INSIGHT FROM POLEN CAPITAL

Credit Quality and Valuation Trends of the S&P 500

A Critique of Passive Investing

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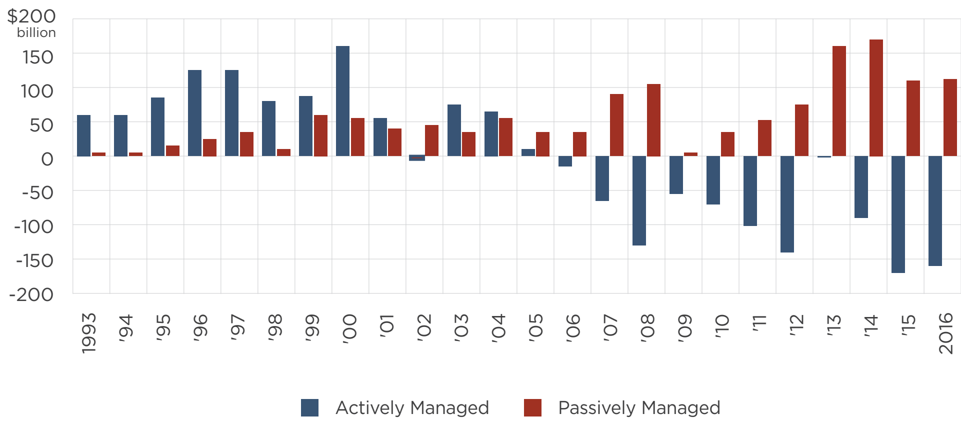
Executive Summary

Passive investing in U.S. equities has attracted billions in capital over the past several years as investors have been enticed by its low fees, efficient structure and seemingly endless product choices. But investor fervor does not necessarily equate to a quality investment. In fact, it appears the U.S. large cap equity market, as measured by the S&P 500 Ex-financials Index, has seen a deterioration in its fundamentals and credit quality over the past several years, yet its valuation sits at levels much higher than prior to the last recession. Investors may be unaware of the dangers that are presently embedded within the market and passive investment vehicles that, by definition, will be unable to pivot investors away from these risks. Active managers that focus on quality provide investors the ability to potentially mitigate some of these threats to their capital.

The Context

Passive index investing is cheap, efficient and here to stay. According to Morningstar, in 2016 passive inflows totaled $504.8 billion, bringing passive vehicles to more than 35% of total AUM in the asset management industry. In U.S. equity funds, passive vehicles doubled their inflows from 2015 and now manage more than 40% of the assets in the market.[1] Figure 1 helps to place these trends in some historical context.

Figure 1: Net Flows of U.S. Stock Mutual and Exchange-Traded Funds



Source: WSJ

1 Lauricella, Tom, and Alina Lamy. "Morningstar Direct Asset Flows Commentary: United States." Morningstar. January 11, 2017. Accessed July 12, 2017. https://corporate.morningstar.com/US/documents/AssetFlows/AssetFlowsJan2017.pdf.

However, as many past trends have demonstrated, investor fervor does not always indicate a quality investment. With hundreds or thousands of member securities, it is impossible for an investor to thoroughly understand the risks and potential of each underlying business in an index. As a result, passive index investing is also an inherently opaque, automated style of capital allocation. In tracking the index, passive vehicles arbitrarily allocate according to what the index dictates, while investors are often unaware of which businesses they own. Consequently, a passive investment becomes a bet on the market with little concern for the quality of the constituent corporations, exposing passive investors to concealed risks of significant magnitude.

