TD Wealth

What Returns Should You Expect from your Stock Portfolio?

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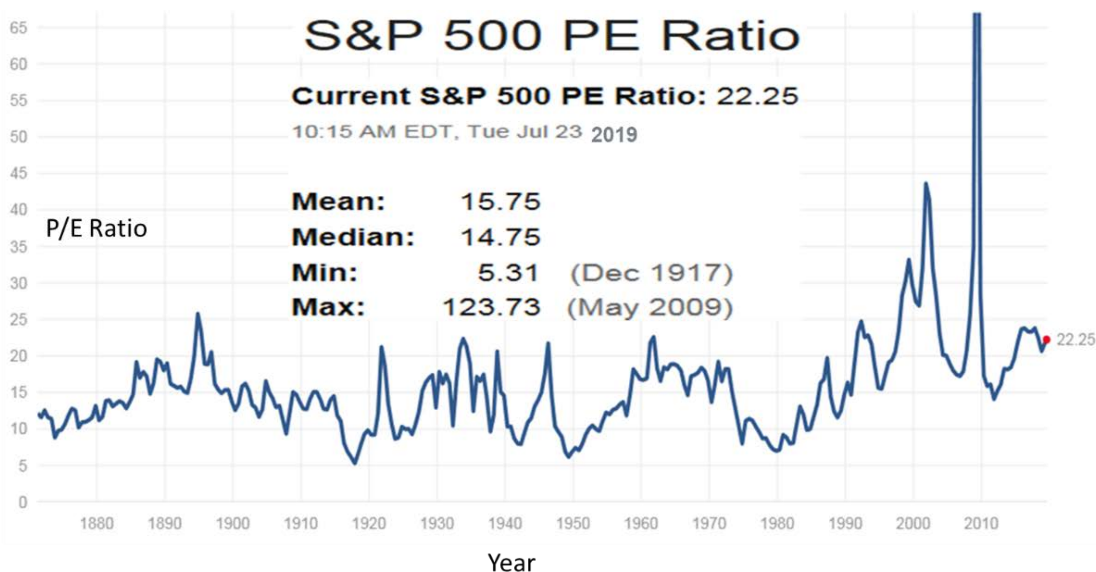
With so much discussion surrounding market uncertainty, one question I am often asked is what return should I expect from my portfolio? One way to explore this question is to formulate a reasonable expectation of potential future stock market returns and compare those return expectations to investing in high quality fixed income. In other words, I will explore whether long-term investors may be better off investing in stocks, or alternatively, high-quality fixed income at this time.

Stock market valuation is primarily a function of two variables: the price paid per share of the companies that make up the market, and the underlying earnings per share of those companies. If we take the ratio of these variables, we create a widely used formula to evaluate the relative expensiveness of a stock – the price-to-earnings (P/E) ratio.

Historically, the Standard & Poor's 500 Composite Index (S&P 500), which is an index of the 500 largest companies in the US has had an average P/E ratio multiple of 15.75 since 1900[1]. Put differently, the S&P 500 has produced an annual average return of $1 for every $15.75 invested during that time period.

As of August 2019, the P/E ratio of the S&P 500 is 22.25, which is approximately 50% more expensive than the historic average of 15.75[2]. At first glance, it may appear that owning stocks would be a bad idea. However, I would like to elaborate on why investing in the stock market may still be a good option for some long-term investors.



Source: https://www.multpl.com/s-p-500-pe-ratio

[1] https://www.multpl.com/s-p-500-pe-ratio

[2] Ibid.

Limitations of the P/E Ratio

I would like to begin with a word of caution: The P/E ratio has limitations in its ability to evaluate and compare individual companies. Examples include:

- Each industry or sector commands its own average P/E ratio.
    - For example, as of August 1st, 2019, the P/E ratio for Amazon is 77, while TD stock has a ratio of 12[3]. A high P/E ratio can be entirely justified (i.e. Amazon) if the company can grow its earnings at a faster rate than the economy.
    - In general, we could see higher sustained P/E ratios in the future given the increasing growth of technology companies, which usually command higher P/E ratios.

