FAST Graphs Value You Academy

Introducing: FAST Graphs Value You Academy

Hello, this Chuck Carnevale, Co-Founder of FAST Graphs. Many of you know me as "Mr. Valuation" a moniker that I wear proudly. This is important to me, because throughout my 5-decade career I have always strived and endeavored to educate individual investors towards making sound and prudent long-term investment decisions. Teaching individual investor self-reliance has been an important and meaningful part of my professional DNA. Therefore, I am proud and excited to announce the creation of an important new offering from FAST Graphs that we expect to launch early next year. Between now and then we will be offering a free preview as an introduction to the forthcoming FAST Graphs Value-You Academy.

Our goals and objectives are simple and straightforward. Just like FAST Graphs have taken the guessing out of investing, our objective with our Value-You Academy will be to first demystify financial analysis in a fun and simple way. Many investors and subscribers are constantly asking for help on making important financial decisions. My position on the subject is straightforward. Knowledge is power and financial analysis is well within the wheel house of literally everyone that has money invested.

This brings me to our second important goal and objective, to simultaneously provide the tools to assist in conducting comprehensive financial analysis efficiently and effectively. Any job is always easier when you have the proper tools. Simultaneously and in conjunction with launching of the FAST Graphs Value-You Academy we will be incorporating significant upgrades to FAST Graphs. This will include but not be limited to providing subscribers complete financial statements on every company. Additionally, we will provide clear graphical visualizations that will empower subscribers to easily evaluate important financial metrics, ratios and valuation references. Our endgame is to empower our subscribers with the ability to make prudent and successful financial decisions with confidence and fruitful outcomes.

With a clear understanding of the enormity and complexity of accomplishing these lofty goals, we have associated with two leading academic experts. Both scholars that I am about to introduce possess extensive experience in teaching finance to individual investors, corporate executives, and managers. But most importantly, they are experts in unveiling the mysteries of financial statement analysis in a fresh, friendly, and easy to understand manner. In short, they demystify what many believe to be a mundane process and make it interesting as well as empowering. The result is that they empower individuals with the confidence and ability to make sound financial decisions. We are both excited and honored to have these highly skilled and respected academics as part of our FAST Graphs' team and family.

Course Description

Learn how to properly value a business so you can make more profitable long-term decisions on your investment portfolios. All businesses get their value from the amount of cash the company can generate on behalf of its stakeholders. Stocks simply represent ownership interest in those businesses. The trick to long-term success is to buy the stocks when they are aligned with the intrinsic value of the business behind the stock.

This course will not only teach you how to value businesses but also to read and understand a company's key financial statements, thereby taking the mystery out of investing. It will also simultaneously provide you with the necessary tools to do it easily, efficiently, and effectively. This course has a comprehensive curriculum that teaches finance and key investing principles in a fun, visual way that is easy to grasp and understand.

Learning Objectives

1. Understand stock pricing basics
2. Learn to value a company and their stock
3. Create list of stocks worth further research
4. Establish a responsible, reasonable, and informed process for making intelligent investment decisions
5. Manage risk through research and diversification
6. Empower financial independence through education and data
7. Learn a simple way to read and understand financial statements

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Topic 1: Motives for Making Your Own Investments

With the right knowledge and tools, anyone can invest successfully and confidently. FAST Graphs is the right tool and Value You Academy provides the right knowledge.

You have an almost endless supply of investment advice available to you. How do you decide which recommendations to follow and which to avoid? How do you evaluate investment opportunities for yourself? How do you make sense of plans and investments offered by professionals? Understanding the basics of investing, and even more importantly, value, will empower you to navigate your investments with a rational, disciplined, and personalized approach.

Is this gambling or what?

Investing is different from gambling in many ways, but the most important is that while the "house" has an advantage in gambling and the average participant will lose, the stock market has a long track record of positive returns.

In today's uncertain world it is hard to make sense out of almost anything, let alone a fickle stock market. However, you will be well served to recognize and understand that the greatest investors of all time engage in rational and predictable business perspective investing strategies. The reason is simple, the principles of business, economics and accounting are timeless.

Is learning about investing worth it?

The S&P 500 has an average annual return of about 10%. Thanks to a combination of strong returns and compounding, investing can create incredible wealth.

For instance, if you made a $100,000 one-time investment 30 years ago and earned a 10% return, you would now have over $1.7 million. Simple interest, which in this case would be $10,000 a year, would leave you with $400,000 = [(30 X $10,000) + $100,000]. Compounding is "interest on interest" and reflects that once an investment increases in value, you earn future returns off the increased value and not just the original investment.

Learning about investing can help you to reach financial goals and harness the power of compounding.

The better informed the investor is, the better the investment decisions they can make. But being an informed investor can be a very arduous task, and some would even say that conducting research on common stocks is a real snoozer. Poring over mounds of financial data and trying to piece this information into meaningful and useful knowledge is not the average person's idea of a good time. Most people have better things to do with their time yet recognize that making sound financial decisions is critical to their future.

It is logical to assume that the more you know about the companies you are investing in, the smarter you can be about making good choices. As previously stated, researching common stocks can be tedious, confusing, and complex. But investing in common stocks without thoroughly understanding what you are buying or what you own can be foolish and dangerous at the same time. Therefore, most would agree that a comprehensive and thorough research process before investing is prudent and necessary.

So, if you are not willing to do the job yourself, then hiring a professional that you believe is competent and you can trust is a reasonable course of action. Even then, most investors would be more comfortable with their portfolios if they understood what they own and why they own it. Knowledge is power, and regarding investing, an essential key to achieving financial success and controlling the amount of risk taken to achieve it.

On the other hand, if turning your money over to a professional is not appealing, you could seek the assistance of research tools and or services.

Important Considerations Before Investing

Before investing in a common stock, it is logical to possess key information that reveals the quality and the value of the business being considered. It is necessary to ask and answer some key questions about a business before laying your money down. For example, what kind of a track record has the company produced? What do their earnings and cash flows look like? How

fast have they grown and how consistent has the growth been? Regarding the future, what is a rational expectation of how fast the company can grow going forward. These and other important questions are all basic information to have before investing.

Establish your own goals and identify your risk tolerance

A common refrain is that most active managers can't beat the market (S&P 500). The usefulness of this observation is limited as a professional manager may not aspire to "beat the market." Investors are unique, and as such, possess investment objectives that are also unique to their own goals, objectives and risk tolerances.

Simply stated, investing is not a one-size-fits-all. Therefore, it makes more sense to create portfolios that are designed to meet the individual's goals, objectives and risk tolerances.

More to the point, the market (S&P 500) simply may not be a suitable investment for every individual. On the other hand, this does not simultaneously suggest that those investors should not invest in stocks at all. A good example could be a portfolio of blue-chip dividend aristocrats with a long history of increasing their dividend every year. In contrast, the S&P 500 would also include stocks that don't even pay a dividend.

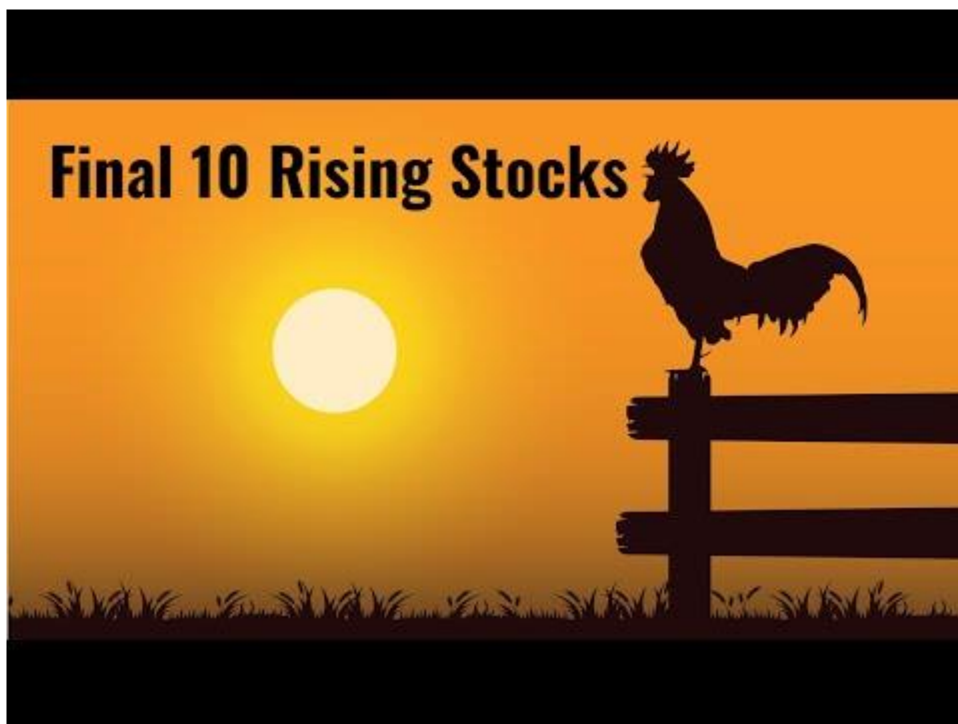
Building Investment Portfolios to Meet Your Goals, Objectives and Risk Tolerances

Total return is a commonly used investment performance metric. While it is generally useful, it may be that the amount of income the portfolio is generating relative to the market may be a more important objective for some individuals. Similarly, the amount of risk taken is major consideration.

Investors might choose bonds, CDs or other fixed income securities either in addition to or instead of stocks. These are typically not purchased with the goal of beating the market. Instead, fixed income investments are normally purchased because of the safety and/or predictability they offer and for higher current income if available. The key is to be clear on what you as an investor want to achieve and then build a set of investments that give you the best chance of reaching your goals.

Do you want to own winners AND losers, or just winners?

There are many reasons to pursue individual investing, but the 2020 pandemic reminds us of a major motivation to select single stocks: it is a market of stocks, not a stock market. As of the end of July of 2020, the S&P 500 was up about 0.4% for the calendar year. Meanwhile, three of the biggest S&P constituents Amazon, Apple, and Microsoft were up over the same period by 71%, 30%, and 45% respectively. Owning an S&P 500 index fund would give an individual exposure to a wide group of stocks, but this might not always be desirable.



Personal qualities that bring investing success

Anyone can be a successful investor, but certain traits are common to most great investors. Investors typically have a desire to understand things and have some control rather than trust to a "black box" or completely defer to experts. Acquiring the necessary knowledge is not hard, but requires discipline. Rational thinking, rather than emotional reactions, is key to investing success.

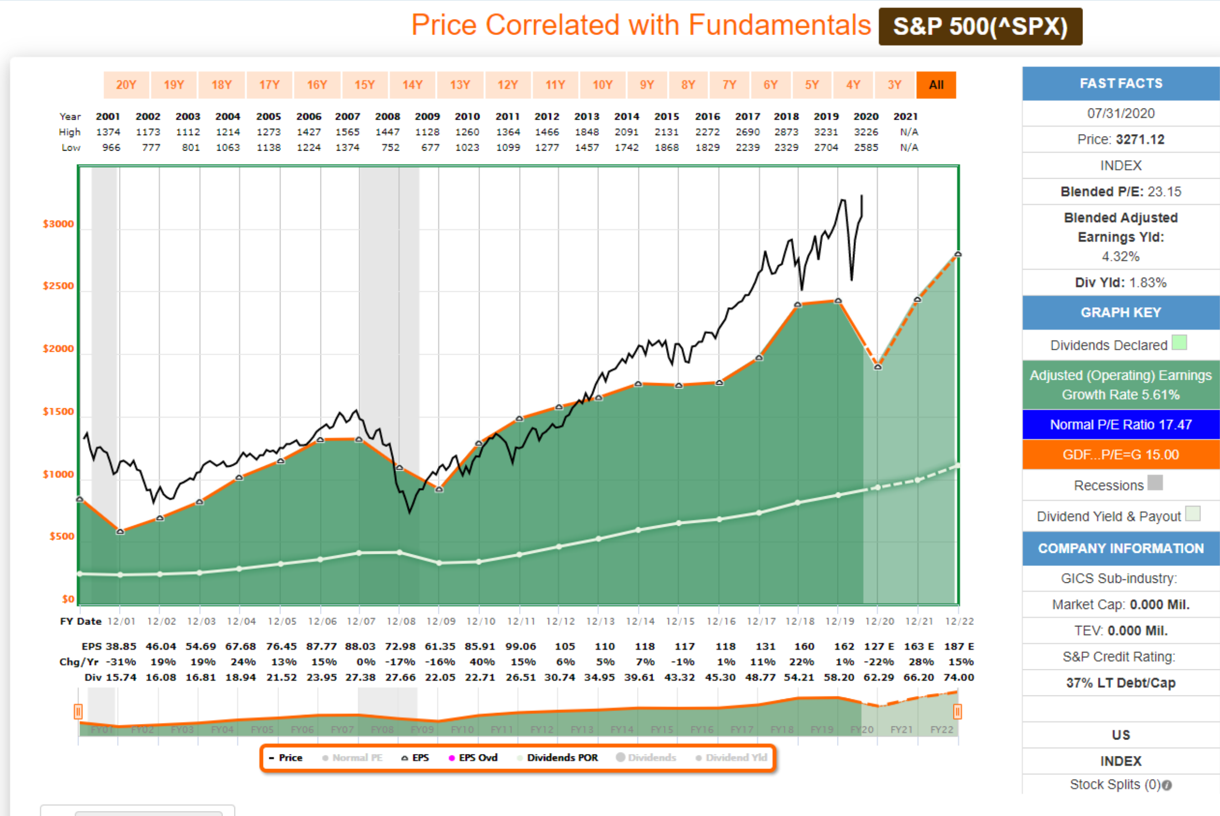
Are you a short or long-term investor?

It is often said that individuals with a short-term perspective are traders and those with a long-term perspective are investors. Both trading and investing have demonstrated the ability to generate wealth, but FAST Graphs Value You Academy is focused on the process of long-term investing and not short-term trading.

Value of a Long-Term Perspective

- Worrying about investment results on a daily, quarterly, or even yearly basis can distract investors from pursuing their long-term goals.
- The market can change quickly and throw investors off balance.
- Declines are especially disturbing for those who are concerned with short-term fluctuations and watch the daily returns during volatile periods.
- During such periods, it can be helpful to step back and perhaps adjust your perspective.

Standard & Poor's 500 (^SPX) Index



For example, a FAST Graphs look at the stock market over the past 20 years through July 2020, shows

yearly gains — and losses — of as much as 22%. However, a hypothetical investor who entered the market with $10,000 and stayed the course would have seen an average annual return of 5.5%, and an ending value of $28,543.09 of Market Value plus Dividends.

Do you want to learn a process to make financial decisions, or leave it others?

There are many high-quality financial experts. Receiving and following advice from experienced professionals is often prudent for managing some or even all of your finances. But, how do you know if you are getting good advice? What if you are uncomfortable completely leaving your financial future to others? Learning the fundamentals of investing can help you to both evaluate professional money managers and help make your own investing choices.

Can I manage my own stock portfolio?

Managing a portfolio may seem daunting, but the basic concepts are very simple. FAST Graphs is a time saving tool that allows you to quickly analyze opportunities rather than sinking hours and hours into wading through complicated financial disclosures. Value You Academy provides the necessary background knowledge to get the most out of the FAST Graphs.

Do you want to acquire the knowledge and do the research?

Natural curiosity is the best motivator. If you are reading this, you have an interest on some level in investing. Give it a try and see if it fits. Use the knowledge here and apply it to your own FAST Graphs analysis. You will be able to quickly tell if you want to invest in yourself through taking control over your investment decisions.

How does the stock market work?

Stocks represent the opportunity to buy partial ownership of firms. The stock market sets the price for this proportional ownership of a firm. Like all markets, the exact price at any moment is driven by what investors are willing to pay combined with what current owners are willing to accept to give up their ownership. However, it is important to note that the price of a stock is not necessarily the same thing as the value of a stock. As Warren Buffett says, “Price is what you pay, value is what you get.” Estimating and understanding value is critical to successful long-term investing.

What is business perspective investing?

The answer is simple, straightforward, and common sense based. Business perspective investing simply means managing your investment portfolios with the same mindset that you would use to manage a business you owned. As a business owner, you are keenly aware that your financial rewards will be directly proportionate and in total alignment with the amount of money the business generates on your behalf. The more money a business makes, the more valuable it becomes to you as its owner.

Legendary investor and mentor to many investing greats Benjamin Graham once aptly stated that: "investing is most intelligent when it is most businesslike." In other words, investing is NOT speculating in markets by attempting to guess (forecast) where stock prices may or may not go in the short run. Instead, approach investing as a long-term oriented shareholder/owner of terrific businesses.

This approach might best be described as a long-term buy-and-hold strategy. Additionally, it is important to build common stock portfolios one company at a time with the primary objective of investing in high-quality at sound or attractive valuations. While many prefer to utilize index funds or other passive products (ETF's, CEF's annuities, etc.), others may prefer an active role.

Another way of looking at the issue of active versus passive would be to focus on the amount of trading that is done within a portfolio. Making changes to portfolios from time to time if necessity dictates is one potential valuable advantage of "active' management. On the other hand, doing this as little as possible is consistent with the notion that, as Warren Buffett once said: "inactivity strikes us as intelligent behavior."

While indexing is synonymous with passive investing, from another perspective, it may not be quite what it sounds like. An index, just like a personal portfolio, will from time to time add and subtract companies. Consequently, there is a level of activity within the various indices as well.

However, the primary reason not to utilize so-called passive investments like an index is because of a focus on valuation. In any index, at any point in time, there will likely be many businesses that are overvalued. There are also likely to be many businesses that are undervalued. An index investment is hoping that the two groups (overvalued and undervalued) roughly cancel each other out. A more active approach takes responsibility for identifying which firms to buy and which to avoid or sell.

Individual stocks, mutual funds, index funds, and ETFs, CDs, Bonds, and more!

Investing in common stocks is the same idea as the business owner's perspective. Moreover, the same argument could be made about investing in fixed income instruments like bonds, CDs, fixed insurance annuities etc. The amount of money that your investment produces is what gives it its value to you as an investor. This is a timeless principle and it is never "different this time."

How do I manage the risks of investing?

Business perspective investors always run the numbers out to their logical conclusion. When you apply a business perspective investing strategy to your own personal finances, you can be assured of keeping your emotions in check, and your rational and logical mind always engaged. Knowledge is truly power. Later in the text, specific strategies to manage risk are provided including: margin of safety, diversification, suggestions on when to buy and sell.

Advantages and disadvantages of individual investors

In his book, *One Up on Wall Street*, Peter Lynch emphasized that individual investors have advantages over large institutions. He highlighted specific examples including the fact that individuals can set their own timeline for performance evaluation. Individuals don't have to report out to anyone and thus can take a longer-term approach. Also, unlike most institutions who are judged relative to benchmarks, individuals can determine their own goals and compare performance accordingly.

You don't have to time the market or predict the future to be successful. Finding good companies at a fair price, investing for the long-term, and maintaining discipline with your process is the best path forward. Studies find that many individual investors do poorly. In particular, research indicates that investors that trade too often, significantly underperform. As an individual, one major risk is making emotional investment decisions rather than rational choices based on good information.

Why has the stock market acted the way it has during the COVID crisis?

As we reflect on the market near the end of 2020, on the one hand, we have stocks that are

trading at very high valuations. On the other hand, there are a significant number of stocks - and even entire industry groups - being priced at low valuations.

As a result, the prudent long-term investor is faced with both opportunity and risk at the same time. It has never been more important to choose the right companies (stocks) to invest in. But unfortunately, the challenge of picking the right stocks is often counterintuitive to what is happening in the short run. History has shown over and over again that expensive stocks tend to perform poorly in the long run and inexpensive stocks tend to provide higher returns with less risk. As the old adage teaches us, those who fail to learn the hard lessons of history are doomed to repeat them.

How can I tell the difference between a good stock and a bad stock?

In the long-run, firm fundamentals drive value. A good stock is a firm with solid fundamentals that you can buy at a fair price. A good company, with strong fundamentals, can still be a bad stock to own if the price is too high. And, some firm fundamentals are so bad that even seemingly low prices will yield a bad investment.

Fundamental analysis then is the key to deciding on whether or not a given stock is a good investment. Value You Academy provides best practices on evaluating firm fundamentals and on how to utilize financial statement information available in FAST Graphs to quickly yet thoroughly determine if a stock is a good or bad choice.

Why FAST Graphs Value You Academy

There are many sources of financial education out there and there are many tools that you can use. But, the key is to have the right tool for the right job and the knowledge of how to use it. FAST Graphs is the right tool and Value You Academy provides the right knowledge.

This tool is not designed to be the end-all, as no such tool could even exist. Instead, this tool was designed to make the process of researching a company not only easier and more efficient for the average investor, but also to provide a clear and instant perspective of the fundamental value and financial strength of each company they own or might be interested in owning. Therefore, subscribers are capable of instantly deciding whether the company they are considering is research worthy or not.

One major challenge to investors is that there is so much information out there on firms and the economy that it is hard to know what really matters. One of the strengths of FAST Graphs is that while there is in depth information, it is presented in a way that helps investors focus on what matters most and keep out excessive noise.

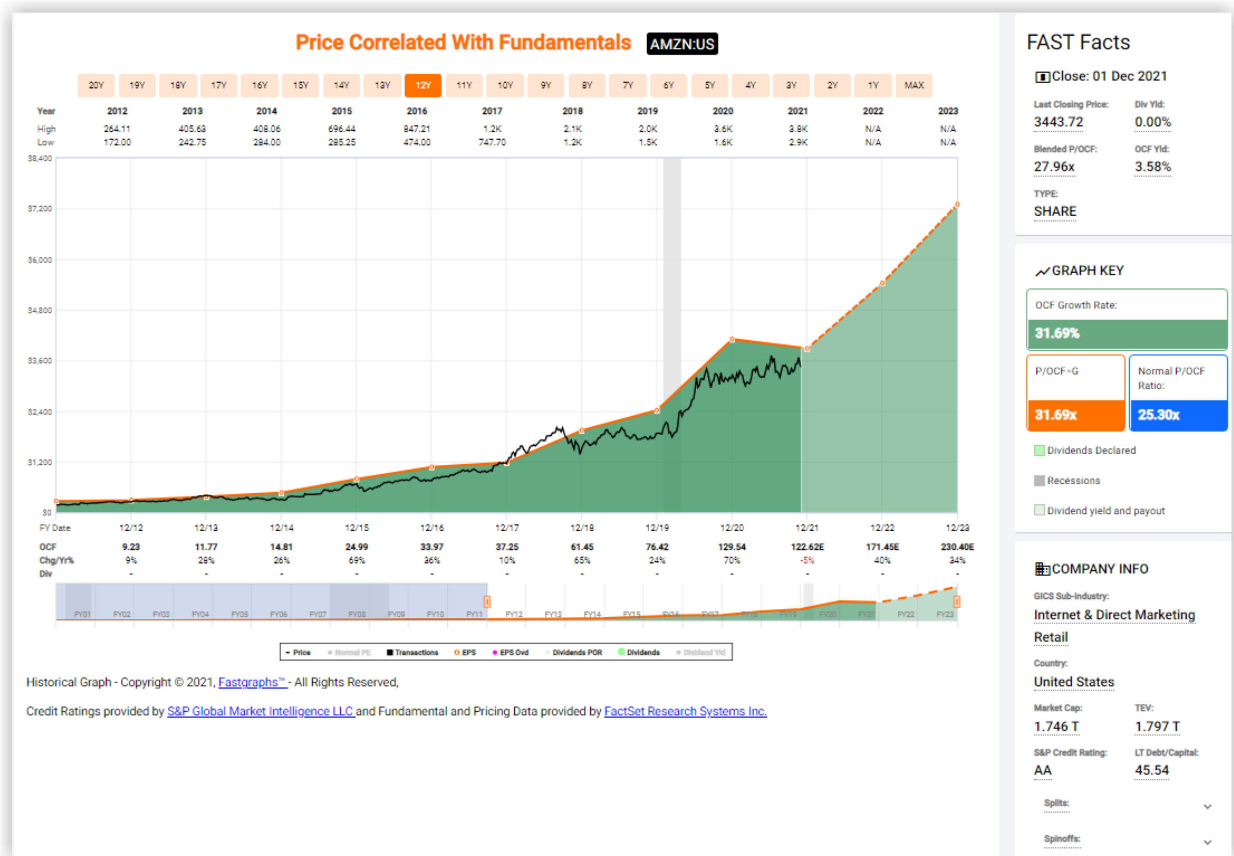
How can I tell if a stock is selling at a fair price?

Valuation is the analytical process of determining the current (or projected) worth of an asset or a company. With stocks, the market price is easily observable and reflects what you must pay for a share of stock. Value on the other hand is not easily observed and must be estimated by the investor.

There are many techniques used for doing a valuation. We look at the business's management, the composition of its capital structure, the prospect of future earnings, and its assets, among other metrics.

Company value is driven by the cash the firm generates. Seeing is believing and FAST Graphs allows you to quickly do just that. Consider Amazon over the last 10 years …

Amazon COM INC (AMZN:US)



If you had purchased Amazon at the start of this chart on 12/31/2012 you would have paid $250.87 and if you had sold at the end of the chart on 7/31/2020 you would have sold for $3,164.68. This corresponds to a total return of 1,162.5% or an annualized return of 39.7%. Put another way, an investment of $10,000 at the end of 2012 would now be worth over $126,000.

But, in 2012 and many times since you would have read in the popular press that Amazon was "overvalued." It is true that Amazon wasn't generating very much profit in 2012 and the firm doesn't fit many people's idea of traditional value investing. Amazon was however generating a lot of cash.

In the chart above you see the stock price movement in black and the operating cash flow in green. For the most part, as operating cash flow went, so went the stock price. You will also notice that the chart allows you to visualize a potential future stock price path for Amazon based on future cash flow generation. Regardless of investing style, the fundamental truth of the link between value and cash flow generation remains the same.

Understanding the difference between profits and cash flow, knowing that value is driven by the cash generated by a business, and having a tool to evaluate opportunities could have meant the difference between a huge financial gain and an opportunity missed.

All-in-one portfolio, screener, research, performance estimator, and education

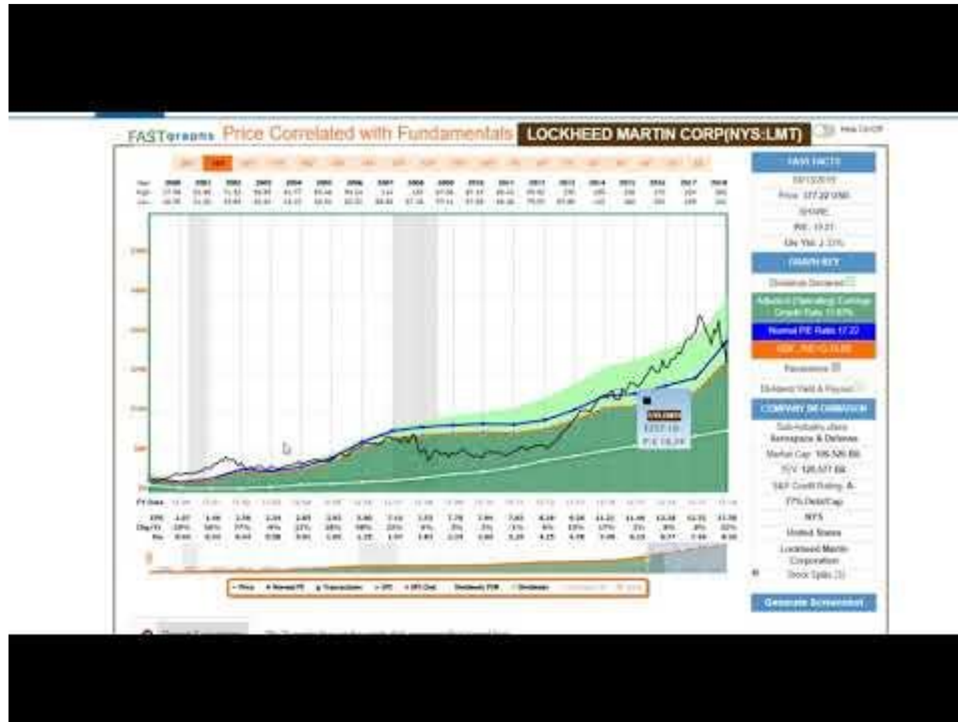
The goal of FAST Graphs is to provide what you need to make your investment decisions. With FAST Graphs you can track your portfolio performance, screen the universe of companies for new ideas, conduct fundamental research, and estimate future performance. Now with Value You Academy you have access to education not just on the features of FAST Graphs, but the why and how of all things investing.

Whether a do-it-yourselfer or do-it-for-me investor, FAST Graphs are essential

FAST Graphs is a stock research tool that empowers subscribers to conduct fundamental stock research deeper and faster than ever before. The graphs provide the essential company fundamental information you need to know in order to make smart investment decisions. Within a matter of minutes, subscribers can examine the relationship of operating results to stock price performance on thousands of companies.

Topic 2: Stock Pricing Basics

I'm ready to start, but where to begin? Introduction to Stock Valuation



When it comes to investing in common stocks, valuation is a great place to start. Many have heard terms such as fair valuation, undervaluation or overvaluation.

In truth, the concept of valuation is much more complex than those three simple notions. Two preliminary notes on valuation:

1. Just because a stock is technically trading at fair value, does not necessarily mean that it is a good or attractive investment.

2. Just because a stock is moderately overvalued, does not necessarily mean that it is a poor or unattractive investment.

In truth, there are circumstances where a moderately overvalued stock is a much better investment than a stock that is at fair value. The key revolves around the potential growth of the respective company. At its core, investing at sound valuation empowers you to participate in the results that the business generates on your behalf as a stakeholder. When investing at a sound valuation, if the business generates strong growth, the rate of return you can expect will also be strong.

Valuation is a Measurement of Risk and Prudence

Valuation is only one important component of successful stock investing. That said, valuation may be even more relevant to the soundness of the investment than it is to the total return the investment can achieve. The logic of valuation provides a check of how plausible certain projections for a firm may be. Understanding the history of the firm, the current situation, and future projections allow us to make a common sense decision.

A Conceptual Definition of Fair Value

If you look up the term fair value on sites such as Investopedia or Wikipedia and others, you will discover somewhat vague definitions. Put simply, fair value, as it relates to common stock investments, is when the current stock price relative to a firm's fundamentals (like cash or earnings) adequately compensates investors for the risk they are taking by providing both a realistic and acceptable return on invested capital.

What do I need to know about a company?

One of the challenges of investing is that there is a lot of information on publicly traded companies. You could spend almost endless hours on learning about a single company. Instead of examining every aspect about a firm possible, it makes more sense to focus on the most relevant aspects of a company. Basic due diligence would include: understanding how a firm generates sales, evaluating growth potential, current financial health, and valuation. One advantage of Fast Graphs is that key information is provided in a way that is quick and easy to understand, and just as important, avoids including excessive information that is not critical to evaluating an investment.

Should I buy? Value and price

The venerable investor Warren Buffett has a real knack of putting complex concepts and ideas into simple and easily understood terms. His quote, "*Price is what you pay. Value is what you get*" is one of the best summaries of a central issue to investing. Therefore, stated succinctly, the answer to the question of when to buy is simply when you are reasonably certain that the company's stock can be purchased at a sound valuation.

This concept of value represents the key to receiving the full benefit that these wise words provide. Knowing the specific price that you pay is simple and straightforward. And, although many have an intuitive understanding of value, its deeper meaning is often only vaguely comprehended.

So how do you know, when buying a stock, if you're getting value or not for your money? The answer lies in the amount of cash flow (earnings) that the business you purchase will generate on your behalf. And regardless of how much cash flow the business generates for you, its value to you will be greatly impacted by the price you pay to obtain it. If you pay too much you get very little value. If you pay a low price then the value you receive is greatly increased.

Therefore, it is important that your attention be placed on the cash flows that the business is producing. It is a mistake for investors to focus intensely on stock price and its movement.

Another investing great offered his view on this important point: *"Just because you buy a stock and it goes up does not mean you are right. Just because you buy a stock and it goes down does not mean you are wrong."* Peter Lynch 'One Up On Wall Street'

This means that it is important to focus on the process of stock valuation and selection, particularly on your analysis of fundamentals. Price changes, especially in the short term, will not signal if you are reaching reasonable conclusions about firms. Instead, evaluating your understanding of current and future cash flow generation will better serve you in the long term.

In order to receive value, you must know how to calculate value. Then, and only then, can you be reasonably certain that you're investing in a stock and receiving value for the price you pay.

The driver of stock value is cash generation

The principles that valuation is based on can be represented mathematically. However, such a "proof" is likely to bore the reader with complex mathematical formulas. Instead, it is better to provide logical explanations of value that represent its essence.

The value of any asset is based on the cash that the asset generates for the owner. Valuation is the process of converting expectations of future cash generation into a price per share estimate. It is not possible to precisely calculate a "true" valuation, but it is possible to get a reasonable range of potential values that are consistent with the fundamentals.

Present Value Versus Future Value

One of the most difficult aspects of valuation for investors to accept or embrace is the distinction between present value versus future value. Conceptually, this might be analogous to the old adage: "one in the hand is worth more than two in the bush." What confuses investors is how two very different companies with dramatically different growth rates can command a similar current P/E ratio (proxy for valuation). The clarity comes with recognizing and understanding the distinction between present value versus future value.

In short, stock values aren't based on cash that has been generated. Value instead is based on cash that will be generated. We'd rather have cash today than a year from now. This idea holds generally such that cash occurring in the future is less valuable the further away from today that it is. In other words, value represents what all of the cash the business will generate in the future is worth to us today. Present value is defined as the value from the perspective of today.

A valuation then is simply an estimate of what future cash flows are worth to investors today. The key is to make estimates for how much cash will be generated in the future. Additionally, we want to know when those cash flows will happen because the longer we have to wait for cash, the less valuable it is to us today.

Price and Value

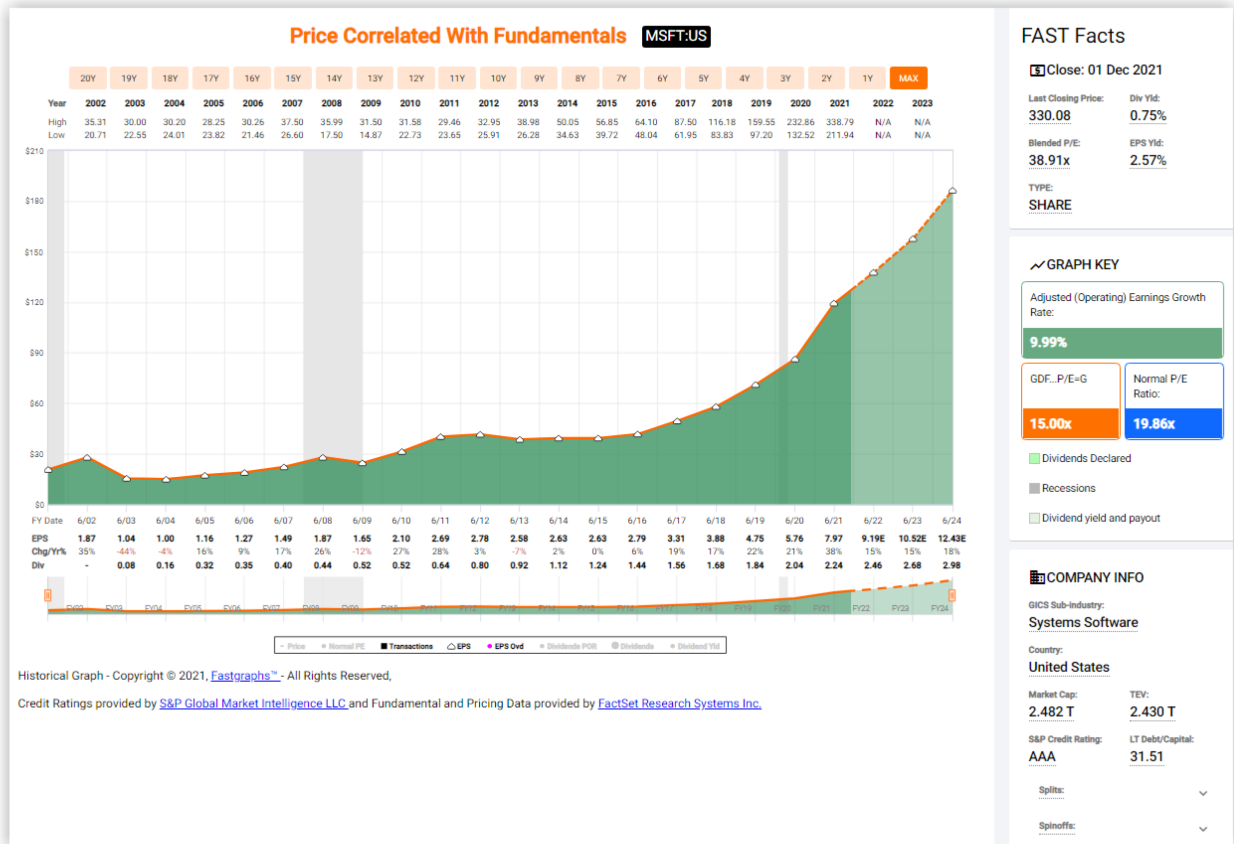
The price of a stock is pretty easy to observe but the value of a stock has to be estimated and can be a little bit trickier. It helps to think of value as what you get out of the stock and what you get out of a stock as an investor is hopefully more cash than you invested.

The specific way that you get more cash is through dividends and hopefully price appreciation. The best way to figure out how much cash you might get back is to determine how much cash the firm will generate. From there, you want to determine the "right" price to pay.

Long-term correlation between earnings and stock prices

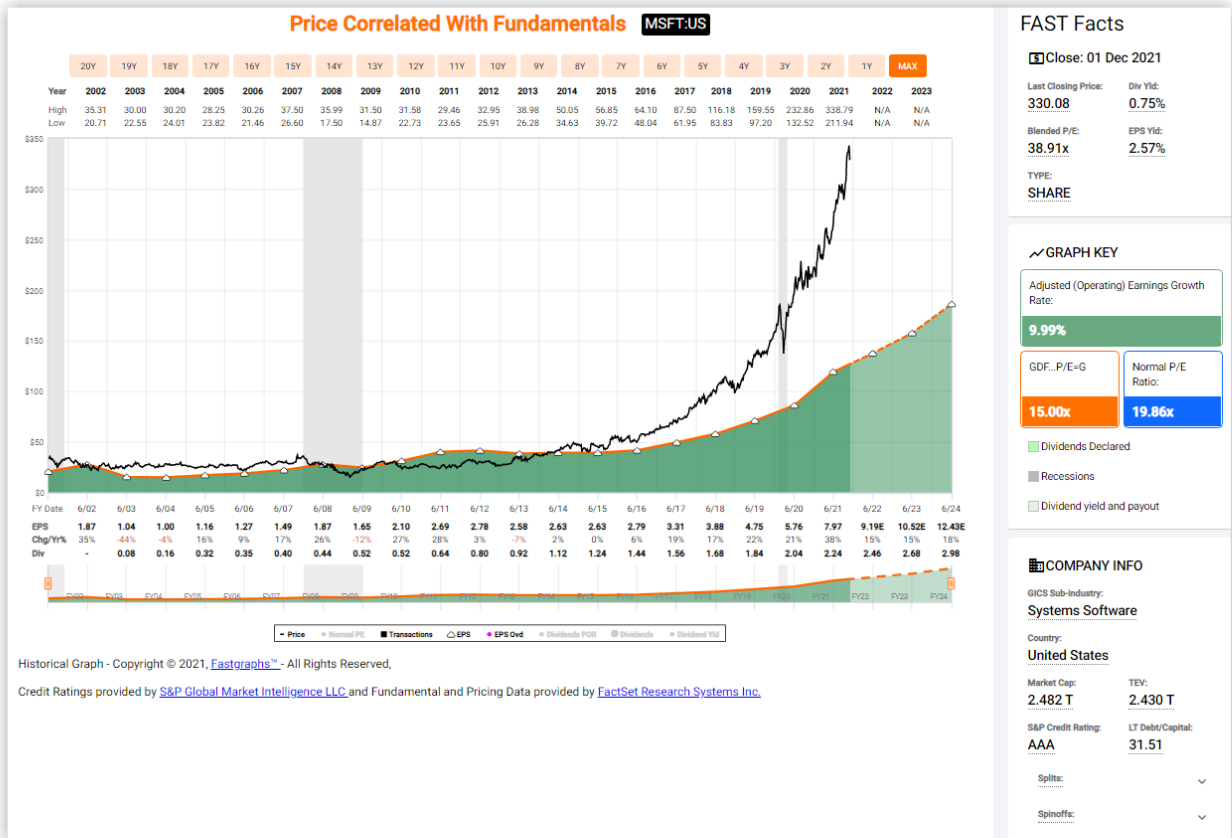
Look at this Microsoft FAST Graph from September 30, 2021:

MICROSOFT CORP (MSFT:US)



The only thing displayed on this graph is the earnings per share (EPS) for Microsoft over this 20 year period. The orange line represents the implied price (or valuation) of Apple based on the fair value P/E multiple of 15.

Taking a step back, value is driven by cash flow generation. This graph shows Microsoft's actual historical cash flow (adjusted earnings to be precise). We know from history that investors will typically pay $15 for every $1 of EPS generated by a healthy firm that is expected to both survive and grow at a reasonable rate into the future. That means that if the "theory" of value being driven by cash flow generation is useful, then the price of Microsoft should roughly follow both the EPS trend line and the fair value P/E of 15. Check out this graph which adds the black line for price:



We see that for the most part, the black line correlates to the orange line. Not perfectly. And, since 2016 the black line has gotten pretty far above the orange line. But, the basic point remains that value is driven by cash flow generation over the long term.

How FAST Graphs Draws Fair Valuation Reference Lines

This video describes how the fair valuation reference line is created on Fast Graphs. Sometimes folks feel that such lines are arbitrary or even intended to support a particular narrative. In short, the fair value orange line is typically based on a P/E of 15. The exception to this scenario is for firms that grow at very high rates in which case the ratio is adjusted to the growth rate of the firm.

Additionally, the blue line is provided based on a blended multiple. The blended multiple is an average multiple for the firm over the time period selected. Knowing when each valuation reference line is most relevant to the firm you are evaluating is key and will be addressed in this book.

Price-to-Earnings (P/E) to value stocks

P/E

The P/E ratio is one of the most widely used multiples to value a stock. The value of a firm is driven by the cash it creates and earnings per share is a widely reported and forecasted measure for cash created.

Use P/E to estimate price

As a simple example, assume you are valuing a firm 'ABC' and that it has a current price of $30 per share and earnings per share of $2. This means that the current P/E is 15 (30/2). Let's assume that the P/E of 15 is a good estimate of future valuation. This means that all we need to estimate a future price is a future estimate of earnings per share.

Assume that analysts have projected earnings per share of $3 one year from now. The estimate of price one year from now then is found by multiplying the projected earnings per share by the P/E ratio or 15 X 3 = $45.

Estimating future return from investment

What do you want from your investments?

There are two drivers of return to investors: dividends and capital gains. Whether you choose to focus on one or the other, or even prefer a balance between the two, is up to you.

One helpful way to think about investment goals is to focus on opportunity cost. In particular, what else could you do with your money? What are prevailing rates of return in risk free investments like U.S. Treasuries or bank savings accounts? What does the expected return look like between various stocks? The best way to get a specific sense of what might be available for stock returns is to estimate future

returns using Fast Graphs.

Use fundamental estimates to project future stock price

There is a misperception that fundamentals generally and Fast Graphs in particular is backward looking only. While it is true that we only know the past, it is also true that we can make estimates about the future. Many stocks have numerous analysts making projections about stock fundamentals such as future expected earnings. Combining a forecast of a fundamental such as earnings with a valuation ratio such as P/E produces an expected future price.

The forecasting tool in Fast Graphs allows you to see what the price will be for the next one, two, three and four years based on analyst earnings forecasts and a range of potential valuation multiples. The blue line in historical Fast Graphs gives us a sense of how the market typically values a firm. The orange line is an intrinsic value line based on long-term norms of valuation.

Linking future stock price to return

Once we have determined a specific forward looking fundamental estimate and a specific valuation multiple, we have a future price. Using Fast Graphs, you only need to click on the current stock price and then click on the projected stock price to get an estimated return over the period as well as an annualized return. This projected return is just one estimate and almost certainly won't exactly reflect the future. Instead, this estimate allows you to compare one possible return scenario to your own goals and expectations for investment performance.

Topic 3: Key Metrics and Other Multiples

Growth and Value

One possible definition of a fast grower (growth stock) is one that has consistently compounded earnings at 15% per annum or better over extended periods of time (five years or longer). Furthermore, the more consistent the growth has been, the better it fits this definition of a pure growth stock.

In short, a P/E ratio of 15 is appropriate for most companies. But, it does not work for all. In Fast Graphs, a P/E ratio of 15 applies when growth rates fell in the range of 0% to 15%. In addition to the fact that the P/E ratio of 15 has been the average for indices like the S&P 500, there is also a logical and mathematical reality behind its validity. However, although a P/E ratio of 15 was an appropriate valuation to pay for growth of up to 15%, I also pointed out that it did not necessarily indicate the rate of return investors should expect to receive. The ultimate rate of return achieved will be related to the valuation paid and the subsequent growth that the company achieves.

Also, the 15 P/E ratio should not be looked at as an absolute, instead it should be viewed as a baseline barometer for fair value. In other words, the 15 P/E is a good starting point guideline to

ensure that you are not overpaying and taking too much risk. Consequently, anytime you come across a moderately growing company (5%-15%), whether a blue-chip or even a moderate to high dividend payer that is trading at a P/E ratio above 15, then caution is called for.

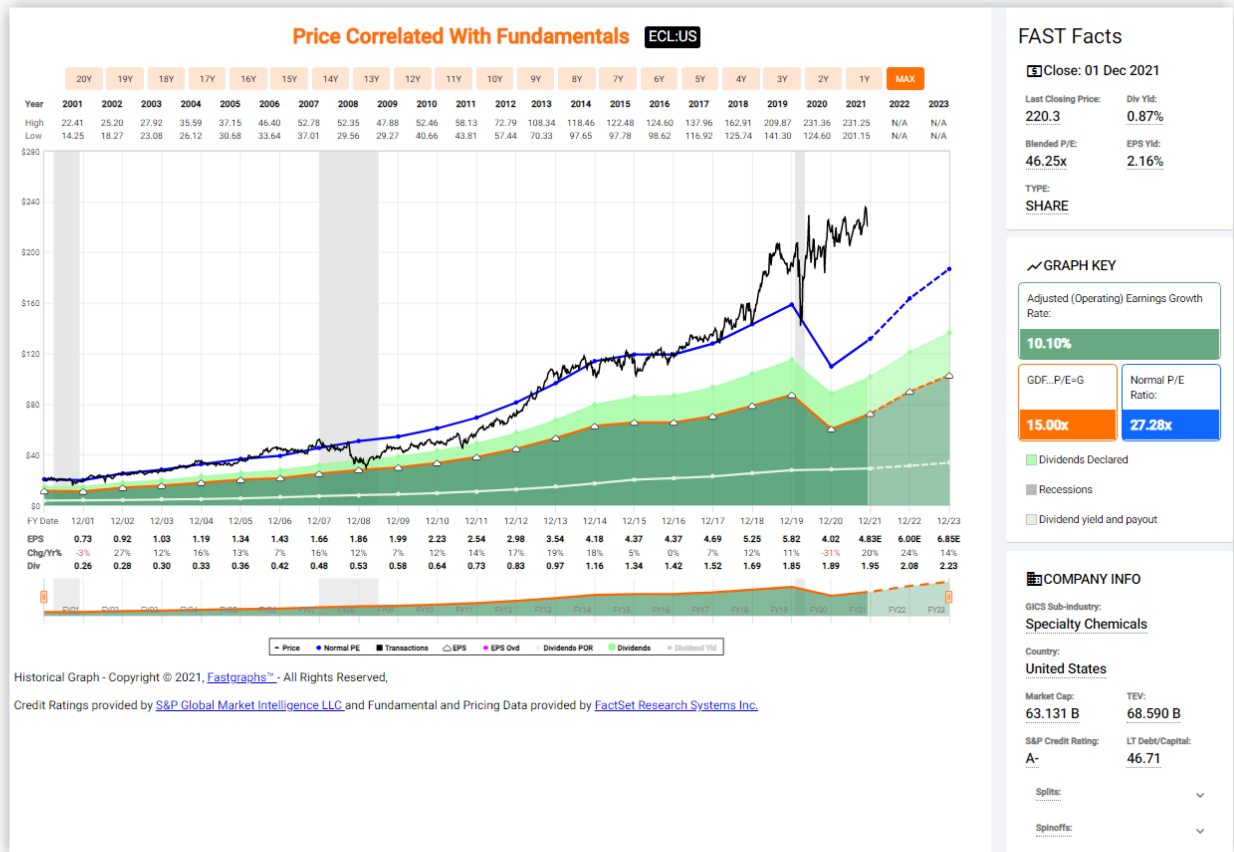
Exceptions to The Rule – Premium Valuations

However, there are certain companies that will always command a premium valuation even when their earnings growth is within the 5 to 15% range. Echo Labs (ECL), Sysco (SYY) and Automatic Data Processing (ADP) are three examples as depicted in the long-term historical FAST Graphs from December 10, 2019 below:

Echo Labs: Historically Valued at a 25-ish P/E Ratio

From the historical earnings and price correlated graph on Echo Labs we see that the market has chronically valued this stock at a P/E ratio in the 25-ish range (the actual P/E of the dark blue line is 27.28). Additionally, note that this stock has never traded at a theoretical fair value P/E ratio of 15 over this entire timeframe. There are exceptions to every rule. The key is to clearly evaluate what you see and accept it as historical reality.

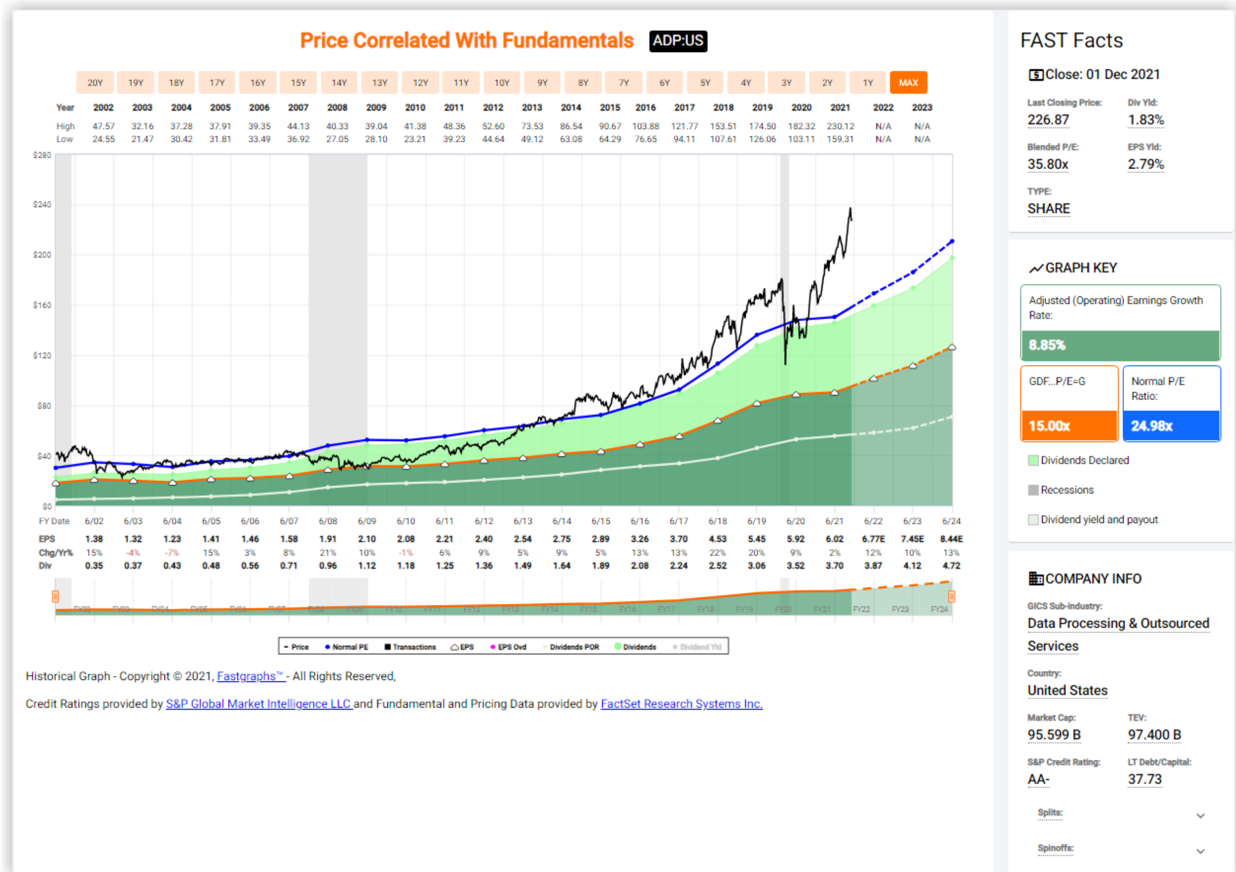
ECOLAB INC (ECL:US)



Automatic Data Processing (ADP): Historically Valued at a 20-ish P/E

Once again, we see an example of a company that the market likes to apply a premium earnings valuation to (P/E ratio 20-25-ish). However, with this example we do see a few occasions where the price did trade at the theoretical fair value P/E ratio of 15. In other words, the price touched the orange P/E ratio 15 line. These rare periods of time when the stock could be purchased at a P/E ratio of 15 or slightly below would be considered optimum for this example.

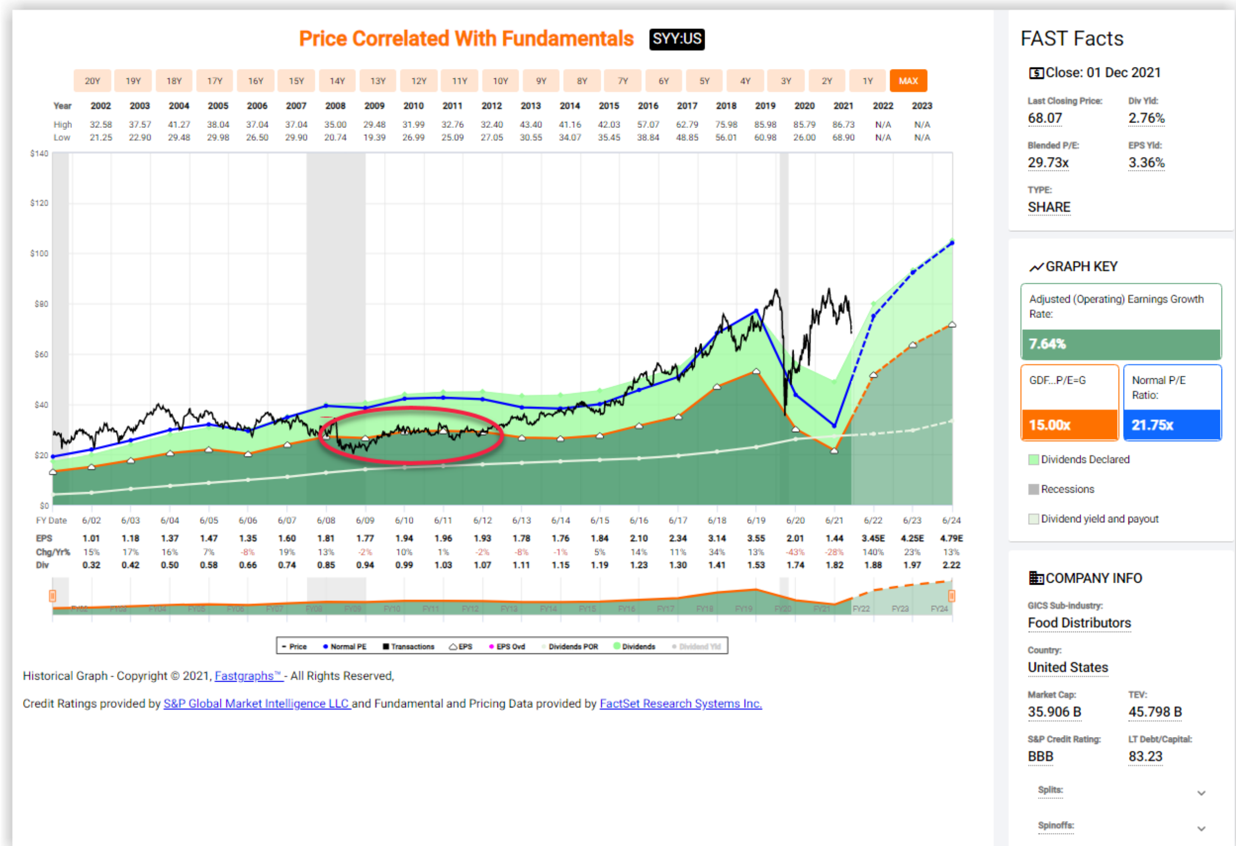
AUTOMATIC DATA PROCESSING INC (ADP:US)



Sysco (SYY): Another Example Of A Premium Valuation

As previously stated, there are exceptions to every rule, Sysco Corp. is one more example. However, in this example, there was a 4-year timeframe (2008 through 2012) where Sysco could have been purchased at a P/E ratio in the 15 range (see red circle). Therefore, investors had an ample timeframe where they could have purchased Sysco at an optimum valuation with which to invest in this dividend growth stock.

CP,[AMMN



The moral of the story is that the primary determinant of what investors should expect as a reasonable rate of return is the company's actual growth rate of earnings. To clarify, the assumption is that if a slow to moderate growing stock is bought at a reasonable P/E ratio of 15, in the long run, the investor should expect to achieve capital appreciation that equates to its earnings growth rate. In other words, purchasing a stock at a rational valuation empowers you to participate directly in the company success.

This of course assumes that the P/E ratio at the end of the timeframe being measured is also close to 15. If the ending P/E ratio is higher than 15, then the rate of return the investor achieves will be higher – and vice versa. Also, total returns will additionally include dividends, if any. The bottom line is that investing in a stock at a sound valuation reduces risk and simultaneously provides the opportunity to participate directly in the success of the company.

How to Value a Fast-Growing Business

Although the 15 P/E ratio as a baseline valuation reference is quite relevant for most companies, it does not apply to all companies. One important deviation is the appropriate valuations that should be applied to growth stocks. The venerable Peter Lynch referred to these as "**superstocks**" and these were also the stocks he favored.

Superstocks: Fair Value Is When P/E Ratio Equals Earnings Growth Rate

Extensive research over many years leads to the conclusion that a P/E equal to earnings growth rate (PEG ratio) is more appropriate for companies that grow at faster rates.

Peter Lynch believes that the fastest growing stocks deserve the most attention from investors. The reason they deserve the most attention, is because these are the stocks that will generate the highest total returns over the long run. Companies with these attributes are what Peter hunted for when he was seeking his *"10 baggers",* because he believed these were the most explosive stocks.

In chapter 13 titled "Some Famous Numbers" Peter Lynch introduced his belief that: **"The P/E ratio of any company that's fairly priced will equal its growth rate."** This statement was the mother of the PEG ratio of 1 representing fair value.

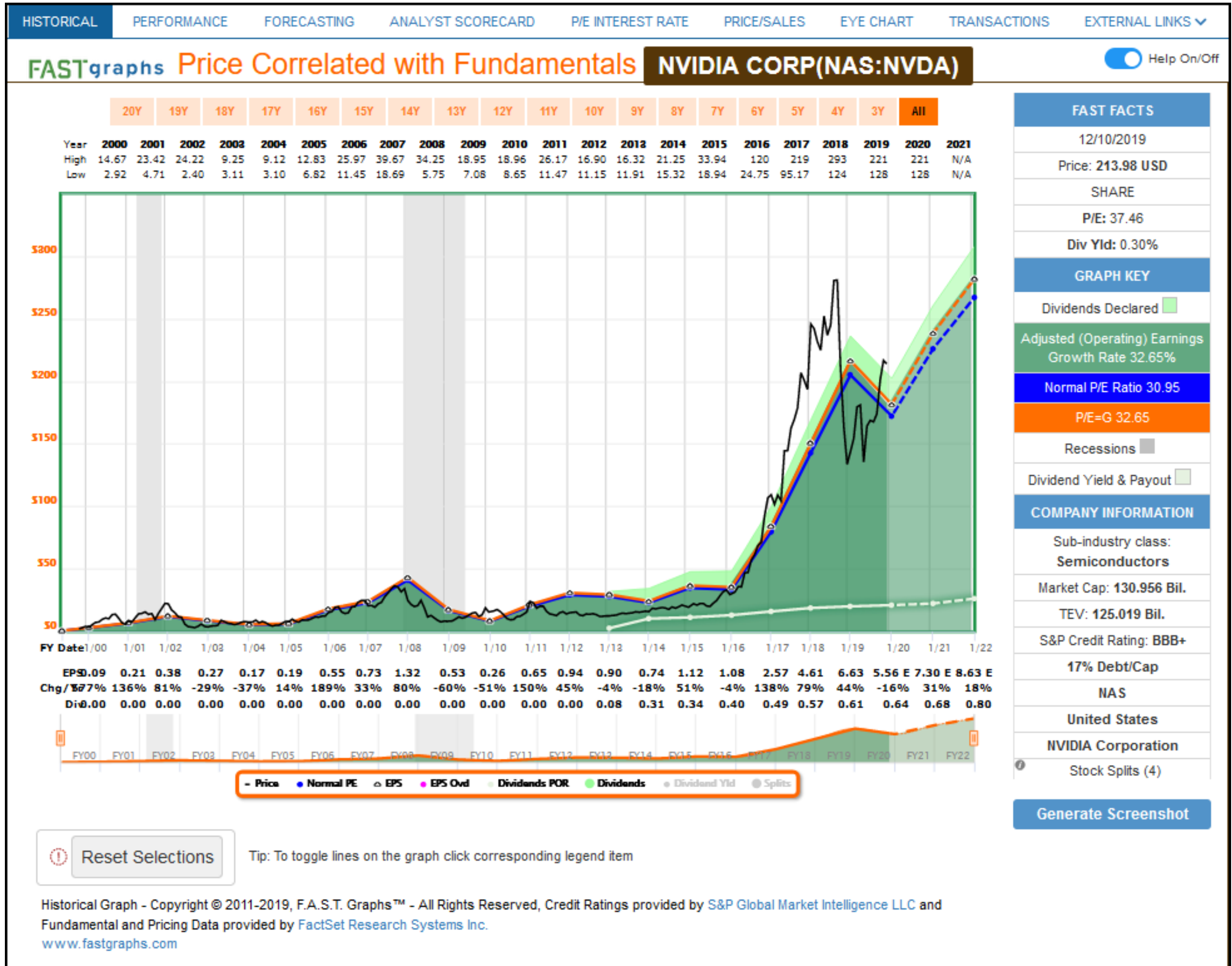
In other words, a company growing at 20% a year should logically command a P/E ratio of 20, while a 25% grower should logically command a P/E ratio of 25 and so on. The simple reason for this is because the future stream of income that these fast growers generate will be orders of magnitude (multiples) of what the average company can do. This thesis applies up to a point where very high growth rates are unsustainable, usually growth rates of 30% or above. In other words, there is a limit.

The three fast growers examined immediately below will provide a look at a range of consistent historical earnings growth of 20% to 30%. In each case notice that the orange earnings justified valuation line will be plotted at a P/E ratio that is equal to its achieved earnings growth rate. The growth rate number will be listed in the dark green color-coded box to the right of the graph. The orange rectangle will list the P/E ratio of the orange line on the graph and the reader should note that it will be equal to the company's earnings growth rate. The black monthly closing stock price is then overlaid on each graph.

Dividends, if any, are represented by the light green shaded area above the orange earnings justified valuation line. Dividends are paid out of the green shaded earnings area, and are only stacked on top for visual perspective. One benefit this provides is the opportunity to see precisely when dividends are started. Keep in mind that companies that grow at this rate normally do not come with a high dividend yield. Performance graphs will accompany each earnings and price correlated historical FAST Graphs™.

The main point of this analysis is to illustrate how closely the black monthly closing stock price line tracks the orange earnings justified valuation line. This validates the above quote from Peter Lynch's runaway national bestseller One Up On Wall Street. In Chapter 10, which was titled "Earnings, Earnings, Earnings" Peter also elaborated on the importance of earnings as a valuation reference.

NVIDIA Corp. (NVDA): Superfast Growth Commands High P/E Ratio



FASTgraphs Performance Results **NVIDIA CORP(NAS:NVDA)**

Help On/Off

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

PERFORMANCE RESULTS FOR 10/29/1999 TO 12/10/2019

Invested: $ 10,000.00 Begin shares: 5423.58
Split-adjusted Price(10/29/1999): $ 1.84

Begin Shs at Closing Price: $ 1,160,537.65
Closing price(12/10/2019): $ 213.98

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
1/2013	0.07	0%	8.3%	5,423.6	406.77	4.1%
1/2014	0.31	313.3%	41.9%	5,423.6	1,681.31	16.8%
1/2015	0.34	9.7%	30.4%	5,423.6	1,844.00	18.4%
1/2016	0.40	16.2%	36.6%	5,423.6	2,142.31	21.4%
1/2017	0.48	22.8%	18.9%	5,423.6	2,630.43	26.3%
1/2018	0.57	17.5%	12.4%	5,423.6	3,091.44	30.9%
1/2019	0.61	7%	9.2%	5,423.6	3,308.39	33.1%

Div. Growth Rate: (6 yrs)
AVG: 64.4%
CAGR: 41.8%

		S&P 500
Dividends:	$ 15,104.65	$ 3,856.36
Growth:	$ 1,160,537.65	$ 23,337.27
Annualized ROR (w/o Div):	26.6%	4.3%
Growth and Dividends:	$ 1,175,642.30	$ 27,193.63
Total Annualized ROR:	26.7%	5.1%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.
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O'Reilly Automotive Inc (ORLY): High Correlation with Price Equal to Earnings Growth

HISTORICAL | PERFORMANCE | FORECASTING | ANALYST SCORECARD | P/E INTEREST RATE | PRICE/SALES | EYE CHART | TRANSACTIONS | EXTERNAL LINKS

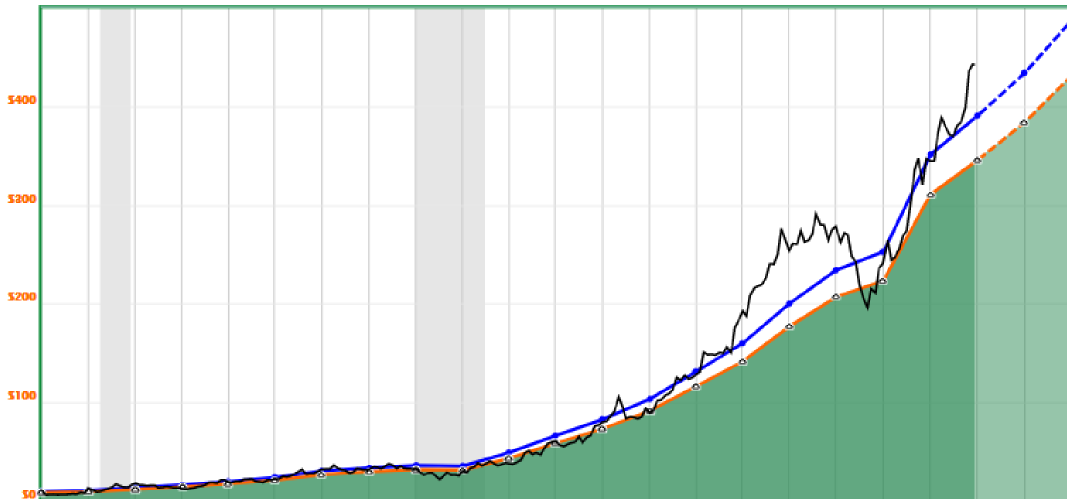
FASTgraphs Price Correlated with Fundamentals

Help On/Off

OREILLY AUTOMOTIVE INC(NAS:ORLY)

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	13.63	19.22	18.63	22.45	23.54	32.53	38.30	38.84	32.68	42.93	63.05	82.17	107	136	197	278	293	284	363	454	N/A
Low	4.13	7.75	12.05	11.46	18.03	21.98	27.49	30.43	20.00	26.47	37.47	53.33	75.61	87.06	128	179	225	169	218	330	N/A



FY Date	12/00	12/01	12/02	12/03	12/04	12/05	12/06	12/07	12/08	12/09	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	12/19	12/20	12/21
EPS	0.50	0.63	0.77	0.92	1.12	1.41	1.55	1.67	1.64	2.26	3.05	3.81	4.75	6.03	7.34	9.17	10.73	11.58	16.10	17.90 E	19.89 E	22.34 E
Chg/Yr	9%	26%	21%	20%	21%	26%	10%	8%	-2%	38%	35%	25%	25%	27%	22%	25%	17%	8%	39%	11%	11%	12%
Div	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Reset Selections

Tip: To toggle lines on the graph click corresponding legend item

FAST FACTS

12/10/2019

Price: **441.90 USD**

SHARE

P/E: 24.83

Div Yld: 0.00%

GRAPH KEY

Dividends Declared

Adjusted (Operating) Earnings Growth Rate 19.30%

Normal P/E Ratio 21.81

P/E=G 19.30

Recessions

Dividend Yield & Payout

COMPANY INFORMATION

Sub-industry class: **Specialty Stores**

Market Cap: **33.434 Bil.**

TEV: **39.624 Bil.**

S&P Credit Rating: **BBB**

91% Debt/Cap

NAS

United States

O'Reilly Automotive, Inc.

Stock Splits (3)

Generate Screenshot

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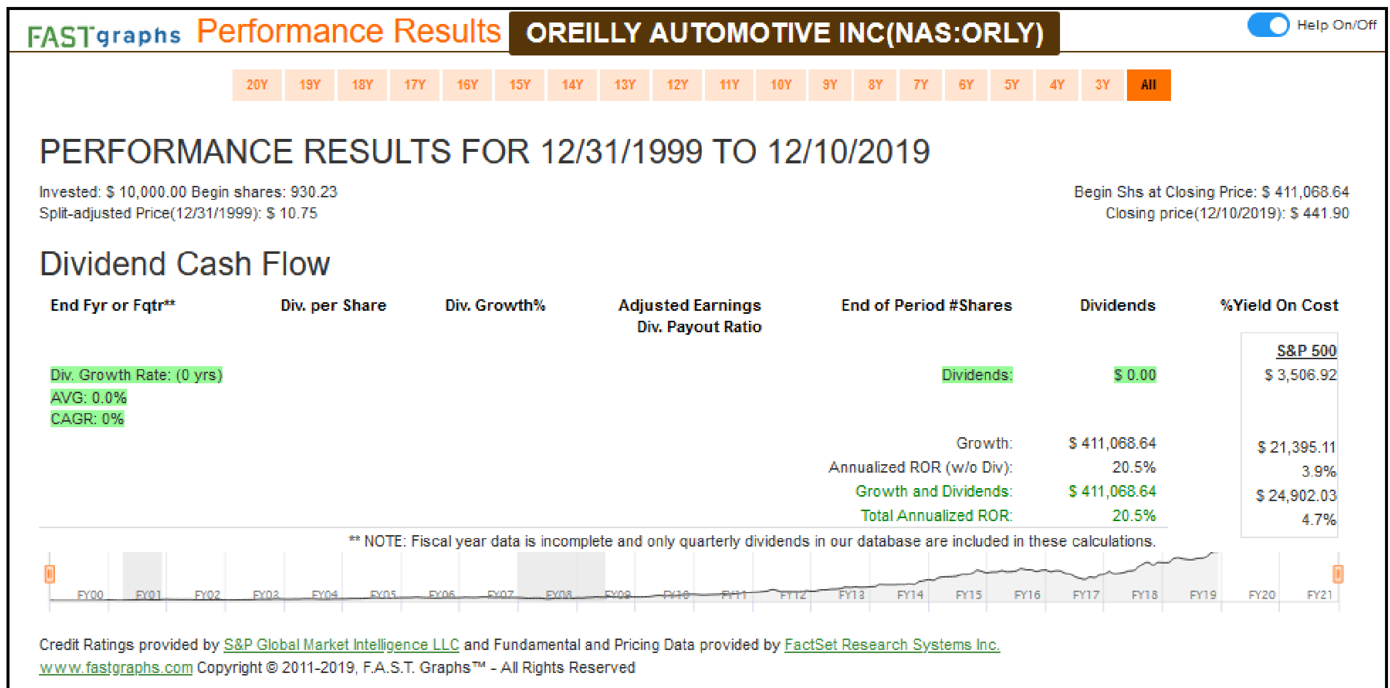


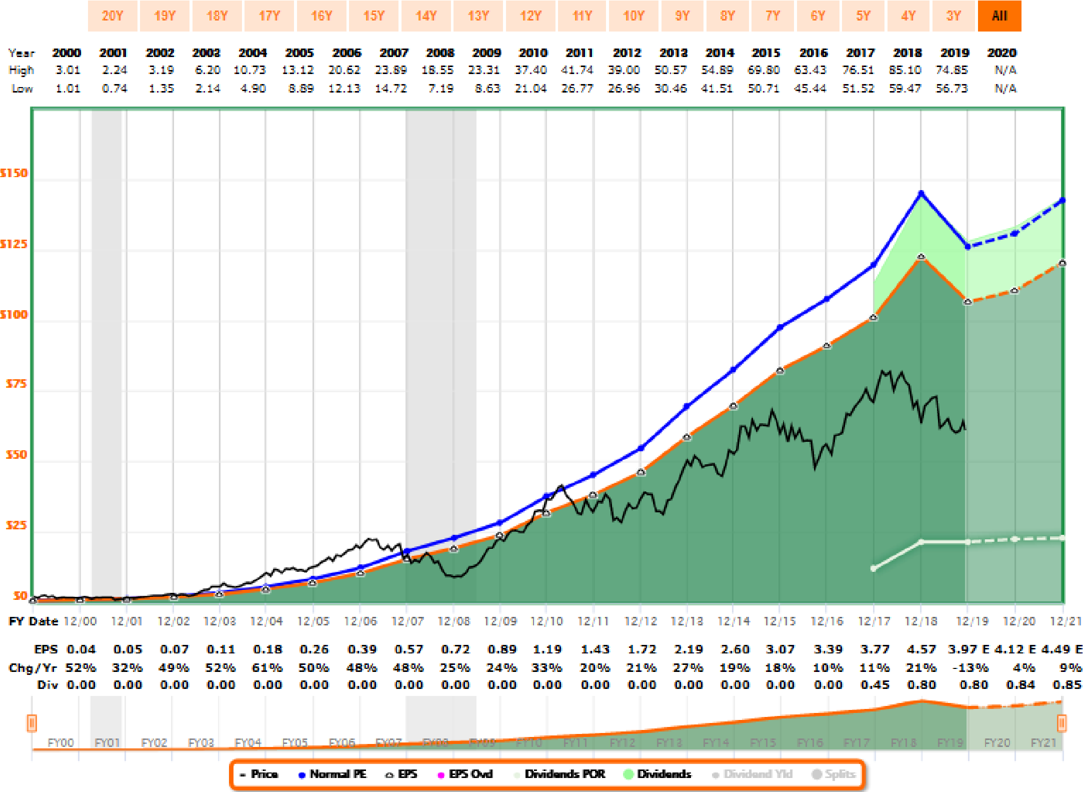
Cognizant Technology Solutions (CTSH): What Happens When Growth Slows?

The reader should note that price has tracked earnings closely since March 2012. However, there is a reason that will be explained below.

FASTgraphs Price Correlated with Fundamentals

Help On/Off

COGNIZANT TECHNOLOGY SOLUTIONS(NAS:CTSH)



FAST FACTS

12/10/2019

Price: **61.10 USD**

SHARE

P/E: 15.26

Div Yld: 1.31%

GRAPH KEY

Dividends Declared

Adjusted (Operating) Earnings Growth Rate 26.84%

Normal P/E Ratio 31.76

P/E=G 26.84

Recessions

Dividend Yield & Payout

COMPANY INFORMATION

Sub-industry class: **Information Technology Services**

Market Cap: **33.456 Bil.**

TEV: **32.289 Bil.**

S&P Credit Rating: -

11% Debt/Cap

NAS

United States

Cognizant Technology Solutions

Stock Splits (5)

Reset Selections

Tip: To toggle lines on the graph click corresponding legend item

Generate Screenshot

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FASTgraphs Performance Results **COGNIZANT TECHNOLOGY SOLUTIONS(NAS:CTSH)** Help On/Off

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y **All**

PERFORMANCE RESULTS FOR 12/31/1999 TO 12/10/2019

Invested: $ 10,000.00 Begin shares: 4391.16
Split-adjusted Price(12/31/1999): $ 2.28

Begin Shs at Closing Price: $ 268,299.88
Closing price(12/10/2019): $ 61.10

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
12/2017	0.45	0%	11.9%	4,391.2	1,976.01	19.8%
12/2018	0.80	77.8%	17.5%	4,391.2	3,512.92	35.1%
03/2019**	0.20**			4,391.2	878.23**	
06/2019**	0.20**			4,391.2	878.23**	
09/2019**	0.20**			4,391.2	878.23**	

Div. Growth Rate: (1 yrs)
AVG: 77.8%
CAGR: 77.8%

		S&P 500
Dividends:	$ 8,123.62	$ 3,506.92
Growth:	$ 268,299.88	$ 21,395.11
Annualized ROR (w/o Div):	17.9%	3.9%
Growth and Dividends:	$ 276,423.50	$ 24,902.03
Total Annualized ROR:	18.1%	4.7%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.
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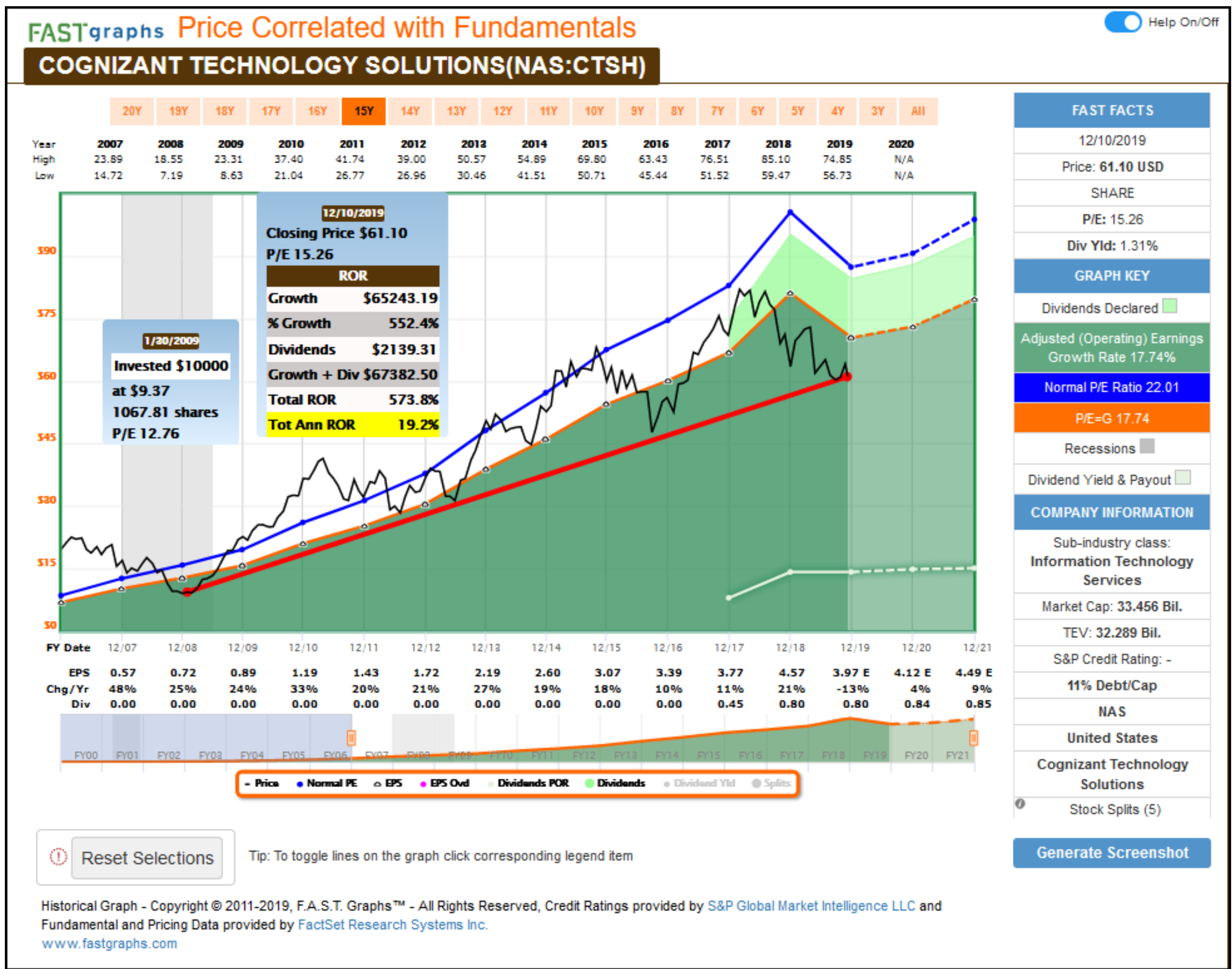
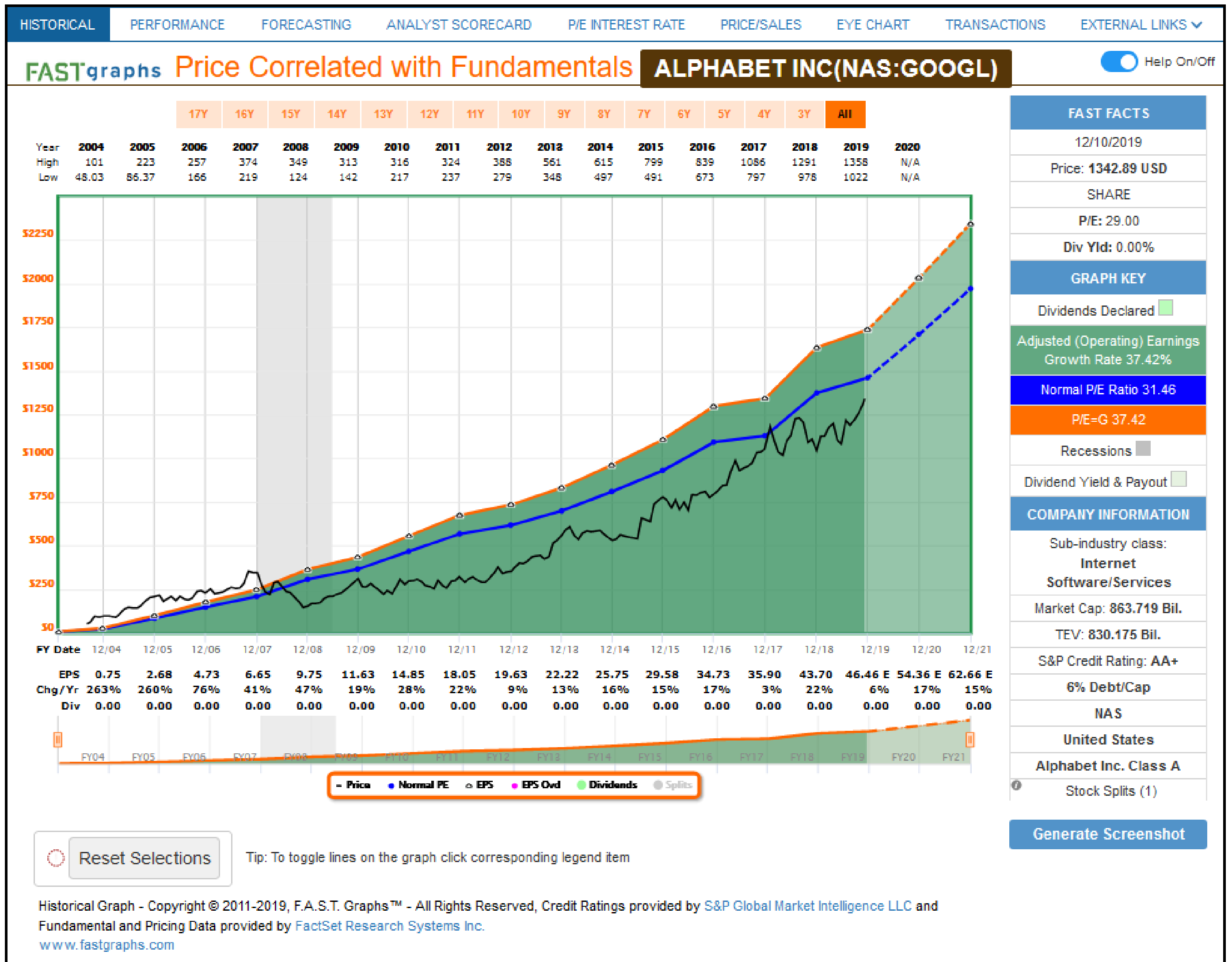
When Growth Rates Change So Does Valuation

A company's earnings growth rate tends to slow down the bigger the company gets. Fair valuation should and does adjust when that occurs.

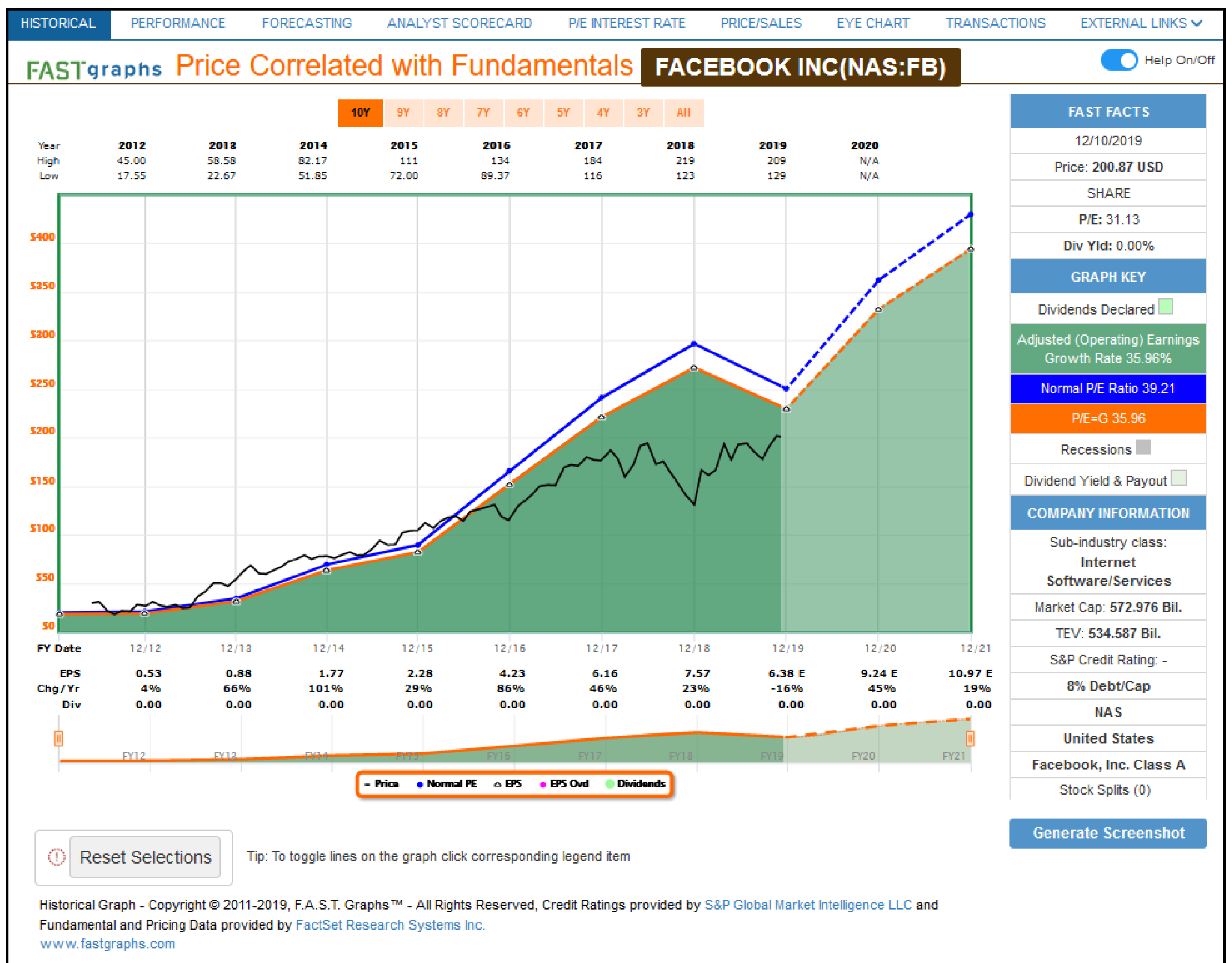


Superfast “Superstocks”

Alphabet Inc (GOOGL)



Facebook (FB)

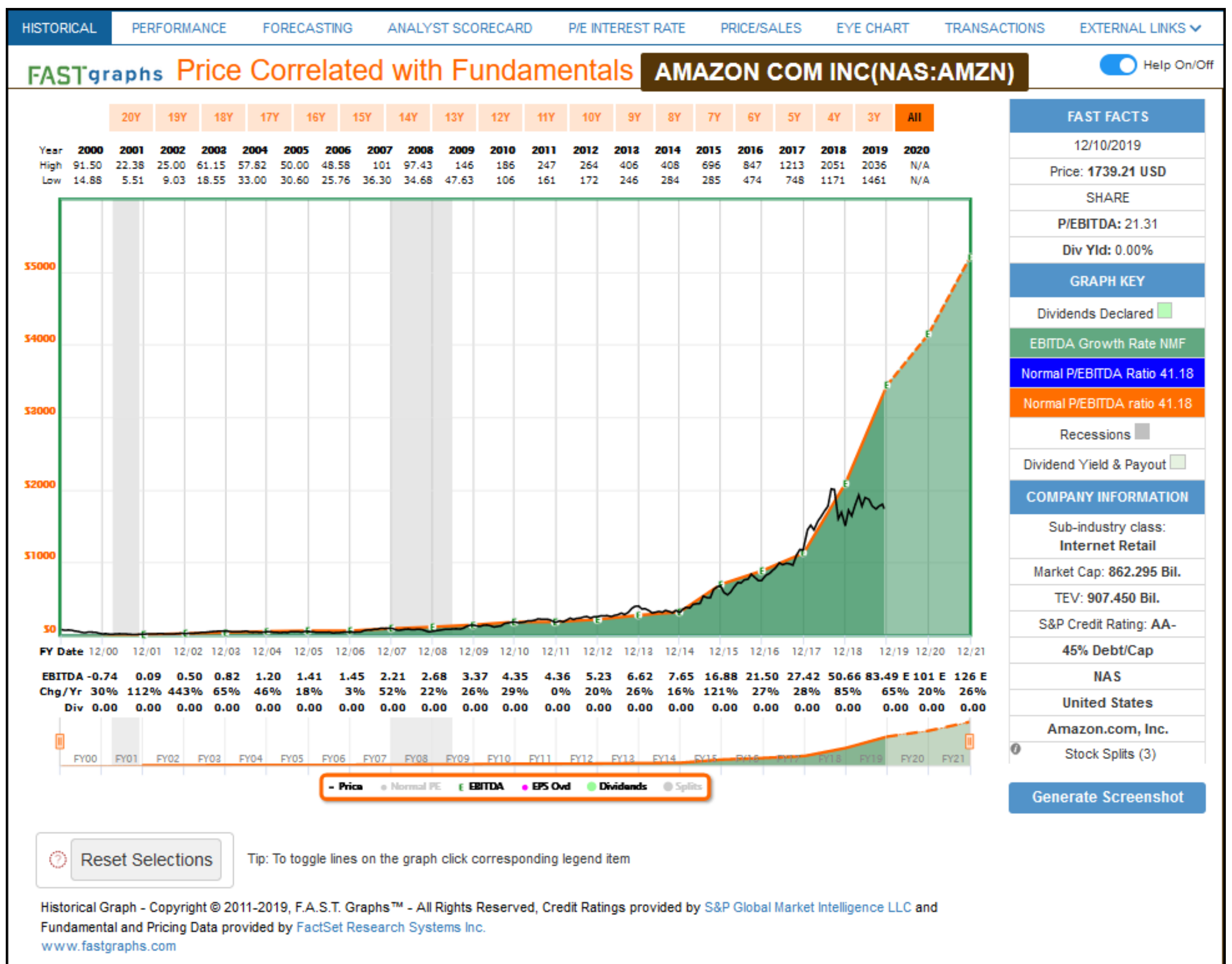


These Principles Apply To All Metrics Such As Cash Flows, etc.

Although everything written thus far has focused almost exclusively on earnings, it's important to understand that these principles universally apply to other metrics. For instance, Amazon's (AMZN) record is based on operating cash flow or EBITDA rather than earnings.

According to Jeff Bezos, Amazon has been willing to eschew earnings in favor of cash flows. Although the market typically values stocks, publicly at least, based on earnings Amazon is one exception. The correlation between Amazon's stock price and its generation of EBITDA has been uncanny as illustrated below:

Amazon Valued via EBITDA



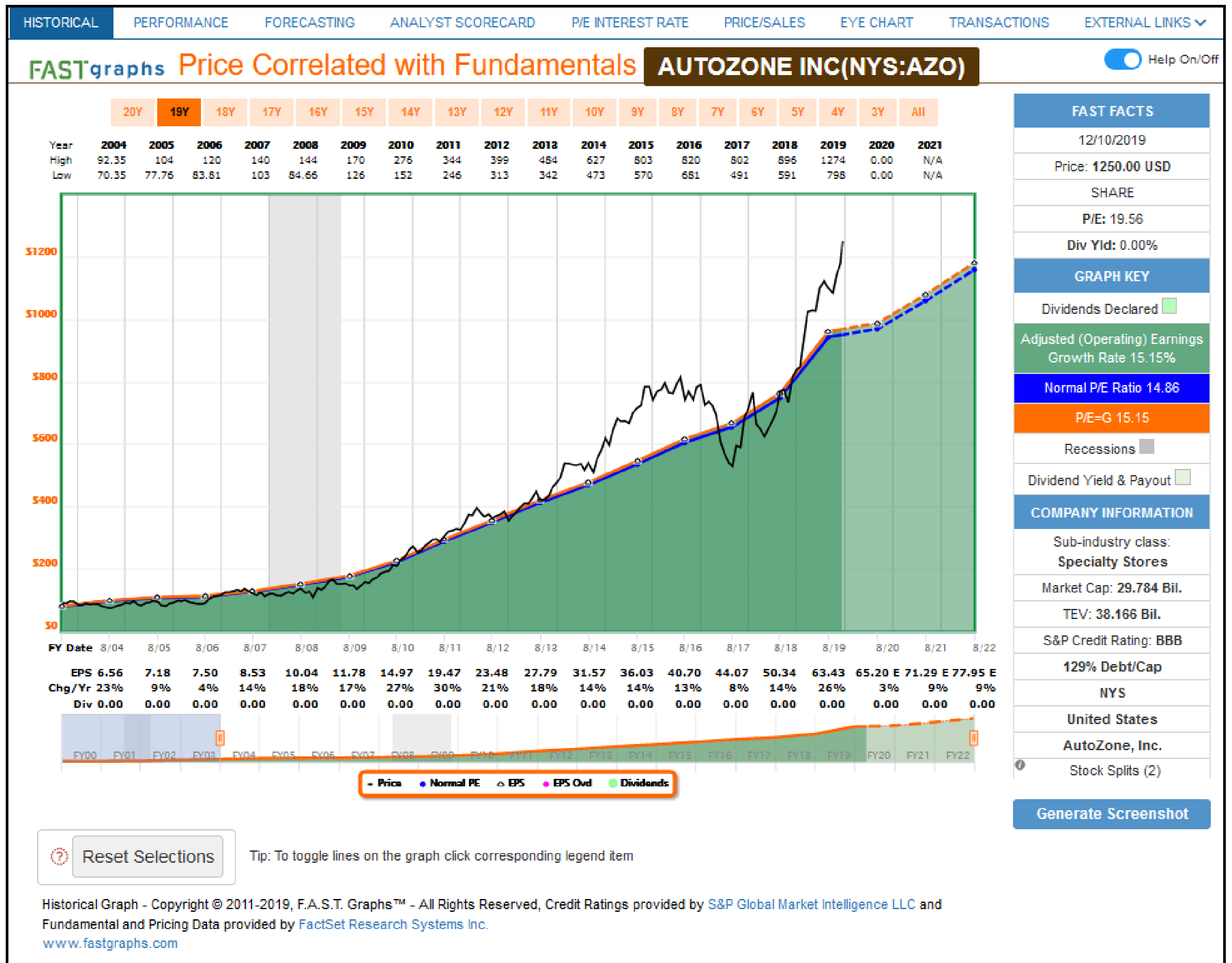
One important consideration that should be highlighted from the above FAST Graphs on these superfast “Superstocks” is how little an effect the general health of the economy or the stock market had on their performance results. Shareholders were rewarded in direct proportion to each company’s operating performance. And, each of these companies’ operating performance was a function of their independent business plans and models.

Growth and Value Summary

The following graph on AutoZone Inc (AZO) offers the opportunity to provide a summary of the principles discussed above. AutoZone has historically grown just outside the 15% threshold that the approximate definition of growth stocks suggests. Note that the adjusted operating earnings growth rate has been 15.15%, just slightly above the PE 15 baseline. Therefore, also note that

the P/E multiple of the orange line is 15.15, not 15. But most importantly, note how price has closely correlated with and tracked that valuation reference over this timeframe.

Therefore, the reader should further note that these valuation "rules of thumb" are precisely that. In other words, they are not absolutes. Instead, they represent rational ranges of valuation that are prudent and perhaps most importantly apply in the real world over long periods of time. There will be disconnects in the short run, but over the long run stocks will revert to these rational valuation levels based on their growth rate achievements over those timeframes.



From the insights provided by the FAST Graphs above, the relationships between valuation and earnings growth rates should be clear. They also validate the notion that the concept of fair value should always be a consideration for investors. Valuation clearly matters, in fact, valuation

matters a lot. When stocks are only viewed from the perspective of price alone, the principles behind valuation are easily missed or ignored. This can lead to very expensive investor mistakes.

As Warren Buffett has said: *"the fact that people will be full of fear, greed or folly is predictable. The sequence is not predictable."* The relevance of this statement implies accepting and recognizing periods of time when markets are behaving irrationally.

Types of earnings correlations

In Fast Graphs there are nine different correlations including four earnings correlations: adjusted operating earnings, owner's earnings, basic earnings, and diluted gap earnings.

Let's look at Microsoft Corporation as of their fiscal year ending June 30th 2020. The adjusted operating earnings was 5.76. The owner's earnings go up to 6.86. Basic earnings are 5.82 and diluted gap earnings of 5.76. How do we get these four different numbers?

Adjusted (operating) earnings

This metric is the default metric for FAST Graphs, and is generally the best metric to use for most companies (except for REITS, they use FFO and AFFO as you'll see below). It uses the reported earnings instead of GAAP earnings from companies which adjusts for 1 time charge offs and things that do not

represent normal operations of the company.

Owner's earnings

Owner's Earnings utilizes Warren Buffett's preferred formula for valuing companies.

Net Income
+ Depreciation and Amortization
+/- Other non-cash charges
– Maintenance Capital Expenditures

This is all then divided by the diluted common shares outstanding to give a per share number to correlate to.