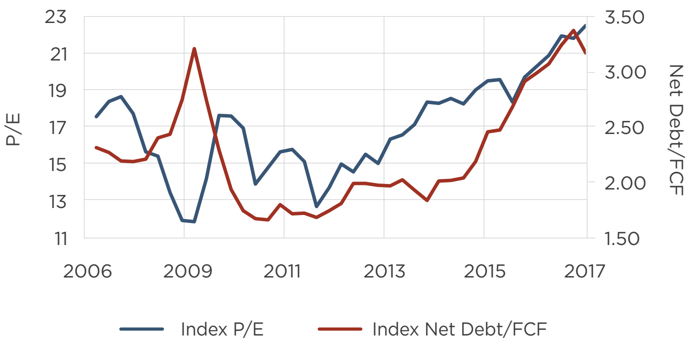
The Data

In order to shed light on some of these risks, we decided to evaluate the development of credit quality, valuation and growth for the market over the past decade. Credit quality was measured from a cash flow perspective using Net Debt/Free Cash Flow (FCF) and a balance sheet perspective with Net Debt/Equity, two metrics used at Polen Capital to assess the strength of a business's financial position. Net Debt, measured as total debt minus cash, is compared to trailing 12-month free cash flow in order to assess the ability of a corporation to generate enough cash to cover its liabilities. For example, a Net Debt/FCF ratio of less than 2x implies that, if need be, a business could pay down its existing net debt with current levels of free cash flow in less than two years time. The Net Debt/Equity ratio enables the investor to appraise the level of debt relative to the claims that shareholders have on company assets, the final safety net for any investment. Valuations were measured using the ubiquitous Price/Earnings ratio. Due to distortions in debt-related metrics that banks and insurance companies can often create, we chose to use the S&P 500 Ex-Financials Index (the "Index") as our proxy for the broad market. Using data from Bloomberg, each of these measures was calculated for the Index from year end 2006 to year end 2016.

The Results

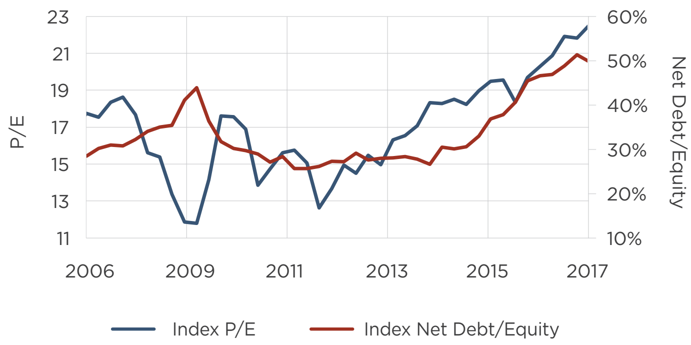
Our investigation revealed a clear result: as investors have continued to pour increasing amounts of capital into S&P 500-centric passive strategies, they appear to be receiving products with worsening fundamentals and higher valuations. In recent years, rapidly decreasing credit quality along with increasing valuations has led to higher risk for passive investors. In particular, Net Debt/FCF (see Figure 2) and Net Debt/Equity (see Figure 3) have increased substantially since 2010, expanding from 1.7 to 3.2 and 30% to 50%, respectively. As a result, companies are functioning with a higher level of leverage relative to the bottom lines of both the cash flow statement and the balance sheet. Simultaneously, valuations have inflated substantially with the Price/Earnings ratio climbing from 16.9 to 22.5.

Figure 2: Net Debt/FCF vs. P/E



Source: Bloomberg.
P/E and FCF based on trailing 12-month data. Net Debt calculated as Total Debt - Cash and Equivalents.

