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Investment Newsletter – December 2020

This newsletter starts with a look at the current market environment. Following that is an introduction to the new version of our Defensive Equity portfolio strategy, designed specifically to limit the risks of equity investing.

The Investment Environment at the End of 2020

It has been a strange year in so many ways, including the behavior of the stock market. Here's the headline of the Wall Street Journal's "Heard on the Street" column from December 24th:

"Valuations Raise Questions About Laws of Investing"

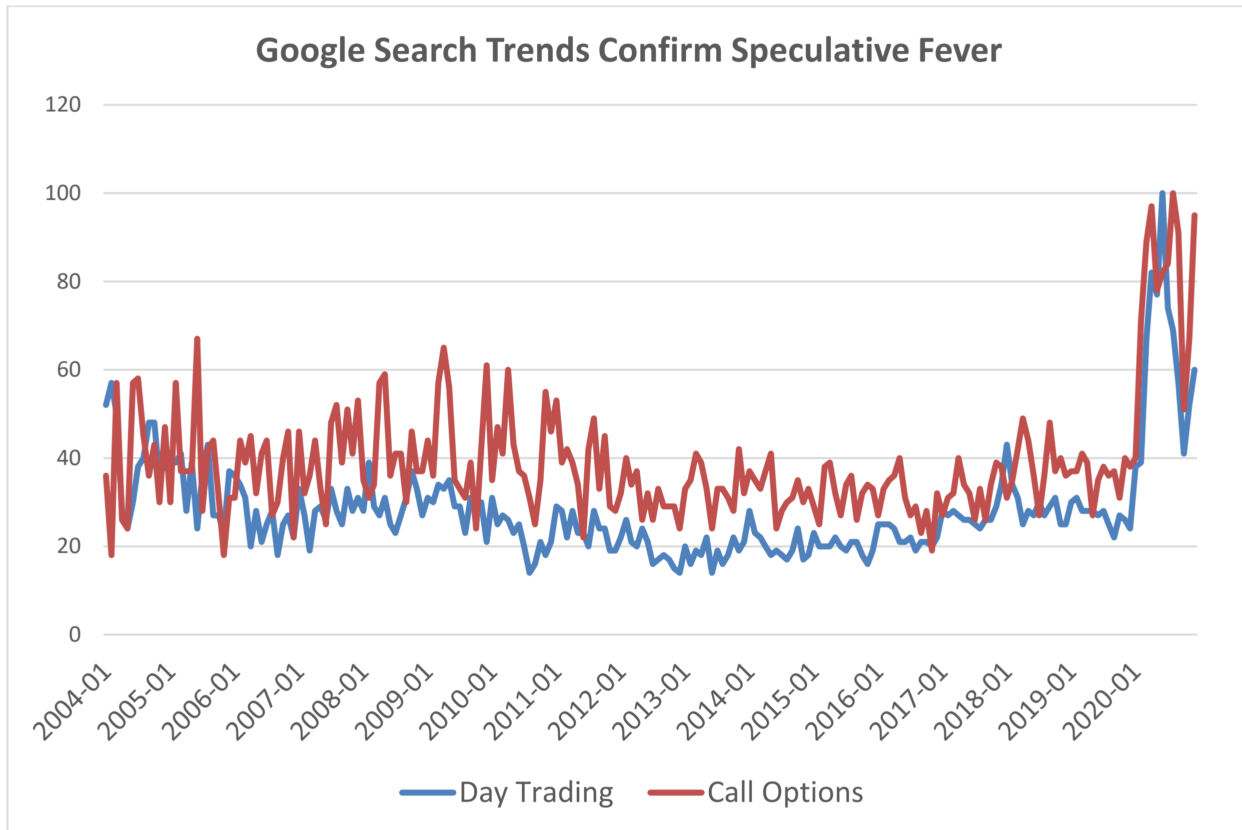
The article gives various measures of how expensive stocks are, including price to forward earnings, price as a multiple of inflation-adjusted earnings over the last decade (Shiller cyclically adjusted P/E), and the value of stocks as a percentage of the economy (Warren Buffett's favorite). Here's a quote that sums it up:
".. *standard measures show valuations are at rarely seen levels that have typically ended in tears*".