Basic Earnings

Basic earnings is simply Net Income/Common Shares Outstanding. This basically shows a snapshot of how the company is doing today. This is given to us at the bottom of the income statement in the annual report. GAAP basic earnings and diluted earnings can be found for Microsoft in their financial statements and notes including note 2 which tells us that basic earnings per share is the weighted average number of common stock outstanding during the last 12 months fiscal year. The diluted earnings per share includes outstanding stock options and stock awards.

When we look at the bottom line net income and we divided by basic shares to get basic earnings. For Microsoft as of June 30th 2020, we take: 44,281/7,610 = 5.82

Diluted earnings (GAAP)

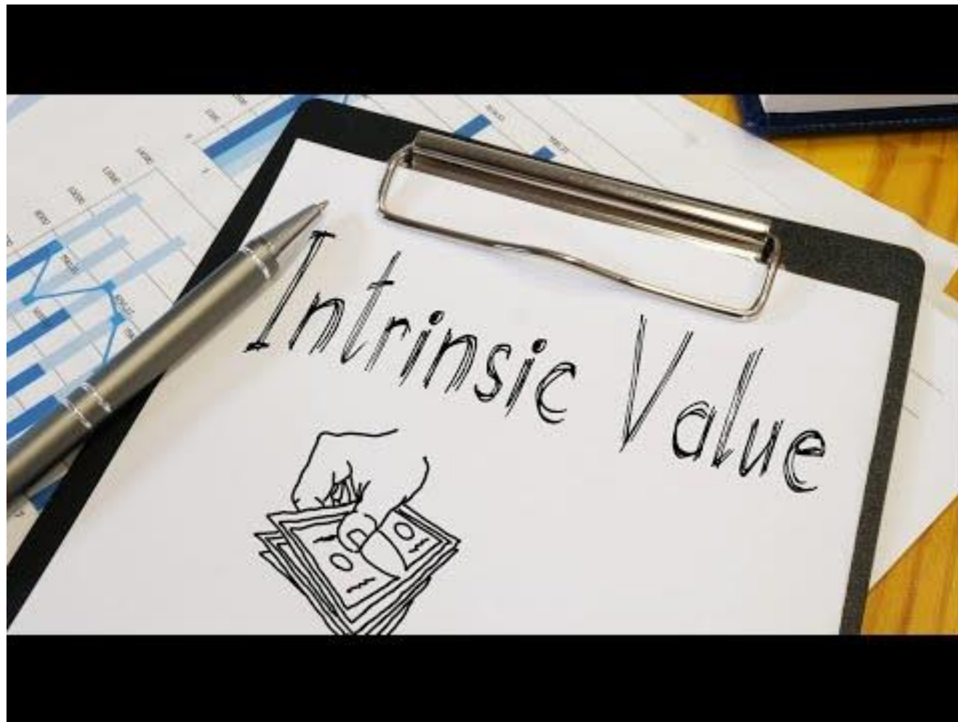
Diluted Earnings is Net Income/Diluted Common Shares Outstanding. This is slightly different than Basic Earnings, because it is showing more of a worst-case-scenario. Diluted shares include all common shares outstanding plus the total number of shares the company would issue if all convertible bonds or anyone with stock options traded in for stock.

Diluted earnings per share includes the stock options that could be exercised that would increase the number of shares outstanding to 7,683. This would mean that diluted earnings per share is: 44,281/7,683 = 5.76, down from the basic EPS of 5.82.

When we look at the income statement we're going to work our way down from top line to bottom line. For Microsoft, you can see the revenue for the last 12 months was 143 billion plus

and to generate that amount of sales revenue we had cost and we also had expenses so we match in accrual accounting the cost of
the revenue for products and services that's 46 billion plus. That is subtracted to get our gross margin of
96,937 (million).

Cash flow correlations



Operating cash flow

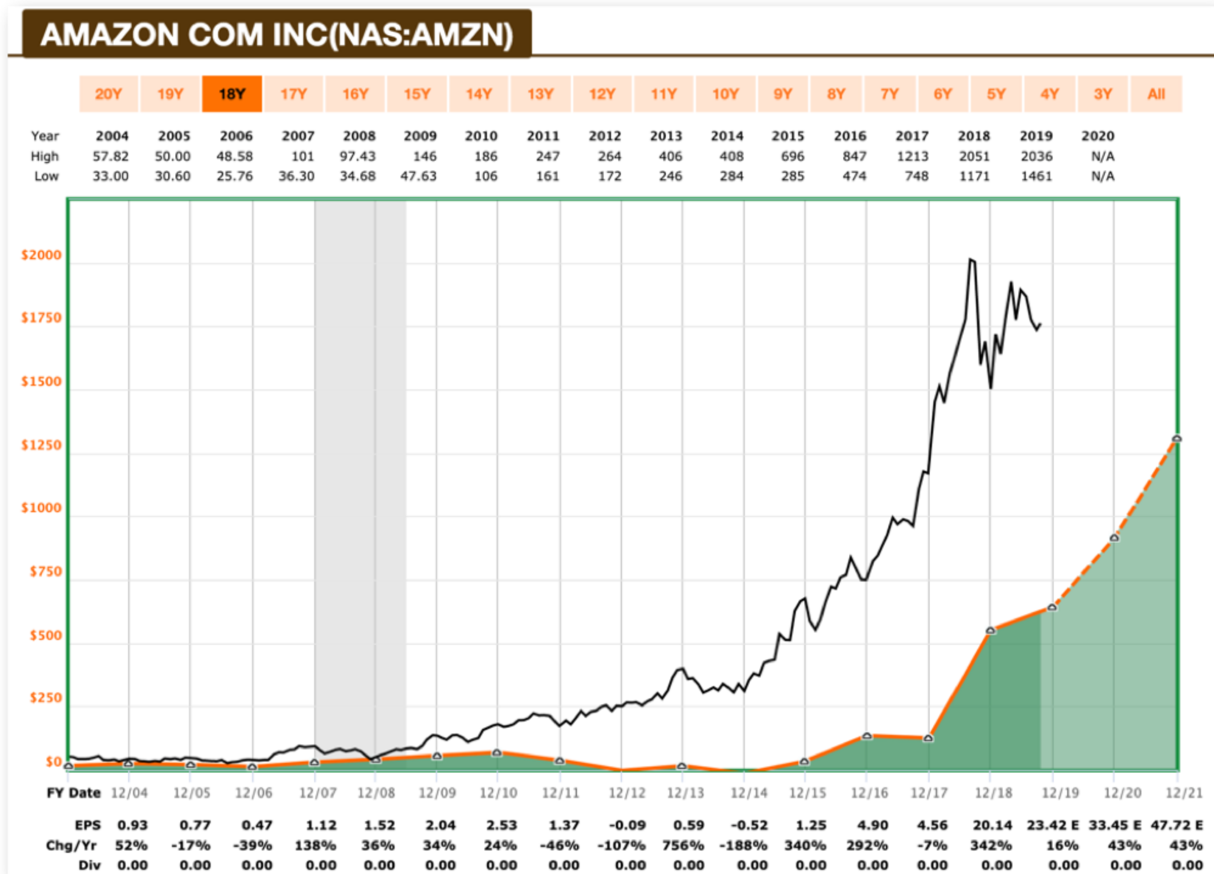
Operating Cash Flow simply plots the OCF per share to correlate it to stock price. Stock price doesn't always correlate to this metric, but it is still important to look at the see the stability of Operating Cash Flow for the selected company.

You've probably noticed that "FFO" is included with "OCF". This is because this is the metric to utilize when looking at REITs. REITs report both FFO and AFFO and they are the industry standards used to value the REIT using those two metrics.

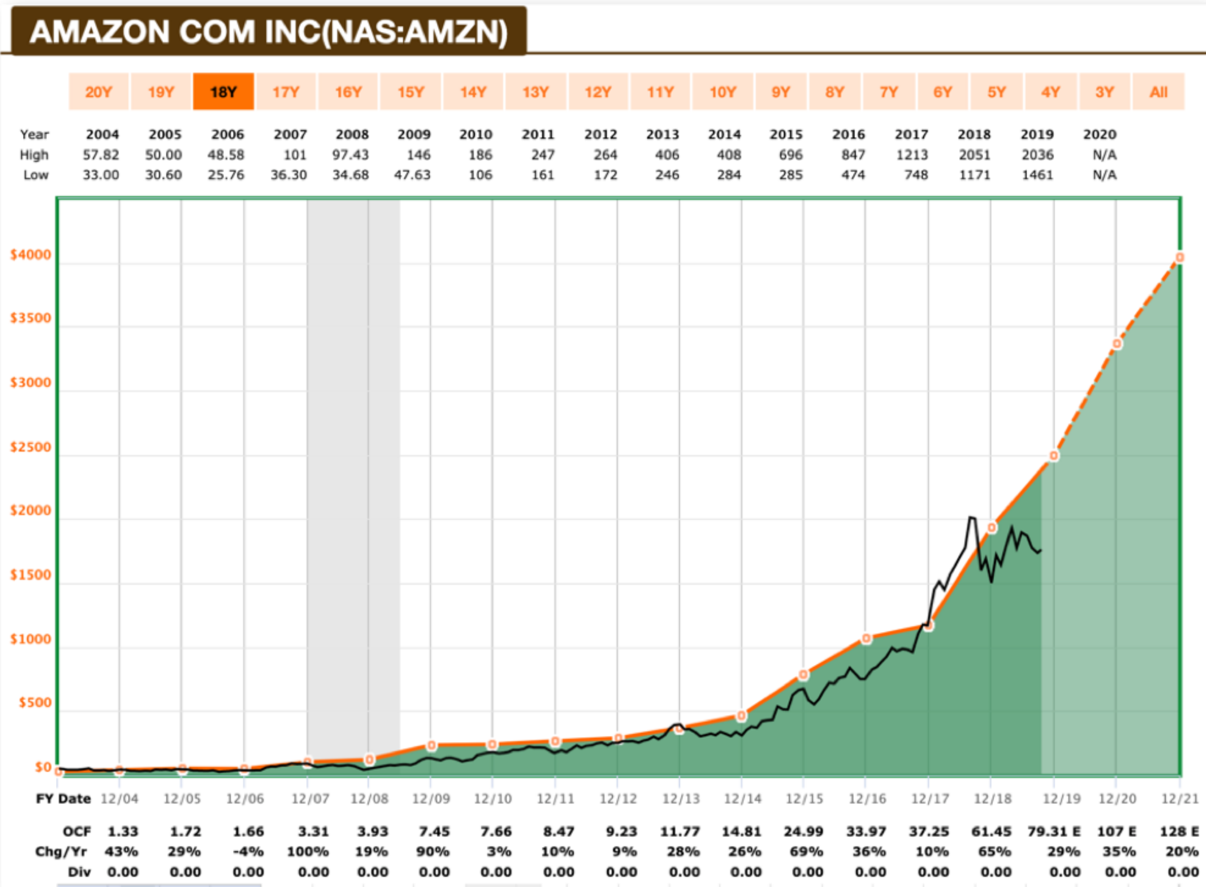
There are some cases though where Operating Cash Flow does correlate to stock price better than any other metric. An example of this would be Amazon (NAS:AMZN).

AMZN really doesn't correlate to Adjusted (Operating) Earnings as most other companies do, and that partly has to do with Jeff Bezos (The Founder of Amazon) telling shareholders that

AMZN is not going to focus on earnings, but cash flow instead. The first image below is AMZN plotted using the Adjusted (Operating) Earnings, and as you can see there is a large disconnect between the stock price and the earnings.



This second image shows AMZN plotted using Operating Cash Flow over the same timeframe, and there is undeniable evidence showing that AMZN follows where its Operating Cash Flow goes.



Free cash flow

Free Cash Flow plots Free Cash Flow per share and compares it to stock price. Just like OCF above, FCF doesn't always correlate perfectly with stock price, but seeing stability in the metric is extremely important.

FCF will generally be less stable than OCF because it accounts for Capital Expenditures for the year.

FCF = OCF – Capex.

As discussed above about REITs, Free Cash Flow will represent AFFO when valuing a REIT.

Intrinsic value correlations

Price to EBITDA (earnings before interest, taxes, and depreciation and amortization)

This metric plots the EBITDA per share of the company. This is a widely used metric, because it is viewed as a “soft form” of Operating Cash Flow. As Warren Buffett puts it, it is Earnings before all of the bad stuff.

EBITDA is defined as Earnings Before Interest Taxes Depreciation and Amortization.

Net change in cash

This simply shows the net change in cash on the balance sheet the company has each year and graphs it as a per share item. It is simply Ending Balance of Cash – Beginning Balance of Cash.

Ben Graham’s Formula

If an investor is going to successfully invest in common stocks over their lifetime, there are three important questions that must be correctly answered. What to invest in? When to invest? When to sell? The first question deals with finding the right company or companies that you believe can deliver the returns you are seeking. Of course, this is a multifaceted question that also relates to, and deals with the individual investor’s specific goals, risk tolerances and objectives, in addition to the prospects of the company in question.

The last two questions deal with valuation. No matter what the investor’s goals are, or whether or not a company pays a dividend, sound valuation should be adhered to. Consequently, the answers to when to invest and conversely when to sell, are rather straightforward.

Benjamin Graham the Acknowledged Father of Value Investing

Ben Graham is credited with coining the phrase “intrinsic value”. And as many investors know, his book *Security Analysis* co-authored with David Dodd and first published in 1934 represents the Bible of value investing even to this day. Ben Graham introduced the principles of valuation to the investing world and established its importance regarding prudent investing practices. One of Ben Graham’s most important contributions was in drawing a fundamental distinction between investing and speculating. Ben believed that a sound business purchased only at intrinsic value or below provided not only an adequate return, but also a margin of safety. Margin of safety is addressed as a method of risk management later in this book.

Another one of Ben Graham’s greatest contributions was providing his famous formula for valuing a stock. However, before we delve deeply into this formula, some historical perspectives regarding Ben Graham’s world are in order. Ben Graham was born in 1894 and died in 1976. Ben first came to Wall Street and entered the investing world in 1914. Therefore, his formative years were most definitely influenced by the time known as the Industrial Revolution.

Ben Graham’s Value Formula: $V^* = EPS \times (8.5 + 2g)$

In other words, fair value is equal to EPS multiplied by the sum of 8.5 and 2 times the growth rate of the firm's earnings. The influences of the Industrial Revolution on Ben Graham's thinking provide both insights and perspectives on the veracity and validity of his famous formula for valuing a stock. Ben Graham was developing his understanding of stock investing during a time when most public companies were agricultural or industrial in nature, and therefore grew very slowly, usually between 0 to 5% per annum. Consequently, his formula for calculating the value of a stock by taking the company's last 12 months earnings-per-share times the answer of the equation 2 times expected earnings growth plus 8.5 made perfect sense for valuing companies in his era.

In 1974, in an updated version of *Security Analysis*, Ben Graham's formula was modified, allegedly to consider and to adapt to changes in prevailing interest rates. Nevertheless, there is research-based evidence that validates Ben Graham's original formula as it applies to companies growing earnings at 5% or less.

Keep in mind, that in Ben Graham's day, there were no Microsoft's (MSFT), Starbucks (SBUX), Google's (GOOG), Netflix (NFLX), Apple (AAPL) or Green Mountain Coffee Roasters (GMCR), etc. Consequently, it is inconceivable that Ben Graham would have suggested multiplying Netflix's historical 58% earnings growth rate, or its 35% consensus forecast earnings growth rate, times two and adding 8.5 to this number in order to calculate a PE ratio that reflected Netflix's intrinsic value. Ben Graham never saw companies growing earnings-per-share at such incredible rates. Nevertheless, his original formula stands the test of time today for companies growing at rates that prevailed during his era.

Modern Evidence of Ben Graham's Formula

The following examples are offered as clear and undeniable evidence of the validity of Ben Graham's insightful formula. Utilizing our "fundamentals at a glance" research tool F.A.S.T. Graphs™, you can see how profoundly and accurately Ben Graham's formula applies to companies growing at 5% or less. Fast Graphs automatically applies this formula to slow growth companies.

Although it may be confusing that both a 5% grower and a 10% grower will utilize the same PE ratio to identify intrinsic value, there is a logical explanation. Buying a company at a sound valuation does not determine the rate of return you can earn. Instead, it means that you are making a sound purchase based on a rationally expected valuation that the marketplace will apply to a company.

The rate of return that an investor should logically expect to receive will be more a function of the rate of change of earnings growth that a given company is capable of generating. The faster the earnings growth rate, the higher your return expectations should be. When you invest at intrinsic value levels, your long-term rate of return will inevitably be a function of your company's earnings growth. Stated more directly, if you buy a 5% grower at intrinsic value, your

long-term capital appreciation expectation should be 5%. If the company pays a dividend, you can add that to your total return. In contrast, if you buy a 10% grower at intrinsic value, your long-term capital appreciation expectation should be 10%, plus dividends as above.

The point is that intrinsic value will inevitably manifest over time. Therefore, if you adhere to investing under the principles of intrinsic value, you will be making sound and intelligent decisions that provide a margin of safety and compensate you for the risk you take. However, your investment receives its value from the cash flow it produces. The higher the growth rate the more cash flows the company will produce, and the higher the rate of return that can be expected as a result.

Bonds Set the Valuation Threshold

Considering that a bond is a fixed income instrument, it provides a yield that doesn't grow. For example, a 10 year bond that pays 8% interest has a price to interest ratio (PI Ratio) of 12.5 (cost of 100, divided by eight, the interest rate). Or as you would more commonly find today, a 10 year corporate bond paying approximately 5% has a price to interest ratio (PI Ratio) of 20. There are two important points that are being made here. First, even a no growth fixed stream of income has a value that is represented as a multiple of its yield. Second, the lower the yield the higher the price, or the more expensive the fixed income instrument is.

Ben Graham understood that intrinsic value was functionally related to fixed income rates or bond rates, and he wrote about it extensively. Ben understood that stocks and bonds were in competition with each other and therefore simultaneously related.

Testing Ben Graham's Formula in the Real World

Due to the regulated nature of their businesses, utility stocks are, almost by definition, slow but predictable growers. Therefore, they represent a quintessential example of the kind of company that research indicates that Ben Graham's formula applies to. The graph below plots the stock price independent of earnings and dividends of Southern Company (SO), a well-known utility, from 2003 to December 2020.

You can see that the earnings growth rate of 3.6% translated into earnings going from $1.97 in 2003 to an estimated $3.20 in 2020. You will also note that the orange line used the Graham formula to estimate fair value for SO over the period examined. Throughout the graph, buying SO when the price was above the orange line would have resulted in weak results. Buying at fair value or better would have yielded much stronger results. Regardless, you can see the formula in action.

Look specifically at 12/18 when the stock was trading roughly at fair value. EPS was 3.07 such that the Graham formula would say intrinsic value = 3.07 X (8.5 + 2 X 3.6) = $48.20 which is roughly where the black price line was at that point. In fact, on 11/30/2018 SO closed at $47.33.

Ben Graham Wisdom

Ben Graham constantly taught that the stock market was not always rational. He pointed out that there will be times when the markets would behave very foolishly. However, he also suggested that having an intelligent framework based on valuation would allow investors to avoid making foolish mistakes. Ben Graham immortalized this market reality with his famous allegory courtesy of Wikipedia as follows:

Graham's favorite allegory is that of Mr. Market, an obliging fellow who turns up every day at the share holder's door offering to buy or sell his shares at a different price. Often, the price quoted by Mr. Market seems plausible, but sometimes it is ridiculous. The investor is free to either agree with his quoted price and trade with him, or ignore him completely. Mr. Market doesn't mind this, and will be back the following day to quote another price.

There are sound business and economic principles behind the concept of valuation. Ben Graham did more than give a formula for calculating intrinsic value, he taught that valuation matters a lot. When you pay more than sound valuation indicates, you will be taking more risk for potentially a much lower return than you deserve. Conversely, if you buy at a bargain price, your risk will be lower and your future returns potentially higher.

P/E for Firms Growing Faster Than 5%

In Fast Graphs, the Ben Graham wisdom is updated and extended for firms growing greater than 5%. In particular, for firms growing in the 5 to 15% range, the intrinsic value P/E is set to 15. For firms growing higher than 15%, P/E/ is set to the growth rate of the firm with a cap at 30%.

Discounted cash flow valuation (DCF)

The discounted cash flow method is a direct application of the idea that value is related to the future cash flows generated by a company. Under this method of valuation, you project the future cash flows and then use the math of time value of money to find the present value of the future cash flows. The result is the value of a firm.

This method makes clear the importance of developing a reasonable and rational expectation of the future prospects of a business. We cannot escape the obligation to forecast-our results depend on it. Our forecasts should not be prophecy, and we should not simply guess, nor should we play hunches. Instead, we must endeavor to calculate reasonable probabilities based on all factual information that we can assemble. Analytical methods should then be employed based upon our underlying earnings driven rationale, providing us reasons to believe that the relationships producing earnings growth will persist in the future.

Forecasting future earnings is a major key to investment success. This is because earnings and cash flow determine market price and dividend income in the long run. We should learn as much as we can from the past, carefully focus on the present (especially on current valuation based on the earnings yield a company currently offers), and finally we must attempt to make rational and reasonable forecasts of what we can expect in the future. Moreover, it is the future prospects of the business that will be most relevant to us, but it is also the most challenging to ascertain.

Forecasting Earnings Is The Key

Discounted cash flow formulas may appear complex and imposing, but thanks to technology, their implementation is rather easy to accomplish. However, the determination of the precise factors that must be plugged into the formulas for them to be of value is the greater challenge. The two most critical factors to input are the future cash flows (growth rates) and the discount rate.

Formulas and models aside, it's important to realize the ultimate goal of forecasts is to determine what the business is worth today. In other words, we want to find current intrinsic or fair value. One of the most important aspects of that goal is the recognition that these calculations cannot be made with laser like precision. Instead, the best we can hope to accomplish is the determination of a reasonable range of probabilities and possibilities that we can use to make reasonably sound investment decisions. Investing is not a game of perfect. On the other hand, it doesn't need to be. As Warren Buffett once so aptly put it: *"It is better to be approximately right than precisely wrong*."

Forecasting Future Cash Flow

Given that future cash flow projections are the key to long-term investing success in common stocks, it makes sense to place a great deal of importance on trying to be both logical and rational with forecasts for growth. It is best to approach this process with the idea of a reasonable range of possibilities firmly in my mind.

Many investors find it helpful to run multiple scenarios. This might include a conservative, moderate, and best-case scenario. when making my estimated earnings calculations.

Fast Graphs was designed to be a tool to think with. In the case of forecasting future cash flow, this is particularly true. Three features of Fast Graphs are particularly useful when applying discounted cash flow logic.

First of all, the future estimates in Fast Graphs are programmed to default to the consensus analyst estimates gathered by and provided by FactSet. Analysts are paid to follow stocks. Many firms have numerous analysts making projections and this gives us some history to use to judge how good the analysts are at projecting earnings for a certain firm.

Several studies find that analysts' consensus estimates are often inaccurate, and sometimes, but not all the time, by a wide margin. There are a couple of points about analysts' estimates that are often overlooked. First of all, about half the time the estimates are spot on. As to the times when they are inaccurate, they are still often accurate enough to base reasonable decisions upon. Rather than focusing on whether or not analysts are in general accurate, it is better to approach on a case-by-case basis.

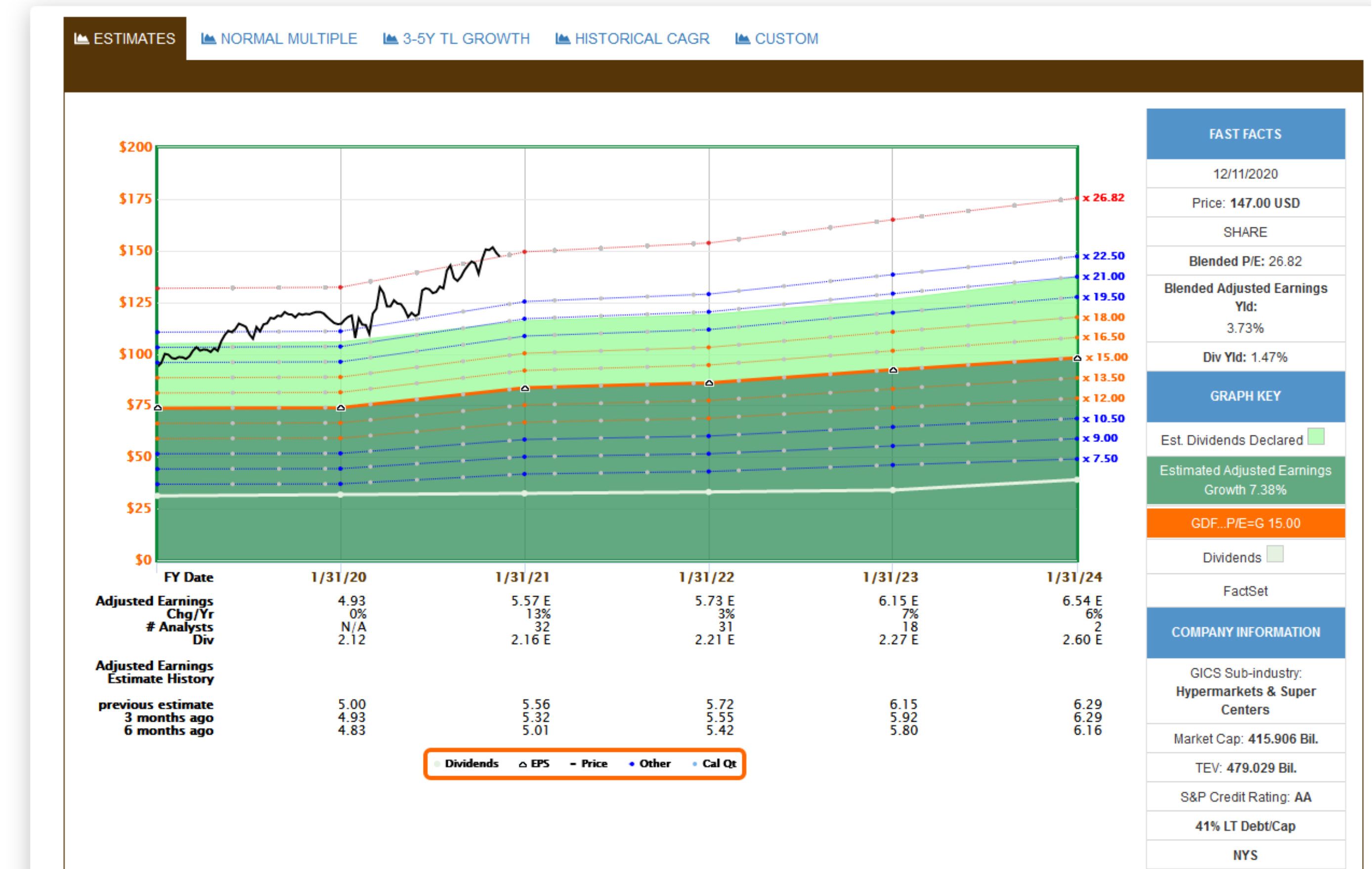
Moreover, it is best not to treat analyst forecasts as a precise number. Instead if you see a consensus estimates for say 9% growth over the next 5 years, you might translate this to a range. Perhaps something like 8% to 10%, or 8% to 12%.

The most important thing is not whether the numbers are precisely accurate, but whether or not the general direction helps make decisions. You will always need to check analysts forecasts against your own understanding. Do you believe the company is capable of generating average future growth, above-average future growth, below-average future growth, or no growth?

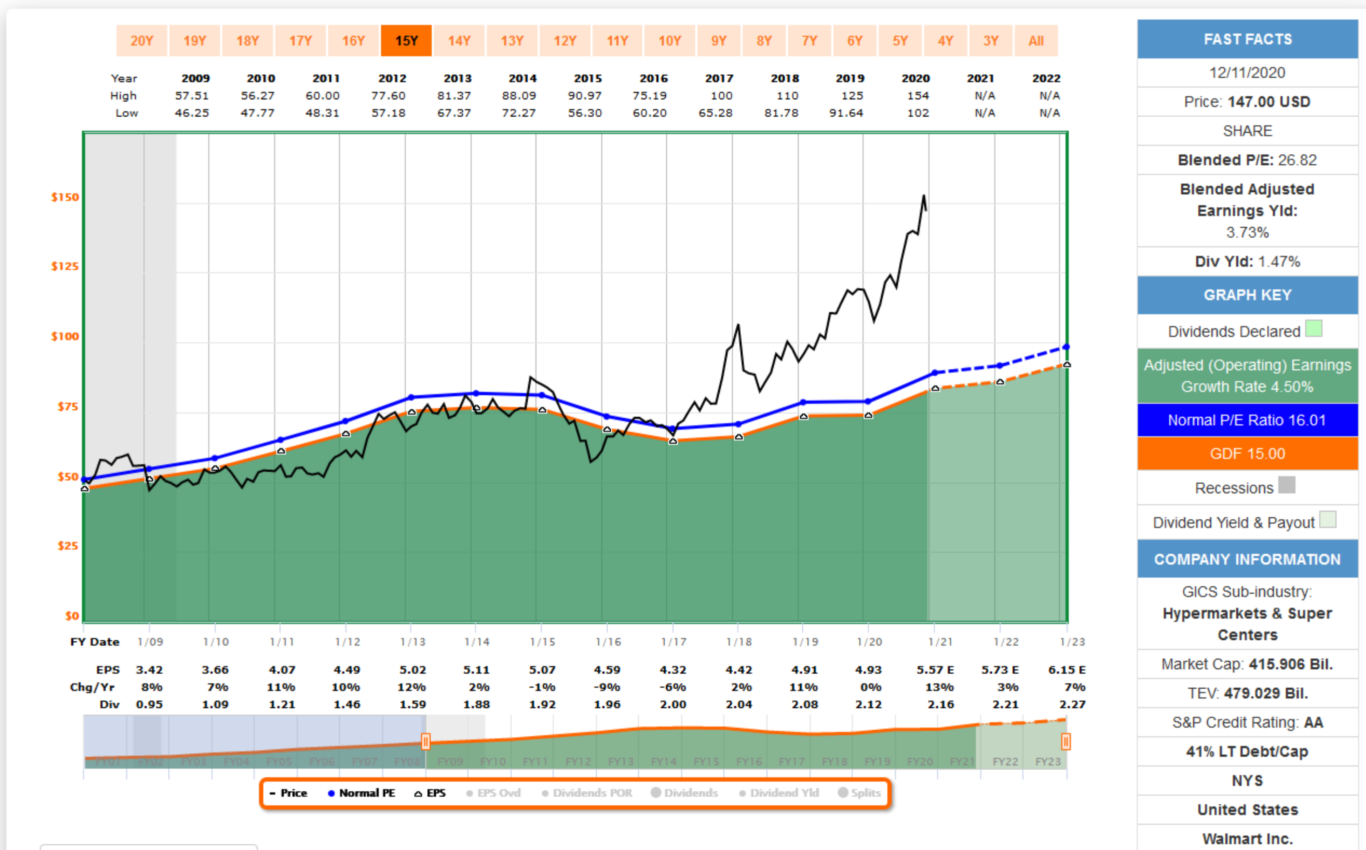
The following are offered as examples of how to use the calculator tool when evaluating the future potential of any company. First and foremost, note that the Forecasting Calculator in Fast Graphs provides estimates for the current fiscal year and for the three fiscal years beyond the current year.

Wal-Mart (WMT), has a fiscal year-end of January 31, the $5.57 estimate (the nearest) is very near as of the 12/22/2020 date of this example. Moreover, the estimate of $5.73 for next fiscal year is only slightly more than 1 year away. These are the estimates to focus most of your attention on because forecasts in the fairly short run are more accurate than those at longer terms. It is also important to note that more analysts are involved in shorter-term forecasts than longer-term forecasts. For WMT, you will see that there are 31 analysts making predictions for FY 22 compared to 18 analysts for FY 23, and only 2 analysts for FY 24.

Forecasting Calculators **WALMART INC(NYS:WMT)**



In addition to using the Forecasting Calculator, it makes sense to check a longer-term historical graph to use as a benchmark. The following 15-year historical graph on Wal-Mart calculates earnings growth at 4.5% per annum. This provides some credibility regarding the 7.38% estimated growth rate out to 1/31/2024 on the Forecasting Calculator.



In Forecasting Calcuators, you have the option to use historical growth, analyst estimates of growth, or even input your own via the custom feature.

Discount Rates and Discounted Cash Flow Valuation

The discounted cash flow valuation method is one of the most widely-accepted and utilized methods of valuing a business. As mentioned above, in order to calculate valuation, practitioners must rely on mathematical formulas. However, the challenge with utilizing mathematical formulas to determine the net present value (NPV) of a future stream of income is in determining the proper inputs. Consequently, the accuracy of our result is subject to the principle "garbage in garbage out." In other words, our calculations will only be good as the data inputs we use when running our formulas.

Consequently, this presents a real challenge because two of the most important inputs to the discounted cash flow (DCF) formula and net present value (NPV) formula require a modicum of accuracy when estimating the future growth rate of the cash flows and their present value. Moreover, the next most critical input is in choosing the correct (best guess) discount rate to apply. Unfortunately, no precise values are available. Instead, practitioners must rely on making the most reasonable assumptions and/or estimates for these critical inputs that they can.

Calculating The Correct Discount Rate

Academics studying and teaching modern finance theory support the utilization of the capital asset pricing model (CAPM) as their preferred method for determining the correct discount rate to apply to their formulas. However, many famous investors like Warren Buffett do not agree with this approach, In fact, Buffett uses the current yield on U.S. treasuries as his discount rate.

Trying to pin down a discount rate can add unnecessary confusion. Ultimately, what the discount rate is trying to capture is the return that YOU the investor require for taking on the risk of a given investment. The greater the risk, the greater the return you require. This logic should give you a common sense check against method used to determine a discount rate.

The 15 P/E Ratio As a Short Form DCF Formula

A P/E ratio of 15 represents a valid and fair valuation proxy for most companies. The average P/E ratio for the Standard & Poor’s 500 over the past 200 years has been about 15. One potential explanation for this result is based on the earnings yield (inverse of the P/E).

Using a simple illustration of what E/P (earnings yield) calculates, assume $1 worth of earnings and divide it by a PE of 15. This equals an earnings yield of approximately 6.67%. This 6.67% is a relatively close approximation of the the long-term return that common stocks have delivered throughout history. Of course, that number often deviates based on the conditions of a particular period. However, during normal times, the 6.67% return seems like a reliable and reasonable expectation of returns on the average stock.

This earnings yield based reasoning represents a reasonable discount rate to input into discounted cash flow (DCF) and/or net present value (NPV) formulas as well.

DCF on Fast Graphs

Fast Graphs does not have an explicit DCF calculator. However, the logic of DCF can be found throughout the graphs. Recall that the main idea of DCF is that the value of a stock is the present value of the future cash flows generated by the company. Fast Graphs allows us to estimate future cash flows using some combination of analysts, history, and our own assessment.

Where traditional DCF gets trickier is in setting the appropriate discount rate. Rather than attempting to get precise with a calculation for a concept that is somewhat fuzzy, Fast Graphs provides a more common

sense approach. In particular, the Forecasting Calculator allow you to project a future stock price based off earnings growth and a projected valuation ratio. You can then compare the future stock price to the current stock price to get an estimated annualized return. This estimate for annual return can be thought of as an "actual" return which you can compare to the return that you require (discount rate). In this way, no formulas or esoteric required return calculations are needed. The result is a "DCF like" analysis that is much quicker, intuitive, and easy to interpret compared to a full blown DCF model.

Topic 4: Basic Accounting Concepts

Why the numbers are presented the way they are

Generally Accepted Accounting Principles (GAAP)

Overview of GAAP
Accounting provides us with a standardized system for recording financial events that occur within an organization, as well as the organization's overall financial position. To ensure a reasonable degree of consistency in the presentation of financial information, a system of Generally Accepted Accounting Principles (GAAP) has evolved.

- GAAP is not a legal requirement. However, if an organization's financial statements are audited by an outside Certified Public Accounting (CPA) firm in the United States or by a Chartered Accounting (CA) firm in Canada, the auditors are required to disclose deviations from GAAP. Such deviations can jeopardize a firm's financial credibility. As a result, most audited organizations comply with the rules.

- In the United States, the Financial Accounting Standards Board (FASB) writes the rules. In Canada, the rulemaking body is the Canadian Institute of Chartered Accountants (CICA).

- Accounting is not standardized internationally. The United States and Canada are remarkably similar in their GAAP rules and requirements, but other countries often make quite different GAAP assumptions. Many large multinational organizations follow the International Accounting Standards (IAS).

- With multinational companies, the accounting rules of the parent company's country are normally used in the consolidated statements. Thus, a U.S. company with international subsidiaries will follow U.S. GAAP in its annual report, while a British company with U.S. subsidiaries will prepare its statements in accordance with British GAAP.

- While GAAP is the system used for reporting to the shareholders, banks, and the public, a business's tax accounting will comply with the tax laws of the countries in which it does business. As a result, the numbers on the tax return will often differ from those on the financial statements.

GAAP rules are extensive and often quite complex.
The following are among the most critical GAAP assumptions:

- **The fiscal period**—While organizations typically prepare monthly, quarterly, and year-to-date financial statements, one year—or approximately one year—is usually the critical financial period.
- **The use of historical cost**—In most countries, historical cost (i.e., what was paid) is the basis for valuing assets. This can lead to undervaluing of assets, as the current market value may be much greater due to inflation or other factors. However, if an asset is permanently impaired its value must be lowered to what it is now worth.
- **Conservatism**—Conservatism requires that losses be recognized as soon as they can be quantified, while gains must be recorded when earned.
- **"Going Concern" concept** – When we keep the books, we assume that an organization will remain in business for the foreseeable future. The alternative would be to show items at liquidation value, which is normally not realistic.
- **Monetary unit** – All items on the statements are expressed in monetary terms regardless of their nature. Thus, inventory, etc. are shown at their monetary values. In the U.S. accounting, historical cost (i.e., what was paid) is the basis for valuing assets.
- **Quantifiable items or Transactions** – Accounting deals with items or events that can be quantified in monetary terms. Since the value of some of an organization's strengths, such as its work force, cannot be quantified, financial statements do not show the total worth of the organization.
- **Consistency** – GAAP permits certain choices in accounting methods or assumptions. Once a particular method or assumption has been selected, the organization must continue to use that method or assumption unless a change is announced. This principle is essential for the accurate evaluation of financial statements.
- **Full Disclosure** – If an accounting method or assumption is changed and the change has a material impact, it must be disclosed along with the corresponding financial effects.
- **Materiality** – Material events or information are any events or facts that would affect the judgment of an informed investor. Material items must be disclosed separately from other information in financial reports. Because in large organizations many events are not material, categories such as "other assets," "other liabilities," and "other income and expenses" are used in annual reports.

Three Branches of Accounting

1. ***Financial Accounting***— Accounting according to **GAAP** or **IFRS**

   GAAP – Generally Accepted Accounting Principles – Guidelines and rules for use by accountants in preparing financial statements. Developed over a period of years, these principles are designed to help ensure that financial data are presented fairly and are comparable from firm to firm and industry to industry.

   IFRS – International Financial Reporting Standards - are principles-based standards, interpretations and the framework adopted by the International Accounting Standard Board (IASB). IFRS financial statements consist of:

1. Statement of Financial Position (Balance Sheet)
2. Statement of Comprehensive Income (Income Statement)
3. Statement of Changes in Equity (Equity section of Balance Sheet)
4. Statement of Cash Flows (Cash Flow Statement)
5. Notes, including a summary of significant accounting policies (Footnotes)
6. Comparative information is required for the prior reporting period (Past fiscal year figures)

<u>Financial</u> Accountants - Look Backward - External Accounting

Historians who use dollar signs (**$**) to report the history of a business to interested individuals through the monthly, quarterly, or annual financial reports of the business.

2. ***<u>Tax</u> accounting***— Accounting in accordance with the appropriate country's tax laws – Internal Revenue Service (IRS) in United States

3. ***<u>Managerial</u> accounting***— Non-GAAP accounting to help management make better business decisions

<u>Managerial</u> Accountants - Look Forward - Internal Accounting

Instead of reporting on what has happened, they provide information for making better decisions regarding the future. Includes financial forecasts, budgets, projections, and analysis to help determine:

- **<u>Profitability</u>** (profits vs. risk) versus **<u>Liquidity</u>** (safety vs. risk)

Who Monitors Compliance with the Rules?

Audit Opinion or Accountant's Report

An audit by an independent, outside accounting firm gives financial statements credibility. The opinion letter normally states that the statements were prepared in accordance with GAAP and are a fair representation of the organization's financial position. If the annual report is a summary report, the auditors' opinion is referenced there and the actual opinion letter appears in the 10-K report (the official annual filing with the Securities and Exchange Commission). Except in rare instances, this opinion should not contain any qualifications as to the integrity of the statements.

The Role of the External Auditor

In most cases, an independent Certified Public Accounting (CPA) or Chartered Accounting (CA—the Canadian equivalent of CPA) firm is involved with the financial statements. This role takes one of three forms:

1. **Compilation**

   For small firms, the CPA or CA prepares (i.e., compiles) the statements using financial information supplied by management. A compilation does not verify the accuracy of the numbers nor the accounting methods. However, for small businesses the compilation may be all that is needed because the manager/owners are heavily involved in all aspects of the

business and financing needs are minimal.

2. **Review**
A review is the next step up from a compilation. The CPA or CA asks management questions about how the books are kept and how the statements are prepared. However, a review does not involve going outside the company for information. Companies move from a compilation to a review as their needs for financing increase and/or as the owners are less directly involved in all aspects of the business.

3. **Audit**
An audit involves checking transactions and verifying information. Such checking is done on a sampling basis. In an audit, the CPA or CA also goes outside the company to verify information. In addition, the auditor assesses the accounting systems and methods used and evaluates estimates and assumptions made by management. The auditor gives an opinion on whether the financial information is presented fairly in all material respects and in accordance with generally accepted accounting principles.

In the United States and Canada as well as most other countries, all companies whose stock is publicly traded are required to have their statements audited. While an audit is not a requirement for privately held companies in the United States and Canada, large private companies are usually audited. Lenders often require an audit. Also, if the shareholders are not actively involved in the business they may want an audit. In most other countries, private companies above a certain size (sales, assets, and number of employees are typical criteria) are required to be audited.

Not-for-profit and government entities are usually required by law to be audited.

Difference between Cash—and Accrual-Basis Accounting

As individuals we generally use cash-basis accounting. In other words, we say we have a revenue or financial gain when we receive money, and an expense when we pay out money. Small service businesses, personal service corporations (i.e., law firms, accounting firms, consulting businesses, medical practices, etc.), and farms may also use cash-basis accounting for tax purposes.

	Cash-Basis Accounting	**Accrual-Basis Accounting**
Revenue Recognition -	When cash is received	When revenue is earned
Expense Recognition -	When cash is paid out	Expenses necessary to earn the revenues are recognized when that revenue is earned. The revenues and expenses required to earn them are "matched."

Four Key Financial Statements

A complete set of financial statements includes the:

1. **Income Statement**
2. **Statement of Retained Earnings** (or **Shareholder Equity**)
3. **Cash Flow Statement**
4. **Balance Sheet**

Each statement has a distinct purpose, but all four are interrelate.

The **income statement** shows the business's profits for a specific period. Those profits, less any dividends that are paid, go into the balance sheet as part of the shareholders' equity. In other words, the shareholders are reinvesting some of their profits in the business.

The **statement of retained earnings or shareholder equity** shows that process of reinvestment. It tells what portion of the profits were reinvested in the business and what portion were paid out in dividends.

The **cash flow statement** tells us what has given cash to the business and what has used cash. In other words, it gives information on the business's liquidity. It is prepared after the other three statements and uses information from all of them.

Thus, the income statement and the statement of retained earnings are prepared before the **balance sheet** and directly affect it. The balance sheet itself tells the company's financial position on a particular day—what it owns, what it owes, what belongs to the shareholders.

The Income Statement

The Income Statement is a description of the organization's net profit achievement during a period ranging from a month to a year. It describes the revenues earned and expenses incurred, with the difference being profit or loss. The income statement may also be called the P & L (i.e., profit and loss statement), the statement of earnings, the operations statement, or the statement of revenues and expenses.

<u>The Income Statement equation is</u>:

Sales / Revenue – Costs / Expenses = Profit or Loss

Revenues

Revenues represent the money charged customers for products and services that the organization sold and delivered during the time of the statement. This is not necessarily the money collected during the year.

Revenues are reduced as appropriate by allowances for returns, discounts, and customer credits to arrive at the net sales or revenues that the organization has actually generated.

Cost of Goods Sold (also called Cost of Sales)

For a manufacturer, the Cost of Goods Sold represents the cumulative costs relating to products that were sold to customers during that year. Included in these costs are:

- raw materials
- direct labor
- factory overhead—all other costs associated with the manufacturing facility such as indirect labor and supplies, depreciation, supervision, etc.

For retailers, wholesalers, and distributors, the Cost of Goods Sold represents what the company paid for those products that were resold to customers that year and the transportation associated with getting the products to the company's premises.

For service businesses, the equivalent of Cost of Goods Sold is called Cost of Services Provided. This reflects the cost of labor, supplies, and other support that was needed for providing the service.

Gross profit or **gross margin** is the difference between net revenues and cost of goods sold.

Operating Expenses
These include all expenses (other than those that are part of Cost of Goods Sold) that are incurred in the day-to-day operations of the business. These include:

- Selling, General and Administrative expenses (S, G, & A)
- Research and Development
- Depreciation and Amortization of assets not used in a manufacturing process

  – Buildings and equipment are depreciated (i.e., their cost is spread over a number of years) because they have a limited life. Land is not depreciated because it does not "wear out." However, mineral resources are depleted; for organizations having such resources, depletion is an expense like depreciation.

  – A company makes a capital expenditure (purchases equipment) with the expectation that it will benefit the company for many years. In the following example, the expenditure is $100,000, the expected useful life is five years, and the depreciation method is straight-line.
  The annual depreciation expense will be:

$$\frac{\$100{,}000}{5} = \$\ 20{,}000$$

  – Most organizations use straight-line depreciation on their financial statements. However, depreciation is calculated differently for tax purposes. Each country has its own method of tax depreciation, and these methods are changed frequently.

Other Income and Expenses
This is an all-encompassing category that includes all non-operating income and expenses, (i.e., those that do not pertain to the continuing operation of the business and not previously mentioned). In addition to interest income and expense, this could include foreign currency gains and losses, one-time events, such as major write-offs of assets, and one-time gains/losses resulting from the disposal of businesses and facilities.

These items are netted together and added or subtracted from the operating profit to obtain the **pretax income or loss** of the organization. This pretax profit may also be called **profit before income taxes** or **profit before provision for income taxes.**
For a not-for-profit, this pretax income or loss is called **excess of revenues over expenses** or **excess of expenses over revenues.**

Income Taxes and Net Income
The income taxes of the business are then subtracted to obtain "the bottom line," i.e., the net income, net earnings, or net profit of the business.

Comprehensive Income
GAAP now requires that a business also state its "comprehensive income."
Comprehensive income is net income adjusted for unrealized gains or losses in financial investments and

for gains or losses in the value of foreign subsidiaries due to changes in exchange rates.

EBIT and EBITDA

On internal income statements, many organizations also show EBIT and EBITDA. EBIT stands for Earnings Before Interest and Tax and EBITDA stands for Earnings Before Interest, Tax, Depreciation, and Amortization. The formulas are:

EBIT = Earnings Before Interest Expense and Tax Expense

EBITDA = Earnings Before Interest Expense and Tax Expense + Depreciation & Amortization

Both EBIT and EBITDA are frequently used as performance measures for operating units of the business since operating units do not directly control interest income or expense or the company's taxes. Depreciation and amortization are added back because they are non-cash items. Also, once equipment is purchased and put in service, the operating manager cannot normally directly affect the depreciation expense.

EBIT and EBITDA are also often used as business valuation methods (i.e., the value is set as a multiple of EBIT or EBITDA).

The Income Statement

Presents the organization's operating performance during a period of time.

Revenues Earned.
Expenses Incurred.
Profit, **Income**, or **Loss**, the difference between Revenues and Expenses.

Income Statement - Sample format

	Gross Sales
-	Returns, Discounts, and Allowances
=	**Net Sales / Revenue**
-	Cost of Goods Sold (Cost of Sales)
=	**Gross Profit**
-	Selling, General, and Administrative expense (S, G, & A)
-	Depreciation (non-manufacturing companies)
-	Research and Development expense (R & D)
=	**Operating Profit (EBIT)**
+	Interest and investment income
-	Interest expense
+/-	Profit/loss from Sale of Assets
=	Pre-Tax Income
-	Income Tax
=	**Net Income / Net Earnings / Net Profit**

Margins

Whenever any of the profit numbers are divided by net sales and shown as a percent, the result is a margin ratio. Thus, gross margin is gross profit divided by net sales, and the

operating margin is operating profit divided by net sales. Margins vary with industries.

The Balance Sheet

The Balance Sheet is the business's financial status report and is sometimes called the statement of financial position. It describes what the business owns (Assets) and what it owes to others (Liabilities); the difference between them belongs to the owners (Stockholders' Equity). It presents this information at a point in time, usually at the end of an accounting period. The formula for the balance sheet is the Accounting Equation:

Assets = Liabilities + Equity

Assets are what the organization owns, and liabilities and stockholders' equity describe how the purchase of those assets was financed. The equation can be also be shown as:

Assets – Liabilities = Equity

At the close of each accounting period, the equation is always in balance.

Another term for equity is net worth.
The equivalent terms for a government or a not-for-profit organization are net assets, fund balance, reserve, or surplus.

Capitalizing versus Expensing an Item

Capitalizing an Item

The item becomes an asset on the balance sheet. Usually it is depreciated, depleted, or amortized over time and gradually is converted to an expense.

The organization appears to be more profitable in the short run because the cost of the item is spread over time.

Tax benefits are realized over several years and must be claimed in accordance with the law for that particular asset.

Expensing an Item

The item is an expense on the income statement. It is not shown on the balance sheet.

The organization is less profitable in the year the expense is incurred, but more profitable in subsequent years.

The entire cost of the item is a tax deduction in the year the tax purchase occurred.

Assets

Assets are what the organization owns. They are presented in two categories:

1. **Current Assets—**Cash plus assets that will become cash within one year or will be used up within that period

2. **Long-Term Assets—**Assets with a useful life more than one year, mainly consisting of:
    - Fixed Assets—property, buildings, and equipment
    - Investments—financial assets and joint ventures
    - Intangibles—goodwill and intellectual property such as patents and trademarks

Current Assets are those assets of the business that will become cash within a one-year time period or will be used up within that period. They are listed in the order of their liquidity, i.e., their convertibility to cash.

- **Cash and cash equivalents:** Currency, checking accounts, money-market funds, and other very liquid, short-term investments with a maturity of three months or less.

- **Marketable securities:** Investments which earn the company interest income have a maturity of over three months but not over 12 months, and are extremely high quality (low risk). They may also be called temporary or short-term investments. Examples include:
  – Certificates of deposit (issued by commercial banks).
  – Treasury bills (issued by the U.S. government).
  – Commercial paper—short-term unsecured notes with a maturity of 3 to 12 months (issued by large, normally creditworthy companies).
- **Accounts receivable:** Money that the company is owed for products and services it has already provided to its customers for which it has not yet been paid. It is usually reduced by an allowance for doubtful accounts.

- **Inventory:** Tangible product in all stages of completion, which will eventually go to customers as part of future sales or will be used as part of the service provided to customers. Inventory includes:
  – Raw Materials / Components
  – Work in Process (WIP)
  – Finished Product or Finished Goods

- Inventory can be valued using any of the following three methods:
  – FIFO (First In, First Out)
  – LIFO (Last In, First Out)
  – Weighted average cost

The Effect of Each Method

- If costs are rising, FIFO (First In, First Out) increases pretax income.
  The inventory value on the balance sheet reflects the most current costs.

- On the other hand, for the same scenario, LIFO (Last In, First Out) lowers pretax income and undervalues the inventory (sometimes as much as 50%).

- Weighted-average inventory valuation is a middle-ground approach.
  The cost of goods sold is lower than for the LIFO company but higher than for the FIFO company. Conversely, the inventory value exceeds that of the LIFO company but is less than that for the FIFO company.

- When costs are rising, LIFO is advantageous because it reduces the taxes that must be paid, thus improving cash flow. However, if costs are dropping, FIFO is more advantageous because the organization will pay less taxes.

- LIFO accounting is primarily practiced in the United States, although LIFO is also acceptable in Germany, Italy, Japan, and Belgium. While Canadian companies may use LIFO, they are not allowed to receive any tax benefits from its use. As a result, very few companies in Canada use LIFO accounting.

- **Prepaid expenses:** Expenses that have already been paid in advance of the time period(s) covered. Examples are insurance, software licensing, and maintenance contracts for equipment.

Long-Term Assets

Long-term assets are those assets with a useful life of more than one year and over a certain minimum dollar amount. Long-term assets are also sometimes called capital assets. While an organization has some flexibility in deciding whether to expense or capitalize an item, it must do so in accordance with GAAP and the tax laws in the country where the asset is located.

Long-term Assets

- **Fixed Assets** or **Property, Buildings,** and **Equipment:**

  – **Land:** Presented at historical cost (i.e., what was paid for the land itself). Improvements such as buildings and parking lots are shown separately.

  – **Buildings, Equipment, Furniture, Fixtures, and Vehicles:** Tangible assets that are available to the company to conduct its business.

  – **Mineral Reserves and Timber:** Resources to be removed and sold during the normal course of business.

Fixed assets are shown at their original cost less accumulated depreciation or depletion.

- **Investments:**

– **Financial Investments** are stocks and bonds issued by other companies and joint ventures. Financial assets "available for sale" will be shown at market value, not historical cost.

– **Deferred Charges** are financial outlays that have already been expended with the expectation that the company will achieve benefits over a multi-year period. An example is the fees or costs incurred to obtain a long-term loan. Deferred charges are spread over the number of years that the company will realize their benefit.

- **Intangible Assets:**

– **Patents and Copyrights** represent either ownership or the right to use intellectual property for an identifiable period of time. These investments are amortized over the legal life or the useful life, whichever is less. The amount shown represents the legal costs of obtaining the patent or copyright or the amount paid to an outsider for it, not the market value.

– **Goodwill** represents the purchase price of another business less the appraised market value of the assets purchased. Goodwill is tax deductible in the United States over a 15-year period. Goodwill for acquisitions made prior to July 1, 2001 is amortized on the financial statements. Goodwill for acquisitions made on or after that date is not amortized on the financial statements. Effective January 1, 2002, there will no longer be amortization of goodwill in the U.S. and Canada.

– **Internally Developed Software for Internal Use:** The costs of developing such software are shown as an asset and are amortized over the expected life of the software.

Liabilities

Liabilities represent the amounts owed to others either for products or services received but not yet paid for, or for money borrowed. There are two categories of liabilities:

1. **Current**
2. **Long-term**

1. Current Liabilities are amounts due within one year from the date of the balance sheet.
These typically include:

- **Accounts Payable:** Amounts owed to vendors for products and services received, not yet paid.
- **Current Portion of Long-Term Debt:** The principal amount of the long-term debt that is due within one year from the date of the balance sheet.
- **Accrued Liabilities:** Expenses that have been incurred but not yet paid.
- **Short-Term Debt:** Loans from banks and others due to be repaid in less than one year.

- **Deferred Revenue:** Advance payments or deposits on a contract (i.e., the organization has received the money but "owes" the customer goods or services).

2. Long-Term Liabilities:

- **Long-Term Debt:** Funds borrowed, not due to be repaid within the next year. Examples include bonds and debentures: notes that are sold to investors and usually have a fixed interest rate and a maturity of 5-30 years.
- **Deferred Income Taxes:** Amounts owed to tax authorities arising because of different methodologies between tax accounting and statement accounting.
- **Reserves:** Estimates of liabilities that the company will probably have to pay out some time in the future. Examples for uses of reserves are possible litigation exposures, environmental cleanup, warranties, and retiree medical benefits.

Stockholders' Equity

This represents the owners' portion of the balance sheet. It is the difference between assets and liabilities. The key categories are:

1. **Preferred Stock**
2. **Common Stock**
3. **Retained Earnings**
4. **Changes in Comprehensive Income**
5. **Treasury Stock**

1. Preferred Stock A hybrid security. It is part of equity, yet it has a predetermined dividend that makes it an "interest-rate" sensitive security, like a bond. The holders of this security receive their dividends prior to any dividend distribution to common shareholders. Preferred shareholders do not normally have voting rights.

2. Common Stock The common shareholders are the true owners of the business. The **common stock** represents the amount of money that the historical owners have invested in the business. Common shareholders normally have voting rights, although there may be different classes of common stock with different voting rights.

3. Retained Earnings are that portion of profits that the owners have "reinvested" in the business. They represent the cumulative net income that the company has achieved in its entire corporate existence LESS the total dividends paid out and any losses the firm has sustained.

Not-for-profit organizations and governments: In lieu of common stock, these organizations have "net assets," "reserves," "fund balance," or "surplus." The reason for this is that the organizations have no ownership. These are equivalent to a corporation's retained earnings.

4. Changes in Comprehensive Income includes:

Cumulative Currency Translation—the gains or losses that the company has experienced when

assets denominated in another currency are converted to the currency the company's statements are presented in.

Changes in the Value of Investments—the difference between the cost and the market value of the company's financial investments such as stock in another company. Since the investments have not been sold, the company has not actually realized the gain or loss.

5. Treasury Stock represents what the company paid when it repurchased its own shares that had previously been issued. The amount paid is subtracted from the equity of the firm.

Typical Balance Sheet Format

December 31, 20XX

Assets:

Cash
Marketable Securities
Accounts Receivable
Inventory
Prepaid Expenses
Current Assets
Buildings
Machinery & Equipment
Furniture & Fixtures
Vehicles
(Less: Accumulated Depreciation)
Land
Net Fixed Assets
Investments
Intangible Assets
Other Assets
Total Assets

Liabilities:

Accounts Payable
Accrued Liabilities
Short-Term Debt
Current Maturities of Long-Term Debt
Current Liabilities
Long-Term Debt
Other Liabilities Due After One Year
Total Liabilities

Equity:

Common Stock
Retained Earnings

Cumulative Comprehensive Income

Total Stockholders' Equity

Total Liabilities & Equity

The Statement of Retained Earnings

The Statement of Retained Earnings shows the change in the retained earnings account during the year. It is a bridge between the Income Statement and the Balance Sheet.

For public companies, the statement is expanded into a Statement of Shareholders' Equity and shows the changes in all equity accounts on the balance sheet instead of just the retained earnings account. For not-for-profit organizations and government entities, it is called the Statement of Net Assets, Statement of Fund Balance, or Statement of Reserve.

Typical Statement of Retained Earnings Format

Full year, 20XX

Balance in **Retained Earnings** at beginning of year

Add profits for the year **or** Subtract loss for the year

Subtotal

Subtract any dividends paid to shareholders

Balance in **Retained Earnings** at year's end

Statement of Cash Flow

The Statement of Cash Flow is divided into three sections:

- **Cash flow from or used in operations**
- **Cash flow from or used in investments**
- **Cash flow from or used in financing**

The **cash flow from or used in operations** is the cash flow from the day-to-day operation of the business. Most organizations use the indirect format when presenting this information, beginning with the net income for the period. Non-cash expenses are then added back. Changes in non-cash current asset and current liability accounts are also shown. Increases in non-cash current assets such as receivables and inventory reduce cash flow, while increases in liabilities such as payables increase cash flow because the business is using its suppliers' money.

The **cash flow from or used in investments** section shows outlays for capital expenditures and acquisitions. In addition, it shows the purchase or sale of securities that are not cash equivalents, as well as any loans the organization has made to others or collected during the period. Usually, the subtotal for this section reflects a cash outflow as organizations typically invest more back in the business than they receive from the sale of assets or the collection of loans.

The **cash flow from or used in financing** portion of the statement shows the cash the firm has received from loans and the cash used to repay loans during the period. It also includes cash received from the sale of stock and cash used to buy back stock or pay dividends.

Typical Statement of Cash Flow Format

Full year, 20XX

Operations

Net Income

Non-cash expenses (e.g., depreciation, amortization)

Net (increase) decrease in receivables

Net (increase) decrease in inventory

Net (increase) decrease in prepaid expenses

Net increase (decrease) in payables and accrued liabilities

Cash flow from/for Operations

Investments

(Purchase of fixed assets)

(Investments in other companies)

Sale of assets

Cash flow from/for Investments

Financing

Borrowing funds

(Paying back debt)

Funds from sale of company's stock

(Buying back stock—treasury stock)

(Payment of dividends)

Cash flow from/for Financing

Net cash increase/decrease

Add: Cash at beginning of year

Cash at end of year

Balance
sheet
FINANCIAL
STATEMENTS
Equity
Income
statement
Cash
flows

Topic 5: Financial Statement Analysis

The Objectives of Financial Analysis

- Financial analysis is an intellectual process applied to the financial statements of an enterprise to help responsible people make better decisions.
- The decisions are either backward-looking or forward-looking.
- If you are an owner or manager of a company, backward-looking decisions are typically concerned with assessing past performance:
  - – Was the company's strategy right for today's markets?
  - – Were last year's tactics appropriate?
  - – Should the promised bonuses be paid to key executives?
  - – Should someone be fired or demoted for nonperformance?

- **Forward-looking decisions deal with making the future of the business happen:**
  - – What should be next year's operational budget?
  - – What capital investments should be made?
  - – Should another company be bought?
  - – Should a part of the company be sold or closed?
  - – Should debt or stock be issued? If so, in what form?

- **And if you are not an owner or manager of a company:**
  - – Should I invest in the company?
  - – Should I buy the company?
  - – Should I sell my investment in the company?
  - – Should I lend to the company?
  - – Should I call my loan to the company?

Financial Statement Sources of Data

For analysis purposes, where does the information for all these critical decisions come from? The data used in financial analysis comes principally from a company's financial statements:

- Income Statement
- Balance Sheet
- Statement of Cash Flows

Sound financial analysis demands the following tools:

- A thorough understanding of the content and meaning of the Income Statement and the Balance Sheet

- Knowledge of the metrics used to describe how well or poorly a company is doing—its safety and profitability

- An ability to calculate and use a company's cost of capital Mastery of the meaning of cash flow, its components, and how they are displayed on the Statement of cash flows

- An awareness of the Theory of Interest and the Time Value of Money (TVM)
- Mastery of how to evaluate capital projects and Mergers and Acquisitions (M&A)

Financial Ratios

There are three categories of financial ratios.
Each category is designed to evaluate the financial "health" of the business from a different perspective. It is important to remember that no ratio alone tells the whole picture. As an analyst, you must examine the range of ratios and understand the business in relation to its industry and particular environment in order to make your judgment.

The three categories of financial ratios are:

- **Liquidity —** the ability of the organization to generate funds to meet its short-term financial obligations.
- **Leverage** — the portion of assets that have been financed through debt vs. equity financing and the organization's ability to handle the debt that it has.
- **Profitability** — the amount of profit generated by the business, the return on the investment by the shareholders or in the business.

Liquidity Ratios

- Current Ratio
- Acid-Test or Quick Ratio
- Days Sales Outstanding (DSO) Ratio
- Accounts Receivable Turnover Ratio
- Inventory Turnover – Days Inventory on Hand (DIOH)

Current Ratio

Definition:

The current ratio is a broad-based look at the organization's overall liquidity.
It measures the business's ability to meet its current obligations and is calculated as follows:

$$\frac{\text{current assets}}{\text{current liabilities}}$$

Norms:

Standards for this ratio vary with the industry:

- Service industries, having little or no inventory, typically have current ratios ranging from 1.1 to 1.3. ($1.10 to $1.30 in current assets for every dollar of current liabilities.)
- Companies that have significant amounts of inventory tend to have a higher current ratio.
- Typical range for manufacturing firms is 1.6 to 2.0.

What higher or lower than the norm means:

- Low current ratio may indicate that the organization has liquidity problems. Keep in mind, however, that a ratio is only an indicator. Some organizations can sustain lower-than-average current ratios due to their ability to move inventory and collect accounts receivable quickly.

- A ratio that is much higher than the norm for the industry may indicate the inability of management to properly invest its assets.

Acid-Test (Quick) Ratio

Definition:

The acid-test, or quick, ratio is a more focused look at the company's liquidity.
It compares the organization's most liquid current assets to its current liabilities.

$$\frac{\text{cash + marketable securities + receivables}}{\text{current liabilities}}$$

Norms:

Generally, most industries that sell on credit have a minimum acid-test ratio of 0.8 to 1.0. Industries with significant cash sales (e.g., the retail grocery industry) tend to have a lower quick ratio.

What higher or lower than the norm means:

As with the current ratio, a low quick ratio may be an indicator of cash flow problems, while an excessively high ratio may indicate poor cash or receivables management.

Days Sales Outstanding (DSO) Ratio

Definition:

A company's DSO or collection period ratio measures the average number of days it takes for a business to collect from its customers. A DSO of 45 indicates that, on average, the company collects amounts owed by customers within 45 days.

$$\frac{\text{accounts receivable x 365}}{\text{annual credit sales}}$$

When the amount of receivables varies greatly throughout the year, the average accounts receivable for the year should be used. Also, when a company has a mix of cash and credit sales, annual **credit** sales should be used if the information is available.

Norms:

- The ratio will vary according to industry. Businesses selling perishable products tend to have a relatively low DSO (under 30 days), while businesses that "push" their inventory through the marketplace by giving customers long terms to encourage them to buy more product may have DSOs of 60 days or more.

- In general, industries with credit terms of “net 30” tend to have DSOs in the range of 45-50 days.

What higher or lower than the norm means:

- When a company’s DSO is much higher than the norm for its industry, it may indicate problems with its credit approving and collection processes. An excessive DSO can cause cash-flow problems and cause the company to become heavily dependent on short-term borrowing.

- A DSO which is much lower than the industry norm may indicate an overly restrictive credit-approving policy.

Accounts Receivable Turnover Ratio

Definition:

This ratio (the reciprocal of DSO) indicates how many times a year the business “turns over” its accounts receivable. It reflects the speed at which credit sales are ultimately collected in cash.

$$\frac{\text{annual credit sales}}{\text{average accounts receivable}}$$

Norms:

As with DSO, this ratio varies with industry. Businesses with perishable products tend to have high turnovers, while businesses that grant extended credit terms will have low turnovers.

What higher or lower than the norm means:

Slow turnover, relative to the norm for the industry, may cause cash flow problems and a heavier dependence on short-term borrowing. A turnover significantly higher than the norm may indicate an overly restrictive credit policy.

Inventory Turnover Ratio

Definition:

Inventory turnover measures the number of times a year on average that the business sells out its inventory.

$$\frac{\text{cost of goods sold}}{\text{Inventory}}$$

When the value for cost of goods sold is not available, the following formula may be used:

$$\frac{\text{net sales}}{\text{Inventory}}$$

This version of the ratio will be influenced by changes in pricing which may not be related to inventory values and could, therefore, distort the result.

The ratio may also be calculated as DIOH (days inventory on hand) by dividing the turnover into 365 (the number of days in a year). Thus, six turns a year means the firm is carrying slightly over 60 days of

inventory.

Regardless of the formula used, the following considerations apply:

- When inventory values vary considerably during the year, the average inventory is often used.

- Because LIFO undervalues inventory, the ratio should always be calculated using the FIFO, or weighted-average-value, of the inventory. For LIFO companies, the FIFO or weighted-average-value can be found in the notes to the financial statements.

Norms:
The acceptable range for this ratio varies with the industry and type of product. For example, companies with perishable products will have an extremely rapid turnover, while businesses whose product takes a long time to make, such as airplane manufacturers, will have a low turnover.

What higher or lower than the norm means:
For companies that sell a product, the ability to move the product inventory quickly has a direct impact on liquidity. This is critical in today's highly competitive environment in which the entire supply chain is focused on maintaining low inventory levels, the objective being a lower cost structure and higher profits.

The Cash Conversion Cycle

Cash put into Inventory or Providing a Service,
Invoice the Customer – Accounts Receivable,
Receive Payment from Customer – Back to Cash

- By using DIOH and DSO a business can determine how long it takes to complete the cycle shown above. For example, if the business is carrying 60 days of inventory and has a DSO of 45, the entire cycle requires 105 days (60 + 45).

- For service businesses, the time used to provide the service can be substituted for DIOH. For example, if the service is provided all month (such as telephone service) and billing is at the end of the month, 30 days would be used.

- The goal is to reduce the entire cycle. The impact of changes should be considered on the entire cycle. For example, granting longer payment terms might encourage customers to take more inventory, thus reducing DIOH. However, DSO would increase.

Leverage Ratios

Leverage is the term used to identify the level of debt of an organization. It compares the portion of assets that have been financed through debt to those financed through equity.

- Business entities acquire capital by borrowing, selling stock, and reinvesting profits in the business. Leverage focuses on the borrowed component.

- The ratios you will study in this section will identify the amount of debt an organization has, as well as its ability to repay or service the debt. The ratios below are representative of the large number of ratios used in this area.

Debt-to-Equity Ratios and Debt-to-Capital Ratio

Definition:

These ratios evaluate the amount and source of the funds that the business has to operate.

$$\frac{\text{Long-Term Debt}}{\text{Equity}}$$

$$\frac{\text{Total Liabilities}}{\text{Equity}}$$

Debt refers to the interest-bearing financial obligations of the organization, while liabilities refer to all funds owed—both interest-bearing and non-interest-bearing.

The debt-to-capital ratio compares the long-term debt to the business's sources of capital, which are long-term debt and equity.

$$\frac{\text{Long-Term Debt}}{\text{Long-Term Debt + Equity}}$$

Norms:

Capital intensive industries (i.e., those that must invest heavily in fixed assets) tend to carry more debt as they use borrowing to help fund the investment in the business.
Norms vary with industry and the terms and conditions of the debt also affect the amount of borrowing the organization can handle.

Most businesses can handle a total liabilities-to-equity ratio of 1.5 or less. Over 3.0 is definitely high (with the exception of banks and financial services firms—because money is their "product" these firms are more highly leveraged).

What higher or lower than the norm means:

Generally, the higher the leverage, the greater the financial risk of the firm. While the balance sheet discloses the extent of the organization's financial obligations, it is the notes to the statements which reveal the interest rates and when the loans must be repaid. These issues, as well as any lender restrictions, must be considered when evaluating the firm's risk in this area.

On the other hand, if the firm carries very little debt, the return to the shareholders may be lower because the business is financed almost entirely by the shareholders' equity.

The term "leveraged buy-out" refers to an acquisition that is primarily financed by borrowed money.

Such firms have extremely high debt-to-equity and debt-to-capital ratios. Reducing the debt to a manageable level is a major priority for these businesses.

Interest Coverage (Times Interest Earned) Ratio

Definition:

This ratio measures the company's ability to generate earnings to pay its interest commitments.

$$\frac{\text{Pre-Tax Income + Interest Expense}}{\text{Interest Expense}}$$

The combination of pre-tax income and interest expense is called EBIT (Earnings Before Interest and Tax).

Norms:

Generally, lenders look for this ratio to be 3 or higher. That is, the company would have generated $3 of earnings (before interest and tax) to cover every dollar of interest expense.

What higher or lower than the norm means:

If the ratio is under 1, the organization's earnings are not covering the cost of its borrowings. However, this does not mean that it cannot pay the interest since cash flow from operations may be adequate to pay the interest. If the ratio is under 3, the organization's earnings are primarily going to pay interest and income tax.

With this ratio, higher is better. Some organizations carry little or no debt and have ratios far greater than 3.

Cash Flow to Current Maturity of Long-Term Debt Ratio

Definition:

This ratio measures the firm's ability to generate cash flow to cover principal payments maturing in the next year. It is calculated as follows:

$$\frac{\text{net income + depreciation + amortization}}{\text{current maturity of long-term debt}}$$

If the annual depreciation expense is not shown separately on the income statement, it can be found in the "operations" section of the cash flow statement.

"Current maturity of long-term debt" is often found as a line item in the current liabilities section of the balance sheet. It may also be called "current portion of long-term debt," "long-term debt due in the next year," or "principal on debt due in the next year." If the amount is relatively small, it may not be listed separately in the current liabilities section, but only disclosed in the note on the long-term debt.

Norms:

A ratio of 2 or higher is desirable; in other words, the organization has at least 2 dollars in cash flow for every dollar of principal due in the next year.

What higher or lower than the norm means:
If the ratio is under 1, the company may have difficulty in meeting lender commitments.
In general, the higher the ratio the better.

Debt to EBITDA Ratio

Definition:
This ratio measures the amount of income generated and available to pay down debt before covering interest, taxes, depreciation, and amortization expenses. Debt to EBITDA measures a company's ability to pay off its incurred debt. A high ratio result could indicate a company has a too heavy of a debt load.

Banks often include a certain Debt to EBITDA target in the covenants for business loans, and a company must maintain this agreed-upon level or risk having the entire loan become due immediately. This metric is commonly used by credit rating agencies to assess a company's probability of defaulting on issued debt, and firms with a high Debt to EBITDA ratio may not be able to service their debt in an appropriate manner, leading to a lowered credit rating.

$$\frac{\text{Debt}}{\text{EBITDA}}$$

Where:
Debt = Long-Term Debt and Short-Term Debt Obligations
EBITDA =Earnings Before Interest, Taxes, Depreciation, and Amortization

Norms:
If a company has $100 million in debt and $10 million in EBITDA, the Debt to EBITDA ratio is 10.
If the company pays off 50% of that debt in the next five years, while increasing EBITDA to $25 million, the Debt to EBITDA ratio falls to two.

A declining Debt to EBITDA ratio is better than an increasing one because it implies the company is paying off its debt and/or growing earnings. Likewise, an increasing Debt to EBITDA ratio means the company is increasing debt more than earnings.

Some industries are more capital intensive than others, so a company's Debt to EBITDA ratio should only be compared to the same ratio for other companies in the same industry. In some industries, a Debt to EBITDA of 10 could be completely normal, while in other industries a ratio of three to four is more appropriate.

Profitability Ratios

The third and last category of financial ratios evaluates profitability. Profitability measures the extent to which a company has generated a return on the investment in the business. The measure of profit typically used is either pre-tax income or after-tax income. The ratios calculate the relationship between the profit measure to the investment base or sales. The results are expressed as a percentage.

Return on Equity (ROE)

Definition:
Return on equity is one of the best known and widely used of the profitability ratios.

$$\frac{\text{net income}}{\text{total shareholders' equity}}$$

Return on equity measures the profit earned on the shareholders' investment. It is a very important ratio, especially for companies whose stock is publicly traded. This ratio measures the profitability of the entire organization and is often used to evaluate the performance of senior management.

Norms:
The average ROE for large, publicly traded companies is approximately 12 to 13%.
For Canadian companies, the range is somewhat lower due to higher corporate tax rates.

What higher or lower than the norm means:
Shareholders normally want better-than-average performance. The range for ROE can vary a great deal and some companies may earn two to three times the average. Regulated industries (e.g., utilities) are allowed only an average return on the regulated portion of their business. In addition, small, closely held private companies seek to minimize taxes rather than generate a high net income under GAAP.

Return on Invested Capital (ROIC)

Definition:
Return on invested capital measures the return earned on long-term capital sources, i.e., long-term liabilities and stockholder equity.

$$\frac{\text{net income}}{\text{long-term liabilities + equity}}$$

Highly leveraged companies often show a high ROE since they have a lower stockholder equity. In this instance, ROIC is often a more realistic indicator of their profit performance since it measures the return on the total long-term funds available to the organization.

Norms:
The average ROIC of large United States companies ranges between 7% and 9%.
The average for Canadian companies is slightly lower.

What higher or lower than the norm means:
A higher-than-average ROIC indicates that the firm is generating a good return on the total funds invested in the business. If the firm is below average, it is not generating a desirable return on its long-term funds and may be too dependent on borrowing.

Profit Margin or Return on Sales (ROS)

Definition:
This measure evaluates the overall profitability of the firm in terms of its sales revenue.
It is expressed as a percentage and is calculated as follows:

$$\frac{\text{net income}}{\text{net sales}}$$

For divisions or business units, the calculation is often made using pre-tax income.

Norms:
Average returns on sales can range from 2% to over 10% depending on the industry.

What higher or lower than the norm means:
A higher than average return is desirable. However, the return could be increased by raising prices which might also reduce overall sales and the overall profitability of the business.

Return-on-Assets (ROA) Ratio

Definition:
Since operating managers usually do not influence the amount of debt or equity of a company, ROA is often used to measure the performance of operating managers. It can be calculated for either the entire company or for specified operating units. The formula for the entire company is:

$$\frac{\text{net income}}{\text{total assets}}$$

The formula for a division or business unit is:

$$\frac{\text{pre-tax income of unit}}{\text{assets allocated to unit}}$$

Pre-tax income is used since unit managers are not accountable for the company’s tax rate.

The "assets allocated to unit" typically include the unit's receivables, inventory, property, buildings, and equipment less accounts payable and accrued liabilities. In this form, the ratio is often called RONA (return on net assets) or ROCE (return on capital employed). Accounts payable and accrued liabilities are subtracted because they are interest-free financing for the firm.

Norms:
Return on assets varies by industry. For the company, averages can range from 1% (banking) to as high as 12%. For divisions or business units, while goals vary by company, many firms seek a RONA for operating units in the 15% to 20% range.

What higher or lower than the norm means:
An above average ratio often indicates that the firm is doing a superior job of managing the investment in the business. However, the ratio can be temporarily increased by not upgrading or replacing fixed assets, drastically cutting inventory levels, or practicing very restrictive credit policies. While a below average ratio may indicate poor asset management, it may simply mean that the firm has very new fixed assets and little depreciation has been recorded.

Topic 6: Investment Strategies

Buy and Hold Investing

Why Buy and Hold

The buy-and-hold motivation depends on what and/or when you buy-and-hold. If you buy the right company at the right price, then buy-and-hold is a great strategy. If you buy the wrong company at any price, then the buy-and-hold strategy is unwise. Similarly, if you buy the right company at the wrong price, then buy-and-hold would once again be a bad move.

2008 Financial Crisis and Buy and Hold

For example, after the market crash of 2008, many questioned the wisdom of buy-and-hold. Individuals pointed to the so-called lost decade to validate a thesis that buy-and-hold was a poor choice. In this era of day trading, where some investors are more inclined to own a common stock for mere minutes rather than years, many pundits and investors questioned buy-and-hold.

One critical point is that buy-and-hold is an investing strategy. Investing strategies, by definition, imply a long holding period. Speculation (or trading), on the other hand, implies shorter timeframes. The point is not to debate the virtues of one over the other, but to point out that investing and speculating are not the same thing.

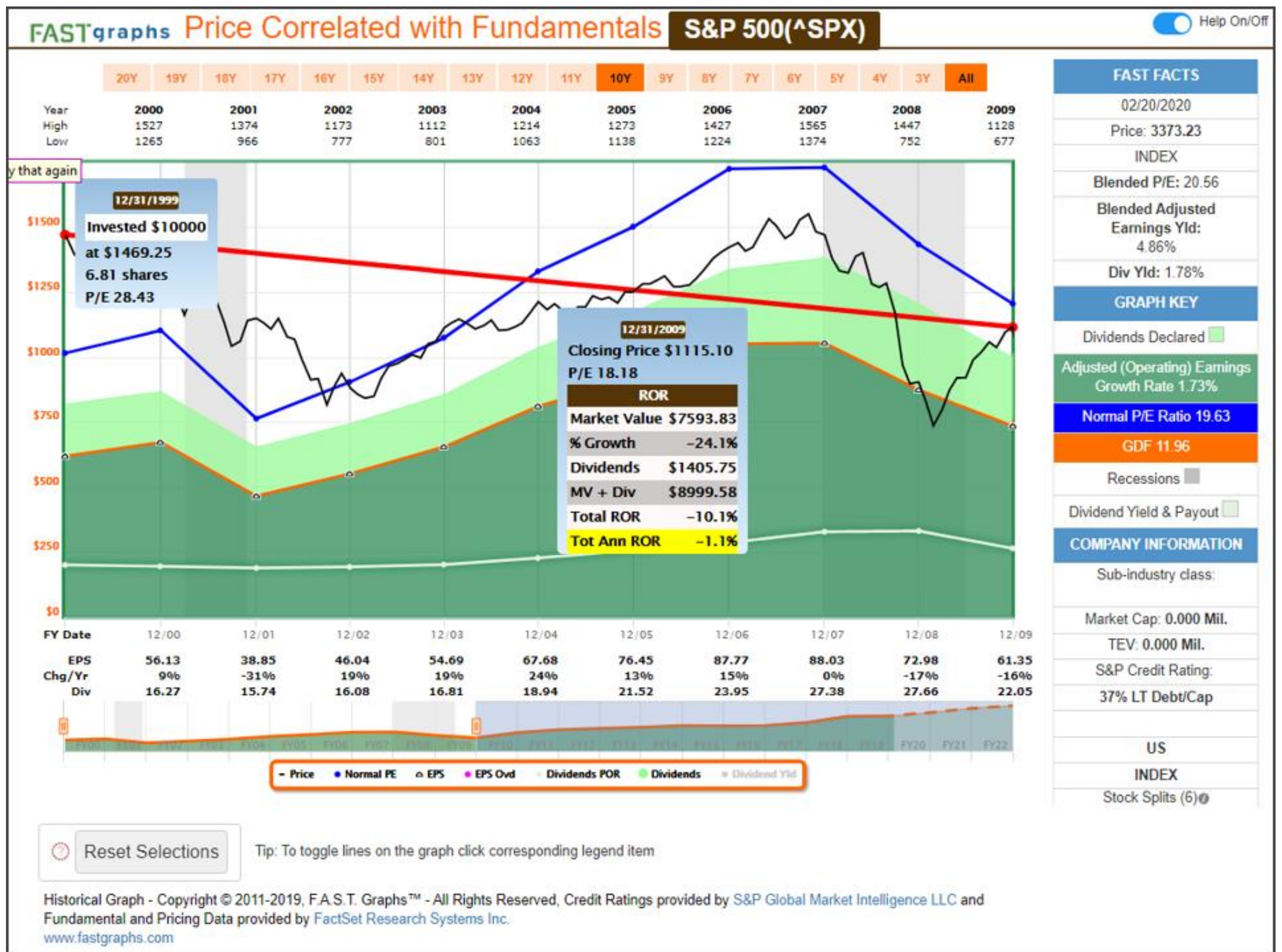
As an investing strategy, there is an "old" adage that supports the virtue of being a buy-and-hold investor: "*a portfolio is like a bar of soap, the more you handle it the smaller it gets.*" The true investor is looking for a place where they can allocate their capital in order to receive an attractive return on their capital at appropriate levels of risk. The higher the return they attempt to achieve, the higher the risk they're willing to take, and vice versa.

Another aspect about buy-and-hold as an investment strategy refers to investors who are looking to generate income from their investments. Income investors have the option of either fixed income, i.e., bonds, annuities and CDs, etc.; or income producing equities, i.e., real estate, dividend paying common stocks, etc. Of course, they can invest in these asset classes separately or in packages like mutual funds, MLPs, REITS or ETFs, etc. These investments need to be owned for long periods of time if any meaningful harvesting of interest or dividends is to occur.

Overvaluation and the lost decade

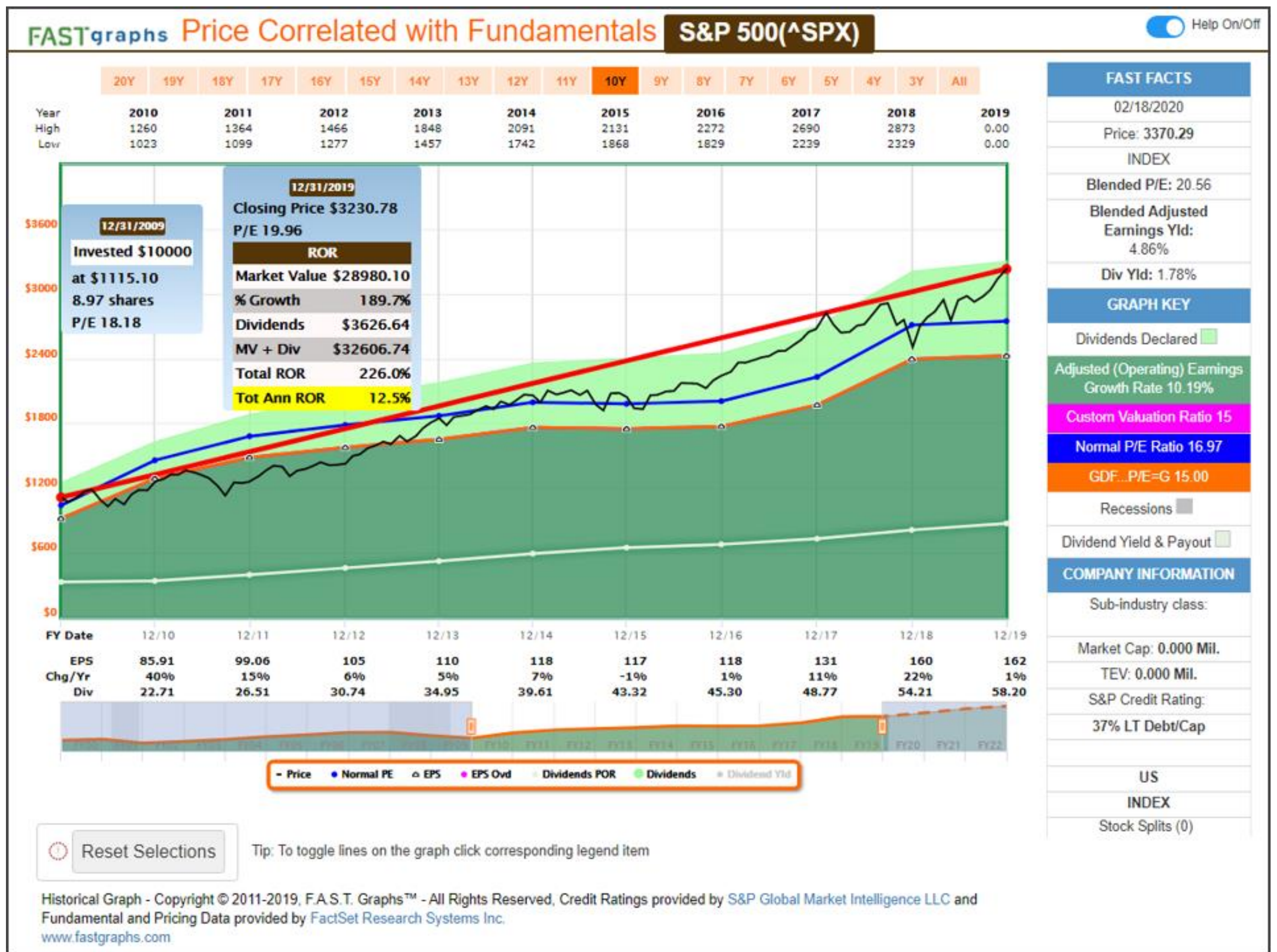
The following FAST Graphs on the S&P 500 show the importance of valuation regarding a buy-and-hold strategy. The first graph plots the S&P 500 stock price correlated to earnings for the period of calendar year 2000 through 2009. There are two important takeaways from this graph: 1. Earnings growth for the S&P 500 over this time period was exceptionally low at 1.73% per annum. 2. For the initial starting/year (ending December 31, 1999), the P/E ratio of 28.43 is at a premium relative to the historical fair value reference S&P 500 P/E ratio of 15 indicating overvaluation.

Therefore, it should be clear that the so-called "lost decade" spanning calendar year 2000 through 2009 resulted from the combination of excessive starting valuation coupled with virtually no growth. As a result, investors selecting an S&P 500 index fund at the valuation at the beginning of calendar year 2000 would have seen 10 consecutive years of negative returns (-1.1%) - including dividend income. In other words, passive investing only works if prudent investors focus on sound valuation and growth potential in the same manner they would when choosing an individual stock.

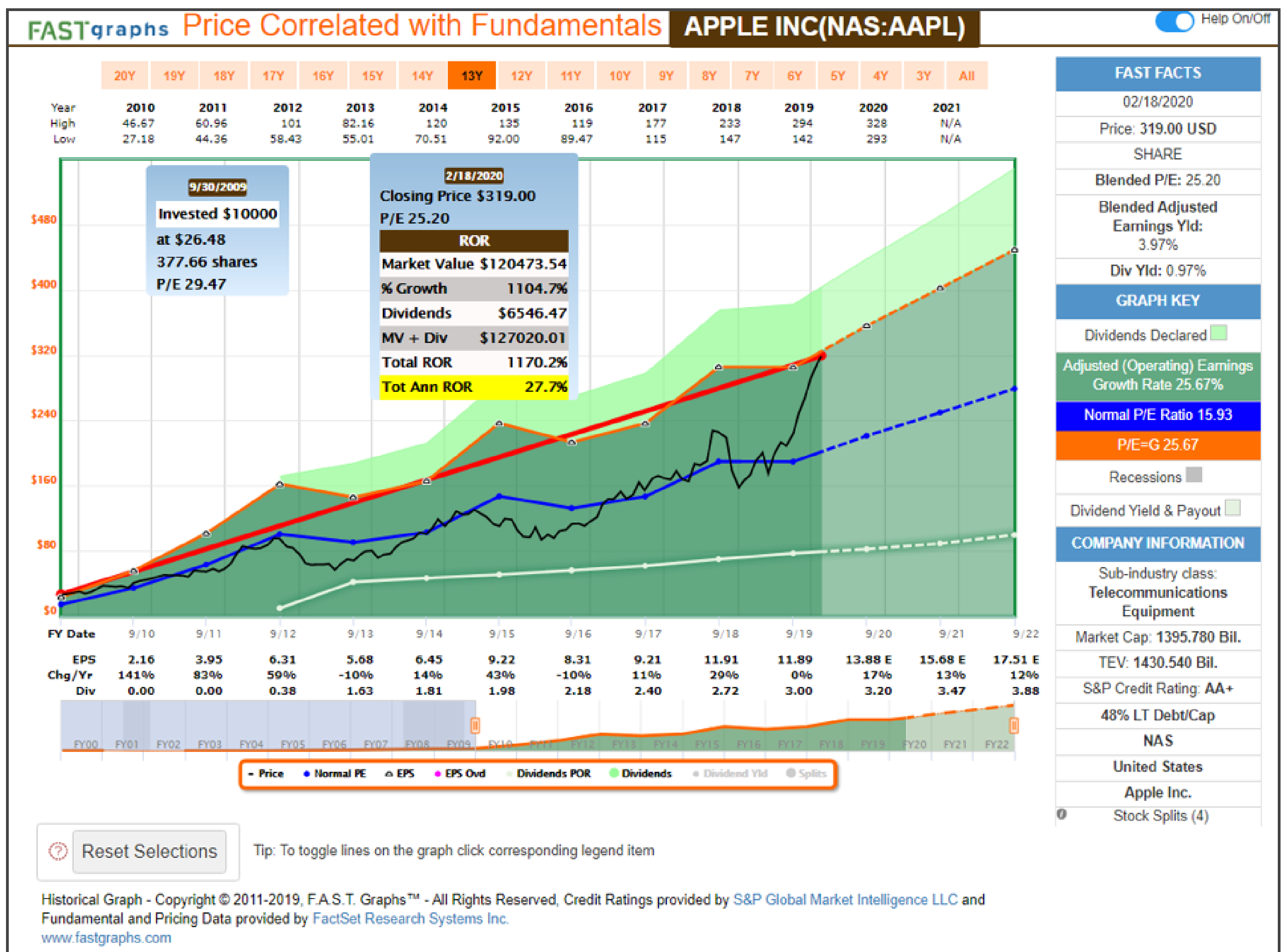


When growth and value are aligned

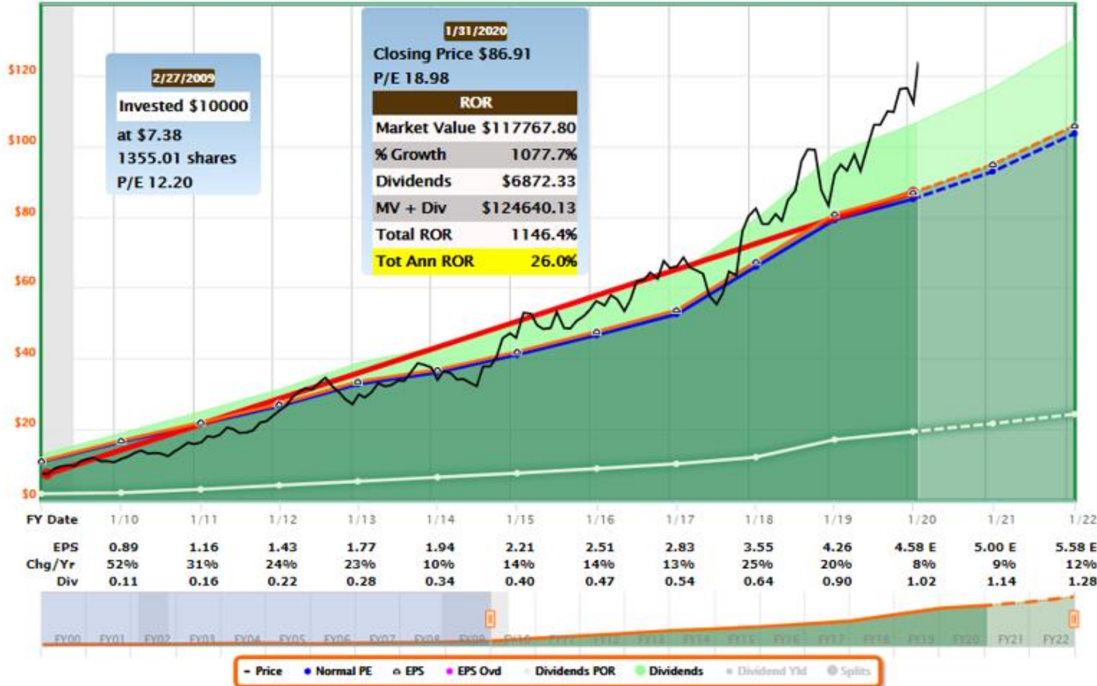
This next graph illustrates the benefit of applying a buy-and-hold strategy to the index when growth and value are aligned. The adjusted operating earnings growth for the S&P 500 over the 10-year timeframe 2010 through 2019 was 10.19%. Moreover, the beginning valuation was moderately high at a P/E ratio of 18.18, however, the ending valuation offered P/E expansion to a P/E ratio of 19.96 by December 31, 2019. Therefore, the result was a total annualized rate of return of 12.5% including dividends paid but not reinvested. Clearly, this illustrates that buy-and-hold was a successful strategy even though beginning valuation was a little high but not as excessive as the 2000-2009 period.



The next series of graphs portrays three companies over the timeframe 1999 to February 2020, that illustrate how effective a strategy buy-and-hold can be. At varying degrees, each of these companies possess extremely consistent and strong earnings growth, and each was reasonably valued at the beginning date of this time period. The first choice, Apple Inc. (AAPL), provides an example of a pure growth stock that morphed into a strong dividend growth stock.



The second choice, Ross Stores (ROST), provides an example of a growth stock with a dividend component. Ross Stores, as good as performance would have been had the stock only traded at fair value, it was even better as a result of it being overvalued at the end of the period as illustrated in the performance graph that follows.