- Earnings per Share can be manipulated or be irrelevant altogether[4].
    - Earnings can be distorted based on how a company has accounted for a particular item.
    - Accounting standards vary from country to country.

- The P/E ratio ignores the impact of debt.
    - The use of debt amplifies earnings when profits are positive, and vice-versa when negative.

The P/E ratio simply is one of the clues in trying to value a business. The P/E ratio is generally a more useful tool when evaluating stock market indices (i.e. the S&P 500) than at the individual company level.

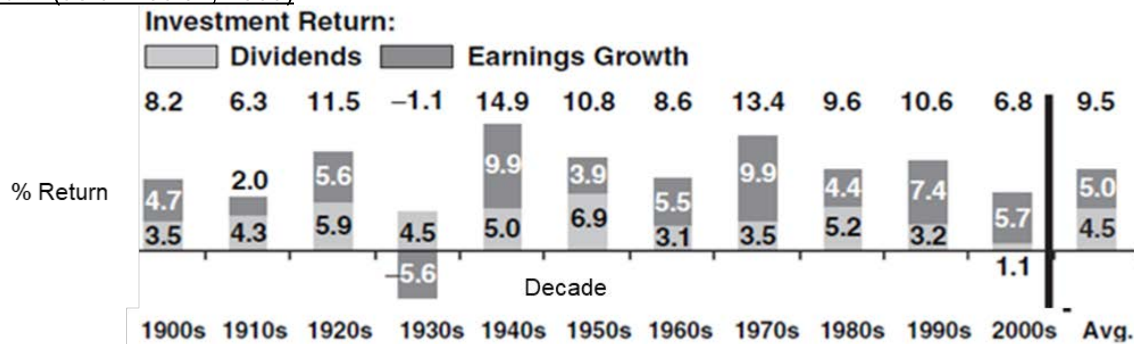
Earnings per Share (EPS)

Earnings per share (EPS) are the portion of a company's profit allocated to each outstanding share of common stock. The resulting number serves as an indicator of a company's profitability[5].

Earnings can be broken down into two components: earnings growth and dividend yield (dividend yield = dividends divided by stock price). Added together, these two components provide the approximate investment return of a company. The below chart illustrates the surprising consistency of investment returns. The annual growth in earnings and dividend yield of the S&P500 has averaged 9.5% since 1900 (see Exhibit 1).

[3] https://ycharts.com/companies/AMZN/pe_ratio; https://ycharts.com/companies/TD/pe_ratio
[4] http://www.munknee.com/the-pe-ratio-its-strengths-and-limitations/
[5] https://www.investopedia.com/terms/e/eps.asp

Exhibit 1(as of Dec 31, 2009)



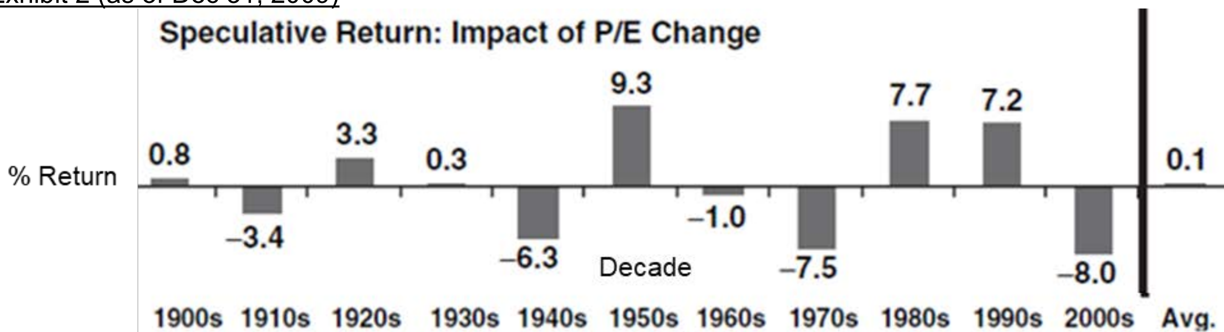
Source: Bogle, John, 2017, *The Little Book of Common Sense Investing*, John Wiley & Sons Inc., Hoboken, New Jersey, 16p

Price per Share

Generally, investors may be willing to pay more for an investment if the economic climate is perceived to be growing and stable. Exhibit 2 illustrates the fluctuation in price investors are willing to pay for $1 of earnings.