Many commentators have made note of "factor inversions", which, in layman's terms means stocks are performing opposite to how they have in the past: the stocks with the best investment value metrics perform worst and vice versa. The performance of the stocks of bankrupt companies like Hertz (discussed in the June Newsletter) illustrate this point perfectly.

Shall we party like its 1999? A defining feature of markets in 2020 is the resurgence of individual investors. According to Citadel Securities, retail investors account for 20% of trading volume in 2020, double their 10% share in 2019. More than 10 million new brokerage accounts were opened in 2020. The Robinhood Markets Inc. app will be downloaded 500,000 times in December alone. This is a new brokerage founded to profit from inexperienced investors. The Wall Street Journal has documented how it "gamifies" investing and the Massachusetts Securities Division launched legal action against the company. The securities exchange commission has also charged the company with wrongdoing.

Here's a factoid from Barron's Magazine: Since mid-July, trades for 10 contracts or fewer have consistently accounted for more than 60% of all opening call option purchase premiums, massively dwarfing larger trade sizes. The renewed

speculative fever of individual investors is captured by this chart of google search trends showing increased interest in day trading and call options (i.e. contracts that allow investors to make highly leveraged bets on stock price increases):



It is great that a new generation has embraced investing, but such speculative surges tend to distort securities prices and drive down future returns. Thus, caution is warranted for those tempted to join the party.

If you're a new investor playing with $1,000 of stimulus (free) money, it's fine to take a chance of losing it because you don't really need the money. You have a chance to make a profit you can brag about, have some fun, and most importantly, learn some lessons. All in all, I think it is a good thing, and well worth the losses likely to follow.

On the other hand, don't try this with your retirement savings. For those of us with more to lose, it makes sense to be cautious and continue paying attention to the factors which have always (until recently) determined future returns. Despite the elevated downside risk, we know that stocks can remain at very high valuations for extended periods. Therefore, this alone does not mean we should get out of equities entirely. This is the context in which I recently shifted more client equity investments to the lower risk stocks in the Defensive Equity Portfolio – which we will discuss next.

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Reformulating the Defensive Equity Strategy

The September 2020 newsletter analyzed the historical performance of the Defensive Equity strategy designed by Folio Institutional, one of the custodial brokers used by Berkeley Investment Advisors. While the portfolio has performed very well, that prior work showed that there was potential to reduce risk further without impeding long term performance. By analyzing past performance of the portfolio with and without the riskier components, I showed a path to improve the portfolio.

Rather than focus solely on removing the higher risk components, my goals for reformulating the portfolio are:

1. Reduce risk as measured by:
    a. maximum drawdown in 2020,
    b. the standard deviation of returns (i.e. volatility), and
    c. Beta (co-movement with the market).
2. Create a concentrated portfolio of 30 to 40 stocks so as to achieve diversification while still utilizing only the top picks[1].
3. Use quantitative ranking factors to select the stocks likely to out-perform the prior portfolio based on the most recent fundamental and market data.
4. Include only stocks with sufficient liquidity so as to properly manage trading costs and market impact.

My process starts with the list of all U.S. stocks covered by the quantitative research ranking system I utilize in analyzing stocks. This data set, which is updated weekly, uses a weighted ranking system to rank stocks from 0 (worst) to 100 (best). Based on extensive back testing using data since 1999, the variables used to determine each stock's ranking include the following:

- **Earnings growth.** This is a combination of eight different measures that look at reported and estimated earnings per share.
- **Research and development (R&D) spending.** This is primarily R&D in relation to market capitalization. This only applies to certain industries, which include: biopharmaceuticals; chemical, plastic, and rubber materials; consumer goods; consumer vehicles and parts; electronic components and manufacturing; hardware; healthcare equipment; healthcare services; household products; industrial manufacturing; integrated oil and gas exploration and production; manufactured products; and software and consulting**.**
- **Share turnover.** This is the volume of shares traded per day divided by the number of shares outstanding; the lower this number is, the more insensitive the stock is to market volatility.
- **Earnings yield.** This is the earnings per share divided by the share price, combining six different ways to measure earnings.