FASTgraphs Price Correlated with Fundamentals
ROSS STORES INC(NAS:ROST)
Help On/Off
20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All
Year 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
High 16.65 24.58 35.41 41.00 48.10 56.68 69.81 81.48 104 118 118 N/A
Low 10.58 15.04 23.53 26.52 30.92 43.47 50.42 52.85 73.76 81.80 81.80 N/A
2/27/2009
Invested $10000
at $7.38
1355.01 shares
P/E 12.20
1/31/2020
Closing Price $86.91
P/E 18.98
ROR
Market Value $117767.80
% Growth 1077.7%
Dividends $6872.33
MV + Div $124640.13
Total ROR 1146.4%
Tot Ann ROR 26.0%
$120 $100 $80 $60 $40 $20 $0
FY Date 1/10 1/11 1/12 1/13 1/14 1/15 1/16 1/17 1/18 1/19 1/20 1/21 1/22
EPS 0.89 1.16 1.43 1.77 1.94 2.21 2.51 2.83 3.55 4.26 4.58 E 5.00 E 5.58 E
Chg/Yr 52% 31% 24% 23% 10% 14% 14% 13% 25% 20% 8% 9% 12%
Div 0.11 0.16 0.22 0.28 0.34 0.40 0.47 0.54 0.64 0.90 1.02 1.14 1.28
Price Normal PE EPS EPS Ovd Dividends POR Dividends Dividend Yld Splits
FAST FACTS
02/20/2020
Price: 123.81 USD
SHARE
Blended P/E: 26.90
Blended Adjusted Earnings Yld: 3.72%
Div Yld: 0.82%
GRAPH KEY
Dividends Declared
Adjusted (Operating) Earnings Growth Rate 18.98%
Normal P/E Ratio 18.58
P/E=G 18.98
Recessions
Dividend Yield & Payout
COMPANY INFORMATION
Sub-industry class: Apparel/Footwear Retail
Market Cap: 44.433 Bil.
TEV: 46.805 Bil.
S&P Credit Rating: A-
43% LT Debt/Cap
NAS
United States
Ross Stores, Inc.
Stock Splits (5)
Reset Selections
Tip: To toggle lines on the graph click corresponding legend item
Historical Graph - Copyright © 2011-2019, F.A.S.T. Graphs™ - All Rights Reserved, Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.
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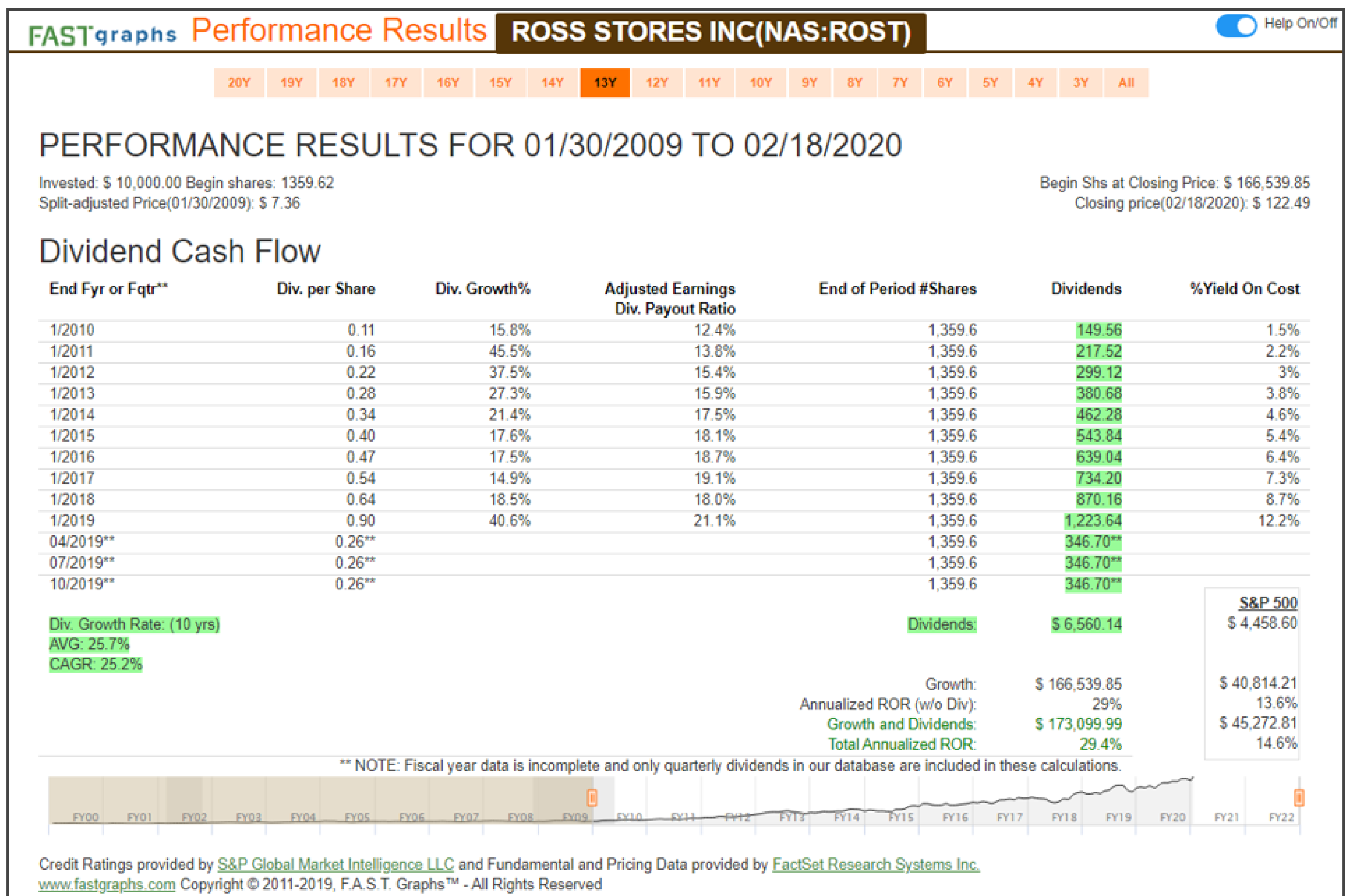

FASTgraphs Performance Results ROSS STORES INC(NAS:ROST)

Help On/Off

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

PERFORMANCE RESULTS FOR 01/30/2009 TO 02/18/2020

Invested: $ 10,000.00 Begin shares: 1359.62
Split-adjusted Price(01/30/2009): $ 7.36

Begin Shs at Closing Price: $ 166,539.85
Closing price(02/18/2020): $ 122.49

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
1/2010	0.11	15.8%	12.4%	1,359.6	149.56	1.5%
1/2011	0.16	45.5%	13.8%	1,359.6	217.52	2.2%
1/2012	0.22	37.5%	15.4%	1,359.6	299.12	3%
1/2013	0.28	27.3%	15.9%	1,359.6	380.68	3.8%
1/2014	0.34	21.4%	17.5%	1,359.6	462.28	4.6%
1/2015	0.40	17.6%	18.1%	1,359.6	543.84	5.4%
1/2016	0.47	17.5%	18.7%	1,359.6	639.04	6.4%
1/2017	0.54	14.9%	19.1%	1,359.6	734.20	7.3%
1/2018	0.64	18.5%	18.0%	1,359.6	870.16	8.7%
1/2019	0.90	40.6%	21.1%	1,359.6	1,223.64	12.2%
04/2019**	0.26**			1,359.6	346.70**	
07/2019**	0.26**			1,359.6	346.70**	
10/2019**	0.26**			1,359.6	346.70**	

Div. Growth Rate: (10 yrs)
AVG: 25.7%
CAGR: 25.2%

	ROST	S&P 500
Dividends:	$ 6,560.14	$ 4,458.60
Growth:	$ 166,539.85	$ 40,814.21
Annualized ROR (w/o Div):	29%	13.6%
Growth and Dividends:	$ 173,099.99	$ 45,272.81
Total Annualized ROR:	29.4%	14.6%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.
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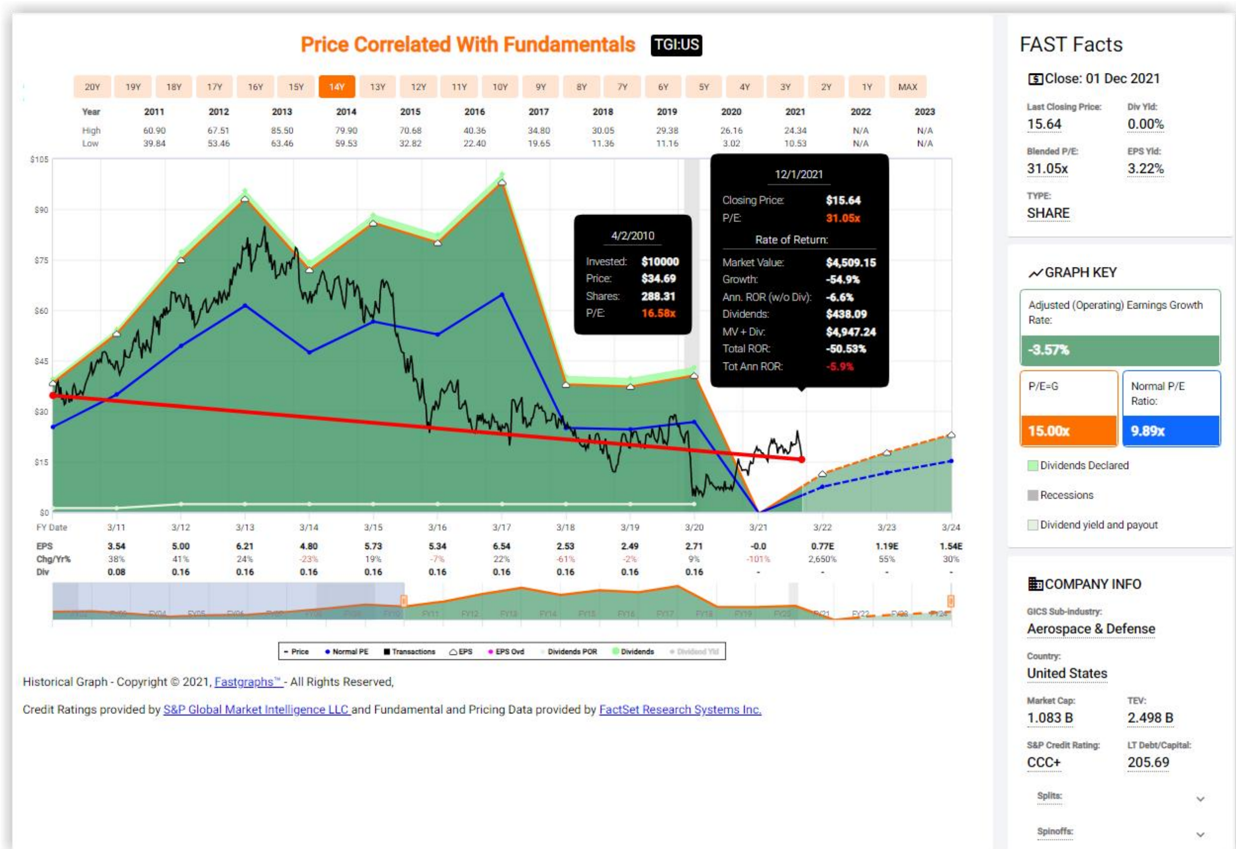
The third and final choice, Ameriprise Financial Inc. (AMP) provides an example of a dividend growth stock where valuation was attractive at the beginning and undervalued at the end of the timeframe. Nevertheless, despite its low ending valuation buy-and-hold turned out to be a great investment strategy for shareholders in Ameriprise Financial Inc. This once again illustrates how powerful buy-and-hold as an investment strategy is when valuation and growth are both aligned.

Each of these examples provide evidence that a buy-and-hold investing strategy works extremely well when the right companies are originally purchased at the right valuations. The buy-and-hold strategy, done right, is a great and prudent way for people to invest.

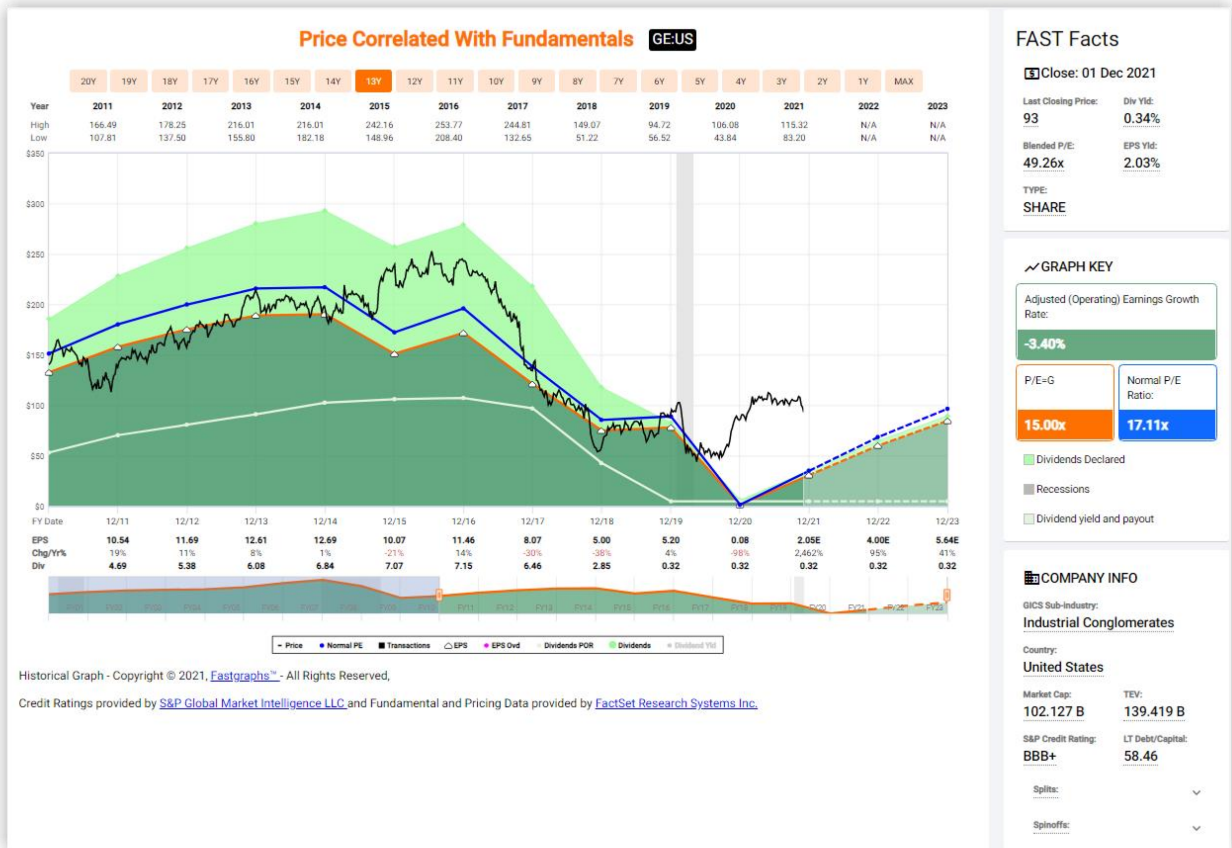
When Buy-And-Hold Is A Bad Idea

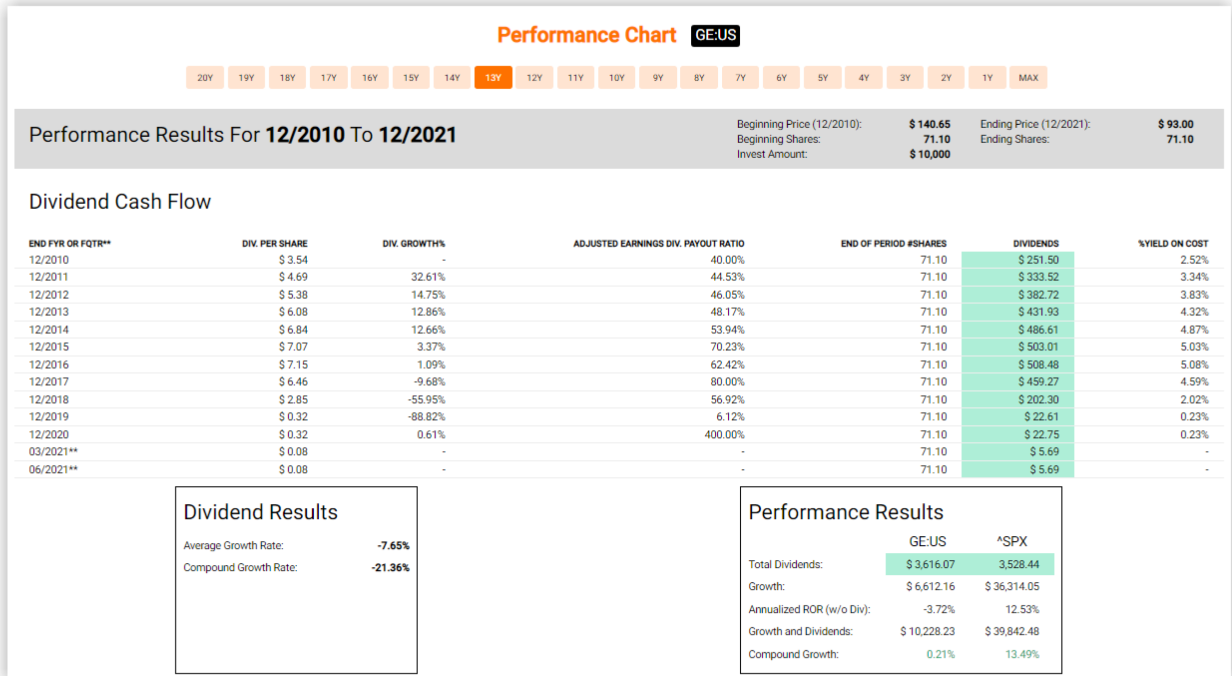
However, the following examples illustrate when buy-and-hold does not work as intended. The primary point is that you can't simply make a general or universal statement that buy-and-hold is an effective strategy. The truth depends on valuation and the success (growth) of the investment purchased.

Add company



General Electric (GE) Earnings and Price Correlated Graph Followed With Performance





Performance Chart GE:US

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y 2Y 1Y MAX

Performance Results For **12/2010** To **12/2021**

Beginning Price (12/2010): $ 140.65
Beginning Shares: 71.10
Invest Amount: $ 10,000
Ending Price (12/2021): $ 93.00
Ending Shares: 71.10

Dividend Cash Flow

END FYR OR FQTR**	DIV. PER SHARE	DIV. GROWTH%	ADJUSTED EARNINGS DIV. PAYOUT RATIO	END OF PERIOD #SHARES	DIVIDENDS	%YIELD ON COST
12/2010	$ 3.54	-	40.00%	71.10	$ 251.50	2.52%
12/2011	$ 4.69	32.61%	44.53%	71.10	$ 333.52	3.34%
12/2012	$ 5.38	14.75%	46.05%	71.10	$ 382.72	3.83%
12/2013	$ 6.08	12.86%	48.17%	71.10	$ 431.93	4.32%
12/2014	$ 6.84	12.66%	53.94%	71.10	$ 486.61	4.87%
12/2015	$ 7.07	3.37%	70.23%	71.10	$ 503.01	5.03%
12/2016	$ 7.15	1.09%	62.42%	71.10	$ 508.48	5.08%
12/2017	$ 6.46	-9.68%	80.00%	71.10	$ 459.27	4.59%
12/2018	$ 2.85	-55.95%	56.92%	71.10	$ 202.30	2.02%
12/2019	$ 0.32	-88.82%	6.12%	71.10	$ 22.61	0.23%
12/2020	$ 0.32	0.61%	400.00%	71.10	$ 22.75	0.23%
03/2021**	$ 0.08	-	-	71.10	$ 5.69	-
06/2021**	$ 0.08	-	-	71.10	$ 5.69	-

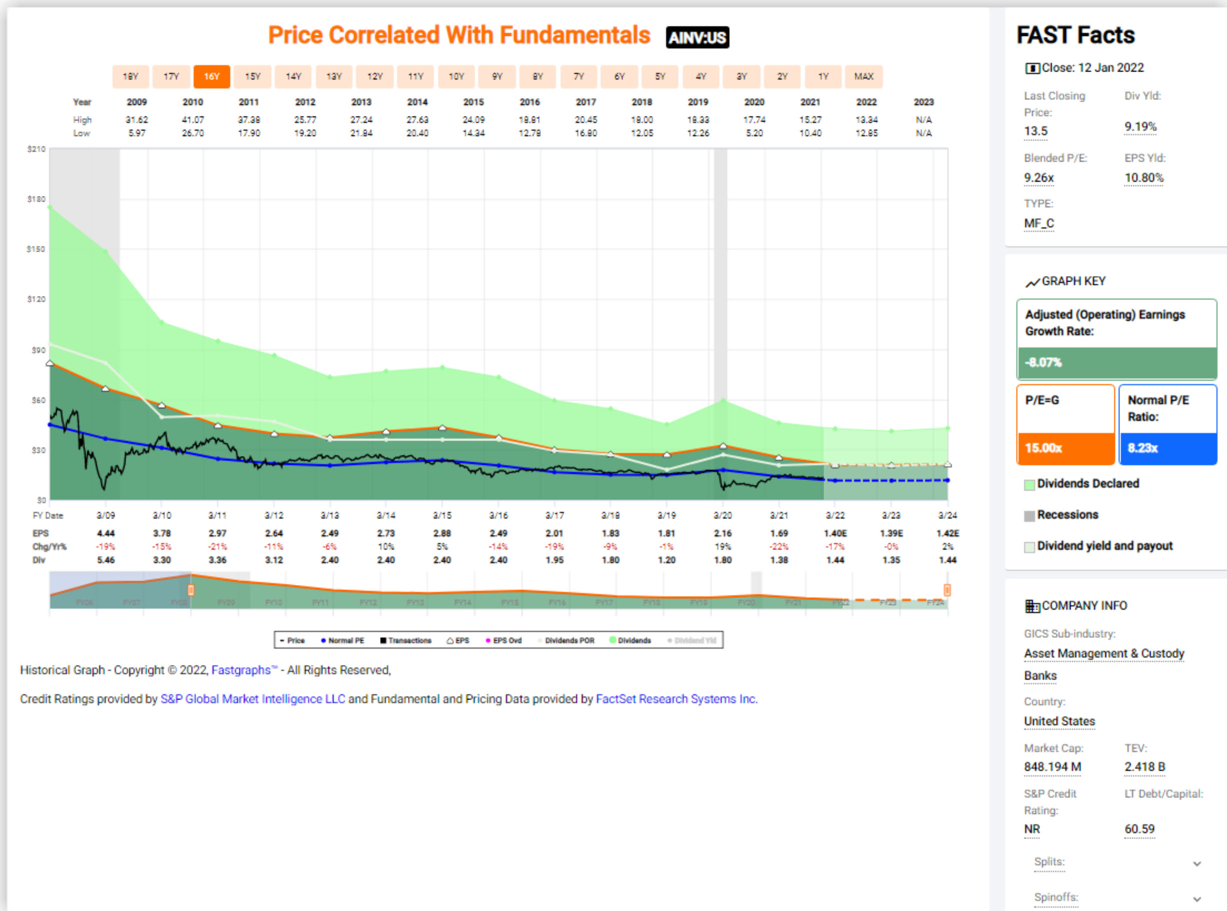
Dividend Results

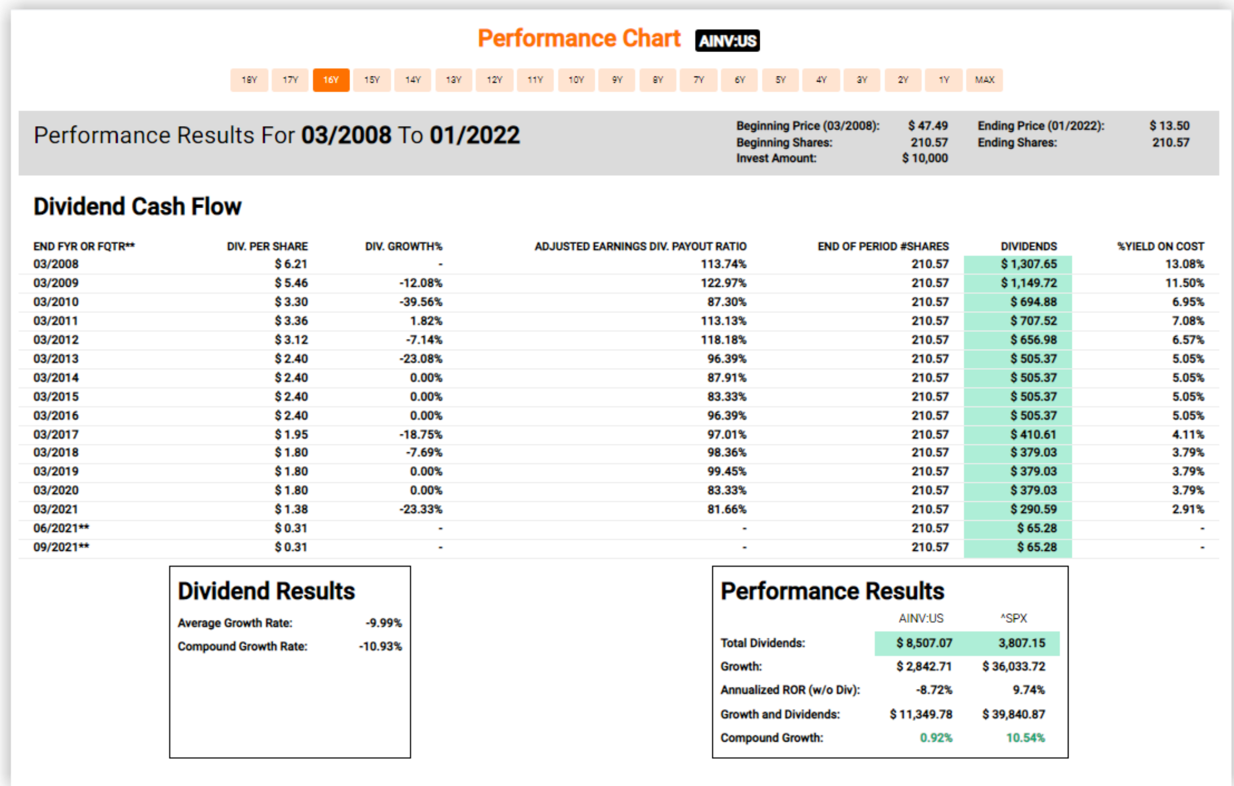
Average Growth Rate:	-7.65%
Compound Growth Rate:	-21.36%

Performance Results

	GE:US	^SPX
Total Dividends:	$ 3,616.07	3,528.44
Growth:	$ 6,612.16	$ 36,314.05
Annualized ROR (w/o Div):	-3.72%	12.53%
Growth and Dividends:	$ 10,228.23	$ 39,842.48
Compound Growth:	0.21%	13.49%

Apollo Investment Corp (AINV) Earnings and Price Correlated Graph Followed With Performance





Performance Chart AINV:US

18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y 2Y 1Y MAX

Performance Results For **03/2008** To **01/2022**

Beginning Price (03/2008):	$ 47.49	Ending Price (01/2022):	$ 13.50
Beginning Shares:	210.57	Ending Shares:	210.57
Invest Amount:	$ 10,000		

Dividend Cash Flow

END FYR OR FQTR**	DIV. PER SHARE	DIV. GROWTH%	ADJUSTED EARNINGS DIV. PAYOUT RATIO	END OF PERIOD #SHARES	DIVIDENDS	%YIELD ON COST
03/2008	$ 6.21	-	113.74%	210.57	$ 1,307.65	13.08%
03/2009	$ 5.46	-12.08%	122.97%	210.57	$ 1,149.72	11.50%
03/2010	$ 3.30	-39.56%	87.30%	210.57	$ 694.88	6.95%
03/2011	$ 3.36	1.82%	113.13%	210.57	$ 707.52	7.08%
03/2012	$ 3.12	-7.14%	118.18%	210.57	$ 656.98	6.57%
03/2013	$ 2.40	-23.08%	96.39%	210.57	$ 505.37	5.05%
03/2014	$ 2.40	0.00%	87.91%	210.57	$ 505.37	5.05%
03/2015	$ 2.40	0.00%	83.33%	210.57	$ 505.37	5.05%
03/2016	$ 2.40	0.00%	96.39%	210.57	$ 505.37	5.05%
03/2017	$ 1.95	-18.75%	97.01%	210.57	$ 410.61	4.11%
03/2018	$ 1.80	-7.69%	98.36%	210.57	$ 379.03	3.79%
03/2019	$ 1.80	0.00%	99.45%	210.57	$ 379.03	3.79%
03/2020	$ 1.80	0.00%	83.33%	210.57	$ 379.03	3.79%
03/2021	$ 1.38	-23.33%	81.66%	210.57	$ 290.59	2.91%
06/2021**	$ 0.31	-	-	210.57	$ 65.28	-
09/2021**	$ 0.31	-	-	210.57	$ 65.28	-

Dividend Results

Average Growth Rate:	-9.99%
Compound Growth Rate:	-10.93%

Performance Results

	AINV:US	^SPX
Total Dividends:	$ 8,507.07	3,807.15
Growth:	$ 2,842.71	$ 36,033.72
Annualized ROR (w/o Div):	-8.72%	9.74%
Growth and Dividends:	$ 11,349.78	$ 39,840.87
Compound Growth:	0.92%	10.54%

These examples and related discussion illustrate the fundamental difference between true investing and speculating. Buy-and-hold is an investing strategy that implies the appropriate holding time period, which is a hallmark of any strategy called investing. Speculation on the other hand is usually associated with shorter timeframes.

The final premise behind this discussion is to illustrate that passive investing (index investing) is also an investing strategy that can be good or bad – depending. Consequently, it really comes down to what suits the individual investor. Do you prefer taking charge of your own investment portfolios or are you more comfortable leaving it to professional managers like those that build index ETF's and mutual funds? Nevertheless, there are good times and bad times to invest in indices as well.

It is important to note that if you do build your own portfolio and practice a buy-and-hold long-term strategy, that does not guarantee success. Executing correctly through buying firms likely to perform well, at reasonable valuations, maximizes your chances of success.

Dividend Growth Investing

One common investor motive is income. While there are many securities that generate income, dividend paying stocks are a common choice. Dividend growth investing involves identifying firms with a long history of paying dividends that will produce more income than the market. Buying such firms at a fair or better price is one example of a doable strategy that can match certain investment goals you might set.

Regarding dividends, there are several questions that the discerning investor might ask: Are the dividends growing, and if so, at what rate and how consistently and for how long? Has the firm ever cut their dividend, and if they did, why? What about the payout ratio; is it reasonable and is it increasing or decreasing? What has been the cumulative total amount of dividends paid over a given period of time, and what has been the nominal yield and yield on cost (growth yield) that the stock has delivered? Are the dividends well covered by cash flow and free cash flow? What does the future growth potential of dividends look like?

There are other questions regarding a company's fundamental values that a discerning investor should ask and answer. How has the market historically capitalized a given company's fundamental results? In other words, what is a normal valuation that the market has historically

applied? How do these valuations compare with other companies in other industries? And of course, most importantly, how is the market valuing the business today; is it overpriced, underpriced or fairly priced? Although this information requires a certain amount of interpretation on the part of the researcher, clear answers can greatly facilitate the decision-making process.

Questions like those above, and many more, are easy to ask but difficult to answer. Although the information is readily available on public companies, it must be pieced together from financial statements or other data sources. Once the information is gathered, then numerous calculations must be made to answer the proposed questions. FAST Graphs makes this process simpler and quicker than going it completely alone.

Two Dividend Stocks

Here are two dividend paying companies that, at first glance, appear to possess very similar fundamental attributes. Each of these companies offered a similar dividend yield that is more than the yield available on an S&P 500 index fund. Also, each of these companies were trading at similar current valuations as follows:

Ticker	Name	GICS Sub-Industry	P/E	EPS Yld	Div Yld
MDU	MDU RESOURCES GROUP INC	Multi-Utilities	13.58	7.36%	3.41%
UGI	UGI CORP	Gas Utilities	13.41	7.46%	3.64%

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From the information above, each of these companies appears to offer very similar (almost but not quite identical) dividend yields, and their current valuations are very similar. On the other hand, the information above lacks critical information about the company's history and the fundamental records that they have achieved. Statistically, the businesses look very similar. However, there is much that can be learned from the past if the important information is readily available.

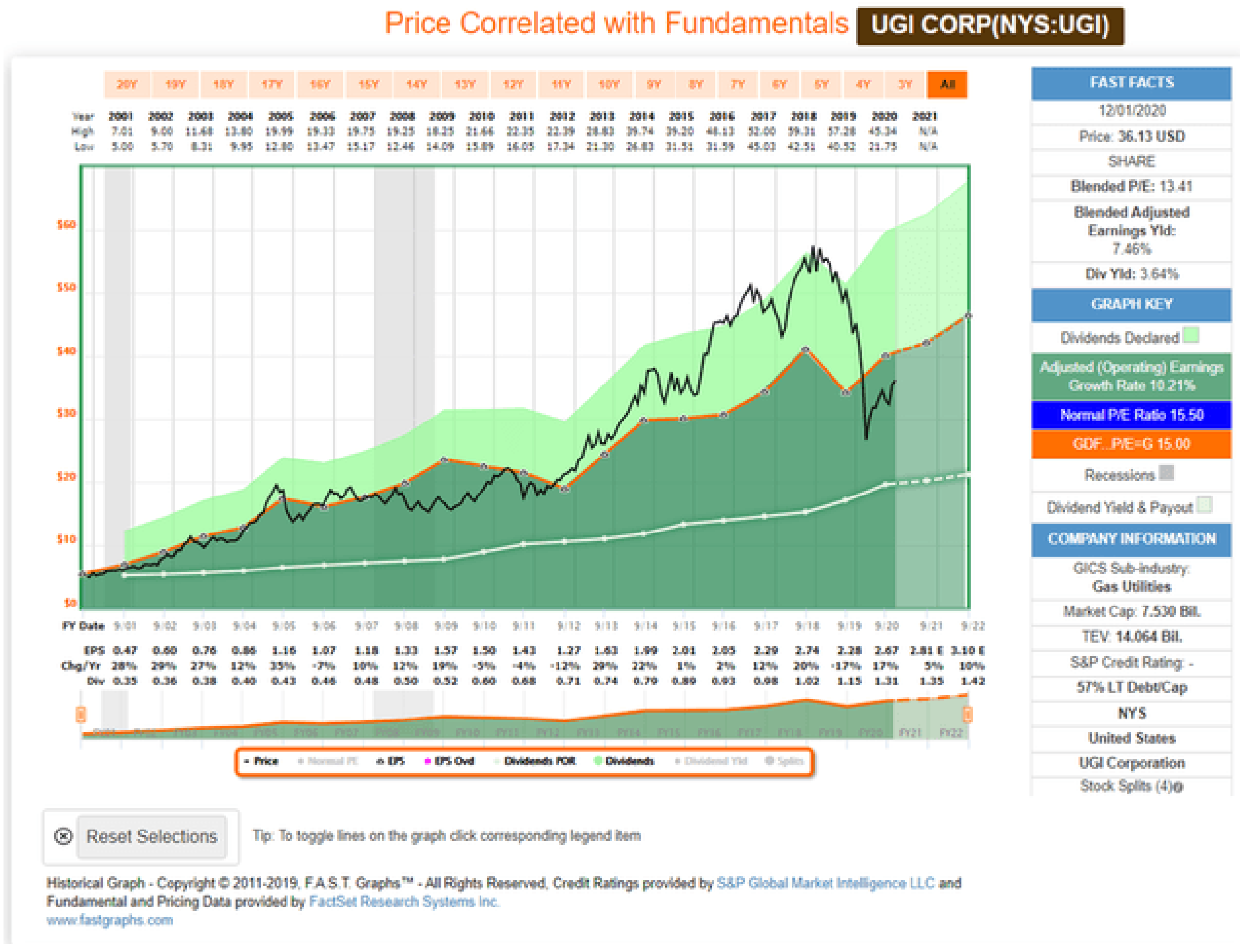
Therefore, let us look at each company from the perspective of historical earnings and dividends only. The three figures below visually depict each company's earnings record (orange line with white triangles) since calendar year 2001.

The black line indicates monthly closing stock prices correlated to the orange earnings justified valuation lines. Now, again, in an instant, you receive answers to many of the important questions that were asked in the above paragraphs. First you can see how stock prices have tracked and correlated to earnings. You can also see how the market has historically valued each company and therefore easily determine on that basis whether the market is fairly valuing each respective company at present time.

The green shaded area represents earnings, and the light green shaded area represents dividends paid out of earnings. Therefore, immediately, you can see how consistent and how fast earnings growth has been and the level of dividends that have been paid out of those earnings is also visible. Additional vital fundamental information can be gleaned from a quick review of each graph.

The performance reports allow you to answer many of the questions regarding the company's dividends that were suggested above. Finally, the forecasting graphs provide a perspective of what analysts currently expect going forward.

UGI Corp (UGI)



Performance Results UGI CORP(NYS:UGI)

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

PERFORMANCE RESULTS FOR 08/31/2000 TO 12/01/2020

Invested: $ 10,000.00 Begin shares: 1972.62
Split-adjusted Price(08/31/2000): $ 5.07

Begin Shs at Closing Price: $ 71,270.76
Closing price(12/01/2020): $ 36.13

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
9/2001	0.35	0%	75.0%	1,972.6	690.42	6.9%
9/2002	0.36	3.2%	60.2%	1,972.6	712.52	7.1%
9/2003	0.38	4.3%	49.4%	1,972.6	743.09	7.4%
9/2004	0.40	5.7%	46.5%	1,972.6	785.90	7.9%
9/2005	0.43	8.8%	37.4%	1,972.6	854.94	8.5%
9/2006	0.46	6.1%	42.9%	1,972.6	907.40	9.1%
9/2007	0.48	4.7%	40.8%	1,972.6	950.00	9.5%
9/2008	0.50	4.5%	37.9%	1,972.6	992.62	9.9%
9/2009	0.52	4%	33.3%	1,972.6	1,032.08	10.3%
9/2010	0.60	14.7%	40.0%	1,972.6	1,183.58	11.8%
9/2011	0.68	13.3%	47.4%	1,972.6	1,341.40	13.4%
9/2012	0.71	3.9%	55.8%	1,972.6	1,393.86	13.9%
9/2013	0.74	4.2%	45.1%	1,972.6	1,453.02	14.5%
9/2014	0.79	7.3%	39.7%	1,972.6	1,559.93	15.6%
9/2015	0.89	12.5%	44.3%	1,972.6	1,755.62	17.6%
9/2016	0.93	4.5%	45.4%	1,972.6	1,834.54	18.3%
9/2017	0.97	4.8%	42.6%	1,972.6	1,923.30	19.2%
9/2018	1.02	4.6%	37.2%	1,972.6	2,012.06	20.1%
9/2019	1.15	12.3%	50.2%	1,972.6	2,258.65	22.6%
9/2020	1.31	14.4%	49.1%	1,972.6	2,584.12	25.8%

Div. Growth Rate: (19 yrs)
AVG: 7.3%
CAGR: 7.2%

		S&P 500
Dividends:	$ 26,969.05	$ 4,165.75
Growth:	$ 71,270.76	$ 25,206.54
Annualized ROR (w/o Div):	10.2%	4.7%
Growth and Dividends:	$ 98,239.81	$ 29,372.29
Total Annualized ROR:	11.9%	5.5%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.
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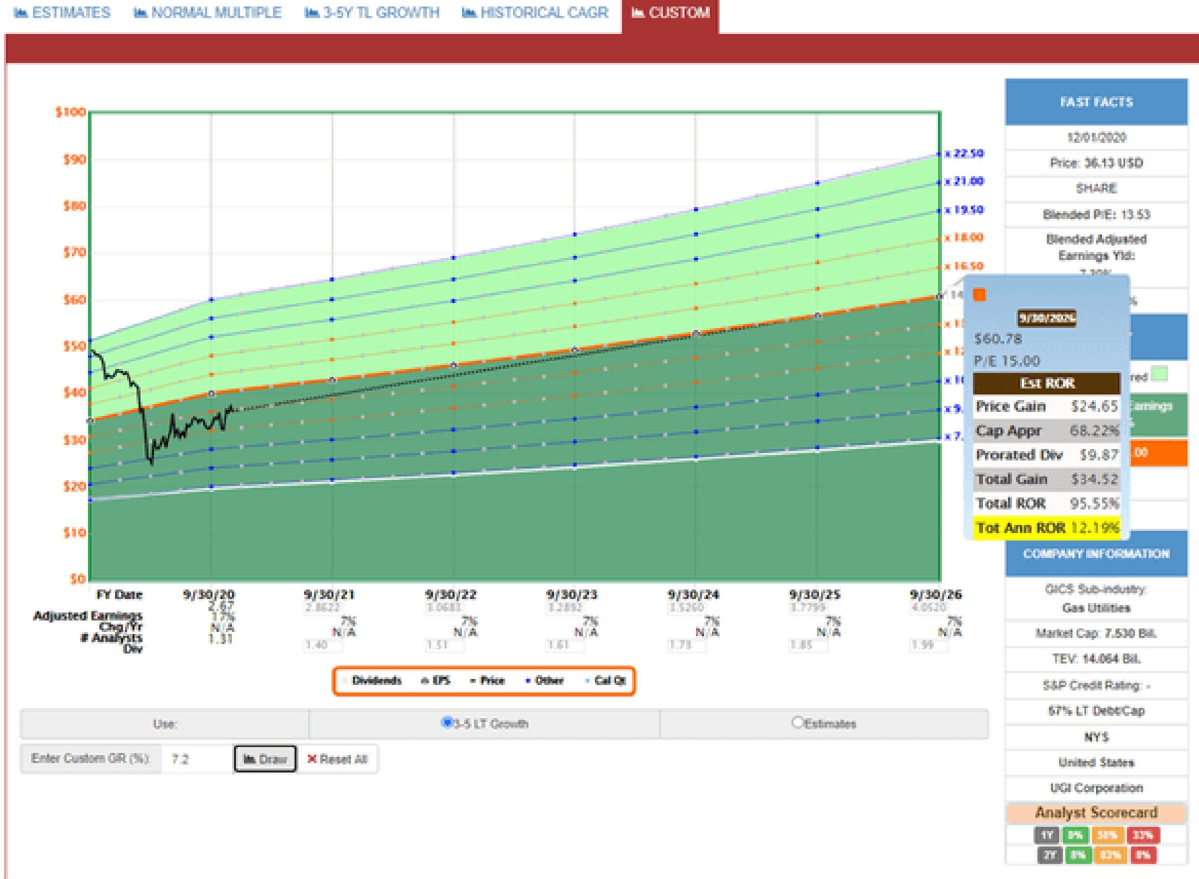
Forecasting Calculators
UGI CORP(NYS:UGI)
ESTIMATES
NORMAL MULTIPLE
3-5Y TL GROWTH
HISTORICAL CAGR
CUSTOM
FAST FACTS
12/01/2020
Price: 36.13 USD
SHARE
Blended P/E: 13.53
9/30/2026
$60.78
P/E 15.00
Est ROR
Price Gain $24.65
Cap Appr 68.22%
Prorated Div $9.87
Total Gain $34.52
Total ROR 95.55%
Tot Ann ROR 12.19%
COMPANY INFORMATION
GICS Sub-industry: Gas Utilities
Market Cap: 7.530 Bil.
TEV: 14.064 Bil.
S&P Credit Rating: -
67% LT Debt/Cap
NYS
United States
UGI Corporation
Analyst Scorecard
FY Date
Adjusted Earnings
Chg/Yr
Analysts
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Use:
3-5 LT Growth
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Enter Custom GR (%): 7.2
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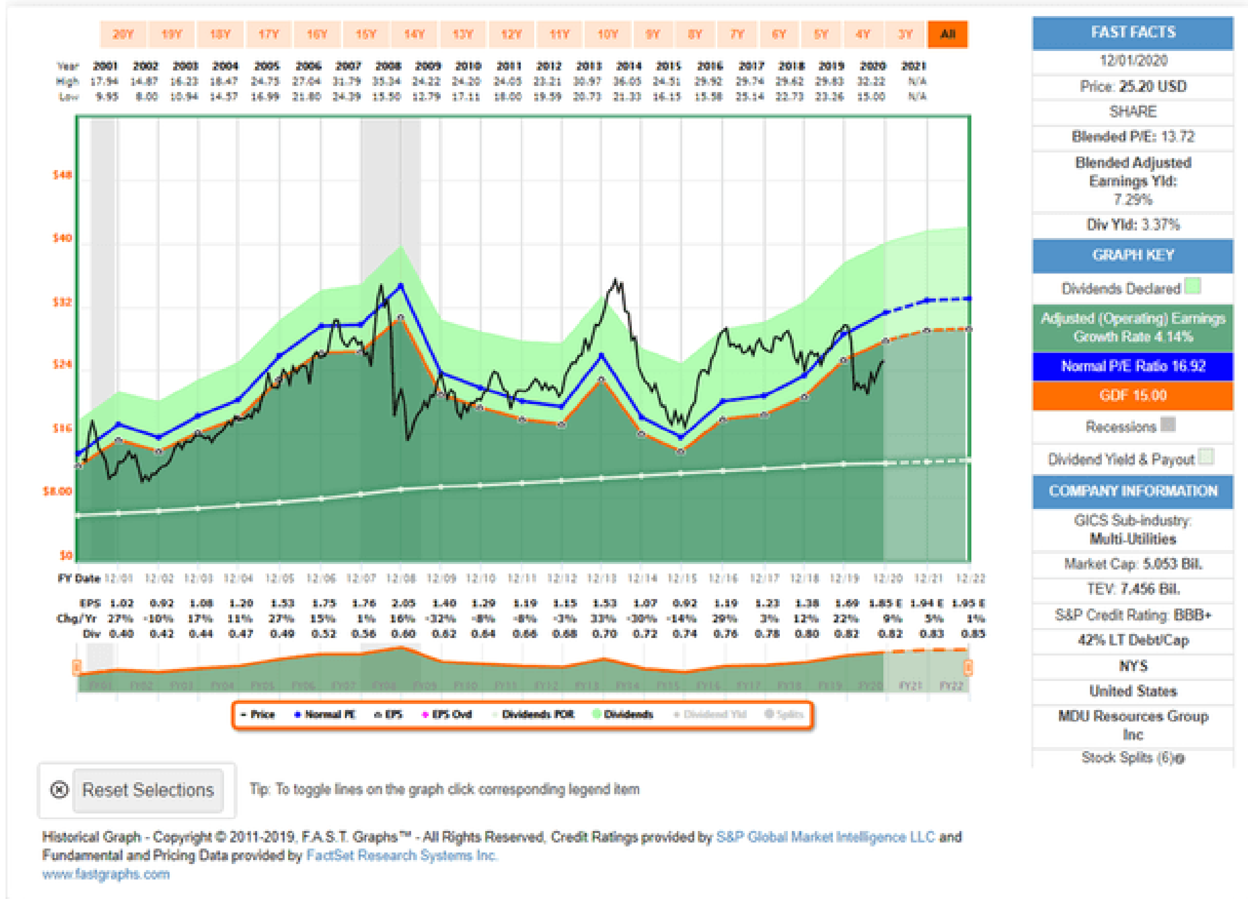
MDU Resources Group (MDU)

Price Correlated with Fundamentals **MDU RESOURCES GROUP INC(NYS:MDU)**



Performance Results **MDU RESOURCES GROUP INC(NYS:MDU)**

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y **All**

PERFORMANCE RESULTS FOR 12/29/2000 TO 12/01/2020

Invested: $ 10,000.00 Begin shares: 692.31
Split-adjusted Price(12/29/2000): $ 14.44

Begin Shs at Closing Price: $ 17,446.21
Closing price(12/01/2020): $ 25.20

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
12/2001	0.40	4.7%	39.3%	692.3	276.92	2.8%
12/2002	0.42	4.4%	45.4%	692.3	289.24	2.9%
12/2003	0.44	5.3%	40.7%	692.3	304.62	3%
12/2004	0.47	6.1%	38.9%	692.3	323.04	3.2%
12/2005	0.49	5.7%	32.3%	692.3	341.60	3.4%
12/2006	0.52	6.1%	29.9%	692.3	362.36	3.6%
12/2007	0.56	7%	31.8%	692.3	387.68	3.9%
12/2008	0.60	7.1%	29.3%	692.3	415.38	4.2%
12/2009	0.62	3.8%	44.5%	692.3	430.97	4.3%
12/2010	0.64	2%	49.2%	692.3	439.62	4.4%
12/2011	0.66	3.1%	55.0%	692.3	453.46	4.5%
12/2012	0.68	3.1%	58.7%	692.3	467.30	4.7%
12/2013	0.69	3%	45.4%	692.3	481.15	4.8%
12/2014	0.71	2.9%	66.8%	692.3	495.02	5%
12/2015	0.73	2.8%	79.9%	692.3	508.86	5.1%
12/2016	0.76	2.7%	63.4%	692.3	522.70	5.2%
12/2017	0.78	2.6%	63.0%	692.3	536.54	5.4%
12/2018	0.80	2.6%	57.6%	692.3	550.38	5.5%
12/2019	0.81	2.5%	48.2%	692.3	564.22	5.6%
03/2020**	0.21**			692.3	143.65**	
06/2020**	0.21**			692.3	143.65**	
09/2020**	0.21**			692.3	143.65**	

Div. Growth Rate: (19 yrs)
AVG: 4.1%
CAGR: 4.1%

		S&P 500
Dividends:	$ 8,582.01	$ 4,517.84
Growth:	$ 17,446.21	$ 27,524.39
Annualized ROR (w/o Div):	2.8%	5.2%
Growth and Dividends:	$ 26,028.22	$ 32,042.23
Total Annualized ROR:	4.9%	6%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.

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Not all dividends are the same, even when they appear to be. Having a clear perspective of a company's past can offer important insights into the future. However, the past is not necessarily indicative of the future. Therefore, comprehensive research is always suggested. With that said, there is nevertheless a lot that can be learned from the past.

Principles for Designing A Dividend Growth Portfolio for Retirement

Managing an investment portfolio is a very personal matter. Consequently, the most important consideration is to design a portfolio that meets your own unique goals, objectives and risk tolerances. Everyone is different, and consequently, every investment portfolio can and should be appropriately different as well. Cookie-cutter or one-size-fits-all approaches to portfolio design are unlikely to be a fit for your individual needs.

Retirement investment portfolios likewise should be designed and constructed to meet the specific needs of the individual. In some cases, the objective might be current income and safety. In other cases, the objective might be the necessity to earn the highest possible rate of return. Importantly, the most appropriate objective for each individual case will often be driven by factors that are external to the portfolio itself.

Two of the most important external factors are the size of the portfolio relative to the investor's needs, and/or the amount of time the investor has before entering the withdrawal phase. These important factors are the major contributors regarding whether the individual will be required to harvest principle upon retirement, or whether they will be able to live comfortably off the income their portfolio can prudently generate.

Of course, the optimum scenario belongs to the prudent planner and disciplined saver that started early and built up a portfolio over time that can generate more than enough income to live off during retirement. More simply put, the larger the size of your portfolio, the more options you have. For example, if you have amassed a portfolio that is large enough to generate more income than you need to live off, you can position your portfolio as riskless as possible if you so choose.

On the other hand, if you have determined that you must continue to grow your assets to meet your needs, then you will be required to take on more risk. Therefore, practical advice on investing is to start early and save regularly. Whether you are inclined to invest in equity (stocks, real estate, etc.) or debt (bonds, CDs, etc.), the sooner you start, and the more often you contribute, the more you will accumulate over time. "Time in" is more relevant and better than "timing."

Nevertheless, and with the above stated, this section is oriented to those investors that have had the good fortune to amass assets large enough to comfortably live off in retirement. However, the specific size that a portfolio needs to be will also differ from one individual to the next. Some people desire or require lavish lifestyles while others will be more modest with their needs. Regardless, the primary focus of this article will be on implementing portfolio design principles that apply best practices for achieving yield or income.

Principle Number 1: Be Realistic with Your Yield Objective

Establishing a realistic assessment of available current market yields should be the first step that every investor investing for income should take. This takes precedence over calculating the yield you require from your portfolio in order to meet your needs. The best place to start is by examining the yields available from Treasury bonds, widely considered the least risky investment of all. An intelligent baseline and perspective of the yield you can realistically achieve on your portfolio is best established by being fully cognizant of the yields that the lowest-risk investments provide.

The following snapshot taken from the US Department of the Treasury shows the current yield on Treasury bonds as of July 12, 2019:

Current Treasury Bond Yields:

Current Treasury bond yields:

Date	1 Mo	2 Mo	3 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
07/01/19	2.17	2.16	2.21	2.10	1.94	1.78	1.74	1.79	1.90	2.03	2.34	2.55
07/02/19	2.21	2.17	2.20	2.09	1.91	1.77	1.71	1.75	1.85	1.98	2.29	2.51
07/03/19	2.25	2.20	2.21	2.08	1.91	1.77	1.71	1.74	1.83	1.96	2.25	2.47
07/05/19	2.26	2.22	2.23	2.14	1.98	1.87	1.82	1.84	1.93	2.04	2.34	2.54
07/08/19	2.23	2.24	2.26	2.14	1.99	1.88	1.84	1.86	1.94	2.05	2.32	2.53
07/09/19	2.22	2.24	2.26	2.15	2.00	1.92	1.88	1.88	1.96	2.07	2.34	2.54
07/10/19	2.18	2.18	2.20	2.07	1.93	1.82	1.79	1.82	1.93	2.07	2.36	2.57
07/11/19	2.17	2.17	2.17	2.08	1.97	1.85	1.84	1.88	1.99	2.13	2.42	2.65
07/12/19	2.16	2.18	2.14	2.07	1.96	1.84	1.81	1.86	1.98	2.12	2.42	2.64

Friday Jul 12, 2019

After establishing the yields available from the lowest-risk fixed-income investments, it is then prudent to move on to and conduct a review of the lowest-risk dividend-paying equities. Regarding equities, the current yield of the S&P 500 sits around 2%. Furthermore, a review of the yields available on the prestigious dividend growth stocks comprising the S&P Dividend Aristocrats are a sensible place to focus your search.

The S&P Dividend Aristocrats constituents currently offer yields ranging from a low of .5% to a high of 6.09%. For those more interested in growth, a 2% current yield is more often associated with higher growth potential, while a 3% current yield is more associated with moderate growth and above-average income. However, prudent investors can also combine these appropriate dividend growth stocks with higher yielding equities such as REITs and/or MLPs. Reaching for yields beyond the above quoted numbers requires taking on more risk than many retirees would or should be willing to take.

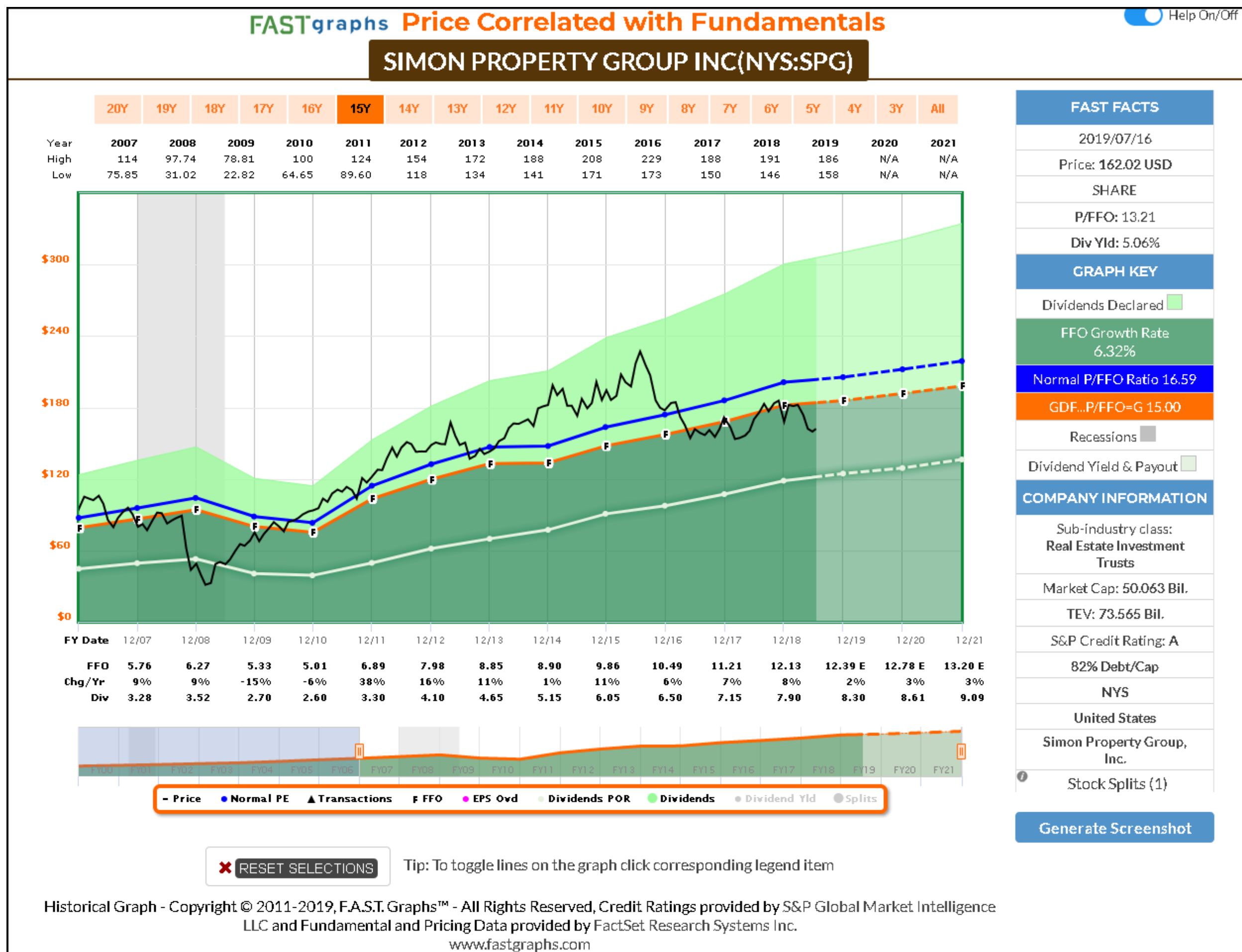
With those numbers in mind, I believe a conservatively-oriented retirement portfolio can figure on a blended average dividend yield without taking on undue risk of between 3 and 4%. But most importantly, they could also conservatively expect a growth yield (yield on cost increase) of 6 to 8% going forward. These numbers are realistic given the yield environment of 2019.

There is an important consideration when examining the yields on dividend-paying equities that is not required when examining fixed-income yields. When examining the yields on blue-chip dividend paying stalwarts, it is important to evaluate current valuation. In other words, it's important to determine what dividend yields are available from blue chips when they are fairly valued. Additionally, it's also important to evaluate available yields on blue chips with different growth potential characteristics.

The following are representative examples of a range of higher-yielding, moderate-yielding and lower-yielding blue-chip dividend growth stocks. These examples provide a realistic and prudent range of the yields currently available that can be researched with the objective to construct a realistic and appropriate yielding retirement portfolio. However, this list includes examples that may not be appropriate for retirement portfolios.

Simon Property Group (SPG): Higher-Yielding Quality REIT Appropriate For Retirement Accounts

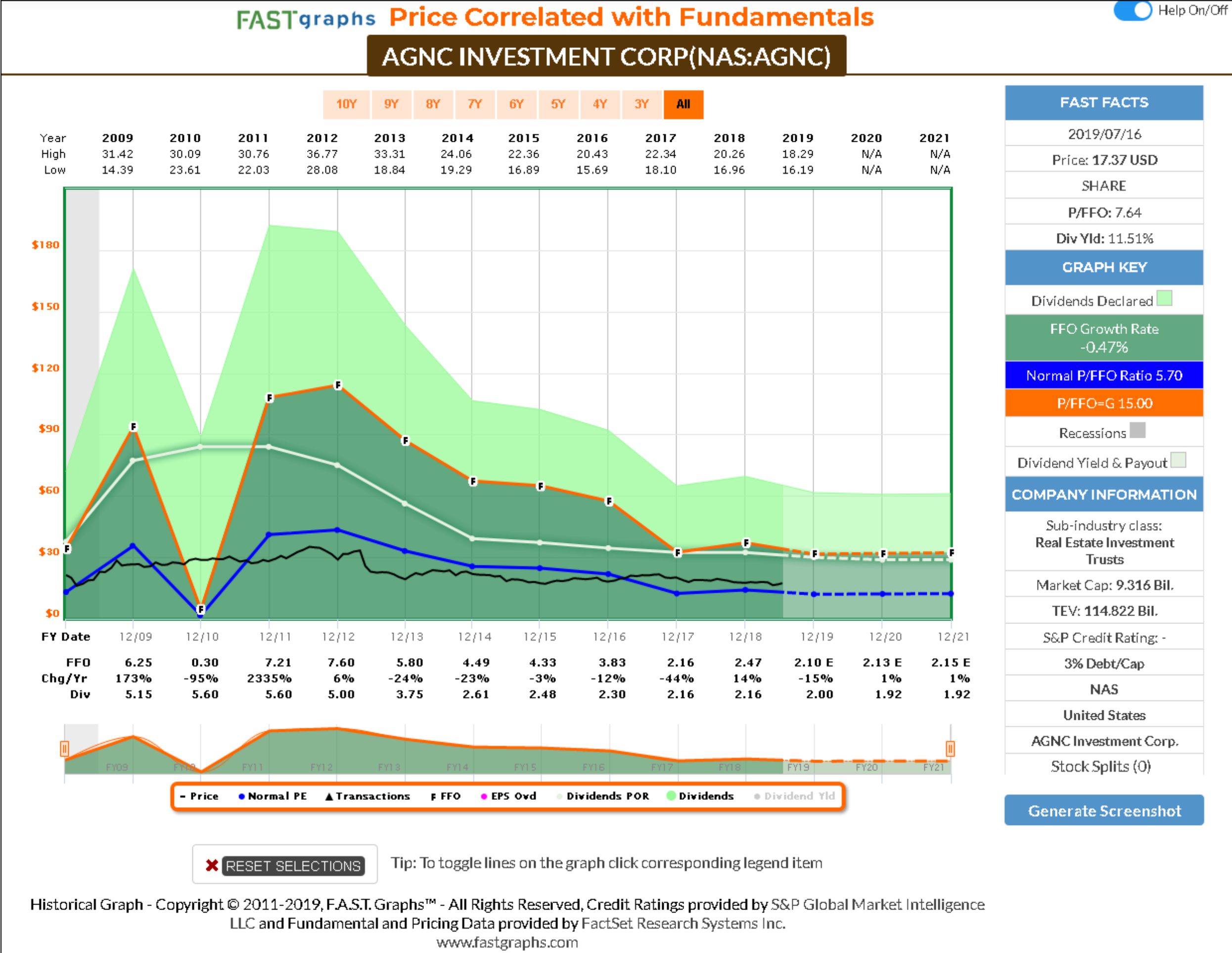
Simon Property Group is a high yielding and high quality REIT. But most importantly, it is available at a very attractive valuation as of July 2019. Consequently, I it represents an excellent candidate to not only turbocharge the yield on your retirement portfolio, but also provide above-average long-term capital appreciation as well.



AGNC Investment Corp (AGNC): A High-Yield Higher Risk REIT Questionably Appropriate

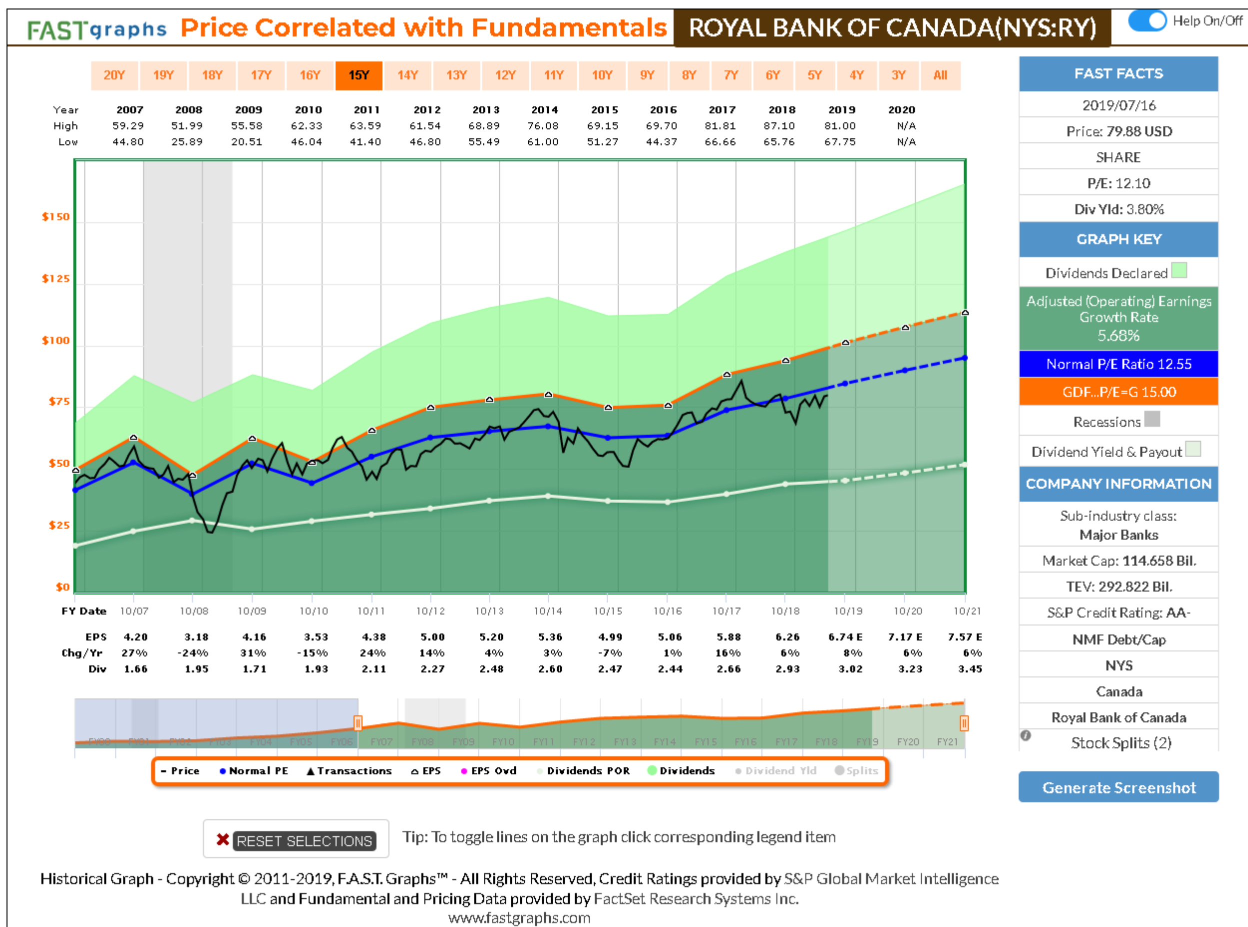
In contrast to high-quality Simon Property Group, AGNC Investment Corp (AGNC) is a mortgage REITs that utilizes leverage. Statistically, this investment looks quite enticing. Its price to FFO is very low at 7.64 and its current dividend yield is 11.51%. Although a credit rating is not available, the firm only shows 3% debt to capital. Therefore, at first glance it statistically appears to be a phenomenal income investment.

However, closer scrutiny will illustrate that the company has significantly cut its dividend several times since 2009. Additionally, FFO has a negative growth rate over that same timeframe. Importantly, a historical review of AGNC's performance will clearly illustrate the risk as well as the opportunity of investing in this extremely high-yield investment.



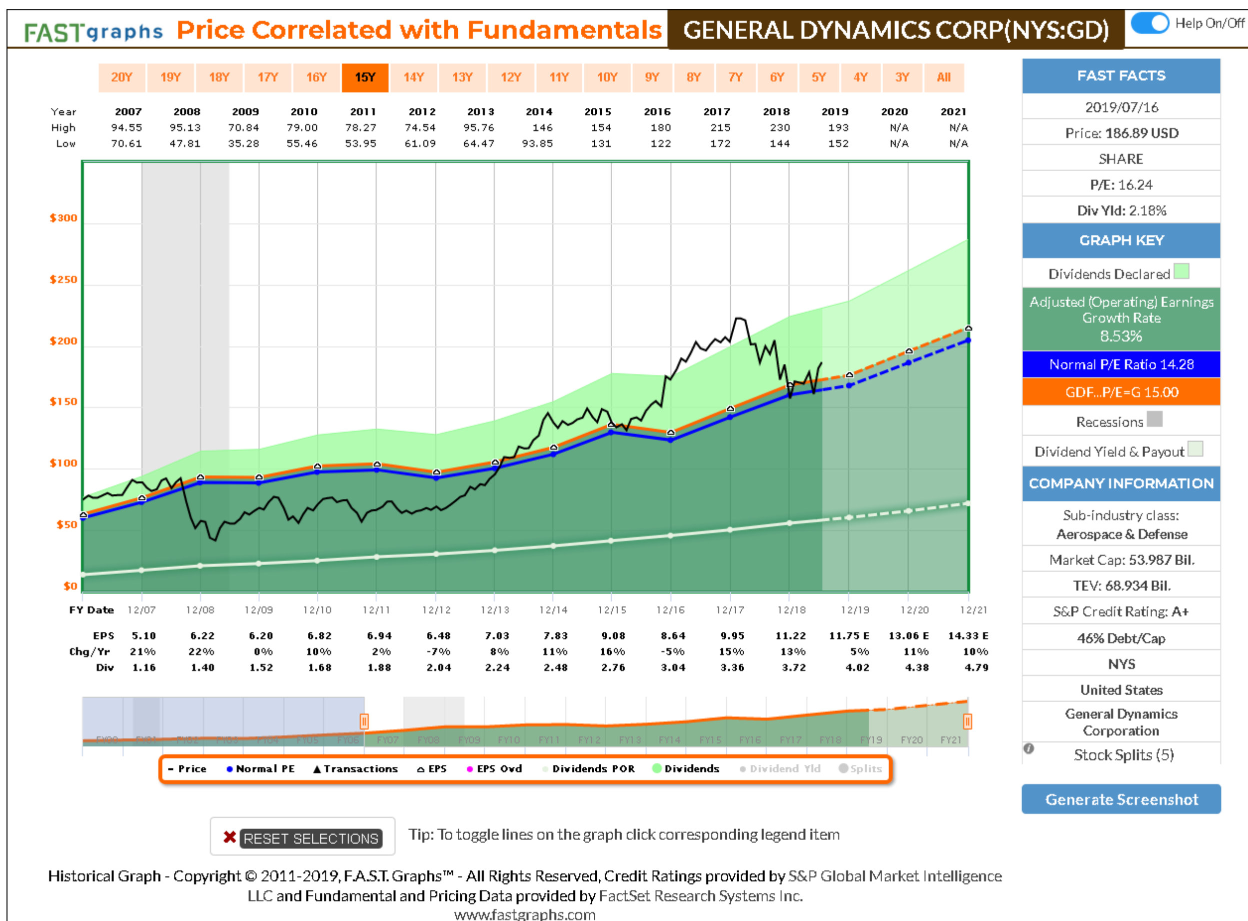
Royal Bank of Canada (RY)

Royal Bank of Canada represents an opportunity to invest in a fairly valued high-quality above average yielding financial. The company is AA- rated and trades at a blended P/E ratio of 11.8, which is below its traditionally low normal P/E ratio of 12.73.



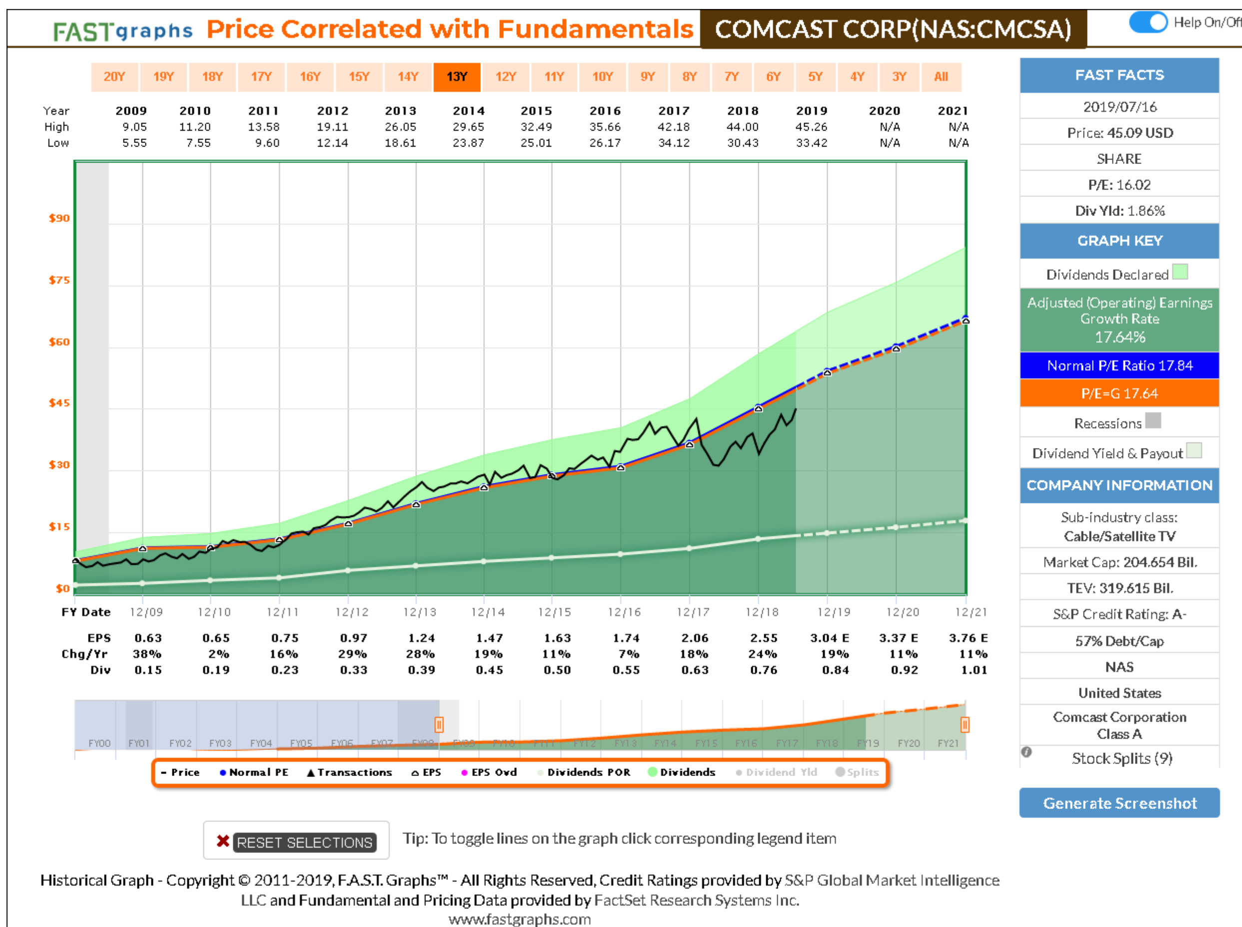
General Dynamics Corp (GD)

General Dynamics is a high-quality dividend growth stock that is fully valued offering a slightly above-market dividend yield. However, this example represents an opportunity to invest in an above-average growing blue-chip for a predictable above-average future total return.



Comcast Corp (CMCSA)

The Comcast Corp. example represents a faster growing blue-chip dividend growth stock with a slightly below-market yield. This type of dividend growth stock can be very appealing to dividend growth investors still in the accumulation phase. Although this company has only been paying a dividend since 1999, its dividend growth yield (yield on cost) has consistently grown at approximately 20% per annum.



Charles Schwab Corp (SCHW)

Charles Schwab Corp. is included in order to provide an example of a high-quality blue-chip dividend growth stock that appears reasonably attractive on the surface, but may not be appropriate for retirement accounts when scrutinized more closely. The company is A rated, and has a low debt to capital ratio of 25%. Although the company has historically been awarded a premium valuation by the market, its current valuation, although historically low, does not appear attractive relative to future expectations for growth.

At this point, you now have a perspective on the yields that are currently and generally available from the most conservative fixed-income and reasonably-valued dividend growth stocks. Since these are, in theory at least, the lowest-risk equity and fixed-income options available, we can utilize this information as a guide towards assessing risk as we seek suitable income-producing investments.

Additionally, we have discovered that the highest-quality fixed-income investments offer very low current yields even if we purchased the longest maturities. Therefore, if we are assessing

investment opportunities in bonds, we should immediately recognize that any bond offering current yields in excess of our low-risk baseline would logically contain higher risk.

Regarding the high-quality dividend stocks examined above, their current yields range from 1.63% to 11.51%. However, as a general statement, growth expectations are higher with the lower-yielding equities and vice versa. This is an important perspective depending on whether the individual investor is more in need of capital appreciation or current income. On the other hand, the examples also include exceptions to that general statement. As with all rules of thumb, there are always exceptions.

Finally, the important point behind this exercise is that we now have a clear understanding and knowledge of a reasonable and general range of dividend yields we can expect from high-quality equities.

Principle Number 2: Determine How Much Income Your Portfolio Needs To Produce

The second step after determining the range of prudent yields available is to calculate how much income needed to live off of in retirement. This calculation will vary from one individual to the next. Then, take an inventory of any sources of income outside of the retirement portfolio. For most retirees, this will be Social Security. However, income sources can also include pensions, rental income from real estate properties, interests in businesses, etc.

These income sources should be subtracted from our gross income need in order to determine how much income the retirement portfolio needs to generate. For example, if an individual has determined that they need $75,000 worth of income in order to retire comfortably, and are receiving $25,000 worth of Social Security income, then their portfolio would be required to generate an additional $50,000 worth of income.

Once this has been accomplished, the process of determining the yield that your equity portfolio must generate is a simple process. You simply divide your income need by your total portfolio value and that will determine the overall yield your portfolio must generate. Staying with the example presented above, if you had a $1 million portfolio, you would simply divide your $50,000 supplemental income need by $1,000,000 and determine that your portfolio must yield 5%.

Now, here is where things get tricky, and also why this simple process is so important. Based on the previously discovered ranges of yields available from conservative equities, it's imperative that we understand that a 5% yield target on an equity portfolio would require an aggressive higher-risk strategy. Consequently, there are only limited realistic options if the goal is to have the portfolio fund retirement without harvesting principle.

Therefore, either a lower level of retirement income, or extra risk will be required to generate the 5% yield target. If neither of those options are acceptable, then harvesting assets in order to supplement is necessary.

For additional perspective, utilize the same example but with a larger accumulated portfolio. If the individual had accumulated a $2 million portfolio and was receiving the same $25,000 per annum of Social Security and had the same $75,000 income need, the math works much better. In this case, if you divide the $50,000 supplemental income need by the $2 million portfolio value, you discover a portfolio only needs to earn 2.5% to meet the goal. Based on the range of high-quality dividend yields available currently, the target yield is both realistic and comfortable.

Finally, a properly designed dividend growth retirement portfolio should experience a steadily increasing level of dividend income each year. Therefore, a properly designed dividend growth retirement portfolio will fight inflation from the growth and income alone, and any capital appreciation would represent a bonus above that.

The Advantages And Benefits Of A Retirement Portfolio Capable Of Producing Enough Income

Although there are many investing strategies and philosophies that people can choose to follow, there is one that beats them all. Those wise and prudent people that started saving early in life are typically the ones that amass retirement portfolios capable of meeting their long-term needs. The simple act of putting away even a little bit of money every month reaps huge benefits over time. Unfortunately, far too many people lack the discipline or wisdom to execute a sound long-term retirement plan.

However, those people that have been prudent enough to save and plan wisely for retirement are blessed with many incredible and important investing options. Perhaps the most important of all is that they are empowered to take on less investment risk at precisely the time when they shouldn't be taking any risks.

There is a general investing principle that applies. Investing for income, and investing in income-producing investments are generally less risky than investing for growth or in growth-oriented investments. In the same vein, generating a growing income stream through investing in dividend-growth stocks is more predictable than investing for capital appreciation or total return. High-quality dividend growth stocks with long histories of growing their dividends every year can continue to produce a higher rate of income even if the prices of their publicly-traded stocks are dropping. In retirement, a predictable growing income stream is of paramount importance.

Value Beats Growth or Growth Beats Value: Fact and Myth

The finance industry often indicates that stocks can be generally categorized into only two styles commonly referred to as growth investing or value investing. These overly-vague notions about investing in stocks can even be seen in our most prestigious financial news outlets and sites. Currently, the mantra appears to be that growth is beating value, as if there is a long-running rivalry between only these two classes of stocks.

This overly-generalized type of thinking is very detrimental to investors at all levels. It distracts investors from thinking about important principles of sound investing by focusing their attention on fallacious concepts. Instead of helping investors understand how rates of return on stocks are generated and where they come from, investors are duped into thinking about ambiguous concepts that are imprecisely defined. In truth, there exists a virtual infinite array of common stock types.

And more to the point, most stocks are technically growth stocks at some level. However, some stocks grow slowly while other stocks grow very fast – and literally everything in between. Moreover, even the fastest growth stock can at the same time be in value, or for that matter, be dangerously overvalued. Just because a growth stock comes into value doesn’t change its true classification. In other words, a growth stock can also at the same time be a value stock.

Value is not an asset class, instead it is a representation of whether (or not) you are paying a fair price for an asset. Growth stocks can be available at a fair value or even undervalued. At the end of the day, valuation is a measurement of the level of risk you are assuming in order to

achieve a rate of return. Or as Warren Buffett once so aptly put it "Price is what you pay, value is what you get."

Sources of Return: First there is Growth then there are Dividends

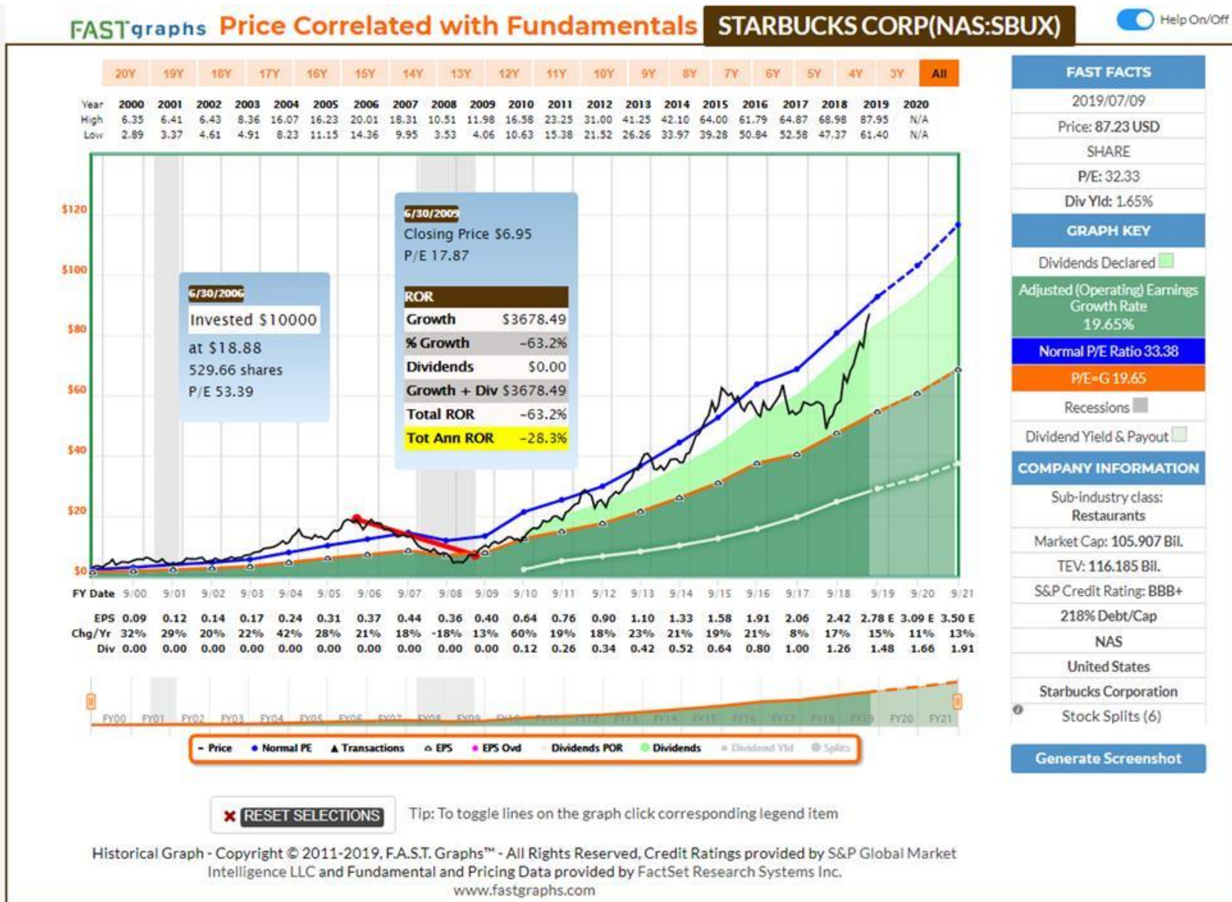
Ultimately, the returns that a common stock delivers will be a function of how fast the business grows in conjunction with whether it pays a dividend and how fast that dividend grows. Additionally, valuation will also have an effect. Valuation can either enhance or reduce the returns that the business can generate. Higher valuations reduce returns, lower valuations enhance returns. Even though this is simple common sense, the simple concept is often overlooked or ignored by investors.

The growth rate, rate of change or velocity of growth has a significant mathematical impact on eventual rates of return. Consequently, if prudent and rational valuation principles are applied, high growth will always outperform lower growth whether high growth is impeccably valued or not. And as a further aside, whether dividends are paid or not.

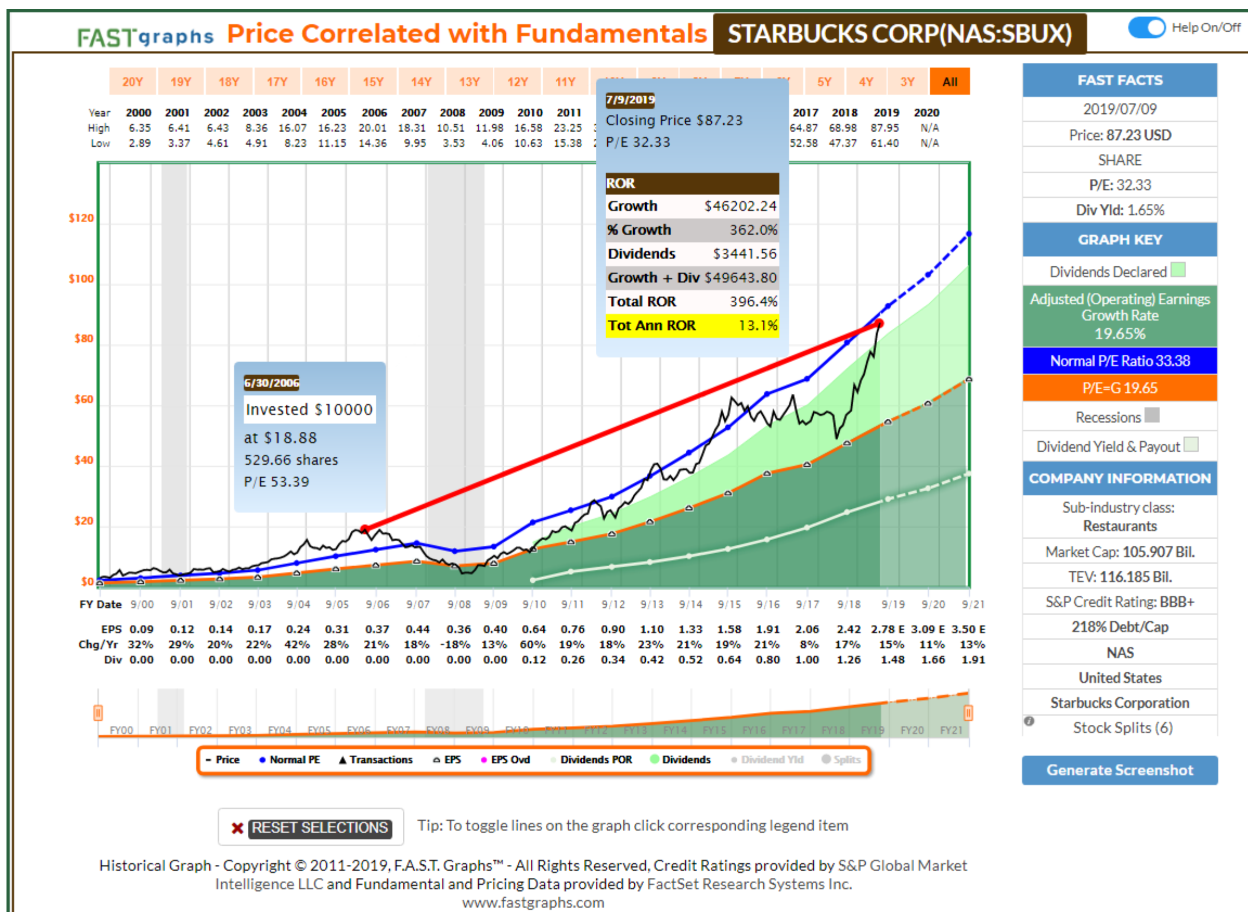
The power of compounding is a powerful force. Therefore, don't fall into the myth that value will beat growth – or vice versa. High growth will most always win the race. The only exception will be when valuations are so extreme that they can even defeat the incredible power of compounding. Consequently, it's implicit that investors understand, recognize and acknowledge how fast the business they are looking at is growing and whether the market is valuing it appropriately or not.

Investing in high-growth stocks is undoubtedly riskier than, for example, investing in blue-chip dividend growth stocks. That said, their rapid growth can effectively mitigate some of the risk. Thanks to the power of compounding, the company that is growing its earnings very fast can bail investors out even if they overpay for the stock at purchase. Of course, this assumes that the company continues growing at above-average rates.

The following earnings and price correlated graph on Starbucks (SBUX) characterize a case in point. Had you invested in the company at its peak P/E ratio of 53.39 on June 30, 2006 you would have obviously suffered significant losses over the next 3 full years.

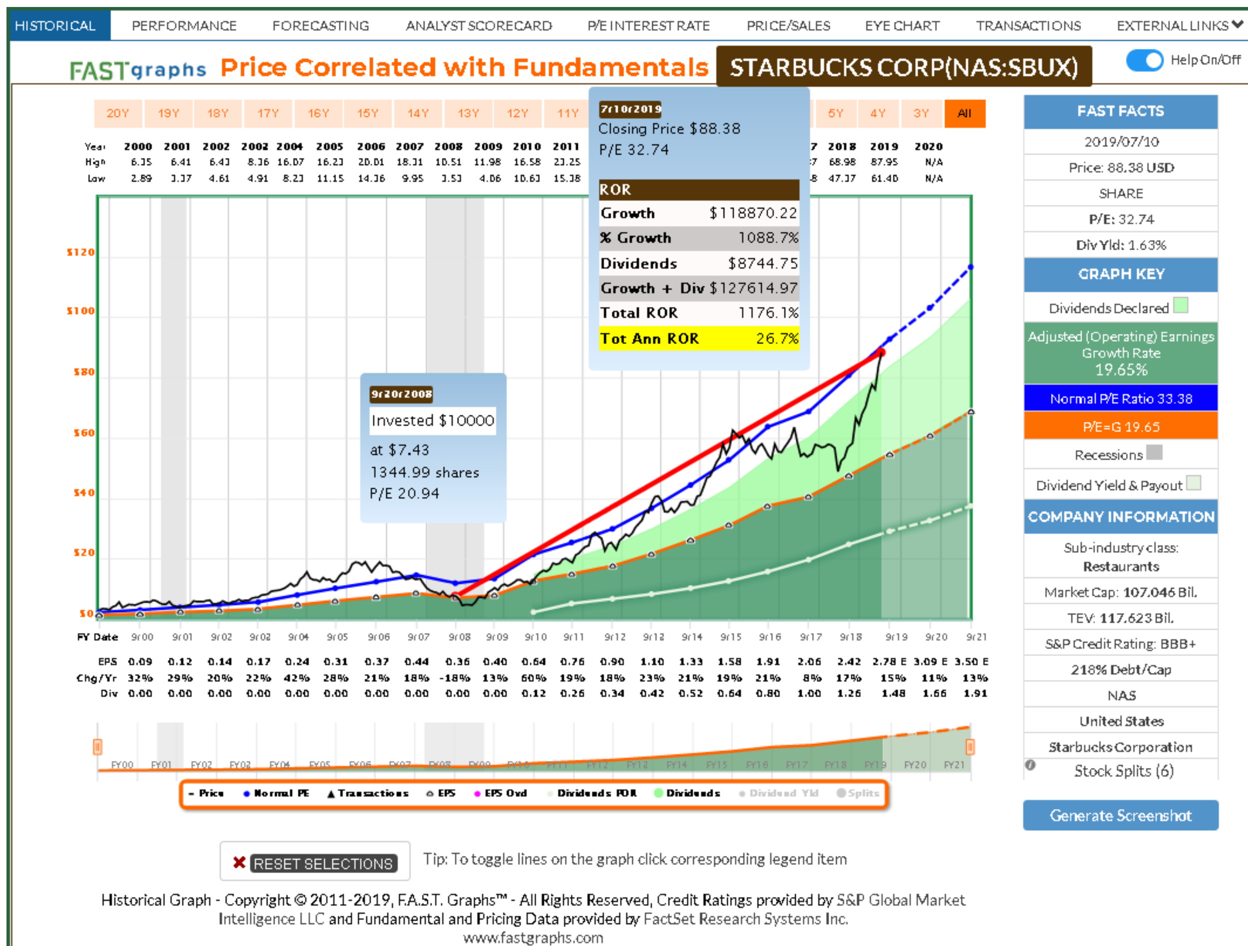


However, considering that this original irrational behavior took you into the throes of the Great Recession, and further considering that the company remained profitable, you would have made money long-term if you held onto the stock. Above-average earnings growth bailed you out even though the current P/E ratio of 32.33 is significantly below the P/E ratio you paid at original purchase.



Therefore, the FAST Graphs definition of a high growth stock is straightforward and precise and has nothing to do with value definitionally. Conceptually, a high growth stock represents the common stock of a company whose business is consistently growing earnings and/or cash flow at a significantly above-average rate. Considering the historical average growth rate of stocks (6 to 8%), a high growth stock is a company whose earnings are consistently increasing at double-digit rates (10% or higher).

In truth, if you buy a great growth stock like Starbucks at an attractive valuation, it is simultaneously a value stock and a growth stock. But most importantly, your results are greatly enhanced while your risk is simultaneously reduced. The graph below shows what would have happened if the investor waited approximately three years in order to buy the growth stock Starbucks when it also became a value stock. The result is that the investor would have doubled their rate of return (26.7% versus 13.1%) which more than doubled the total dollars they would have had at the end which are also generated in three years less time.



The Power of Compounding

Compounding is a very powerful force, which over long periods of time will inevitably outperform value. To illustrate the point, remember the Rule of 72. This rule states that you can calculate the number of years it takes to double your money at a given compound return by dividing it into the number 72.

Assume that the average person has a working lifespan of 36 years. In modern times this may be a conservative assumption, but it facilitates the math. Next, assume two different compound rates of return as they apply to the average common stock, and then to the pure growth stock. For the average common stock, assume a generous and above-average rate of return of 10% per annum. For the pure growth stock, assume the appropriately higher rate of return of 20% per annum. The math then looks like this:

With the average common stock, divide 10% into 72 to calculate that it will take 7.2 years to double your money (72/10% = 7.2 years).

With the pure growth stock, divide 20% into 72 to calculate that it will take 3.6 years to double your money (72/20%=3.6 years).

Applying this math to the assumed average working life of 36 years yields following results:

If your money doubles every 7.2 years at a 10% rate of return, you will get 5 doubles in 36 years (36/7.2=5).

If your money doubles every 3.6 years at a 20% rate of return, you will get 10 doubles in 36 years (36/3.6=10).

The net effect is that by doubling the average rate of return from 10% to 20% per annum, you do not earn two times the money by earning twice the return. Instead, you get double the doubles. Looked at from the perspective of the first $1 (dollar) invested the power of compounding (compressing time) becomes vividly clear.

Doubling your first $1 (dollar) 5 times at the 10% return results in the following: $1 doubles 5 times to $2, $4, $8, $16, and finally to $32. However, at the 20% return I get 5 additional doubles over the same 36 year timeframe as follows: $64, $128, $256, $512, $1024.

To put this into perspective, over the assumed 36 year working lifetime you earn 32 times more money by earning 20% than you would have if you earned 10% (1024/32=32). Doubling the number of doubles over the same timeframe shows the incredible power of compounding that true growth stocks are capable of offering.

The Incredible Benefits of Growth

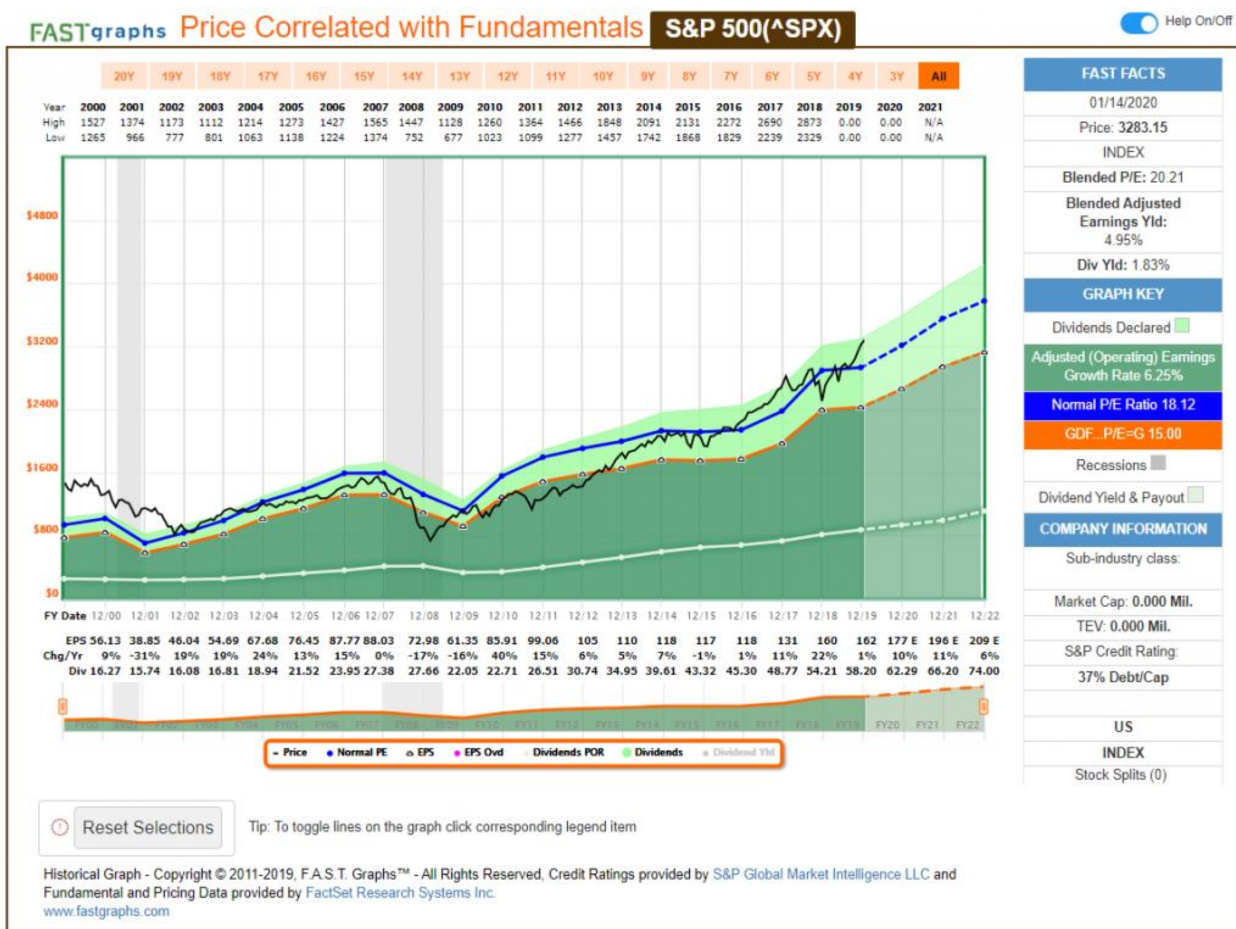
One of the great benefits of investing in high-growth stocks is that as long as they are in a high-growth phase, you can pay more than they are worth and still make money. You can thank the power of compounding for that risk mitigation. Of course, if you find them at or below value, then you can make more money while simultaneously taking on less risk. Lower risk and higher return is certainly a desirable objective. However, as long as firms are growing fast, there is no price or valuation, within reason, that you could pay and not make some money. Nevertheless, the hat trick so to speak is that the company continues to grow at high rates after you purchase it. This is where the risk is with growth stocks, because achieving and maintaining high growth is both difficult and rare.

More on Value Investing

Almost by definition, value investing rarely performs well in the short run. This is especially true when you are in a strong bull market. Most companies as represented by the S&P 500 trade at fundamental multiples that are significantly above historical norms. Below is a 20-year historical earnings and price correlated FAST Graph of the S&P 500. There are two valuation reference lines on the graph.

The dark blue valuation reference line represents a normal P/E ratio of 18.12. The orange valuation reference line represents a fair value P/E ratio of 15. As you can see, for most of that timeframe market prices traded between those valuation references. However, note the two outliers calendar year 2000 to the beginning of 2002 and calendar years 2017 to January 2020. Clearly, January 2020 valuations were high.

S&P 500 Twenty-Year Valuation Levels



As legendary investor Warren Buffett once stated "Most people get interested in stocks when everyone else is. The time to get interested is when no one else is. You can't buy what is popular and do well."

The dark side of being a value investor is that it often takes a long time before you eventually reap your rewards. Consequently, being a value investor also means being a patient investor. Or perhaps more appropriately stated, being a value investor also implies having a long-term mindset.

This speaks to why Warren Buffett also said "If you aren't willing to own a stock for ten years, don't even think about owning it for ten minutes." Stated more directly, value investing rarely produces instantaneous or short-term results, because value investing usually also implies investing in unpopular stocks. This unpopularity is often why they have become valuable (bargains).