As demonstrated by comparing Exhibit 1 and Exhibit 2, the change in price of the S&P 500 (Exhibit 2) appears to have been much more volatile than the changes in the underlying earnings (Exhibit 1) over time. These greater swings may be associated with the speculative nature of the stock market itself.

Exhibit 2 (as of Dec 31, 2009)



Source: Bogle, John, 2017, *The Little Book of Common Sense Investing*, John Wiley & Sons Inc., Hoboken, New Jersey, 16p

For instance, there have been decades where companies have produced above average earnings growth and dividend yields, but the rate of change in the P/E ratio was negative (i.e. 1940's, 1970's), as shown in the chart above. Additionally, the opposite has been true during the 1900's, 1930's, 1980's, and 1990's when earnings were below average, but the rate of change in the P/E ratio increased during the decade. These unexpected deviations from price and earnings may be attributed to the impact human behavior has on the stock market.

The Price-to-Earnings (P/E) Ratio

As discussed on page 1, the current P/E ratio of the S&P 500 is roughly 50% greater than the historic average since 1900. However, this information alone cannot necessarily be a dissuading factor in your decision to own stocks for reasons which include:

1) Interest rates are currently low.
2) You are statistically at a disadvantage trying to time the market.

Interest rates are currently low

To borrow a thought from perhaps the most famous investor of all-time, Warren Buffett believes rising interest rates are like gravity to stock market valuations, and any stream of future income (i.e. earnings or dividends) are much more valuable if interest rates are low.

> "Any investment is worth what you will receive between now and when it is sold discounted back to today. The discounting back is affected by whether you choose interest rates like those of Japan (low) or interest rates like those we had in 1982. When we had 15% short-term rates in 1982, it was silly to pay 20 times earnings for stocks.[6]"

Many investors use US government bond yields as their "risk-free" discount rate to value and compare stock market investments. As of August 5th, 2019, a 10-year US Treasury Bond yields just 1.75%. To put these figures into perspective, let's assume inflation is projected to increase at 2% annually, and the bond does not default on its payments. Given these assumptions, purchasing a 10-year U.S Treasury bond today would guarantee an after-inflation annual loss of -0.25% (1.75% - 2%).

Daily Treasury Yield Curve Rates

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
08/05/19	2.07	2.08	2.05	1.99	1.78	1.59	1.55	1.55	1.63	1.75	2.07	2.30 [7]

To summarize, today's higher stock market valuations appear to be justified given our low interest-bearing investment alternatives.

You are statistically at a disadvantage trying to time the market.