[1] The original portfolio had 38 stocks.

- **Capital intensity.** This is the ratio of gross plant to capital expenditures. The lower capital investment requirements are, the easier it'll be to increase cash flow.
- **Accounting accruals.** This analysis measures the impact of accounting entries on earning as opposed to actual cash flows to make sure that a company's earnings are real (also known as high quality earnings).
- **Industry momentum.** This is a combination of three different measures to follow trends in industry.
- **Volatility.** This includes variance in price and in volume, as well as beta, and favors stocks with low variability.
- **Sales stability.** This measure helps avoid companies with huge swings in sales from quarter to quarter.
- **Free cash flow to enterprise value.** This tells us how much cash is available to the business owners in relation to the total capitalized firm value, including both equity and net debt capitalization.
- **Sales growth.** This includes three different measures that emphasize both short-term and long-term sales growth while avoiding companies that grow *too* fast.
- **Price to sales.** This is the price to buy the whole company, meaning market capitalization, as a ratio to annual revenue.
- **Analyst earnings estimates revisions.** This measure includes various analyst revisions to gauge changes in sentiment.
- **Gross margin.** This is the percentage of sales that represents profit when counting only the cost of goods sold (e.g. not overhead). It is considered a good measure of a company's "moat" meaning its competitive advantage.
- **Return on assets and equity.** This includes three different measures of profits in relation to assets employed and invested equity.
- **Momentum.** This is a combination of six different measures, designed so as not to conflict with the main principle behind value investing: buy a stock when it's cheapest.
- **Net operating assets.** This measures the assets actually used in the business. Lower is better.
- **Short interest.** This is the shares borrowed and sold short as a percentage of total shares. This measures the magnitude of market participants betting on a fall in the stock: the lower, the better.
- **Price to earnings ratio divided by earnings growth rate (P.E.G.).** This combines value ratios with growth ratios, including earnings growth and free cash flow growth.
- **Debt coverage.** This measures debt in comparison to cash flow, and profitability measures to make sure a company's debt load isn't excessive.

In addition to the variables described above which are combined into each stock's ranking, each stock's sector is identified in my data and for each stock I look at the risk variables as described in my risk reduction goal (#1 above). As a reminder, Beta measures how much a stock will move, on average, relative to a move by the market as whole. As explained in the September 2020 newsletter, I want to eliminate stocks that have Beta greater than 1, (meaning those stocks that

move more than the market as a whole). I also have measures of liquidity, including the bid-ask spread, that I need to take into account.

Focusing on volatility as measured by the standard deviation of returns, it is useful to rank the universe of stocks by percentiles such that the 20th percentile would be stocks that have lower volatility than 80% of all stocks. Using this I want to screen out all stocks above this percentile rank. Because Beta and volatility are correlated, this screening leaves us only with stocks that have Beta less than 1.

The Defensive Equity portfolio was reformulated to lower its risk on November 30th and the remaining monies previously in the Long Term Value equity strategy were reallocated to the Defensive Equity portfolio. At launch, the portfolio was 68% in consumer staples stocks, 24% in health care stocks, 5% in utilities, and 3% in consumer services. It had a dividend yield of 2.8%.

Because the new selection criteria include price sensitive factors, the composition of the portfolio will change according to which stocks meeting the risk and liquidity constraints offer the best odds for high returns at rebalancing dates. Given that my ranking system data does not extend back to 2007, and some stocks currently in the portfolio did not exist then, I cannot fully evaluate it over the full period as in the September newsletter. However, I did look at how the portfolio would have performed during this year’s market decline and found that the draw down on the current portfolio would have been only 14% as compared to 32% for the S&P 500 and 26% as calculated for the original Defensive Equity portfolio. This risk reduction is important because many investors prefer to limit drawdown risks to less than 25% and the current high level of valuations increases the risks in the market as a whole.

Going forward my goal is to continue refining the stock selection criteria so as to optimize future returns while keeping the risks significantly lower than the overall stock market, as represented by the S&P 500.

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