Moreover, and from a more practical point of view, we must also acknowledge that value stocks are typically inexpensive for good reasons. This is especially true in a major bull market run like

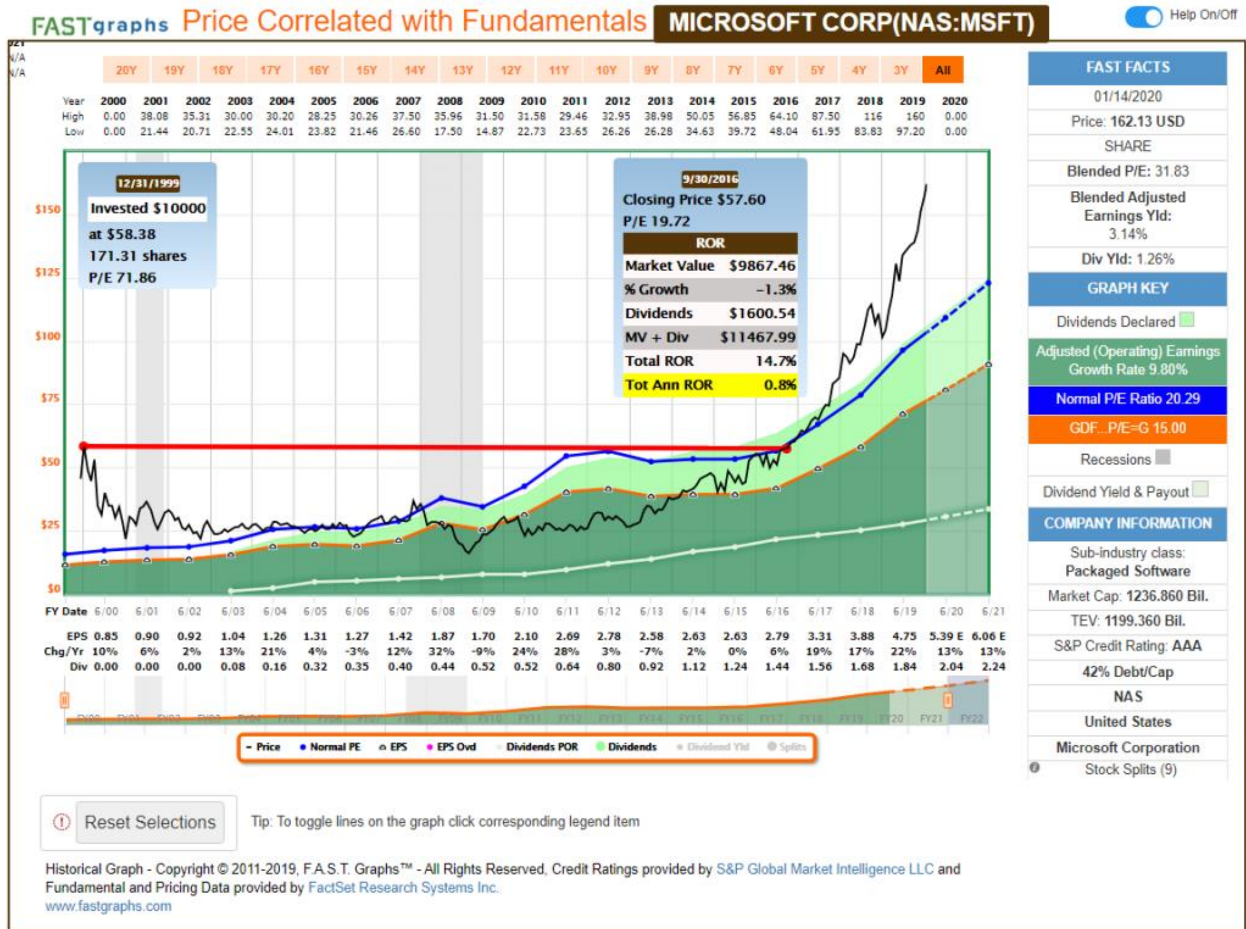
the 2008 to early 2020 period. Therefore, the trick is to determine whether the related issues are temporary or more permanent in nature. Additionally, you need to ascertain whether the discounted stock price is justified or perhaps an overreaction. These judgments can help us determine the level of risk we are facing and if we are being adequately compensated for taking it by the low valuations or not.

On the other hand, in the long run value stocks often dramatically outperform and very often do so by taking on significantly less risk than other strategies such as momentum, or in many cases even growth. This is attributed to the fact that the risk is being mitigated by low valuation (price). As a result, one key benefit of value investing is the valuation risk mitigation element.

Even though all stocks will fall in a bad market, attractively valued stocks tend to recover much quicker. In fact, if a stock is dangerously overvalued (bubble territory) it may take decades instead of years or months before it recovers. Premier technology stocks such as Microsoft, Cisco and Oracle are three extreme examples that took many years and even decades to return to their peak valuations reached during the tech bubble of 1999 through 2000. In fact, Cisco has yet to get even close to those peak valuations. Not all price drops are the same.

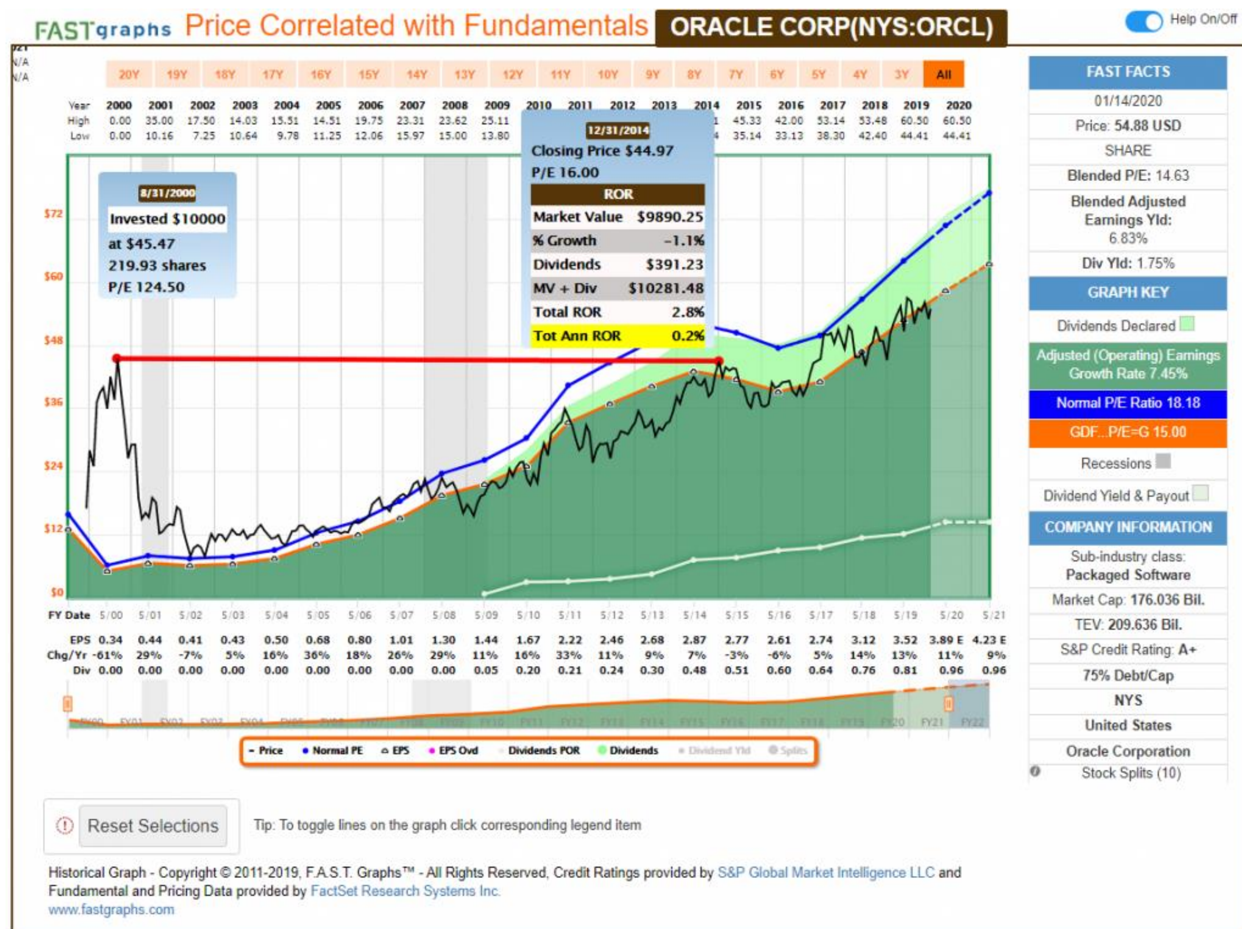
As illustrated by the three graphs below, being patient is not a very profitable attribute when you are investing in popular stocks that are simultaneously dangerously overvalued. In fact, being a long-term holder of stocks that were purchased when they were at the peak of popularity can result in very long-term periods of dead money. You invested in the very best stocks, but if you paid too much to buy them, therefore, you negate all their potential. Warren Buffett also spoke about this when he said: “For the investor, a too-high purchase price for the stock of an excellent company can undo the effects of a subsequent decade of favorable business developments.” Valuation matters, and it matters a lot.

Microsoft Corp (MSFT)



Cisco Systems (CSCO)

Oracle Corporation (ORCL)



Value Investing Success Takes Time

One of the great dangers of investing in overvalued stocks is that time becomes your great adversary instead of your ally. In contrast, a great benefit of being a value investor is that it puts time on your side. However, at the same time, it often takes time before success manifests for value investors. When you are investing in unpopular stocks, which is where value often comes from it often requires waiting until they become popular again before you can reap your rewards through rising prices.

On the other hand, the above statements are only true if the underlying fundamentals remain solid. The primary difference between a great value investment and a value trap is the strength of the underlying fundamentals. It makes more sense to focus on the fundamentals than it does to worry about short-term stock price action. Fundamentals are durable, stock prices are ephemeral.

Measuring performance without simultaneously measuring valuation is a job half done. There are numerous ways value investing can pay off. You can simply buy a great company that is growing at a sound valuation and then let the growth generate strong future returns. Or, you can

buy a slower growing company at a significant bargain and make your money through P/E expansion as the undervalued stock moves back into alignment with fair value. There are other ways that value investing produces good returns, these are just a few examples.

Topic 7: Finding Good Candidates

K.I.S.S – Simplify Research

At its core, value investing relates to getting value on your money with investing just as it would to getting value for anything you would purchase. No one wants to pay more than they should for anything that they purchase. In this regard, most people execute a rather sane and simple strategy when purchasing most things. Intelligent shoppers are always on-the-lookout for bargains or sales. Moreover, most intelligent shoppers have a general idea of what the merchandise they are desirous of purchasing is worth. As a result, they are excited and appreciative when they see merchandise they want selling at a bargain price. Ironically, this seems to hold true for most every shopper except most common stock shoppers. It is curious that common stock investors seem to hate it when their stocks go on sale.

Imagine for a moment that you pulled up to your favorite retail store and noticed that the parking lot was full. As a result, you had to circle the lot many times just to find a place to park. When you finally entered the store, you noticed that every aisle was jam-packed with people with full shopping carts feverishly pulling merchandise off the shelves. It could only be described as a shopping frenzy.

At that moment, something odd happened. The manager of the store got on the intercom and announced to all the customers in the store that the store wanted to reward their loyal shoppers. For the next hour the manager said everything in the store is going to be marked down 50% off. Before the store manager's words were barely out of his mouth, you noticed something remarkable. Every shopper in the store instantly abandoned their already-full shopping carts and ran out to their cars and into the parking lot.

Fortunately, the store manager immediately came to his senses and made another announcement through speakers located in the parking lot area. He apologized profusely, rescinded his half off sale, and further announced that if the shoppers would come back the price of everything in the store would be marked up 50% above what the price was when the shoppers were in their shopping frenzy. With this announcement, the shoppers jumped out of their cars and stormed the doors of the store and once again engaged in a buying frenzy that was even more intense than it was just before they left.

If you think about it, the stock market is the only market on earth where shoppers routinely behave this way. When stock prices are high and inflated, people can't seem to get enough securities to add to their portfolios. However, when those same companies go on sale at significant discounts to true value, it's as if investors are saying they will not by that cheap stuff.

With this in mind, here is an approach on how investors can simplify their research and due diligence process on common stocks. Chuck's experience in the Army taught him the "K.I.S.S." principle: Keep It Simple Stupid. Most of you have heard that expression before, and it can be applied to researching and assessing the fair value of common stocks. ck I'm interested in.

How Do You Simplify the Research Process: Start by Asking the Big Questions?

Big Question Number 1: Will the company remain an ongoing concern?

Since value investing implies the long-term ownership of good businesses, the most important thing to be comfortable with before investing is whether or not the business is viable longer term. Stated more simply, are you comfortable that the company your are examining is in no danger of going bankrupt or out of business in the near future?

This greatly simplifies the research process and simultaneously engenders confidence in the investment decision. The simple knowledge that the business is strong enough to survive reduces the anxiety that short-term stock price volatility engenders. Furthermore, this helps investors realize that they own a valuable asset regardless of whether other people are currently buying or selling it. Since you're not worried about the survival of the business, you can have the confidence to let stock price volatility run its course.

Furthermore, true value investors buy the business, not the stock. This is not a trivial statement and represents one of the most important keys to implementing a successful value investment strategy. Almost by definition, investing in a business implies the desire to hold the investment for a long period of time. In the real world, people do not trade businesses. However, in the real world, there are many people that do trade stocks. Since business owners are not planning on selling in the near future, daily price fluctuations can and should be ignored. On the other hand, short-term price volatility can and often does create a lot of anxiety in the minds of active traders.

Big Question Number 2: Do I anticipate that the business will grow long-term or shrink?

Many investors complicate their stock research process through attempting to be too precise, especially with their future forecasts. For example, investors can find specific analyst estimates on most every significant publicly-traded company on the major stock exchanges. These estimates will often include specific earnings numbers for the next few years, and additionally a longer-term forecast for earnings growth rates.

Although it's rational to attempt to have some idea of how fast the company you're investing can grow, this does not need to be as precise as many investors want or need it to be. It's significantly easier and more relevant to hold a general view of the future prospects of a business. In other words, before you stress too much about attempting to forecast precise future growth rates, simplify the process by evaluating whether you believe the business can grow or will it shrink. If you invested in a sound business at a reasonable or attractive valuation, you don't need a lot of growth in the future to make money. This is especially true when the company pays a dividend and has a long history of increasing its dividend.

Additionally, it would be naïve to think that estimates could be perfect. As we all know, the future always contains elements of uncertainty. Therefore, no matter how thorough, dedicated or even capable an analyst might be, none of them have crystal balls. Moreover, as the future unfolds, things change. This can be related to the prospects of an individual company, or perhaps related to dynamic macroeconomic changes.

Big Question Number 3: What am I investing for?

Knowing precisely what you're investing for also simplifies the research process while simultaneously eliminates much of the worry and anxiety. Therefore, the clear answer to this question can empower you to focus on what's important and eliminate worrying about things that are not important. Some of the more common choices could be investing for growth, income, or some combination of both. There is no better or worse answer to this question, there is only the answer that is right for you.

For example, if you are truly investing for income and perhaps future income growth, then the most important thing to focus on would be the dividends your companies are paying. Dividend income is a function of the number of shares you own and not subject to the fluctuating price of the stock. In other words, whether your stock price is rising or falling, your dividend income will be unaffected. In this regard, you should be most concerned with what dividend the company is paying on a per-share basis, and additionally whether they will pay more or less in the future. If you can discipline yourself to do this, you will worry much less about stock price volatility. Consequently, you will be more prone to make intelligent decisions rather than emotional ones.

Wal-Mart Stores (WMT)

Here is an analysis on Wal-Mart Stores in the context of the three big questions presented above.

Big Question Number 1: Will Wal-Mart Stores continue to be a going concern?

It is hard to believe that Wal-Mart won't be around long-term. A quick glance at some important fundamental financial metrics should clearly validate that belief. Wal-Mart has a healthy balance

sheet. Cash and debt levels are reasonable. Wal-Mart has increasing revenue to along with solid profits and cash flows.

Big Question Number 2: Will Wal-Mart grow or shrink?

Considering Wal-Mart's enormous size, it would be a stretch to believe that the company would continue to grow at past historical rates. However, it would not be a stretch to believe that Wal-Mart will grow. The only question would be – how fast? Nevertheless, considering its quality, just knowing that it can grow at all could be enough if the valuation is fair.

Big Question Number 3: What are you investing in Wal-Mart for?

From the brief analysis above regarding Wal-Mart's growth potential, it is certainly not the most exciting total return stock available. However, considering its high yield, impeccable quality it might appeal to income-seeking investors concerned with safety and quality.

Whether most common stock investors will admit it or not, investing in stocks carries a deep-rooted primal fear of losing all of your money. Therefore, during a bad market many people will project a bear market to the extreme of total loss. Although this does happen on occasion, it is very rare to see a stock drop 100% or go out of business. This is especially true when you are invested in blue-chip dividend paying stocks. Consequently, focusing on the big question of whether you believe your company will continue as a going concern can be enough to alleviate the extreme fear of total loss. Once you come to grips with the likely reality that your company will most likely outlive you, it becomes easier to fight those panicky feelings.

Whether we like it or not, the undeniable reality of investing in the stock market is that there will always be bear and bull markets. But most importantly, each bear market inevitably ends by turning into a bull market, and vice versa. If we learned anything from our last "Great Recession" it should be that. Although it may be hard for many people to wrap their heads around this, our last recession created one of the best investment opportunities in modern times. And equally as important, all of the Dividend Champions and Aristocrats raised their dividends prior to, during and after the Great Recession – Wal-Mart included. If you were investing for income, and knew what you were investing for, it was quite calming to realize you were receiving a raise in pay each year. Those that did, were able to K.I.S.S. their worries away.

Topic 8: Portfolio Basics

Measuring Reward

Stock have the potential to generate rewards either through price appreciation or dividends. The combination of both of these rewards is called total return. Measuring the reward of past investments in FAST Graphs is straightforward. Select a point in history as the purchase price and then select an exit point and you will see the return from price appreciation, dividends (if any), and total return.

Forward looking return is similarly simple to find in FAST Graphs using Forecasting. You can select the current stock price point and then select a possible future stock price created by the graph and get a sense of future reward.

One of the key foundations of investing is that risk and reward go together. You want the higher return for the lowest risk. The concepts are two sides of the same coin and it pays to focus on both. While it is easy to estimate future rewards, in reality, you can't be sure what the actual rewards will be. The less certain you are about future rewards, the riskier the investment and the higher the reward you would need to invest.

Managing Risk

There are many ways that investors measure and think of risk. The simplest and most relevant way to approach risk is to realize that it reflects the chance that something negative happens. More specifically, the chance that some aspect of the firm's performance is worse than expected. This negative downside could be general to the entire market, focused to a specific industry, or related only to the firm.

Prudent diversification can help manage risks associated with the entire market or a given industry. Firm specific risk requires more effort to manage, but the process can be simple.

As discussed previously, the best protection an investor has is to buy a good company at a good price. Strong fundamentals reduce the risk of something very bad, like bankruptcy, happening in the short-term. Financial statement analysis can help identify health and unhealthy firms.

What About Beta?

Every investor is concerned with risk at some level. Arguably investors in retirement are and should be concerned with risk the most. However, not every investor looks at or defines risk in the same way. In truth and fact, there is a wide gap between how various segments in the financial community define and view the complex subject risk.

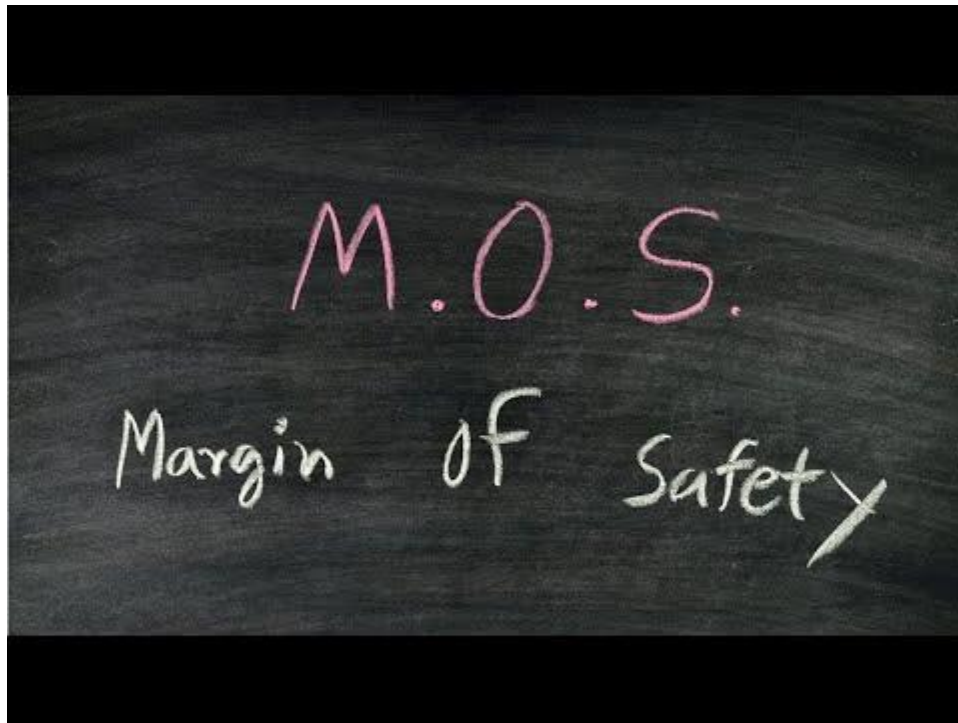
For example, proponents of academic finance tend to have a very narrow view of the concept of risk. Academic finance seems to favor defining risk as volatility. Since much of their work is derived by conducting statistical analysis on large databases with a strong focus on historical price movements, they tend to prefer statistical expressions of risk such as beta.

In layman terms, academic finance defines beta as a measure of a stock's volatility in relation to the overall market and/or a benchmark. Therefore, the statistical measure "beta" fits very nicely

into their statistical models such as the capital asset pricing model (CAPM). This is a model that allegedly calculates the expected return of an asset based on its beta versus expected market returns.

More traditional definitions of risk are favored by old-school, business owner oriented, fundamental investing proponents. To the fundamentalist, risk is more about more practical matters such as the loss of purchasing power, or more directly the outright loss of capital.

Margin of Safety



The concept of margin of safety is critical to managing risk. Margin of safety is defined as the gap between current stock price and intrinsic value. In the video above, Chuck looks at five aerospace and defense stocks (Curtiss Wright, General Dynamics, L3Harris, Lockheed Martin, and Raytheon) from the Dividend Kings master list.

While all five companies evaluated are considered very high quality, this is an example of picking one with the largest margin of safety. In particular, all firms have a strong record of consistent growth over the period of Fast Graphs data.

One exception is Raytheon projected growth is expected to be negative in the near term as of November 25, 2020. Given that Raytheon's stock price is above the orange valuation line as of

the video, it actually has negative margin of safety. Similarly, L3Harris and Curtiss Wright are both slightly above the orange intrinsic value line and thus has a negative margin of safety.

General Dynamics and Lockheed Martin both have stock prices below the orange intrinsic value line and thus have positive margins of safety. Both of these investments would be preferred to the other three examined based on margin of safety. Between these two, General Dynamics is the winner with 10.6% margin of safety versus Lockheed with a 4.3% margin of safety.

It is important to note that investing when you have little or even negative margin of safety does not mean you can't make money. It does mean that you will not get all of the return out of the investment that you could if you purchased at fair or better value.

When to Buy and Sell

One of the most common questions that investors have is when to buy and when to sell a stock? The answer is directly linked to valuation.

For starters, the prudent investor must accept that you cannot value a business with perfect precision and therefore should not try. Instead, you want to have a range of valuations that are based on realistic assessments of what a business can produce on its shareholders' behalf. Nevertheless, once you have a reasoned understanding of the value of the business then and only then can you make intelligent buy, sell or hold decisions. Not with perfect timing, but with prudent calculations offering a range of value that prudent investors can embrace.

The main reason that perfect answers are not possible can be found in the classic Warren Buffett quote: "*The fact that people will be full of greed, fear or folly is predictable. The sequence is not predictable.*"

Buffett is speaking to the reality that the stock market can and often does temporarily miss-appraise stocks. During times of greed, the market is quite capable of overvaluing companies, sometimes to an outlandishly high level. When fear reigns, the market can significantly undervalue a company and keep it that way for an outlandishly long period of time.

Yet for the most part and over the longer run, the market will price stocks close to intrinsic value, and when deviations do occur, they inevitably revert to the mean or correct themselves. The insidious part of this last statement is the confusing fact that the correction process can happen very quickly or drag on over very long periods of time.

As the great investor Bernard Baruch so aptly put it: "*Don't try to buy at the bottom or sell at the top. This can't be done except by liars.*"

Warren Buffett, speaking of his mentor Ben Graham said:

"*Ben Graham said you should look at stocks as small pieces of the business. Look at (market) fluctuations as your friend rather than your enemy – profit from folly rather than participate in it. He said the three most important words of investing: "margin of safety." I think those ideas, 100 years from now, will still be regarded as the three cornerstones of sound investing.*"

Avoid Bad Reasons to Sell

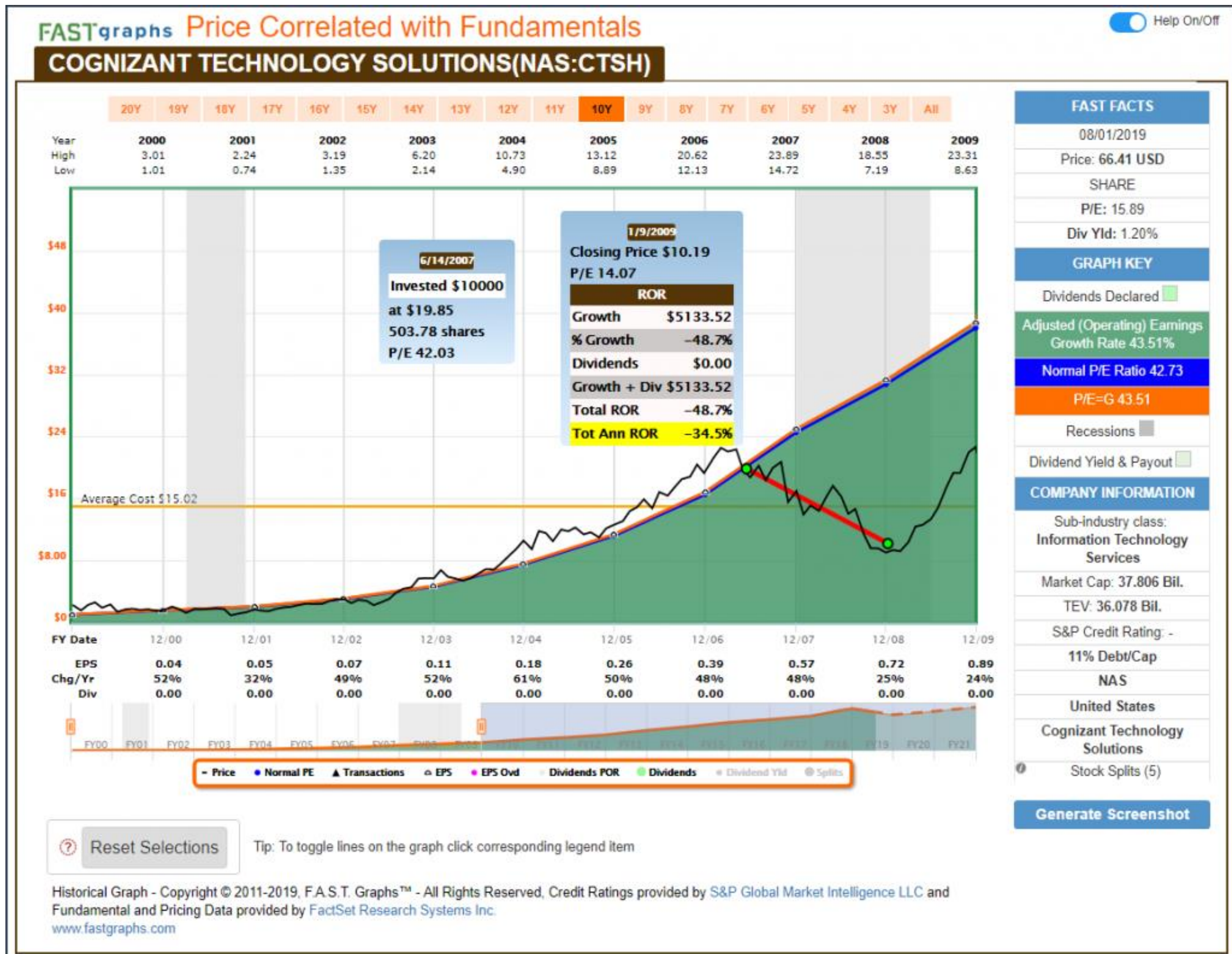
One of the worst reasons is to sell is unfortunately one of the most common – the stock price has dropped. If fundamentals remain strong, a price drop should be more likely to initiate a buy decision than a sell decision.

Avoid Selling Just Because the Price Drops: Cognizant Technology Solutions a Textbook Example

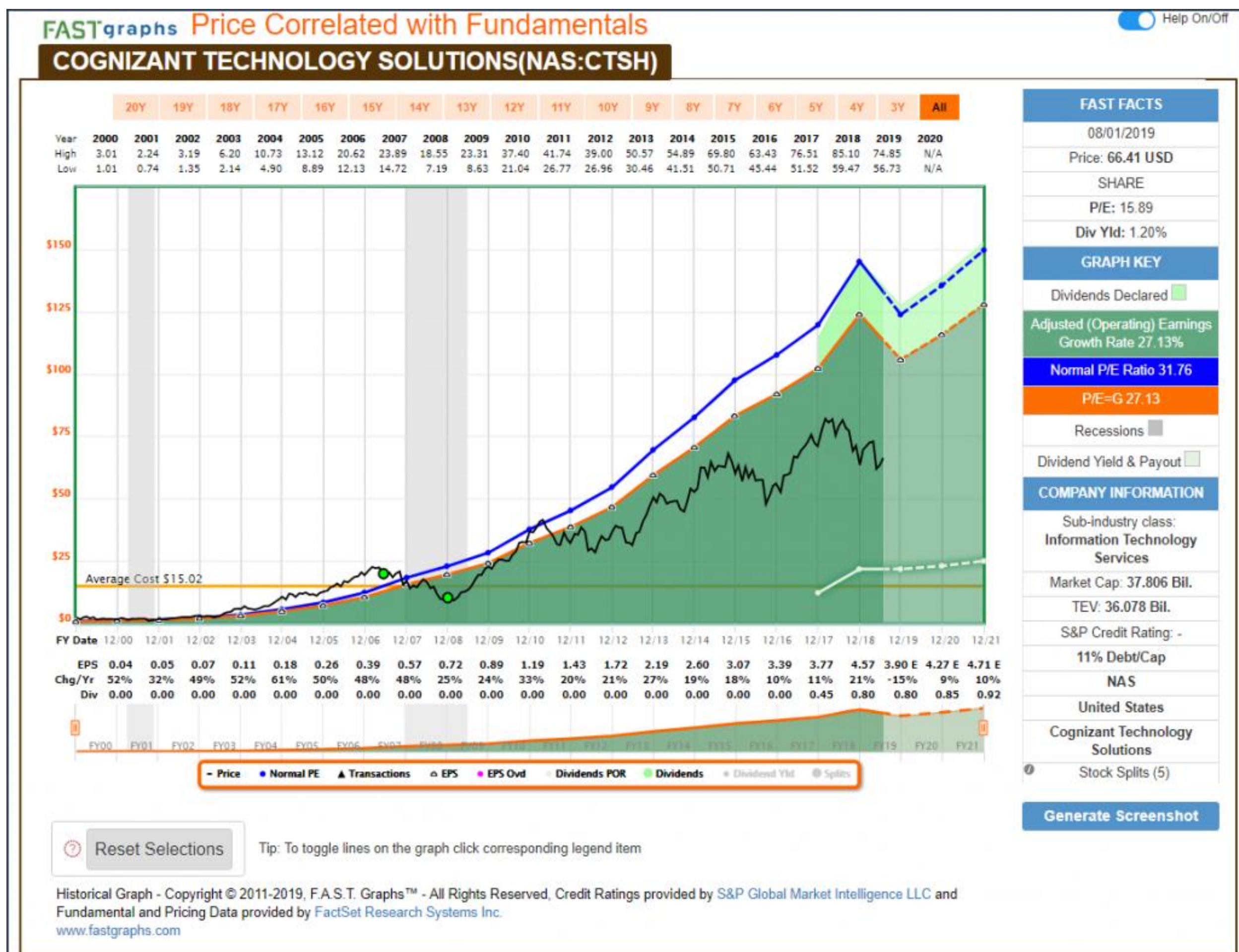
In June 2007, prior to the Great Recession, Chuck initiated a position in the growth stock Cognizant Technology Solutions (CTSH) for his total return portfolios. Note by the green dot on the graph that he purchased the company at a P/E ratio of 42, which indicated fair value based on its earnings growth rate of 43.5% (P/E ratio equal to earnings growth rate). From that point forward, the stock went on a freefall and by January 2009 right in the throes of the Great Recession, the price of this great growth stock was nearly cut in half from $19.85 when it was first purchased to $10.19.

However, since he loved the stock at $20, he was crazy about it at $10. Therefore, considering that earnings continued to grow at a very high rate over this timeframe, instead of panicking, he enthusiastically doubled down on the stock. Note by doing so, he lowered his cost basis from $19.85 to $15.02. Although the timing actually turned out to be almost perfect, it was actually a combination of luck and good analysis.

The lucky part was simply fortuitous timing that was technically unpredictable. In other words, Chuck didn't know the stock had bottomed out, but his analysis suggested that fundamentals continue to be strong and therefore the stock was available at ½ off sale.



As you can clearly see, the company's earnings growth continued and the stock price followed. Consequently, this holding has turned out to be one of the best performing stocks Chuck has ever invested in. Imagine the cost to us if he had panicked and sold out just because the price had dropped even though fundamentals were as strong as ever. Of course, in cases where the fundamentals have deteriorated or appear more likely to do so than before, the valuation and investment thesis needs to be revisited.



FASTgraphs My Transactions COGNIZANT TECHNOLOGY SOLUTIONS(NAS:CTSH)

Help On/Off

Buys

Date	Quantity	Cost	Cost/Share
06-14-2007	2,000.00	$39,700.00	$19.85
01-09-2009	2,000.00	$20,380.00	$10.19
Totals:	4,000.00	$60,080.00	$15.02

Sells

Date	Quantity	Proceeds	Proceeds/Share
Totals:	0.00	$0.00	$0.00

Holding

Holding	Quantity	MarketValue	DollarsAtRisk	AvgCost/Share
Totals	4,000.00	$261,320.00	$60,080.00	$15.02

Edit transactions in Portfolio

In short, it is generally unwise to sell a stock for less than it is worth. Similarly, when a company is trading for more than it is worth it is unwise to buy. The key then is coming up with a reasonable valuation range and periodically updating your analysis to reflect new information. If the fundamental story has changed, it might be time to consider buying or selling. If the price compared to the valuation has changed, it might also be time consider buying or selling.

Time in the Market and Value Investing Is Not Market Timing

Time in the market is often what matters most. This will benefit you most when your initial investment is made at a sound valuation. One temptation to avoid is trying to get too particular timing the market and buy at an exact bottom or sell at an exact top. Instead, solid analysis followed by sticking to your plan unless you get new information is the best way to take advantage of time in the market and avoid market timing.

There is a reason why many investors cannot embrace or maintain the patience to trust that fair valuation will inevitably manifest. Unfortunately, most investors are quick to judge their holdings over a timeframe that is too short. Therefore, in his 1996 Berkshire Hathaway annual report Warren Buffett provided this sage advice: “if you aren’t willing to own a stock for 10 years don’t even think about owning it for 10 minutes.”

Nevertheless, the real problem is that although the reversion to the mean, as statisticians would call it, are virtually an inevitability, the time it takes the reversion to occur is not precise. Once again Warren Buffett explains it quite succinctly with the following quote: “The fact that people will be full of greed, fear or folly is predictable. The sequence is not predictable. Warren Buffett.”

What is the Long-Term?

Conceptually, the long-term implies a timeframe long enough for a business to create and generate additional value to its shareholders. More simply stated, a timeframe long enough to produce revenue, earnings, cash flow and dividend growth, etc. One short form definition is at the minimum a business cycle. Business cycles are generally (but not precisely) defined as 3 to 5 years in length, once again, at a minimum. But the longer the better, i.e., Warren Buffett's above suggestion for owning a stock for at least 10 years.

Keys to Avoiding Mistakes

Understanding how to value a business is the key to avoiding making obvious mistakes when purchasing or selling common stocks. When you know what your investment is worth, the market cannot take advantage of your gullibility. When you don't know what your investment is worth, markets can easily influence you with fear or greed. When emotions rule, logic goes out the window.

A second key is to recognize that these principles apply to long-term investing. As Ben Graham so aptly put it "in the short run the market is a voting machine, but in the long run it is a weighing machine." The critical aspect of Ben's profound statement is to accept the reality that

the market can and will miss price stocks over short periods of time. On the other hand, it is also a reality that the markets will improperly value stocks over several years. This often is what gets investors in trouble.

However, true prudent value investors recognize that inevitably a company's stock price will move into alignment with its true worth valuation. It is not a matter of if, but only of when it might occur. Smart investors recognize anomalous values and are prepared to take appropriate action as they occur. This could mean being aware, and therefore, being prepared to take action, or it can also simply mean taking immediate action. Nevertheless, it's the awareness that is the key to long-term success.

Obviously, mistakes usually occur when the market or people are caught up in emotion. As we all know, the primary emotional responses that can affect investor behavior are fear and greed. When gripped by the hype from greed or by the hysteria from fear, investors rarely behave rationally. It is during times like these when stock prices can become disconnected from true worth valuations. This undeniable fact that stock values are not always rational needs to be recognized and accepted. One of the primary reasons why investors often make bad investment decisions is because their judgment is usually based only on price movement. Price should only be considered relative to value.

Diversification - How Many Stocks Should You Own?

This is a widely debated subject that is most commonly referred to as concentrated versus widely diversified portfolio construction. Of course, the widely diversified camp likes holding a lot of stocks and therefore often support investing in indexes. Many mutual funds and ETF's also hold widely diversified portfolios. In contrast, renowned investors such as Charlie Munger prefer highly concentrated portfolios. Studies have indicated that a portfolio with 12-18 stocks provides most of the benefit that diversification can provide.

Moreover, designing the common stock portion of your portfolio is very challenging. For starters, there is no perfect or even best way to design a stock portfolio. However, there are many effective strategies that have produced successful long-term results. The key to success is to find and implement the strategy that best fits your own unique goals, objectives, needs, and most importantly – risk tolerances.

There are many aspects associated with designing a common stock portfolio that need to be considered. The number of individual companies to include in your portfolio is a big one. In addition to the number of companies, you must also decide how much weight you should put in each one. Or, should they be equally weighted? In other words, should you put the exact same percentage of your portfolio in each company? Or, does it make more sense to overweight some and underweight others? Furthermore, should you own stocks from every sector or just the sectors you like the best?

These are just a few of the important questions that investors must grapple with when designing a common stock portfolio. But, there is no absolute or perfect strategy for constructing a stock portfolio that fits every individual investor. On the other hand, there are important considerations that every individual investor would be well-advised to contemplate. Ultimately, it comes down to designing a stock portfolio that suits you.

The Universal Principle: Start With A Well Thought-Out and Designed Plan

There is only one universal principle about constructing a common stock portfolio that universally applies to every investor. Prior to building any portfolio, common stock or otherwise, it is imperative that every investor starts by developing a comprehensive and detailed plan. Importantly, it's not only imperative to have a plan, it's even more vital to be disciplined about following it.

This is commonly referred to as an investment policy statement ((IPS)). However, an IPS generally goes beyond defining investment goals and objectives, it also takes into consideration risk tolerance, liquidity requirements and asset allocation.

Logically then, the first step in creating your investment plan is to clearly identify and determine your specific investment goals and needs. For example, if your primary objective is growth or total return, your focus might be best placed on a portfolio combination of growth stocks and/or above-average growing dividend growth stocks. In contrast, if your primary objective is current income, your focus might be best placed on a portfolio combination of blue-chip dividend paying stalwarts and/or high-yield stocks.

Of course, there are many variations of what the most appropriate mix of stocks might be. Therefore, depending on your needs and risk tolerances, the mix of appropriate stocks are only limited by each investor's imagination coupled with their needs. Once again, there is no perfectly right or wrong answer, except to design a portfolio that can meet your goals, and one that you are comfortable enough with to stay the course.

How Many Stocks Should My Portfolio Hold?

The question of how many stocks a portfolio should contain has been widely discussed, and even hotly debated. Some of the greatest investors that ever walked the planet have shared their views and opinions, and there have been numerous academic studies conducted as well. However, there really is no consensus, and many of the differing views are supported by compelling and logical arguments. Interestingly, the arguments of many renowned fundamental investors versus academics that have conducted studies are not that far apart.

Many investors find that a concentrated portfolio of between 10-20 stocks make it possible to intimately know each holding while still benefiting from diversification. That said, instead of

supporting any specific number of holdings, here are some practical considerations that individual investors might think about.

For starters, let's assume that you are constructing an equal weighted portfolio. This simply means placing the same amount (percentage) of your investment in each selection. Therefore, the number of stocks you place in a portfolio represents the percentage of your portfolio it comprises. The basic math is simple. If you hold 5 stocks, they each comprise 20% of your portfolio. If you hold 10 stocks, they each comprise 10%. If you hold 20 stocks, they each represent 5%. If you hold 25 stocks, they each represent 4%, and so on.

The fewer stocks you own, the greater your exposure to good or to bad things happening in the future to each individual stock. For example, all things being equal, if you only hold 5 stocks, and 1 of them falls 50% in value, your overall portfolio would drop by 10%. In contrast, if you hold 25 stocks, and 1 of them falls 50% in value, your overall portfolio would only drop 2%. This represents the risk aspect discussed previously. The lower your tolerance for risk, the more stocks you should hold – and vice versa. Therefore, although this is basic, it's an important yet simple mathematical perspective to hold clearly in the back of your mind.

Concentrated Or Diversified: What Do The Experts Suggest?

According to a Morningstar classroom report found here, academic professors Frank Riley and Keith Brown reported in their book "Investment Analysis And Portfolio Management" that about 90% of the maximum benefit of diversification was derived from portfolios of 12 to 18 stocks.

To paraphrase the report, this suggests that by owning only 18 stocks you will get the same return as investing in a passive market index. The report also suggested that if you own more than 18 stocks, you are simply increasing your workload without receiving much benefit. The Morningstar report went on to suggest that there is also a practical risk to being too diversified. The report implies that by owning more than 18 stocks it becomes nearly impossible to know your companies well enough.

There is an excellent website on value investing founded by Seeking Alpha author Vishal Khandelwal that studies and reports on the behaviors and practices of prominent value investors and value investing in general found here.

In a post titled "How Many Stocks Should You Own?", He offered a summary of the opinions of several legendary investors that I personally admire greatly as follows:

"Just to sum up, here is what the legends have advised on how many stocks you should own in your portfolio…

Ben Graham – 10 to 30…with each company being large, prominent and conservatively financed.

John Keynes – 2 to 3…companies which one thinks one knows something about and in the management of which one thoroughly believes.

Warren Buffett – 5 to 10…if you are a know-something investor, able to understand business economics and to find sensibly-priced companies that possess important long-term competitive advantages.

Seth Klarman – 10 to 15…better off knowing a lot about a few investments than knowing only a little about each of a great many holdings."

One all-time great value investor, Phil Fisher, had very strong opinions on how many stocks investors should hold. The following quote taken from the book "The Warren Buffett Way" by Robert G. Hagstrom nicely summarizes Phil Fisher's views:

"Phil Fisher taught Buffett the benefits of focusing on just a few investments. He believed that it was a mistake to teach investors that putting their eggs in several baskets reduces risk. The danger in purchasing too many stocks, he felt, is that it becomes impossible to watch all the eggs in all the baskets. In his view, buying shares in a company without taking the time to develop a thorough understanding of the business was far riskier than having limited diversification."

Should You Equal Weight or Overweight Portfolio Holdings?

The answer to the question regarding how many stocks to hold in a portfolio discussed above related primarily to an equal weighted portfolio of stocks. However, there is also the question of overweighting versus equal weighting that can also affect the optimum number of stocks to hold in a portfolio.

The 60/40, 70/30, 80/20 and 90/10 Approach

One conceptual approach is the 60/40, 70/30, 80/20 and/or 90/10 Approach. This common stock portfolio design concept primarily deals with two broad categories of equally weighted common stocks – blue-chip dividend paying stalwarts and growth-oriented stocks.

The central idea is to build a solid foundation of conservative blue chips supplemented by riskier growth stocks. If both your risk tolerances and total return needs were high, you might put 60% of your money in conservative blue chips and 40% in more aggressive growth stocks. In contrast, if your risk tolerances were low but you still needed some additional growth, you might put 90% of your money in blue chips and only 10% in growth. Of course, each additional blend would be determined by the needs and risk tolerances of each individual investor. In essence, the more growth you choose, the higher your total return expectation. However, the more growth you choose, the more risk you must be willing to assume. Furthermore, there is no guarantee that taking on more risk will generate a better return.

Variations of this approach could also be applied to already retired investors in need of income. In this situation you would blend your mix based on the yield characteristics of your individual selections. This could be blue-chip dividend paying stalwarts such as Johnson & Johnson (JNJ) or Procter & Gamble (PG), mixed in with the appropriate mix of higher-yielding REITs and/or MLPs.

The key is that your common stock portfolio should be custom-designed to meet your own goals, needs and risk tolerances. There is no one-size-fits-all, and each individual investor is unique and different. However, there are common sense tried-and-true principles that can be, and should be, commonly applied. Always starting with a well-defined plan is a good example.

The More Aggressive Concentrated/Diversified Approach

As the reader can imagine, there are numerous variations and common stock blending strategies that can be implemented than just those discussed above. Another one is the aggressive concentrated/diversified approach. An example of this strategy might be to place 50% of your money into your top 5 selections (10% of your total in each). The remaining 50% of your money could be heavily diversified by putting 2% increments into 25 additional companies, or even 1% increments into 50 additional companies.

With this strategy, you are very selective with your top 5 holdings in the first place, and in the second place you research, watch and monitor them closely and comprehensively. To be clear, your top 5 holdings are intensely researched and focused upon. With the remaining, for example 25 or 50, you allow the principle of broader diversification to take care of them. The idea here is to swing at the fences with half of your money invested in stocks you know a lot about and follow closely, and look for singles and doubles with the other half.

Although this is a risky portfolio construction strategy, it can pay off enormously in the long run. The 5 stocks you are overweight in could be aggressive growth stocks capable of producing the 10-, 20- or 30-baggers that Peter Lynch talked about in his book “One Up On Wall Street.” The remaining stocks could be comprised of more conservative blue-chip dividend payers. If you want to be really aggressive with a total return objective, every stock could be aggressive growth. Once again, the variations are endless. It all comes down to your own goals and risk tolerances.

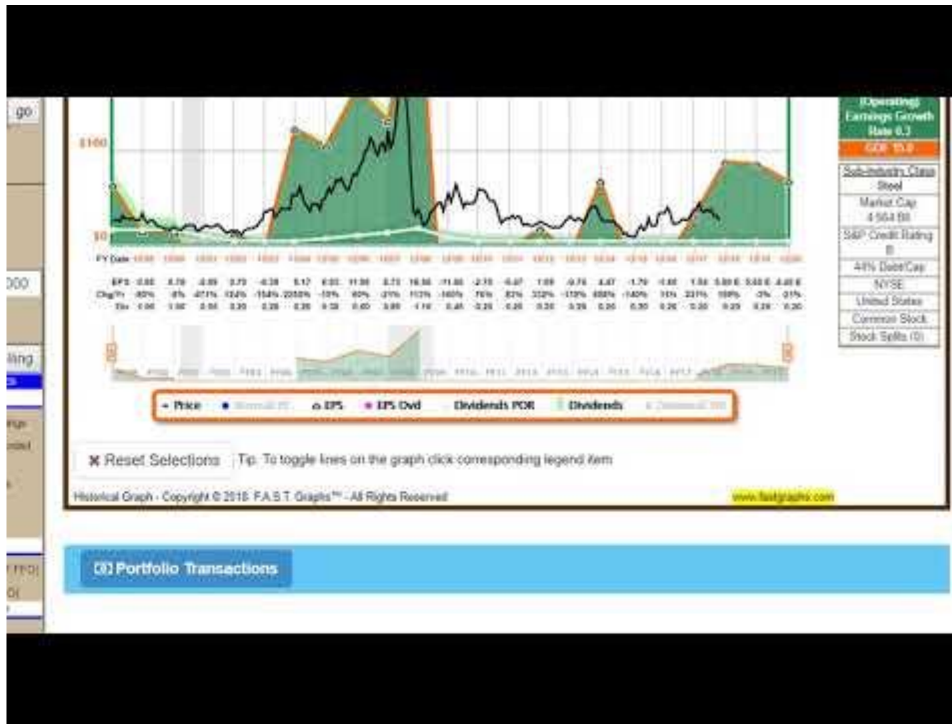
As an interesting aside, Peter Lynch utilized a variation of this strategy, but at a different scale, when he ran the Fidelity Magellan fund. In his book “One Up On Wall Street” in the chapter “Designing A Portfolio” he had this to say:

“Some people ascribe my success to my having specialized in growth stocks. But that’s only partly accurate. I never put more than 30% to 40% of my funds assets in the growth stocks. The rest I spread out among the other categories described in this book. Normally I keep about 10% to 20% or so in the stalwarts, another 10% to 20% or so in the cyclicals, and the rest in

turnarounds. Although I own 1400 stocks in all, **half of my funds' assets are invested in 100 stocks, and two thirds in 200 stocks**. 1% of the money is spread out among 500 secondary opportunities I am monitoring periodically, with the possibility of turning in later."

After reading the above, the reader should consider that Peter Lynch had billions of dollars to deal with and invest, as well as a large staff of associates to assist him. Obviously, for us average investors out there; our resources are much more limited. Nevertheless, the underlying principles that Peter Lynch was articulating appropriately apply, only the scale of our resources is different.

Constructing A Diversified Portfolio



The truth is, there is no perfect method or strategy for designing a stock portfolio that is right for every individual investor. However, there are principles of sound investing that every investor can follow and apply when designing a common stock portfolio that's just right for them.

Furthermore, there are general categories that individual investors fall into. Some individuals are young and planning for retirement while other individuals are closer to retirement, and there are some that are already retired. Additionally, each individual investor has different levels of financial resources that specifically apply. To complicate the process even more, individual investors of all types possess unique goals, needs, objectives and risk tolerances. Therefore, the logical secret to designing a successful common stock portfolio is to design one that's most appropriate for you.

On the US stock exchanges alone, individual investors have almost 20,000 individual stocks (companies) to choose from. No matter how diligent you could be, it would be impossible for any individual to conduct a comprehensive analysis on all of them. Therefore, individual investors need a method of separating the wheat from the chaff.

One effective way to accomplish that is to break the larger list down into broader categories based on specific characteristics and attributes. In his best-selling book "One Up On Wall Street," renowned mutual fund manager Peter Lynch presented what he referred to as "The Six Categories."

Peter Lynch's Six General Categories

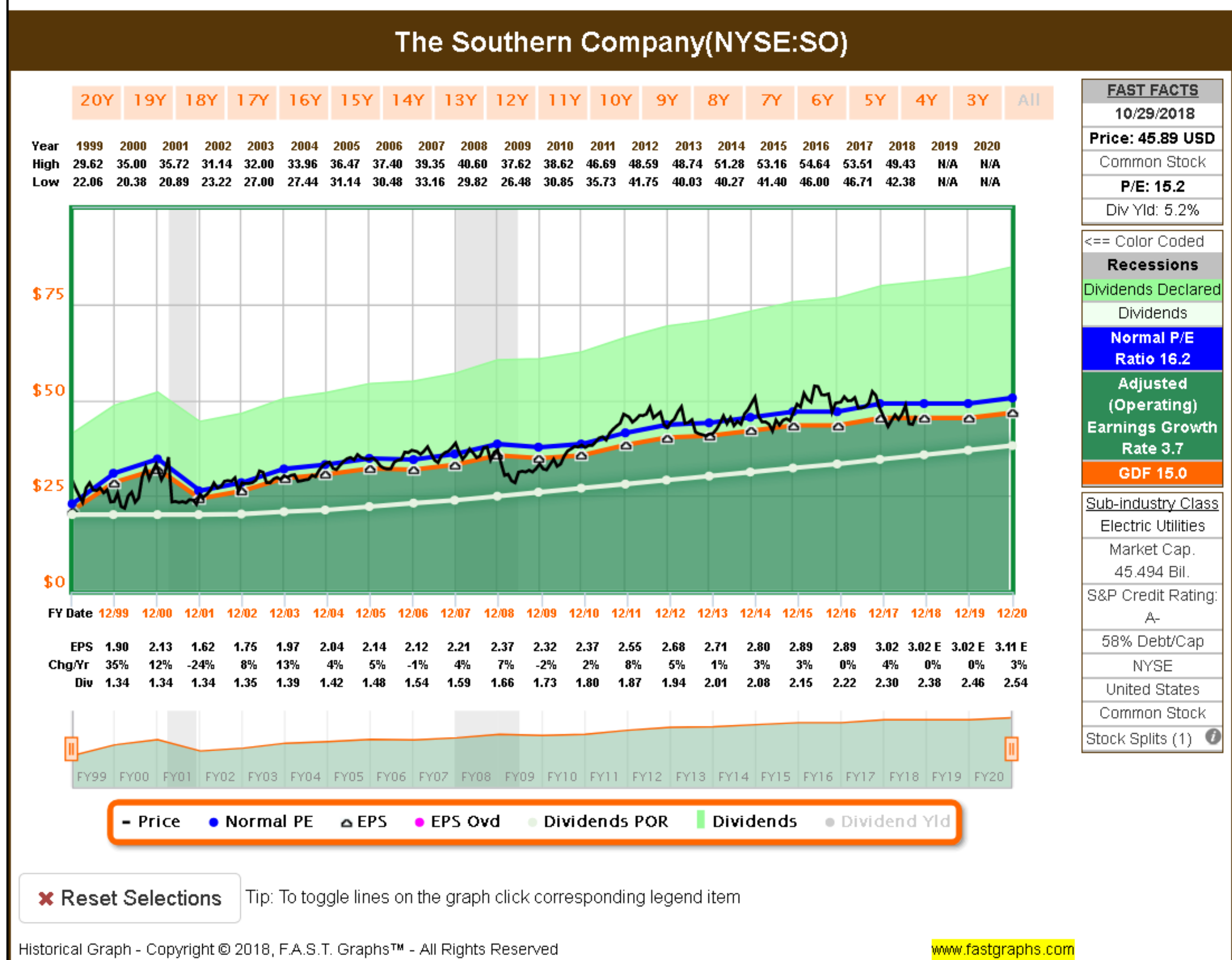
Below are presented Peter Lynch's six general categories with a short description taken directly from his best-selling book "One Up On Wall Street."

Slow Growers

"Usually these large and aging companies are expected to grow slightly faster than the gross national product. Slow growers didn't start out that way. They started out as fast growers and eventually pooped out, either because they had gone as far as they could, or else they got too tired to make the most of their chances. When an industry at large slows down (as they always seem to do), most of the companies within the industry lose momentum as well. Electric utilities are today's most popular slow growers."

The Southern Company: Classic Example of a "Slow Grower" Utility Stock

As you can see on the following historical earnings and price correlated FAST Graph, the Southern Company (SO) has only averaged earnings growth of 3.5% per annum since 2002. However, note the high yield and the high dividend payout ratio offered to compensate for its slow growth.



The Stalwarts

"Stalwarts are companies such as Coca-Cola, Bristol-Myers, Procter & Gamble, Hershey's, Ralston Purina and Colgate-Palmolive. These multibillion-dollar hulks are not exactly agile climbers, but they are faster than slow growers."

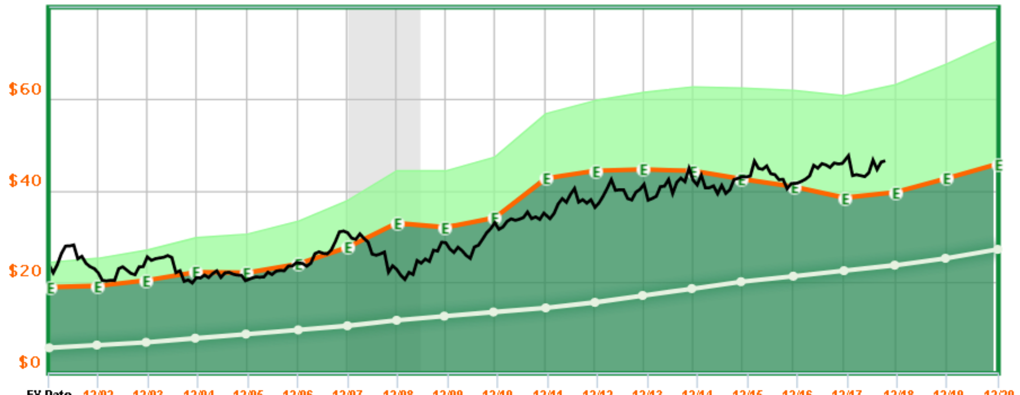
Stalwarts are an important category for retired investors and dividend growth investors. Many of the Dividend Aristocrats and Dividend Champions are found in this category. However, as Peter Lynch pointed out, stalwarts will not necessarily produce high growth, but most of the companies in this category would be considered blue chips. Nevertheless, quality often comes at premium valuations. Therefore, it can be difficult to find stalwarts at attractive values.

Earnings and Price Correlated F.A.S.T. Graphs™ coca-colacompany.com

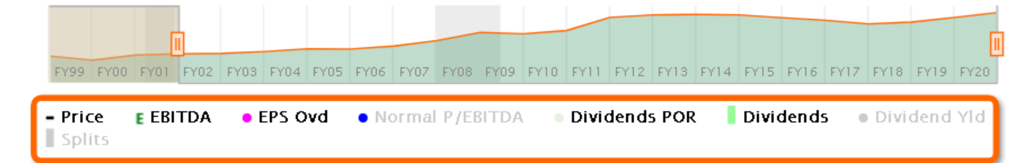
The Coca-Cola Company(NYSE:KO)

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High	28.95	25.45	26.75	22.63	24.68	32.16	32.80	29.73	32.94	35.88	40.66	43.43	45.00	43.91	47.13	47.48	48.62	N/A	N/A
Low	21.45	18.50	19.15	20.16	19.68	22.78	20.14	18.72	24.73	30.64	33.28	36.52	36.89	36.56	39.88	40.22	41.45	N/A	N/A



FY Date	12/02	12/03	12/04	12/05	12/06	12/07	12/08	12/09	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	12/19	12/20
EBITDA	1.26	1.34	1.46	1.45	1.58	1.82	2.17	2.11	2.25	2.82	2.93	2.95	2.93	2.81	2.70	2.54	2.62 E	2.82 E	3.03 E
Chg/Yr	2%	6%	9%	-1%	9%	15%	19%	-3%	7%	25%	4%	1%	-1%	-4%	-4%	-6%	3%	8%	7%
Div	0.40	0.44	0.50	0.56	0.62	0.68	0.76	0.82	0.88	0.94	1.02	1.12	1.22	1.32	1.40	1.48	1.56	1.66	1.79



✖ Reset Selections Tip: To toggle lines on the graph click corresponding legend item

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FAST FACTS
10/29/2018
Price: 46.46 USD
Common Stock
P/EBITDA: 17.8
Div Yld: 3.4%

<== Color Coded
Recessions
Dividends Declared
Dividends
EBITDA Growth Rate 4.8
Normal P/EBITDA ratio 15.1

Sub-industry Class
Soft Drinks
Market Cap. 195.294 Bil.
S&P Credit Rating: A+
46% Debt/Cap
NYSE
United States
Common Stock
Stock Splits (7)

The Fast Growers

"These are among my favorite investments: small, aggressive new enterprises that grow at 20 to 25% year. If you choose wisely, this is the land of the 10-40 baggers, and even the 200 baggers. With a small portfolio, one or 2 of these can make a career. Fast-growing company doesn't necessarily have to belong to a fast-growing industry. As a matter of fact, I'd rather it didn't."

Performance Results

Starbucks Corporation(NasdaqGS:SBUX)

PERFORMANCE RESULTS for 09/28/2001 to 10/29/2018

Invested: $ 10,000 Begin Shares: 2,677.38 — **Begin Shs at Closing Price: $156,278.67**

Split-adjusted Price(09/28/2001): **3.73** — Closing Price(10/29/2018): **58.37**

Dividend Cash Flow

End Fyr or Fqtr**	Dividends per Share	Dividend Growth%	Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
9/2010	0.18	NMF	28%	2,677.38	$ 481.93	4.8%
9/2011	0.28	56%	37%	2,677.38	$ 749.67	7.5%
9/2012	0.36	29%	40%	2,677.38	$ 963.86	9.6%
9/2013	0.45	24%	40%	2,677.38	$ 1,191.42	11.9%
9/2014	0.55	24%	41%	2,677.38	$ 1,472.56	14.7%
9/2015	0.68	24%	43%	2,677.38	$ 1,820.62	18.2%
9/2016	0.85	25%	45%	2,677.38	$ 2,275.79	22.8%
9/2017	1.05	24%	51%	2,677.38	$ 2,811.26	28.1%
12/2017**	0.30**			2,677.38	$803.21**	
03/2018**	0.30**			2,677.38	$803.21**	
06/2018**	0.36**			2,677.38	$963.86**	

Dividend Growth Rate: (7yr) AVG: 29.4%
CAGR: 28.7%

		S&P 500
Dividends:	$ 14,337.39	$ 3,875.56
Growth:	**$156,278.67**	**$ 21,816.72**
Annualized ROR (w/o Div):	**17.4%**	**4.7%**
Growth and Dividends:	**$170,616.06**	**$ 25,692.28**
Total Annualized ROR:	**18.0%**	**5.7%**

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

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Fundamental company data and index data provided by S&P Global Market Intelligence LLC

The Cyclicals

"A cyclical is a company whose sales and profits rise and fall in regular if not completely predictable fashion. In a growth industry, business just keeps expanding, but in a cyclical industry it expands and contracts, then expands and contracts again. The autos and the airlines, the tire companies, steel companies, and chemical companies are all cyclicals. Even defense companies behave like cyclicals, since their profits rise and fall depends on the policies of various administrations."

When examining the following graphs on well-known cyclicals in the autos, tire and steel sector, we see classic examples of what Peter Lynch meant when he said, "profits rise and fall in regular if not completely predictable fashion." The associated performance reports of each of these first three examples illustrates the unpredictable nature of investing in them.

One risk to true cyclicals is a lack of consistency. Semi-cyclicals such as United Technologies, Boeing or Home Depot might be a better fit for many investors

Turnarounds

"Turnaround candidates have been battered, depressed, and often can barely drag themselves into Chapter 11. These are slow growers; these are no growers. These aren't cyclicals that rebound; these are potential fatalities. Turnarounds stocks can make up lost ground very quickly… The best thing about investing in successful turnarounds is that of all the categories of stocks, their ups and downs are least related to the general market."

The Asset Plays

"An asset play is any company that is sitting on something valuable that you know about, but that the Wall Street crowd has overlooked. The asset play may be as simple as a pile of cash. Sometimes its real estate."

A Note of Caution on Stop-Losses

Placing a stop loss order on a winning stock could be a strategic mistake. A winning stock is when fundamentals are strong and where the markets are pricing the asset fairly. Then, if the stock price falls but fundamentals remain intact, the winning stock simply goes on sale. In other words, the stock begins trading at a valuation that is below its intrinsic value. To the astute investor, this represents a buy signal, not a sell signal.

It is never a good idea to sell an investment for less than it's worth. Placing a stop loss only serves the purpose of potentially locking in an unnecessary loss. An unrealized loss can quickly turn into an unrealized gain if the principles of sound valuation are heeded. A better strategy is to buy more of a winner that has gone on sale.

A Hypothetical Example of a Costly Stop Loss

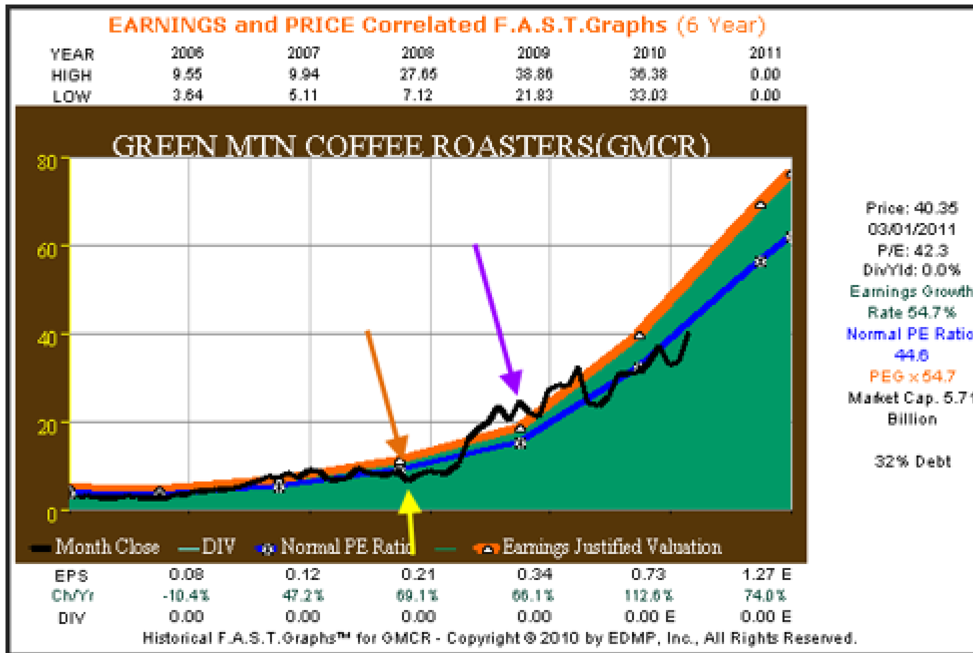
Let's assume you intelligently bought Green Mountain Coffee Roasters (GMCR) on September 30, 2008 at $8.74 per share (orange arrow). Since this is a very fast-growing company, its PE ratio at the time was approximately 44.6, which is admittedly high. But, because its earnings growth rate was just under 55% per annum, it was trading at a PEG ratio below one, which many consider an attractive valuation. Nevertheless, the high absolute PE ratio motivated you to place a stop loss 15% below its $8.74 purchase price.

Therefore, by October 31, 2008, approximately one month later, Green Mountain Coffee Roasters' stock price had fallen to $6.44. Consequently, you would have previously been stopped out of the stock because its price fell below the approximately $7.50 trigger price of your stop loss order (yellow arrow). But most importantly of all, notice how earnings-per-share had continued to grow at a very high rate, in spite of the short-term drop in stock price (the orange earnings justified valuation line continued to rise). In other words, fundamentals remained strong even though stock price had temporarily fallen.

Exactly one year later, after you had originally made a sound purchase of Green Mountain Coffee Roasters (GMCR) at $8.74 (the black stock price line was below the orange earnings justified valuation line), Green Mountain Coffee Roasters (GMCR) is trading at $24.61 (purple arrow) or almost 3 times your original purchase price. But alas, because you didn't trust the principles of sound valuation you placed a stop loss order and were completely out of the position.

Clearly, the better long-term decision would have been to buy more of this terrific company on sale. Since you applied sound principles of valuation on your original purchase, and since fundamentals continued to grow stronger, you should have been a motivated buyer not seller.

click to enlarge images

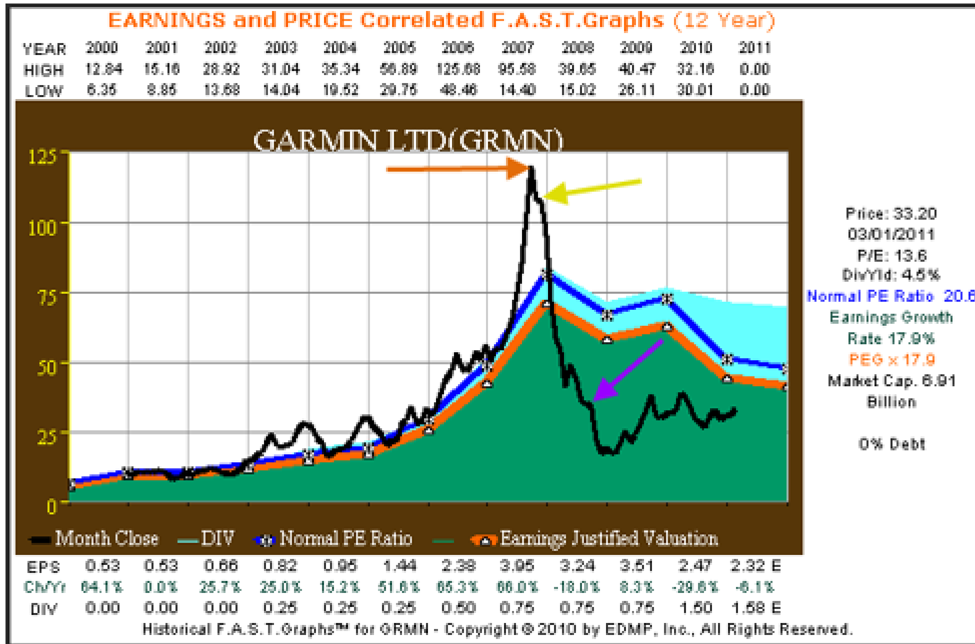


Hypothetical Example of an Appropriate Stop Loss Strategy

In this example, let’s assume that you were following Garmin Corporation (GRMN) back in calendar year 2007 when GPS technology was hot. You had watched the stock price rise from approximately $50 per share at the beginning of the year to over $119 per share by the end of September, and simply couldn’t stand being out of it anymore. The PE ratio at that time was approximately 30, but since growth was strong this didn’t scare you much and you bought the stock (orange arrow). However, because the stock had such a huge run over the short run, you placed a stop loss order 10% below your original purchase price.

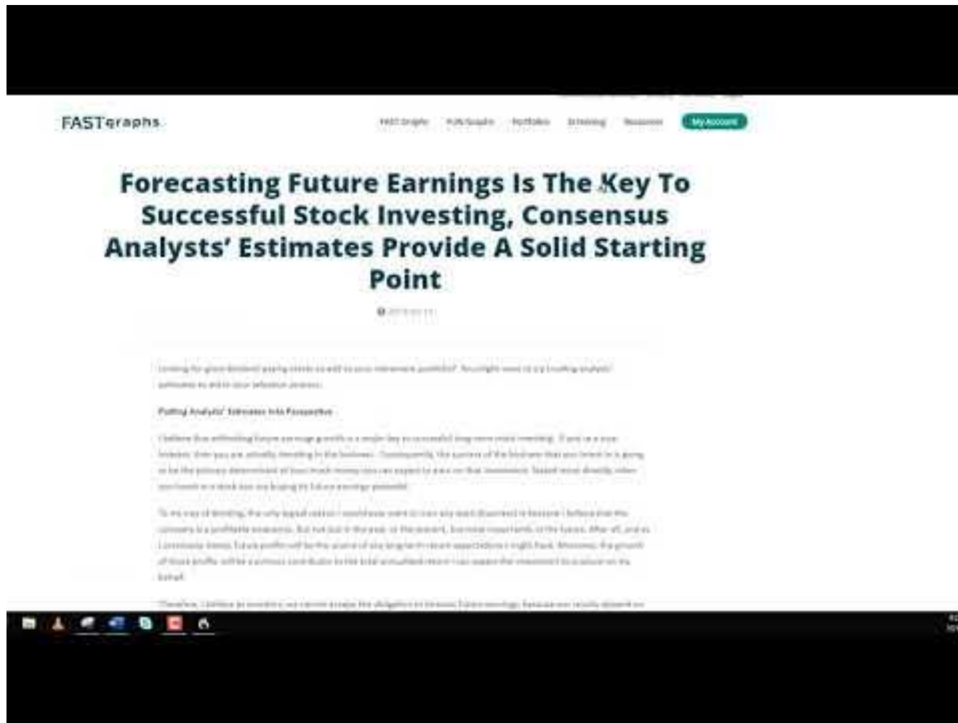
Once again, within a month the stock price fell and triggered your stop loss (yellow arrow). However, in this example the stop loss makes sense because at such a high valuation, Garmin Corporation (GRMN) is not a winner. Not only was the company significantly overvalued at the time of purchase (the black price line was significantly above the orange earnings justified valuation line), its fundamentals were also beginning to permanently deteriorate (the orange earnings justified valuation line falls). Consequently, approximately one year later on September 30, 2008, the stock you originally purchased at $119.40 a share would only be worth $33.94 a share (purple arrow). In short, stop losses are a good idea for stocks likely to be losers and not a

good idea for stocks that are likely to be winners. Avoiding likely losers completely is the best option.



Topic 9: Intermediate Investing Topics

Using Analyst Forecasts – What about accuracy?



As investors, we can learn a great deal from the past about the businesses we are contemplating investing in. However, as investors, we must also recognize that we can only truly invest in the future.

Consequently, although understanding a company's history can help us better understand the business, our success is predicated on our ability to recognize the business's future potential. And most importantly, we can also learn from past valuation levels, but we must calculate the present and future value of the business based on its capacity to produce a future income stream on our behalf. At its core, fair valuation is a function of discounting future earnings, cash flows and revenues back to the present value.

Therefore, you might want to start out by reviewing analysts' estimates to aid in your selection and evaluation process.

Putting Analysts' Estimates Into Perspective

The future value (total return) of your investment will be a function of fair value and the growth the business you are selecting achieves in the future. Therefore, the key to investment success is predicated on forecasting the future growth of any business you are evaluating with as much accuracy as is possible. This is most commonly measured based on a company's reported earnings when they file each quarterly financial statement.

Estimating future earnings growth (and/or any of the other metrics) is a major key to successful long-term stock investing. If you're a true investor, then you are investing in the business, not the stock. Consequently, the success of the business that you invest in is going to be the primary determinant of how much money you can expect to earn on that investment.

We cannot escape the obligation to forecast a business's future growth potential, because our results depend on it. Furthermore, we should not guess, nor should we simply play hunches. Instead, we must attempt to calculate reasonable probabilities based on all the information that we can assemble.

Then we should apply analytical methods based upon our earnings driven rationale that provide us reasons to believe that the relationships producing earnings growth will persist in the future. In other words, we must strive to forecast future earnings as accurately as we possibly can. On the other hand, we should simultaneously realize that perfection is not to be expected.

The Selection Dilemma

But here is the dilemma. With all the thousands of companies to choose from, how can I forecast future earnings accurately enough in order to pick the stocks that might best meet my goals and objectives? Reviewing and considering the consensus estimates of leading analysts following a given company is a good place to start. These estimates are readily available on FAST Graphs.

Forecasting is Not A Game of Perfect Nor Does It Need To Be

Admittedly, consensus estimates may not be perfect; in fact, many estimates will be wrong. On the other hand, consensus estimates are generally accurate enough to be of value, especially for stock screening purposes. And more importantly, the closer to current time the estimate that you're relying on is (this year or next year's estimate), the more likely it is that they will be accurate enough to be of value.

One prominent study suggests that analysts' estimates are often off by factors of 12% or more. This seems like a big miss, but as long as the investor understands that estimating future performance is not a question of being perfectly accurate, then this actually indicates that analyst forecasts are at least somewhat useful.

Consensus Earnings Estimates Accuracy

Perhaps most importantly, we must ask ourselves the question: just how accurate do analysts' estimates need to be to be of real value? Since forecasting is all about the future, and much of the future is an unknown, we must accept the fact that estimates will contain a level of imprecision. Therefore, we should expect discrepancies to manifest when our forecast eventually turns to actual reality (reported earnings).

There tends to be more earnings misses on the plus side than there are on the negative side. This may be driven by the fact that the analyst bases estimates on guidance from the company itself. Management teams are more likely to guide lower and therefore exceed expectations, than the other way around. This presents the argument that relying on the forward earnings estimates of analysts may be a very conservative way to base stock investing decisions on.

FAST Graphs provides an Analyst Scorecard for each stock such that you can see for yourself how analysts have done in the past for a specific stock. One way of looking at a company for which the analysts have done a poor job is that it is riskier. If professionals who are paid to follow the company can't consistently come close to identifying what the future for that company will hold, caution is in order.

More on Forecasting

In simple terms, reasonably accurate forecasts are ultimately achieved as a process commonly referred to as research and due diligence. The best way to accomplish a forecast that is reasonable within an acceptable range of probabilities is by applying both a macro and micro analysis.

The Macro Approach

Regarding demographics, perhaps the most important factor to recognize is the current distribution of our population. We still have the bimodal powerful demographic forces of the graying of America and the baby boomer generation. Additionally, we also have a rapidly growing economic force associated with millennials which are those people born in the 1980s and 1990s. The Pew Research Center recently defined our current population demographic makeup as follows:

- "**The Silent Generation:** Born 1928-1945 (73-90 years old)
- **Baby Boomers:** Born 1946-1964 (54-72 years old)
- **Generation X:** Born 1965-1980 (38-53 years old)
- **Millennials:** Born 1981-1996 (22-37 years old)
- **Post-Millennials:** Born 1997-Present (0-21 years old)"

The point is that these various demographic forces have different spending habits and desires. Consequently, by considering the consumption tendencies of these and other demographic segments will allow us to make better informed forecasts on the future health of several industries that will serve these large and growing markets. We may not be able to generate precise numbers by reviewing demographics; however, we should be able to determine if there's an opportunity for growth or not.

Of course, three obvious industries would be healthcare, technology and financial services associated with retirement planning. In the most basic terms, thinking about these demographics can help us establish and identify whether a true market would exist for the products and services of the companies we might be interested in investing in.

Once again, this is not a game of perfect. The central idea is to be essentially correct that there is a large and possibly even a growing market for a given company's products or services. If you believe there is, then it really comes down to how well the company's management can execute. You can make these judgments by simply reviewing each company's quarterly financial reports.

The Micro Approach

From the macro, the individual investor needs to move to the micro because ultimately, it is the individual security, or stock selection that produces long-term returns. Long-term returns are a function of earnings past, present and future. There is no better way to come up with a reasonable forecast of future earnings than by conducting a thorough and comprehensive fundamental analysis on every company under consideration. However, the focus should be on attempting to determine whether said company possesses the future earnings power to provide you the returns required that are commensurate to the amount of risk you are taking to achieve them.

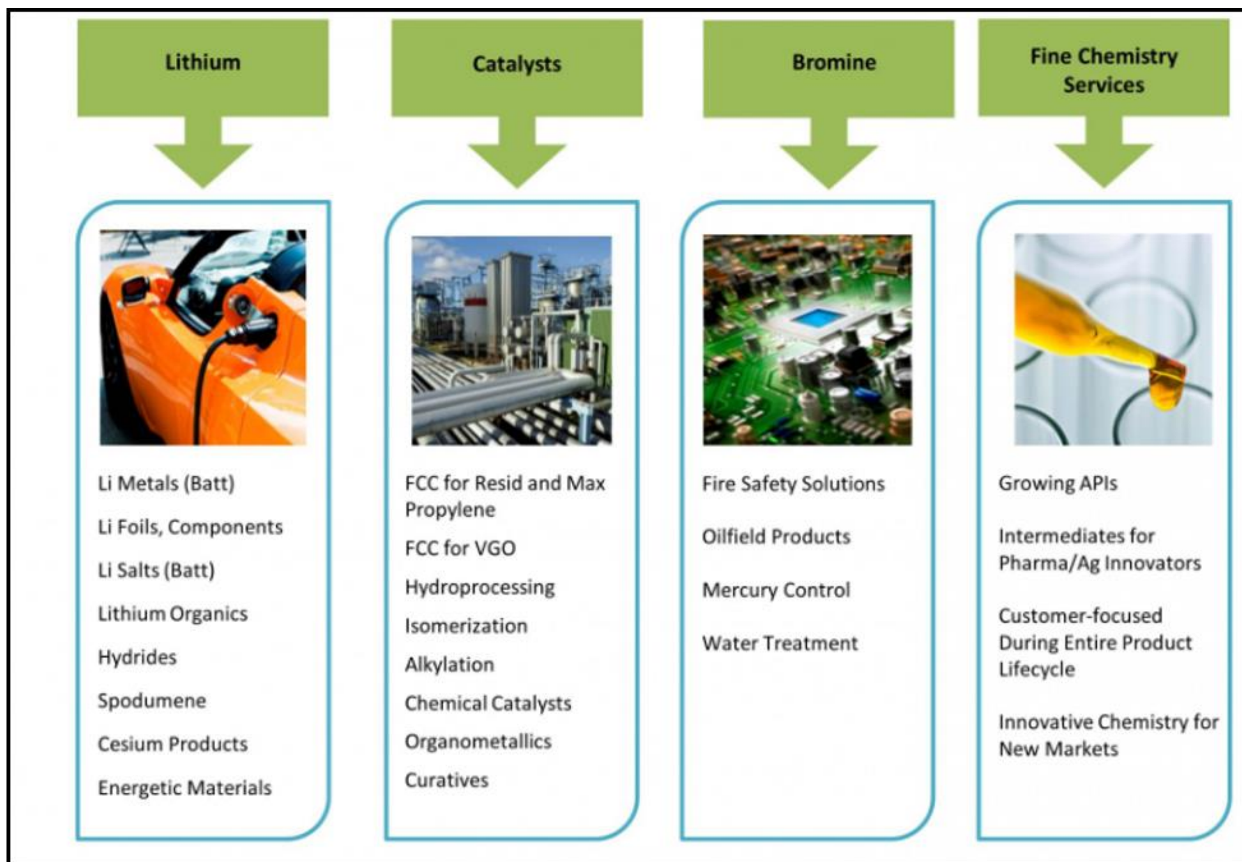
There's an old Wall Street adage that states that you don't want to invest in even the best buggy whip manufacturer after Henry Ford came along. In other words, the buggy whip industry was

totally disrupted with the invention of the model T Ford and the assembly line. Cars rapidly replaced the horse and buggy. Consequently, buggy whip sales plummeted.

In other words, it's imperative that the investor/owner continues to monitor, check and recheck a company's strategic advantage on a continuous basis. Due diligence must be ongoing. Perhaps the good news is that a company's prospects usually don't change overnight or in the blink of an eye. Therefore, the diligent investor would have ample time to re-evaluate each company's prospects as things change.

In addition to reviewing financial statements, you should spend some time on the company's website. You want to understand what the business does, what products or services it sells, and who its customers are.

You may want to examine exactly what businesses a firm is in and what contribution does each division or area contribute to sales and earnings. For example, I offer the following slides from Albemarle's (ALB) financial report that discusses their various business divisions, with the second and third slides reporting the contribution that each division makes to the overall business. But most importantly, you can also identify which division (in this case lithium), is growing the fastest.



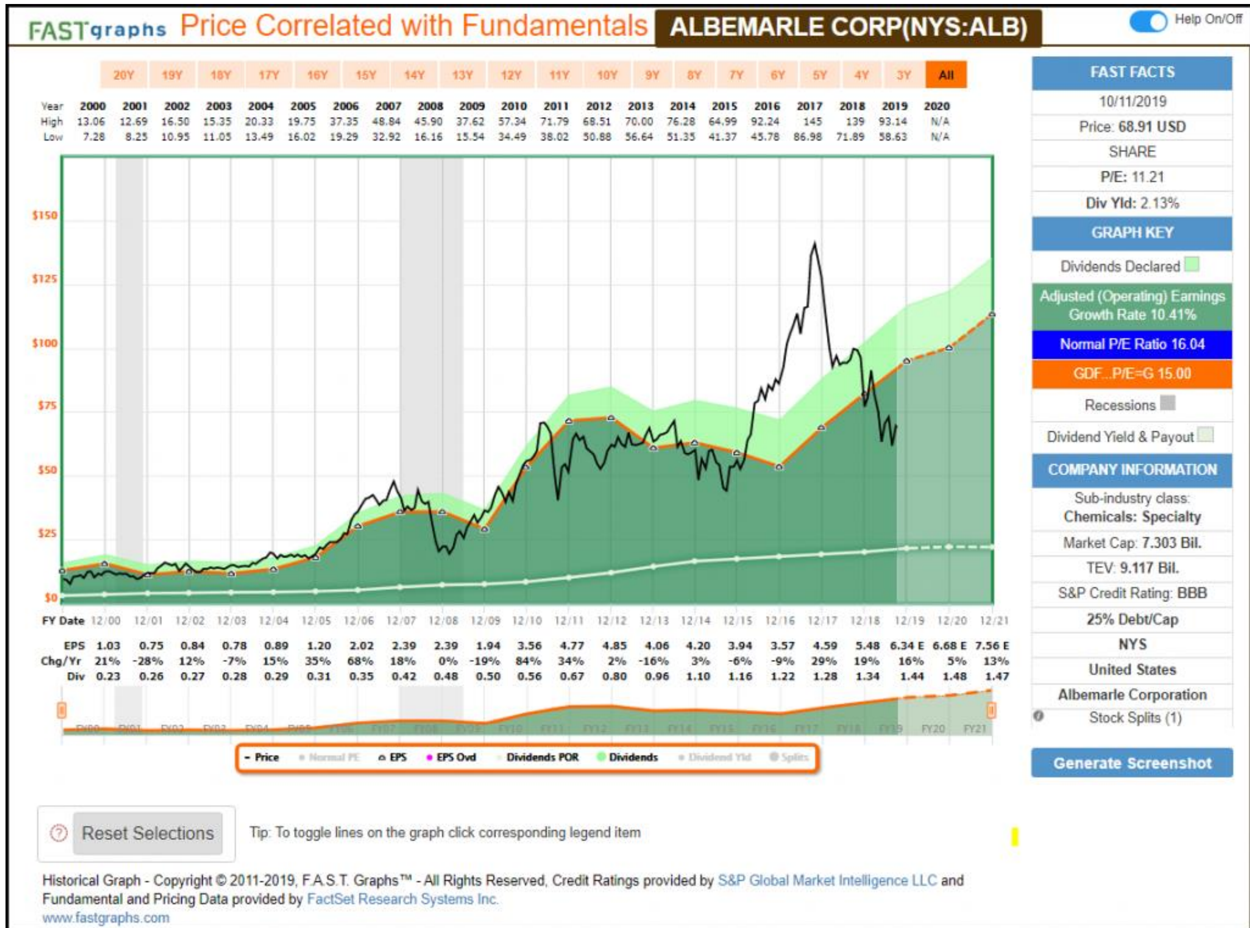
By examining the financials that ended in December 31, 2017 we see that lithium grew from 25% contribution to 32.2%. Which clearly is the fastest growing division by far.

	Year Ended December 31,				Percentage Change
	2017	%	2016	%	2017 vs. 2016
	(In thousands, except percentages)				
Net sales:					
Lithium	$ 1,018,885	33.2 %	$ 668,852	25.0 %	52 %
Bromine Specialties	855,143	27.8 %	792,425	29.6 %	8 %
Catalysts	1,067,572	34.7 %	1,031,501	38.5 %	3 %
All Other	128,914	4.2 %	180,988	6.8 %	(29)%
Corporate	1,462	0.1 %	3,437	0.1 %	(57)%
Total net sales	$ 3,071,976	100.0 %	$ 2,677,203	100.0 %	15 %
Adjusted EBITDA:					
Lithium	$ 446,652	50.4 %	$ 285,714	37.7 %	56 %
Bromine Specialties	258,901	29.2 %	226,926	29.9 %	14 %
Catalysts	283,883	32.1 %	316,609	41.8 %	(10)%
All Other	13,878	1.6 %	14,772	1.9 %	(6)%
Corporate	(117,834)	(13.3)%	(85,804)	(11.3)%	37 %
Total adjusted EBITDA	$ 885,480	100.0 %	$ 758,217	100.0 %	17 %

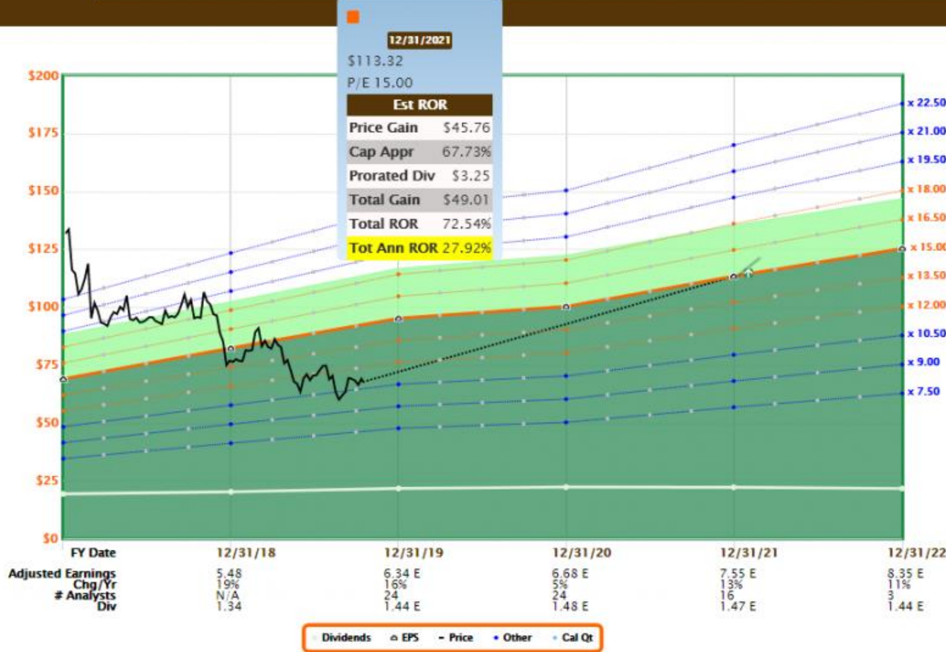
When looking at the year and December 31, 2018, we see that lithium has now become the largest and the fastest growing division in Albemarle. However, we might also note that the rate of change of growth, although still high, has slowed down from 52% to 21%.

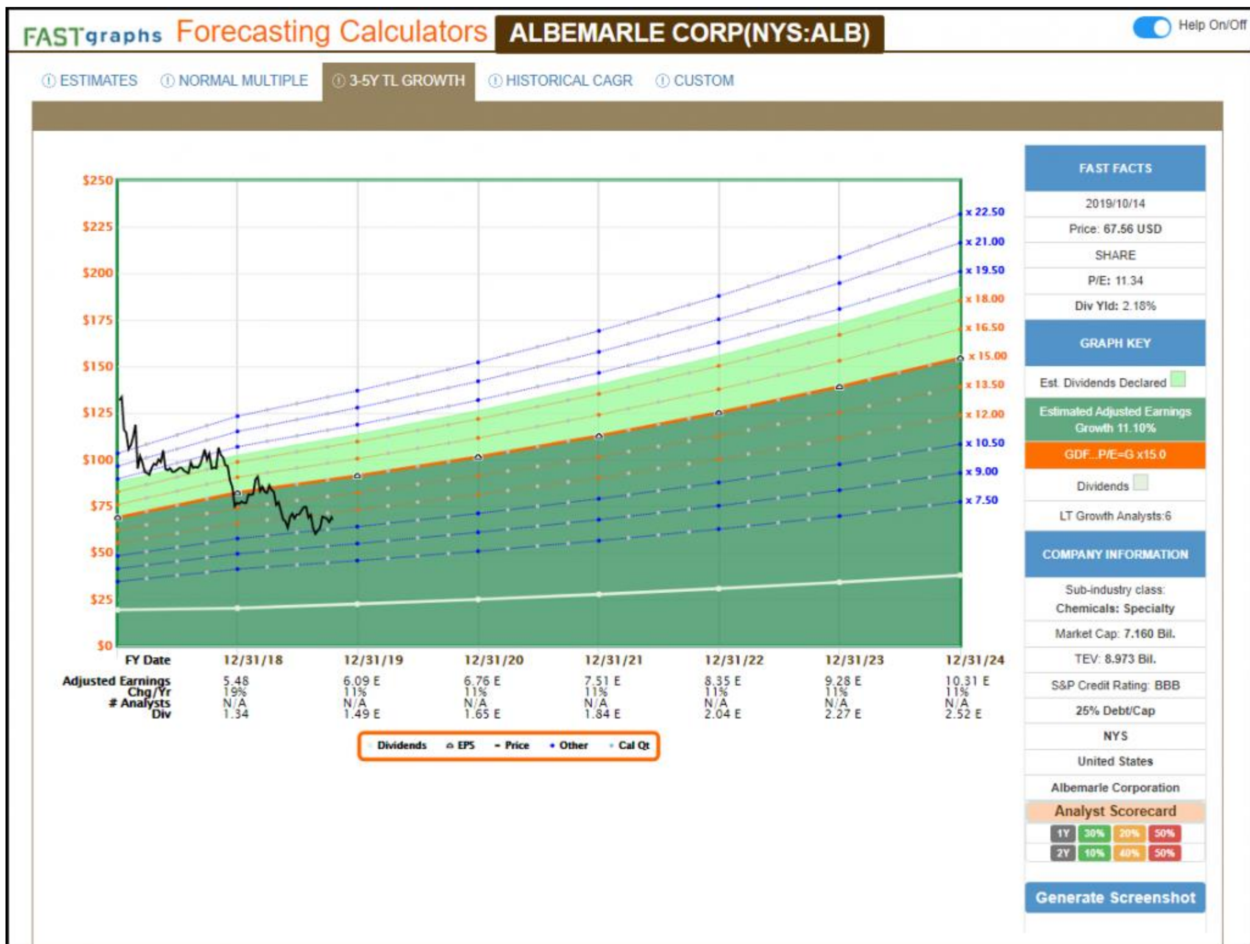
	Year Ended December 31,				Percentage Change
	2018	%	2017	%	2018 vs. 2017
	(In thousands, except percentages)				
Net sales:					
Lithium	$ 1,228,171	36.4 %	$ 1,018,885	33.2 %	21 %
Bromine Specialties	917,880	27.2 %	855,143	27.8 %	7 %
Catalysts	1,101,554	32.6 %	1,067,572	34.7 %	3 %
All Other	127,186	3.8 %	128,914	4.2 %	(1)%
Corporate	159	— %	1,462	0.1 %	(89)%
Total net sales	$ 3,374,950	100.0 %	$ 3,071,976	100.0 %	10 %
Adjusted EBITDA:					
Lithium	$ 530,773	52.7 %	$ 446,652	50.4 %	19 %
Bromine Specialties	288,116	28.6 %	258,901	29.2 %	11 %
Catalysts	284,307	28.3 %	283,883	32.1 %	— %
All Other	14,091	1.4 %	13,878	1.6 %	2 %
Corporate	(110,623)	(11.0)%	(117,834)	(13.3)%	(6)%
Total adjusted EBITDA	$ 1,006,664	100.0 %	$ 885,480	100.0 %	14 %

With the above information clearly in mind, you can comfortably determine that Albemarle's lithium business is the main contributor to their recent acceleration in growth. Furthermore, without attempting to put a number on it, you can estimate with confidence that Albemarle's business will continue to grow going forward as lithium demand should continue to be strong for years to come.



Consequently, you also have a comfortable level of confidence that consensus estimates might be reasonable as well. Therefore, you can begin to run "what if" performance calculations so that you have a reasonable expectation of what your future total returns might be like.


FASTgraphs Forecasting Calculators
ALBEMARLE CORP(NYS:ALB)
Help On/Off
ESTIMATES
NORMAL MULTIPLE
3-5Y TL GROWTH
HISTORICAL CAGR
CUSTOM
12/31/2021
$113.32
P/E 15.00
Est ROR
Price Gain $45.76
Cap Appr 67.73%
Prorated Div $3.25
Total Gain $49.01
Total ROR 72.54%
Tot Ann ROR 27.92%
$200
$175
$150
$125
$100
$75
$50
$25
$0
x 22.50
x 21.00
x 19.50
x 18.00
x 16.50
x 15.00
x 13.50
x 12.00
x 10.50
x 9.00
x 7.50
FY Date
12/31/18
12/31/19
12/31/20
12/31/21
12/31/22
Adjusted Earnings
Chg/Yr
Analysts
Div
5.48
19%
N/A
1.34
6.34 E
16%
24
1.44 E
6.68 E
5%
24
1.48 E
7.55 E
13%
16
1.47 E
8.35 E
11%
3
1.44 E
Dividends
EPS
Price
Other
Cal Qt
FAST FACTS
2019/10/14
Price: 67.56 USD
SHARE
P/E: 10.97
Div Yld: 2.18%
GRAPH KEY
Est. Dividends Declared
Estimated Adjusted Earnings Growth 11.17%
GDF...P/E=G 15.00
Dividends
FactSet
COMPANY INFORMATION
Sub-industry class:
Chemicals: Specialty
Market Cap: 7.160 Bil.
TEV: 8.973 Bil.
S&P Credit Rating: BBB
25% Debt/Cap
NYS
United States
Albemarle Corporation
Analyst Scorecard
1Y 30% 20% 50%
2Y 10% 40% 50%
Generate Screenshot



Making Sense of Potential Future Multiples

The 15 P/E Ratio Reflects Fair Value Under Real-World Circumstances

After examining thousands of companies over several decades, through the lens of the FAST Graphs (Fundamentals Analyzer Software Tool), a 15 P/E ratio represents historical fair value for earnings growth up to 15% per annum. Although there are exceptions to every rule, it is no accident that a 15 P/E ratio is so ubiquitous. There are logical factors and real-world evidence that support a 15 P/E as a rational fair valuation for most, but not all companies.

This is reasonable for a multiple reasons, but first it is worth noting that the more than 200-year average P/E ratio of the S&P 500 has been between 14 to 16. Second, this is a real-world occurrence because it is consistent with the long-term average return of 6% to 8% that common stocks have traditionally delivered to investors.

This fact is further supported by the reality that a 15 P/E ratio represents an earnings yield (E/P) of 6.67%, or approximately 6% to 7%. The most important point regarding this 15 P/E concept rests on the notion of soundness, not rate of return. When the current earnings yield is between 6% and 7%, the investment is currently prudent whether (or not) the business grows, and almost regardless of the company's rate of growth (up to a point – 15%).

But perhaps most importantly, future earnings growth is uncertain. Consequently, it may or may not come out as forecast. Therefore, it makes more sense to focus more on current time than it does future time.

The Key: A Win-Win for Both Buyer and Seller

The key to understanding this is to think of it from both the perspective of the buyer and/or a seller. Starting with the seller, it is only rational to sell your business if you can generate enough funds to earn an acceptable return on your proceeds.

Let's assume that you owned a business that was generating you $100,000 per year of net income. Furthermore, let's assume that the $100,000 per year was both fixed and guaranteed. But let's further assume that it was now time for you to retire and sell your business. The seminal question is, what price would you be willing to accept from a potential buyer?

If a buyer offered you $100,000 (P/E = 1), you would (or at least should) without hesitation turn it down. However, if you were offered $1,500,000 (a P/E of 15) you might consider selling. If you invested the $1,500,000 proceeds and received a 6.67% return (the earnings yield from a P/E of 15) your income would be $100,500 per year, or approximately what the business was earning you.

A key point to consider is that present time or current valuation is more reliable than future time valuation. In other words, when either a buyer or seller is evaluating a business, they can logically assume that the company's current earnings are the most reliable earnings with which to make their calculations of fair value upon. The most recent actual reported earnings are a certainty, while there is always significant uncertainty regarding future earnings. Consequently, potential future earnings growth is essentially significantly discounted in favor of actual current earnings.

Additionally, it should also be recognized that there are significantly different levels of risk in achieving a given level of growth. The higher the expected growth, typically the riskier it would be to achieve it.