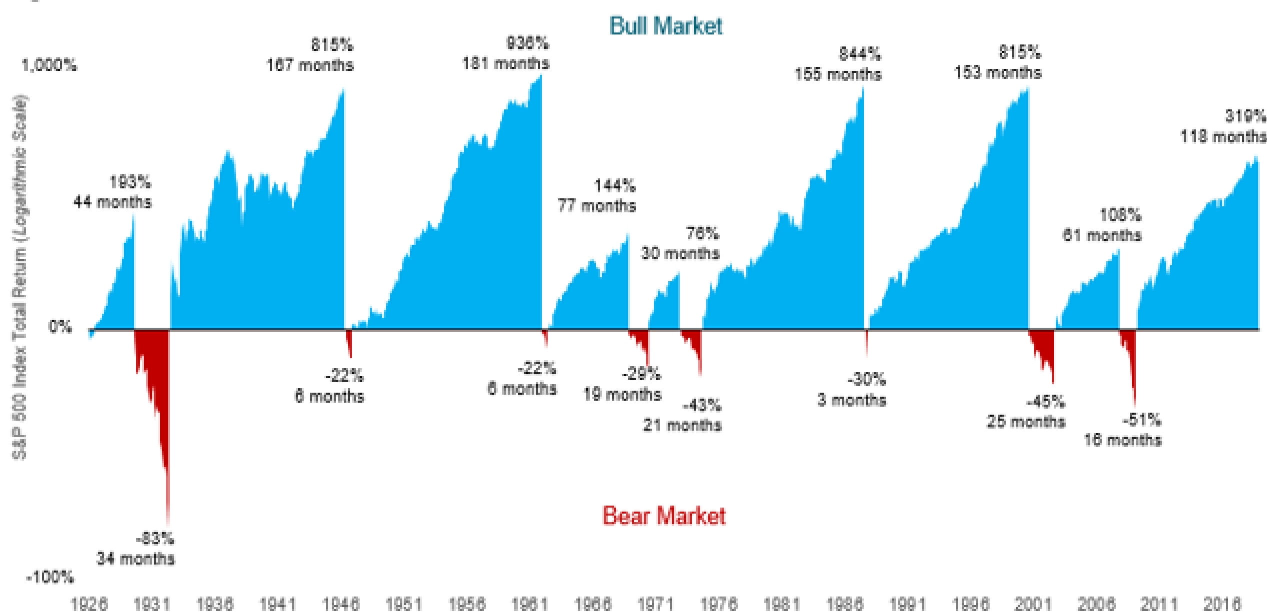
We never recommend that you try and time the market. The reason why market timing is not recommended is that for investors to successfully time the stock market, you would have to make two correct predictions: buying at the bottom of the market and selling at the top. Furthermore, the investor must be right over 70% of the time to have a greater than 50% average timing the markets (70% X 70% = 50%). Additionally, these statistics do not include other costs such as trading fees, or taxes.

[6] https://www.cnbc.com/2018/05/17/buffett-interest-rates-are-most-important-thing-in-stock-valuations.html
[7] https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield

To further add to the complexity of timing markets, the length and magnitude of bull and bear market cycles have been far from consistent over the past 92 years. On average, there have been 17 bull and bear market cycles using a 20% threshold for downturns. The average bear marketing seeing a 40% decline, while the average bull market has increased by 472%. The average bear market has been 16 months in duration while the average bull market has sustained for almost 110 months[8]. These fluctuations can primarily be attributed to speculative changes in the price investors have paid for their investments, as opposed to the underlying earnings growth and dividend yield of those companies.

Exhibit 3 (as of July 2018 and for information purposes only)

S&P 500 Index total returns in USD, January 1926–December 2018
Using a 20% threshold for downturns



Source: Dimensional Funds

What Returns Could You Expect from a Market Portfolio?

According to index fund pioneer and Vanguard Group founder John Bogle, we can reasonably estimate future market returns by looking at these three variables:

1) Growth in earnings (g)
2) Dividend yield (d)
3) Change in the P/E ratio (Δp)

To summarize Bogle, he contends we can estimate possible future returns by using this formula:

Total Future Returns = $g + d \pm \Delta p$

[8] Dimensional Funds

For 2018, the annual growth in earnings (g) and dividend yield (d) of the S&P 500 was 5.53% and 1.9% respectively[9]. Given the above formula, we know that without a change in the P/E ratio, future market returns should average roughly 7.5% (5.53% + 1.9%) if growth in earnings (g) and dividend yield (d) remain constant. However, we also need to consider the possibility of a change in the price investors are willing to pay for earnings (Δp).

Hypothetically, if we assume the average S&P 500 P/E ratio reverts to the historic average of 15.75 over the next 15 years, the average change in the P/E ratio would be -2.25% per year. Plugging these figures into the above formula, the expected total future return over the next 15 years can be estimated to be approximately 5.25%.

Total Future Returns = 5.53% + 1.9% – 2.25% = 5.25%

Of course, the above assumptions are simply future estimates, and markets have frequently shown many instances of sustained P/E ratios above the historical average. However, for an investor with a long-term investment time horizon, the change in the P/E ratio (Δp) should revert to 0 over time. As a result, earnings growth and dividend yields should be the primary drivers of future stock market returns[10].