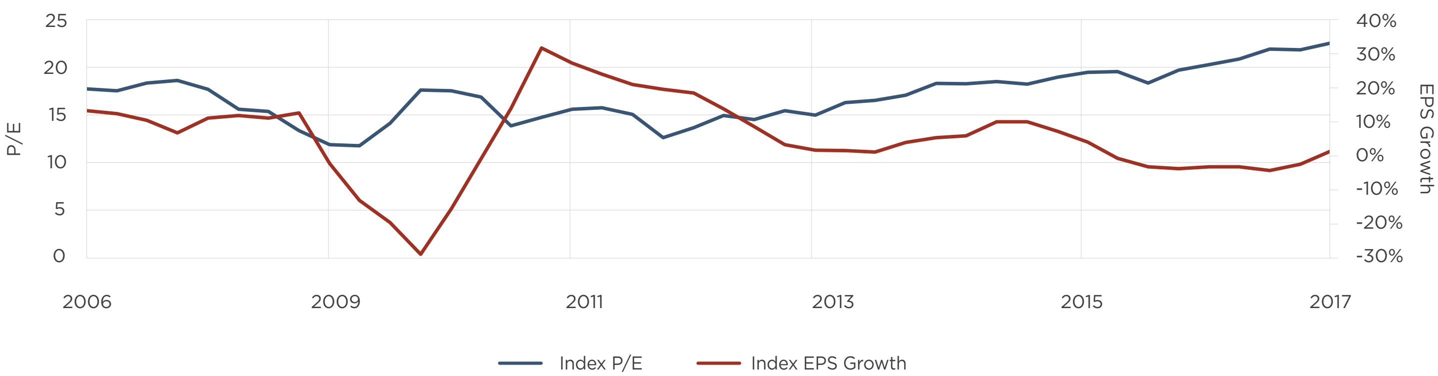
Figure 3: Net Debt/Equity vs. P/E



Source: Bloomberg.
P/E based on TTM data. Net Debt/Equity calculated as (Total Debt - Cash and Equivalents)/Book Value of Equity.

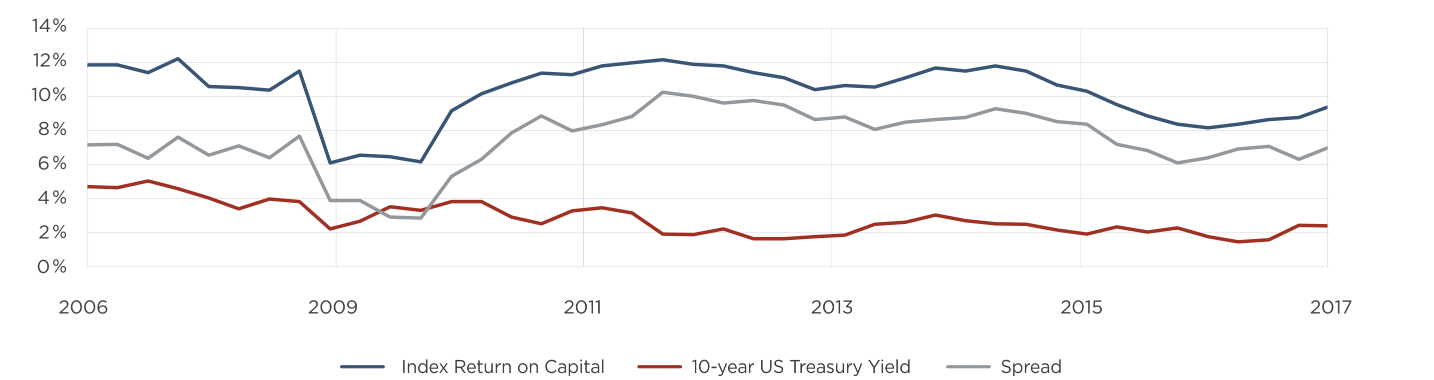
Perhaps most importantly, both Net Debt/FCF and Net Debt/Equity now stand noticeably higher than pre-2008 levels. In the final quarter of 2007, Net Debt/FCF stood at 2.18 and Net Debt/Equity was 32%, both approximately 50% lower than the current level.[2] Simultaneously, the Index is also trading at a higher Price/Earnings with investors paying a 27% earnings premium relative to the end of 2007. *Consequently, passive investors are currently paying a higher price for a collection of lower-quality companies compared to the pre-crisis environment.* The concerns of higher leverage and valuations over recent years have been compounded by decelerating earnings growth (see Figure 4). In fact, the rise in valuations and the deterioration of credit quality have continued despite the earnings growth rate of the Index declining since 2010 and currently standing marginally above zero. In addition, Figure 5 illustrates that the increased debt burden has not led to higher returns. Instead, the spread of return on capital for the Index over the 10-year Treasury yield (a rough proxy for cost of capital) has fallen since 2011 from 10% to 7% as leverage has grown. From a high level, the deceleration in EPS growth and the declining levels of profitability indicate that the aggregate increase in debt levels has been increasingly unproductive. It is even more pronounced when one considers that much of this debt has likely been used by corporations to repurchase their common stock. Index funds and ETFs take no heed of these trends, continuing to allocate to the same companies regardless of quality or price. The result is a more expensive, lower-quality investment with dimmer growth prospects. The higher debt levels and lack of earnings growth does not seem to support recently expanding valuations.