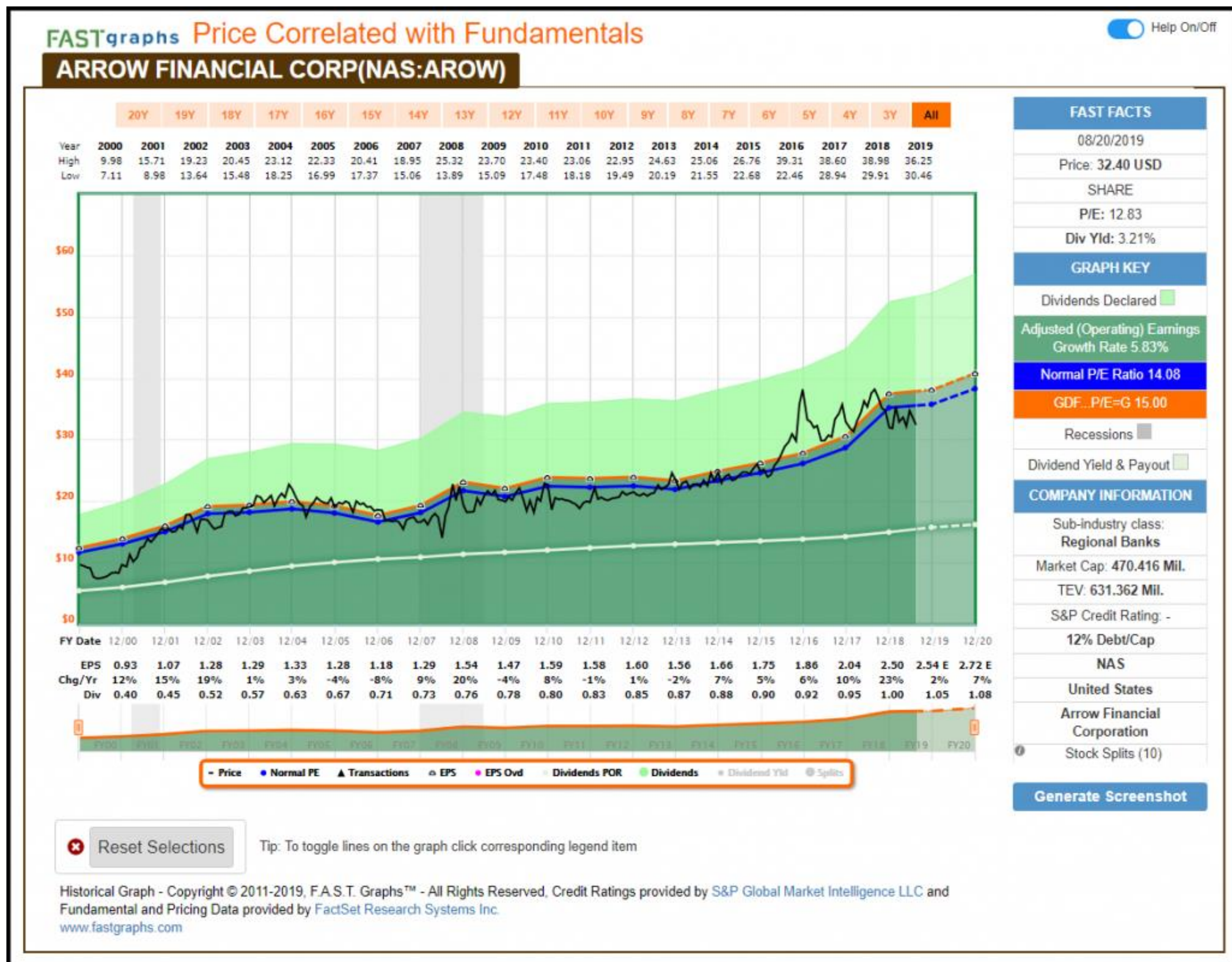
Examples of Applying Fair Valuation Reference Lines Based on Earnings Growth

What follows below are just a few examples of how fair valuation of a common stock can be calculated based on each company's ability to grow. Most importantly, these examples are designed to illustrate that fair valuation is a measure of soundness and not a driver of future rates of return. The primary drivers of future return will be the growth of a company's income streams – earnings, cash flows and dividends, etc.

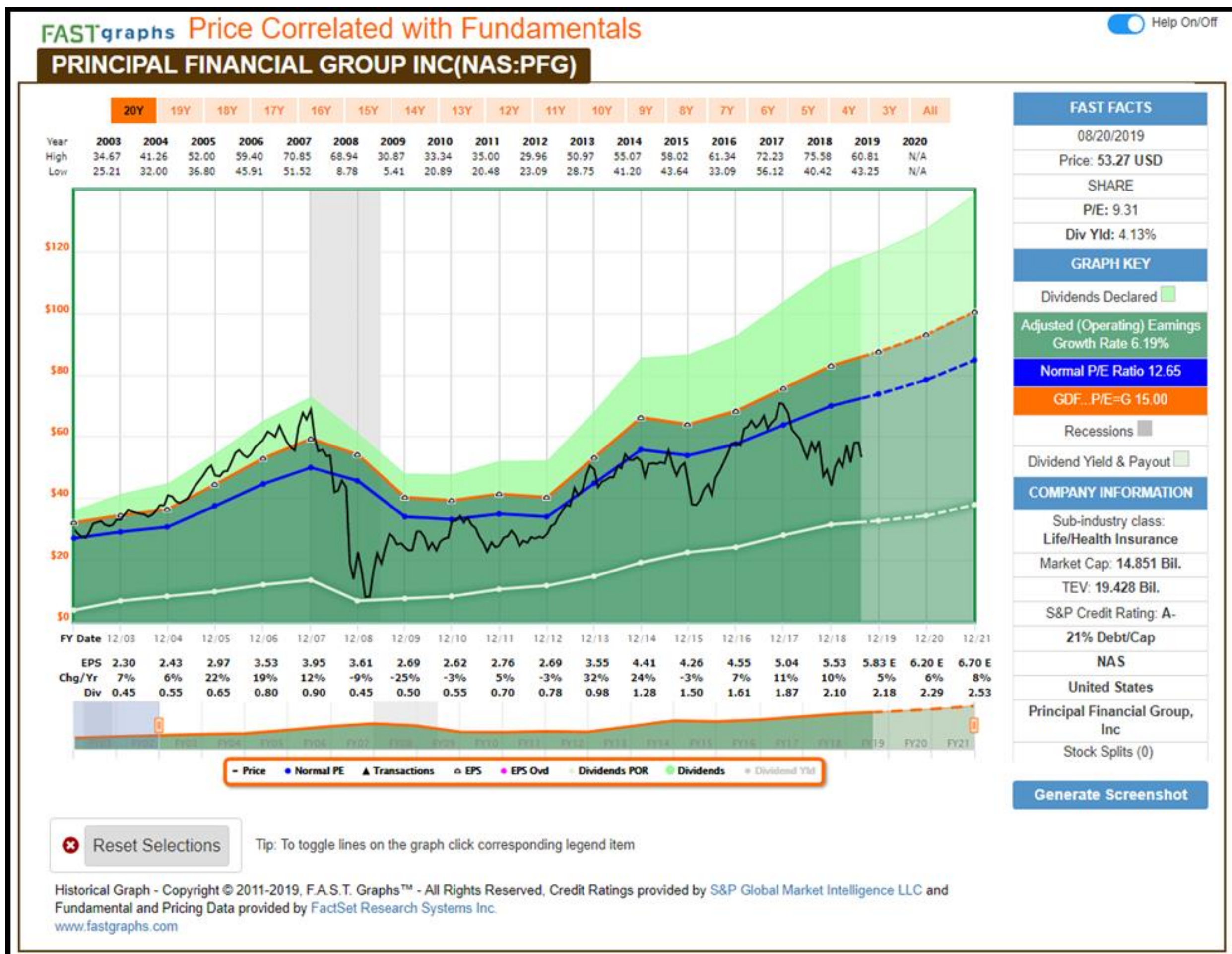
The idea of possessing a clear understanding of fair valuation empowers investors to make more prudent decisions in the long run. Over the short run, the stock market is liable to do anything and/or behave in often irrational and illogical ways. However, when an investor is grounded in the principles of valuation, they can protect themselves from participating in folly or in making risky long-term bets with their capital.

When reviewing the following screenshots, pay close attention to a couple of important attributes. First start your review by checking the dark green color-coded rectangle to the right of each graph that shows the company's earnings growth rate over the timeframe being shown. Next, check the orange rectangle and note the P/E ratio that is being applied and the widely accepted formula for valuing a business that is utilized. Then, as you review each company, focus on how the stock price (the black line) has correlated to and followed the orange earnings justified valuation reference line. Finally, note how these valuation reference lines have actually provided fair valuation insights historically in the real world.

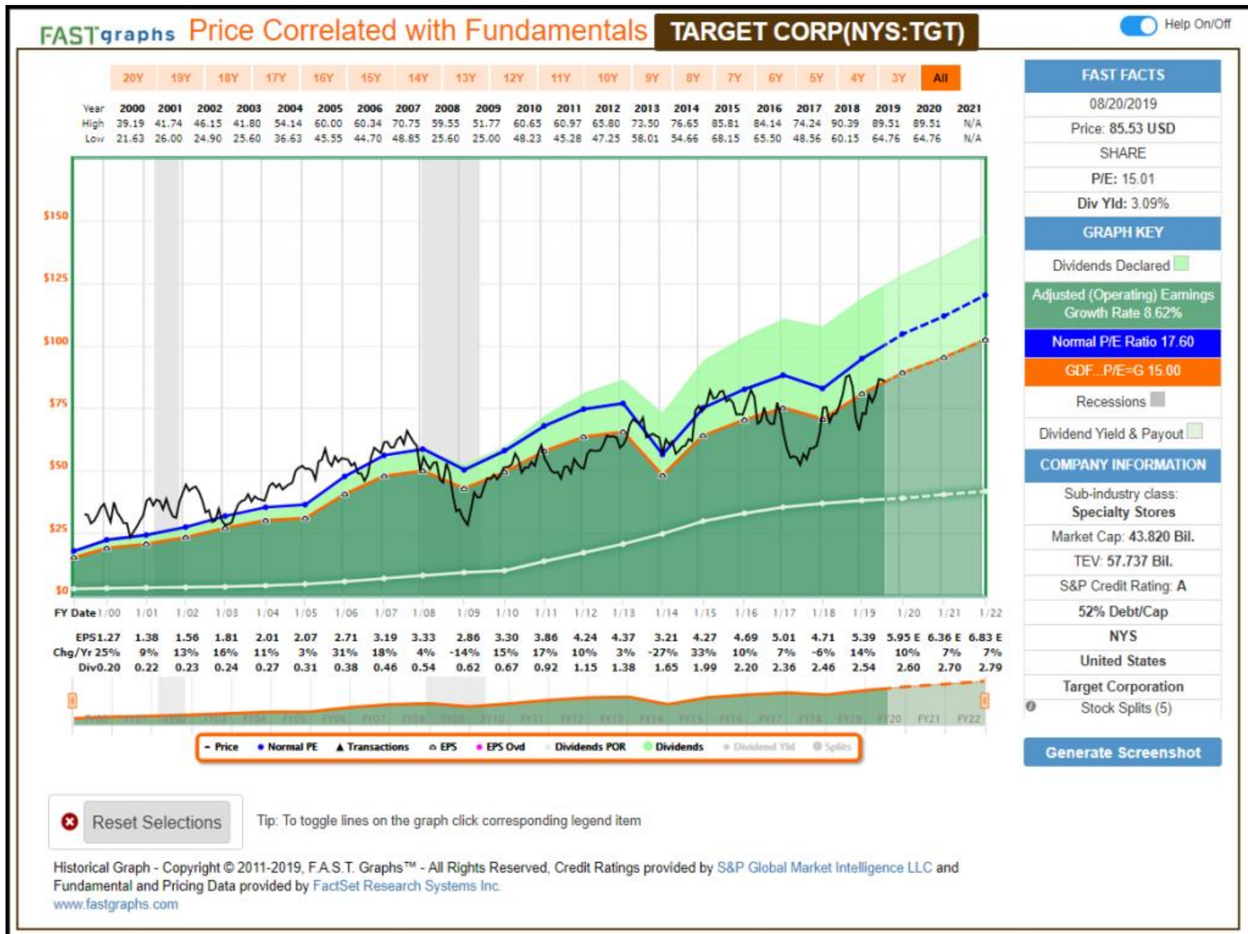
Arrow Financial Corp (AROW): Average Growth Fair Value P/E ratio of 15



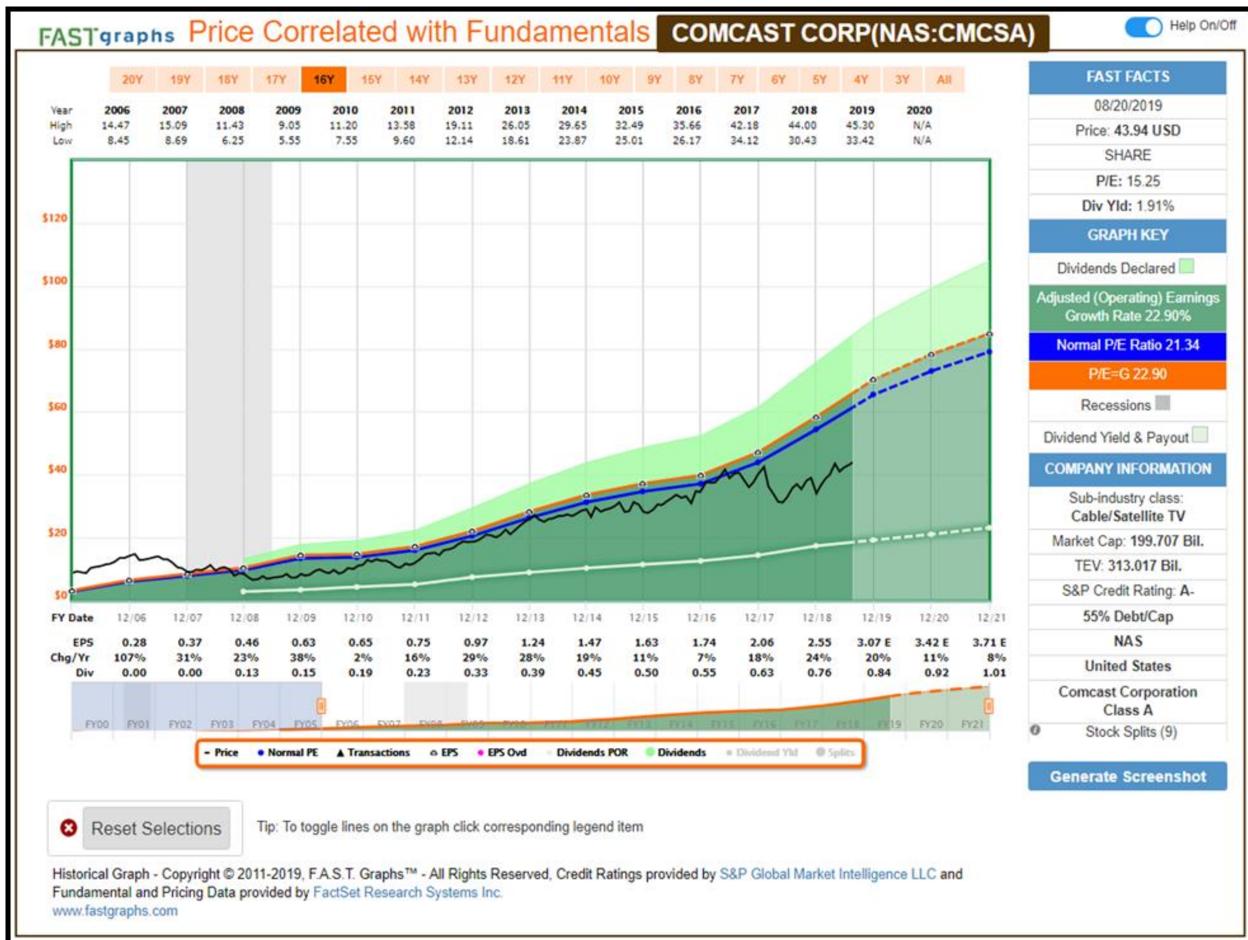
Principal Financial Group (PFG): Average Growth Fair Value P/E ratio of 15 vs Normal P/E ratio of 12.65



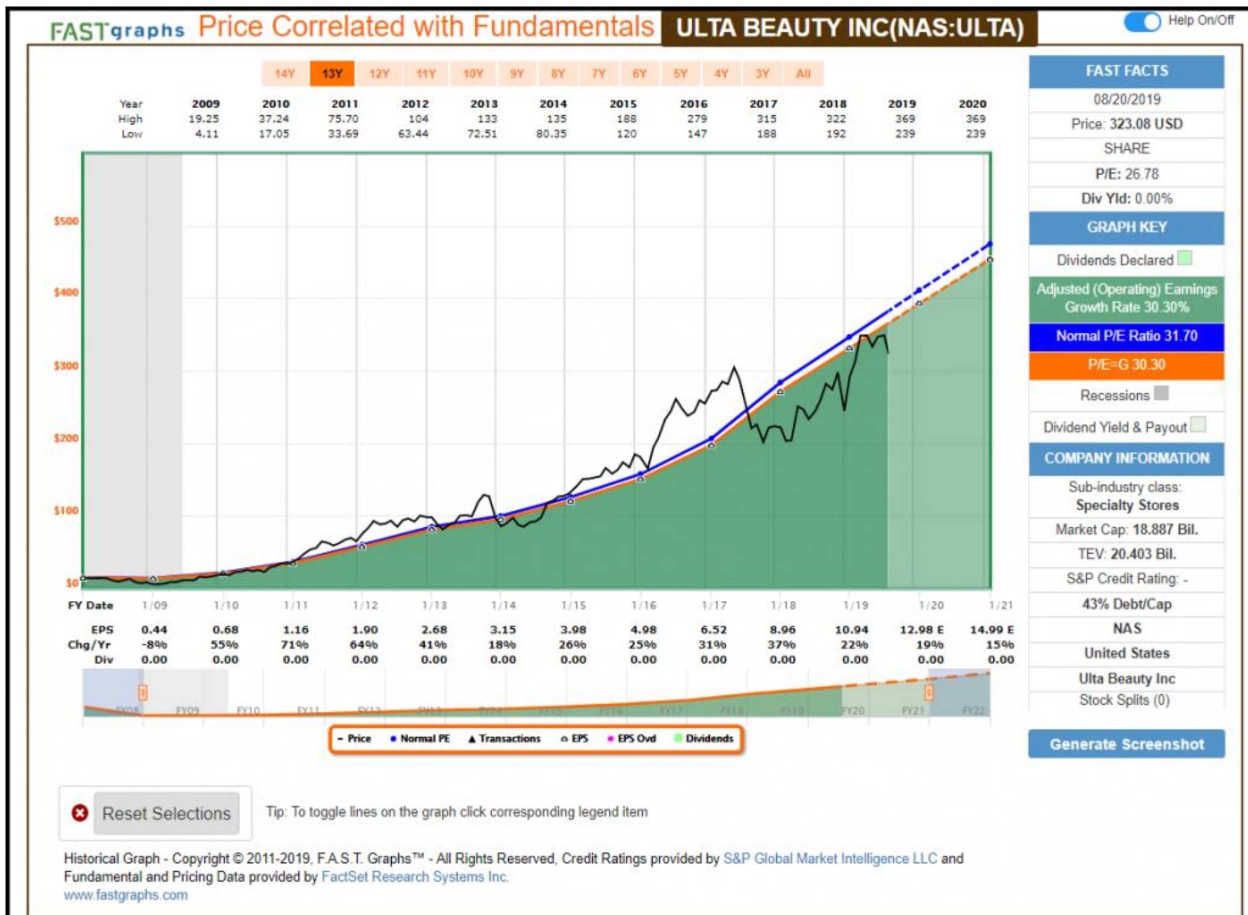
Target Corp (TGT): Above Average Growth Fair Value P/E Ratio Of 15

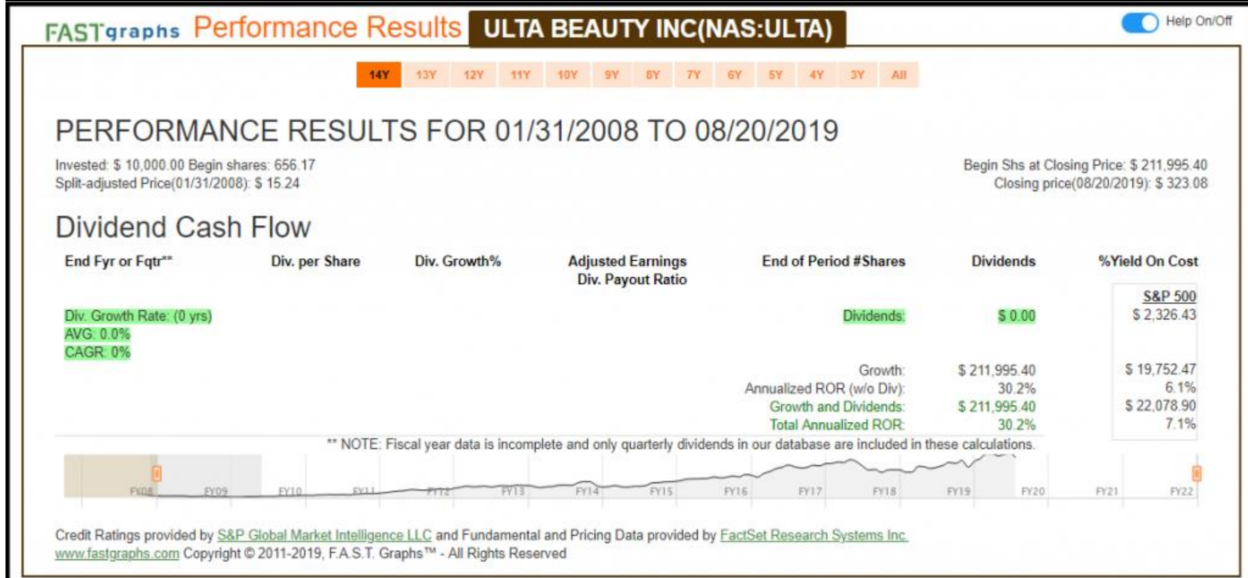


Comcast Corp (CMCSA): High Growth Fair Value P/E Ratio Equal To The Company's Growth Rate

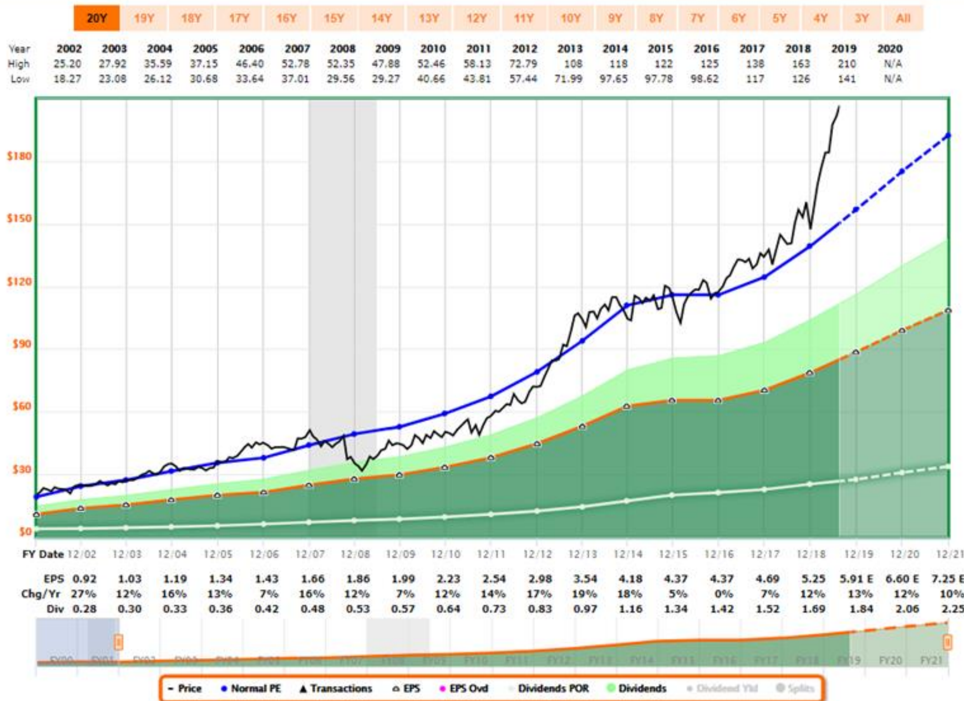


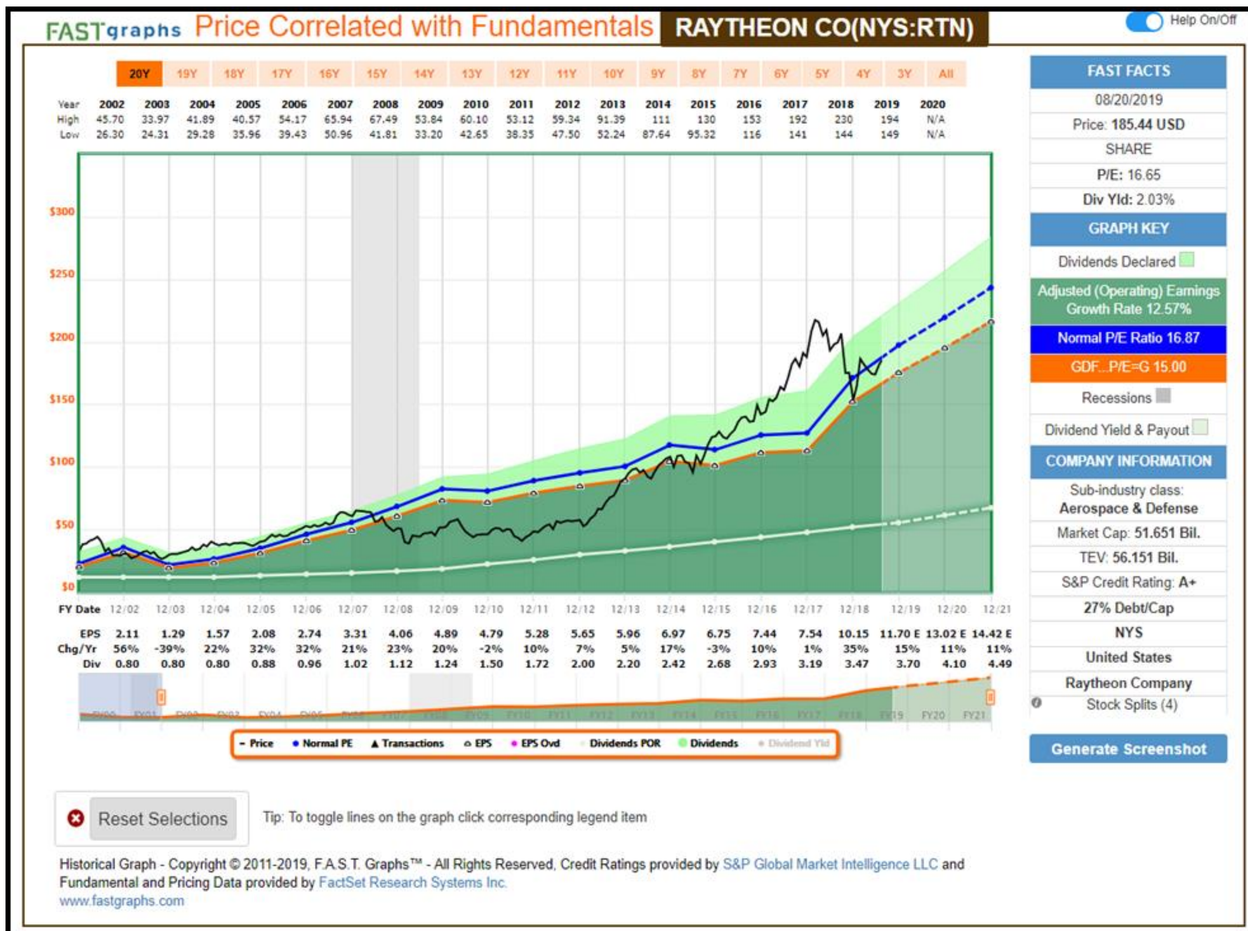
Ulta Beauty Inc (ULTA): Very Fast Growth Fair Value P/E Ratio Equals Growth Rate





Ecolab Inc (ECL): The Exception to the Rule versus Raytheon Co (RTN)


FASTgraphs Price Correlated with Fundamentals
ECOLAB INC(NYS:ECL)
FAST FACTS
08/20/2019
Price: 206.60 USD
P/E: 36.44
Div Yld: 0.89%
GRAPH KEY
Dividends Declared
Adjusted (Operating) Earnings Growth Rate 12.20%
Normal P/E Ratio 26.54
GDF...P/E=G 15.00
Recessions
Dividend Yield & Payout
COMPANY INFORMATION
Sub-industry class: Chemicals: Specialty
Market Cap: 59.450 Bil.
TEV: 67.855 Bil.
S&P Credit Rating: A-
40% Debt/Cap
NYS
United States
Ecolab Inc.
Stock Splits (4)
Generate Screenshot
Reset Selections
Tip: To toggle lines on the graph click corresponding legend item
Historical Graph - Copyright © 2011-2019, F.A.S.T. Graphs™ - All Rights Reserved, Credit Ratings provided by S&P Global Market Intelligence LLC and Fundamental and Pricing Data provided by FactSet Research Systems Inc.
www.fastgraphs.com



Unique Situations

Some firms require specialized knowledge to evaluate. This includes: REITs, MLPs, Utilities, IPOs, Banks and Financials, Turnarounds, and Negative Earnings firms.

Banks, Financials, Insurance, and REITs

There are 14 subsectors that collectively make up the Finance Sector. Furthermore, there are several research candidates in each subsector that are very similar to each other relative to growth, dividend yields and valuation. Consequently, for diversification purposes, you might want to only select those specific candidates in each subsector that appeal to you most. Stated more directly, there are a lot of viable choices for attractive investments in each subsector within the Finance Sector. Therefore, you can pick your favorite, or diversify among several different candidates in each subsector.

FactSet Sectors – Subsectors

Commercial Services Miscellaneous Commercial Serv. Advertising/Marketing Services Commercial Printing/Forms Financial Publishing/Services Personnel Services	**Distribution Services** Wholesale Distributors Food Distributors Electronics Distributors Medical Distributors	**Health Technology** Pharmaceuticals: Major Pharmaceuticals: Other Pharmaceuticals: Generic Biotechnology Medical Specialties	**Producer Manufacturing** Metal Fabrication Industrial Machinery Trucks/Construct/Farm Auto Parts: OEM Building Products Electrical Products Office Equip/Supplies Miscellaneous Manuf Industrial Conglomerates
Communications Major Telecommunications Specialty Telecommunications Wireless Telecommunications	**Electronic Technology** Semiconductors Electronic Components Electronic Equipment/Instruments Telecommunications Equipment Aerospace & Defense Computer Processing Hardware Computer Peripherals Computer Communications Electronic Production Equipment	**Industrial Services** Contract Drilling Oilfield Services/Equipment Engineering & Construction Environmental Services Oil & Gas Pipelines	**Retail Trade** Food Retail Drugstore Chains Department Stores Discount Stores Apparel/Footwear Retail Home Improvement Chains Electronics/Appliance Stores Specialty Stores Catalog/Specialty Dis. Internet Retail
Consumer Durables Motor Vehicles Automotive Aftermarket Homebuilding Home Furnishings Electronics/Appliances Tools & Hardware Recreational Products Other Consumer Specialties	**Energy Minerals** Oil & Gas Production Integrated Oil Oil Refining/Marketing Coal	**Miscellaneous** Miscellaneous InvestmentTrusts/MutualFunds	**Technology Services** Data Processing Services Information Technology Packaged Software Internet Software
Consumer Non-Durables Food: Major Diversified Food: Specialty/Candy Food: Meat/Fish/Dairy Beverages: Non-Alcoholic Beverages: Alcoholic Tobacco Household/Personal Care Apparel/Footwear Consumer Sundries	**Finance** Major Banks Regional Banks Savings Banks Finance/Rental/Leasing Investment Banks/Brokers Investment Managers Financial Conglomerates Property/Casualty Insurance Multi-Line Insurance Life/Health Insurance Specialty Insurance Insurance Brokers/Services Real Estate Development Real Estate Investment Trusts	**Non-Energy Minerals** Steel Aluminum Precious Metals Other Metals/Minerals Forest Products Construction Materials	**Transportation** Air Freight/Couriers Airlines Trucking Railroads Marine Shipping Other Trans
Consumer Services Media Conglomerates Broadcasting Cable/Satellite TV Publishing: Newspapers Publishing: Books/Magazines Movies/Entertainment Restaurants Hotels/Resorts/Cruiselines Casinos/Gaming Other Consumer Services	**Health Services** Managed Health Care Hospital/Nursing Management Medical/Nursing Services Services to the Health Industry	**Process Industries** Chemicals: Major Diversified Chemicals: Specialty Chemicals: Agricultural Textiles Agricultural Commodities/Milling Pulp & Paper Containers/Packaging Industrial Specialties	**Utilities** Electric Utilities Gas Distributors Water Utilities Alternative Power Generation

Portfolio Review: Finance Sector: 131 Research Candidates

The following portfolio review lists the 131 research candidates.

Ticker	Name	CR	Sub-Sector	Exchange	P/E	P/CF(FFO)	EPS Yld	Div Yld	Market Cap
ATH	ATHENE HOLDING LTD	BBB+	Specialty Insurance	NYS	7.3	3.1	13.8%	0	8.686 Bil.
FAF	FIRST AMERICAN FINANCIAL	BBB-	Specialty Insurance	NYS	11.9	7.6	8.4%	3.3%	5.628 Bil.
FNF	FIDELITY NATIONAL FINANC	BBB	Specialty Insurance	NYS	12.9	11.8	7.8%	3.6%	9.593 Bil.
MIC	GENWORTH MI CANADA INC	BBB+	Specialty Insurance	TSE	8.4	10.4	12.0%	4.6%	3.853 Bil.
IBKC	IBERIABANK CORP	BBB	Savings Banks	NAS	11.5	24.9	8.7%	2.1%	4.282 Bil.
ISBC	INVESTORS BANCORP INC /N	BBB-	Savings Banks	NAS	15.5	13.0	6.5%	3.5%	3.593 Bil.
SYF	SYNCHRONY FINANCIAL	BBB-	Savings Banks	NYS	8.5	2.6	11.8%	2.6%	23.042 Bil.
WBS	WEBSTER FINANCIAL CORP	BBB	Savings Banks	NYS	15.2	12.5	6.6%	2.3%	5.312 Bil.
BOKF	BOK FINANCIAL CORP	BBB+	Regional Banks	NAS	13.3	30.6	7.5%	2.2%	6.498 Bil.
EWBC	EAST WEST BANCORP INC	BBB	Regional Banks	NAS	11.2	123.3	8.9%	1.7%	7.919 Bil.
FITB	FIFTH THIRD BANCORP	BBB+	Regional Banks	NAS	9.2	16.5	10.8%	3.2%	18.803 Bil.
FMBI	FIRST MIDWEST BANCORP IN	BBB-	Regional Banks	NAS	14.4	15.5	6.9%	2.1%	2.441 Bil.
HBAN	HUNTINGTON BANCSHARES IN	BBB+	Regional Banks	NAS	11.7	6.2	8.5%	3.9%	15.043 Bil.
HWC	HANCOCK WHITNEY CORP	BBB	Regional Banks	NAS	10.8	23.6	9.2%	2.5%	3.731 Bil.
NTRS	NORTHERN TRUST CORP	A+	Regional Banks	NAS	13.9	57.6	7.2%	2.6%	20.256 Bil.
SIVB	SVB FINANCIAL GROUP	BBB	Regional Banks	NAS	13.4	121.4	7.4%	0	13.110 Bil.
TRMK	TRUSTMARK CORP	BBB	Regional Banks	NAS	16.0	NMF	6.2%	2.6%	2.310 Bil.
UMBF	UMB FINANCIAL CORP	A-	Regional Banks	NAS	16.6	19.6	6.0%	1.7%	3.423 Bil.
UMPQ	UMPQUA HOLDINGS CORP	BBB-	Regional Banks	NAS	12.4	19.2	8.1%	4.6%	3.999 Bil.
VLY	VALLEY NATIONAL BANCORP	BBB	Regional Banks	NAS	12.7	11.8	7.9%	4.1%	3.520 Bil.

Ticker	Name	CR	Sub-Sector	Exchange	P/E	P/CF(FFO)	EPS Yld	Div Yld	Market Cap
ASB	ASSOCIATED BANC CORP	BBB	Regional Banks	NYS	11.2	13.8	8.9%	2.9%	3.808 Bil.
BXS	BANCORPSOUTH BANK	BBB	Regional Banks	NYS	14.2	19.5	7.0%	2.1%	3.202 Bil.
CFG	CITIZENS FINANCIAL GROUP	BBB+	Regional Banks	NYS	10.3	10.2	9.7%	3.5%	16.965 Bil.
CFR	CULLEN FROST BANKERS INC	A-	Regional Banks	NYS	15.0	43.1	6.7%	2.6%	6.565 Bil.
DFS	DISCOVER FINANCIAL SERVI	BBB-	Regional Banks	NYS	9.0	4.7	11.1%	2.2%	23.460 Bil.
FCF	FIRST COMMONWEALTH FINAN	BBB-	Regional Banks	NYS	12.9	12.2	7.8%	2.9%	1.375 Bil.
FHN	FIRST HORIZON NATIONAL C	BBB-	Regional Banks	NYS	9.6	5.0	10.4%	3.6%	4.952 Bil.
MTB	M&T BANK CORP	A-	Regional Banks	NYS	13.2	41.5	7.6%	2.3%	23.947 Bil.
NTB	BANK OF NT BUTTERFIELD &	BBB+	Regional Banks	NYS	11.1	7.5	9.0%	4.0%	2.194 Bil.
SNV	SYNOVUS FINANCIAL CORP	BBB-	Regional Banks	NYS	10.7	3.6	9.3%	2.5%	6.567 Bil.
STI	SUNTRUST BANKS INC	BBB+	Regional Banks	NYS	11.5	38.9	8.7%	3.0%	29.352 Bil.
STT	STATE STREET CORP	A	Regional Banks	NYS	10.0	36.6	10.0%	2.6%	27.070 Bil.
LB	LAURENTIAN BANK OF CANAD	BBB	Regional Banks	TSE	8.0	7.4	12.6%	6.4%	1.715 Bil.
NA	NATIONAL BANK OF CANADA	A	Regional Banks	TSE	10.2	14.6	9.8%	4.2%	20.929 Bil.
HPT	HOSPITALITY PROPERTIES T	BBB-	Real Estate Investment Trusts	NAS	21.1	7.3	4.7%	7.8%	4.450 Bil.
PCH	POTLATCHDELTIC CORP	BBB-	Real Estate Investment Trusts	NAS	17.2	17.8	5.8%	4.5%	2.437 Bil.
BRX	BRIXMOR PROPERTY GROUP I	BBB-	Real Estate Investment Trusts	NYS	15.1	9.2	6.6%	6.5%	5.149 Bil.
EQC	EQUITY COMMONWEALTH	BBB-	Real Estate Investment Trusts	NYS	NMF	55.8	6.5%	0	4.011 Bil.
LXP	LEXINGTON REALTY TRUST	BBB-	Real Estate Investment Trusts	NYS	10.6	9.6	9.4%	7.9%	2.106 Bil.
WRI	WEINGARTEN REALTY INVEST	BBB	Real Estate Investment Trusts	NYS	11.6	12.5	8.6%	5.6%	3.620 Bil.

Ticker	Name	CR	Sub-Sector	Exchange	P/E	P/CF(FFO)	EPS Yld	Div Yld	Market Cap
CHP.UT	CHOICE PROPERTIES REAL E	BBB	Real Estate Investment Trusts	TSE	12.1	13.1	8.3%	5.5%	9.040 Bil.
REI.UT	RIOCAN REAL ESTATE INVES	BBB	Real Estate Investment Trusts	TSE	14.8	13.5	6.8%	5.8%	7.625 Bil.
JLL	JONES LANG LASALLE INC	BBB+	Real Estate Development	NYS	13.7	29.3	7.3%	0.5%	7.548 Bil.
BPY.UT	BROOKFIELD PROPERTY PART	BBB	Real Estate Development	TSE	8.3	NMF	12.1%	6.5%	10.992 Bil.
ACGL	ARCH CAPITAL GROUP LTD	A-	Property/Casualty Insurance	NAS	14.6	1490.5	6.9%	0	13.259 Bil.
AFG	AMERICAN FINANCIAL GROUP	BBB+	Property/Casualty Insurance	NYS	11.7	4.5	8.6%	1.6%	8.808 Bil.
ALL	ALLSTATE CORP	A-	Property/Casualty Insurance	NYS	11.4	40.7	8.8%	2.1%	31.271 Bil.
CB	CHUBB LTD	A	Property/Casualty Insurance	NYS	13.8	NMF	7.2%	2.2%	61.550 Bil.
ORI	OLD REPUBLIC INTERNATION	BBB+	Property/Casualty Insurance	NYS	11.2	13.6	9.0%	3.9%	6.283 Bil.
PGR	PROGRESSIVE CORP	A	Property/Casualty Insurance	NYS	14.6	78.8	6.9%	3.5%	42.455 Bil.
TRV	TRAVELERS COS INC	A	Property/Casualty Insurance	NYS	14.2	16.5	7.0%	2.3%	34.807 Bil.
CNA	CNA FINANCIAL CORP	BBB+	Multi-Line Insurance	NYS	13.4	NMF	7.5%	3.2%	11.817 Bil.
HIG	HARTFORD FINANCIAL SERVI	BBB+	Multi-Line Insurance	NYS	11.0	4.7	9.1%	2.4%	17.643 Bil.
PBCT	PEOPLES UNITED FINANCIAL	BBB+	Major Banks	NAS	13.4	23.8	7.5%	4.0%	6.690 Bil.
BAC	BANK OF AMERICA CORP	A-	Major Banks	NYS	10.9	59.9	9.2%	2.1%	280.394 Bil.
BBT	BB&T CORP	A-	Major Banks	NYS	13.0	85.0	7.7%	3.1%	39.580 Bil.
BK	BANK OF NEW YORK MELLON	A	Major Banks	NYS	12.7	NMF	7.9%	2.2%	49.566 Bil.
CMA	COMERICA INC	BBB+	Major Banks	NYS	11.7	17.2	8.5%	3.1%	13.757 Bil.
COF	CAPITAL ONE FINANCIAL CO	BBB	Major Banks	NYS	7.6	12.5	13.1%	1.9%	38.979 Bil.
JPM	JPMORGAN CHASE & CO	A-	Major Banks	NYS	11.4	NMF	8.8%	3.1%	341.143 Bil.

Ticker	Name	CR	Sub-Sector	Exchange	P/E	P/CF(FFO)	EPS Yld	Div Yld	Market Cap
KEY	KEYCORP	BBB+	Major Banks	NYS	9.9	4.7	10.1%	3.9%	17.402 Bil.
PNC	PNC FINANCIAL SERVICES G	A-	Major Banks	NYS	11.7	12.1	8.6%	3.0%	57.733 Bil.
RF	REGIONS FINANCIAL CORP	BBB+	Major Banks	NYS	11.5	4.6	8.7%	3.5%	16.446 Bil.
TCF	TCF FINANCIAL CORP	BBB-	Major Banks	NYS	12.9	18.1	7.7%	2.6%	3.768 Bil.
USB	US BANCORP	A+	Major Banks	NYS	12.4	15.0	8.1%	2.9%	82.704 Bil.
WFC	WELLS FARGO & CO	A-	Major Banks	NYS	11.4	194.6	8.8%	3.6%	227.971 Bil.
BMO	BANK OF MONTREAL	A+	Major Banks	TSE	11.2	63.9	8.9%	3.9%	65.941 Bil.
BNS	BANK OF NOVA SCOTIA	A+	Major Banks	TSE	10.2	28.3	9.8%	4.8%	89.178 Bil.
CM	CANADIAN IMPERIAL BANK O	A+	Major Banks	TSE	9.2	50.4	10.9%	5.0%	50.025 Bil.
RY	ROYAL BANK OF CANADA	AA-	Major Banks	TSE	12.0	NMF	8.3%	3.9%	148.447 Bil.
TD	TORONTO DOMINION BANK	AA-	Major Banks	TSE	11.4	13.6	8.8%	3.9%	37.501 Bil.
BHF	BRIGHTHOUSE FINANCIAL IN	BBB+	Life/Health Insurance	NAS	5.2	1.5	19.4%	0	4.601 Bil.
PFG	PRINCIPAL FINANCIAL GROU	A-	Life/Health Insurance	NAS	9.3	7.0	10.7%	4.2%	14.294 Bil.
AEL	AMERICAN EQUITY INVESTME	BBB-	Life/Health Insurance	NYS	7.1	NMF	14.2%	0.9%	2.880 Bil.
AFL	AFLAC INC	A-	Life/Health Insurance	NYS	11.8	14.9	8.5%	2.2%	36.811 Bil.
LNC	LINCOLN NATIONAL CORP	A-	Life/Health Insurance	NYS	7.3	6.2	13.7%	2.4%	12.817 Bil.
MET	METLIFE INC	A-	Life/Health Insurance	NYS	8.5	60.0	11.8%	3.7%	43.709 Bil.
PRI	PRIMERICA INC	A-	Life/Health Insurance	NYS	16.7	11.4	6.0%	1.1%	5.292 Bil.
RGA	REINSURANCE GROUP OF AME	A	Life/Health Insurance	NYS	11.8	37.7	8.5%	1.7%	9.136 Bil.
TMK	TORCHMARK CORP	A	Life/Health Insurance	NYS	13.3	44.7	7.5%	0.8%	9.087 Bil.
UNM	UNUM GROUP	BBB	Life/Health Insurance	NYS	7.1	7.4	14.1%	2.8%	7.978 Bil.

Ticker	Name	CR	Sub-Sector	Exchange	P/E	P/CF(FFO)	EPS Yld	Div Yld	Market Cap
VOYA	VOYA FINANCIAL INC	BBB	Life/Health Insurance	NYS	11.9	4.6	8.4%	0.1%	7.418 Bil.
GWO	GREAT WEST LIFECO INC	A+	Life/Health Insurance	TSE	10.0	4.7	10.0%	5.4%	30.255 Bil.
MFC	MANULIFE FINANCIAL CORP	A	Life/Health Insurance	TSE	8.2	2.3	12.2%	4.4%	44.380 Bil.
PWF	POWER FINANCIAL CORP	A+	Life/Health Insurance	TSE	8.8	15.6	11.4%	5.8%	21.173 Bil.
ARCC	ARES CAPITAL CORP	BBB-	Investment Managers	NAS	10.3	31.0	9.7%	9.2%	7.443 Bil.
CG	CARLYLE GROUP LP	BBB+	Investment Managers	NAS	9.9	7.0	10.1%	9.5%	1.964 Bil.
PSEC	PROSPECT CAPITAL CORP	BBB-	Investment Managers	NAS	7.9	16.5	12.7%	10.7%	2.464 Bil.
AMG	AFFILIATED MANAGERS GROU	A-	Investment Managers	NYS	7.6	4.8	13.1%	1.2%	5.740 Bil.
ARES	ARES MANAGEMENT CORP	BBB+	Investment Managers	NYS	16.0	5.2	6.2%	5.5%	2.383 Bil.
BEN	FRANKLIN RESOURCES INC	A+	Investment Managers	NYS	11.5	22.4	8.7%	3.2%	16.534 Bil.
BLK	BLACKROCK INC	AA-	Investment Managers	NYS	16.3	20.1	6.1%	3.0%	69.326 Bil.
BSIG	BRIGHTSPHERE INVESTMENT	BBB-	Investment Managers	NYS	7.7	6.0	12.9%	2.8%	1.306 Bil.
BX	BLACKSTONE GROUP LP	A+	Investment Managers	NYS	14.9	NMF	6.7%	6.9%	40.411 Bil.
EV	EATON VANCE CORP	A-	Investment Managers	NYS	13.1	12.4	7.6%	3.3%	4.834 Bil.
FSK	FS KKR CAPITAL CORP	BBB-	Investment Managers	NYS	7.7	NMF	13.0%	11.8%	3.388 Bil.
GBL	GAMCO INVESTORS INC	BBB-	Investment Managers	NYS	NMF	NMF	0.0%	0.4%	603.688 Mil.
IVZ	INVESCO LTD	BBB+	Investment Managers	NYS	8.2	5.7	12.2%	6.2%	7.723 Bil.
JHG	JANUS HENDERSON GROUP PL	BBB+	Investment Managers	NYS	9.0	8.1	11.1%	5.9%	4.798 Bil.
KKR	KKR & CO INC	A	Investment Managers	NYS	12.1	14.2	8.3%	2.2%	12.313 Bil.
LM	LEGG MASON INC	BBB	Investment Managers	NYS	NMF	5.9	0.0%	4.7%	2.482 Bil.
MAIN	MAIN STREET CAPITAL CORP	BBB	Investment Managers	NYS	14.7	19.4	6.8%	6.3%	2.315 Bil.

Ticker	Name	CR	Sub-Sector	Exchange	P/E	P/CF(FFO)	EPS Yld	Div Yld	Market Cap
TSLX	TPG SPECIALTY LENDING IN	BBB-	Investment Managers	NYS	9.1	16.8	11.0%	7.8%	1.309 Bil.
WDR	WADDELL & REED FINANCIAL	BBB-	Investment Managers	NYS	8.6	4.9	11.6%	5.4%	1.402 Bil.
CIX	CI FINANCIAL CORP	BBB+	Investment Managers	TSE	8.0	8.2	12.6%	3.8%	4.604 Bil.
IGM	IGM FINANCIAL INC	A	Investment Managers	TSE	10.5	10.6	9.5%	6.5%	8.285 Bil.
AMTD	TD AMERITRADE HOLDING CO	A	Investment Banks/Brokers	NAS	15.4	NMF	6.5%	2.1%	31.553 Bil.
BGCP	BGC PARTNERS INC	BBB-	Investment Banks/Brokers	NAS	9.0	NMF	11.1%	9.0%	2.105 Bil.
ETFC	E TRADE FINANCIAL CORP	BBB	Investment Banks/Brokers	NAS	12.9	NMF	7.7%	1.1%	12.086 Bil.
AMP	AMERIPRISE FINANCIAL INC	A	Investment Banks/Brokers	NYS	8.9	7.7	11.2%	2.8%	17.694 Bil.
GS	GOLDMAN SACHS GROUP INC	BBB+	Investment Banks/Brokers	NYS	7.8	6.7	12.8%	1.6%	72.174 Bil.
JEF	JEFFERIES FINANCIAL GROU	BBB-	Investment Banks/Brokers	NYS	12.9	NMF	7.8%	2.5%	6.055 Bil.
MS	MORGAN STANLEY	BBB+	Investment Banks/Brokers	NYS	9.0	0.8	11.1%	2.9%	71.769 Bil.
RJF	RAYMOND JAMES FINANCIAL	BBB+	Investment Banks/Brokers	NYS	12.4	NMF	8.1%	1.6%	11.830 Bil.
SF	STIFEL FINANCIAL CORP	BBB-	Investment Banks/Brokers	NYS	10.3	28.1	9.7%	1.1%	3.945 Bil.
ESGR	ENSTAR GROUP LTD	BBB	Insurance Brokers/Services	NAS	10.6	NMF	9.5%	0	3.577 Bil.
TCPC	BLACKROCK TCP CAPITAL CO	BBB-	Financial Conglomerates	NAS	8.8	NMF	11.3%	10.0%	843.278 Mil.
AXP	AMERICAN EXPRESS CO	BBB+	Financial Conglomerates	NYS	13.7	26.7	7.3%	1.4%	91.927 Bil.
C	CITIGROUP INC	BBB+	Financial Conglomerates	NYS	9.3	NMF	10.7%	2.8%	149.909 Bil.
EQH	AXA EQUITABLE HOLDINGS I	BBB+	Financial Conglomerates	NYS	5.2	NMF	19.3%	2.5%	10.810 Bil.
PRU	PRUDENTIAL FINANCIAL INC	A	Financial Conglomerates	NYS	8.1	1.9	12.3%	4.1%	39.563 Bil.
POW	POWER CORP OF CANADA	A	Financial Conglomerates	TSE	9.0	20.1	11.1%	5.3%	13.482 Bil.
SLF	SUN LIFE FINANCIAL INC	A	Financial Conglomerates	TSE	10.4	4.7	9.6%	3.9%	30.318 Bil.
AER	AERCAP HOLDINGS NV	BBB-	Finance/Rental/Leasing	NYS	6.5	2.3	15.4%	0	6.484 Bil.
AGO	ASSURED GUARANTY LTD	A	Finance/Rental/Leasing	NYS	14.1	NMF	7.1%	1.5%	4.531 Bil.
AL	AIR LEASE CORP	BBB	Finance/Rental/Leasing	NYS	7.8	3.1	12.8%	1.4%	4.128 Bil.
AYR	AIRCASTLE LTD	BBB-	Finance/Rental/Leasing	NYS	6.3	2.7	15.8%	5.9%	1.483 Bil.
GATX	GATX CORP	BBB	Finance/Rental/Leasing	NYS	15.0	5.8	6.7%	2.4%	2.836 Bil.
NNI	NELNET INC	BBB-	Finance/Rental/Leasing	NYS	10.1	NMF	9.9%	1.3%	2.197 Bil.
R	RYDER SYSTEM INC	BBB+	Finance/Rental/Leasing	NYS	10.7	1.9	9.4%	3.5%	3.324 Bil.
WU	WESTERN UNION CO	BBB	Finance/Rental/Leasing	NYS	9.5	9.7	10.5%	4.4%	7.946 Bil.

FAST Graphs Screenshots of 14 Research Candidates One from Each Subsector

The following screenshots provide a quick look at each of the 16 candidates screened out of over 19,000 possibilities. However, there were 1888 companies categorized as Finance Sector, and these 14 were presented as one example from each subsector. The company descriptions are provided courtesy of the Wall Street Journal.

Ticker	Name	CR	Sub-Sector	P/E	P/CF(FFO)	EPS Yld	CF(FFO) Yld	Div Yld	Market Cap	LT D/C
FAF	FIRST AMERICAN FINANCIAL	BBB-	Specialty Insurance	11.9	7.6	8.4%	13.1%	3.3%	5.628 Bil.	NMF
SYF	SYNCHRONY FINANCIAL	BBB-	Savings Banks	8.5	2.6	11.8%	38.5%	2.6%	23.042 Bil.	NMF
STT	STATE STREET CORP	A	Regional Banks	10.0	36.6	10.0%	2.7%	2.6%	27.070 Bil.	NMF
WRI	WEINGARTEN REALTY INVEST	BBB	Real Estate Investment Trusts	11.6	12.5	8.6%	8.0%	5.6%	3.620 Bil.	51.1
JLL	JONES LANG LASALLE INC	BBB+	Real Estate Development	13.7	29.3	7.3%	3.4%	0.5%	7.548 Bil.	16.7
ALL	ALLSTATE CORP	A-	Property/Casualty Insurance	11.4	40.7	8.8%	2.5%	2.1%	31.271 Bil.	NMF
HIG	HARTFORD FINANCIAL SERVI	BBB+	Multi-Line Insurance	11.0	4.7	9.1%	21.3%	2.4%	17.643 Bil.	NMF
BNS	BANK OF NOVA SCOTIA	A+	Major Banks	10.2	31.4	9.9%	3.2%	4.8%	67.031 Bil.	NMF
AFL	AFLAC INC	A-	Life/Health Insurance	11.8	14.9	8.5%	6.7%	2.2%	36.811 Bil.	NMF
BLK	BLACKROCK INC	AA-	Investment Managers	16.3	20.1	6.1%	5.0%	3.0%	69.326 Bil.	10.8
AMP	AMERIPRISE FINANCIAL INC	A	Investment Banks/Brokers	8.9	7.7	11.2%	12.9%	2.8%	17.694 Bil.	NMF
ESGR	ENSTAR GROUP LTD	BBB	Insurance Brokers/Services	10.6	NMF	9.5%	0.0%	0	3.577 Bil.	NMF
AXP	AMERICAN EXPRESS CO	BBB+	Financial Conglomerates	13.7	26.7	7.3%	3.8%	1.4%	91.927 Bil.	NMF
WU	WESTERN UNION CO	BBB	Finance/Rental/Leasing	9.5	9.7	10.5%	10.3%	4.4%	7.946 Bil.	93.9

Specialty Insurance

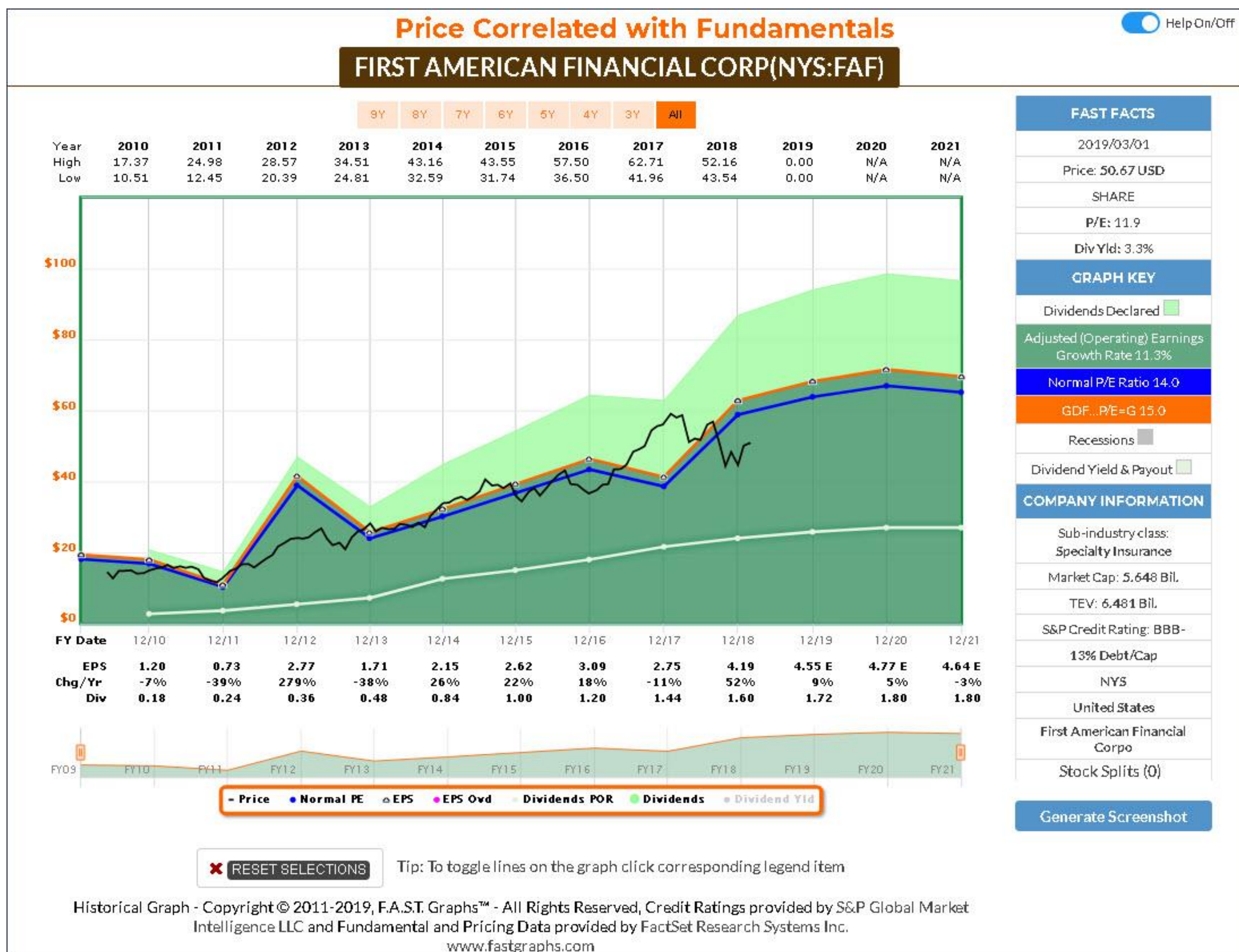
First American Financial Corp (FAF)

First American Financial Corp. operates as an insurance company. It provides title insurance and settlement services to the real estate and mortgage industries. The company operates its business through the following segments: Title Insurance & Services and Specialty Insurance.

The Title Insurance & Services segment provides title insurance, escrow, closing services and similar or related financial services domestically and internationally in connection with residential and commercial real estate transactions. It also maintains, manages and provides access to title plant records and images and provides banking, trust and investment advisory services.

The Specialty Insurance segment issues property & casualty insurance policies and sells home warranty products. It also provides title plant management services, which include title and other real property records and images, valuation products and services, home warranty products, property and casualty insurance and banking, trust and investment advisory services.

First American Financial was founded in January, 2008 and is headquartered in Santa Ana, CA.



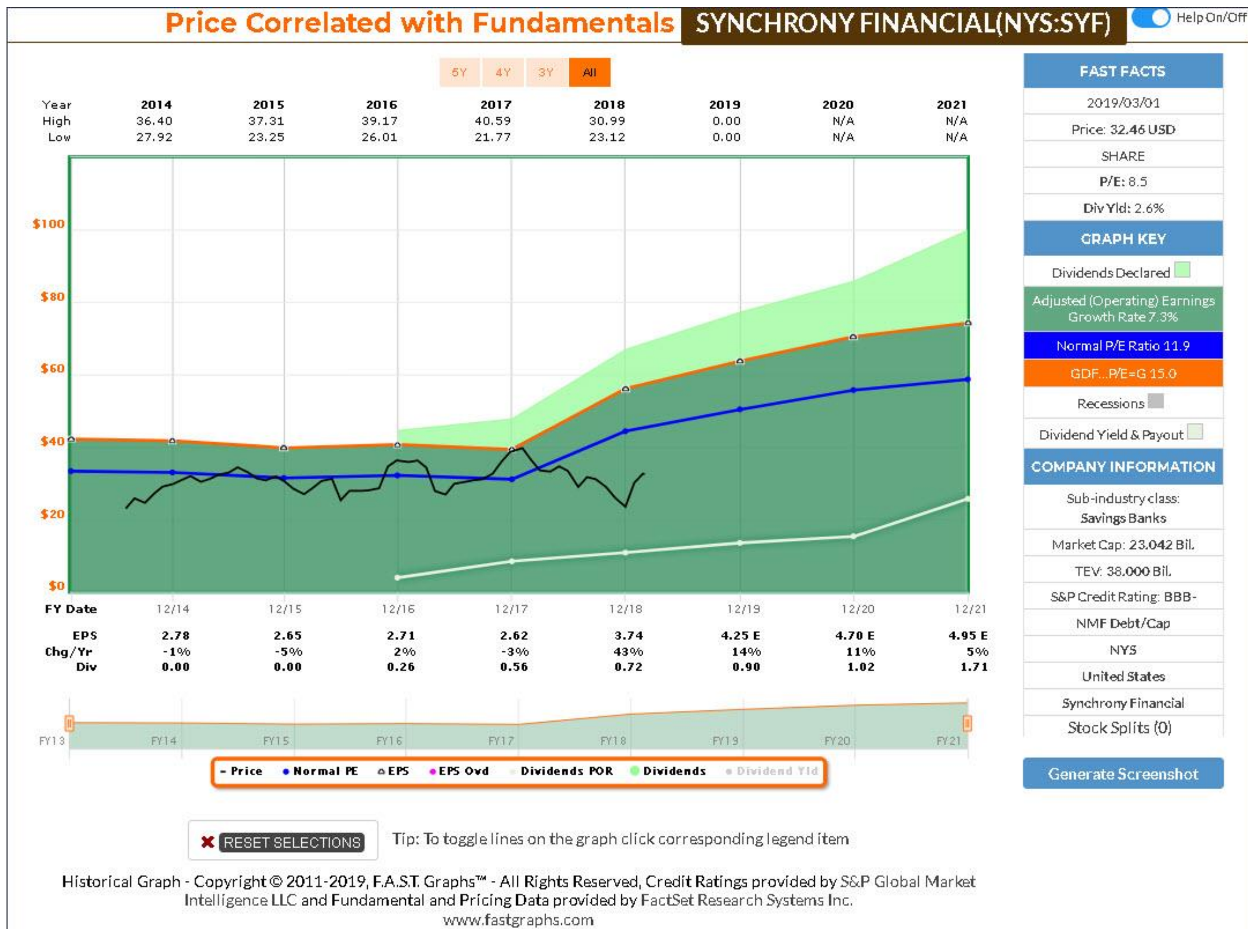
Savings Banks

Synchrony Financial (SYF)

Synchrony Financial engages in the provision of consumer financial services. It operates through three sales platforms: Retail Card, Payment Solutions, and CareCredit. The Retail Card platform is a provider of private label credit cards, and also provides Dual Cards and small-and medium-sized business credit products.

The Payment Solutions platform is a provider of promotional financing for major consumer purchases, offering private label credit cards and instalment loans. The CareCredit platform is a provider of promotional financing to consumers for elective healthcare procedures or services, such as dental, veterinary, cosmetic, vision and audiology.

The company was founded on September 12, 2003 and is headquartered in Stamford, CT.



Regional Banks

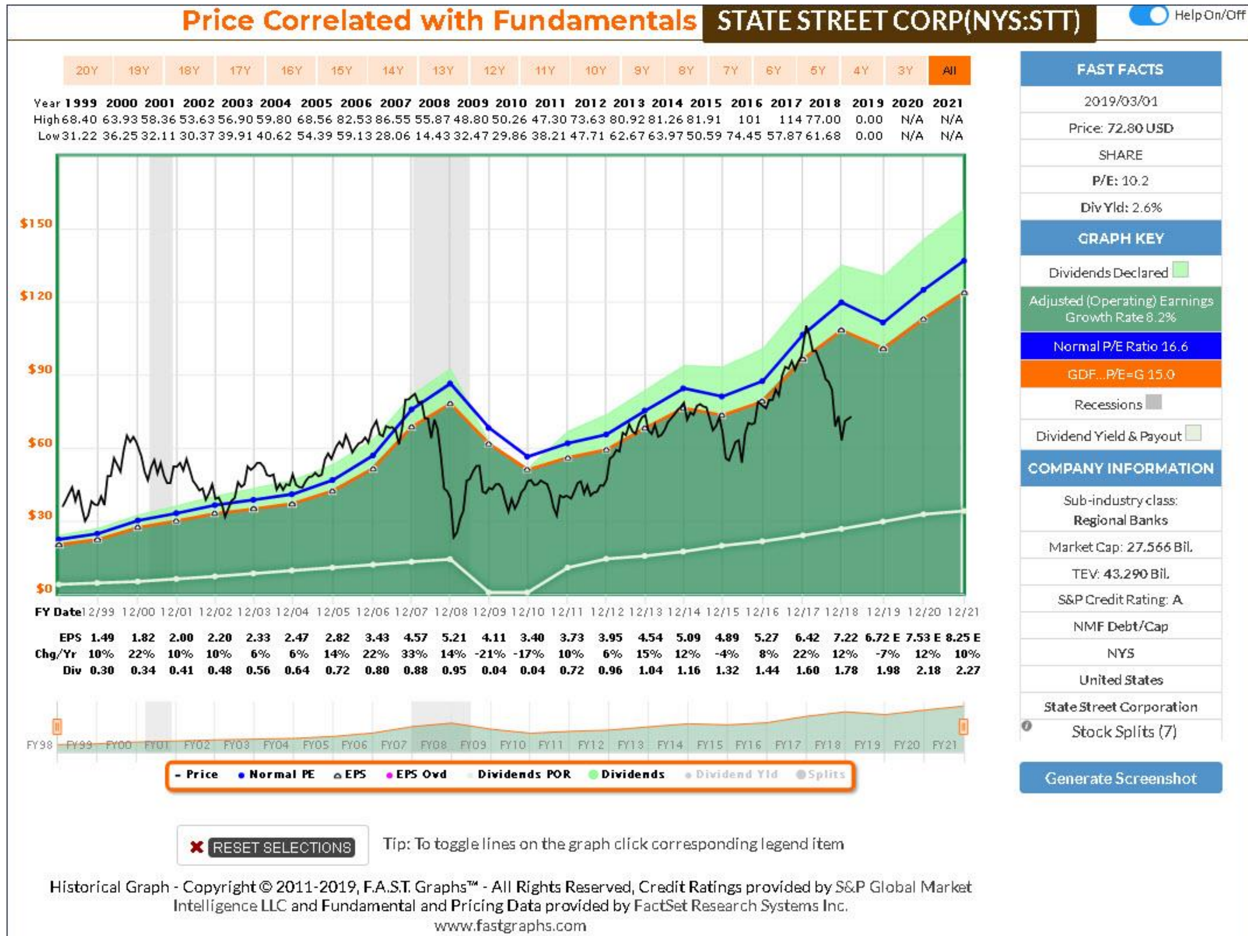
State Street Corp (STT)

State Street Corp. operates as a financial holding company. It conducts business primarily through State Street Bank. The company operates through following business lines: Investment Servicing and Investment Management. The Investment Servicing business offers custody, product and participant-level accounting, daily pricing and administration, master trust and master custody, record-keeping, cash management, foreign exchange, brokerage and other trading services, securities finance, deposit and short-term investment facilities, loans and lease financing, investment manager and alternative investment manager operations outsourcing, and performance, risk and compliance analytics.

The Investment Management business provides services through State Street Global Advisors, which provides a broad array of investment management, investment research and investment advisory services to corporations, public funds and other sophisticated investors. It offers

strategies for managing financial assets, including passive and active, such as enhanced indexing, using quantitative and fundamental methods for both the U.S. and global equities and fixed-income securities.

The company was founded in 1969 and is headquartered in Boston, MA.

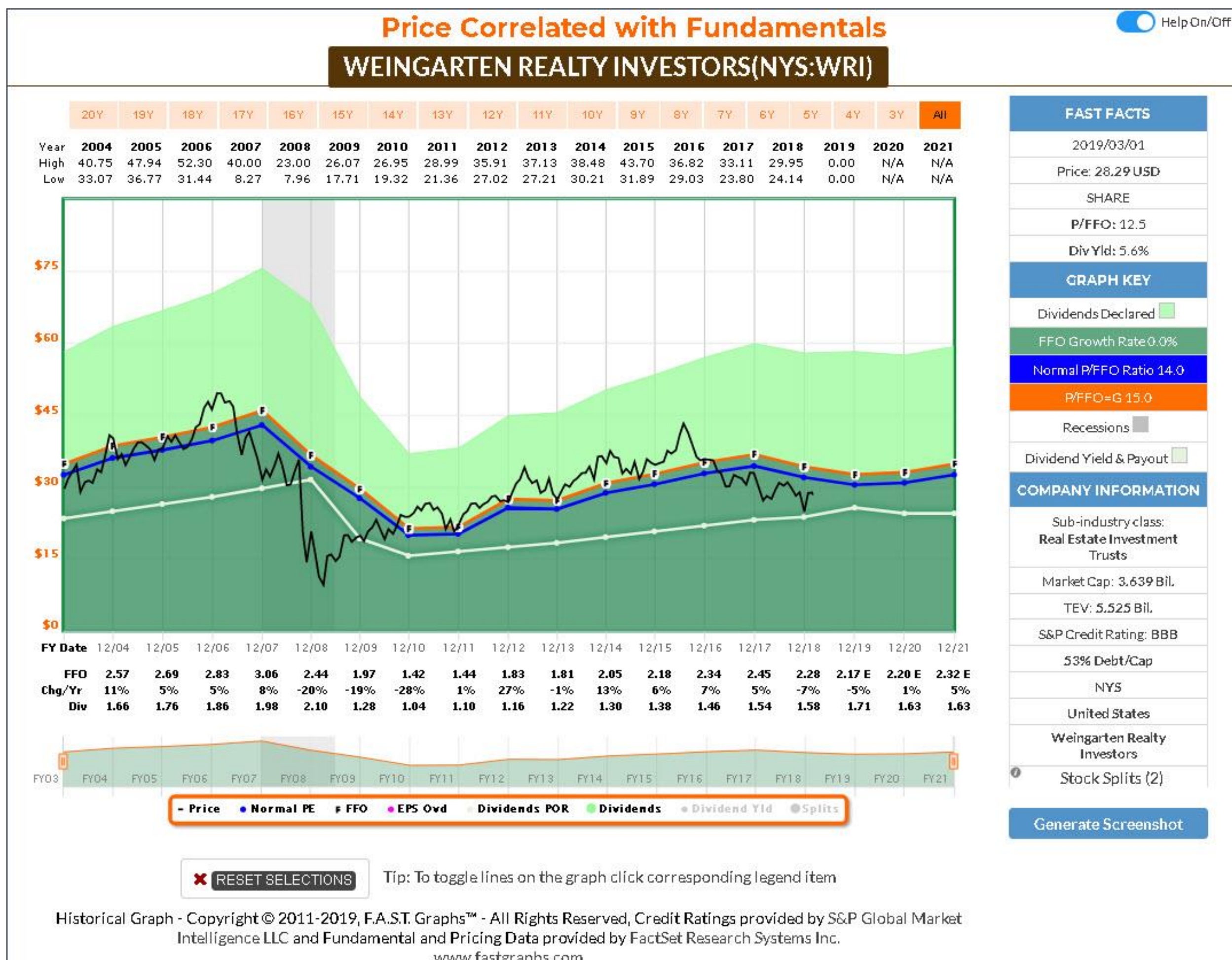


Real Estate Investment Trusts (REITs)

Weingarten Realty Investors (WRI)

Weingarten Realty Investors is a real estate investment trust which owns, manages and develops commercial real estate. Its business activities include the long-term ownership, management, acquisition, development and redevelopment of strategically located neighborhood and community shopping centers and select industrial properties. The company primary business is leasing space to tenants in the shopping and industrial centers which the company owns.

Weingarten Realty Investors was founded in 1948 and is headquartered in Houston, TX.

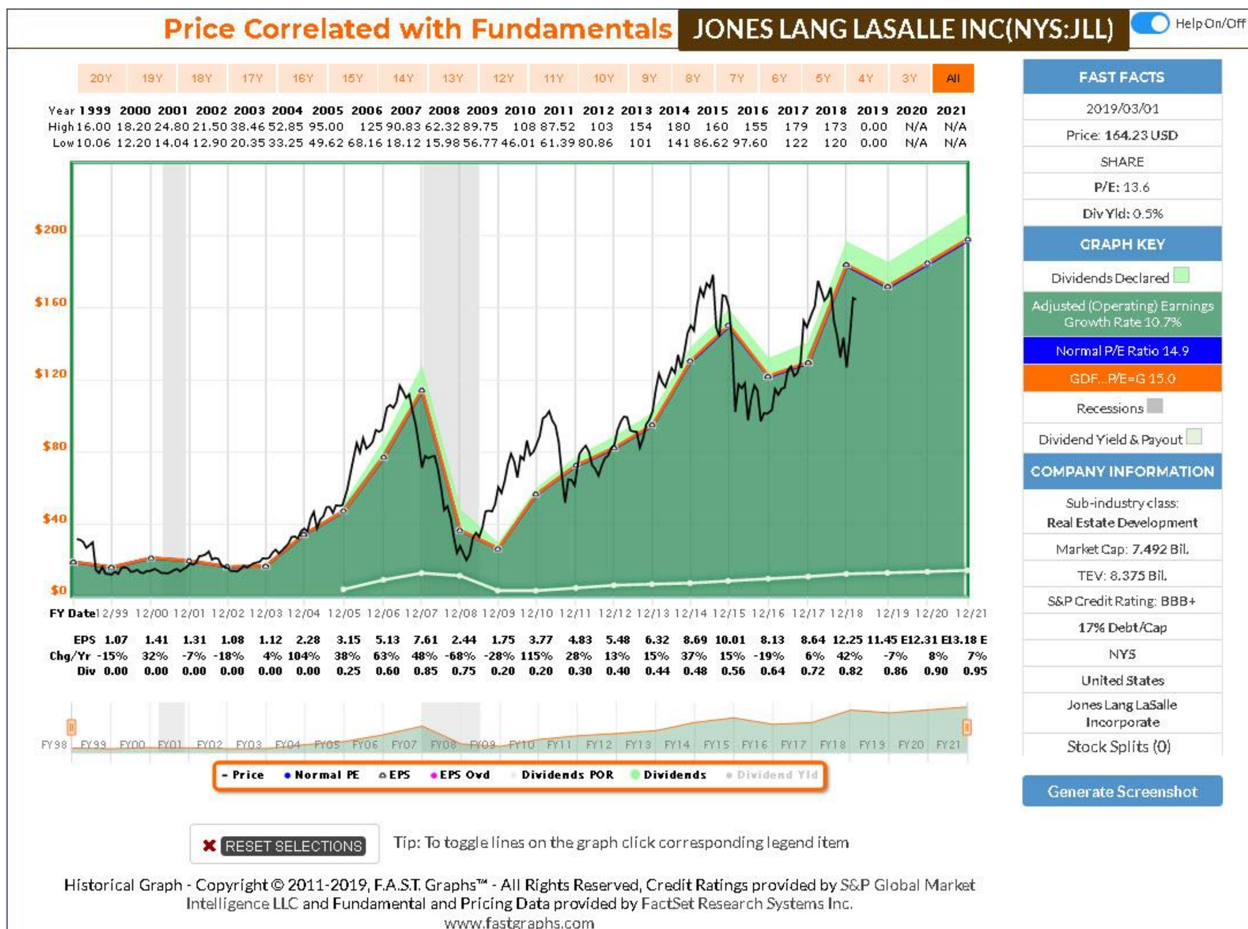


Real Estate Development

Jones Lang Lasalle Inc (JLL)

Jones Lang LaSalle, Inc. engages in the provision of professional services which specializes in real estate and investment management. It operates through the following geographic segments: Americas; Europe, Middle East and Africa (EMEA); Asia Pacific; and LaSalle Investment Management (LaSalle). The Americas, EMEA, and Asia Pacific segments provide a range of leasing, capital markets, integrated property and facility management, project management, advisory, and transaction services. The LaSalle segment offers investment management services on a global basis to institutional investors and high-net-worth individuals.

The company was founded by Richard Winstanley in 1783 and is headquartered in Chicago, IL.



Property/Casualty Insurance

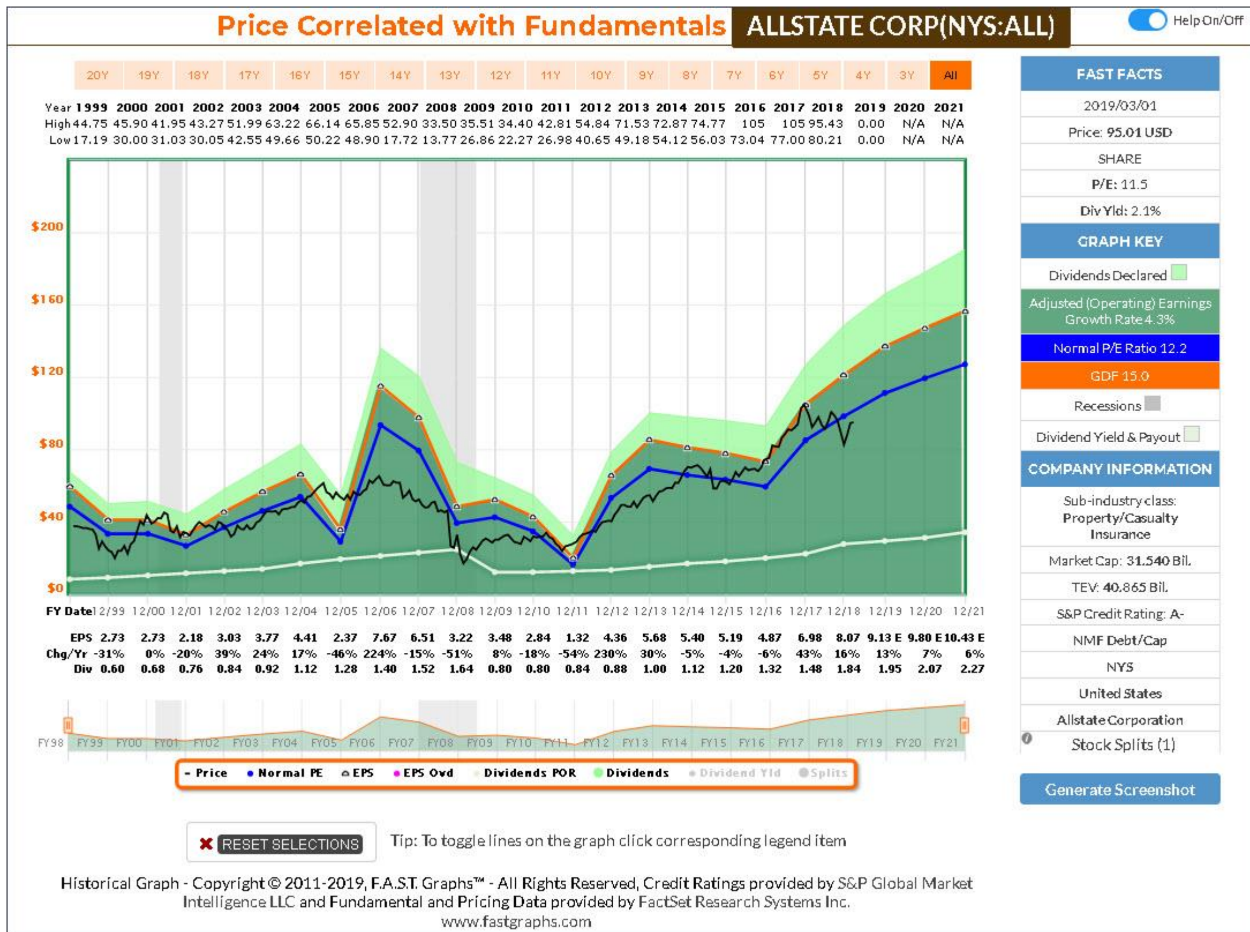
Allstate Corp (ALL)

The Allstate Corp. engages in the property and casualty insurance business and the sale of life and accident and health insurance products through its subsidiaries. It operates through following business segments: Allstate Protection, Service Businesses, Allstate Life, Allstate Benefits, Allstate Annuities, Discontinued Lines and Coverages, and Corporate and Other. The Allstate Protection segment sells private passenger auto and homeowners insurance through agencies and directly through call centers and the internet. These products are marketed under the Allstate, Encompass, and Esurance brand names.

The Service Businesses segment offers a range of products and services that expand and enhance customer value propositions including SquareTrade, Arity, Allstate Roadside, and Allstate Dealer Services. The Allstate Life segment provides traditional, interest-sensitive, and variable life insurance products through Allstate exclusive agencies and exclusive financial specialists.

The Allstate Benefits segment offers voluntary benefits products, including life, accident, critical illness, short-term disability and other health products sold through workplace enrolling independent agents and Allstate exclusive agencies. The Allstate Annuities segment consists of deferred fixed annuities and immediate fixed annuities. The Discontinued Lines and Coverages segment includes results from property and casualty insurance coverage that primarily relates to policies written during the 1960s through the mid-1980s. The Corporate and Other segment comprises of the company's activities and certain non-insurance operations.

The company was founded on April 17, 1931 and is headquartered in Northbrook, IL.



Multi-line Insurance

Hartford Financial Services Group (HIG)

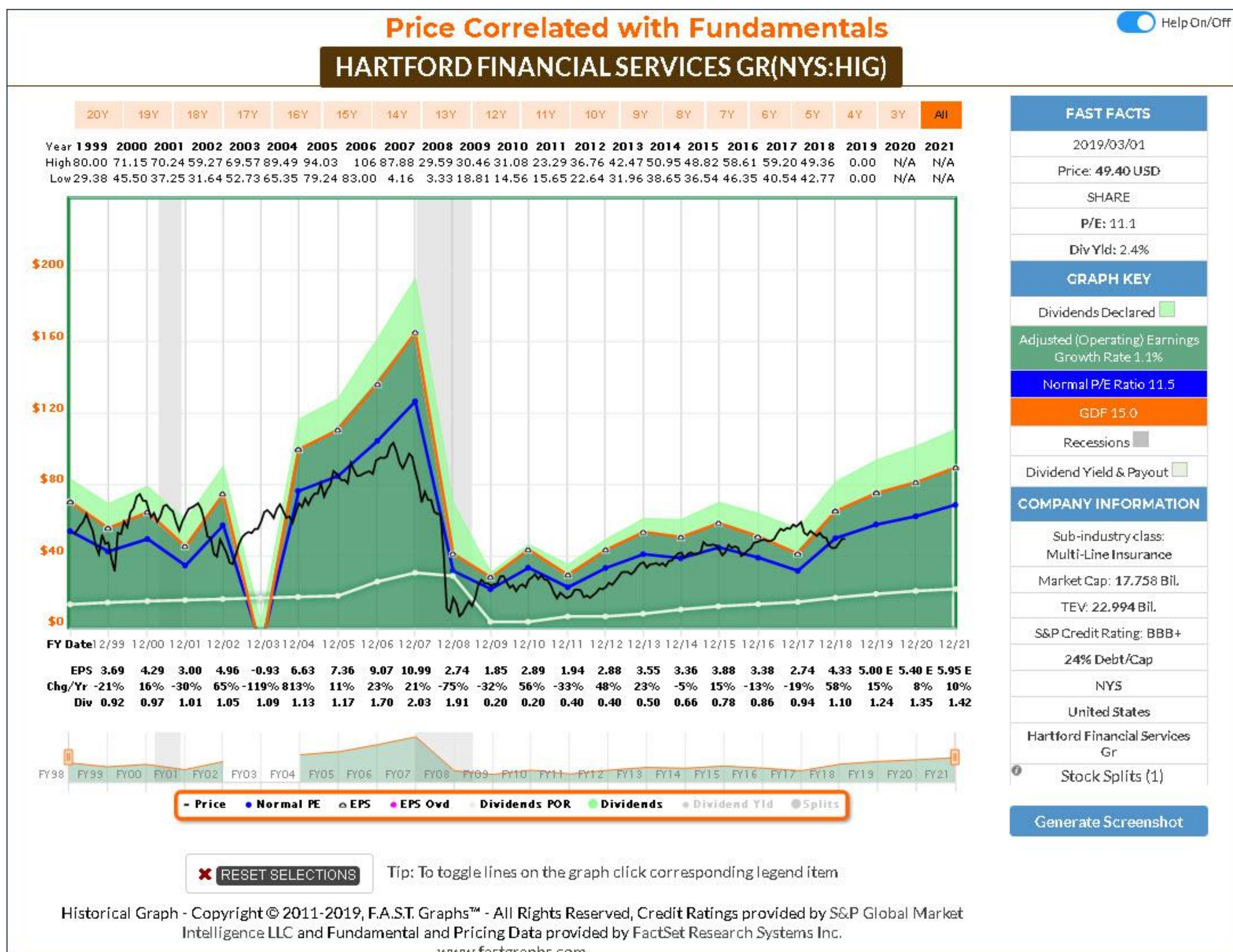
The Hartford Financial Services Group, Inc. is an insurance and financial services company. The company provides life insurance, group and employee benefits, automobile and homeowners

insurance and business insurance, as well as investment products, annuities, mutual funds, and college savings plans. It operates through the following segments: Commercial Lines, Personal Lines, Property & Casualty Other Operations, Group Benefits, Mutual Funds and Talcott Resolution. The Commercial Lines segment provides workers compensation, property, automobile, liability and umbrella coverage under several different products, primarily throughout the U.S., within its standard commercial lines, which consists of The Hartford's small commercial and middle market lines of business.

The Personal Lines segment includes automobile, homeowners and home-based business coverage to individuals across the U.S. The Property & Casualty Other Operations segment includes certain property and casualty operations, currently managed by the company, that have discontinued writing new business and substantially all of the company's asbestos and environmental exposures. The Group Benefits segment offers group life, accident and disability coverage, group retiree health and voluntary benefits to individual members of employer groups, associations, affinity groups and financial institutions.

The Mutual Funds segment provides investment management, administration, distribution and related services. The Talcott Resolution segment is comprised of runoff business from the Company's U.S. annuity, international annuity, and institutional and private placement life insurance businesses, as well as the retirement plans and individual life businesses.

The Hartford Financial Services Group was founded on May 10, 1810 and is headquartered in Hartford, CT.

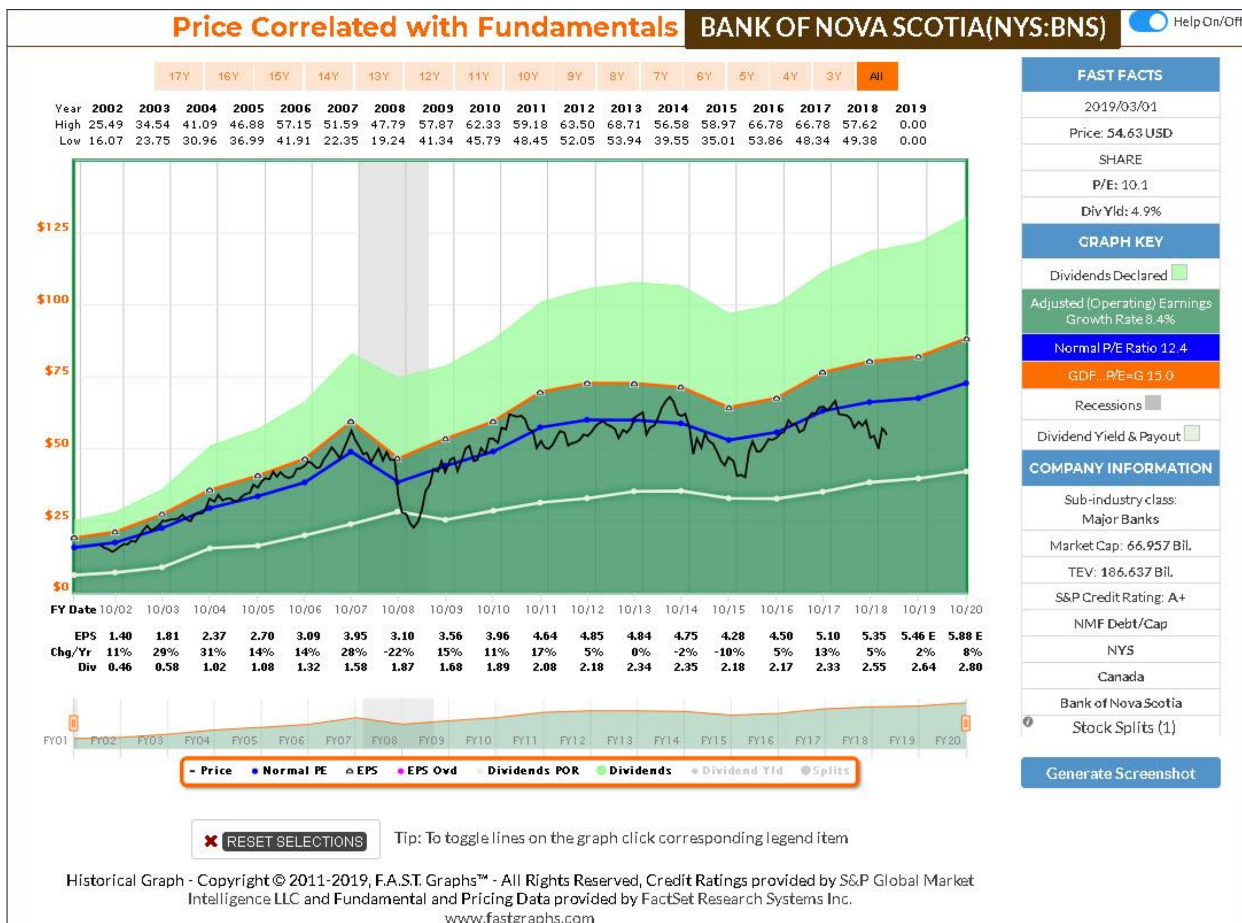


Major Banks

Bank of Nova Scotia (BNS)

Bank of Nova Scotia engages in the provision of financial products and services, including personal, commercial, corporate, and investment banking. It operates through the following segments: Canadian Banking, International Banking, Global Banking and Markets, and Other. The Other segment includes group treasury, smaller operating segments, business line elimination items and other corporate items which are not allocated to a business line.

The company was founded on March 30, 1832 and is headquartered in Toronto, Canada.

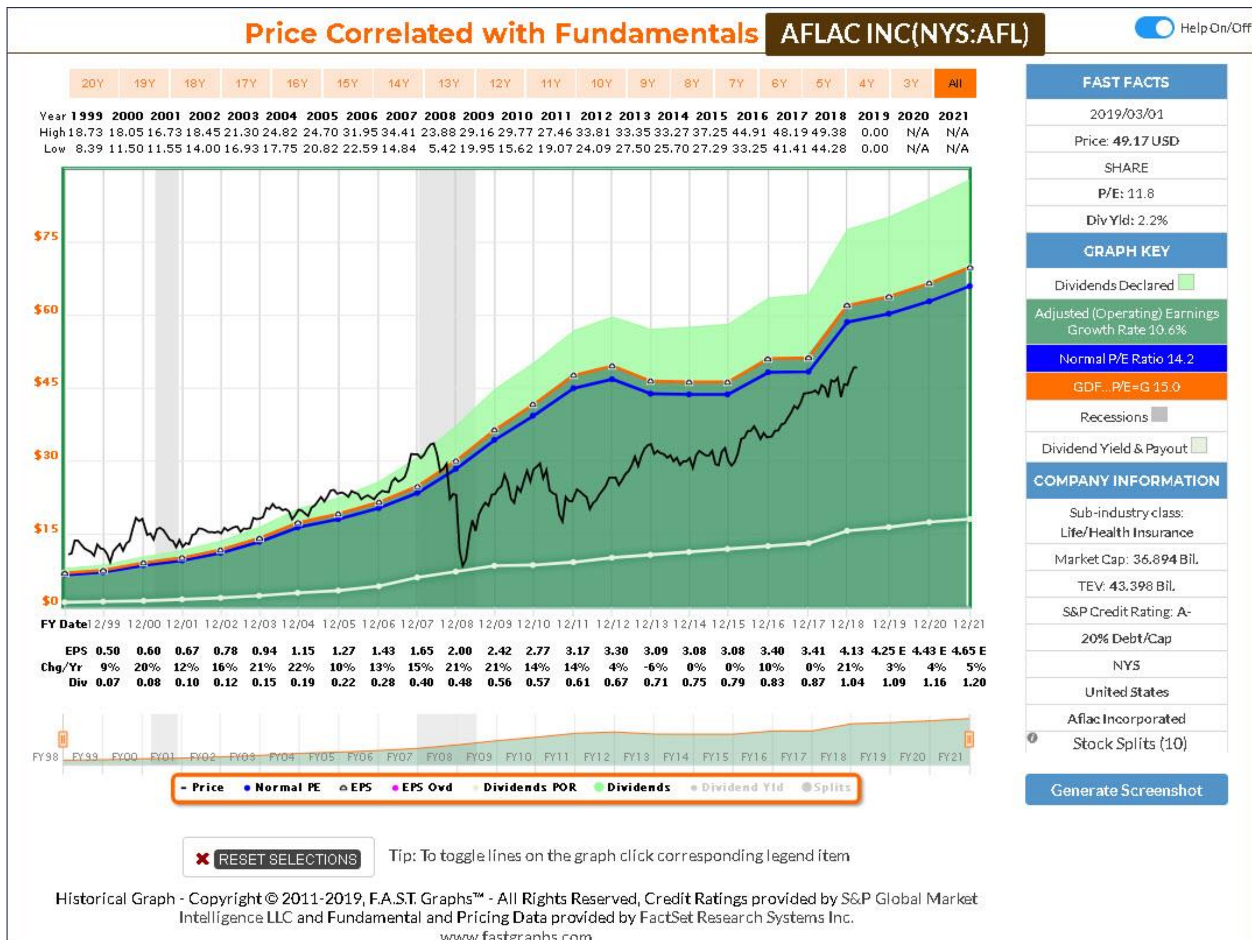


Life/Health Insurance

Aflac Inc (AFL)

Aflac, Inc. is a holding company, which engages in the provision financial protection services. It operates through the Aflac Japan and Aflac United States (U.S.) segments. The Aflac Japan segment offers life insurance, death benefits, and cash surrender values. The Aflac U.S. segment sells voluntary supplemental insurance products for people who already have major medical or primary insurance coverage.

The company was founded by John Amos, Daniel Paul Amos, and William Amos on November 17, 1955 and is headquartered in Columbus, GA.

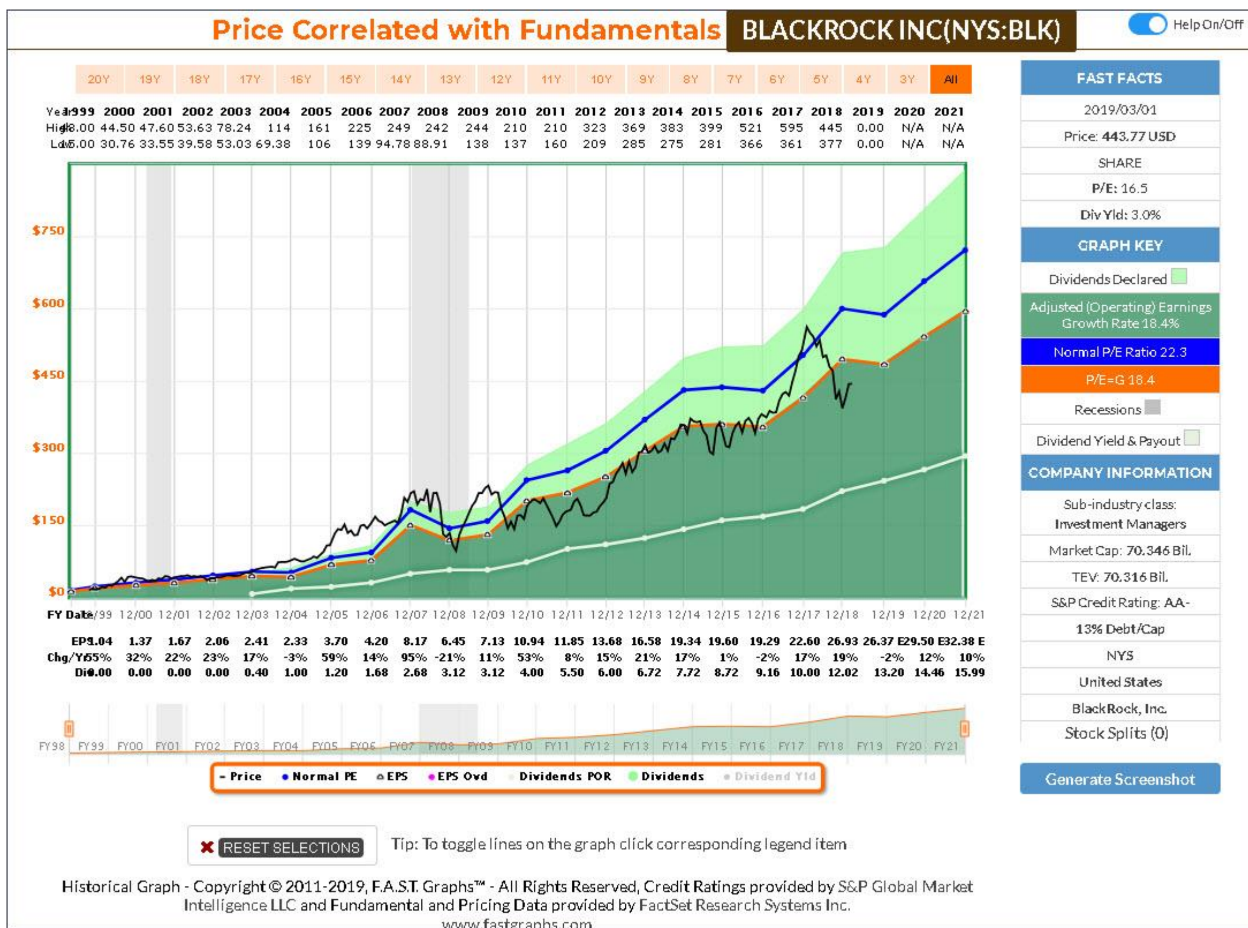


Investment Managers

BlackRock Inc (BLK)

BlackRock, Inc. engages in the provision of investment management, risk management, and advisory services for institutional and retail clients worldwide. Its products include single and multi-asset class portfolios investing in equities, fixed income, alternatives, and money market instruments.

The company was founded by Ralph L. Schlosstein, Susan L. Wagner, Robert Steven Kapito, and Laurence Douglas Fink in 1988 and is headquartered in New York, NY.