What Returns Should You Expect from Your Portfolio?

Part of the reason we implement individually held Canadian and US stocks within your portfolio is to purchase shares in companies with strong business characteristics. We try to focus on choosing companies who can hopefully achieve sustainable earnings growth and/or high dividend yields. Provided these companies are purchased at what we believe to be a reasonable price, we can help increase your chances of outperforming the market index over the long-term.

Of course, choosing the right businesses to own is a challenging task. Some companies may have low or negative earnings growth today, but may increase due to unforeseen changes in their business model. Conversely, companies with strong earnings today may suffer a sustained unexpected decline in their earnings.

When building your portfolio, we strive to focus on selecting companies with the following characteristics:

- What we believe to be a sustainable competitive advantage.
- A history of strong earnings growth.
- Management committed to maximizing shareholder value.
- Able to purchase at a reasonable price.

Furthermore, individually held stocks may offer significant tax advantages in certain circumstances. Examples may include foreign withholding tax planning opportunities, and the ability to control the timing of potential capital gains or losses.

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[9] http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/spearn.htm

[10] Bogle, John, 2017, *The Little Book of Common Sense Investing*, John Wiley & Sons Inc., Hoboken, New Jersey, 16p

Conclusion

1) Although stock prices are currently trading at historically high levels, the long-term investor may have a statistical advantage by owning stocks over bonds for two primary reasons:
    - A typical investment alternative to owning stocks can be to purchase high quality bonds such as the US 10-year government bond which yields just 1.75% as of August 2019.
    - Timing the market requires investors to be correct twice as often since they must sell at the top of the market, and buy at the bottom.
        - Additionally, the length and magnitude of bull and bear markets has been erratic over time, making timing predictions much more difficult. This is just one of the reasons TD does not recommend market timing.

2) The formula often used to evaluate the relative expensiveness of stocks is known as the P/E ratio.
    - The P/E ratio has limitations in its ability to compare individual companies.
    - However, the P/E ratio is generally considered an adequate proxy when comparing the relative expensiveness of entire market indices.

3) The combined growth in earnings and dividend yield of the S&P 500 index has averaged 9.5% per annum since 1900, which has approximately matched the total return of the S&P 500 over that same period.
    - In our opinion, this strong correlation suggests that over the long-term, the primary drivers of stock market price growth are the sum of the growth in earnings and dividend yield of the individual companies that constitute the market.
    - The growth of earnings and dividend yield has historically fluctuated much less than the stock market itself. This mismatch in volatility suggests human behavior can lead to irrational prices of stocks, especially during a market correction.

4) We can reasonably expect the S&P 500 to achieve a below average rate of return should the P/E ratio revert to its historic mean.
    - Using the hypothetical example on page 7, if the reversion occurs evenly over the next 15 years (keeping earnings growth and dividend yield constant), we may expect an average S&P 500 market return over that period of 5.25%.

5) Part of our investment approach is to allocate a portion of your portfolio to owning individual stocks with strong business characteristics.
    - Our focus is to own companies which we believe have a sustained competitive advantage, strong earnings growth, management committed to maximizing shareholder value, and the ability to buy at what we believe to be a reasonable price.
    - Owning individually held stocks may offer greater tax efficiency through foreign withholding tax planning, and the ability to control the timing of potential capital gains or losses.

At Momentum Wealth Management, we strive to think of markets in a rational manner. **Our investment decisions are designed to help maximize your returns after both taxes and fees while also considering your investment time horizon and tolerance for investment risk.** We will continue to monitor and amend your investment mix to help ensure we have implemented an optimal portfolio for your specific needs.

The information contained herein has been provided by Matthew Karam, Investment Advisor, and is for information purposes only. The information has been drawn from sources believed to be reliable. Graphs and charts are used for illustrative purposes only and do not reflect future values or future performance of any investment. The information does not provide financial, legal, tax or investment advice. Particular investment, tax, or trading strategies should be evaluated relative to each individual's objectives and risk tolerance.

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