Figure 4: P/E vs. Earnings Growth



Source: Bloomberg.
P/E based on trailing 12-month data. EPS Growth defined as trailing 12-Month Diluted EPS from Continuing Ops.

Figure 5: Return on Capital



Source: Bloomberg.
Return on Capital defined as trailing 12 Month EBIT/Average Total Capital.

2 For those interested in a more historical perspective, the S&P Ex-Financials Index only dates back about 12 years. The St. Louis Fed Database, however, maintains a Total Liabilities/Assets metric for U.S. non-financial corporations that dates back more than 50 years. While not a perfect substitute for Net Debt/Equity, it can serve as a rough proxy. Over the past fifty years this ratio has averaged 40% but currently sits at nearly 60%, well above the long-term average.

The Consequences

The separation of quality and price in the Index creates intrinsic danger for passive investors by amplifying the possibility of both valuation compression and earnings contraction. In poor economic conditions, companies with inferior credit quality are more likely to struggle to pay their debts, making them liable to underperform as earnings suffer from the direct and indirect costs of financial distress. Firms with poor credit quality will find it harder to attain financing, making it difficult to refinance their current liabilities and causing them to forego valuable projects. If financial distress worsens, poorly positioned firms may be subjected to excessive risk-taking by management or endure inflated agency costs that cut into earnings. In the most extreme cases, the likelihood of default may become a genuine concern.

In case one needs a reminder about the risks of investing in heavily levered businesses, one of the more compelling studies of these effects comes from Opler and Titman, who find that “highly leveraged firms lose substantial market share to their more conservatively financed competitors in industry downturns.”[3] The researchers primarily attribute performance losses to two indirect costs of financial distress: customer reluctance to interact with distressed firms and the ability of financially secure firms to aggressively expel weakened competitors.[4] The result is significant share price depreciation relative to peers, as shown in Figure 6.

Figure 6:

Leverage	Stock Returns Relative to Industry During Downturn
Deciles 8-10	-11.9%
Decile 10	-26.5%

Source: Opler, Tim C., and Sheridan Titman.
Decile 10 indicates the most levered group of businesses.

One may argue that an index comprised of hundreds of securities is adequately diversified to avoid idiosyncratic risk from individual members. However, in reality, index investing has likely exacerbated market risk and left passive investors as the most vulnerable participants. Bolla, Kohler, and Wittig find robust evidence that co-movements in volume, returns, and liquidity have become significantly stronger since 2002 due to the development of index investing.[5] In addition, the study finds that index investing increases the likelihood of tail events, the precise circumstances that would reveal the costs of poor credit quality described by Opler and Titman. *By causing member securities to move together, the index has become a meaningful risk factor in itself rather than providing risk management through diversification.* Consequently, the number of companies in the index may offer inadequate protection against the lack of quality in underlying businesses.

By owning an index filled with companies of inferior credit quality, passive investors remain directly exposed to these risks. In the event of adverse developments, passive investors may find the efficiencies of indexing do not compensate for the added risk of blind capital allocation. The enlarged tail risk of indexing may be hard to perceive in an eight year bull market, yet passive investors stand vulnerable to significant loss of capital.