Investment Banks/Brokers

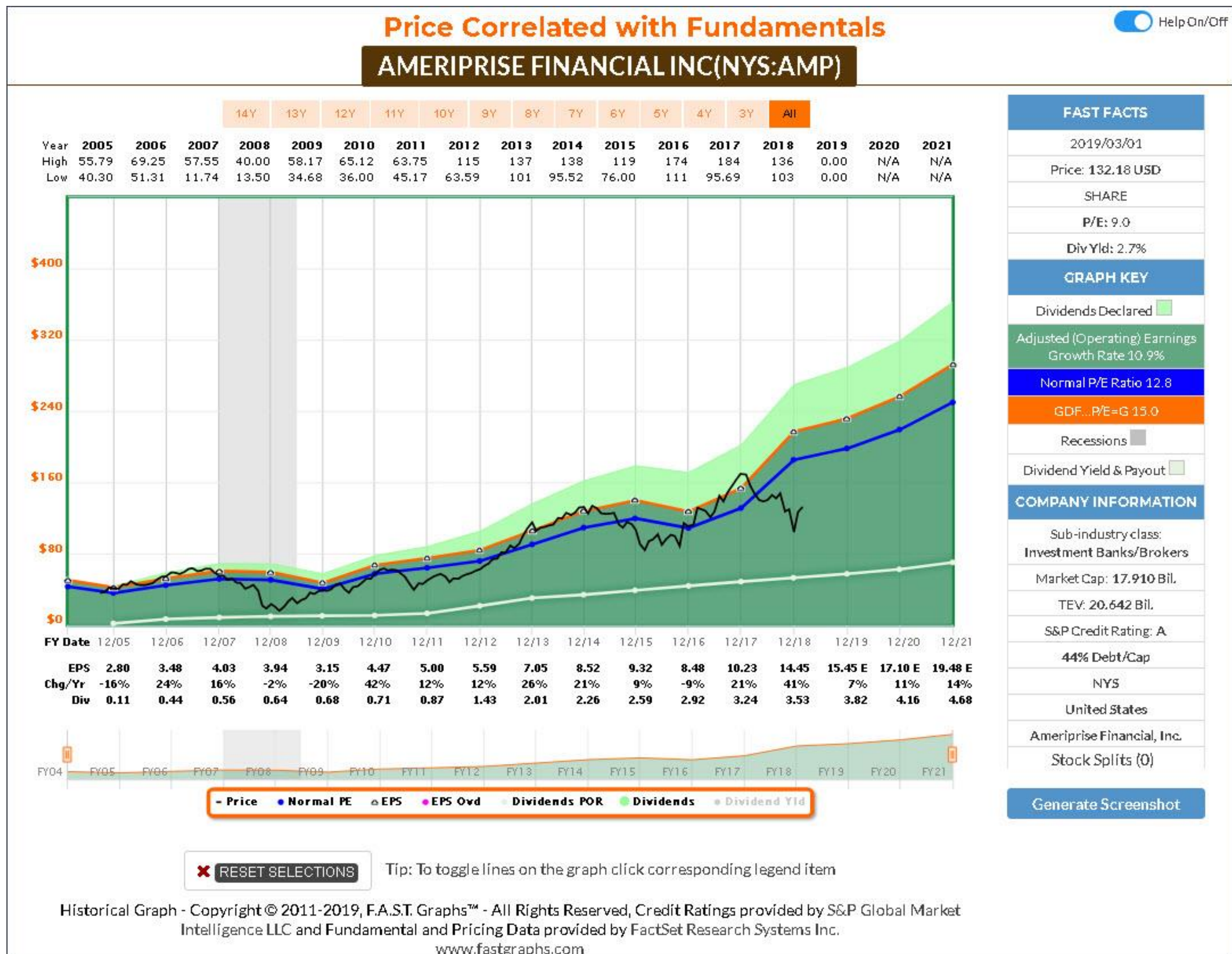
Ameriprise Financial Inc (AMP)

Ameriprise Financial, Inc. operates as a holding company. The company provides financial planning, asset management and insurance services to individuals, businesses and institutions. It operates through five segments: Advice & Wealth Management; Asset Management; Annuities; Protection; and Corporate & Other.

The Advice & Wealth Management segment provides financial planning and advice, as well as full service brokerage and banking services, primarily to retail clients through the company's financial advisors. The Asset Management segment provides investment advice and investment products to retail and institutional clients. It also provides products and services on a global scale through two complementary asset management businesses: Columbia Management and Threadneedle.

The Columbia Management business primarily provides U.S. domestic products and services and Threadneedle primarily provides international investment products and services. Its international retail products are primarily provided through third-party financial institutions. The segments retail products include mutual funds and variable product funds underlying insurance and annuity separate accounts. The Annuities segment provides variable and fixed annuity products of RiverSource Life companies to retail clients. The Protection segment offers a variety of protection products to address the protection and risk management needs of the company's retail clients, including life, DI, and property-casualty insurance. The Corporate & Other segment consists of net investment income on corporate level assets, including excess capital held in the company's subsidiaries and other unallocated equity and other revenues from various investments as well as unallocated corporate expenses.

Ameriprise Financial was founded by John Tappan in 1983 and is headquartered in Minneapolis, MN.



Insurance Brokers/Services

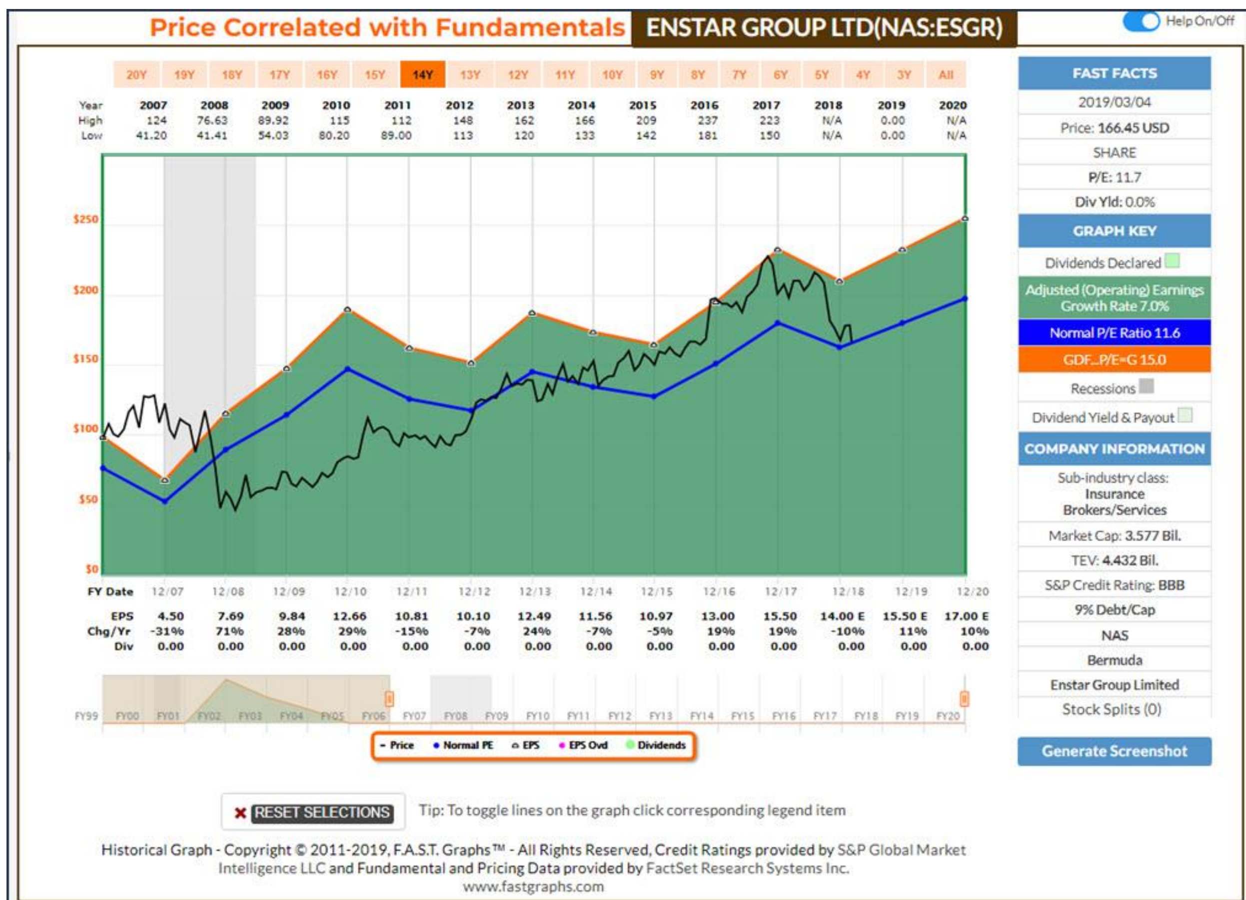
Enstar Group (ESGR)

Enstar Group Ltd. is a holding company, which engages in the acquisition and management of insurance and reinsurance companies. It also provides management, consulting, and other services to the insurance and reinsurance industry. It operates through the following segments: Non-life Run-off, Atrium, StarStone, and Life and Annuities.

The Non-life Run-off segment operates through its subsidiaries that run off their property and casualty and other non-life lines of business. The Atrium segment consists of the active underwriting operations and financial results of Northshore, a holding company that owns Atrium and its subsidiaries and Arden.

The StarStone segment includes the active underwriting operations and financial results of StarStone Holdings, which offers a broad range of property, casualty, and specialty insurance products to both large multi-national and small and middle-market clients. The Life and Annuities segment manages closed-block of life and annuity business and life settlements business.

The company was founded by Paul James O'Shea, Nicholas A. Packer and Dominic Francis Michael Silvester in August 2001 and is headquartered in Hamilton, Bermuda.



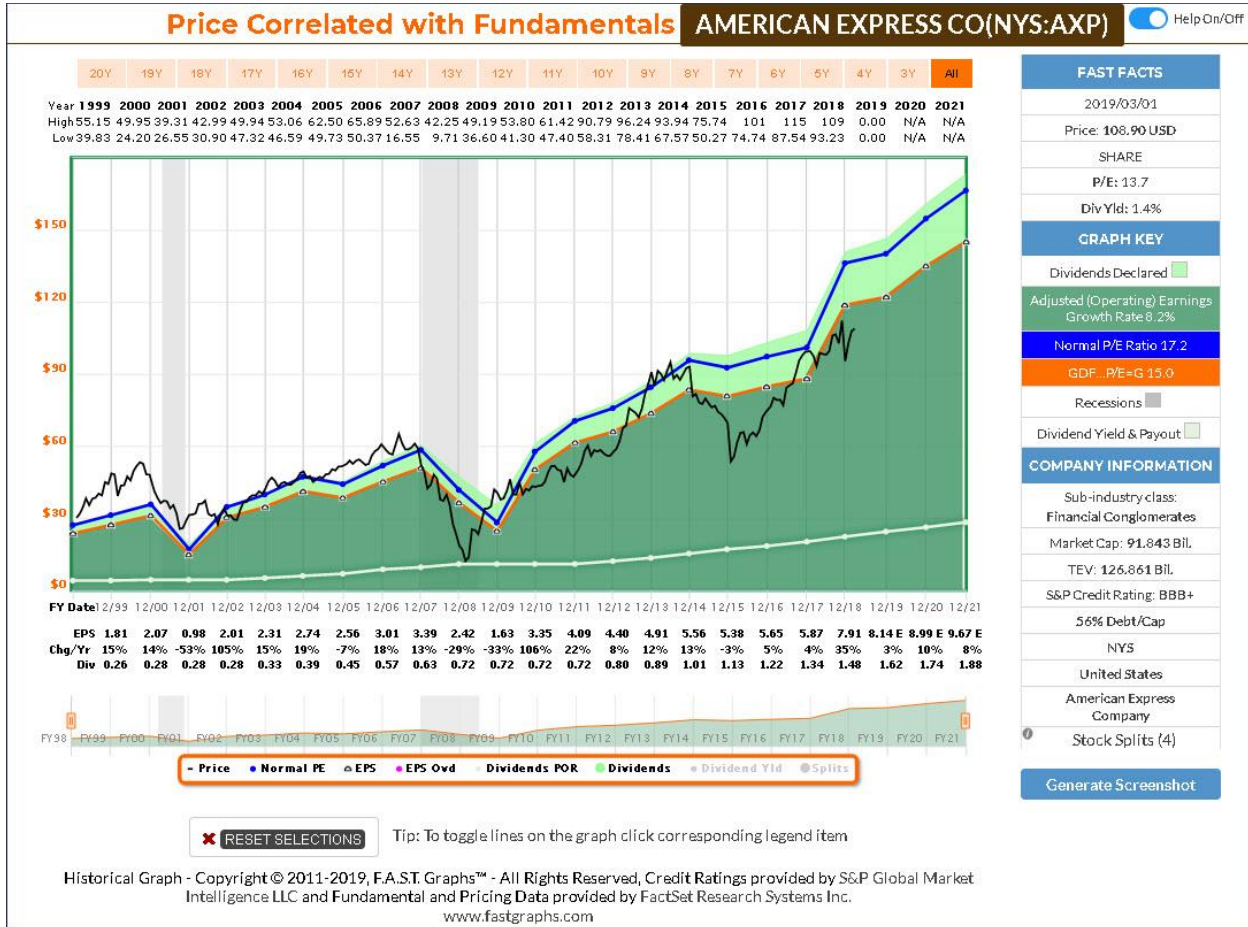
Financial Conglomerates

American Express Co (AXP)

American Express Co. engages in the provision of charge and credit card products, and travel-related services. It operates through the following segments: Global Consumer Services Group, Global Commercial Services, Global Merchant and Network Services and Corporate & Other. The Global Consumer Services Group segment issues a wide range of proprietary consumer cards globally. The Global Commercial Services segment provides proprietary corporate and small business cards, payment and expense management services, and commercial financing products.

The Global Merchant and Network Services segment operates a global payments network that processes and settles card transactions, acquires merchants, and provides multi-channel marketing programs and capabilities, services, and data analytics. The Corporate & Other segment covers corporate functions and certain other businesses and operations.

The company was founded by Henry Wells, William G. Fargo and John Warren Butterfield on March 28, 1850 and is headquartered in New York, NY.



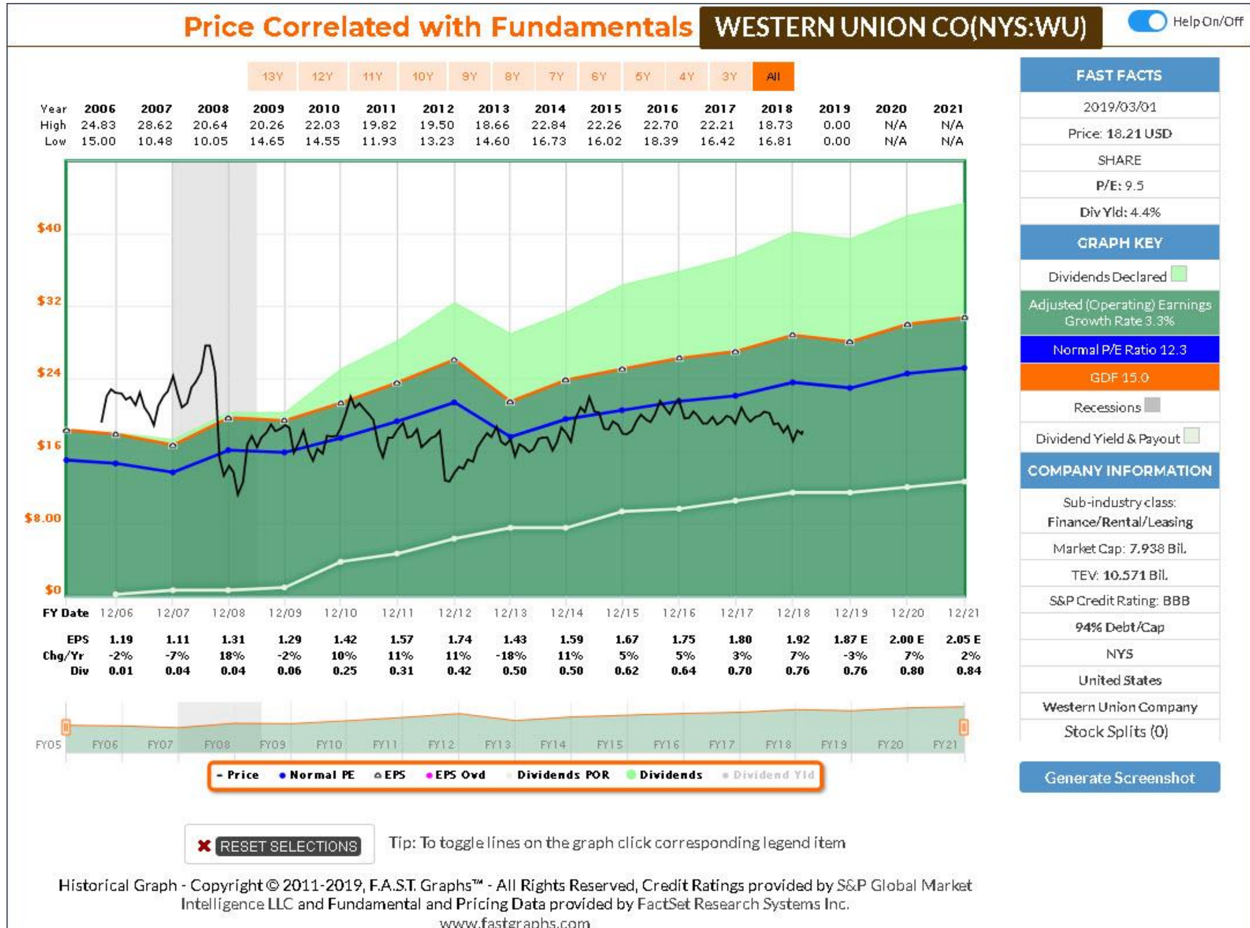
Finance/Rental/Leasing

Western Union Co (WU)

The Western Union Co. is a holding company, which engages in the provision of money transfer and payment services. It operates through the following segments: Consumer-to-Consumer; Business Solutions; and Other. The Consumer-to-Consumer segment facilitates money transfers between two consumers.

The Business Solutions segment offers payment and foreign exchange solutions, primarily cross-border, cross-currency transactions, for small and medium size enterprises and other organizations and individuals. The Other segment comprises electronic-based and cash-based bill payment services.

The company was founded in 1851 and is headquartered in Denver, CO.



MLPs

For starters, there are important tax considerations to be considered when investing in MLPs. These entities issue a K-1 that must be included in the investor's tax filing. This factor alone deters many investors from investing in MLPs. On the other hand, there are tax advantages associated with investing in them that are worth the aggravation of the K-1's for other investors. However, it is not the goal here to delve deeply into the intricacies of the tax advantages or complications of investing in MLPs. Instead, here are research candidates that provide high tax advantaged yields at attractive valuations.

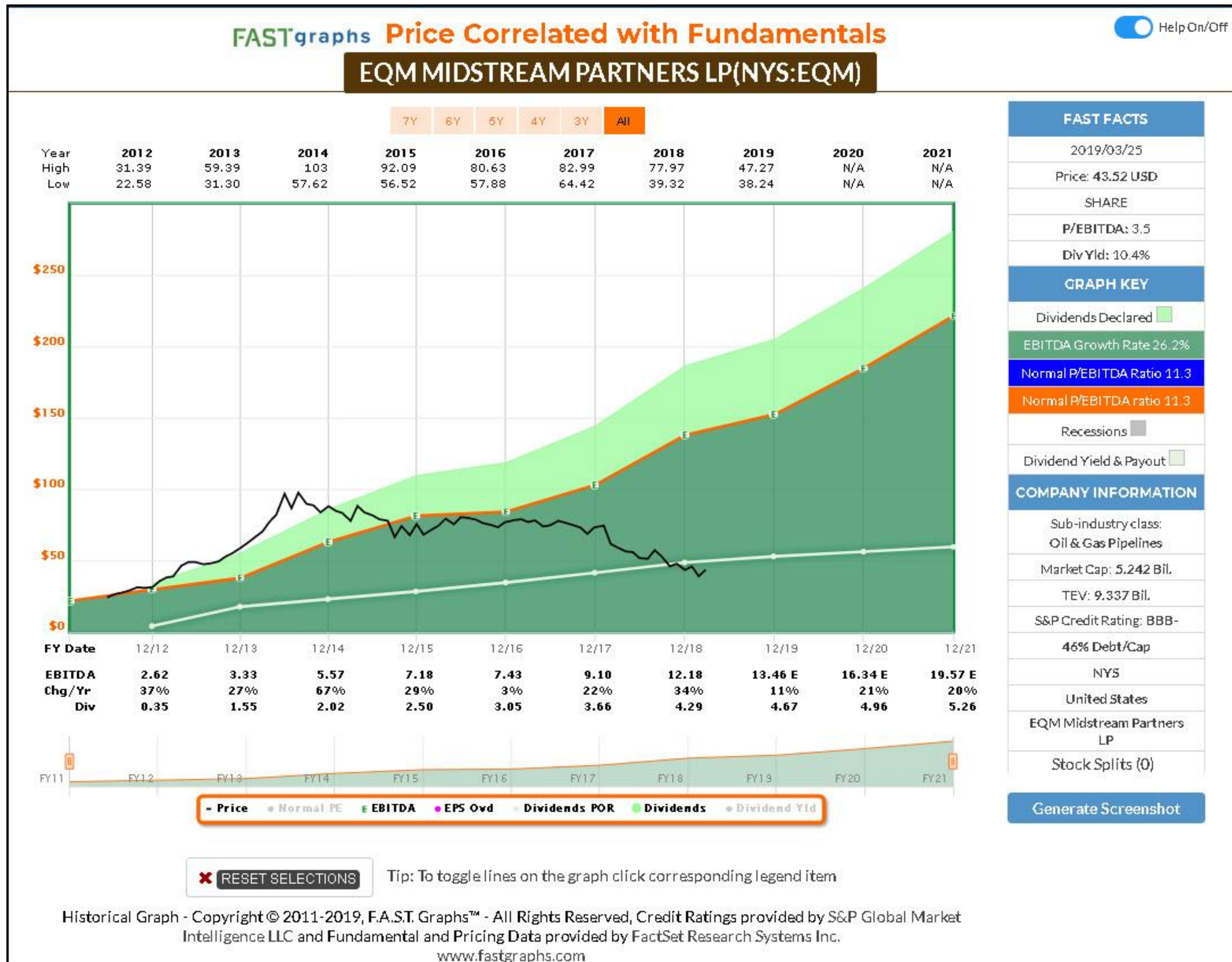
There is an additional attribute that is common to MLPs is critical to understand. MLPs are very capital-intensive entities that require large capital investments to maintain and grow their revenues. Consequently, they are chronic issuers of new shares necessary to raise the capital they need to grow and expand their operations. This significant dilution associated with MLPs is a primary reason why it may not make sense to value them based on earnings. A deep examination will show that most MLPs have earnings-based dividend payout ratios that are very high and often multiples of their earnings.

Other unique attributes of MLPs are significant capital investments leading to large depreciation schedules and significant increases in revenues. Therefore, the valuation of the 10 MLP research candidates below is based on EBITDA multiples rather than earnings multiples.

EQM Midstream Partners (EQM)

EQM Midstream Partners LP engages in the ownership, operation, acquisition, and development of midstream assets in the Appalachian Basin. It operates through the following segments: Gathering, Transmission and Water.

The company was founded on January 18, 2012 and is headquartered in Pittsburgh, PA.



Energy Transfer (ET)

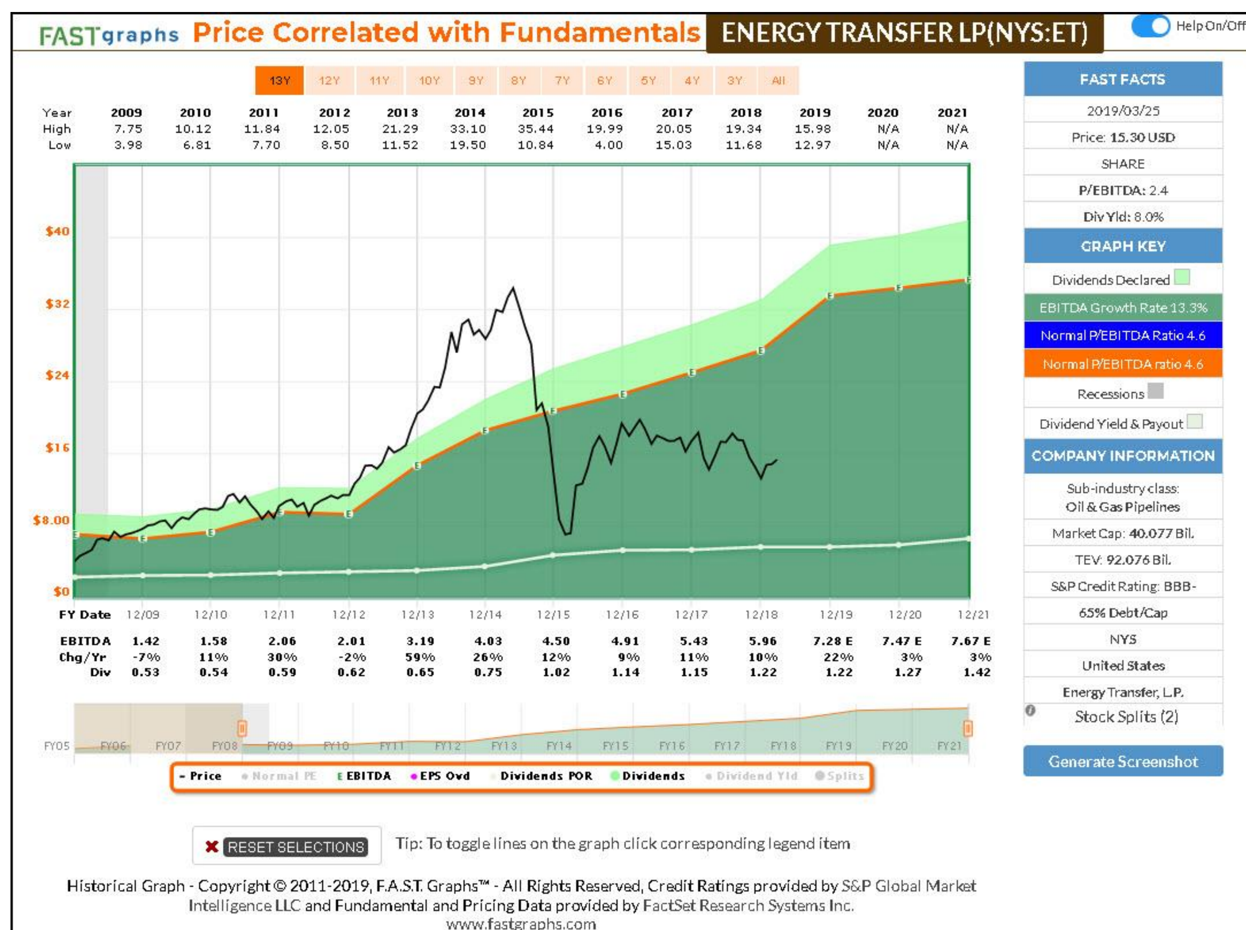
Energy Transfer LP provides natural gas pipeline transportation and transmission services. It operates through following segments: Investment in ETP, Investment in Sunoco LP, Investment in Lake Charles LNG, and Corporate and Other.

The Investment in ETP segment engages in the gathering and processing, compression, treating and transportation of natural gas, focusing on providing midstream services in some of the most prolific natural gas producing regions in the United States, including the Eagle Ford, Haynesville, Barnett, Fayetteville, Marcellus, Utica, Bone Spring and Avalon shales. The

Investment in Sunoco LP segment is engaged in the wholesale distribution of motor fuels to convenience stores, independent dealers, commercial customers, and distributors, as well as the retail sale of motor fuels and merchandise through Sunoco LP operated convenience stores and retail fuel sites.

The Investment in Lake Charles LNG segment is engaged in interstate commerce and is subject to the rules, regulations and accounting requirements of the FERC. The Corporate and Other segment engages in the activities of the parent company.

Energy Transfer was founded in September 2002 and is headquartered in Dallas, TX.



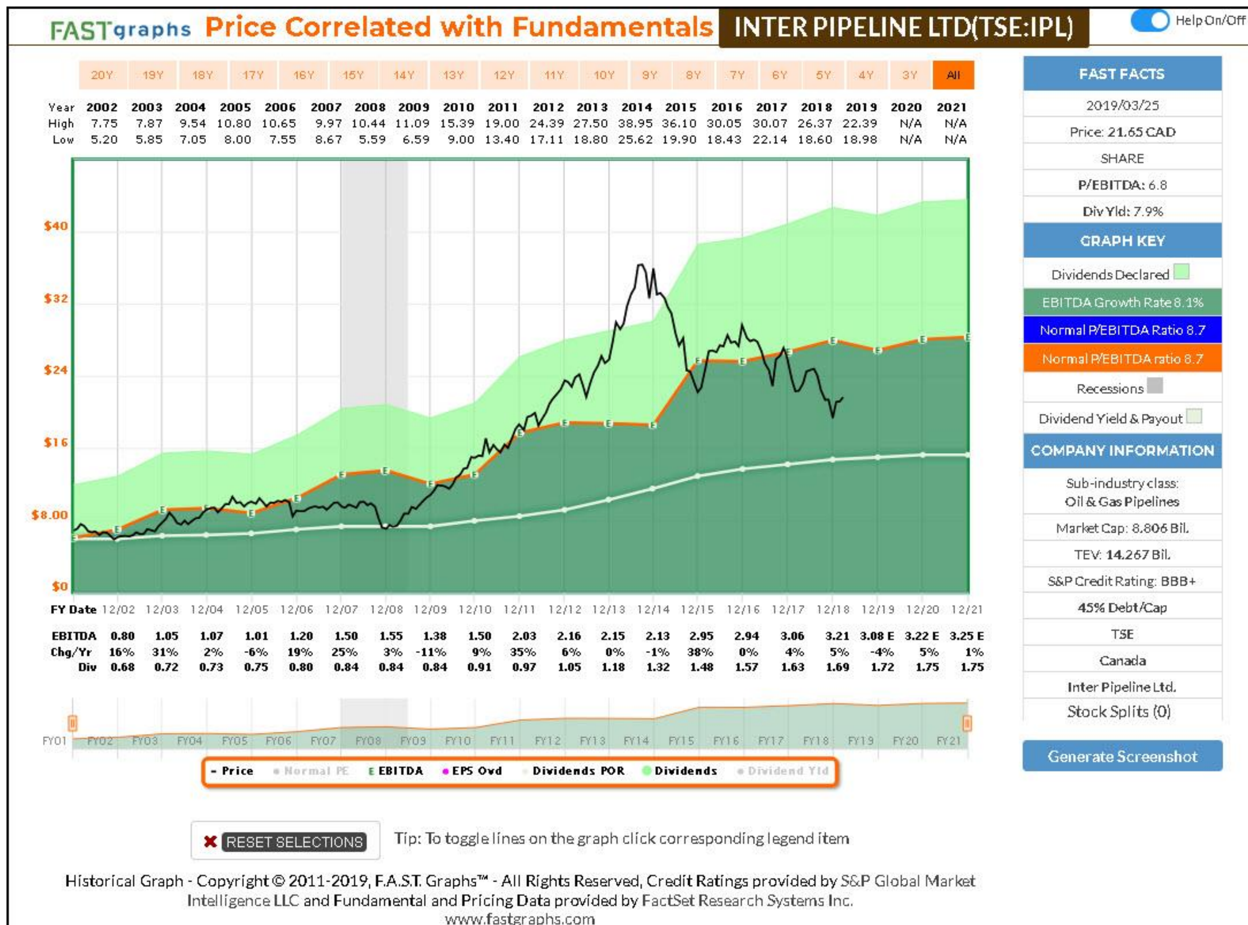
Inter Pipeline (TSE:IPL)

Inter Pipeline Ltd. is a midstream oil and natural gas company, which engages in the provision of oil transportation, natural gas liquid processing, and bulk liquid storage services. It operates through the following segments: Oil Sands Transportation, Conventional Oil Pipelines, Natural Gas Liquids (NGL) Processing, Bulk Liquid Storage, and Corporate. The Oil Sands

Transportation segment consists of the Cold Lake, Corridor, and Polaris pipeline systems that transport petroleum products and provide related blending and handling services in Alberta.

The Conventional Oil Pipelines segment primarily implicates the transportation, storage, and processing of hydrocarbons, as well as midstream marketing blending and handling services. The NGL Processing segment comprises of processing natural gas to extract NGLs including ethane and a mixture of propane, butane and pentanes plus. The Bulk Liquid Storage segment involves the primary storage and handling of bulk liquid products through the operation of sixteen bulk liquid storage terminals. The Corporate segment consists of general and administrative costs.

The company was founded on October 9, 1997 and is headquartered in Calgary, Canada.



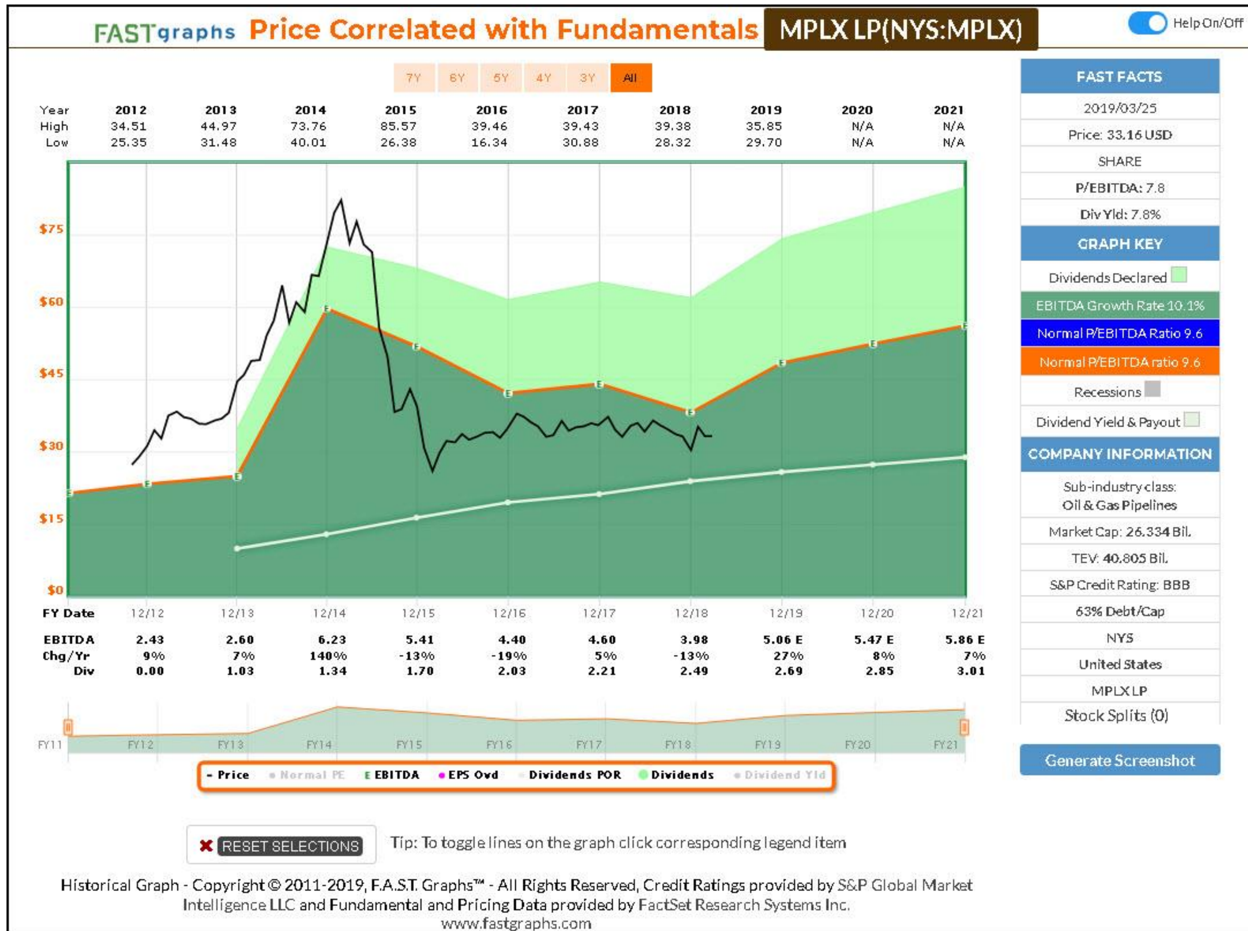
MPLX LP (MPLX)

MPLX LP is a fee-based, growth-oriented limited partnership company. It is engaged in the gathering, processing and transportation of natural gas; the gathering, transportation,

fractionation, storage and marketing of natural gas liquids; and the gathering, transportation and storage of crude oil and refined petroleum products.

The company operates through two segments: Logistics & Storage and Gathering & Processing. The Logistics and Storage segment includes transportation and storage of crude oil, refined products and other hydrocarbon-based products. The Gathering and Processing segment engages in gathering and processing of natural gas.

MPLX was founded in March 27, 2012 and is headquartered in Findlay, OH.

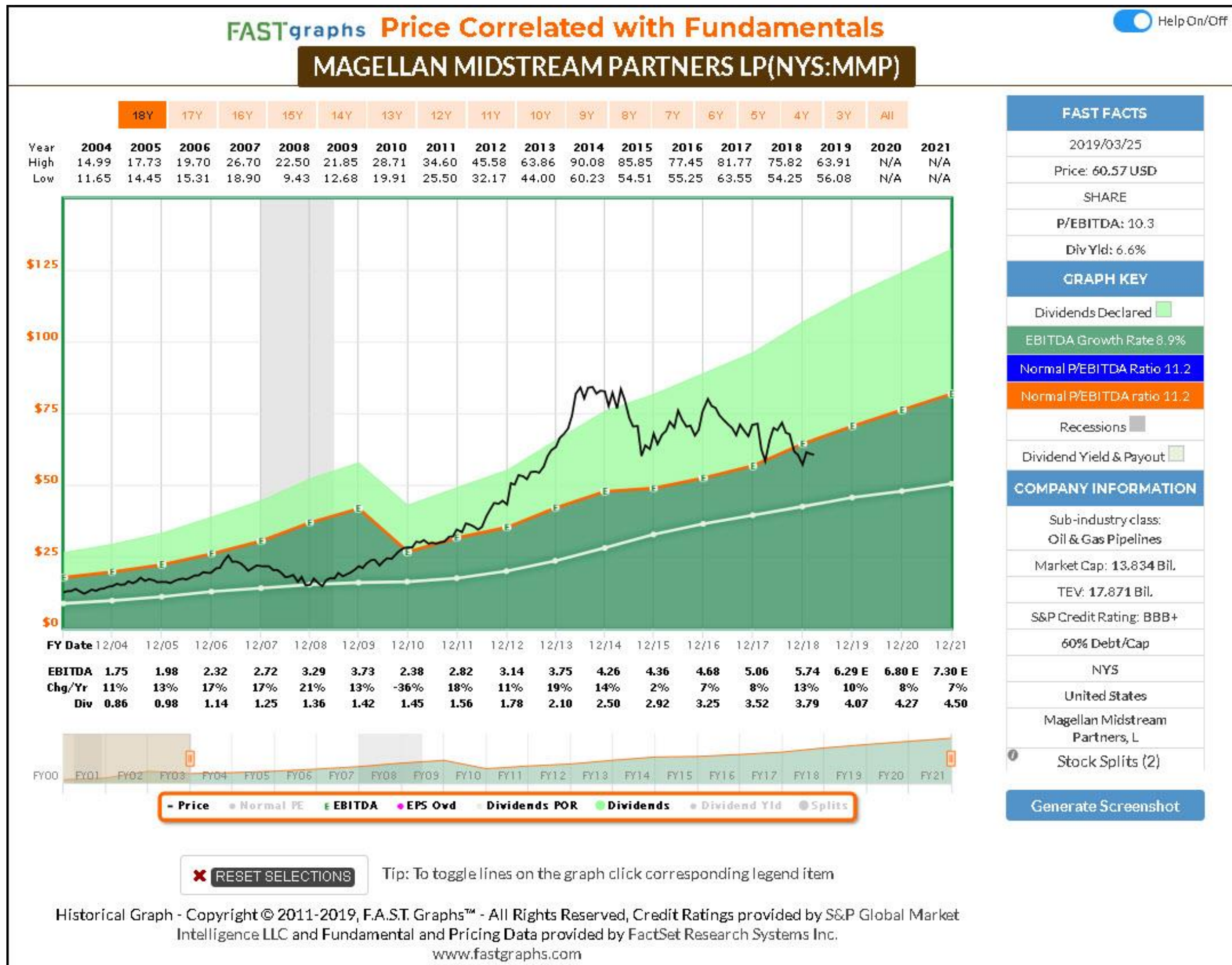


Magellan Midstream Partners (MMP)

Magellan Midstream Partners LP engages in the transportation, storage and distribution of petroleum products, such as crude oil. It operates through the following segments: Refined Products, Crude Oil and Marine Storage.

The Refined Products segment consists of common carrier refined products pipeline system, independent terminals, and its ammonia pipeline system. The Crude Oil segment comprises of crude oil pipelines, splitter and storage facilities which are used for contract storage. The Marine Storage segment includes marine terminals located along coastal waterways.

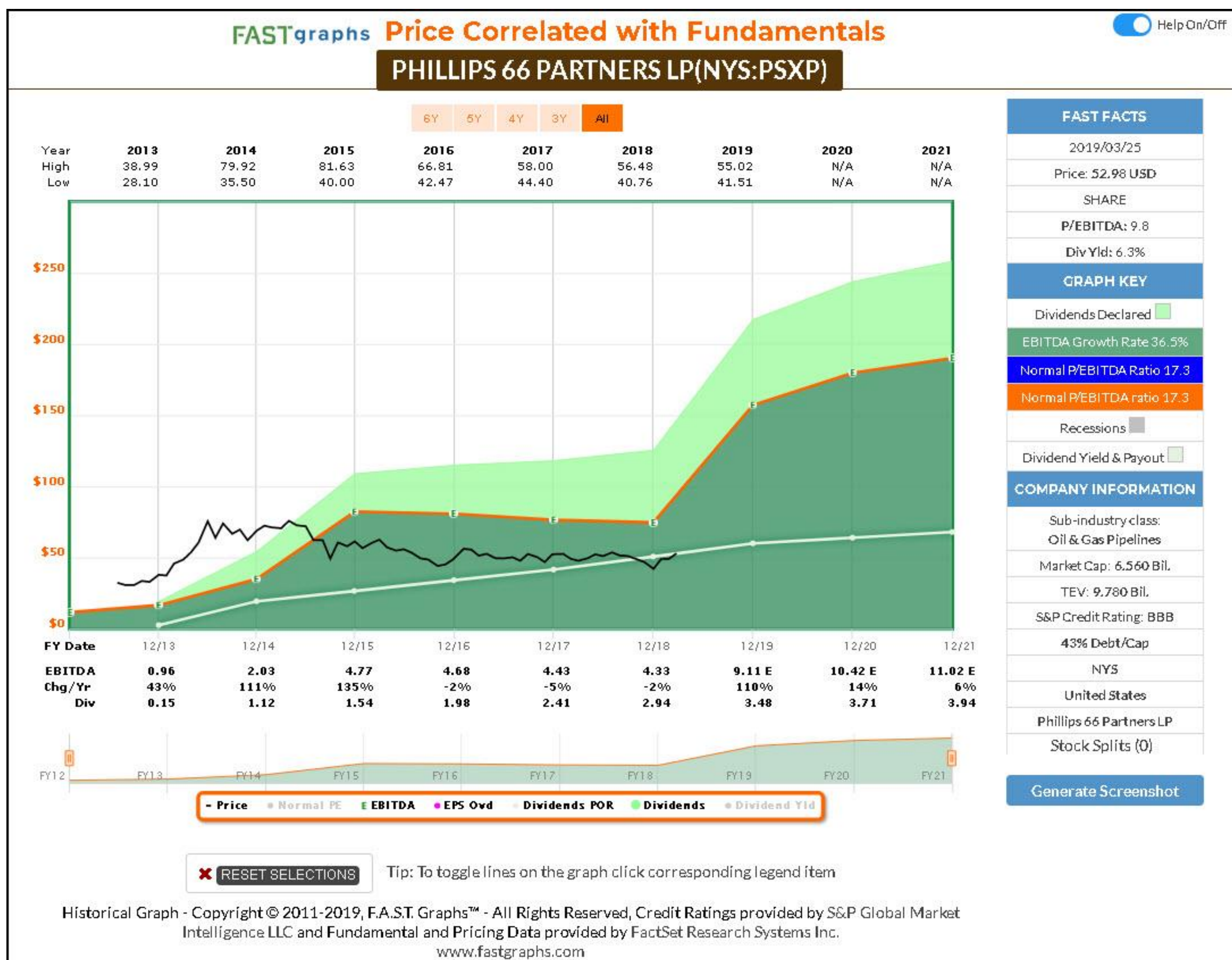
The company was founded in August 2000 and is headquartered in Tulsa, OK.



Phillips 66 Partners (PSXP)

Phillips 66 Partners LP engages in the ownership, operation, development, and acquisition of fee-based crude oil, refined petroleum product and natural gas liquids pipelines and terminals, and other transportation and midstream assets. It also provides terminals and storages for oil and petroleum products.

The company was founded on February 20, 2013 and is headquartered in Houston, TX.

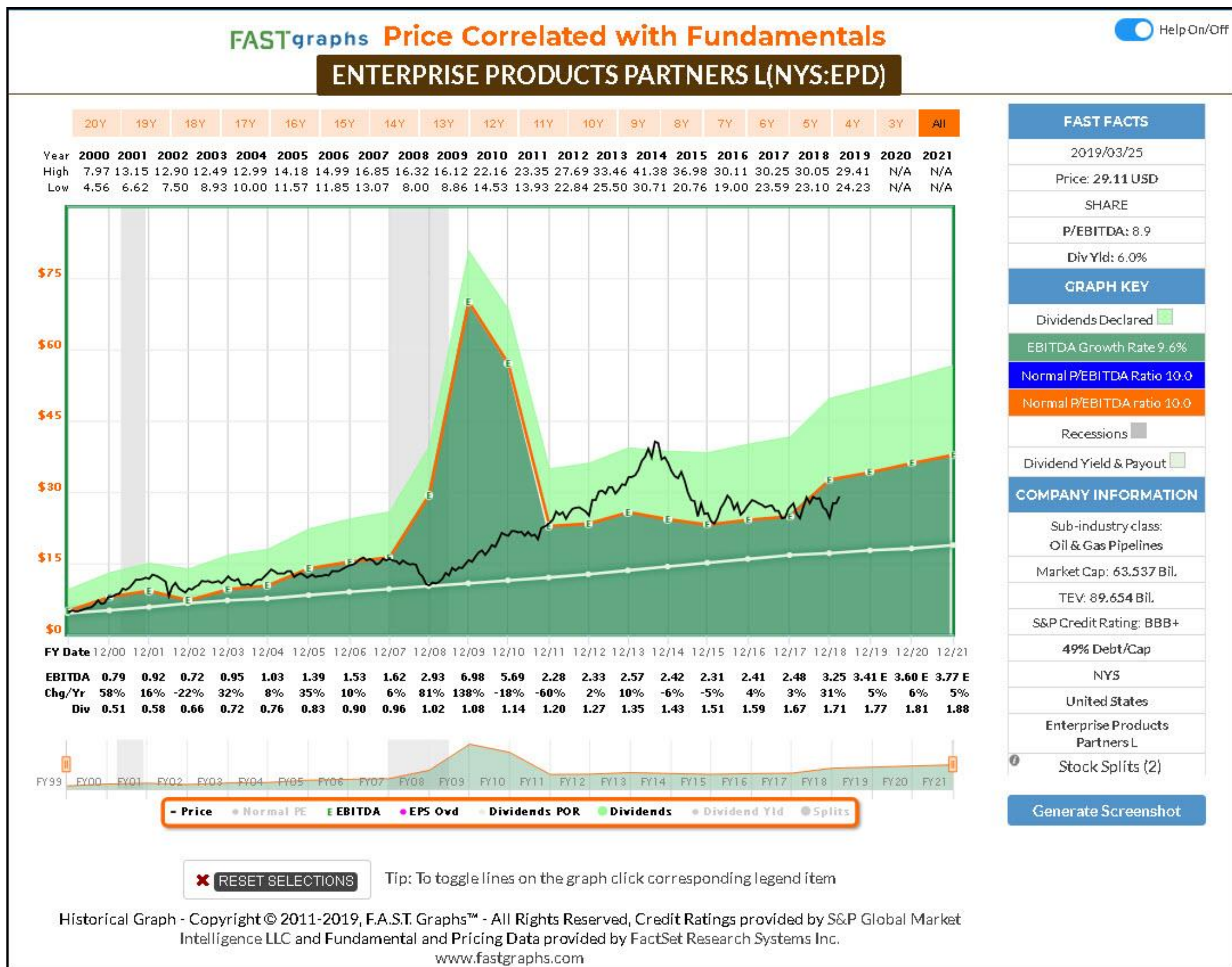


Enterprise Products Partners (EPD)

Enterprise Products Partners LP operates as holding company, which engages in the production and trade of natural gas and petrochemicals. It operates through the following segments: NGL Pipelines & Services; Crude Oil Pipelines & Services; Natural Gas Pipelines & Services; and Petrochemical & Refined Products Services.

The NGL Pipelines & Services segment manages natural gas processing plants. The Crude Oil Pipelines & Services segment stores and markets crude oil products. The Natural Gas Pipelines & Services segment stores and transports natural gas. The Petrochemical & Refined Products Services segment offers propylene fractionation, butane isomerization complex, octane enhancement, and refined products.

The company was founded by Dan L. Duncan in April 1998 and is headquartered in Houston, TX.

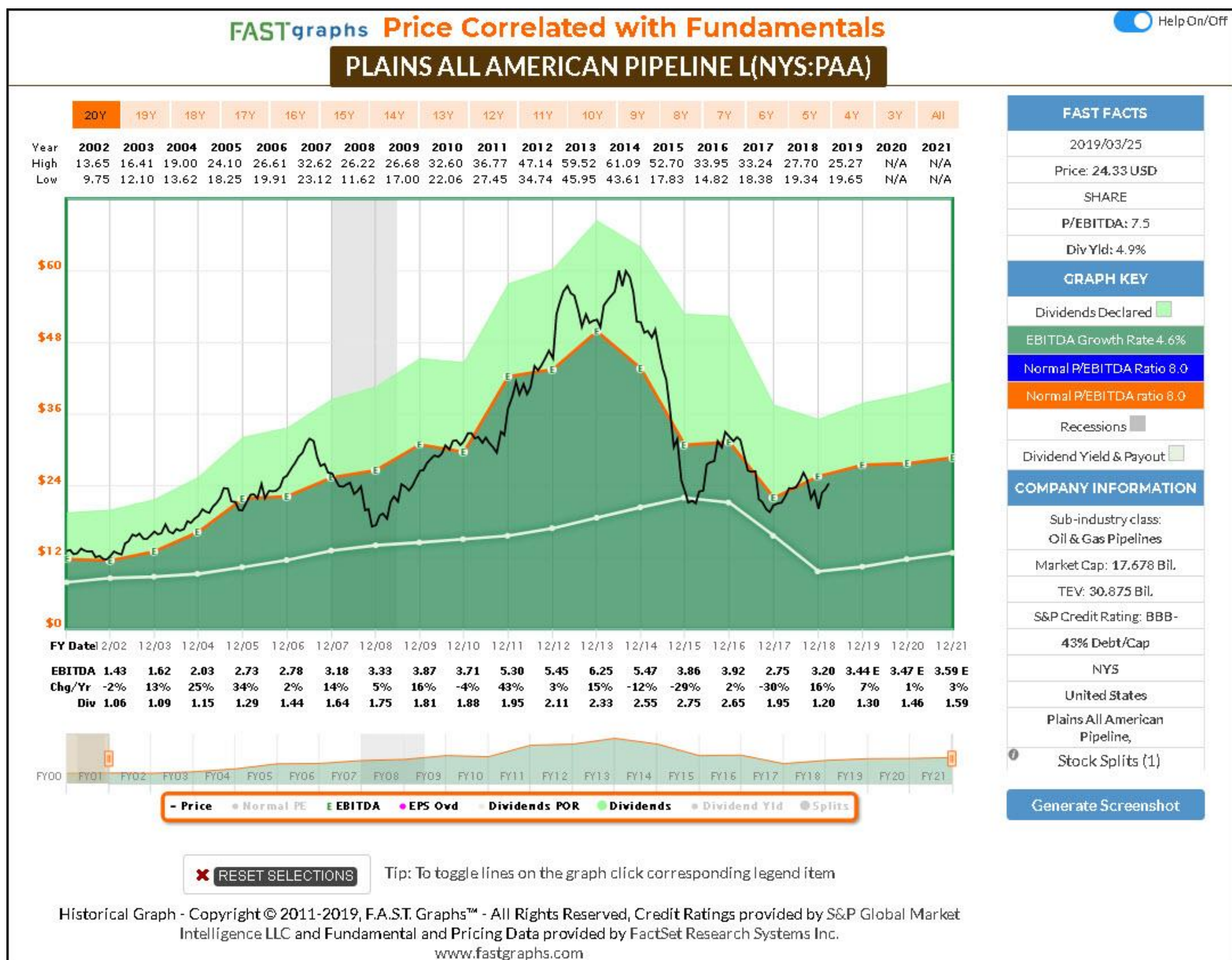


Plains All American Pipeline (PAA)

Plains All American Pipeline LP engages in the provision of transportation, storage, terminalling and marketing of crude oil, refined products and other natural gas-related petroleum products. It operates through the following business segments: Transportation, Facilities, and Supply and Logistics. The Transportation segments consist of fee-based activities associated with transporting crude oil and refined products on pipelines, gathering systems, trucks and barges.

The Facilities segment includes fee-based activities associated with providing storage, terminalling and throughput services for crude oil, refined products, and natural gas, as well LPG fractionation and isomerization services. The Supply and Logistics segment is engaged in the sale of gathered and bulk-purchased crude oil and natural gas liquids volumes.

The company was founded in 1998 and is headquartered in Houston, TX.

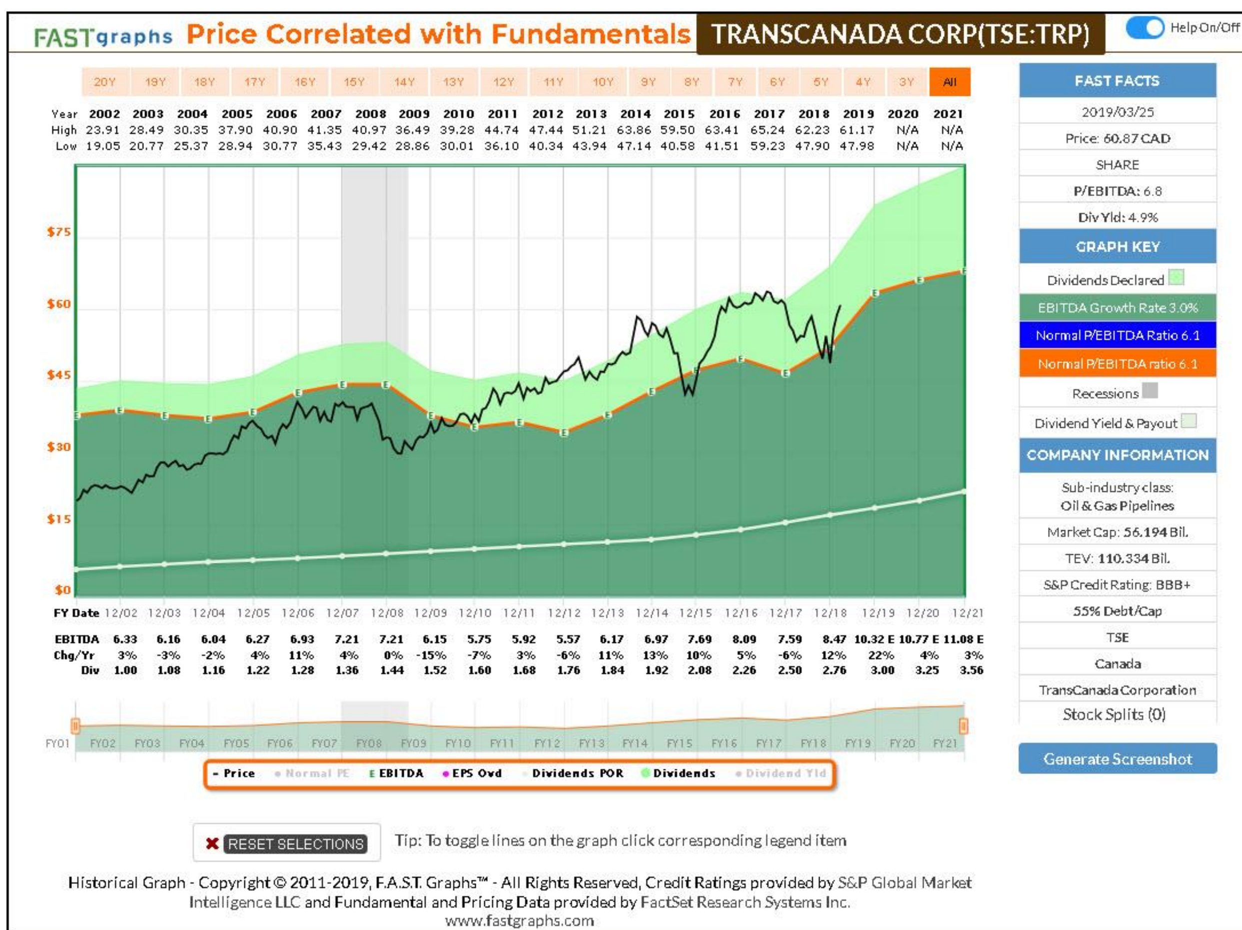


TransCanada Corp (TSE:TRP)

TransCanada Corp. is an energy infrastructure company. It operates through the following business segments: Canadian Natural Gas Pipelines, U.S. Natural Gas Pipelines, Mexico Natural Gas Pipelines, Liquids Pipelines, and Energy. The Canadian Natural Gas Pipelines segment consists of regulated natural gas pipelines.

The U.S. Natural Gas Pipelines segment manages the regulated natural gas pipelines, regulated natural gas storage facilities, midstream, and other assets. The Mexico Natural Gas Pipelines invests on regulated natural gas pipelines in Mexico. The Liquids Pipelines handles investments on crude oil pipeline systems. The Energy segment consists of power generation plants and non-regulated natural gas storage facilities.

The company was founded on May 15, 2003 and is headquartered in Calgary, Canada.



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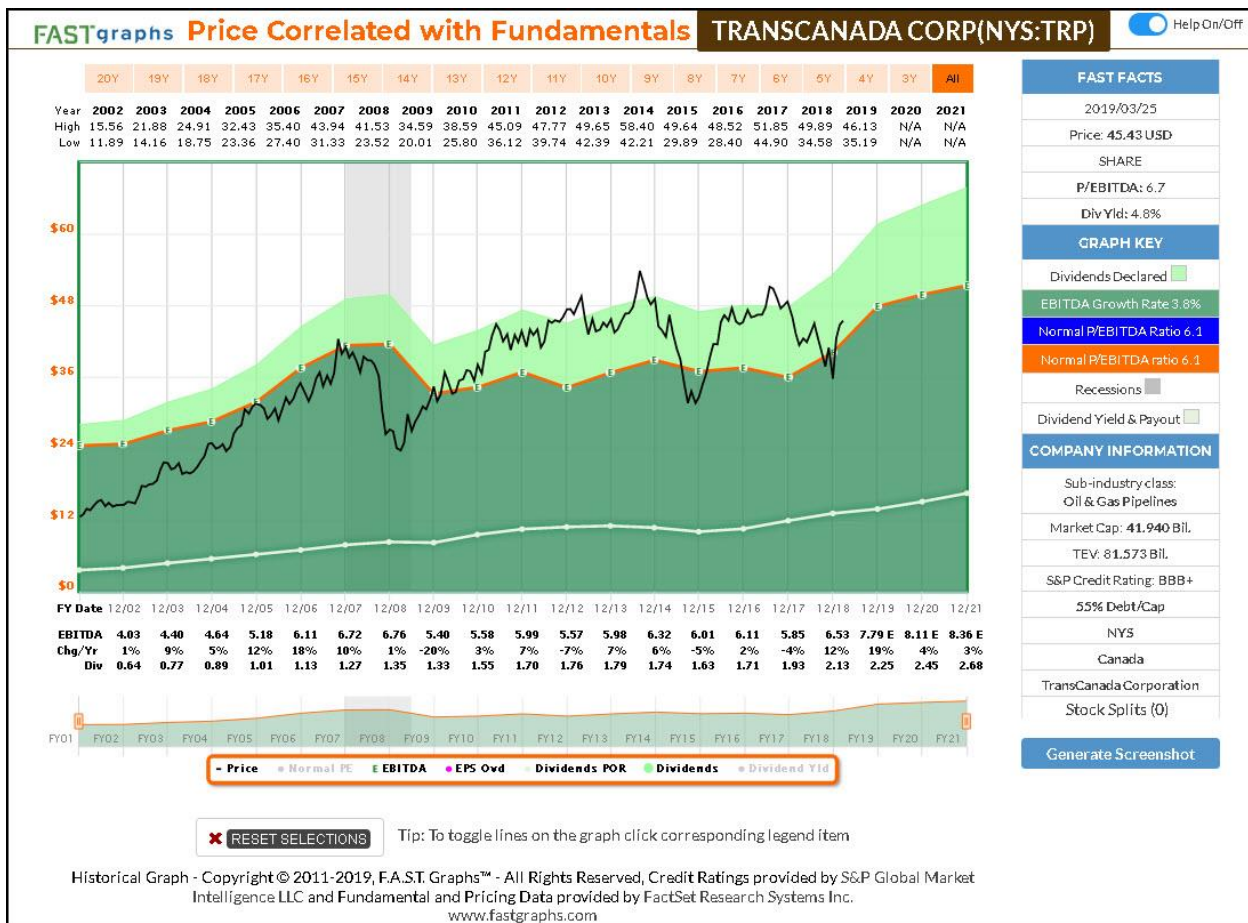

Utilities

The S&P 500 is a large and broad index that includes 10 broad sectors and many types of individual companies. Many S&P 500 constituents pay dividends and many do not. One of the smallest sectors by weight is the Utilities Sector, comprising just over 3% of the total index, and includes 29 constituents. However, one distinguishing characteristic of this sector is that every constituent pays a dividend. As such, every constituent of the S&P 500 Utilities Sector might, or could be, of interest to retired investors or dividend growth investors looking for income.

There are other distinguishing characteristics of utility stocks that might also make them appropriate candidates for long-term buy-and-hold (invest and own) conservative investors seeking income. Many, not all, but many utility companies operate under a regulated environment for some or a large portion of their businesses. Consequently, the utility industry has a reputation for safe, stable dividends and predictable operating results. The legendary investor Warren Buffett is one that holds this view. For example, in his most recent letter to

shareholders of Berkshire Hathaway (BRK.A) (BRK.B), Warren Buffett specifically addressed his utility-oriented holdings as follows (the emphasis added is mine):

"A key characteristic of both companies is their **huge investment in very long-lived, regulated assets**, with these partially funded by large amounts of long-term debt that is *not* guaranteed by Berkshire. Our credit is in fact not needed because each company has earning power that even under terrible economic conditions will far exceed its interest requirements."

"The first is common to all utilities: recession-resistant earnings, which result from these companies offering an essential service on an exclusive basis. The second is enjoyed by few other utilities: a great diversity of earnings streams, which shield us from being seriously harmed by any single regulatory body."

Although Warren Buffett was specifically talking about Berkshire's holdings, the important attributes he highlighted generally apply to the Utilities Sector. However, the reputation for safety and stability that utility stocks have long held is evolving. Many utility stocks have been diversified into non-regulated businesses, and therefore, the old view of the Utilities Sector is evolving.

A category of stocks for utilities such as gas and power. The utilities sector contains companies such as electric, gas and water firms and integrated providers.

General Characteristics of Utility Stocks

There are a couple of facts regarding investing in utility stocks generally that are important. First and foremost, almost by definition utility stocks tend to have very low historical rates of earnings growth. Therefore, if bought at fair valuation, the capital appreciation component for the long-term buy-and-hold (invest and own) investor will correlate very closely to the company's historical rate of earnings growth.

Consequently, there is not much of a margin for error because even a modest amount of overvaluation can significantly lower or even negate any potential future capital appreciation. Additionally, current yield will be lessened, and risk increased if you overpay for a utility stock even by just a little bit. This is an often overlooked danger when investing in utility stocks.

Additionally, utility stocks are generally favored for their above-market current yield. On the other hand, since there is a relatively high correlation between dividend growth and earnings growth, the benefit of a higher-than-average current yield is moderately negated by a lower-than-average dividend growth rate. This represents another important reason why you should be diligent and careful to not overpay for utility stocks.

The 29 S&P 500 Utilities Sector Constituents

Below, are specific examples of the 29 S&P 500 Utilities Sector constituents that possess differing investment characteristics and relative valuations.

There are three columns on the following FAST Graphs "Portfolio Review" that readers may carefully analyze in order to ascertain a feel for the relative current valuation of the companies in the S&P 500 Utilities Sector. Look at the current P/E ratio in relation to each company's historical 15-year normal P/E ratio (15Y N P/E) to get a general sense of whether each company, statistically at least, is overvalued, fairly valued, or even undervalued.

Ideally, the current P/E ratio should be at least equal to or lower than the company's historical normal P/E ratio. Finally, a quick glance at the dividend yield on each company can provide an additional first blush sense of current valuation. In theory, the higher the yield, the lower the valuation, ceteris paribus.

Portfolio Review www.fastgraphs.com

SP500Utilities

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Search:

Ticker	Name	CR	P/E	15Y N P/E	Div Yld	15Y EPS Gwth	15Y Div Cagr	15Y Ann Perf	LT D/C	Est EPS Gr
GAS	AGL Resources Inc.	BBB+	12.6	14.3	4.2%	10.4% FY14	4.1%	10.7%	40.0	-6.40%
AEE	Ameren Corporation	BBB+	17.6	13.8	3.9%	-2.4% FY13	-3.0%	6.0%	44.0	8.07%
AEP	American Electric Power	BBB	16.6	13.6	3.7%	1.6% FY14	-1.1%	6.8%	44.0	4.74%
CNP	CenterPoint Energy, Inc.	A-	18.0	13.4	4.7%	-3.7% FY13	-4.1% *	2.8%	59.0	2.88%
CMS	CMS Energy Corp.	BBB+	19.4	14.1	3.3%	-3.2% FY14	NMF	3.1%	65.0	6.70%
ED	Consolidated Edison, Inc	A-	16.0	14.8	4.2%	1.5% FY14	1.1%	8.0%	45.0	2.43%
D	Dominion Resources, Inc.	A-	20.5	15.8	3.6%	5.6% FY14	4.2%	11.1%	57.0	5.88%
DTE	DTE Energy Company	BBB+	17.7	14.2	3.4%	2.2% FY14	1.8%	8.8%	48.0	4.22%
DUK	Duke Energy Corporation	BBB+	17.0	15.6	4.1%	-1.1% FY14	-0.3%	3.0%	44.0	4.56%
EIX	Edison International	BBB+	15.3	11.2	2.6%	4.3% FY13	1.7% *	7.1%	40.0	3.38%

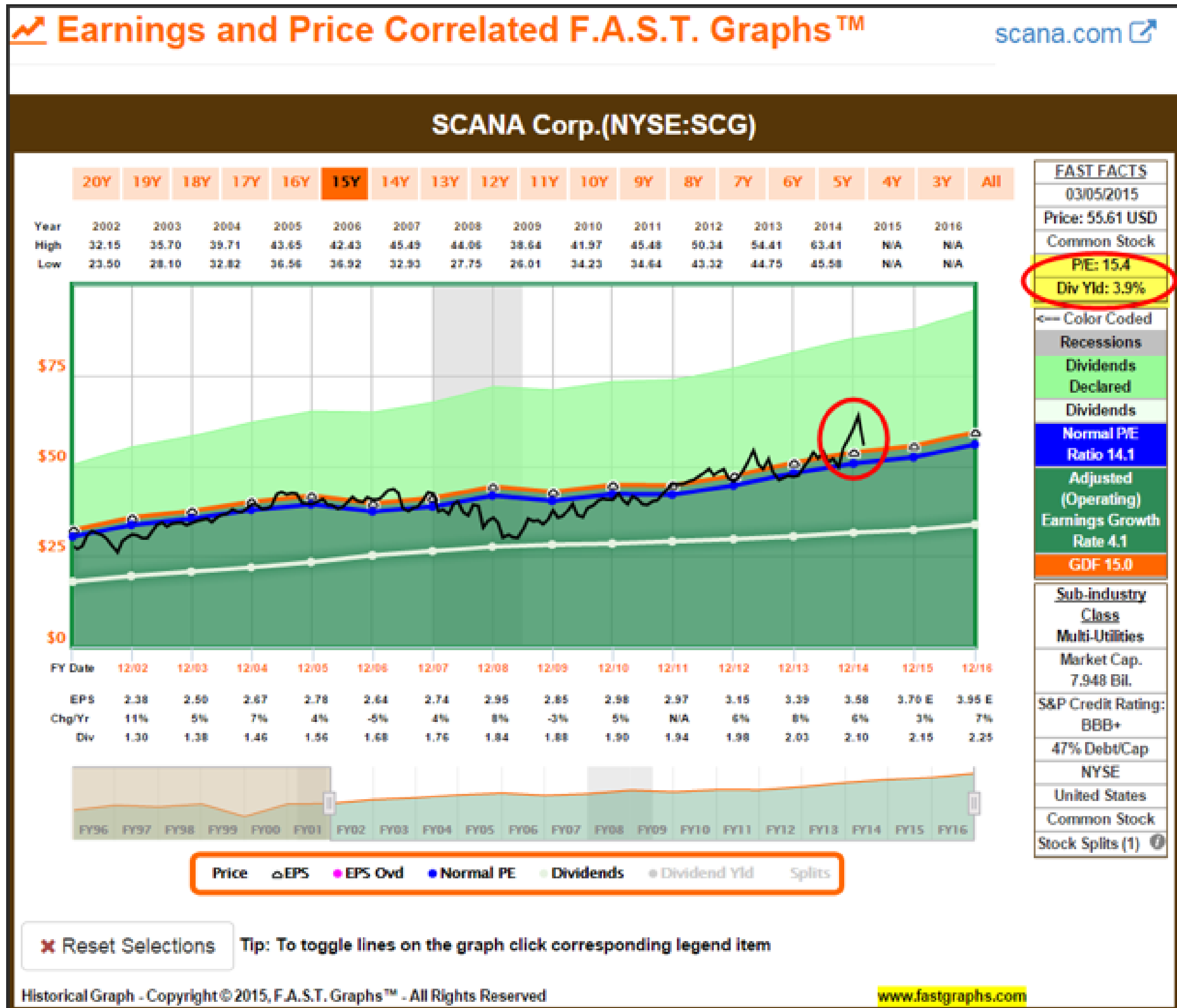
Dominion Resources, Inc. (D)

Although the company does offer a very attractive current yield of 3.6%, its current P/E ratio of 20.5 is historically high. A careful examination of the graph would indicate that earnings growth over the last couple of years has also been above historical norms.

Perhaps this fact and the consideration that investors are seeking yield in today's low interest rate environment might explain this company's abnormally high valuation over the last couple of years. The fundamentals don't seem to support the price as of this graph date.

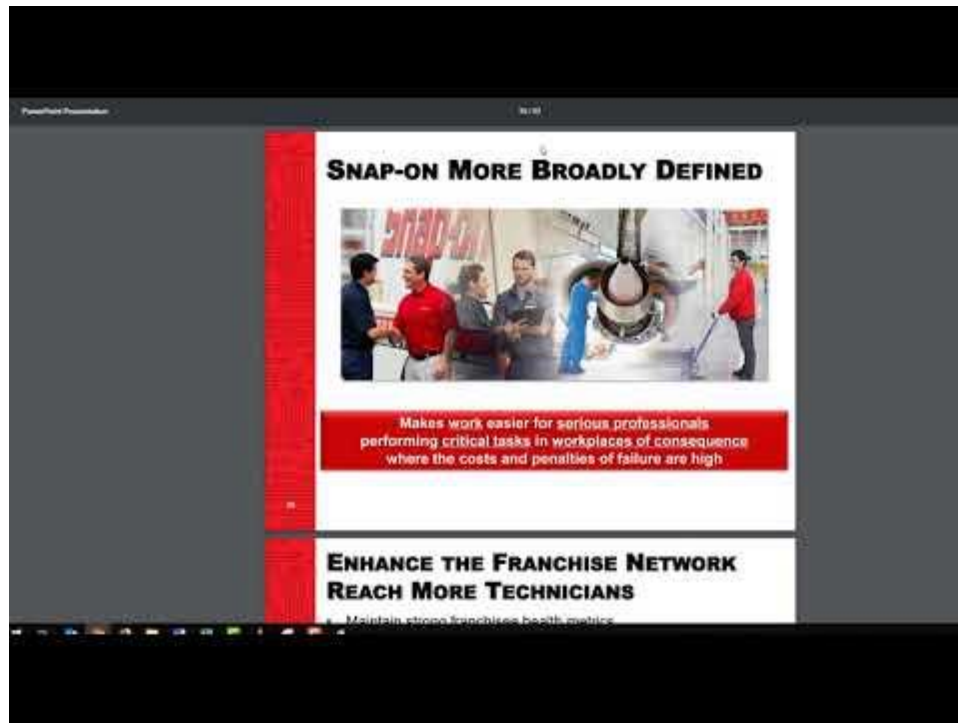
SCANA Corp. (SCG)

The reader should note that the company's stock price performed exceptionally well in 2014, but rose above its normal earnings justified fair value (the orange line). Consequently, since the beginning of 2015, the company's stock price is clearly reverting to the mean. This has resulted in the stock price falling approximately 13% since the beginning of 2015. Investors need to be careful about valuation when investing in low-growth, high-yielding utility stocks.



Topic 10: Advanced Investing Topics

Due Dilligence



Due diligence means doing your homework on a firm. FAST Graphs facilitates a lot of the analysis you will want to do. But, to have a comprehensive understanding of a firm you may want to explore other resources. A firm's annual report of 10-K is available via the SEC or the firm's website. Annual reports can be overwhelming due to the length, boiler plate language, and barrage of numbers. That said, 10-K's in the U.S. are audited and should represent managements good faith discussion about the firm's current position and prospects. Tracking what management says will happen and comparing this to what actually happens can help you both evaluate how solid the firm is and make predictions about the future.

The company website is a good place to look to see exactly how the firm makes money. Similarly, gaining the perspective of suppliers, customers, and employees may be beneficial in evaluating a firm.

Value Traps

When the stock market turns bad, investors find it extremely difficult to remain positive. As a result, people tend to be more cynical during bad times than they would normally be during

better times. When this happens, it becomes all too easy to paint every stock in the stock market with the same negative brush. Since most stocks will, temporarily at least, experience falling prices during a bad market, the distinction between good stocks and bad stocks can become blurred.

Nevertheless, one of the most common concerns investors have is about a "value trap." Put differently, a value trap is when something looks cheap, but is not. The primary driver of a value trap is the fundamentals. If price has fallen, but fundamentals remain strong, then it might be a value opportunity. If price has fallen and fundamentals have fallen accordingly, then it might be a value trap. Either way, focusing only of price movements is unwise and turning your attention to fundamentals is the best way to avoid a value trap.

Interest Rates and Valuation

Many investors are attempting to justify higher stock "valuations" because interest rates are at historical lows. Lower interest rates could affect "market valuations" based on the simple law of supply and demand. The concept is simple, when fixed income offers lower returns it logically stimulates more demand for equities where higher returns can be found. In contrast, when fixed income provides high yields, it reduces the demand for equities because they in fact become less competitive.

However, lower interest rates have not in recent times caused P/E ratios (common stock valuations) to rise. There will be an inverse relationship between interest rates and stock valuations (P/E ratios) when stocks are being valued properly by the market. However, in the real world, there are many other factors that are significantly more important than the level of interest rates, which are an exogenous force. In other words, forces that are internally part and parcel of the underlying business are more relevant to valuation than outside forces like interest rates.

The actual operating results and success of the business itself is of primary importance. In the long run, the company's ability to generate earnings and cash flows will be the predominant determinant of future returns and valuation at any point in time. Good fast-growing businesses are worth more than poor slow-growing businesses.

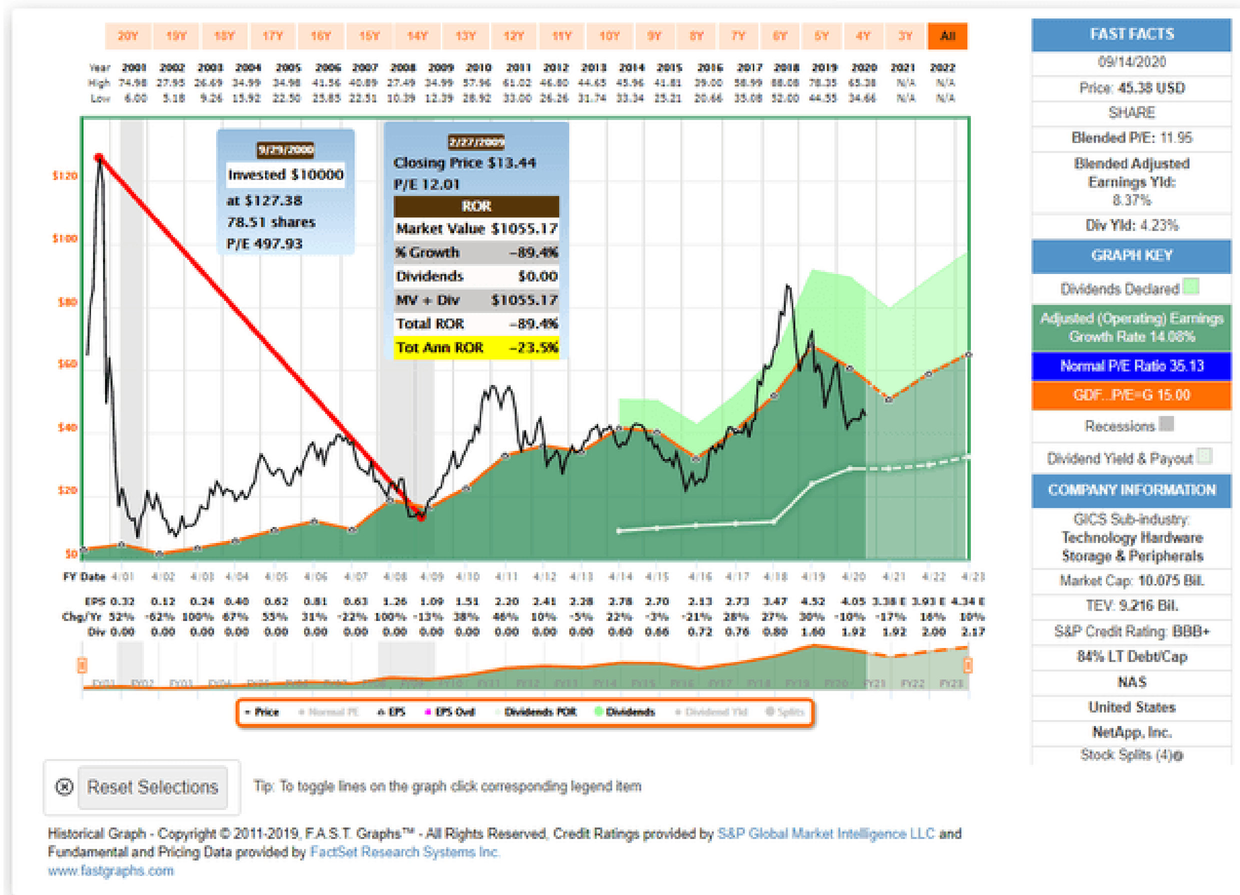
NETAPP Inc. (NTAP): A Good Example In The Extreme

Often the greatest insights can be gleaned from evaluating the extreme. These completely aberrant circumstances cast a bright spotlight on the reality of sound fundamental principles. A case in point would be NETAPP, a technology stock that participated in the tech bubble of 1995 to 2000. Although extreme, NETAPP is one of many tech stocks that became highly valued

during the tech bubble which led to close to a decade of extreme losses from its peak valuation (see performance calculations below).

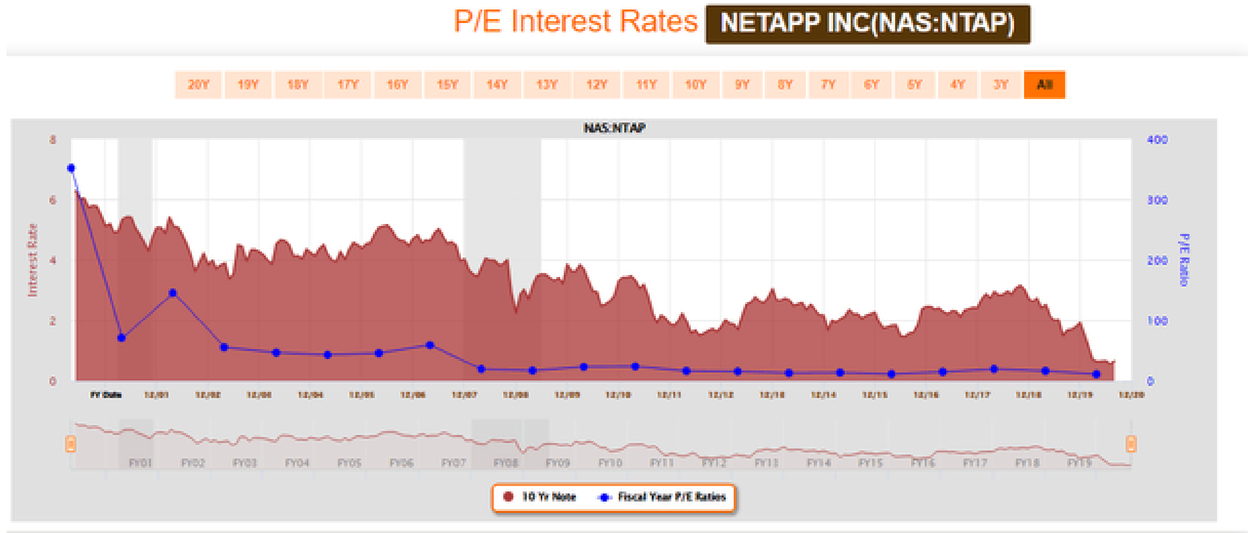
This company repeats a key lesson several times since calendar and fiscal year 2000. Periods of high valuation inevitably culminated in long periods of very poor performance when the market price inevitably reverted to fundamentally based mean valuations. Additionally, with this example we also see the importance of earnings relative to long-term performance and valuation. In the long run, price follows earnings. However, price can get disconnected for short periods of time (which can actually last years) but inevitably move back into fundamental alignment.

NETAPP Inc.



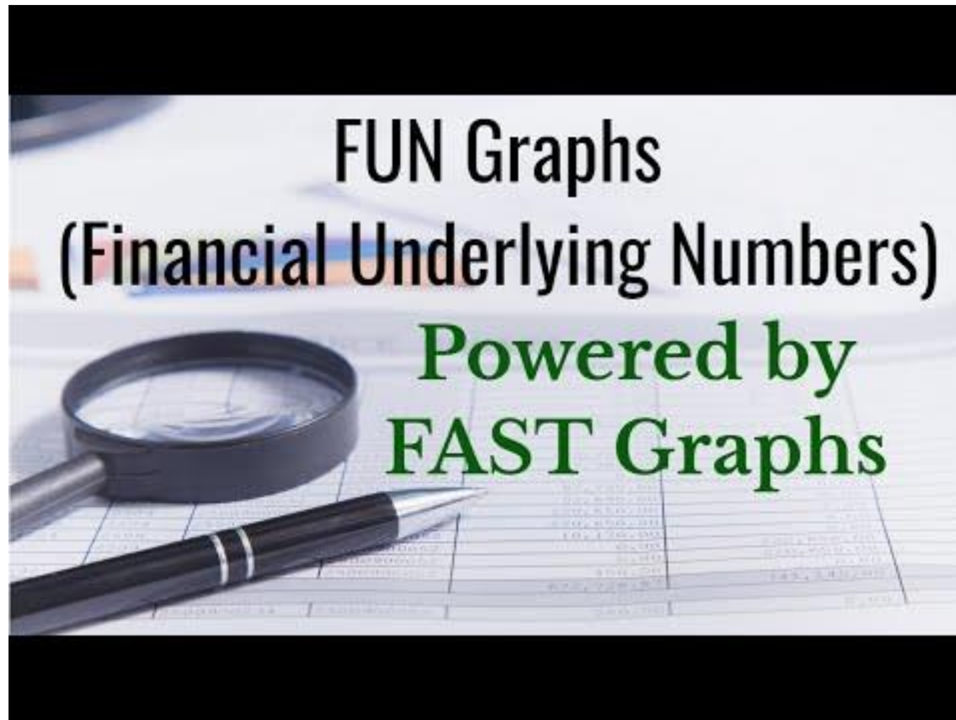
But perhaps most importantly and relevant to this section, NETAPP provides a quintessential example of interest rates and P/E ratios moving down together in tandem. The red shaded area on the graph are 10-year T-bond rates, and the blue line plots year-end P/E ratios. As you can clearly see, the interest rate steadily dropped from 6.29% on May 31, 2000 to less than 1% by August 2020. Additionally, NETAPP's P/E ratio fell from the extreme 352 in fiscal year ended April 2000 to 71 by fiscal year ended April 2001.

As you can see, the P/E ratio for NETAPP has continued to fall in direct proportion to interest rates to its current blended P/E ratio of only 11.95. Again, this is an extreme example, but nevertheless, a clear case where fundamentals, primarily the headwinds of overvaluation, were significantly more relevant than interest rates on NETAPP's valuation (P/E ratio).



Create your own analysis with FUN Graphs

FUN is an acronym for **F**inancial **U**nderlying **N**umbers. FUN Graphs are designed to empower premium subscribers the capability to quickly and efficiently engage in a comprehensive and deep dive into each company's historical fundamental results.



There are 4 separate but comprehensive and powerful FUN graphing options available to premium subscribers. Each of these graphing options provides historical data going back approximately 20 years (if available) to include a quarterly data option for the past 8 or 9 quarters.

1. The "**Per Share Graph**" empowers premium subscribers to F.A.S.T. Graphs™ the capacity to review a company's balance sheet, cash flow statement or income statements on a per-share basis annually.
2. The "**In Millions Graph**" provides the same balance sheet, cash flow statement and income statement data but it is reported in millions of dollars instead of on a per-share basis. Although this graph covers essentially the same financial data as the "Per Share Graphs" it includes the additional metric of common shares outstanding. This allows premium subscribers to evaluate the effects of a company share buyback history.
3. The "**Ratios Graph**" provides up to 20 years of key liquidity ratio data such as the current ratio, quick ratio and long-term debt to capital and equity. Premium subscribers are also provided numerous valuation ratios to include price to book value, price to cash

flow and several others. The ability to compare historical ratios to current ratios allows you to evaluate whether these important metrics are improving or weakening.

4. The "**Percentage Graph**" provides important metrics such as gross and net profit margin, return on assets, equity and capital. These are important metrics to evaluate how efficiently the business is being managed and/or has operated over time, and quickly determine if these important metrics are improving or weakening.

What about Bonds?

Many practitioners of Modern Portfolio Theory (MPT) routinely and automatically recommend standardized asset allocation strategies such as 60% equities and 40% bonds or fixed income. These asset allocation mixes are routinely and adamantly recommended with usually no regard to prevailing economic circumstances. In other words, you include these asset classes regardless.

An extended period of falling interest rates as we have seen since 2008 creates the perfect environment for bonds and bond fund performance. There is an inverse relationship between bond prices and interest rates. When interest rates are falling, the price of previously issued bonds will rise and vice versa. With interest rates at record lows it is only logical to assume that interest rates will move higher sometime in the not too distant future. Consequently, bonds, as an asset class, might temporarily at least be avoided, unless of course they were purchased a long time ago. Older bonds that were issued when rates were higher might make sense to continue holding, especially if they are getting close to maturity.

For those that would like to learn more about the relationship between bond prices and interest rates here is a link to a Wells Fargo educational piece that summarizes things nicely.

Topic 11: Case Studies from History

Apple Analysis as of June 15, 2015

Not that a stock going up when you buy means you are right, or that a stock going down when you buy means you are wrong, it is important to evaluate your analysis over time. Here is a post from Chuck on June 15, 2015 about Apple. Apple had been on an impressive run at this point from about $17 on 9/30/2013 to about $31 on 6/30/2015. Chuck says in the post below that Apple was one of his highest conviction holdings. From the start of June 2015 until 12/4/2020 (the writing of this section), a $10,000 investment in Apple would be worth $40,150. This is a total return of 301.5% and an annualized return of 29.2%. Here is the post:

Apple holds the distinction, among many others, of being the most widely written about and talked about company on the planet. Some of what is written is factual, and those are the offerings that I personally appreciate and look for. On the other hand, high profile Apple

(AAPL) has both enthusiastic fans and equally as enthusiastic critics. Consequently, much of what is written about Apple is based on opinion and even strong emotion context.

This last statement is perhaps understandable due to the emotional makeup and nature of human beings. For example, it is quite common for people to love an underdog, and there was a time in Apple's storied history when it held the role of underdog in the technology sector. In contrast, in more recent times Apple has assumed the role of the entrenched technology giant as it has become the largest public corporation by market capitalization. There are many that believe that Apple is on its way to becoming the first trillion dollar market capitalization company in history.

Regardless of your opinion about Apple, the historical fundamental numbers underpinning the company are facts that cannot be debated, and I contend should not be overlooked. Therefore, my objective with this offering is to take a hard look at Apple by the numbers, with an attempt to be as devoid of opinion as humanly possible. When investing for the future, it is also undeniable that an opinion must be formed. The future is unknowable, and as such, contains uncertainty. However, I've always believed that opinions formed based on facts more often than not prove superior to those based on emotion.

Apple's Businesses

Moreover, since Apple is so widely written about and is such a high profile company, I will not be directly discussing Apple's management, technologies, technological prowess or recent innovations. I'm sure that most of you are quite familiar with what Apple generally does. Furthermore, there are many writers that are far more knowledgeable and experienced about technology and Apple's position in that space. On the other hand, for those of you that are interested in knowing more about Apple's current product offerings, I offer the following links to recent articles that I personally found contained valuable insights. However, I will point out that these articles contain a heavy dose of opinion, as well as facts.

Additionally, for those readers interested in a more factual in-depth look at Apple's businesses, I include the following long business description courtesy of S&P Capital IQ. This next section can be read thoroughly, or utilized as a reference depending on each of your interests. In the spirit of this article, it is primarily factual:

"Apple Inc. designs, manufactures, and markets mobile communication and media devices, personal computers, watches, and portable digital music players. The company sells various related software, services, accessories, networking solutions, and third-party digital content and applications.

The company also sells and delivers digital content and applications through the iTunes Store, App Store, iBooks Store, and Mac App Store. In addition, the company sells various third-party iPhone, iPad, Mac and iPod compatible products, including application software, and various

accessories, through its online and retail stores. The company sells to consumers; small and mid-sized businesses (SMB); and education, enterprise, and government customers.

Products

The company's products and services include iPhone, iPad, Mac, iPod, Apple TV, a portfolio of consumer and professional software applications, the iOS and OS X operating systems, iCloud, Apple Watch, Apple Pay, and various accessory, service and support offerings.

iPhone

iPhone is the company's line of smartphones that combines a phone, music player and Internet device in one product, and is based on the company's iOS Multi-Touch operating system. iPhone has an integrated photo and video camera and photo library app, and on qualifying devices, also includes Siri, a voice activated intelligent assistant. iPhone works with the iTunes Store, the App Store and iBooks Store for purchasing, organizing, and playing music, movies, TV shows, podcasts, books, and apps.

iPhone is compatible with both Mac and Windows personal computers and the company's iCloud services, which provide synchronization of mail, contacts, calendars, apps, music, photos, documents, and more across users' devices. The company offers iPhone 6 and iPhone 6 Plus that feature larger 4.7-inch and 5.5-inch Retina HD displays and support for Apple Pay.

iPad

iPad is the company's line of multi-purpose tablets based on the company's iOS Multi-Touch operating system, which includes iPad Air and iPad mini. iPad has an integrated photo and video camera and photo library app, and on qualifying devices, also includes Siri. iPad works with the iTunes Store, the iBooks Store and the App Store for purchasing, organizing and playing music, movies, TV shows, podcasts, books and apps. The company offers iPad Air 2 and iPad mini 3 that feature a Retina display, Touch ID and support for Apple Pay.

Mac

Mac is the company's line of desktop and portable personal computers. Macs feature Intel microprocessors, the OS X operating system and include Mail, Safari Web browser, Messages, Calendar, Reminders, Contacts and the iLife apps. The company's iWork apps are also available as free downloads with all new Macs. The company's desktop computers include iMac, Mac Pro and Mac mini. The company's portable computers include MacBook Pro, MacBook Pro with Retina display and MacBook Air. The company offers the 27-inch iMac with Retina 5K display with improved performance; and updated the Mac mini.

iPod

The company’s iPod line of portable digital music and media players includes iPod touch, iPod nano, and iPod shuffle. All iPods work with iTunes to purchase and synchronize content. iPod touch, based on the company’s iOS Multi-Touch operating system, is a flash-memory-based iPod with an integrated photo and video camera and photo library app, and also includes Siri. iPod touch works with the iTunes Store, the App Store and the iBooks Store for purchasing and playing music, movies, TV shows, podcasts, books and apps. iPod touch is compatible with both Mac and Windows personal computers and the company’s iCloud services.

iTunes and the iTunes Store

The company’s iTunes app, available for iOS devices, Mac and Windows personal computers and Apple TV, keeps users’ music, movies and TV shows organized in one place. iTunes is integrated with the iTunes Store, the App Store, the iBooks Store, iTunes U and iTunes Radio. The iTunes Store allows customers to purchase and download music and TV shows, rent or purchase movies and download free Podcasts. The App Store allows customers to discover and download apps and purchase in-app content. The iBooks Store features e-books from major and independent publishers. iTunes U allows users to download free lectures and videos from universities, museums, and other institutions. The company’s subsidiary, Beats Music, LLC, offers a subscription streaming music service that offers a curated listening experience and complements the company’s other music services and offerings.

Mac App Store

The Mac App Store allows customers to discover, download and install Mac applications. The Mac App Store offers applications in education, games, graphics and design, lifestyle, productivity, utilities and other categories. The company’s OS X operating system software and its iLife, iWork and other application software titles are also available on the Mac App Store.

iCloud

iCloud is the company’s cloud service, which stores music, photos, applications, contacts, calendars, mail, documents and more, keeping them up-to-date and available to multiple iOS devices, Mac and Windows personal computers and Apple TV. iCloud services include iTunes in the Cloud, iCloud Drive, iCloud Photo Sharing, Family Sharing, Find My iPhone, iPad or Mac and iCloud Backup for iOS devices.

Apple Pay

The company offers Apple Pay in the U.S., a new service aimed at making mobile payments easy, secure and private. Apple Pay works with iPhone 6, iPhone 6 Plus, iPad Air 2, and iPad mini 3.

Operating System Software

iOS

iOS is the company's Multi-Touch operating system that serves as the foundation for iOS devices. Apps delivered with iOS for qualifying devices include Safari Web browser, FaceTime video calling, Maps, Mail, Contacts, Calendar, Clock, Weather, Calculator, Notes, Reminders, Stocks, Compass and Messages. Devices running iOS are compatible with both Mac and Windows personal computers and the company's iCloud services. The company offers iOS 8, which provides new features for Messages and Photos, predictive typing for the company's QuickType keyboard and a new Health app. iOS 8 also introduced Family Sharing, which enables sharing of purchases, photos and calendars within the same household.

OS X

OS X, the company's Mac operating system, is built on an open-source UNIX-based foundation and provides an intuitive and integrated computer experience. OS X Yosemite is the eleventh major release of OS X. Support for iCloud is built into OS X so users can access content and information from their Macs, their iOS devices and other supported devices and access downloaded content and apps from the iTunes Store. Apps delivered with OS X include Mail, Safari Web browser, Messages, Calendar, Reminders, Contacts, Maps, iBooks and the iLife apps. OS X Yosemite incorporates additional continuity features, including Handoff, which allows users to start an activity on one Mac or iOS device and pass it to another Mac or iOS device.

Application Software

iLife

iLife for Mac is the company's consumer-oriented digital lifestyle software application suite included with all Mac computers. iLife features iPhoto, a digital photo application for storing, viewing, editing and sharing photos; iMovie, a digital video editing application; and GarageBand, a music creation application that allows users to play, record and create music. The company also has Multi-Touch versions of these iLife applications designed primarily for use on iOS devices.

iWork

iWork for Mac is the company's integrated productivity suite designed to help users create, present and publish documents, presentations and spreadsheets. iWork includes Pages for word processing and page layout, Keynote for presentations and Numbers for spreadsheets. The company also has iOS Multi-Touch versions of each iWork application designed specifically for use on iOS devices.

Other Application Software

The company also sells other application software, including its professional line of applications, such as Final Cut Pro, Logic Pro X, and its FileMaker Pro database software.

Accessories

The company sells various Apple-branded and third-party Mac-compatible and iOS-compatible accessories, including Apple TV, headphones, cases, displays, storage devices and various other connectivity and computing products and supplies. The company's subsidiary, Beats Electronics, LLC, makes Beats headphones, speakers, and audio software.

Apple TV

Apple TV connects to consumers' high definition TVs and enables them to access iTunes content directly for streaming HD video, playing music and viewing photos. Content from iTunes Radio, Beats Music and other media services, including Netflix, YouTube, Flickr, Hulu Plus, Vevo, MLB, NBA and NHL is available on Apple TV.

Apple Watch

Apple Watch is a personal electronic device that combines new precision watch technology with an iOS-based user interface created specifically for a smaller device. Apple Watch features Digital Crown, a navigation tool that allows users to scroll, zoom and navigate. The company offers Apple Watch, Apple Watch Sport, and Apple Watch Edition collections.

iOS and Mac Developer Programs

The company's iOS and Mac Developer Programs support app developers with the development, testing and distribution of iOS and Mac apps through the App Store and the Mac App Store. Development tools included with the company's Developer Programs include Xcode, the company's integrated development environment for creating apps for iOS devices and Mac. Xcode includes project management tools; analysis tools to collect, display and compare app performance data; simulation tools to locally run, test and debug apps; tools to simplify the design and development of user interfaces; Swift, the company's new programming language for both iOS and OS X; and the software development kits for iOS and OS X.

The company's Developer Programs also provide access to multiple development resources, including the company's Developer Forums, extensive technical documentation and sample code. The company's Developer Programs also provide developers with access tools and information for submitting their apps to the App Store and the Mac App Store.

Product Support and Services

AppleCare offers a range of support options for the company's customers. These include assistance that is built into software products, printed and electronic product manuals and online support, including product information, as well as technical assistance, the AppleCare Protection Plan (APP) and the AppleCare+ Protection Plan (AC+). APP is a fee-based service that includes two to three years of phone support, hardware repairs and dedicated Web-based support resources. AC+ is a fee-based service available in certain countries for iPhone and iPad. AC+ offers additional coverage under some circumstances for instances of accidental damage in addition to the services offered by APP.

Markets and Distribution

The company sells its products and resells third-party products in most of its major markets directly to consumers and SMBs through its retail and online stores and its direct sales force. The company also employs various indirect distribution channels, such as third-party cellular network carriers, wholesalers, retailers, and value-added resellers.

Business Strategy

The company's business strategy leverages its unique ability to design and develop its own operating systems, hardware, application software and services to provide its customers products and solutions with innovative design, superior ease-of-use and seamless integration. The company's strategy also includes building and expanding its own retail and online stores and its third-party distribution network to effectively reach more customers and provide them with a high-quality sales and post-sales support experience.

Research and Development

The company's research and development expenses included $6.0 billion in 2014.

Seasonality

The company has historically experienced higher net sales in its first quarter (year ended September 2014) compared to other quarters in its year due in part to seasonal holiday demand.

Significant Events

In April 2015, SunPower Corporation's China joint venture partnered with the company to provide solar power to the environmentally-preserved ABA Region.

History

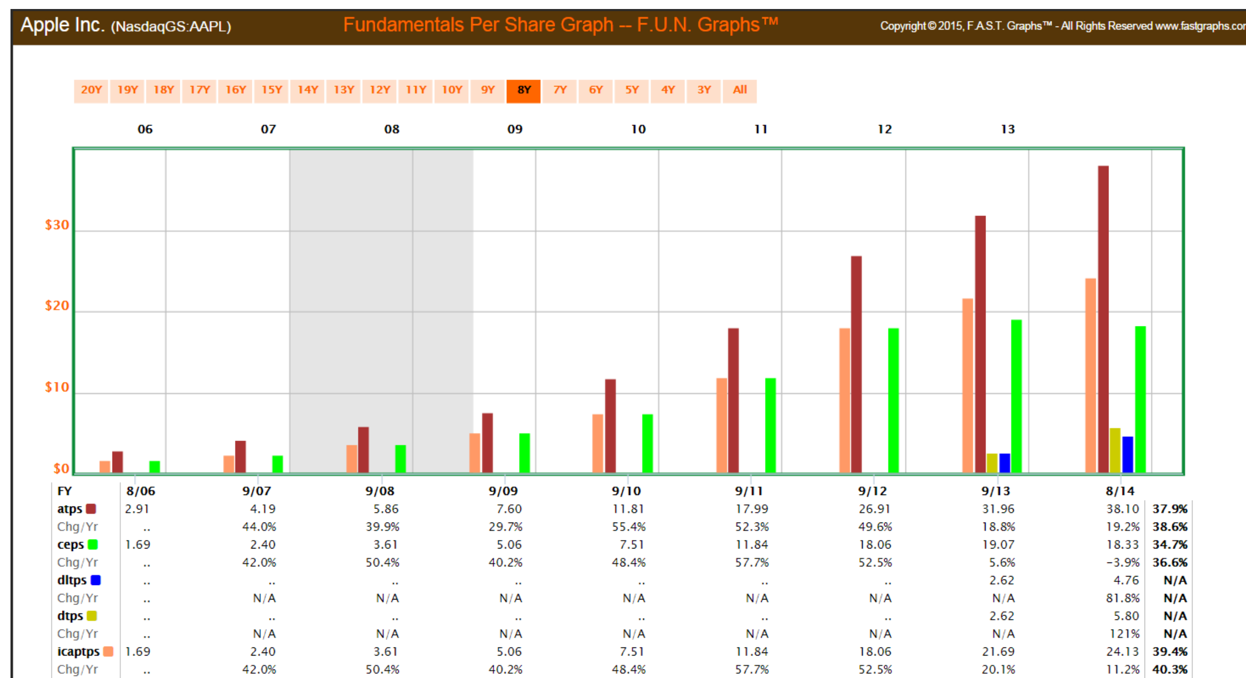
Apple Inc. was founded in 1977. The company was incorporated in the state of California in 1977."

Apple By The Numbers

As I present and review Apple's business by the numbers I will utilize select FUN Graphs depicting some of the company's more noteworthy fundamental underlying numbers. As subscribers to MisterValuation you each have access to the complete set of fundamental metrics through your included subscription to F.A.S.T. Graphs™. Consequently, a secondary objective of this exercise is to familiarize you with this powerful research tool that is included with your subscriptions.

In the Analyze-Out-Loud video included in this presentation, I will run through my analysis of Apple based on the earnings and price correlated F.A.S.T. Graphs™. In addition to covering the historical valuation that the market has applied to Apple's stock, and its current valuation, I will be simultaneously sharing how I personally utilize F.A.S.T. Graphs™ as the first step in a more comprehensive research effort on any company.

With my first graphic I provide a snapshot of some important balance sheet metrics on Apple. These include assets per share (atps), common equity per share or book value (ceps), debt long-term per share (dltps), total debt per share (dtps) and invested capital per share (icaptps). Clearly, Apple has a strong and healthy balance sheet. (Note: To review the entire balance sheet follow the link to F.A.S.T. Graphs™ on the site and select FUN Graphs.)

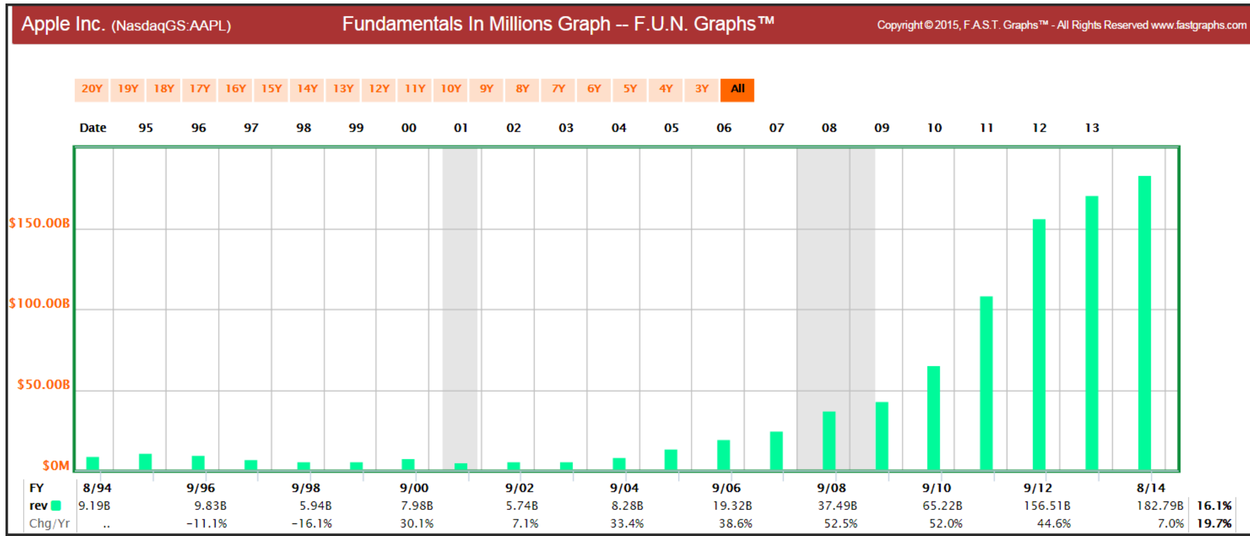


FY	8/06	9/07	9/08	9/09	9/10	9/11	9/12	9/13	8/14	
atps	2.91	4.19	5.86	7.60	11.81	17.99	26.91	31.96	38.10	**37.9%**
Chg/Yr	..	44.0%	39.9%	29.7%	55.4%	52.3%	49.6%	18.8%	19.2%	**38.6%**
ceps	1.69	2.40	3.61	5.06	7.51	11.84	18.06	19.07	18.33	**34.7%**
Chg/Yr	..	42.0%	50.4%	40.2%	48.4%	57.7%	52.5%	5.6%	-3.9%	**36.6%**
dltps	..	..	..	..	..	..	..	2.62	4.76	**N/A**
Chg/Yr	..	N/A	N/A	N/A	N/A	N/A	N/A	N/A	81.8%	**N/A**
dtps	..	..	..	..	..	..	..	2.62	5.80	**N/A**
Chg/Yr	..	N/A	N/A	N/A	N/A	N/A	N/A	N/A	121%	**N/A**
icaptps	1.69	2.40	3.61	5.06	7.51	11.84	18.06	21.69	24.13	**39.4%**
Chg/Yr	..	42.0%	50.4%	40.2%	48.4%	57.7%	52.5%	20.1%	11.2%	**40.3%**

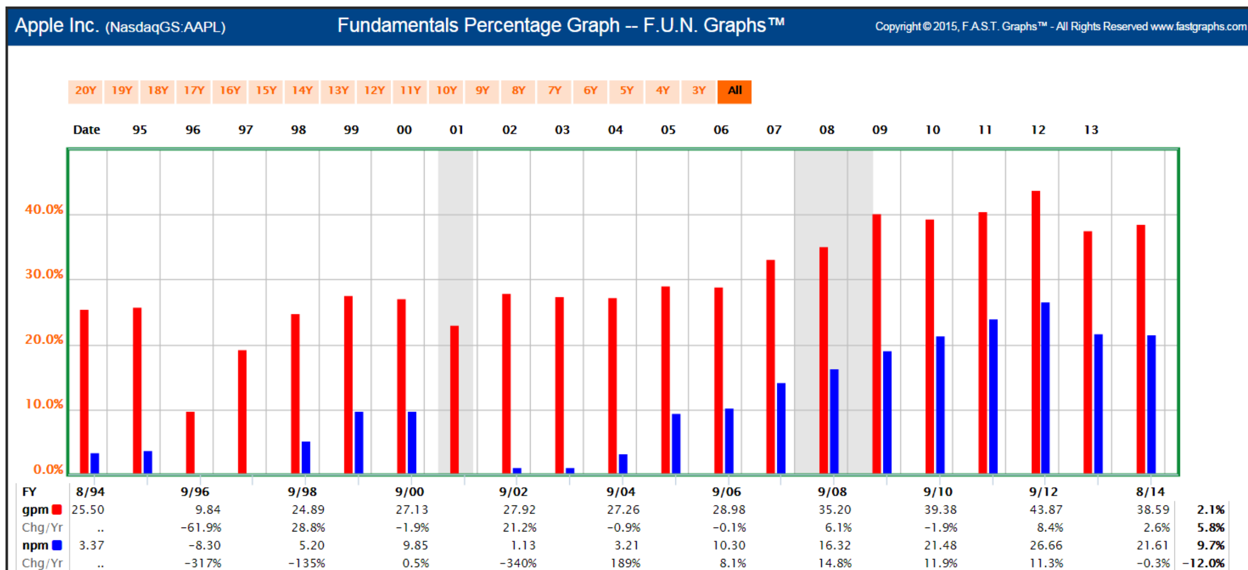
With these next set of graphics, I review the business strength and health of Apple. It is interesting to note that much of Apple's most powerful historical growth coincides with the return of their iconic but deceased leader Steve Jobs. I penned an article on October 6, 2011 just

after Steve Jobs passed away found here that you might find interesting, but more importantly, has relevance to this current offering.

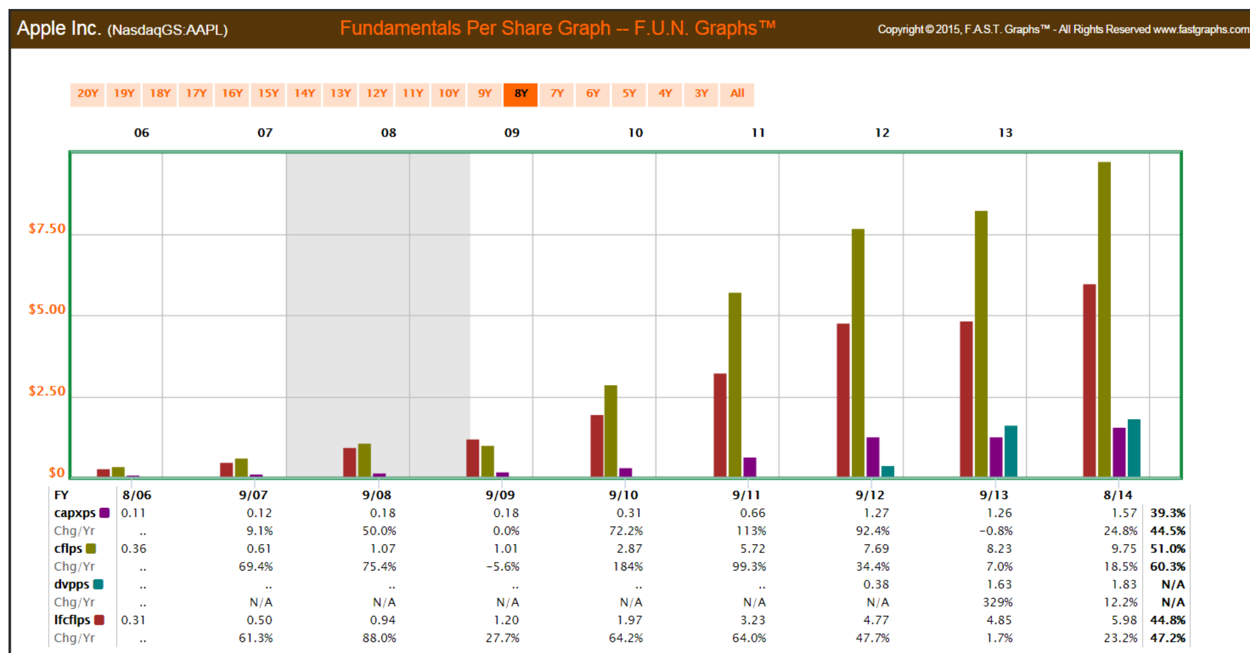
Revenue growth has been incredibly strong since fiscal year 2002. Although due to Apple's current size, it is logical to assume that the rate of change of revenue growth will slow. However, it is also reasonable to assume that it can, and will, continue to grow at above-average rates over the next 3 to 5 years or beyond. I will discuss that in the Analyze-Out-Loud video included.



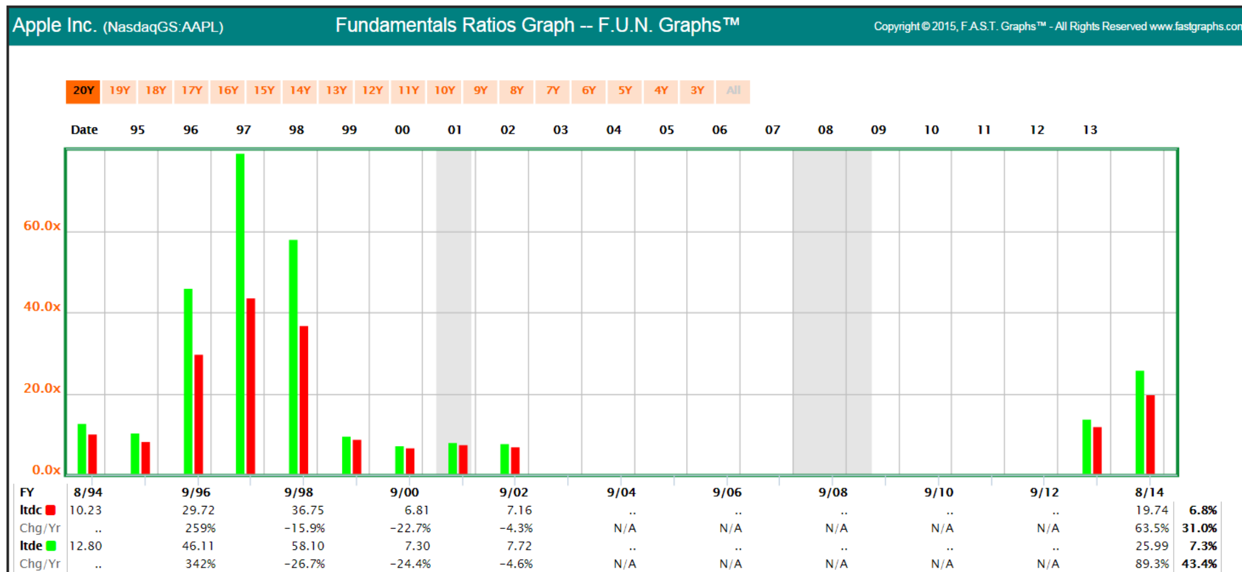
Apple is one of the most profitable companies in the technology sector as evidenced by the following graphic depicting gross profit margin (gpm) and net profit margin (npm). Although both have fallen modestly in recent years, Apple remains one of the most profitable companies in the entire technology sector.



The following snapshot of Apple's cash flow statement provides evidence that the probability remains high for Apple to continue as a highly profitable enterprise going forward. The company's prodigious generation of cash flow per share (cflps) supports continued investment in the company's future growth (capital expenditures per share capxps) and the company's levered free cash flow (lfcflps) more than adequately supports the company's ability to return capital to shareholders through dividends (dvpps) without jeopardizing future above-average growth.

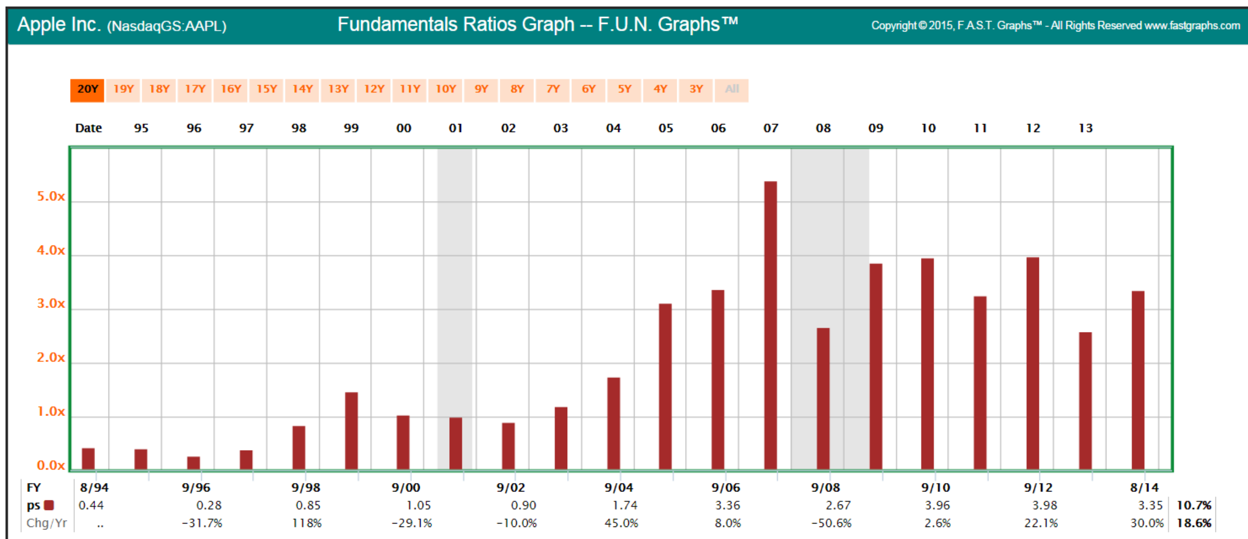


One area where some investors have expressed concern is with Apple's recent addition of debt. The following graphic reviews Apple's long-term debt to capital (ltdc) and long-term debt to equity (ltde). A recent article found here did a great job discussing the pros and cons of Apple's recent debt initiatives. I highly recommend that you take the time to review it.

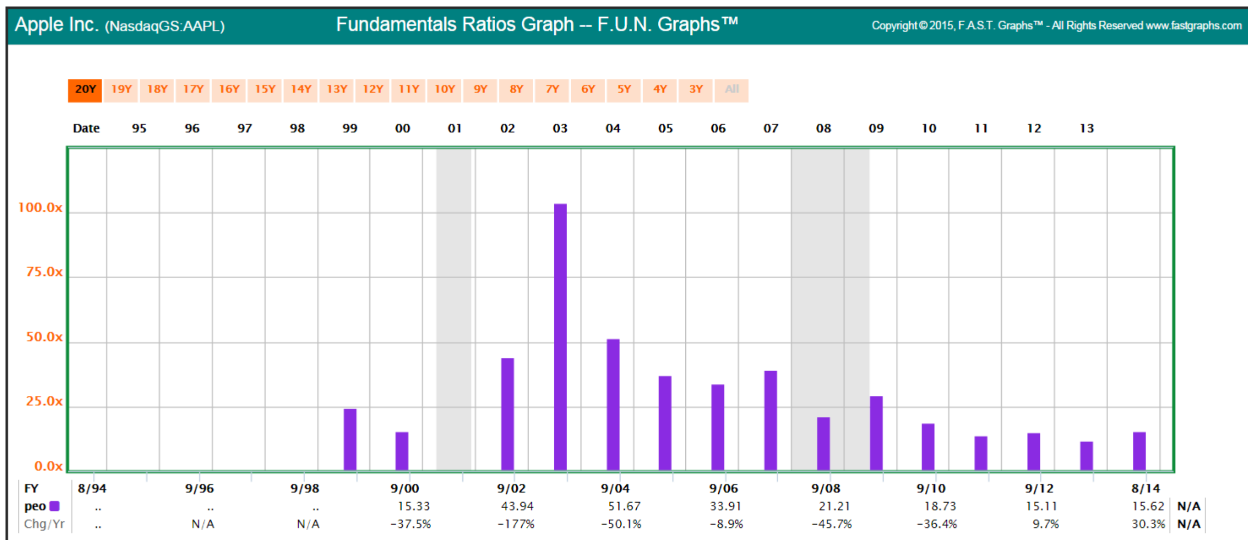


Lastly, and in the spirit of this website, I turn to looking at Apple based on valuation. The primary focal point here is to ask and answer the question is Apple fairly valued today? I would like to interject that Apple is obviously faced with the law of large numbers due to its current size. This is important because it should be acknowledged that it would be unreasonable to expect Apple to continue growing in the future at its historical rates. However, I do not believe it is unreasonable to believe that Apple will continue to grow at significantly above-average rates going forward. But certainly, not at the historical levels they achieved when the company was much smaller.

The first valuation metric I offer is Apple's current price to sales ratio (ps). Apple's current price to sales ratio of approximately 3.35 is well within its normal range over the past decade or so. As an interesting aside, Apple's price to sales ratio had significantly improved during the Steve Jobs' return era, and has moderately fallen since Tim Cook took the reins. However, I believe some of that is attributed to the company's current size.

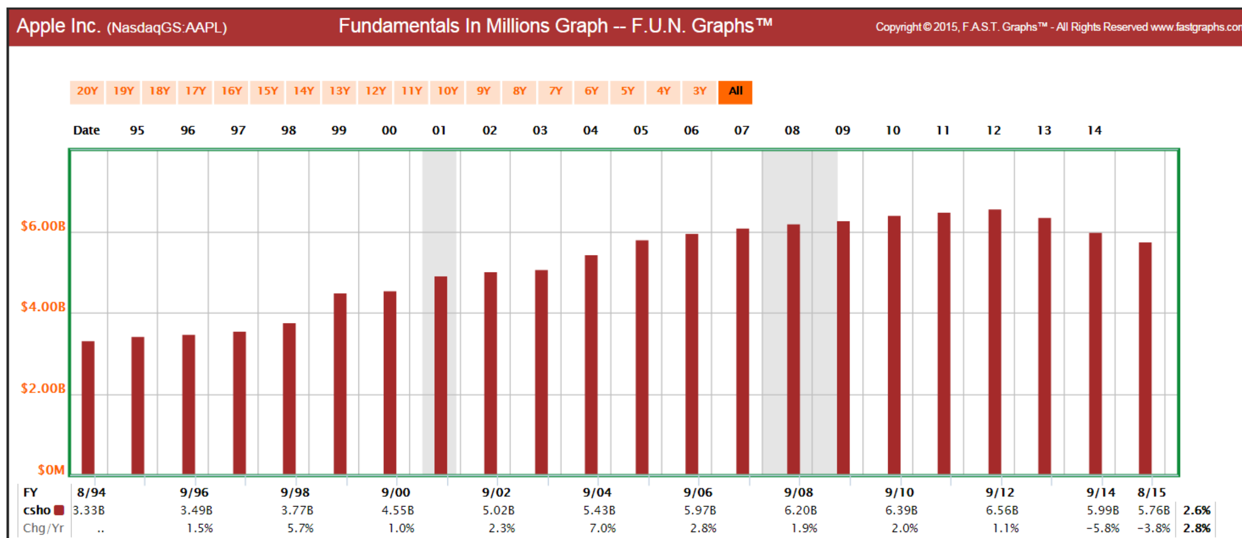


With my next graphic I review Apple's current valuation based on operating earnings. Clearly, Apple is currently available at the low end of its historical normal price to operating earnings (peo). Obviously, the market has recently been valuing Apple shares lower than they normally have. However, with my Analyze-Out-Loud video included with this presentation, I will present my views and rationale on why I believe this is occurring, as well as the opportunity I believe it represents going forward.



With my final graphic on Apple, I present the company's recent share buyback activity in relation to the company's historical norms. Up through fiscal year 2012, Apple was increasing their share count each year. In other words, they were raising capital. However, since fiscal year 2012 the company has been reducing shares. I believe it's interesting to note that Apple was

issuing shares when the valuation was high (see the above FUN Graph) and the company has been returning capital to shareholders by reducing shares when valuation was low.



Summary and Conclusions

Apple represents one of my highest conviction common stock investments, and as such, has been a core portfolio holding since 2011. When I first added Apple, it was purely on the basis of a growth stock. More recently, the company has morphed into a compelling dividend growth investment. However, and at the same time, I contend that it has not lost its appeal as a growth stock. At its current valuation, I believe this company still offers compelling long-term total return potential.

I understand that many dividend growth purists may feel that the company does not offer a high enough current yield for inclusion into their portfolios. However, I would add that consideration could be given to augmenting Apple's current yield by pairing it with a higher-yielding investment, perhaps, and for example, in the REIT space. Even the investor that is primarily focused on maximum current income at reasonable levels of risk might benefit from the opportunity for adding the growth and total return potential that Apple offers.

With the included Analyze-Out-Loud video on Apple I will review the company's past, present and potential future earnings and price relationship and opportunity. Simultaneously, I will be attempting to provide subscribers greater insights into how to most effectively utilize the F.A.S.T. Graphs™ fundamentals analyzer software tool that is included with your subscriptions.

My objective with this site is to help each of you become more prudent investors through focusing on and better understanding the importance of valuation as it relates to your future investment success. But more importantly, my goal is to help you determine fair valuation and provide you the opportunity to research common stock investments deeper and faster. Therefore,

I thought it was fitting to present Apple as my first research recommendation because I do believe it is an investment opportunity that has appeal for most every investor, regardless of whether your objective is income, total return or safety.

Amazon Analysis as of May 25, 2017

Amazon has been a controversial stock, especially amongst value investors. There are many reasons for this, but Amazon has been difficult to value due to tremendous growth coupled with low to negative earnings. In the article and video below from 5//25/2017, Chuck makes a case that Amazon was fairly valued based on the fundamentals. Given Amazon's lack of profitability to that point, this position was somewhat counter to prevailing old school value thinking. However, as Chuck noted, sales and cash flow growth were strong for Amazon and earnings were difficult to judge due to the amount of reinvestment needed. $10,000 invested 5/29/2015 and held to the date of this writing (12/7/2020) would be worth $73,815, good for a total return of 638% and an annualized return of 43.7%.

Amazon: the Valuation Dark Side

It is no secret that Amazon (AMZN) has been a disruptive force, especially relating to the retail sector. On the other hand, the company is also an enigma to the value focused fundamental investor such as yours truly. Over its entire operating history as a publicly traded company, Amazon has commanded what can only be called stratospheric earnings multiples (P/E

ratios). Whether you're looking at trailing twelve month (ttm) earnings, forward earnings or a blend of the two, Amazon's P/E ratio is typically reported at more than 100 times earnings.

This seems bizarre because from a profitability point of view, Amazon looks like a real dud. Their gross profit margins have historically come in above 20%, and for 2016 their gross profit margin exceeded 35%. However, net profit margins are a different story entirely. When they do generate a net profit margin, which they only occasionally do, it is typically razor thin. Furthermore, Amazon has often generated large negative net profit margins. Therefore, the primary reason why their P/E ratios are so high is because they produce very little in the way of earnings (E).

Amazon: The Fairly Valued Perspective

On the other hand, Amazon's revenue growth has been nothing short of extraordinary. The same can be said for Amazon's prodigious operating cash flow growth, and the company does report a lot of free cash flow, although there is some controversy related to how Amazon reports free cash flow. Here is an article written by Seeking Alpha author who goes by Slim Shady that debates the authenticity of how Amazon reports free cash flow.

Nevertheless, even though the company generates significant cash flows, its record of returning cash to investors would have to be given a resounding F or failing grade. Amazon is a growth stock, and as such, pays no dividend so there is no cash returned in this traditional sense. Additionally, Amazon does not buy back shares; instead, they have increased their share count by approximately 5% per annum since 1996.

However, the point that Amazon is a growth stock should not be taken lightly. A true growth stock like Amazon requires capital investment to fund their growth. Therefore, it's quite typical that a growth stock does not pay a dividend. Instead of paying a dividend, growth stocks like Amazon utilize every bit of capital at their disposal to continue funding future growth. This also speaks to the reason why Amazon raises capital by issuing additional shares. As an aside, Amazon also generously utilizes their shares to compensate employees of the company. Nevertheless, as far as growth stocks go, Amazon, led by Jeff Bezos, could arguably be called the most growth hungry company in history.

But perhaps most importantly as it relates to this article, this growth hungry corporate culture speaks to Amazon's lack of profitability. Jeff Bezos has clearly been content and willing to forgo profits in favor of achieving rapid growth. Nevertheless, even though Amazon is light on profitability, the company's revenue and reported operating cash flow growth have indisputably created enormous shareholder value. Consequently, I suggest that Amazon actually appears fairly valued when shares are viewed from the perspective of operating cash flow and operating cash flow growth.

In conducting research for this article I came across the following article published on September 9, 2014 by Benedict Evans titled “Why Amazon Has No Profits (And Why It Works).

I believe the following excerpt nicely summarizes the Amazon growth story:

“Amazon has perhaps 1% of the US retail market by value. Should it stop entering new categories and markets and instead take profit, and by extension leave those segments and markets for other companies? Or should it keep investing to sweep them into the platform? Jeff Bezos’s view is pretty clear: keep investing, because to take profit out of the business would be to waste the opportunity. He seems very happy to keep seizing new opportunities, creating new businesses, and using every last penny to do it.

Still, investors put their money into companies, Amazon and any other, with the expectation that at some point they will get cash out. With Amazon, Bezos is deferring that profit-producing, investor-rewarding day almost indefinitely into the future. This prompts the suggestion that Amazon is the world’s biggest ‘lifestyle business’ – Bezos is running it for fun, not to deliver economic returns to shareholders, at least not any time soon.

But while he certainly does seem to be having fun, he is also building a company, with all the cash he can get his hands on, to capture a larger and larger share of the future of commerce. When you buy Amazon stock (the main currency with which Amazon employees are paid, incidentally), you are buying a bet that he can convert a huge portion of all commerce to flow through the Amazon machine. The question to ask isn’t whether Amazon is some profitless Ponzi scheme, but whether you believe Bezos can capture the future. That, and how long are you willing to wait?”

The following video takes a fundamental look at how the market has historically valued Amazon. When you look at the company from the perspective of earnings, Amazon looks extremely overvalued. However, when viewed from the perspective of operating cash flow, Amazon looks fairly valued. But most importantly, I believe this video indisputably illustrates that the market has historically valued Amazon based on its prodigious operating cash flow generation.

Summary and Conclusions

I feel safe in saying that Amazon is a very controversial stock and company. As a result, it has many detractors and many advocates. But regardless of which side you are on, its historical performance has been indisputably awesome. Perhaps what I find most interesting about this company is how it has achieved what it has by being willing to step out of the box. Historically, Amazon has not been an especially profitable company. On the other hand, it has generated extremely high revenue and operating cash flow growth. So far, the market has been willing to give it a pass on earnings. Unfortunately, I have never owned the stock but find myself wishing that I had.

Nevertheless, I think it's only fair to offer some caution. Before an investor makes a buy, sell or hold decision on Amazon, they should at least consider whether the market will be willing to continue to overlook their lack of profitability. So far so good, caveat emptor.

Repurchases/Buybacks

The value and benefits, or lack thereof, of share buybacks to the future fortunes of a company and their shareholders is one of the most hotly debated subjects on popular financial blogs such as Seeking Alpha. Unfortunately, at least based on my own personal experience, most of the arguments are predicated on opinions and beliefs in lieu of the facts.

Consequently, the primary thesis behind this article is to provide a more fact-based discussion regarding the desirability of share buybacks devoid of emotional or opinionated arguments. Stated more directly, my objective will be to answer the question posed in the title of this article: to buy back shares, or to not buy back shares, that is the question.

My Inspiration Was Not Positively Instigated

My inspiration for penning this article, which I feel was long overdue, came as a result of a loyal reader of my work sharing a rather one-sided, prejudicial and opinionated article on share buybacks that he/she read on MorningStarAdvisor. The article was authored by Rex Nutting of MarketWatch on April 24, 2015 with the provocative title "Update: How the Stock Market Destroyed the Middle Class." From my perspective, this article represents a classic example of an opinionated and prejudiced argument lacking a factual representation as evidenced by the following provoking excerpt:

"But one under-appreciated factor is a pervasive business model that encourages top managers of American corporations to loot their company for short-term gains, depriving those companies of the funds they need to build and enlarge, and invest in their workers for the long haul.

How do they loot their company? By using large stock buybacks to manage the short-term objectives that trigger higher compensation for themselves. By using those stock buybacks to manipulate the share price, which allows them to use inside information to time their own stock sales. By using buybacks to funnel most of the company's profits back to shareholders (including themselves). They use the stock market to loot their companies."

In my opinion (pun intended) this article clearly expressed the author's negative and prejudiced opinion and view of share buybacks while simultaneously alleging that they are destructive to the economy and the middle class. There were facts presented, and I'm going to accept that they were accurate; however, I do not accept the fact that they supported his economic destruction

thesis. The reader can form their own opinions by following this link to the entire article found here.

The truth is that share buybacks are neither good nor bad in their own right. Under certain circumstances and in certain instances, share buybacks can be a very bad or poor use of corporate capital. Under other circumstances and instances, share buybacks can be the most prudent and beneficial use of corporate capital. Therefore, prejudging all share buybacks as bad or destructive is just as wrong as holding prejudiced views or judgment about people based on race, creed or color.

When Share Buybacks Are Good and When They Are Bad

In his 2011 letter to shareholders of Berkshire Hathaway, renowned investor Warren Buffett wrote extensively on his and partner Charlie Munger's position on share buybacks. Here is a link to the full letter, but what follows are a few important excerpts that relate to the subject of this article:

"Charlie and I favor repurchases when two conditions are met: first, a company has ample funds to take care of the operational and liquidity needs of its business; second, its stock is selling at a material discount to the company's intrinsic business value, conservatively calculated."

Personally, I believe that Warren Buffett succinctly hit the nail on the head with this one sentence. However, the first condition can be very difficult to accurately assess, and admittedly open to some debate. On the other hand, that is not to say that it cannot be properly evaluated, it just takes a little work and digging under the hood of a company, the competitive landscape of its industry and its business model to correctly ascertain.

The second condition is easier to determine and evaluate, and represents the primary financial subject that I have dedicated my professional life to-sound valuation. It is a prudent, sound and long-term profitable tactic when a company can repurchase shares at sound and attractive valuations. In contrast, share repurchases can represent a very unsatisfactory and destructive use of capital when valuations are unsound or high. In the same letter, Warren Buffett had this to add on the subject:

"We have witnessed many bouts of repurchasing that failed our second test. Sometimes, of course, infractions – even serious ones – are innocent; many CEOs never stop believing their stock is cheap. In other instances, a less benign conclusion seems warranted. It doesn't suffice to say that repurchases are being made to offset the dilution from stock issuances or simply because a company has excess cash. Continuing shareholders are *hurt* unless shares are purchased below intrinsic value. The first law of capital allocation – whether the money is slated for acquisitions or share repurchases – is that what is smart at one price is dumb at another. (One CEO who always stresses the price/value factor in repurchase decisions is Jamie Dimon at J.P. Morgan; I recommend that you read his annual letter.)"

Interestingly, Warren Buffett then went on to use one of his large holdings, International Business Machine (IBM), as his example to illustrate his points more comprehensively. I found this interesting for a couple of reasons. First of all, because I am also long IBM, and because I authored two articles on the company found here and here that created quite a stir and large and lively comment threads.

The second reason I found this interesting, is based on the date in which Warren Buffett made the comments (his 2011 letter) and the subsequent corresponding share buyback behavior of IBM's management team. Next I will share Warren Buffett's comments on IBM and its management relative to their share repurchases behavior, and then I will provide factual evidence utilizing the F.A.S.T. Graphs™ fundamentals analyzer software tool to provide supporting evidence of the veracity of his words.

"Let's use IBM as an example. As all business observers know, CEOs Lou Gerstner and Sam Palmisano did a superb job in moving IBM from near-bankruptcy twenty years ago to its prominence today. Their operational accomplishments were truly extraordinary. But their financial management was equally brilliant, particularly in recent years as the company's financial flexibility improved. Indeed, I can think of no major company that has had better financial management, a skill that has materially increased the gains enjoyed by IBM shareholders. The company has used debt wisely, made value-adding acquisitions almost exclusively for cash and aggressively repurchased its own stock.

Today, IBM has 1.16 billion shares outstanding, of which we own about 63.9 million or 5.5%. Naturally, what happens to the company's earnings over the next five years is of enormous importance to us. Beyond that, the company will likely spend $50 billion or so in those years to repurchase shares. Our quiz for the day: What should a long-term shareholder, such as Berkshire, cheer for during that period?

I won't keep you in suspense. We should wish for IBM's stock price to *languish* throughout the five years.

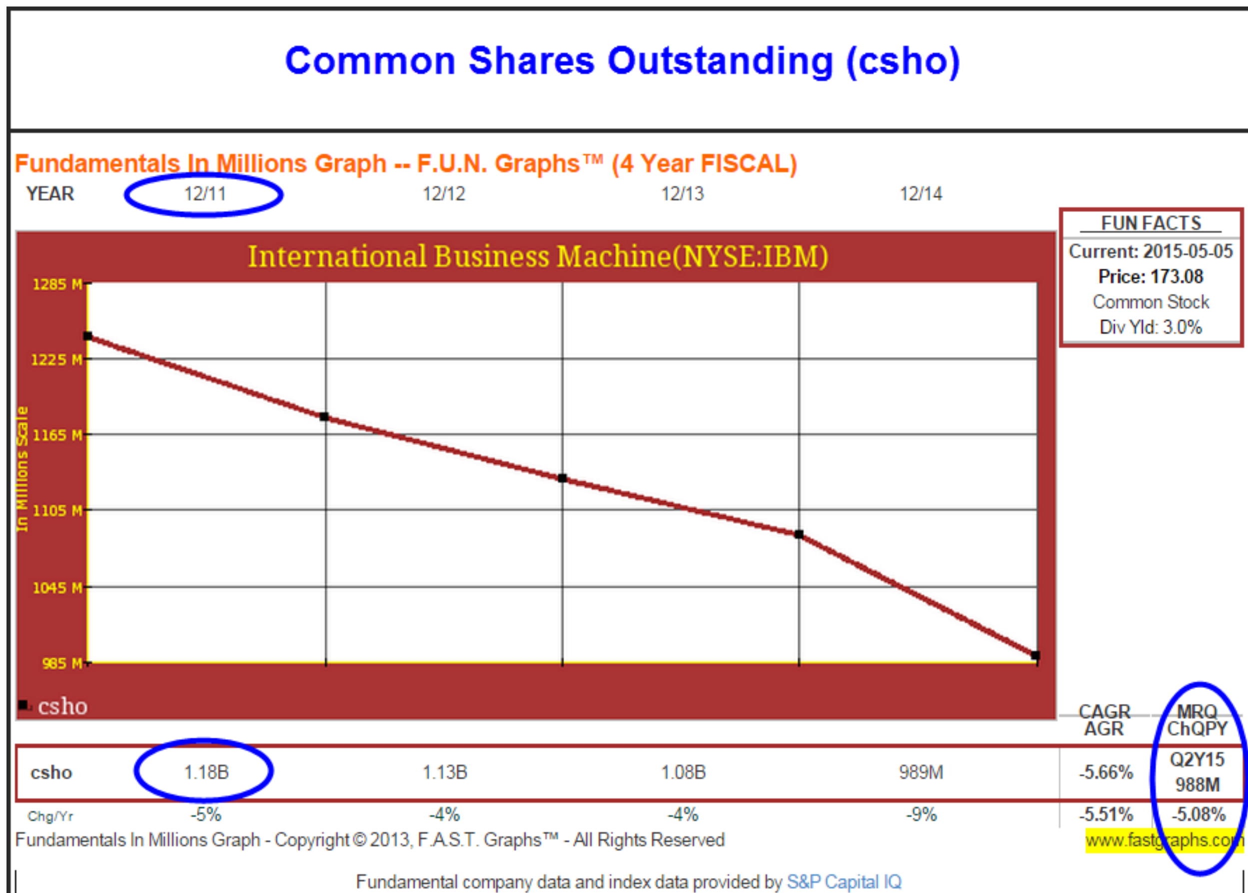
Let's do the math. If IBM's stock price averages, say, $200 during the period, the company will acquire 250 million shares for its $50 billion. There would consequently be 910 million shares outstanding, and we would own about 7% of the company. If the stock conversely sells for an average of $300 during the five-year period, IBM will acquire only 167 million shares. That would leave about 990 million shares outstanding after five years, of which we would own 6.5%.

If IBM were to earn, say, $20 billion in the fifth year, our share of those earnings would be a full $100 million greater under the "disappointing" scenario of a lower stock price than they would have been at the higher price. At some later point our shares would be worth perhaps $1 1⁄2 billion more (1 ½ billion dollars) than if the "high-price" repurchase scenario had taken place.

The logic is simple: If you are going to be a net buyer of stocks in the future, either directly with your own money or indirectly (through your ownership of a company that is repurchasing shares), you are *hurt* when stocks rise. You benefit when stocks swoon. *Emotions*, however, too often complicate the matter: Most people, including those who will be net buyers in the future, take comfort in seeing stock prices advance. These shareholders resemble a commuter who rejoices after the price of gas increases, simply because his tank contains a day's supply."

Warren Buffett's Math Was Correct

I find it fascinating, but not surprising, that Warren Buffett's math in 2011 was prophetic and almost precisely correct. As it turns out, his statement that it would leave about 990 shares outstanding after five years came out almost exactly as he prophesies. As the following FUN Graph (fundamental underlying numbers) illustrates, IBM had 988 million shares outstanding at the end of its second fiscal quarter 2015.

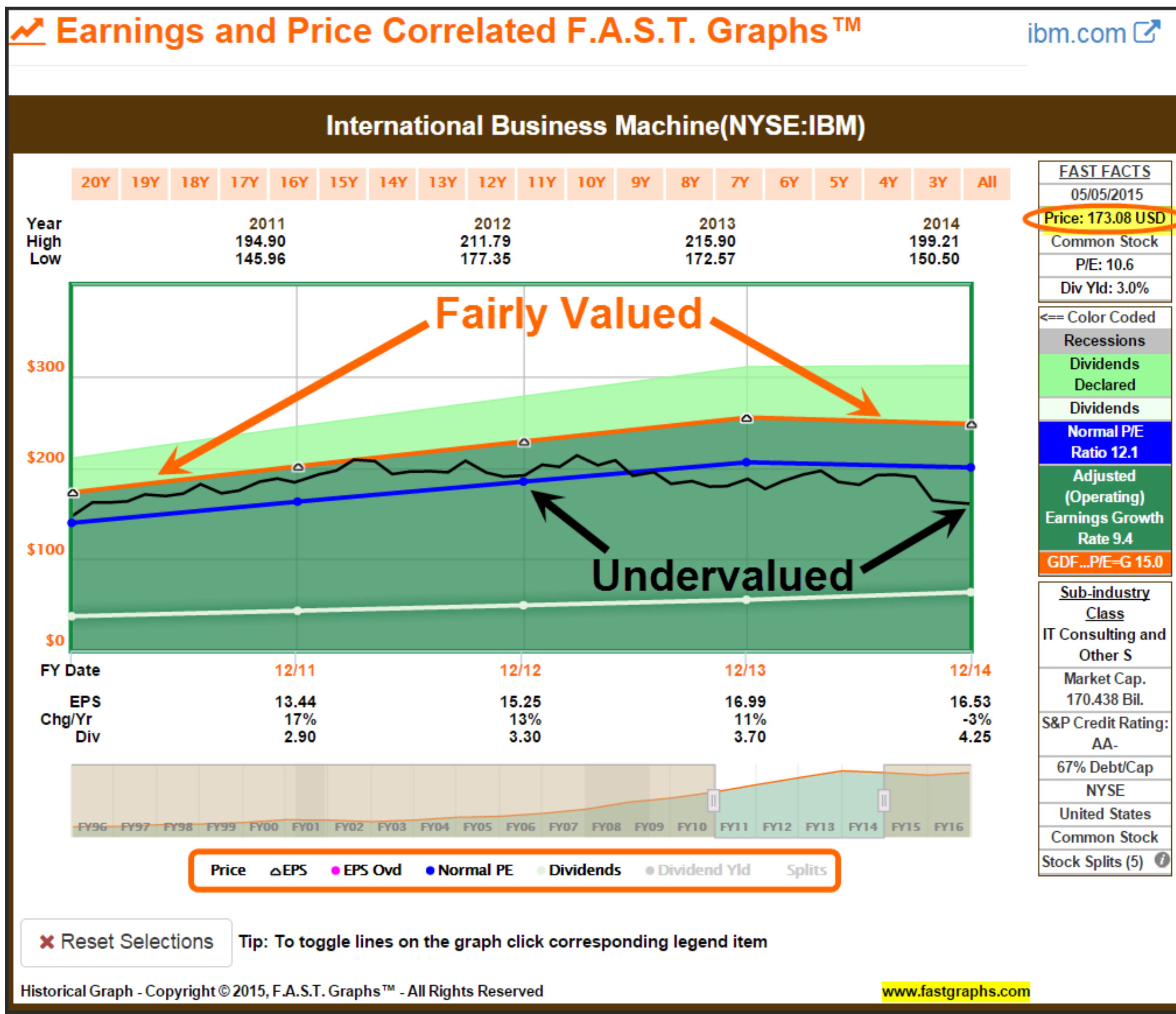


Warren Buffett's Wishes Were Fulfilled

Regarding the price action that he hoped for, his wishes were fulfilled and then some. Here is what he hoped for:

"Charlie and I don't expect to win many of you over to our way of thinking – we've observed enough human behavior to know the futility of that – but we do want you to be aware of our personal calculus. And here a confession is in order: In my early days I, too, rejoiced when the market rose. Then I read Chapter Eight of Ben Graham's *The Intelligent Investor*, the chapter dealing with how investors should view fluctuations in stock prices. Immediately the scales fell from my eyes, and low prices became my friend. Picking up that book was one of the luckiest moments in my life."

Since 2011 IBM's stock price has languished between the $175-$200 range since he made his wish, he and partner Charlie should be quite happy. The following earnings and price correlated F.A.S.T. Graphs™ on IBM since 2011 illustrates the undervaluation that supported their share repurchase activity.

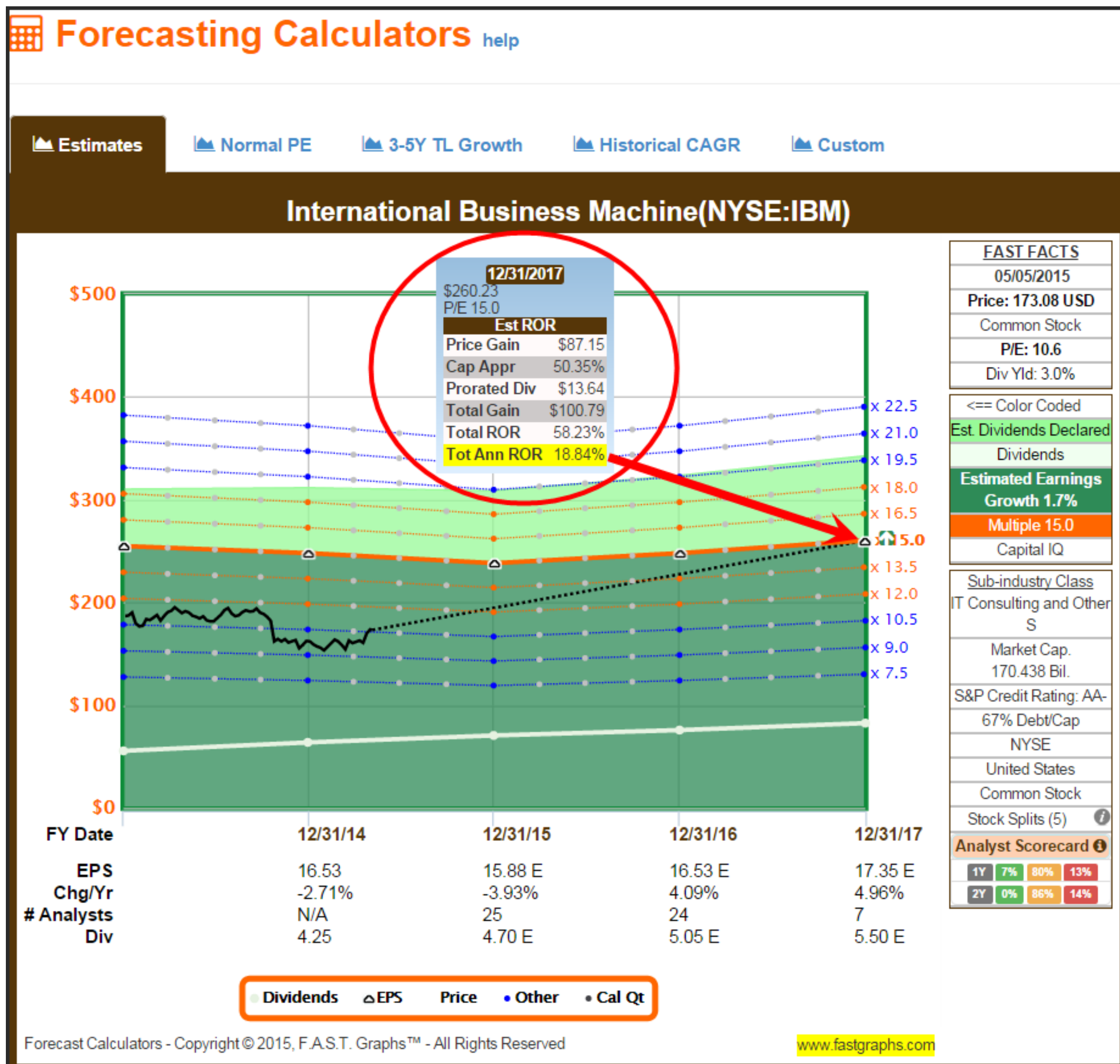


Intermediate Consensus Estimates for IBM

Later in that same letter, Warren Buffett went on to point out that his investment in IBM will be determined primarily by its future earnings as follows:

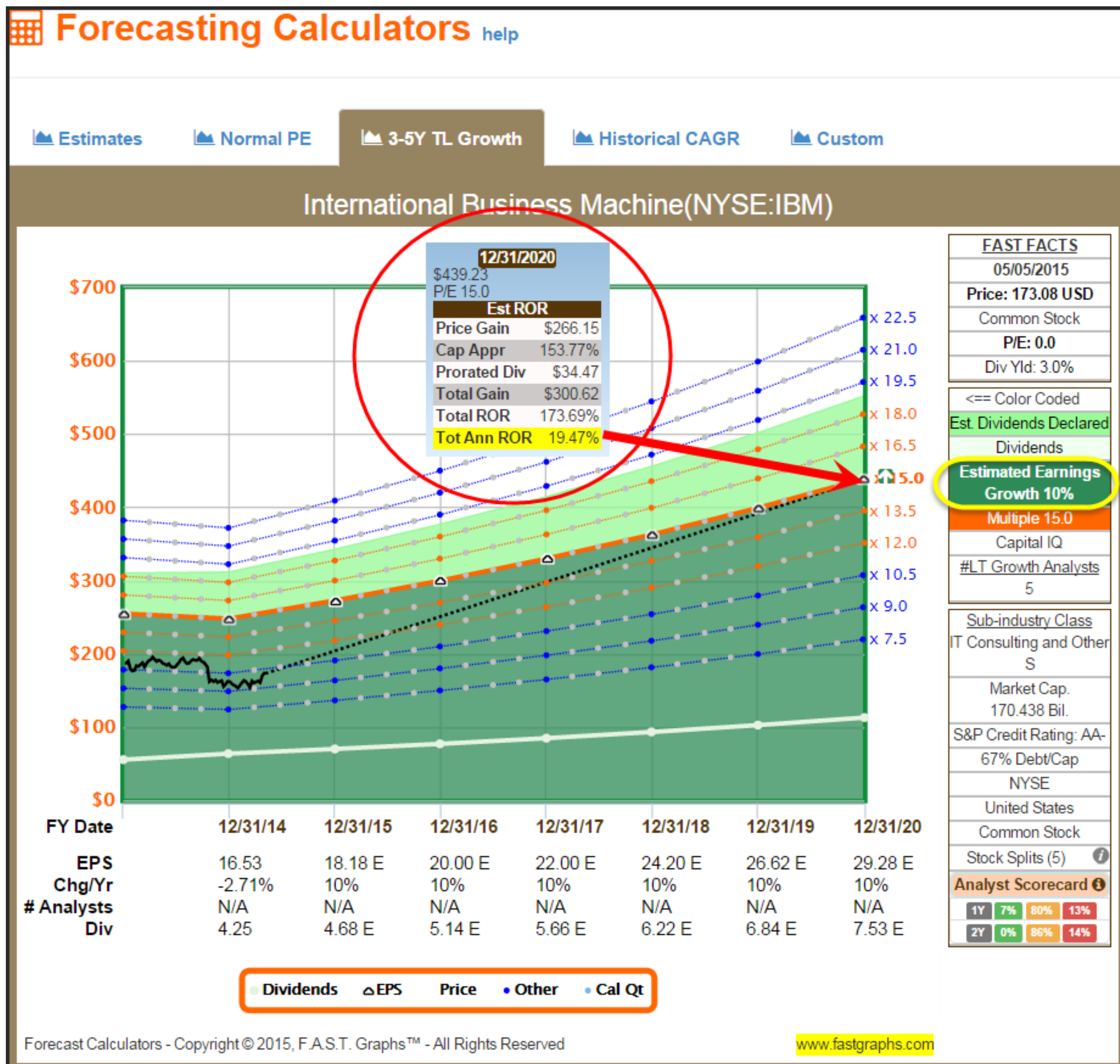
"In the end, the success of our IBM investment will be determined primarily by its future earnings. But an important secondary factor will be how many shares the company purchases with the substantial sums it is likely to devote to this activity. And if repurchases ever reduce the IBM shares outstanding to 63.9 million, I will abandon my famed frugality and give Berkshire employees a paid holiday."

The following "Forecasting Calculator" based on consensus intermediate-term earnings estimates for IBM represents an attractive opportunity out to year-end 2017.



Long-Term (3 to 5 Year) Consensus Estimates for IBM

Since Warren Buffett understands that his future returns will be a function of future earnings growth, the longer-term (3-5 year) consensus trend line earnings growth rate for IBM is even more promising. It seems logical to me that if IBM comes close to meeting those earnings estimates, then the combination of potential P/E ratio expansion and earnings growth promise to be quite rewarding.



Two High Valuation Cases Where Share Buybacks May Be Imprudent: Nike and McDonalds

There are two other high profile companies that have been aggressively buying back their shares, they are Nike (NKE) and McDonald's (MCD). With the first example, Nike, there are a couple of facts that should clearly support current overvaluation. First of all, Nike grew earnings at the strong rate of 12.2% since 1996. But more importantly, the company's stock price rarely traded above a P/E ratio of 20 (the dark blue line on the graph) over that timeframe. However, since the beginning of 2013, Nike's stock price has continuously traded at a P/E ratio valuation significantly above the long-term norm.

Earnings and Price Correlated F.A.S.T. Graphs™ nikeinc.com

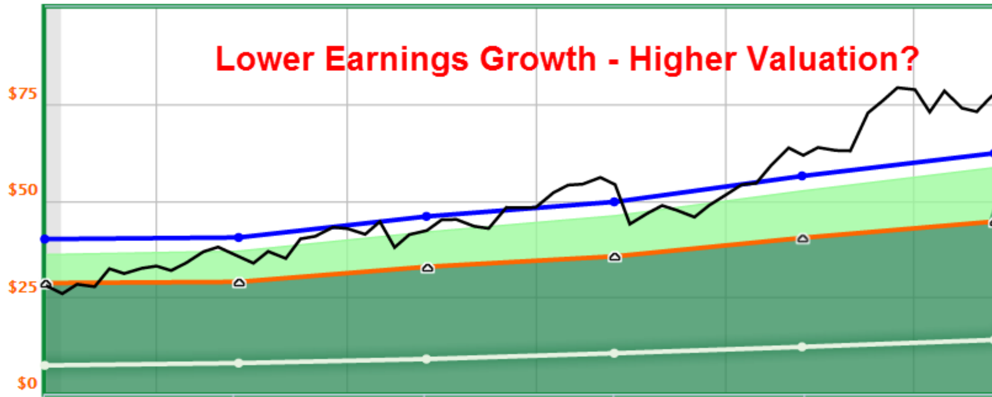
What is really both amazing and confusing about Nike's recent high valuation is the fact that its earnings growth rate has actually fallen dramatically to 9.2% since fiscal year 2009 (May). Clearly, Nike's stock has become popular, but that popularity is not clearly supported by any surge or acceleration in its operating results.

Earnings and Price Correlated F.A.S.T. Graphs™ nikeinc.com

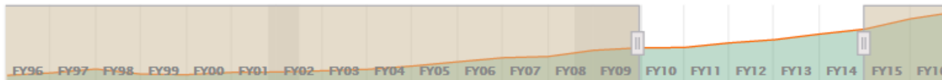
Nike, Inc.(NYSE:NKE)

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

Year	2010	2011	2012	2013
High	46.24	49.12	57.41	80.26
Low	30.45	34.72	42.55	51.40



FY Date	5/10	5/11	5/12	5/13	5/14
EPS	1.93	2.19	2.37	2.69	2.97
Chg/Yr	1%	13%	8%	14%	10%
Div	0.53	0.60	0.70	0.81	0.93



Price EPS EPS Ovd Normal PE Dividends Dividend Yld Splits

FAST FACTS
05/05/2015
Price: 100.42 USD
Common Stock
P/E: 28.6
Div Yld: 1.1%

<== Color Coded
Recessions
Dividends Declared
Dividends
Normal P/E Ratio 20.9
Adjusted (Operating) Earnings Growth Rate 9.2
GDF...P/E=G 15.0

Sub-industry Class
Footwear
Market Cap. 86.336 Bil.
S&P Credit Rating: AA-
8% Debt/Cap
NYSE
United States
Class B Common Stock
Stock Splits (6)

✖ Reset Selections Tip: To toggle lines on the graph click corresponding legend item

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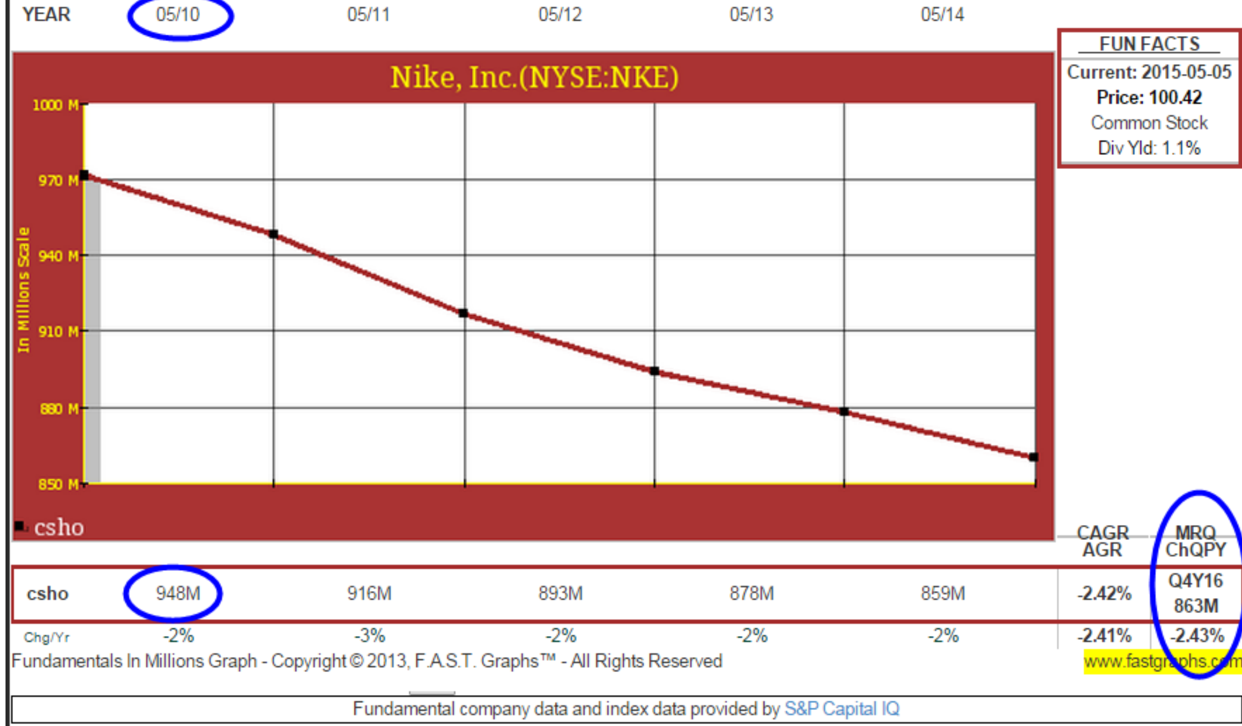
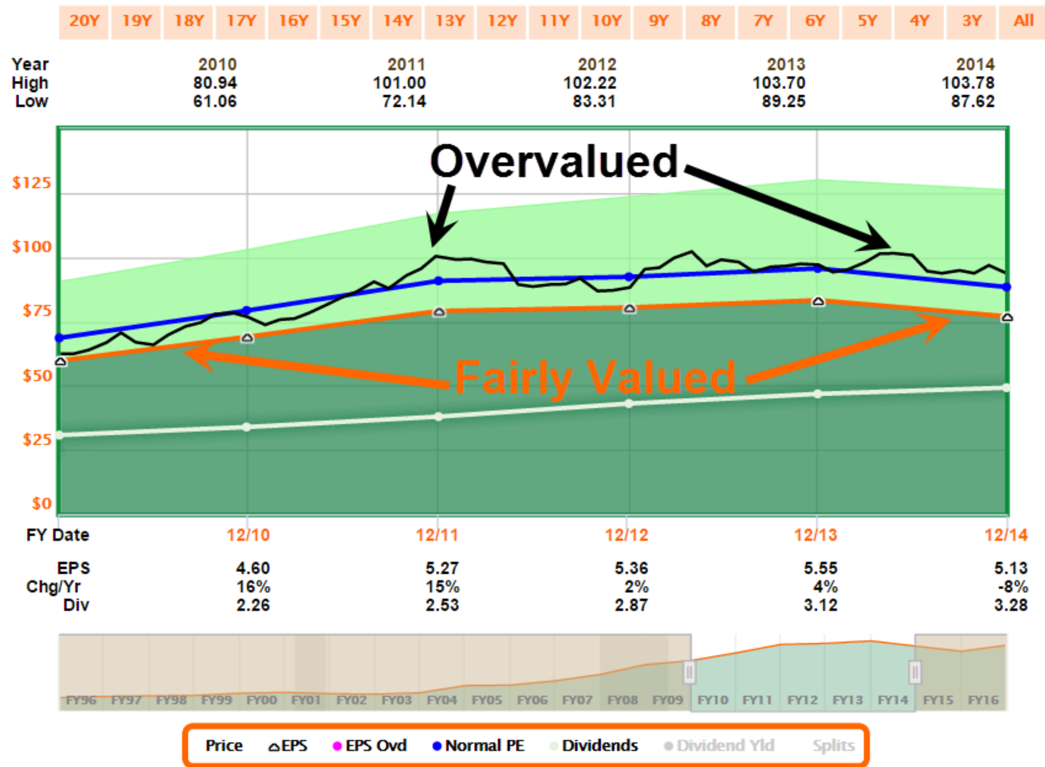
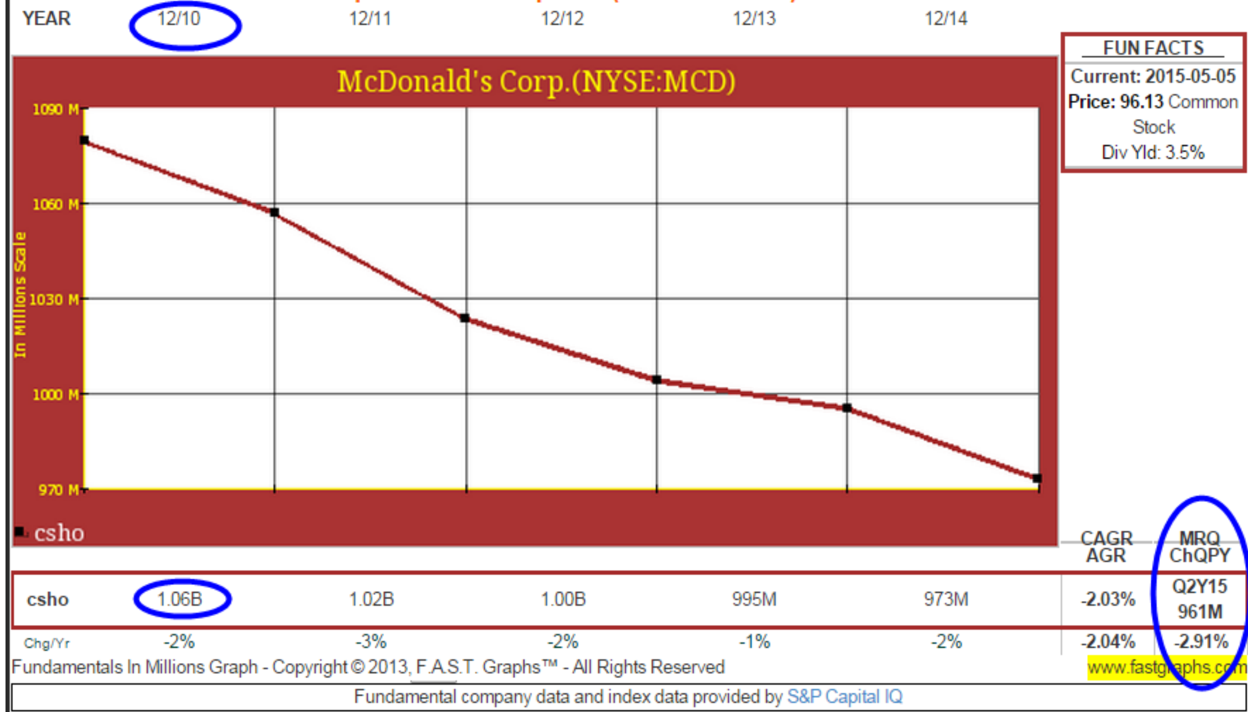
Nevertheless, in spite of Nike's current high valuation, management has been aggressively repurchasing shares outstanding. The share count has fallen from 948 million in fiscal year 2010, to only 863 million during their last quarter. If Nike's stock price were to revert to the mean, as logic would indicate it should, then significant shareholder capital would be destroyed. Consequently, where I would give IBM a high grade on their buyback program, I would give Nike a very low grade, and potentially even a failing grade.



My second example looks at McDonald's, who also has been repurchasing shares at a high valuation. However, in this case, I believe the argument could be made that McDonald's and its shareholders would be better served investing capital directly in their business. Their recently announced turnaround plan somewhat supports my contention.

Just as I did with Nike, the following earnings and price correlated graph followed by McDonald's share repurchase activity supports my contention. Once again, we see a case where management may be misguided by purchasing shares when valuations are high. Especially considering the fact that this company may, in fact, require capital investment in order to right their ship.


Earnings and Price Correlated F.A.S.T. Graphs™
aboutmcdonalds.com
McDonald's Corp.(NYSE:MCD)
20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All
Year 2010 2011 2012 2013 2014
High 80.94 101.00 102.22 103.70 103.78
Low 61.06 72.14 83.31 89.25 87.62
Overvalued
Fairly Valued
$125
$100
$75
$50
$25
$0
FY Date 12/10 12/11 12/12 12/13 12/14
EPS 4.60 5.27 5.36 5.55 5.13
Chg/Yr 16% 15% 2% 4% -8%
Div 2.26 2.53 2.87 3.12 3.28
FY96 FY97 FY98 FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16
Price EPS EPS Ovd Normal PE Dividends Dividend Yld Splits
Reset Selections
Tip: To toggle lines on the graph click corresponding legend item
Historical Graph - Copyright © 2015, F.A.S.T. Graphs™ - All Rights Reserved
www.fastgraphs.com
FAST FACTS
05/05/2015
Price: 96.13 USD
Common Stock
P/E: 19.3
Div Yld: 3.5%
<== Color Coded
Recessions
Dividends Declared
Dividends
Normal P/E Ratio 17.2
Adjusted (Operating) Earnings Growth Rate 5.2
GDF...P/E=G 15.0
Sub-industry Class
Restaurants
Market Cap. 92.201 Bil.
S&P Credit Rating: A-
53% Debt/Cap
NYSE
United States
Common Stock
Stock Splits (10)

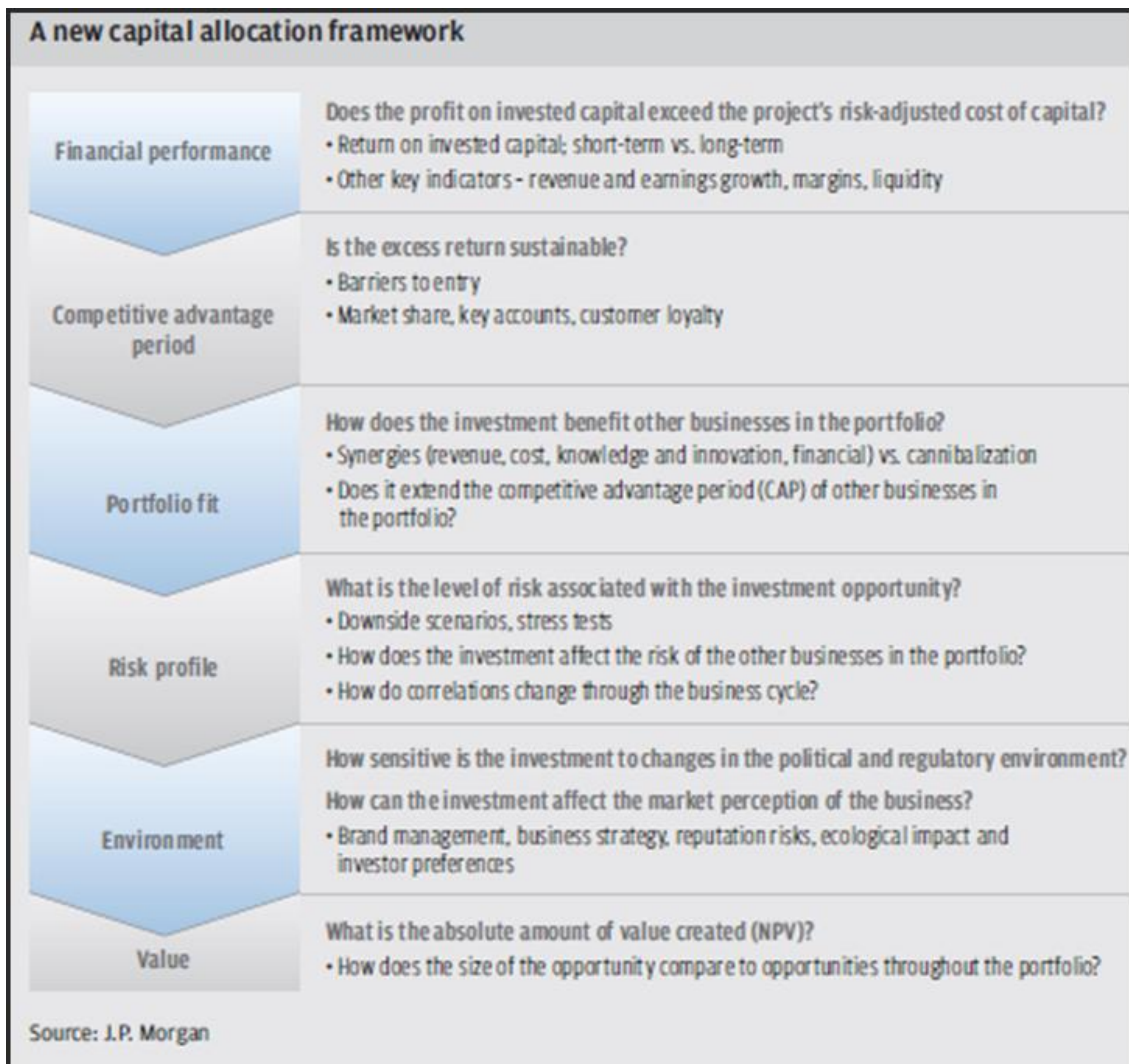


Determining Effective Capital Allocation – Invest or Buyback

Sound and effective capital allocation strategies and behaviors are complex. I would argue that it is naïve to believe that corporations can simply throw money at their company in order to stimulate or instigate greater growth. Consequently, when companies do not have investment opportunities that are greater than their cost of capital, it is both prudent and rational for them to return cash to the shareholders.

The two primary methods of returning cash to the shareholder are through share repurchases and/or dividends. When a company needs their capital to grow, they should retain more capital and invest accordingly. However, as companies become large and mature, investment opportunities that will improve the growth of their businesses decrease. Consequently, it is common that management teams of large and mature companies do not require retaining all their earnings to fund growth or maintain their businesses.

On October, 2009 J.P. Morgan published a report titled "Creating Value through Best in Class Capital Allocation" and in that report they presented a new capital allocation framework that provides insights into the complexity that corporations face when deciding how to best utilize their capital as follows:



In 2007 a paper was published in the Journal of Applied Corporate Finance that provided additional insights into the challenges facing corporate management teams and directors for analyzing capital allocation strategies that create shareholder value. The following are a few excerpts that are appropriate to the thesis of this article:

"In this article, I begin by presenting a relatively simple life-cycle valuation model that is rooted in both discounted cash flow (DCF) principles and the economic concept of competitive corporate life-cycles. Then, with the aim of grounding corporate governance in sound principles of value creation, I recommend that corporate boards undertake a dialogue with management about the content of a periodic Shareholder Value Review (SVR). Although mutual agreement is expected, the board must insist that management respond to the board's oversight authority.

The Life-Cycle Valuation Model

Ever since Miller and Modigliani published their explanation of how discounted cash flow (DCF) principles can be used to value a firm, DCF has been at the core of much valuation modeling. Broadly speaking, DCF says that the value of a firm is the sum of its future expected stream of net cash receipts (operating cash flows less cash outlays for reinvestment) discounted to a present value at the firm's cost of capital.

When investors expect a company to achieve returns on future investments that are just equal to the cost of capital, those new investments create zero additional economic wealth—in which case, the firm's total market value would be roughly equal to the value of its existing assets. To the extent investors expect returns on future investments to be greater than the cost of capital, those investments will create value; and to the extent returns are expected to fall below this standard, value will be destroyed.

Moreover, for companies where future investments are expected to earn returns above the cost of capital, greater wealth is created when more capital is invested, especially when such wealth-creating opportunities can be extended farther into the future. In this sense, a company's current value depends on *competitive life-cycle* patterns that reflect expected future economic returns and reinvestment rates.

As illustrated in Figure 1, the idea of competitive life cycles is based on the premise that competition and capital flows operate over the longer term to force companies' economic returns toward the cost of capital. This relationship was succinctly summarized by George Stigler in 1963, when he wrote:

There is no more important proposition in economic theory than that, under competition, the rate of return on investment tends toward equality in all industries. Entrepreneurs will seek to leave relatively unprofitable industries and enter relatively profitable industries."

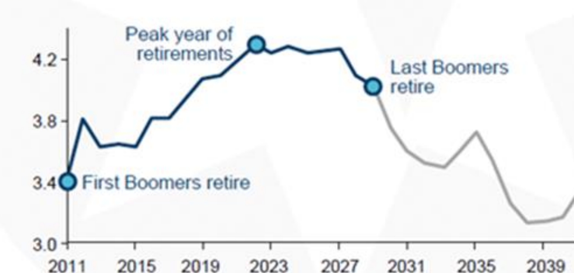
The primary point being, that as corporations become big and mature, it becomes exceedingly difficult to find suitable places to invest their capital that will in actuality create shareholder value. The following "Corporate Competitive Life-cycle" graphic from the above paper presents a simplified model of this phenomenon.

A significant U.S. wealth management opportunity

Trends – Growth in U.S. Investable Assets and Baby Boom Generation Entering Retirement

$ in trillions

Millions of Boomers



- **66%** of assets controlled by underserved mass affluent and affluent households
- **82%** of workers think it's very or somewhat important to work with an advisor who specializes in converting assets to retirement income
- **82%** of workers are not "very confident" that they will have enough money to live comfortably in retirement

See appendix for source information

7

Summary and Conclusions

Share buybacks are neither good nor bad, because in reality they can be either or both. When a company's stock is being highly valued by the market, buying back shares at those high valuations can lead to long-term shareholder capital destruction. The rules and principles of only investing when valuation is sound equally apply to the corporation as it does individual investors. If it's a bad idea for us to invest in a stock at a high valuation, it's also a bad idea for the company to behave that way.

On the other hand, when valuations are sound, or better yet, excessively low, the best investment opportunity a company may have is to invest in their own stock. Therefore, we as investors should not hold a prejudicial view of share buybacks. Instead, we should evaluate and judge a company's share buyback policy on an individual case-by-case basis. Prejudging anything in the general sense is both illogical and wrong.

Furthermore, as it is with all matters regarding investing, decisions should always be driven by a rigorous factual based analysis. There is no room, nor should there be, for opinion or broad

prejudicial generalizations. Clearly the answer to the question whether a company should buy back their shares or not can simply be stated as – it depends.

Microsoft Analysis as of May 14, 2014

Chuck noted in his May 14, 2014 post about Microsoft that he was long and viewed the firm as fairly valued with the potential for roughly double-digit earnings growth. Since then, Microsoft has posted roughly 14% earnings growth. An investment of $10,000 in Microsoft as of 5/30/2014 would be worth (as of the writing of this post on 12/7/2020) $55,012 good for a total return of 450% and an annualized return of 29.9%. Here is the original post:

Everyone is keenly aware of the $300+ billion dollar company that is Microsoft (MSFT). From the classic Windows and Office products to the latest Xbox and Skype, the business doesn't exactly need an introduction. In fact, it's quite likely that you are using or near a Microsoft product now; we used a couple just to get this article to you. So instead of providing a generic opening, we thought it might be interesting to highlight the company with some numbers. There are 1.3 billion people that use Windows everyday and 1 in 7 of the world's population use Office. Skype represents one third of the worldwide phone traffic and Outlook has 400 million users. Internet Explorer's usage share is over 56%. In other words, large is a bit of an understatement.

As impressive as these numbers are, it also highlights the limitations of big. For instance, in the beginning a business can quickly increase its foothold from say .00001% of the market share to .00002%. Alternatively, Microsoft would literally be unable to double its Internet usage share. It already has over half the pie, so growth probably has to come from other areas. Trees don't grow to the sky, or perhaps in Microsoft's case: trees don't grow to the stars.

With that, we thought it might be interesting to view Microsoft in a slightly different manner from which we are accustomed. Being acutely aware of the phenomenal stock and business performance of the company over the last three decades – along with the general concept that the superior growth is a thing of the past – let's view Microsoft's progression using F.A.S.T. Graphs™.

When presented with the "default" or "regular" 15-year F.A.S.T. Graph it reveals quite a bit of information: earnings, dividends, the normal market multiple paid, a theoretical valuation, forecasted earnings and the corresponding relationships between those dynamics. Yet what is often overlooked is the idea that the graphs presented on Seeking Alpha are static such that they demonstrate a single time period of observation.

For instance, here's the traditional 15-year default F.A.S.T. Graph, with 13-years of history and 2 forecasted years. This displays a good amount of information. It shows you that Microsoft grew "adjusted" earnings by a compound rate of almost 9% a year, it gives a theoretical and average valuation paid, shows whether or not the recessions had an effect on the business, demonstrates

when Microsoft initiated a dividend and how the payout ratio has evolved. Perhaps most importantly, it illustrates the idea that where earnings go price eventually follows.

However, as good as this graph is and as quickly as it provides fundamental information about the business, it does have some limitations. For instance, it doesn't explicitly reveal how the company's growth rate has changed over time or whether the market has consistently offered a higher or lower valuation for shares. (Although to be sure, both are implicitly observable) Luckily, a F.A.S.T. Graphs' subscriber has the option of viewing and reviewing a variety of different timeframes. In doing so, the graphs are dynamic such that new calculations are provided for each period viewed.

So, in keeping with the slowing growth trend of Microsoft, you might be inclined to view the growth rate during the 1990's as compared to the last few years.

Below we have included an Earnings and Price Correlated graph from 1994 to 2000, using the Review feature. Here we can see that Microsoft did indeed have a staggering growth rate at nearly 43% per annum. Interestingly, despite the large price decline at the end of this period, an investor still would have realized total returns in the magnitude of 36% per year – turning a hypothetical $10,000 investment into $81,000. Note that the company was not paying a dividend during this time.

Alternatively, viewing the last 7 full years reveals a different bit of information. Over this period, Microsoft was able to grow earnings by about 11% per year – surely still a solid pace, but a far cry from the blazing 1990's. Further, notice that Microsoft had begun paying a dividend by this time.

These two pictures of varying growth rates do a reasonable job of demonstrating the changing growth dynamics of the company. However, a subscriber could get even more detailed by looking at the compound earnings growth rates from each year. We've taken the suspense out of the equation and compiled this information ourselves:

Year	EPS Growth
1996	16.3%
1997	14.4%

1998	12.5%
1999	11.4%
2000	9.3%
2001	8.7%
2002	8.7%
2003	11.6%
2004	11.3%
2005	11.4%
2006	8.5%
2007	9.9%
2008	9.7%
2009	5.9%
2010	10.2%
2011	7.5%
Forecast	8.3%

Note that the above numbers represent the compound rate dating back to each period. So the very fast growth we saw earlier is averaged out by the slower growth more recently. Still, a couple of percent points per year over long-time periods can really add up. Here we can see that growth has slowed, but is still quite reasonable.

In turn, you can observe Microsoft's P/E ratio react accordingly to the slower growth. At the turn of the century, Microsoft's P/E casually resided in the 40's while today it stands a bit closer to 15. Moving forward you might expect it to remain closer to the latter rather than the former. Interestingly, paying 40 times earnings or 15 times earnings can lead to the same performance results: it's the underlying business performance that drives this factor in the long-term.

Perhaps an even better gauge of a company's maturation progression is what it elects to do with its earnings. In the early stages companies often reinvest mightily to quickly expand its operations. But eventually there are only so many profitable ventures to take on and companies generally look to return the excess flow to shareholders. This usually takes the form of share repurchases or dividends.

To the point of dividends, this has been alluded to somewhat already, but is easily observed in the following performance table. A dividend was initiated in 2003 and has been growing at a healthy pace since then – despite the idea that Microsoft is still paying out well under half of its profits. Further, Microsoft started the dividend party off right by offering a $3 special dividend in 2004.

Behind the scenes, the share repurchase program has begun to take hold as well. Using the Fundamental Underlying Number (FUN) chart below, we see that Microsoft began substantially reducing share count after 2005. So much so that common shares outstanding have declined by almost 3% per year for the last 8 years.

Moving forward, we believe that it is important to keep these concepts in mind. It is apparent that Microsoft likely will not return to its fast growth days of yesteryear. However, the company is expected to grow at a decent pace moving forward. Specifically, analysts come to a consensus long-term earnings per share growth rate estimate of about 8.3% – not unimaginable given room for population growth and new products coupled with a healthy buyback program. If these estimates come to fruition – and Microsoft's shares trade at a 15 multiple in the future – this would represent an 11.2% annualized return.

Now, it's paramount to underscore the idea that this is simply a calculator, but it does provide a sensible baseline for how analysts are presently viewing this company.

In sum, when you look at a standard F.A.S.T. Graph as often depicted on Seeking Alpha by us, or any one of the numerous authors that choose to feature them in their articles, realize that it is a static graph. Granted, this single timeframe provides an enormous amount of information at-a-glance. Yet a user also has the opportunity to view a company in multiple time periods. In the case of Microsoft we found this to be an extraordinary valuable feature. We saw a company move from growing at 40% a year with a P/E in the 40's to a company growing at 10% a year with a 15 P/E. In both cases an investor's performance return results were not solely a result of the price-to-earnings ratio paid, but rather by the interaction between earnings growth and price.

For the pure total return investor, you would plausibly prefer to find a company in the growth stage rather than the maturation phase. (Swinging for the fence is a lot easier to do if you're growing at 40% rather than 10%) But keep in mind the idea that you would likely be paying a higher multiple for the chance at higher growth. Today, not many would suggest Microsoft is the high-flying growth choice. After-all, not only is it near impossible to double its share in some segments, but a solid portion of earnings are already earmarked for dividends and share repurchases. Yet this does not preclude the company from reasonable growth. The dynamics of slower growth coupled with a lower valuation multiple mean that this well-established company doesn't have to knock the cover off the ball for investors to find reasonable returns moving

forward. However, as always, we recommend that the reader conduct his or her own thorough due diligence.

Microsoft Analysis as of November 16, 2012

Here, Chuck made an even earlier call that Microsoft was a good buy. Buying 11/30/2012 and holding to the writing of this entry (12/7/2020) would result in a $10,000 investment being worth $85,089 good for a 750.9% return and an annualized return of 30.7%.

Here is the post:

Currently Microsoft (MSFT) is attracting a lot of attention thanks to its launch of Windows 8 and many exciting new products based on this important upgrade. However, within all this attention there is a lot of negative bias applied to this blue-chip technology behemoth. Consequently, the goal of this article is to provide the truth about Microsoft, the company and the stock.

Much of the negative commentary spoken about Microsoft is based on the poor performance of its stock over the last decade and a half. What is unnoticed and more often than not realized is the true fact that Microsoft, the company, has been a stellar performer as an operating business over this time. However, because the price has performed so poorly, it is assumed and often declared that Microsoft, the business, has been a poor performer as well.

The Truth About Microsoft The Business

In order to get the facts straight, let's look at Microsoft through the lens of the F.A.S.T. Graphs™ fundamentals analyzer software tool. However, with the following exercise we are going to ignore the stock price completely, and only focus on how the business has performed. Therefore, our first graph plots Microsoft's earnings per share (the orange line) and its dividends only (the blue shaded area). The reader should note that Microsoft paid a $3.00 special dividend in 2005. When you consider that the average company in the S&P 500 only grew earnings by 6.4% per annum, Microsoft's 12.6% per annum growth is close to double what the average company achieved.

The three dollars special dividend cited above was available due to the company's prodigious ability to generate strong operating and free cash flow. The following graphs plot Microsoft's operating cash flows (marked with an O) and its free cash flow (marked with an F). Clearly, Microsoft has historically generated very healthy cash flows since calendar year 1999. There are not many companies on the planet that can point to this level

of cash flow generation. Once again, we see clear evidence that Microsoft, the business, has performed extremely well since 1999.

Our next graph looks at Microsoft's yearly sales since 1999 correlated with the price to sales that the market has applied to its stock. The burgundy shaded sales paint a very clear picture of strong and consistent long-term sales growth. The blue line representing price/sales shows that Microsoft's results have not been adequately reflected in its stock price, indicating undervaluation. However, we will focus more on this when stock price is added to the graphics later in the article.

The Truth About Microsoft The Stock

The following performance calculations on Microsoft since December 31, 1998 illustrate why so many people have a negative view of Microsoft. A $1000 investment in Microsoft would have actually shrunk to only $768.89, for an average compounded loss of 1.9% per annum. Even when you add in dividends, buy and hold shareholders would have still lost money over this time period.

What we have shown so far doesn't seem to make sense. Microsoft, the business, has clearly been a stellar performer based on fundamentals such as sales, earnings and cash flows. Additionally, their balance sheet is very strong; the company only has 12% long-term debt. This begs the question: how could such a great business produce such poor returns for shareholders? The simple, straightforward clear and undeniable answer is that overvaluation is the culprit.

Calendar year 1999 was the beginning of the end of the great technology bubble. This was a time when tech stocks were routinely being given PE ratio multiples exceeding 100 times earnings. There is no fundamental basis for this, other than an irrationally exuberant marketplace. This was a time when people were smitten with tech and willing to put insane valuations on their stocks. Microsoft is no exception.

Consequently, you will notice that Microsoft's stock price went nowhere but down for several years even though the business was growing. Above-average growth led to below-average returns simply because the market had been grossly mispricing technology shares. It's important to recognize that the management of any company can only control their

operating results. The management of the company cannot control what price the market applies to those results. In other words, Microsoft did not deserve the high valuations of the late 90s, and we're arguing here that they do not deserve the low valuations today.

The following estimated earnings and return calculator shows that 32 analysts reporting to Standard & Poor's Capital IQ expect Microsoft to grow earnings at 10% per annum on average over the next five years. This does not seem implausible when you consider that the company has grown earnings at over 12% for the last 15 years, as you will see in a moment for over 12% a year since the great recession of 2008. We believe Microsoft should rightfully be valued at least 15 times earnings based on its recent history and reasonable expectations of future earnings growth.

This next graph simply shows that Microsoft has averaged 12.4% since calendar year 2008. In other words, as previously stated, it certainly validates the possibility of a 10% forecast.

Summary and Conclusions

Buying low in order to sell high is the cornerstone principle of sound and prudent investing strategy. Yet ironically, it seems that many investors find it very difficult to buy when stocks are reasonable and somehow easier to buy them when they're expensive. We believe the graphics shown in this article clearly illustrate this phenomenon. When quality tech stocks like Microsoft were insanely overvalued, you couldn't beat investors off with a stick. Today, when Microsoft shares can be purchased at a significant discount to fair value offering a dividend yield that has grown every year for 10 consecutive years (Microsoft is a Dividend Contender on David Fish's lists), nobody seems interested.

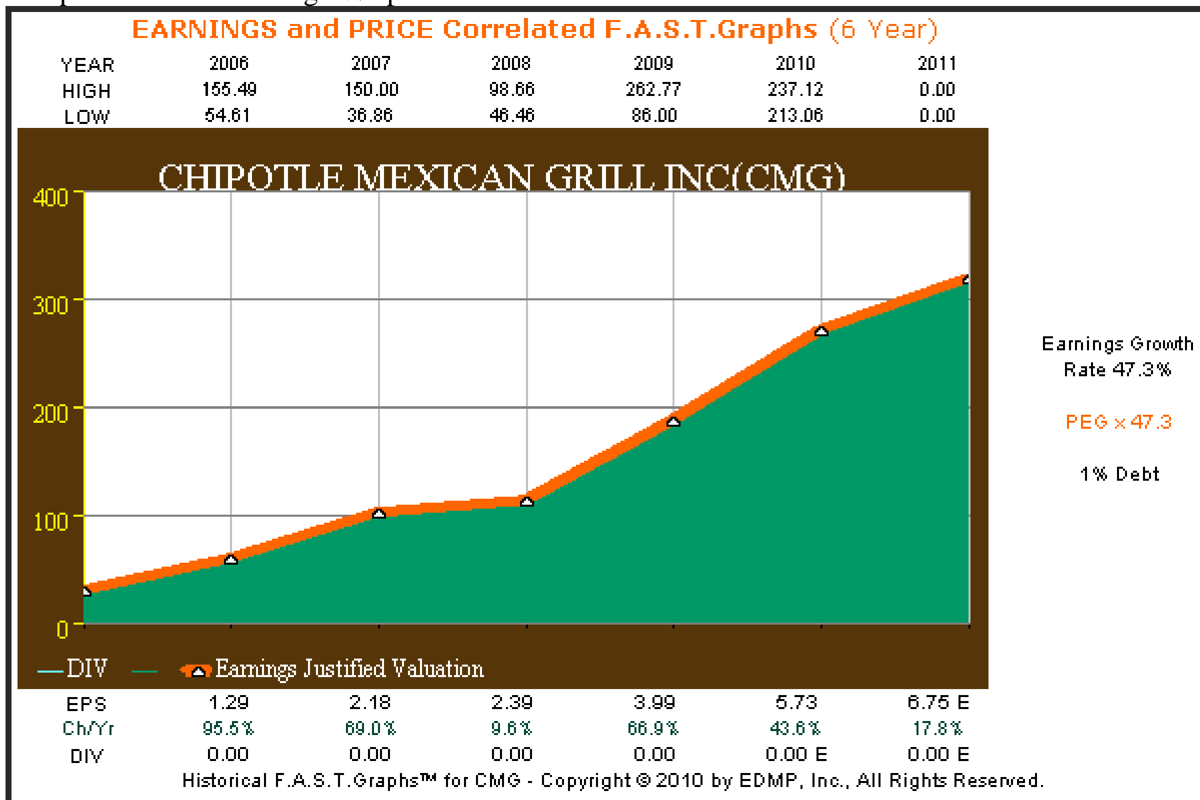
Microsoft certainly has its antagonists; however, we believe most of those antagonists are basing their judgments on the company's historical price performance. Because, as we have clearly illustrated with this article, Microsoft, the business, has been a stellar performer. It is only because the stock was so in credibly overvalued a decade and a half ago that investor shareholders received such poor returns. We believe that the opposite circumstances exist today for the stock; however, the prospects for the business remain

intact. Therefore, we believe Microsoft represents a compelling opportunity to invest in a high-quality blue-chip dividend growth stock at a very low valuation.

Chipotle and Intuitive Surgical on February 16, 2011

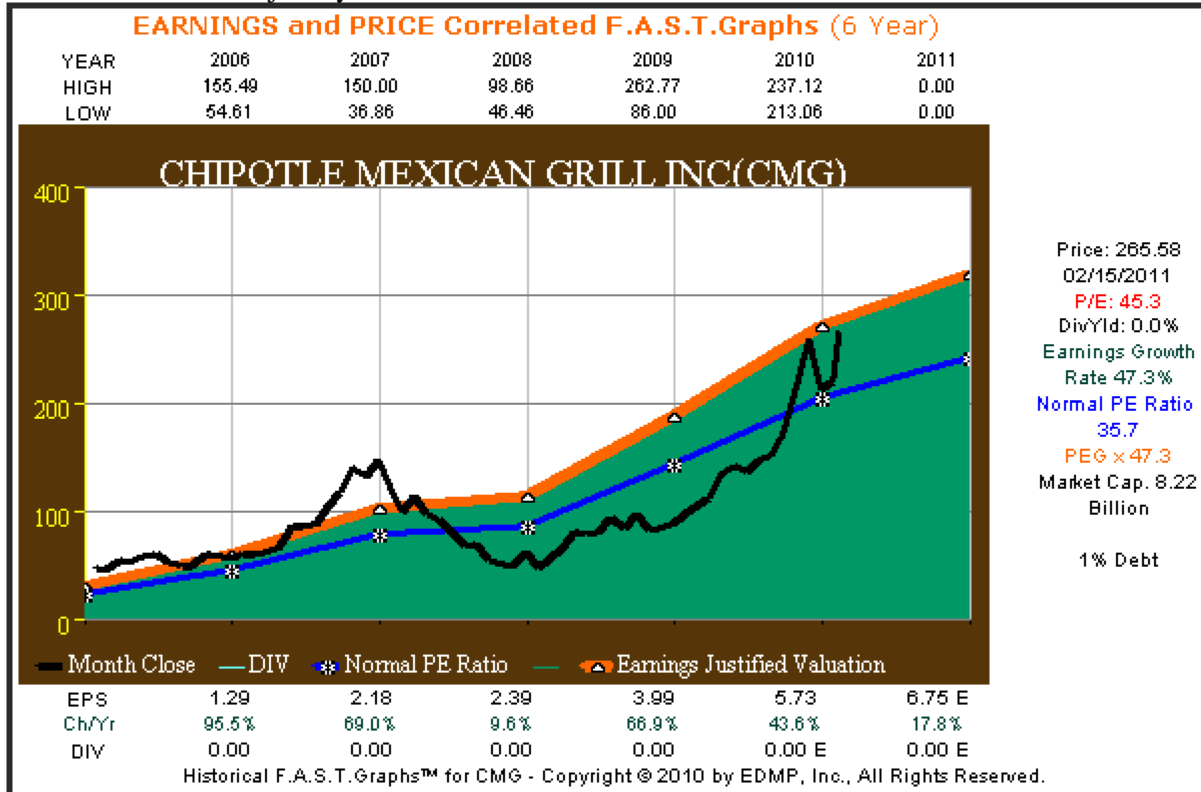
In this post, Chuck highlighted two firms with incredible historical earnings growth over 40%. Both firms had higher than typical P/E ratios, however, this was primarily driven by the large growth. Using the orange and blue valuation lines on Fast Graphs, investors could see that both firms were fairly valued and offered substantial price appreciation if growth forecasts were realized. In both cases, they were, although the ride has been bumpier for Chipotle. That said, an investment of $10,000 on 2/28/2011 in ISRG would be worth $71,385 as of the writing of this post (12/7/2020) and the value of the same $10,000 in Chipotle would be $55,479 representing an annual return of 19%.

Two examples of historical earnings growth greater than 40% per annum:
Chipotle Mexican Grill Inc. (CMG) and Intuitive Surgical Inc. (ISRG)
Capote Mexican Grill is one of the hottest operators and developers of the fast food, casual dining Mexican restaurant group. This company was privately owned by McDonald's Corp. until it went public in early 2006. Since its initial public debut, this company has consistently grown earnings at an exceptional rate exceeding 40% per annum.



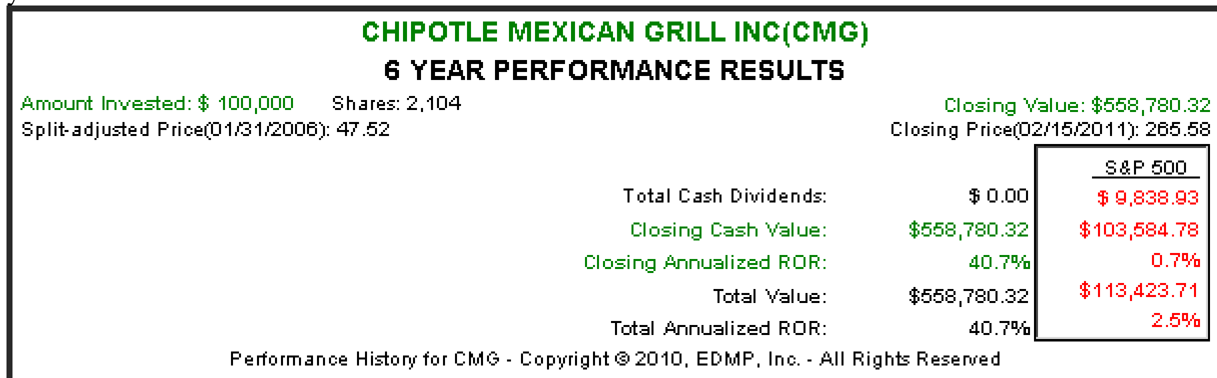
(Click to enlarge)
The earnings and price correlated graph on Chipotle Mexican Grill provides an interesting perspective on valuation as it relates to high-growth stocks, in our opinion. From the graph below it is clear that the company's stock price followed and even exceeded its earnings growth rate until earnings growth slowed

to under 10% during the recession of 2008. However, it's even more interesting to note how the stock price has steadily been climbing back to its previous high valuation as earnings growth once again resumed its normal trajectory.



(Click to enlarge)

Even though Chipotle Mexican Grill does not pay a dividend, shareholders have enjoyed capital appreciation in excess of 41% per annum since the company went public in early 2006. Even without a dividend of any kind, this company has proven to be an exceptional investment over the past five plus years.