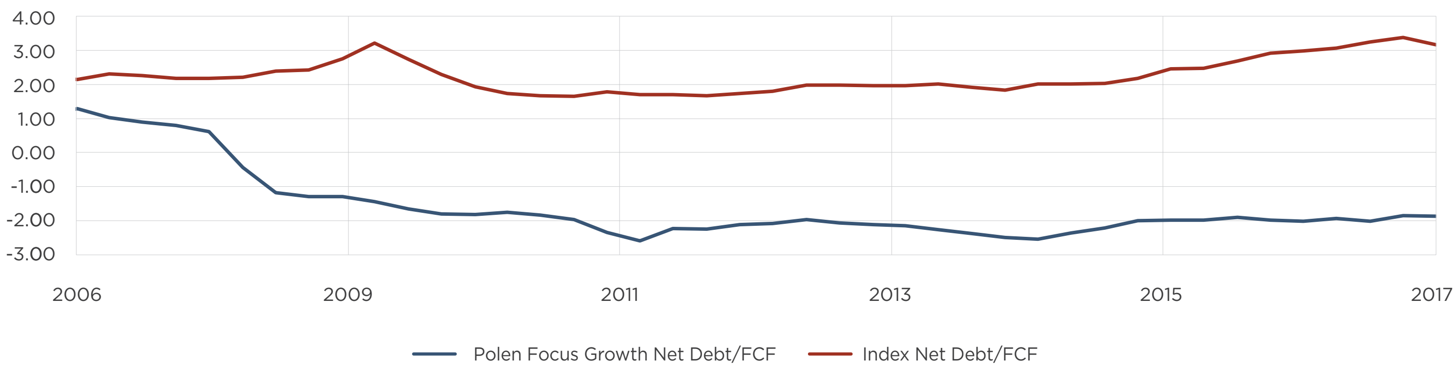
3 Opler, Tim C., and Sheridan Titman. "Financial Distress and Corporate Performance." The Journal of Finance 49, no. 3 (1994): 1015. Accessed July 12, 2017.
4 Opler and Titman: 1016, 1019, 1028.
5 Bolla, Lidia, Alexander Kohler, and Hagen Wittig. "Index-Linked Investing—A Curse for the Stability of Financial Markets around the Globe?" The Journal of Portfolio Management 42, no. 3 (2016): 31. Accessed July 12, 2017.

The Polen Capital Difference

This danger can be mitigated by a robust, systematic search for quality, as instituted by an active manager such as Polen Capital. Polen Capital's quality advantage is illustrated in Figures 7 and 8, which demonstrates the credit quality of the Polen Focus Growth portfolio has remained noticeably superior to that of the Index for the past 10 years.

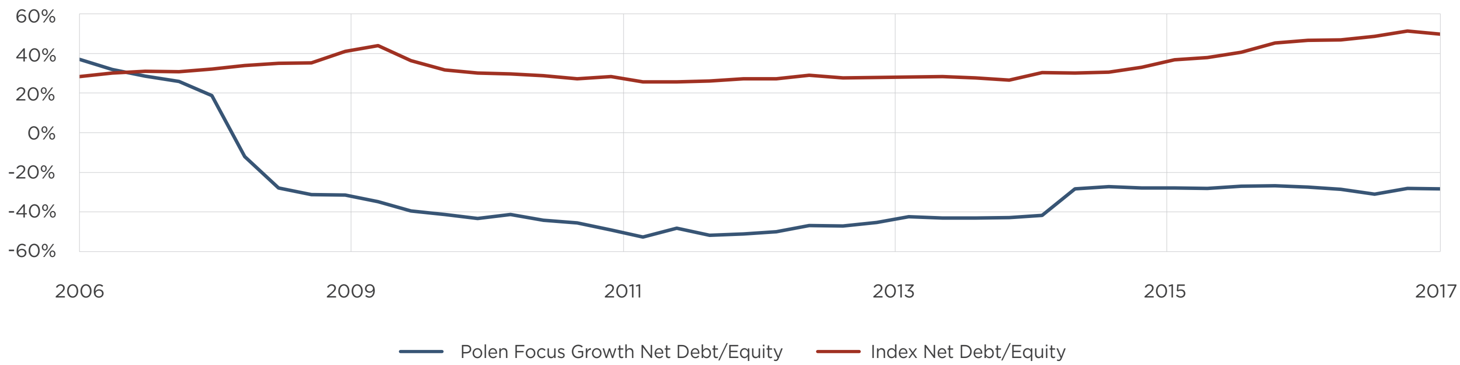
In fact, the Net Debt of the Focus Growth portfolio has been negative for the past nine years, indicating that on a weighted average basis, *portfolio companies are capable of paying off all of their debts with cash already on hand.* The highest Net Debt/FCF reached by the portfolio was 1.29 in Q4 2006, which stands well below the Index average of 2.25. In addition, the average Net Debt/Equity of the Focus Growth portfolio over the past 10 years is -30% (i.e. more cash than debt) compared to the Index average of 34%.[6] Historically, valuations of our Focus Growth portfolio have been higher than the Index, but we feel this premium is justified by the superior quality and safety of our investments, as well as the stable earnings growth these businesses have produced over time.[7]

Figure 7: Net Debt/FCF: Polen Focus Growth vs. Index



Source: Bloomberg.
P/E and FCF based on trailing 12-month data. Net Debt calculated as Total Debt - Cash and Equivalents.

Figure 8: Net Debt/Equity: Polen Focus Growth vs. Index



Source: Bloomberg.
Net Debt/Equity calculated as (Total Debt - Cash and Equivalents)/Book Value of Equity.

6 Some may find it surprising that the Net Debt/Equity ratio for our Focus Growth portfolio was higher than the Index in the 2006-2007 time frame. We've owned some quasi-financial companies in the past (e.g. American Express, Berkshire Hathaway) and because of our limited number of holdings we decided to *include* these companies in the calculations for Focus Growth despite *excluding* them in the Index comparison. In this particular case, the inclusion of American Express resulted in a higher Net Debt/Equity ratio for the portfolio until we sold the company from the portfolio in 2007. If anything, we believe this makes this comparison even more conservative.

7 Please see one of our previous thought pieces on PEG ratios (PEG Ratios in Context).

Conclusion

With deteriorating credit quality, expanding valuations, slowing earnings growth and weakening diversification, investing in the S&P 500 appears to have become a riskier endeavor in recent years. Passive investors, however, by definition are unable to pivot. They remain exposed to severe tail risk as well as the high opportunity cost that underlying businesses in the Index will trail many of their peers. *We want to be absolutely clear on one point: we are not in any way attempting to make a market call; rather, we feel a responsibility to inform investors about risks of passive investing of which they may or may not be aware.*

The allure of indexing is it is impossible to underperform. Numerous studies have shown the pain of loss to be sharper than the joy of gain, particularly when gain and loss are measured on a relative basis to peers. When compared solely to a benchmark, herding to passive investing enables investors to eliminate relative loss, but it also removes the impetus to find quality companies and may cause absolute returns to suffer. As demonstrated here, the risks of indexing are not only dangerous, they are potentially avoidable and unnecessary. By investing in quality rather than investing in everything, one can reduce risk while simultaneously identifying companies with brighter growth prospects than the overall market. Risk mitigation is an innately preemptive measure, but unfortunately, the value of active evaluation often only becomes apparent once conditions have deteriorated. Nevertheless, effective risk management persists at Polen Capital, enabling clients to nimbly avoid risk while targeting faster growth, a combination our clients have enjoyed for over 28 years.

Past performance is not indicative of future results.

About The Author

Stephen Atkins, CFA, Research Analyst, joined Polen Capital in 2012 after a 12-year tenure as a portfolio manager at Northern Trust investments—including eight years as a mutual fund co-portfolio manager. Mr. Atkins also spent two years at Carl Domino Associates, LP. He received his B.S. in Business Administration from Georgetown University and a General Course degree from the London School of Economics. Mr. Atkins is a CFA Charterholder and a member of the CFA Institute and CFA Society of South Florida.

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About Polen Capital

Founded in 1979, Polen Capital is a global investment management firm that provides high value-added quality growth investment strategies to sophisticated clients around the world. The Firm is committed to attracting experienced, disciplined investment professionals to add value to client portfolios. Polen Capital's Large Company Growth Team oversees a global equities universe of high-quality growth companies and manages the flagship Focus Growth strategy, as well as the Global Growth and International Growth investment strategies. The Firm also has an autonomous Small Company Growth Team that manages a U.S. Small Company Growth strategy. Polen Capital's strategies are offered through various investment vehicles to accommodate a broad range of client mandates. For more information visit **www.polencapital.com** and connect with us on **LinkedIn.**

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