CHIPOTLE MEXICAN GRILL INC(CMG)

6 YEAR PERFORMANCE RESULTS

Amount Invested: $ 100,000 Shares: 2,104
Split-adjusted Price(01/31/2006): 47.52

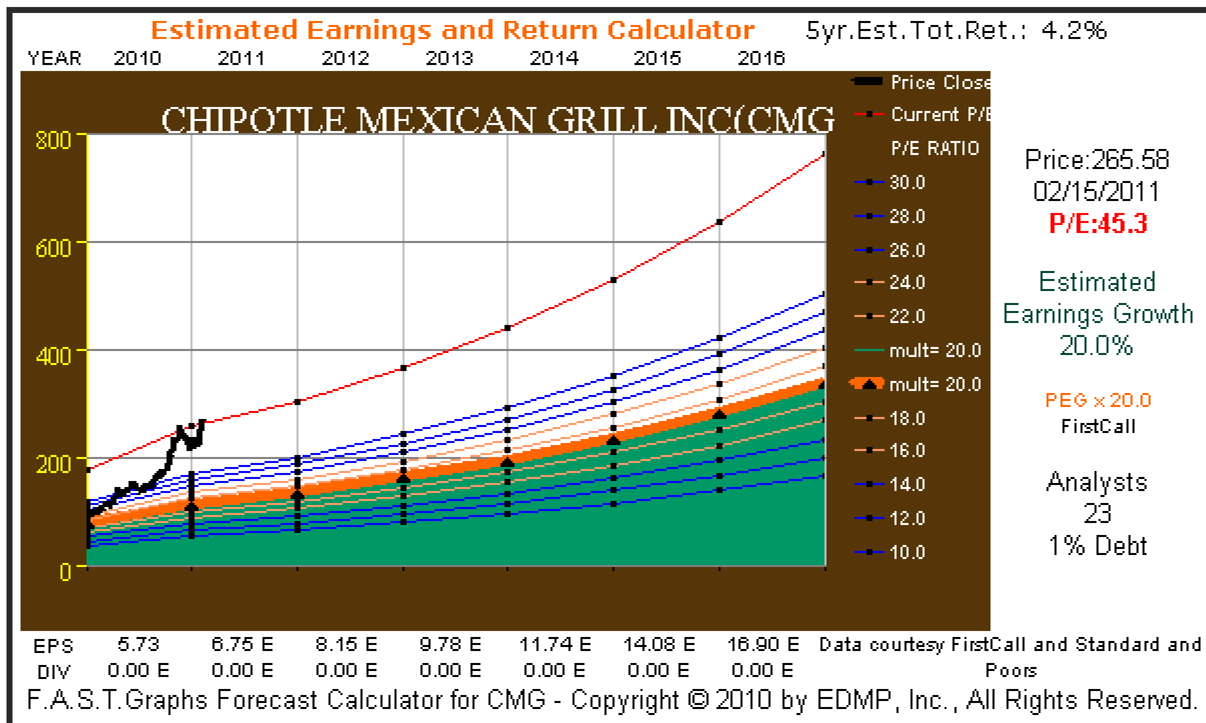
Closing Value: $558,780.32
Closing Price(02/15/2011): 265.58

	CMG	S&P 500
Total Cash Dividends:	$ 0.00	$ 9,838.93
Closing Cash Value:	$558,780.32	$103,584.78
Closing Annualized ROR:	40.7%	0.7%
Total Value:	$558,780.32	$113,423.71
Total Annualized ROR:	40.7%	2.5%

Performance History for CMG - Copyright © 2010, EDMP, Inc. - All Rights Reserved

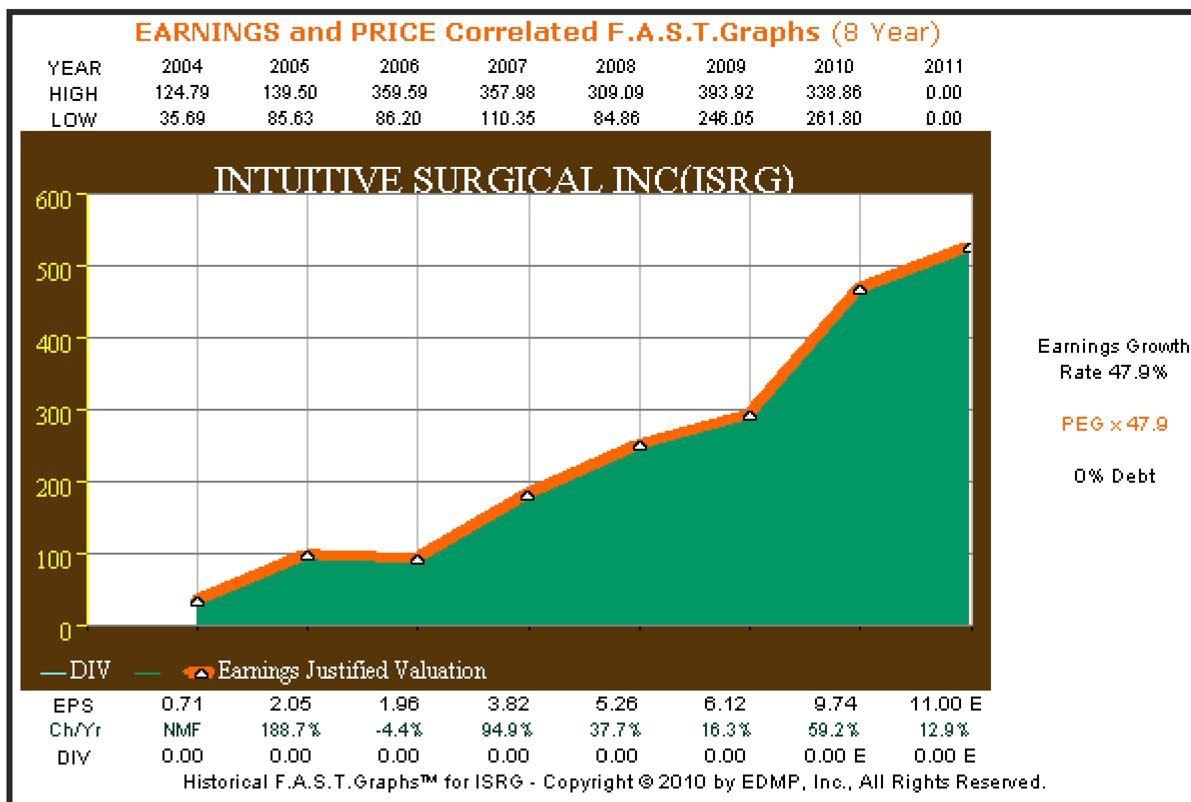
(Click to enlarge)

The current consensus of 23 analysts reporting to FirstCall, expect Chipotle Mexican Grill to continue to grow at the above-average rate of 20% per annum. However, with their current PE ratio over 46, this would appear to be a very high valuation for this hot restaurant concept even if they achieve the consensus expected 20% rate of earnings growth.



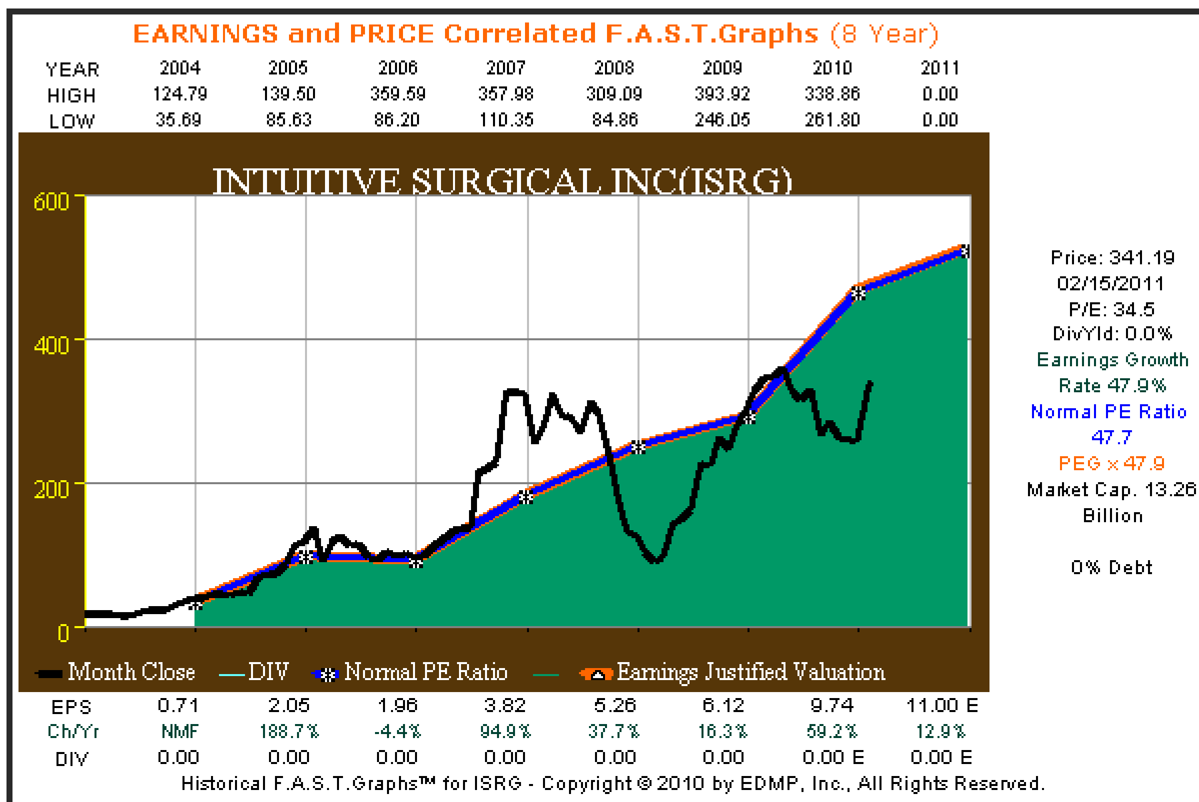
(Click to enlarge)

Intuitive Surgical (ISRG) designs and manufactures a robotic-type surgical system that translates surgeons' movements on a consul while operating a laparoscopic surgical procedure inside the patient. This company has no debt on their balance sheet and has grown earnings in excess of 47% per annum. Once again our graph provides an instantaneous and comprehensive picture of the company's historical operating history.



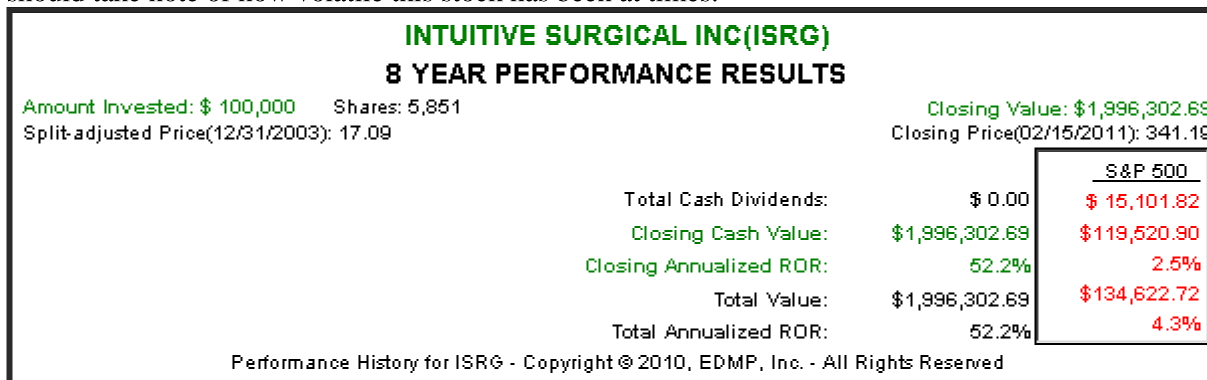
(Click to enlarge)

With their exceptional rate of earnings growth, Intuitive Surgical has mathematically commanded a historical normal PE ratio that is virtually equal to its earnings-per-share growth rate. However, once again we see how statistics can be misleading. Although their normal PE ratio has approximated the earnings-per-share growth rate as a mathematical average, the volatility of their stock price has been extreme at times.



(Click to enlarge)

Nevertheless, since calendar year 2004, long-term Intuitive Surgical shareholders have been lavishly rewarded for owning this high-growth company. The company pays no dividends, but thanks to earnings growth, capital appreciation from owning their shares has been exceptional. On the other hand, investors should take note of how volatile this stock has been at times.



INTUITIVE SURGICAL INC(ISRG)

8 YEAR PERFORMANCE RESULTS

Amount Invested: $ 100,000 Shares: 5,851 Closing Value: $1,996,302.69

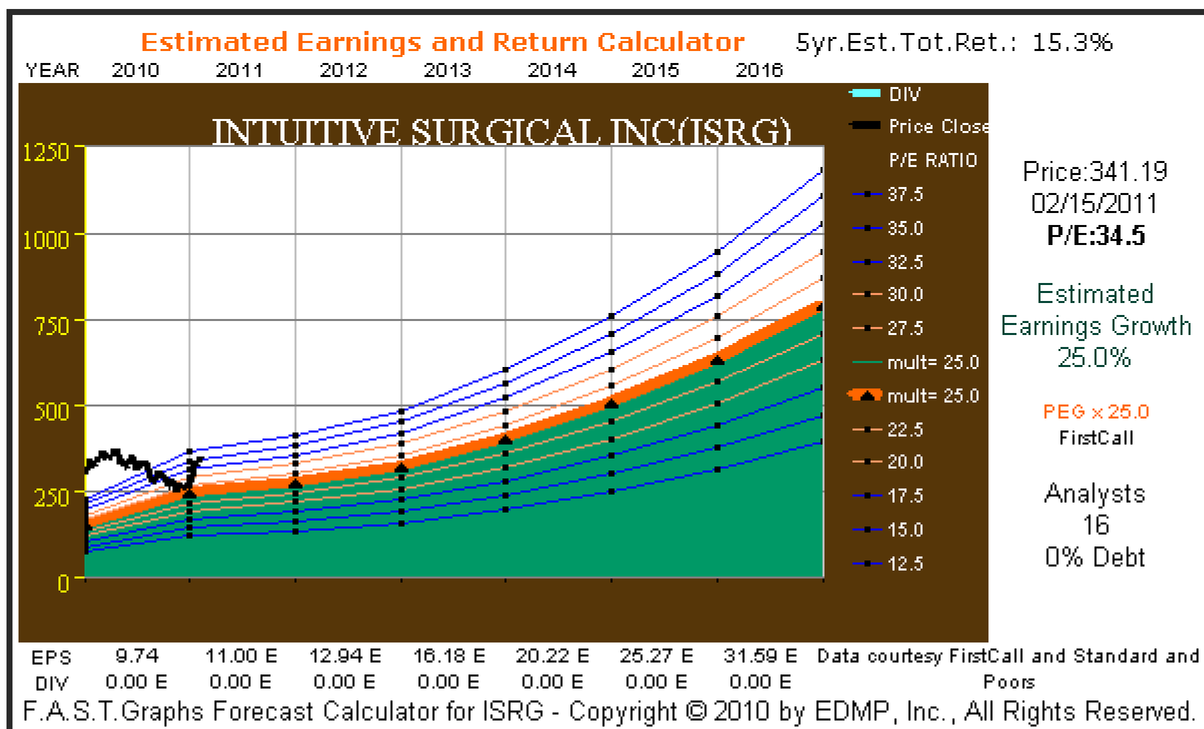
Split-adjusted Price(12/31/2003): 17.09 Closing Price(02/15/2011): 341.19

	ISRG	S&P 500
Total Cash Dividends:	$ 0.00	$ 15,101.82
Closing Cash Value:	$1,996,302.69	$119,520.90
Closing Annualized ROR:	52.2%	2.5%
Total Value:	$1,996,302.69	$134,622.72
Total Annualized ROR:	52.2%	4.3%

Performance History for ISRG - Copyright © 2010, EDMP, Inc. - All Rights Reserved

(Click to enlarge)

The consensus of 16 analysts reporting to FirstCall, expect Intuitive Surgical to continue to grow earnings at 25% per year, or better, over the next five years. However, with the current PE ratio of just under 35 times earnings, it appears that their shares are overvalued for that expected growth rate. Nevertheless, the long-term return from here would still, more than likely be above average, but the risk of achieving it high.

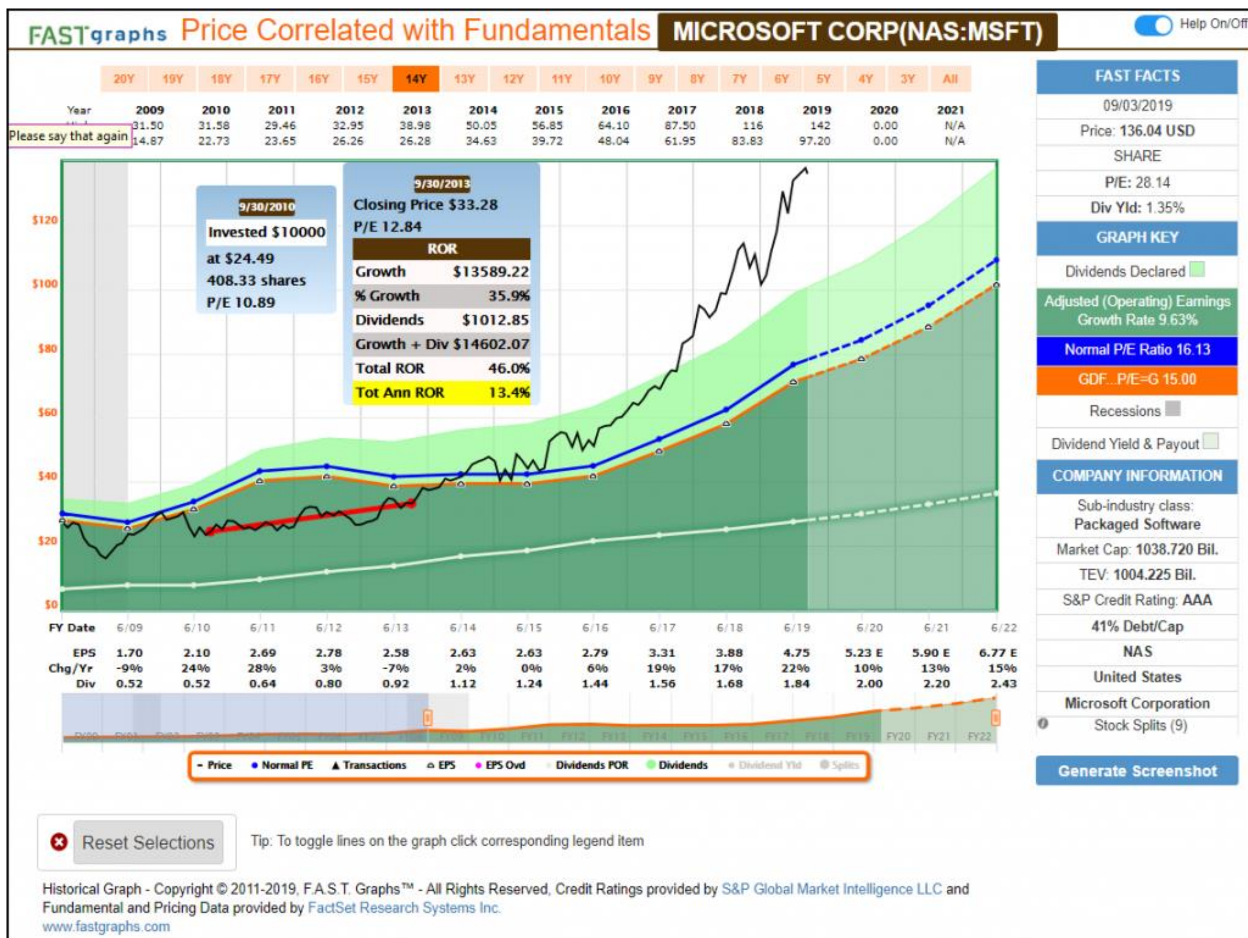


Series of Historical Posts on Undervaluation

These are all examples of companies that I had written articles about indicating that they were undervalued at the time. Each example is listed by the title of the article and the date it was published. With most of these examples I run the return calculations at the minimum holding period of 3 years. However, I do run a couple out through the five-year timeframe. Nevertheless, as you can see, investors purchasing the stocks when they were undervalued did quite well over the minimum business cycle timeframe notwithstanding that the stocks had not yet fully recovered to full value. Furthermore, you might note that most of the stocks went on to become dramatically overvalued generating enormous returns for investors with foresight to buy them when no one else wanted them.

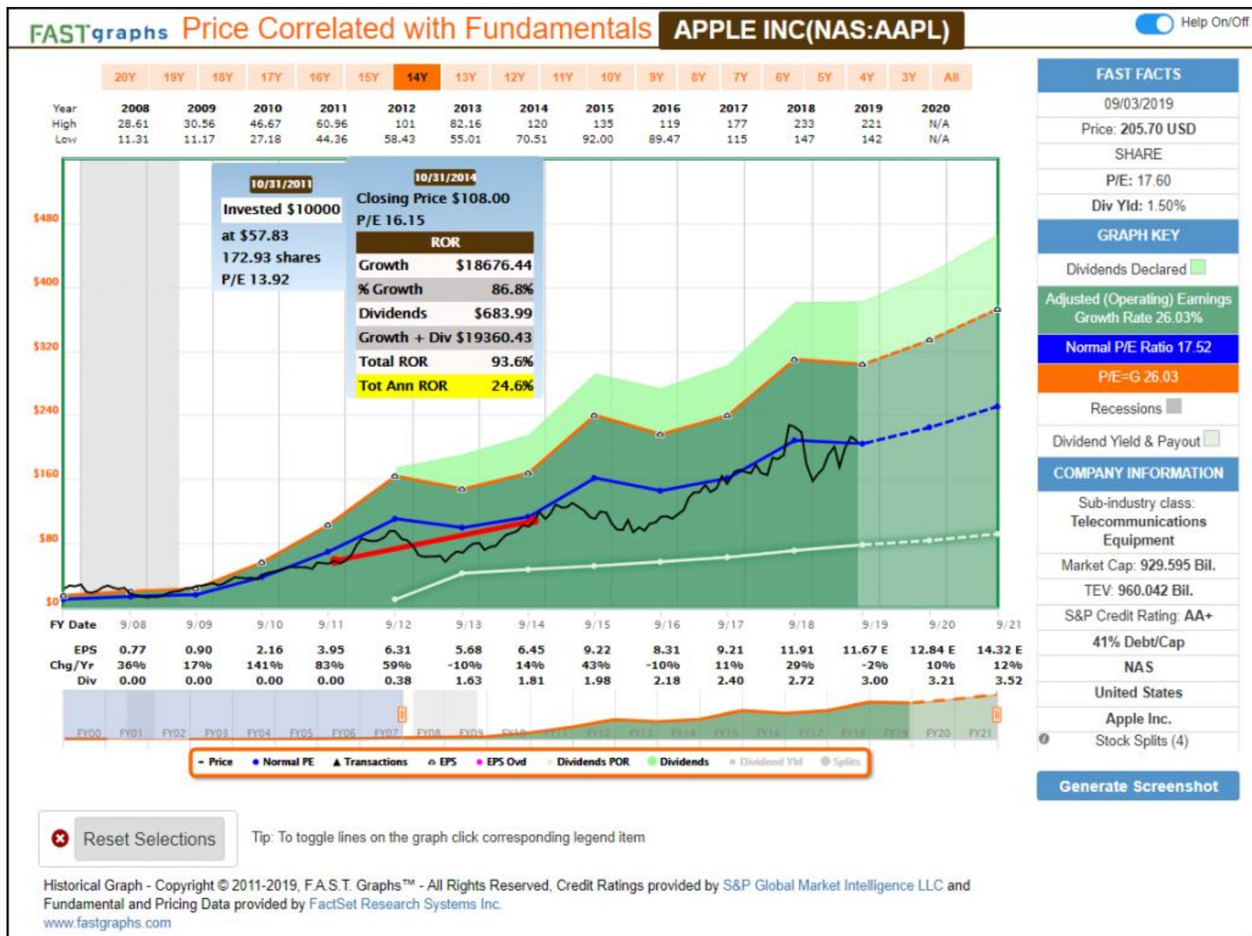
After a Lost Decade, Is Microsoft a Buy? September 2010

When Microsoft (MSFT) was undervalued in 2010 through 2013, it was an excellent investment even though earnings growth was faltering. Fast forward to today and the results of buying Microsoft when it was inexpensive are extraordinary (this calculation not shown below but will be in the video that follows).



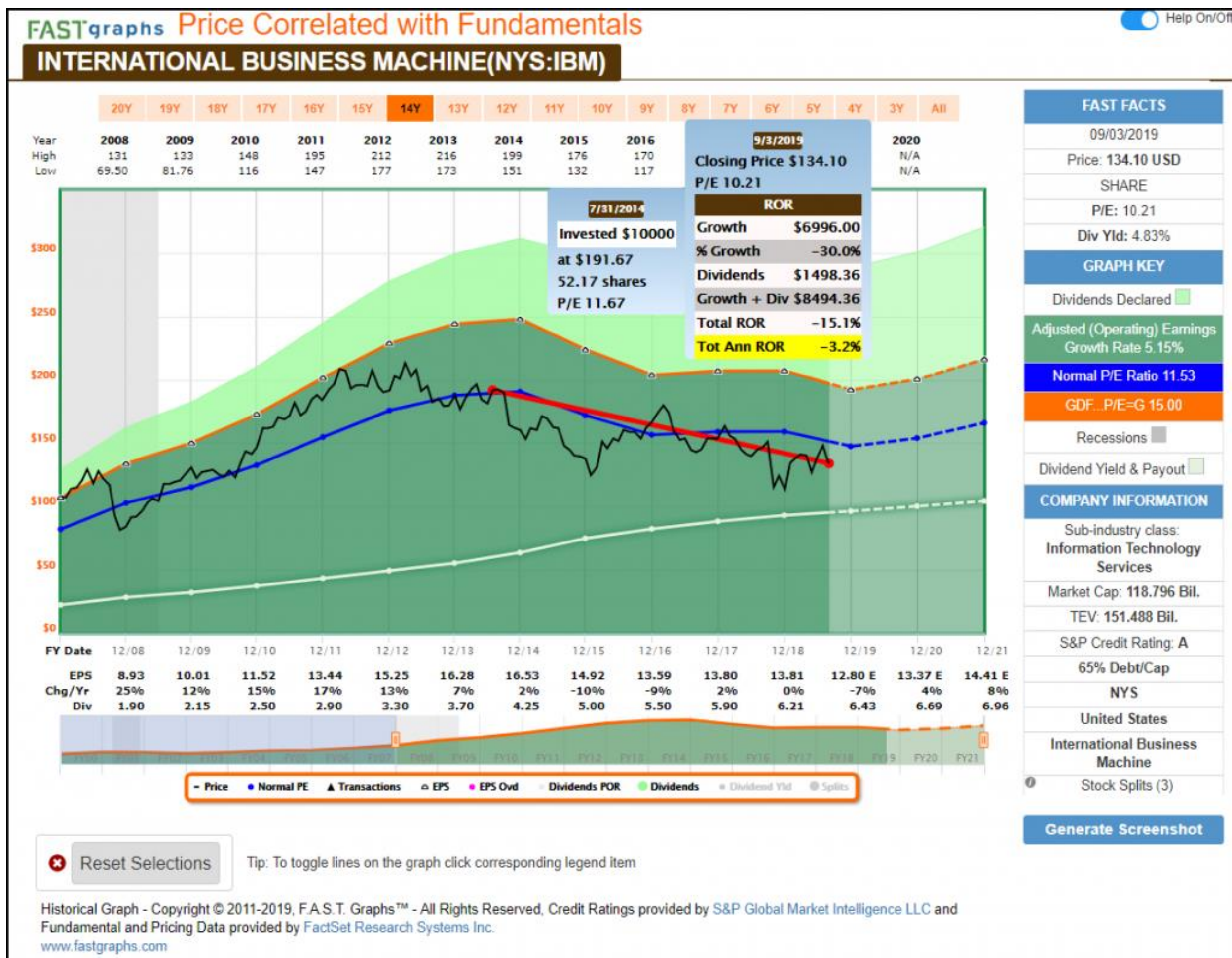
Steve Jobs' Legacy, and Apple's Record, Will Live On: October 2011

Apple (AAPL) was very inexpensive in 2011 and produced exceptional total returns over the next 3 years even though it did not move back into alignment with its earnings justified value (the orange line on the graph).



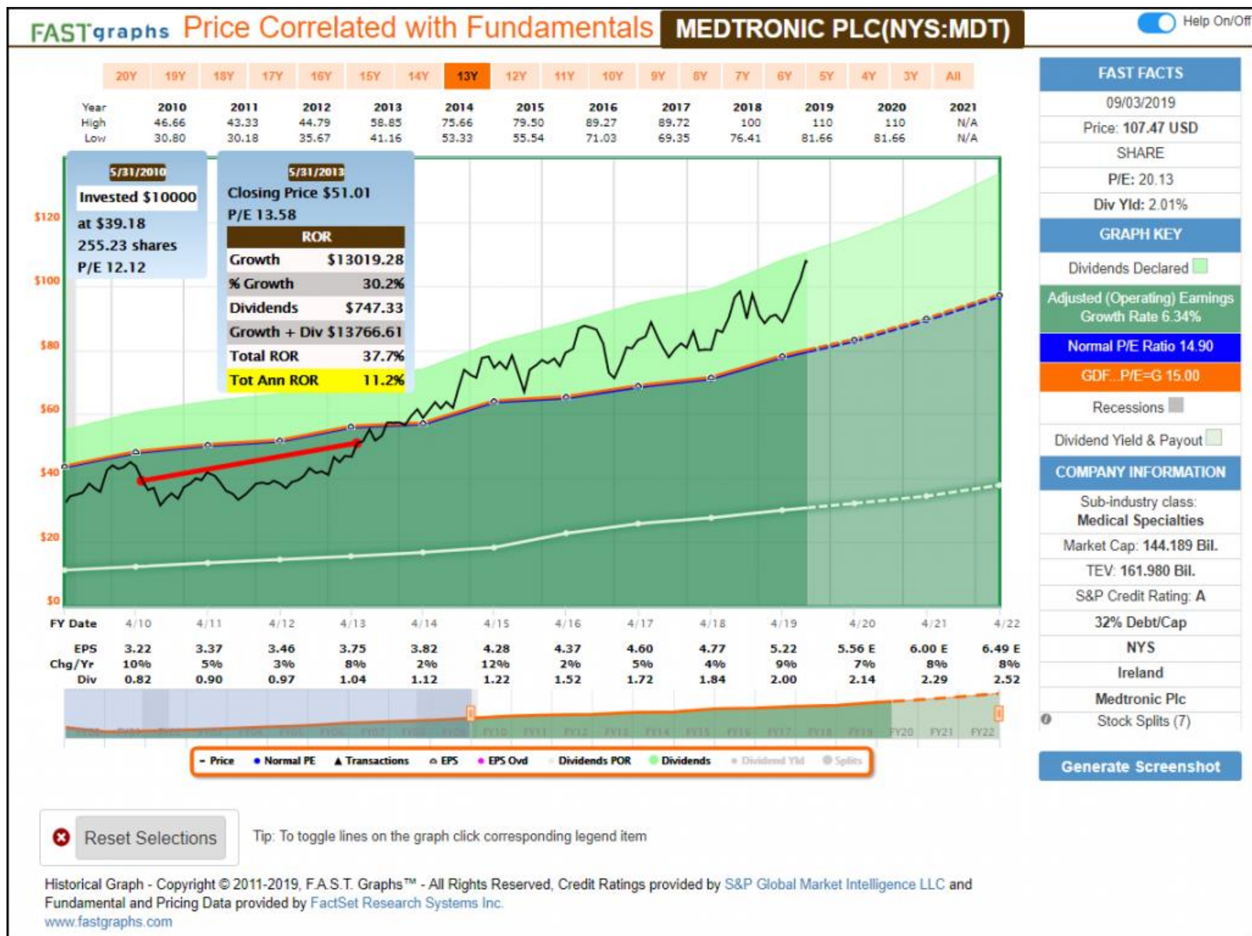
I Feel Like A Thief Buying IBM At Today's Low Valuation: August 2014

I originally invested in International Business Machine (IBM) for the dividend and dividend growth. Thus far, it has been disappointing on a total return basis and in this case, I've run their calculation out to the five-year timeframe. However, IBM has produced double-digit dividend growth which was what I bought it for. Finally, I am quite content and happy to own this stock for another 5 years and I believe I will be well-rewarded for doing so. Time will tell.



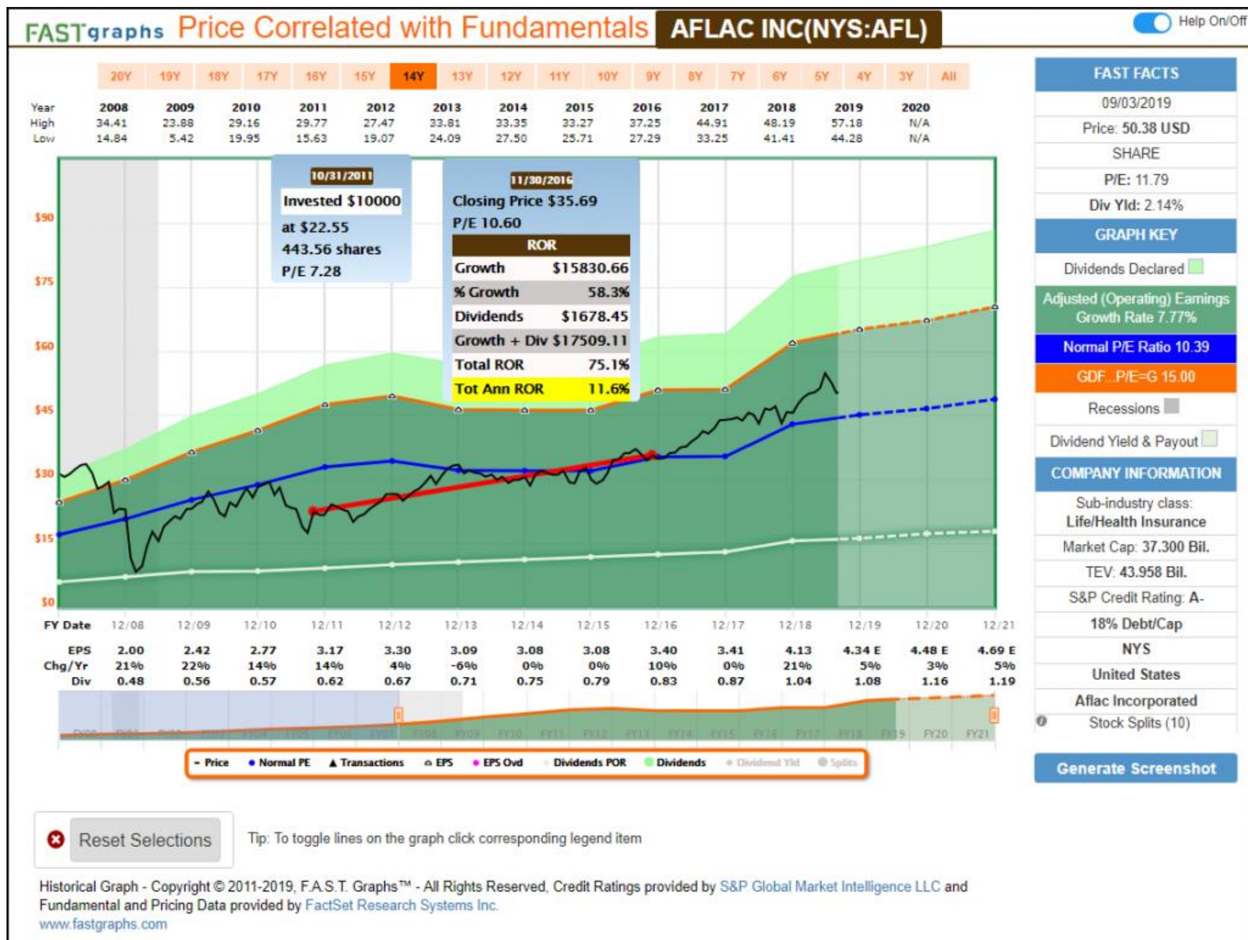
Medtronic: High Quality, High Growth, More Dividends: May 2010

Medtronic (MDT) performed well over the 3 years after I originally wrote the article. But most importantly, its low valuation at the time of my writing set it up for extraordinary longer-term gains. These longer-term calculations are not shown below but will be in the video. Furthermore, the video will also show how insidious overvaluation can be to long-term returns.



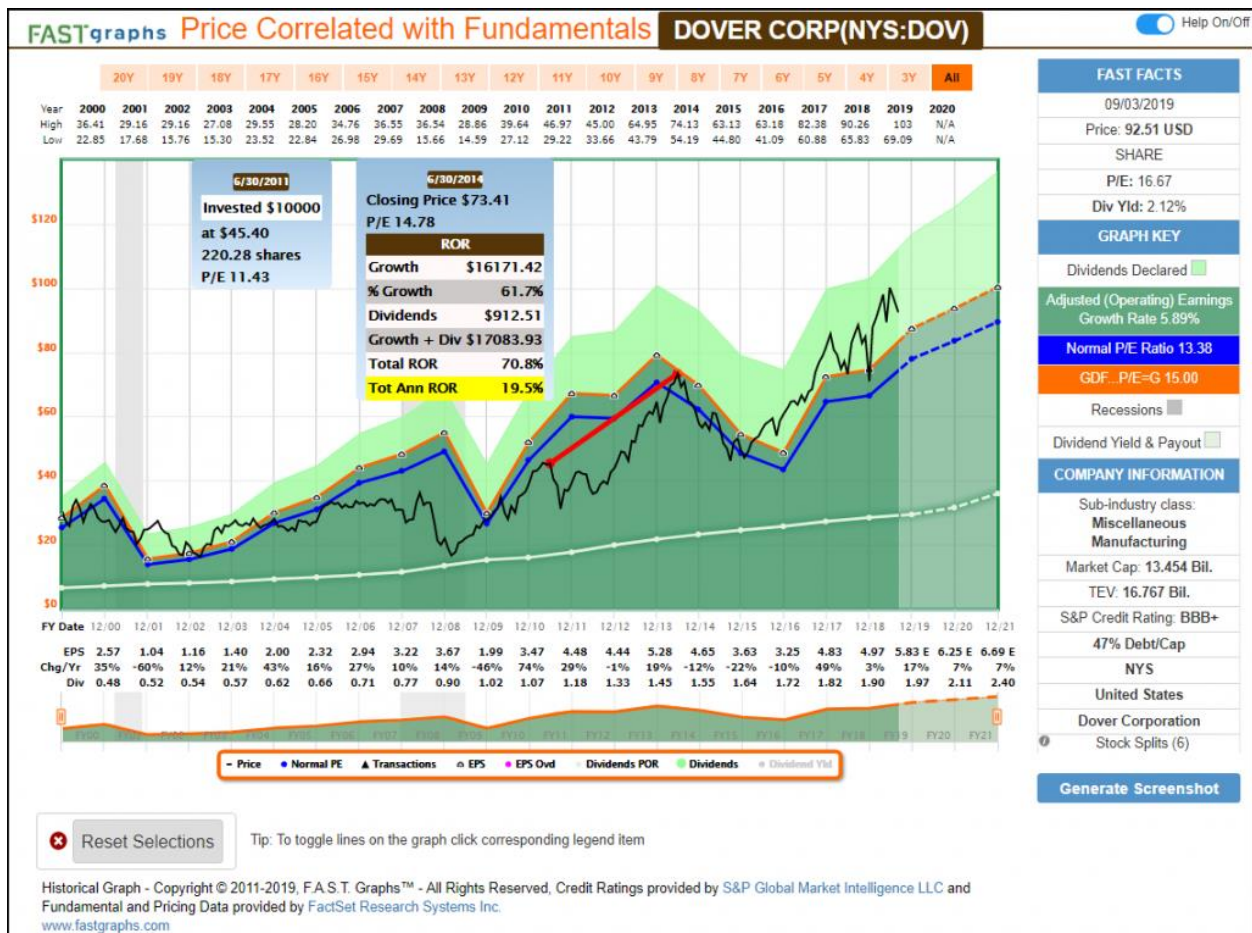
Aflac's Fair Value PE Ratio Should Be Double, And So Should Its Price: November 2011

Aflac (AFL) was undervalued when I wrote about it in November 2011. Although I did not get the double in the P/E ratio that I suggested, nor did I get a doubling in its price. Nevertheless, I am happy with the results especially considering that I feel Aflac remains an undervalued dividend growth stock even today.



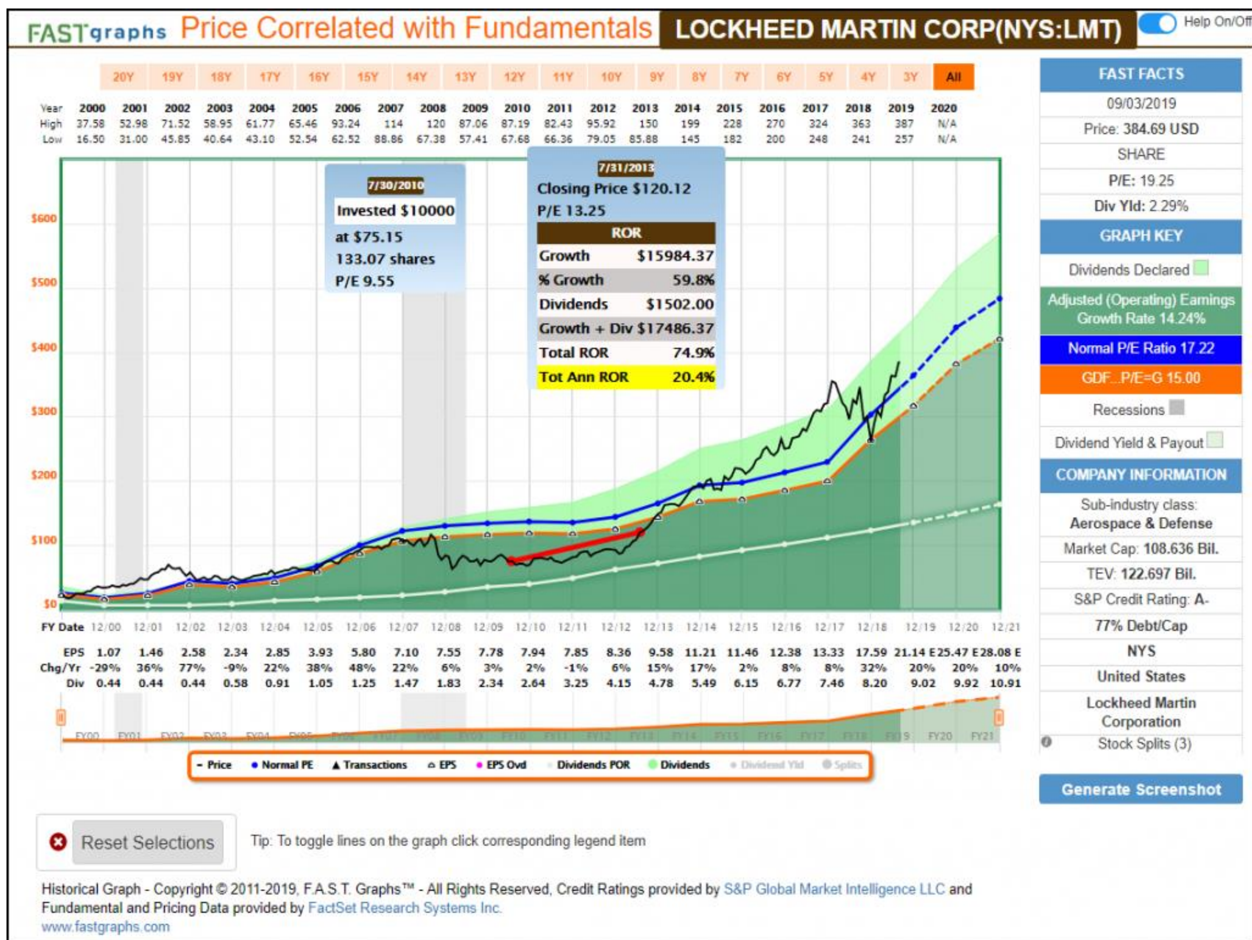
Is Dover Corp. a Cyclical, Growth or Dividend Growth Stock?: July 2011

I included Dover (DOV) because it's a cyclical stock and I wanted the reader to see the potential pitfalls that a cyclical company can bring regarding capital appreciation. Note that the dividend growth has been excellent, but also note that the stock price fell precipitously over the next 2+ years as earnings entered a down cycle. On the other hand, price has since recovered quite nicely.



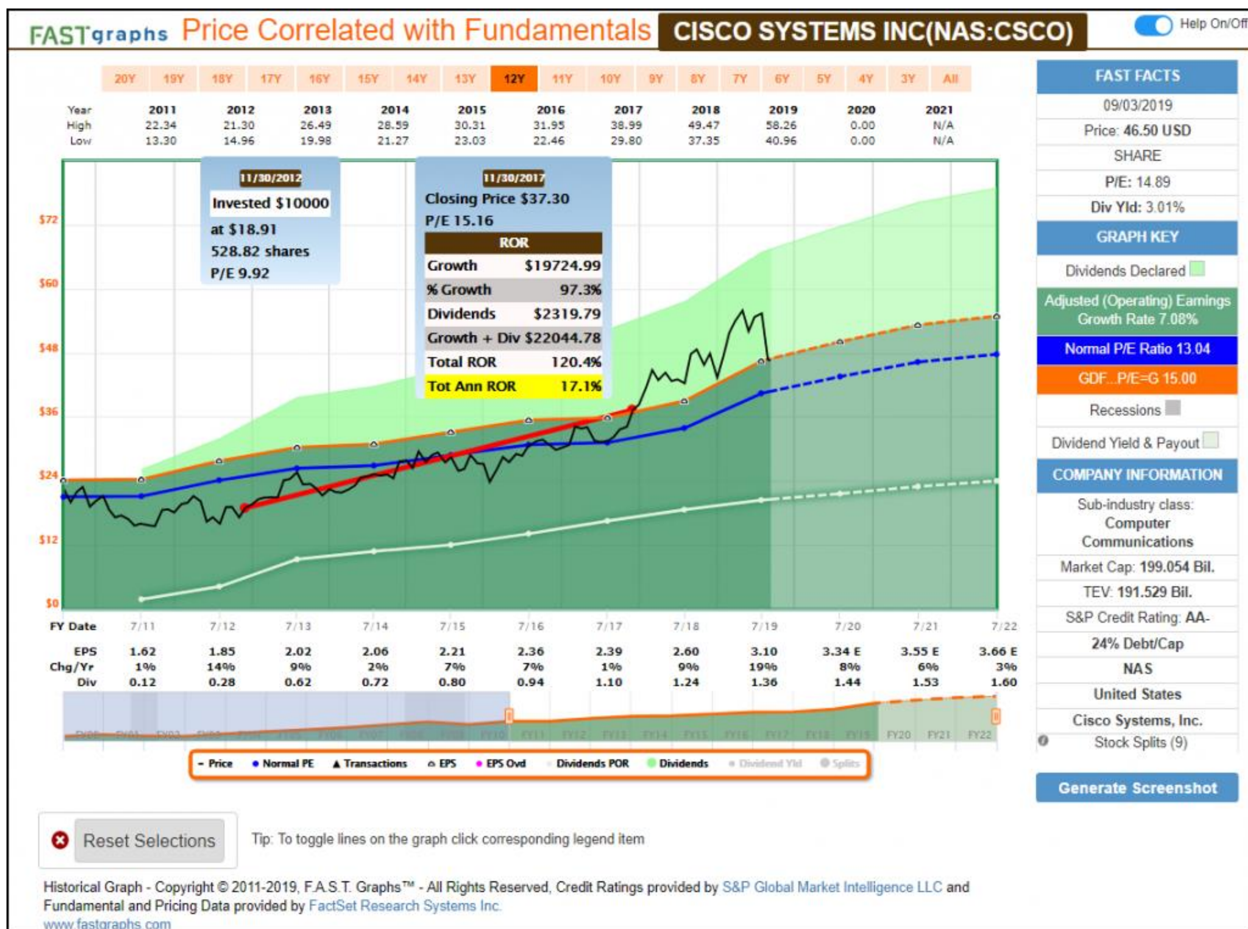
Lockheed Martin Corp: Fundamental Stock Research Analysis: July 2013

The Lockheed Martin (LMT) example does show that the company stayed very undervalued for several years following the Great Recession. However, the reader should also note that earnings growth was very muted during this timeframe. Furthermore, once earnings growth began to accelerate, the stock price accelerated and followed.



Cisco: Switch To This Undervalued Dividend Growth Stock To Boost Your Portfolio: November 2012

Cisco (CSCO) performed exceptionally well for the 5 years it took following my article before the company's price fully reverted to the mean. However, what is not shown below but will be in the video is just how crazy the market can be at times, and how damaging it can be to returns in spite of excellent operating performance. You won't want to miss it.



Although a picture is worth a thousand words, a video utilizing a live interactive graph is worth many more. Consequently, in the following analyze out loud video I will expand on covering the amount of time necessary for a stock to revert to the mean. Furthermore, as a bonus I will also utilize several of these examples to illustrate the opposite and more nefarious results (or lack thereof) that overvaluation causes.

Summary and Conclusions

The key takeaway that I am attempting to convey to the reader is the inevitability of price moving towards alignment with fair value. Moreover, this principle applies when a stock is overvalued, as well as it does when it is undervalued. However, the precise timing when this may occur is uncertain. On the other hand, the faster a company grows its business (earnings, cash flows revenues, etc.) following the purchase the less time it takes for the stock price to move back to alignment. This factor also will impact investor sentiment which tends to be a short-term oriented concept. In other words, if a company is reporting excellent earnings quarter after quarter sentiment that might've once been negative will rapidly turn positive. Nevertheless, as suggested, this might take more than one quarter to take effect.

I also hope that investors recognize and picked up on the idea that good returns can occur while the stock is on its journey to fair value. In other words, you don't have to wait until the full recovery occurs to enjoy excellent total returns (capital appreciation plus dividend income). When you can find a great company on sale you can significantly enhance your returns and lower your risk. Buying low and selling high (if selling ever occurs) is the prime directive of all common stock investors. But most importantly, don't underestimate the potential power and benefit of investing in a great stock on sale. You not only get the growth of the company, but you get leverage without the risk of borrowing anything.

On Politics, Macroeconomics, and Investing

In his Berkshire Hathaway 1994 annual report Warren Buffett said ignore political and economic forecasts. I considered this one of the more profound pieces of investment advice and wisdom that I ever came across. It has been my opinion prior to and since I read this advice that investors spend way too much time and energy worrying about things that really don't – and shouldn't – matter. I have learned that it is futile to attempt to predict future political, economic or market directions and magnitudes. Nevertheless, most investors seem almost obsessed with trying to do it.

Additionally, it is my humble opinion that investors also place too much importance on evaluating their portfolios based solely on what the current market price shows. Market value is only one of many ways to evaluate how your portfolio is performing. Furthermore, I believe that most of the other ways are more important. Current market value and the intrinsic value of your portfolios are often quite different. To my way of thinking, current market value tells you more about your current liquidity than it does the true value of what you own.

Stated differently, market value often either overstates or understates the true value of the businesses that you own. Consequently, I consider it significantly more important and intelligent to assess the value of your businesses based on sound principles of business, economics and accounting (fundamental values). Therefore, by knowing the true worth of your holdings, you can make more intelligent decisions as to whether you should be buying more, selling, or holding in relation to the market value. To clarify, I do not believe in paying more for a business than it is worth, nor do I believe in selling a business for less than it's worth. Current market price rarely gives me the whole picture.

In addition to market price and the associated volatility, I also prefer to consider the operating results, which include the growth of earnings, cash flows and dividends. To clarify, if earnings and dividends are growing and market price is inexplicably falling, I see this as a bargain. On the other hand, if I see market values excessively high and fundamentals do not justify the lofty levels, I see risk and potential loss. To summarize, I trust fundamentals more than I do emotionally-charged market behavior.

Nevertheless, the vast majority of investors that I have talked to see only the bottom line with little consideration, regard or concern about how well their businesses are performing. Consequently, they tend to be inclined to want to sell when they should buy – and vice versa. Additionally, most investors tend to worry about macroeconomic forecasts that are for the most part unpredictable, and rarely turn out to be accurate.

This is a soapbox that I have been standing on for many years (actually decades) with little success. However, I consider it extremely important and therefore will never tire of singing the song of prudence and fundamental valuations. In August 2011, I authored an article discussing these very issues. With this article I am revisiting the message I delivered in 2011. It's important to recognize that this was a period of time where investors were still traumatized by the great recession of 2008. The markets and the fundamentals were behaving quite positively, but investors were having trouble believing that the future could possibly be bright. Yet, despite all these concerns, stock market performance since the spring of 2009 has been one of the best on record.

My Original Article Posted on 2011-08-10 With Edits and Updates Included

There's certainly no shortage of pundits, prognosticators and even self-proclaimed prophets ready and willing to bombard us with dire forecasts about our future. We get a day in the market like Monday, August 8, 2011, and "Chicken Little" shows up everywhere to include radio, television, newspapers, magazines and the Internet. Yet somehow, we survive it all. But no matter how often our so-called experts get it wrong, they remain steadfast in their desire to forecast our doom with their gloom.

It's been more than 40 years ago when I first entered the investment business that many friends and family admonished me to reconsider my career path. Their reasoning was simple. There is simply no possible way that the US economy could survive and prosper under the weight of our enormous national debt. In 1970, the year I entered the business, our national debt sat somewhere between $370 and $380 billion. Of course, today our national debt hovers somewhere around $13 trillion and growing.

Before I go any farther, I want to clarify one important matter. Nothing I've already written or am about to write is meant to trivialize our serious national debt issue. The amount of debt that our government has piled up in the last 40-plus years is egregious and needs to be addressed. On the other hand, a great motivating factor for authoring this article is to attempt to separate government and the economy.

From my perspective, I clearly see government as a major expense item on our economic profit and loss statement. However, I reject the notion that the government either runs the economy or is responsible for its health. Would it not be true, that if our government ran our economy, that we would be at best a socialistic state, or at worst a communistic state. But in truth, we are a democracy, and our economy is one built on free enterprise and consequently is market driven.

Therefore, our free market-based economy is run and driven by the economic forces of supply and demand. On this basis, what matters most is the attitude of the businesses, consumers and other important components of our economic decision-making processes. In other words, how we feel about our economy has a great deal to do with how we behave, which can have a large impact on our economic growth and health over the short run. In other words, if we all believe our economy is weak, it can easily turn into a self-fulfilling prophecy. On the other hand, when our confidence is high our economy tends to be healthier.

Therefore, it's really important to understand what drives our economy and what doesn't. I believe that the overall level of productivity is a major contributing factor to the continuation of economic growth. Essential in this regard would be the primary factors of production, which are land labor and capital. Additional important factors would include research and development and other paths to innovation that promise to increase productivity. But most importantly, government is not a factor of production, as previously stated – it's an expense.

Warren Buffett's Sage Advice in 1994

In the Berkshire Hathaway 1994 annual report, Warren Buffett wrote something that had a major impact on me at the time, and it has continued to contribute to my general thinking about investing to this day. Consequently, I consider it one of my favorite Warren Buffett quotes, as well as one of the most important lessons he ever offered the general investing public. I'm going to present the entire quote in this article; however, I am going to break it down into shorter snippets in order to elaborate its important message. But before I do that, I offer this lament: How can people ignore the following aphorism to the point of not even considering its important lesson?

The first sentence of this important Warren Buffett quote establishes its message: "We will continue to ignore political and economic forecasts which are an expensive distraction for many investors and businessmen." With his first sentence, Warren Buffett is telling us that he considers politics and economic forecasts an expensive distraction. In other words, he is in effect imploring us, as will become more evident later, to focus precisely on what we own, rather than generalities that may or may not impact us in the long run.

The point I am attempting to make here is a simple one. Routinely, I talk to many people that can tell me in precise detail not only what the politicians in the United States are arguing about, but also what's going on in politics in other nations all over the world. They get this information from the daily bombarding of negative and scary headlines offered by the mass media. Yet ironically, if I asked them questions about their precise holdings, they cannot answer them. For example, if I asked them whether the companies that they own had a good quarterly earnings report, or how many of their companies raised their dividends or announced stock buybacks, et cetera, they usually have no clue.

In other words, I believe investors obsess about things that although scary, do not have a direct long-term impact on their specific portfolios, but only their short-term attitudes about them. The next line in the Warren Buffett quote speaks to my point: "Thirty years ago, no one could have foreseen the huge expansion of the Vietnam War, wage and price controls, two oil shocks, the resignation of a president, the dissolution of the Soviet Union, a one-day drop in the Dow of 508 points, or treasury bill yields fluctuating between 2.8% and 17.4%." What these important words tell us is that with investing, there is always something to worry about, keep in mind these words were written in 1994.

However, perhaps the most important lesson that this, my favorite Warren Buffett quote can teach us, is found in the next phrase as follows: "But surprise-none of these blockbuster events may even the slightest dent in Ben Graham's investment principles. Nor did they render unsound the negotiated purchases of fine businesses at sensible prices." Here Mr. Buffett is telling us that the prospects and rewards of owning good businesses are often independent of the general political and economic environment we find ourselves in. He is also speaking to the importance of investing in good businesses at sound valuations. Finally, we believe he is telling us that it's more important for us to focus precisely on what we own, because this is where our true long-term rewards or losses will come from.

The final three sentences in this profound Warren Buffett advice are most relevant to the purpose of this article: "Imagine the cost to us, if we had let a fear of unknowns cause us to defer or alter the deployment of capital. Indeed, we have usually made our best purchases when apprehensions about some macro event were at a peak. Fear is the foe of the faddist, but the friend of the fundamentalist."

Once again, I believe Mr. Buffett is advising us to focus on our precise holdings and their unique fundamental strengths and worry less about what's going on in more general terms. An old Wall Street adage summarizes my point: "Wall Street climbs a wall of worry." Of course, the most important lesson here is not to let fear overcome reason. As promised, what follows is the Warren Buffett quote in its entirety:

"We will continue to ignore political and economic forecasts which are an expensive distraction for many investors and businessmen. Thirty years ago, no one could have foreseen the huge expansion of the Vietnam War, wage and price controls, two oil shocks, the resignation of a president, the dissolution of the Soviet Union, a one-day drop in the Dow of 508 points, or treasury bill yields fluctuating between 2.8% and 17.4%. But surprise-none of these blockbuster events made even the slightest dent in Ben Graham's investment principles. Nor did they render unsound the negotiated purchases of fine businesses at sensible prices. Imagine the cost to us, if we had let a fear of unknowns cause us to defer or alter the deployment of capital. Indeed, we have usually made our best purchases when apprehensions about some macro event were at a peak. Fear is the foe of the faddist, but the friend of the fundamentalist."

A Few Real-World Examples of Warren Buffett's Wisdom

What comes next are four real-life examples looked at through the lens of our F.A.S.T. Graphs™ research tool. Admittedly these four selections are hand-picked, because the theme of this article relates to focusing on precisely what you own and carefully researching them before you buy them. My first two examples will look at what I consider to be pure unadulterated growth stocks. My third and fourth example will look at two blue-chip dividend growth stocks.

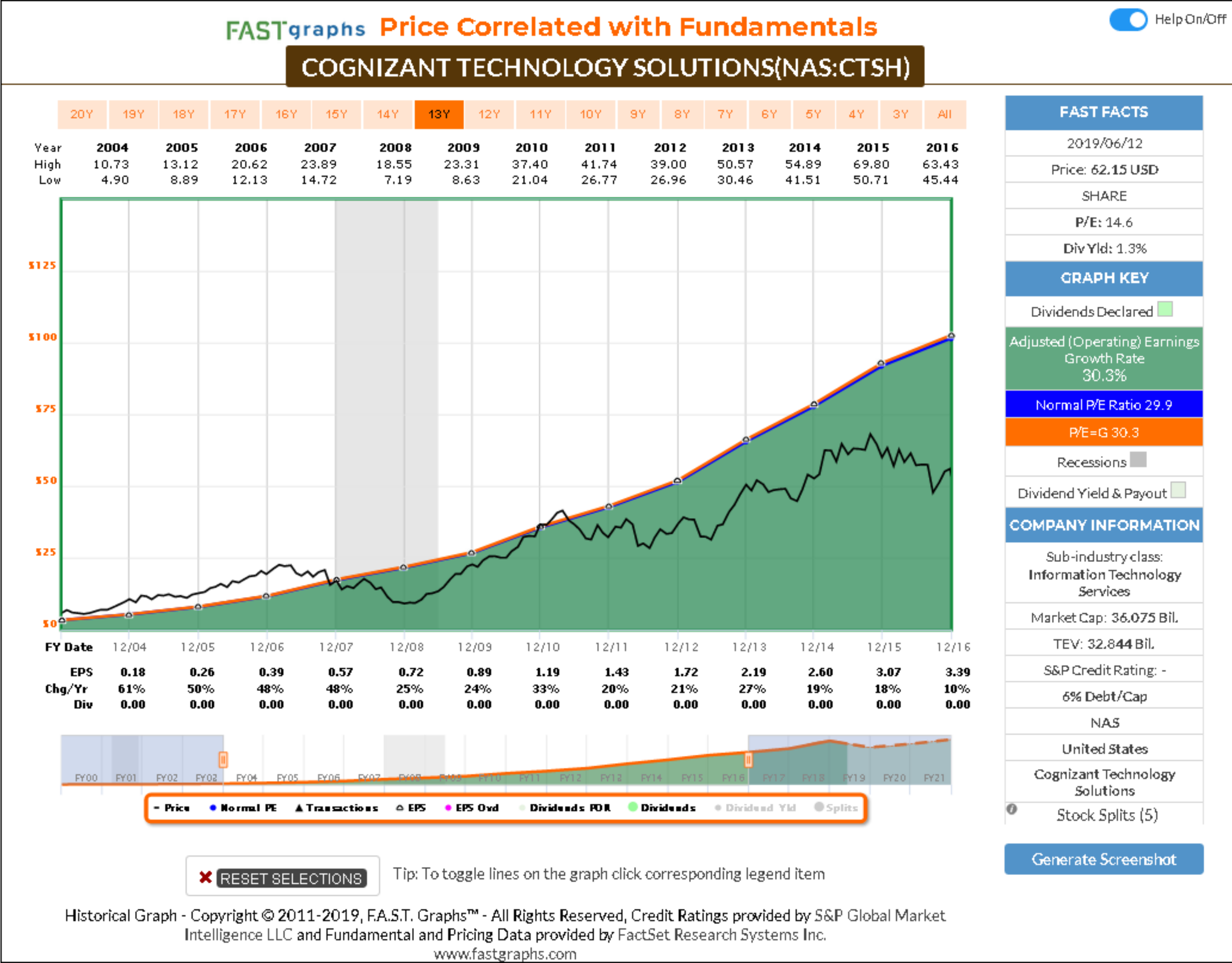
Two Powerful Growth Stocks Unaffected by the Great Recession

Cognizant Technologies Inc. (CTSH)

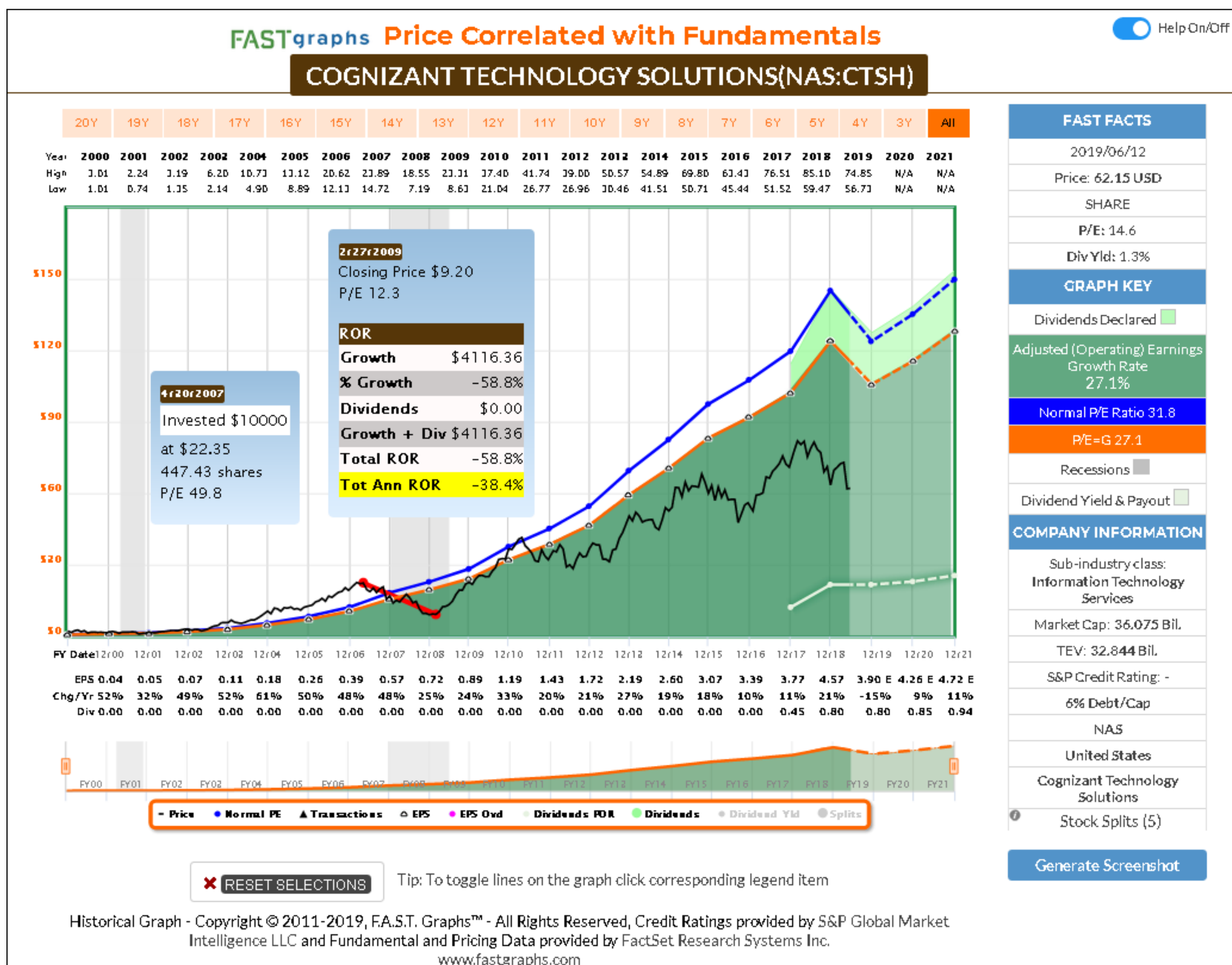
My first example is Cognizant Technology Solutions (CTSH). "Headquartered in Teaneck, New Jersey, Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses…"

The focal point of the following graph is the plotting of each year's earnings since calendar year 2004 as represented by the orange line with white triangles. Notice how during the great recession this well-managed company, with no debt on the balance sheet at the time, generated powerful earnings advances despite the economic crisis.

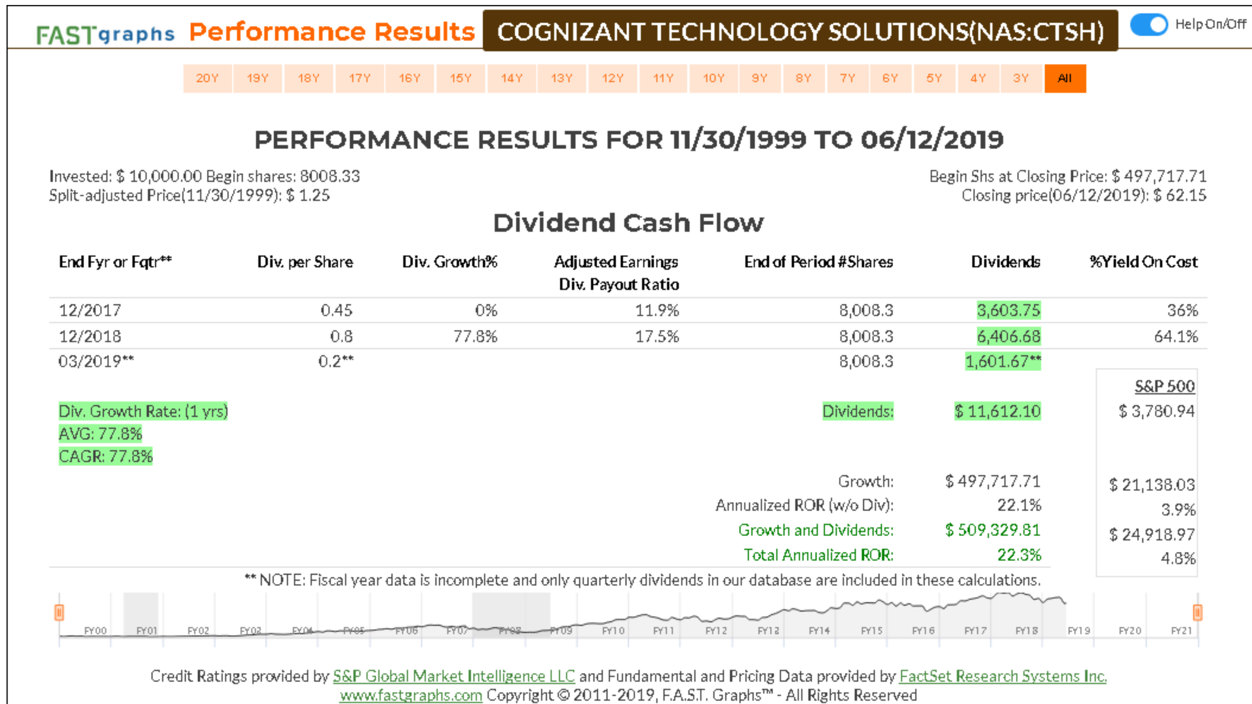
Powerful Operating Performance Right Through the Recession



Furthermore, also consider that the significant drop in stock price from 2007 to 2008 of $22.35 per share to a low of approximately $9 a share was unjustified based on operating results. Perhaps even more importantly, notice how the stock price had recovered to a high of over $41 a share by spring of 2011.



The performance results associated with the above graph illustrate how powerful the rewards can be when the focus is on the specific business results of the company instead of on general economic conditions. The total annualized rate of return for this non-dividend paying growth stock was in excess of 22% per annum at a time when the general market produced very weak results.


FASTgraphs Performance Results COGNIZANT TECHNOLOGY SOLUTIONS(NAS:CTSH)

Help On/Off

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

PERFORMANCE RESULTS FOR 11/30/1999 TO 06/12/2019

Invested: $ 10,000.00 Begin shares: 8008.33
Split-adjusted Price(11/30/1999): $ 1.25

Begin Shs at Closing Price: $ 497,717.71
Closing price(06/12/2019): $ 62.15

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
12/2017	0.45	0%	11.9%	8,008.3	3,603.75	36%
12/2018	0.8	77.8%	17.5%	8,008.3	6,406.68	64.1%
03/2019**	0.2**			8,008.3	1,601.67**	

Div. Growth Rate: (1 yrs)
AVG: 77.8%
CAGR: 77.8%

		S&P 500
Dividends:	$ 11,612.10	$ 3,780.94
Growth:	$ 497,717.71	$ 21,138.03
Annualized ROR (w/o Div):	22.1%	3.9%
Growth and Dividends:	$ 509,329.81	$ 24,918.97
Total Annualized ROR:	22.3%	4.8%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21

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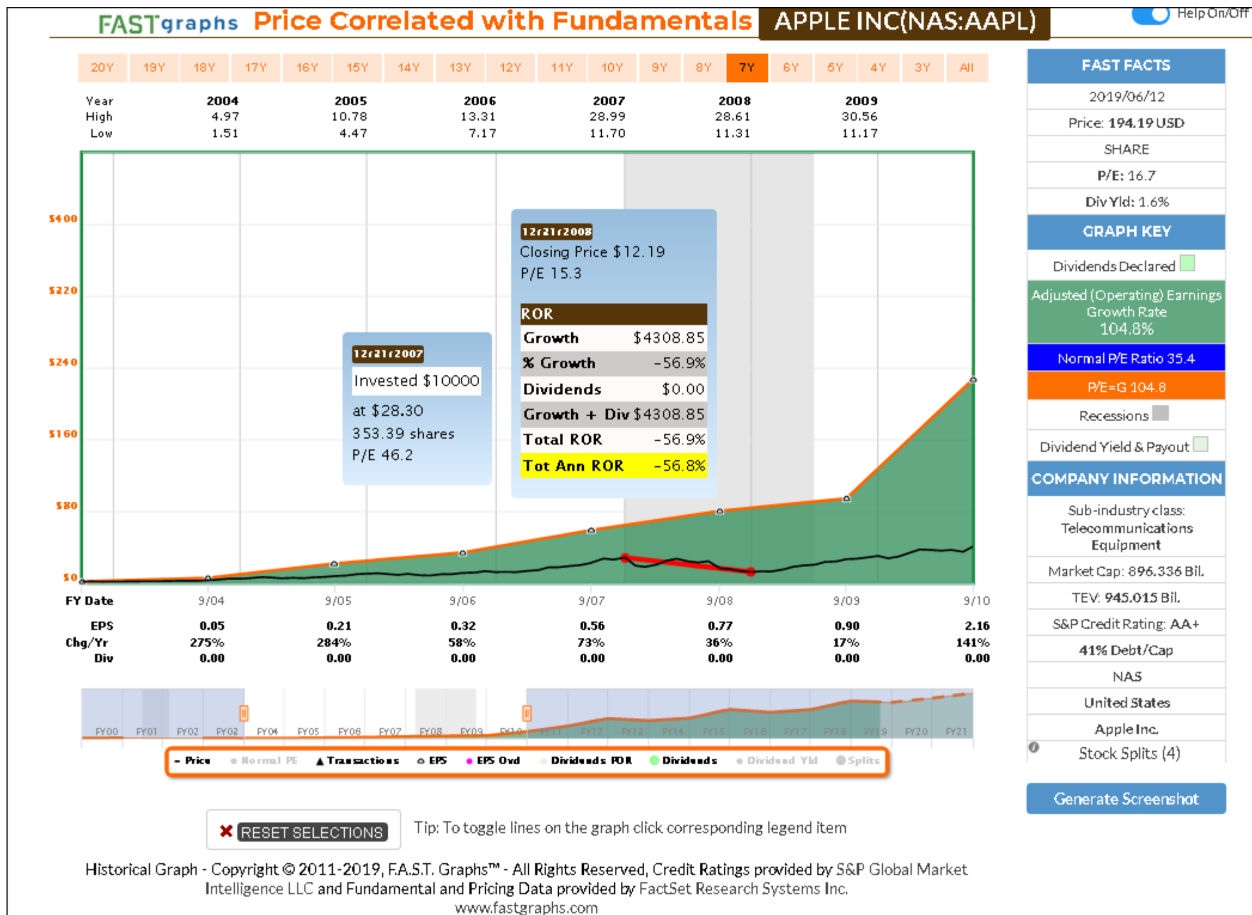
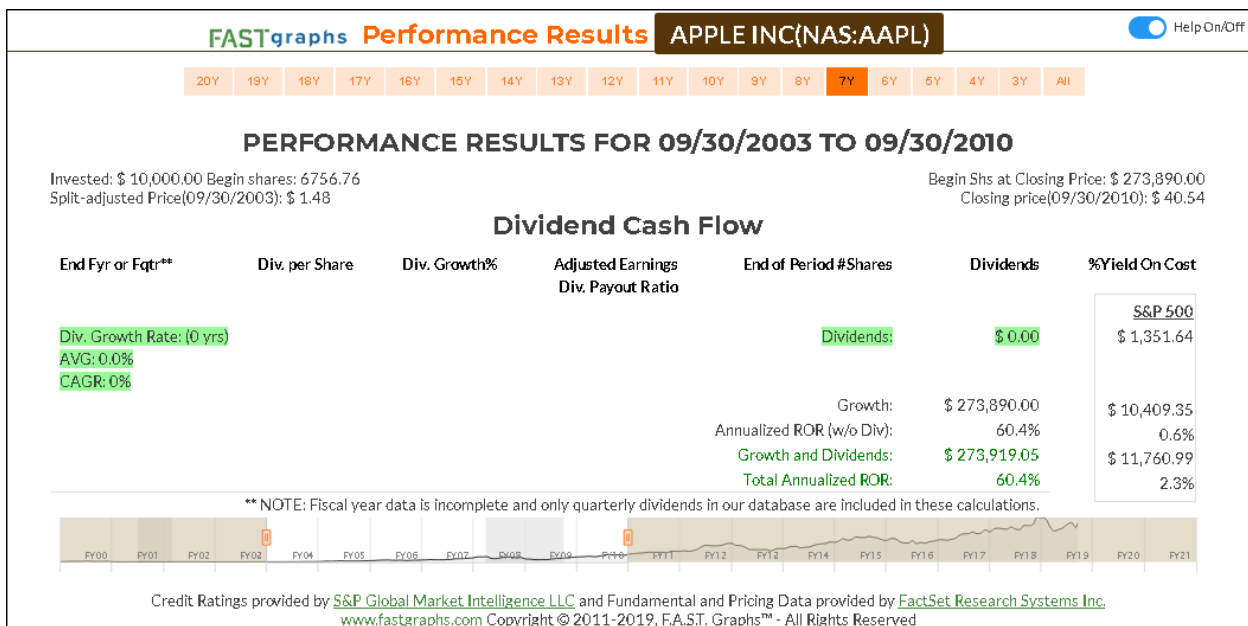
Apple Inc. (AAPL)

My second example looks at one of today's most highly recognized growth stocks, Apple Inc. (AAPL). Thanks to the significant innovations that this company has developed in recent years, their earnings growth has been nothing short of spectacular. Nevertheless, even with this outstanding operating performance, Apple's stock price was more than cut in half during the great recession. Of course, the subsequent recovery in their stock price has also been nothing short of outstanding.



Strong Recession Resistant Performance Results

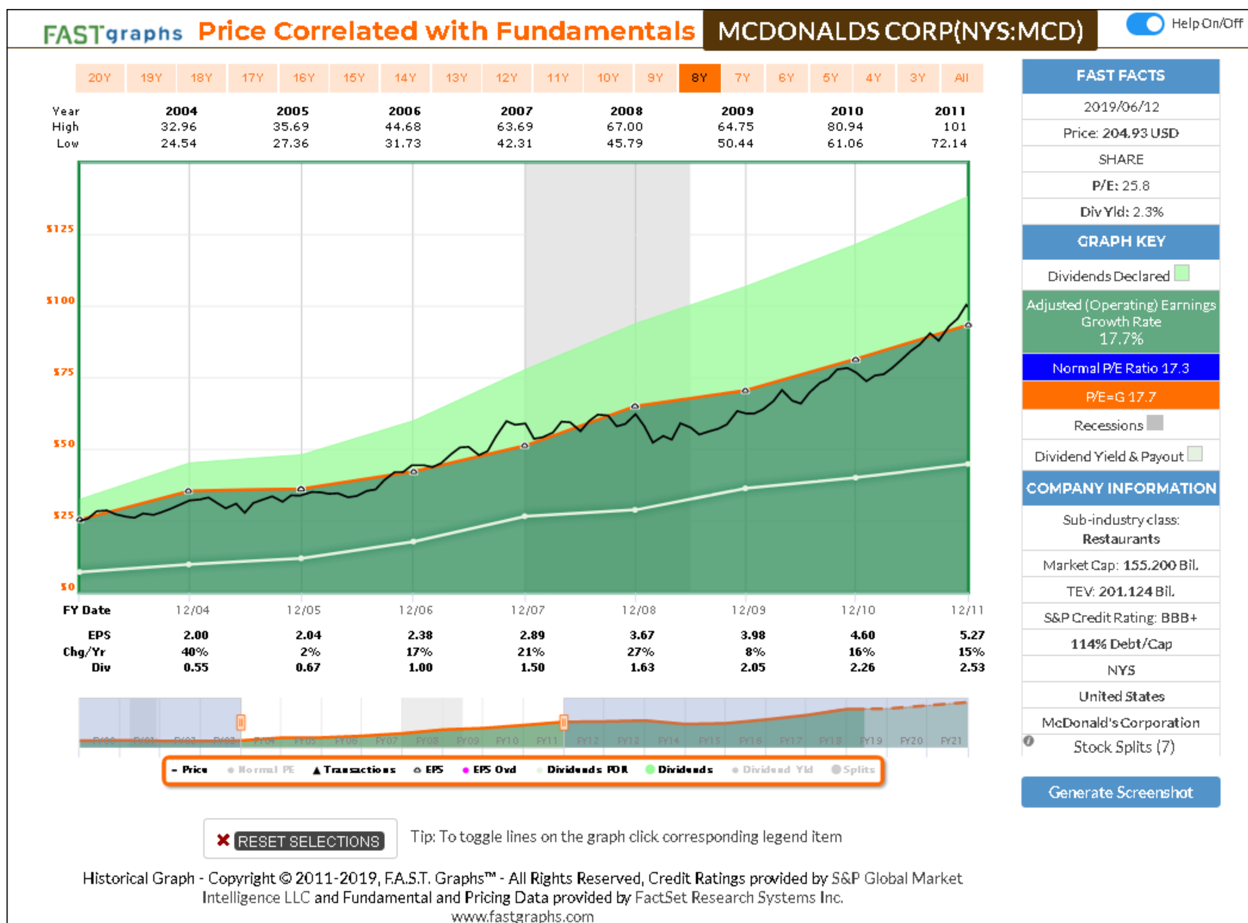
The associated performance results for Apple from fiscal year 2004 through their fiscal year ending in September 2010, are truly remarkable. And, as this article is designed to point out, the more than 60% compounded rate of return that Apple generated for shareholders was achieved independent of the economic or political environment that prevailed during this time.



Two Blue-Chip Dividend Growth Stocks Unaffected by the Great Recession

McDonald's Corp. (MCD)

When looking at dividend growth stocks like my first example, McDonald's Corp., the focus on the orange earnings line is still very important. However, the light green shaded area on the following graph depicts dividends paid out of earnings. What is clear from the graph is how McDonald's stock price tracked its consistent earnings growth record of over 17.7% per annum. For the dividend growth investor, they can still face day-to-day stock price volatility, but the advantage of carefully selected dividend growth stocks is the consistent reward from the increasing dividend.



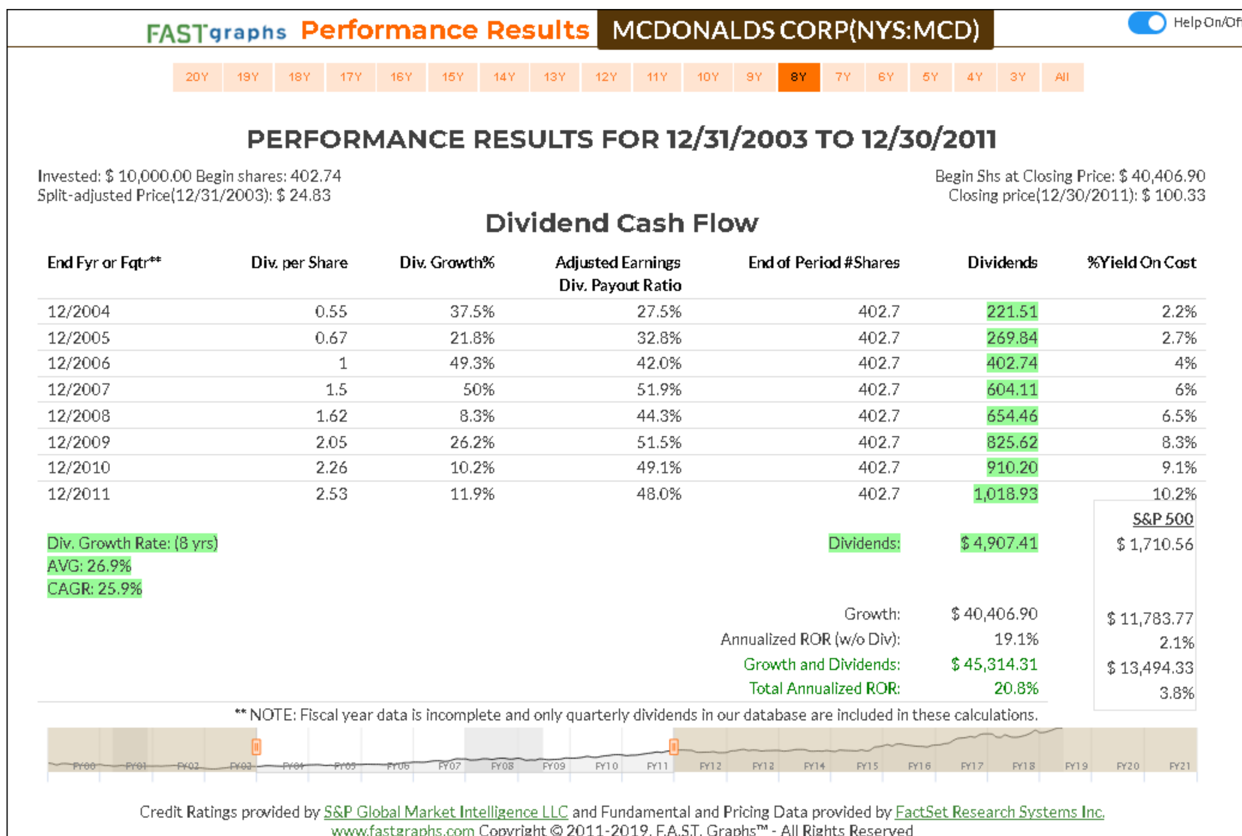
Year	2004	2005	2006	2007	2008	2009	2010	2011
High	32.96	35.69	44.68	63.69	67.00	64.75	80.94	101
Low	24.54	27.36	31.73	42.31	45.79	50.44	61.06	72.14

FY Date	12/04	12/05	12/06	12/07	12/08	12/09	12/10	12/11
EPS	2.00	2.04	2.38	2.89	3.67	3.98	4.60	5.27
Chg/Yr	40%	2%	17%	21%	27%	8%	16%	15%
Div	0.55	0.67	1.00	1.50	1.63	2.05	2.26	2.53

At the bottom of the McDonald's graph, we can see that the dividend increased from $.55 per share to $2.53 per share for calendar year 2011. Since dividend growth investors tend to be long-term owners focused on the dividends, they were rewarded even during the great recession of 2008 by the growing dividend representing an annual increase in pay.

A Growing Dividend Every Year

With the performance results associated with the above graph, we find that McDonald's was an exceptional investment prior to and during the great recession of 2008. As stated above, the most important attribute to focus on here is the rapidly growing dividend record of this recession-resistant company.


FASTgraphs Performance Results MCDONALDS CORP(NYS:MCD)

Help On/Off

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

PERFORMANCE RESULTS FOR 12/31/2003 TO 12/30/2011

Invested: $ 10,000.00 Begin shares: 402.74
Split-adjusted Price(12/31/2003): $ 24.83

Begin Shs at Closing Price: $ 40,406.90
Closing price(12/30/2011): $ 100.33

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
12/2004	0.55	37.5%	27.5%	402.7	221.51	2.2%
12/2005	0.67	21.8%	32.8%	402.7	269.84	2.7%
12/2006	1	49.3%	42.0%	402.7	402.74	4%
12/2007	1.5	50%	51.9%	402.7	604.11	6%
12/2008	1.62	8.3%	44.3%	402.7	654.46	6.5%
12/2009	2.05	26.2%	51.5%	402.7	825.62	8.3%
12/2010	2.26	10.2%	49.1%	402.7	910.20	9.1%
12/2011	2.53	11.9%	48.0%	402.7	1,018.93	10.2%

Div. Growth Rate: (8 yrs)
AVG: 26.9%
CAGR: 25.9%

		S&P 500
Dividends:	$ 4,907.41	$ 1,710.56
Growth:	$ 40,406.90	$ 11,783.77
Annualized ROR (w/o Div):	19.1%	2.1%
Growth and Dividends:	$ 45,314.31	$ 13,494.33
Total Annualized ROR:	20.8%	3.8%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

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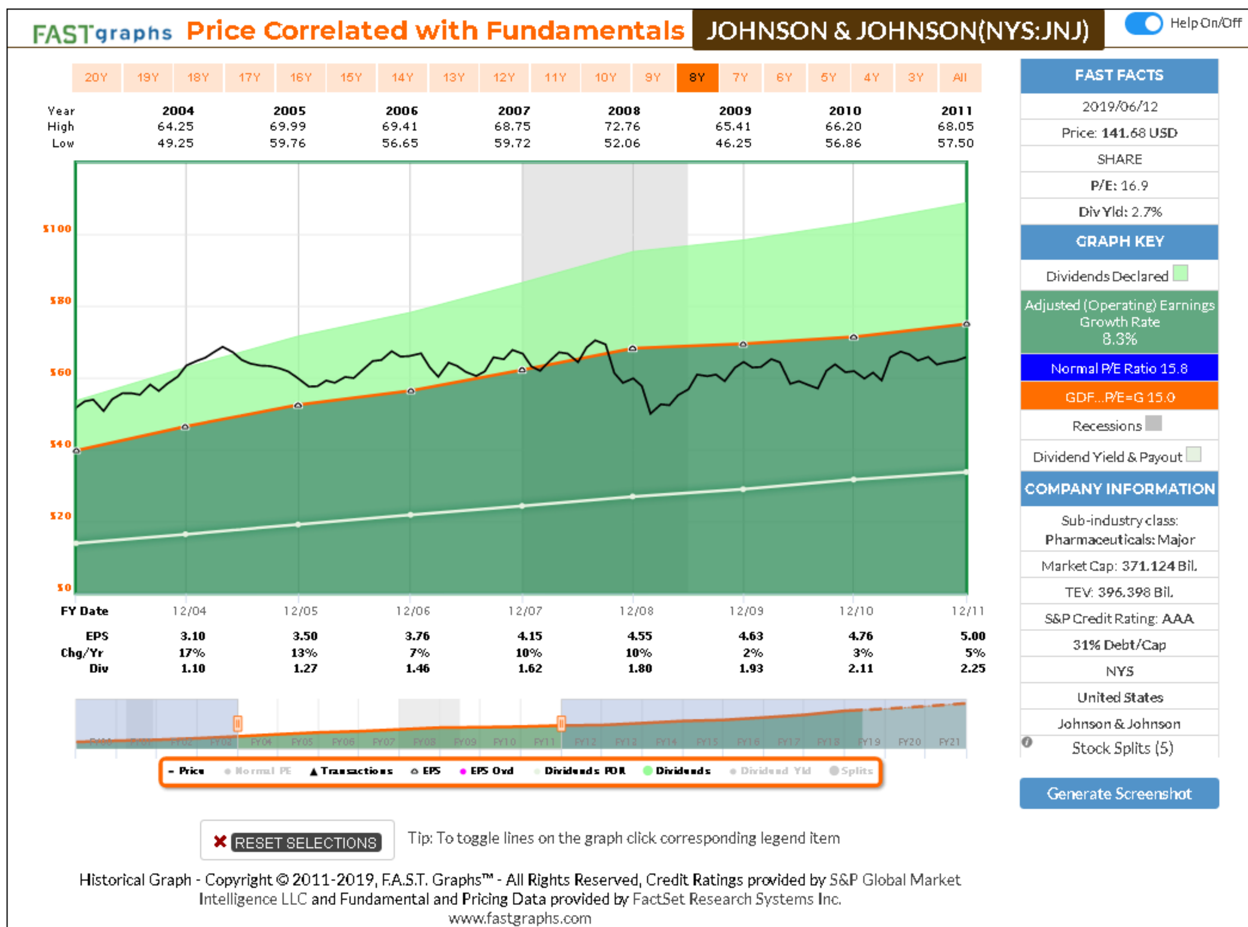
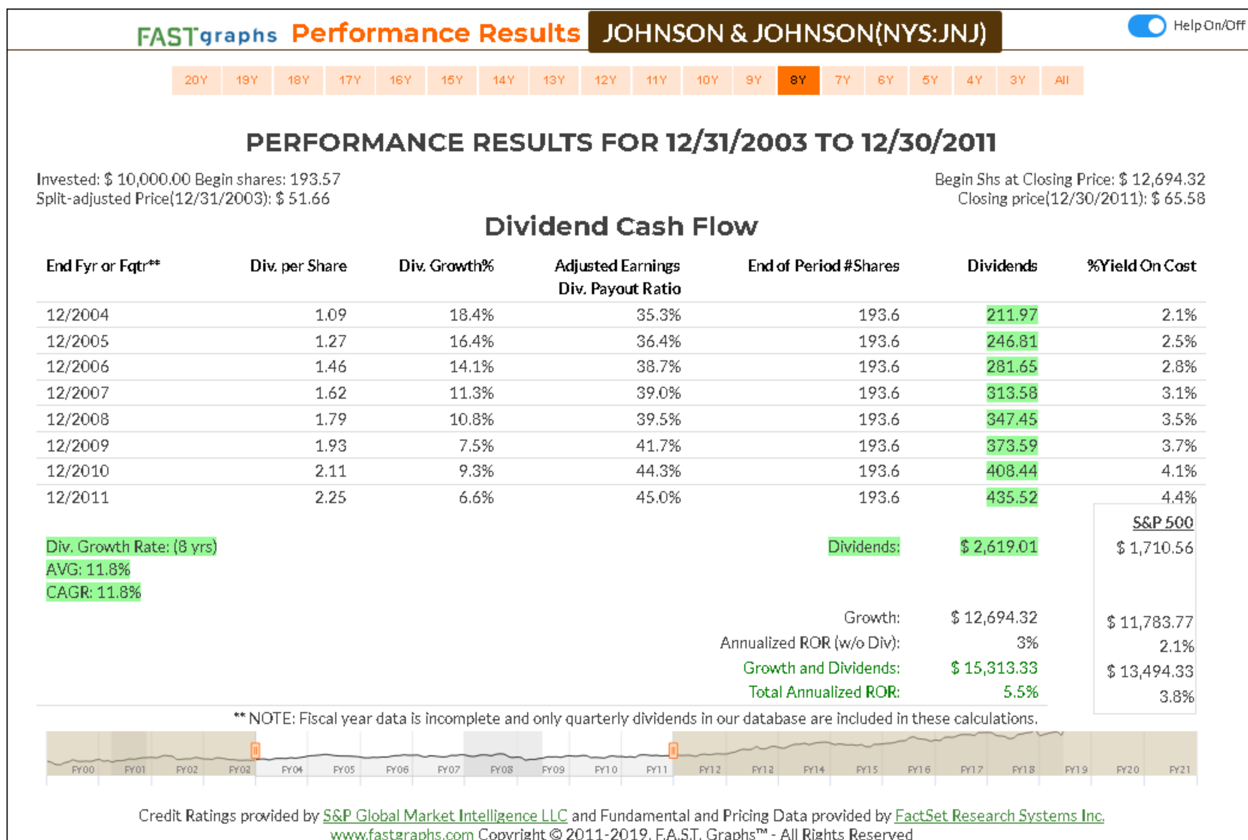
Johnson & Johnson (JNJ)

My fourth and final example looks at Johnson & Johnson, a company whose AAA credit rating was even higher than the US Government over this timeframe, at least according to one rating agency. Once again, we see an example of a very consistent earnings growth rate through the recession. However, the recession did cause their earnings growth rate to slow, but not fall. This graph also shows that Johnson & Johnson has typically commanded a premium price earnings ratio relative to its earnings growth. However, for a couple years post the great recession of 2008 this extremely high-quality company traded at a discount to its earnings justified valuation (the orange line).



Shareholders Get a Dividend Increase Every Year

As was the case with McDonald's, when looking at the associated performance results with the above graph we once again see an example in Johnson & Johnson where they were able to raise their dividend every year since calendar year 2004. Although the growth rate was not as fast as we saw with McDonald's, the dividend yield was 3.4% by the end of 2010, thanks to its low valuation following the great recession. Consequently, the great recession created an intriguing purchase opportunity of this bluest of blue chips at a bargain basement valuation. Possibly for the first time ever, Johnson & Johnson offered investors a starting dividend yield that was more than they could earn on a 30-year treasury bond. It's also important to mention that a high starting valuation was the major contributing factor to Johnson & Johnson's modest returns over this timeframe.



FASTgraphs Performance Results JOHNSON & JOHNSON(NYS:JNJ)

Help On/Off

20Y 19Y 18Y 17Y 16Y 15Y 14Y 13Y 12Y 11Y 10Y 9Y 8Y 7Y 6Y 5Y 4Y 3Y All

PERFORMANCE RESULTS FOR 12/31/2003 TO 12/30/2011

Invested: $ 10,000.00 Begin shares: 193.57
Split-adjusted Price(12/31/2003): $ 51.66

Begin Shs at Closing Price: $ 12,694.32
Closing price(12/30/2011): $ 65.58

Dividend Cash Flow

End Fyr or Fqtr**	Div. per Share	Div. Growth%	Adjusted Earnings Div. Payout Ratio	End of Period #Shares	Dividends	%Yield On Cost
12/2004	1.09	18.4%	35.3%	193.6	211.97	2.1%
12/2005	1.27	16.4%	36.4%	193.6	246.81	2.5%
12/2006	1.46	14.1%	38.7%	193.6	281.65	2.8%
12/2007	1.62	11.3%	39.0%	193.6	313.58	3.1%
12/2008	1.79	10.8%	39.5%	193.6	347.45	3.5%
12/2009	1.93	7.5%	41.7%	193.6	373.59	3.7%
12/2010	2.11	9.3%	44.3%	193.6	408.44	4.1%
12/2011	2.25	6.6%	45.0%	193.6	435.52	4.4%

Div. Growth Rate: (8 yrs)
AVG: 11.8%
CAGR: 11.8%

		S&P 500
Dividends:	$ 2,619.01	$ 1,710.56
Growth:	$ 12,694.32	$ 11,783.77
Annualized ROR (w/o Div):	3%	2.1%
Growth and Dividends:	$ 15,313.33	$ 13,494.33
Total Annualized ROR:	5.5%	3.8%

** NOTE: Fiscal year data is incomplete and only quarterly dividends in our database are included in these calculations.

FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21

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Conclusions

This article is about casting a light of reason on the longer-term perspective, in contrast to what is typically an emotionally-charged attitude about short-term volatility. It is understandably human nature to judge the performance of our portfolios based primarily on their closing stock price for any given day, week, month, or even quarter. The point I am trying to make here is that it is not the most important factor, unless you were literally planning to sell on the day you measure it. Otherwise, the intrinsic value derived from the operating results that your companies generate is, beyond a shadow of a doubt, more important than price volatility, in the longer run.

Part of the problem lies in the complexity that most investors face when attempting to evaluate their specific portfolios beyond price alone. The media only speaks to generalities about the stock market, the economy or politics. Therefore, the everyday investor can only judge their holdings, outside of stock price, against the backdrop of what is generally happening. On the other hand, there are ways that investors could organize the information they receive to focus more on their actual specific holdings. By doing this, they could keep track of their earnings and dividend records, as well as other important news relating specifically to their portfolio holdings. This is precisely why I developed FAST Graphs, the fundamentals analyzer software tool.

Warren Buffett's timeless quote, along with the four examples cited in this article, provide prima facie evidence that supports our thesis. Leave the broader economic issues to all the pundits who relish the opportunity to predict the unpredictable. Regarding your own financial futures, place your attention precisely on what you personally own and focus specifically on the performances of the businesses behind your investments. There is no place in investing for allowing emotions to interfere with sound judgments. If others are selling because they're afraid, you can ignore that based on the confidence you have in what you specifically own. I will summarize and conclude this article with another related Warren Buffett quote:

"If we find a company we like, the level of the market will not really impact our decisions. We will decide company by company. We spend essentially no time thinking about macroeconomic factors. In other words, if someone handed us a prediction by the most revered intellectual on the planet, with figures for unemployment or interest rates, or whatever it might be for the next two years, we would not pay any attention to it. We simply try to focus on businesses that we think we understand and where we like the price and management."