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Author: Liam Drew, Tufts '25

The Unsustainability of the Index Fund Bubble

Over the course of the last three decades, index funds have become overvalued. According to market metrics, the S&P 500 has had a price to earnings ratio of 27.8 over the last ten years, which is 38% percent higher than the historical average P/E ratio of the index fund ("Michael Burry"). Not only have investors been willing to pay more into this ETF for the same earning potential, they've also become much more willing to hold shares passively. Bloomberg data indicates approximately "21.2% of all the S&P 500 companies shares are now held inside passive funds contrasting to only 3.3% in 2003." ("Price/Earnings"). Index funds have become popular passive investments for people with surplus capital who choose not to spend time researching individual stocks or securities. Holding index funds allows investors to hedge risk against the volatility of individual stocks while still profiting off the market's upwards tendency. The S&P 500 has returned an average of 11.88% annually since its creation in 1957, and 10.7% annually since 1990. Over long periods of time, index funds have been so reliable that a common (and historically successful) strategy is to buy shares of an index fund and hold them passively, insensitive to the motions of the market, trusting that the inexorable rise of the market would ensure long-term profitability.

The problem with the widespread adoption of this predictable and passive strategy is that the value and price of the stocks that form the index has become meaningless. This opposes the very premise of a market: individual (rational) actors looking to maximize their own utility by looking for good deals where the price and value of a good or service are well matched. The demand for index funds has remained high as the popularity of buying index funds as an investment strategy increases, which drives up the price. However, the value of the index fund is directly tied to the stocks of which it is composed, and this value doesn't increase at the same rate as the price (induced by passive investing) does. A discussion of the rationality of investors is an entirely separate topic, but the rise of price/value insensitive passive investing is creating inefficiency in the market.

The Efficient Market Hypothesis states that stocks are priced efficiently, and that there is no inefficiency in the market because rational actors have access to the same information, and this information is priced in. This hypothesis suggests that technical and fundamental analysis are ineffective tools for predicting market movements, and that the only way investors can make money in the market is through speculative investment. To some degree, it's true that every investment must be speculative, but this hypothesis in its purest form doesn't explain how legendary investors such as George Soros, Bill Ackman, and Warren Buffet accumulated so much wealth with such consistently profitable investments. Mere speculation could not possibly explain how these individuals achieved such wealth. As a result, the EMH keeps getting watered down by economists. The Weak Efficient Market Hypothesis suggests that technical analysis is still useless because past market data cannot be used consistently to predict future price movements (which is arguably untrue, but a topic for another paper). More importantly, the WEMH suggests that a notion of 'overvalued' and 'undervalued' does exist, and can be determined through fundamental analysis metrics (including the P/E ratio used to evaluate the S&P 500 earlier). If overvalued and undervalued stocks truly do exist (which they do), why wouldn't the rationally acting investors who participate in this market just buy undervalued stocks and short overvalued ones until no over or undervalued stocks existed? This hypothetical question indicates that the EMH is not a useful assumption to make for modeling our markets. According to Michael Burry, "passive investing has removed price discovery from the equity markets. The simple theses and the models that get people into sectors, factors, indexes, or ETFs and mutual funds mimicking those strategies — these do not require the security-level analysis that is required for true price discovery." – Michael Burry (Bloomberg) Clearly, not everyone in the market is a rational actor, and it seems very likely that not every actor is equally well informed.

According to the price to earnings ratio, which is one of the fundamental analysis techniques that determines value, today's stock market is inefficient, and specifically in the case of index fund investment, price and value insensitive. An economic bubble is partially defined as an incongruence between the price and value of an asset according to its fundamentals, and according to this definition, there is certainly an index fund bubble right now. Michael Burry believes that passive and blind investing into index funds is destroying the proper functioning of a market based on valuations, earnings, and future cash flow. This means that true value is no longer priced based on fundamentals, which is another sign of a bubble.

The index fund bubble is real. But does it matter? In the short term, probably not, especially considering that investment in index funds is a long term strategy, and index fund investors understand this and are prepared to leave their money invested for decades. Index fund investment might make sense for these types of investors who want to protect their cash from the erosion that is inflation, since that cash isn't required urgently by anyone investing in the fund. However, if there was any crisis which required people to spend money immediately, those people would divest from index funds and spend the money in other ways. The rise of the stock market and general economic success of the last three decades has been generally unsustainable according to the P/E ratio and other fundamental analysis techniques, and has created a world in which people have the economic security and freedom to invest in their future decades down the road. Should the economic security that allows that ever be threatened, these future investments may be threatened along with it. Alternatively, if an impending crisis such as climate change or a geopolitical meltdown threatened to make the world unlivable long-term, it's likely that investors would liquidate their index fund holdings if the short-term power of their money exceeded the long-term potential it could bring.

It's worth noting that these problems aren't unique to index funds, but the stock market as a whole is threatened by this question of the value of money over time. Should global events ever make present money worth significantly more than the potential of future money, investments will certainly suffer. The main concern with index funds in particular is Michael Burry's point about it being traded separately from conventional assets that are bought and sold with value and price in mind. The market as a whole would certainly suffer from a world-threatening event, but the price and value of most other assets will be constantly related. Index funds currently have this huge incongruence between price and value that many other companies do not have, and the only strategy involved in many purchases of shares by these funds is buying them because they go up. This is discussed extensively in Irrational Exuberance by Robert J. Shiller.

Humanity has reached a point at which it's easy to imagine the imminent demise of the world. We've been so industrious that we threaten the climate, and we're divided into nations led by error-prone humans with nuclear weapons powerful enough to cause apocalypse at their disposal. It's not difficult to imagine a situation in which the promise of the future (and investments) decreases dramatically.

Historically, all bubbles have popped. The index fund bubble having lasted three decades makes it the longest lasting bubble in history, from the tulip fever to the dotcom bubble to the housing market crash. The market is the example of a bubble that hasn't popped. Initially, it makes sense. Index funds naturally select for thriving companies, as the thriving companies increase in value while the struggling companies naturally get replaced by the index. But the pricing of the constituent companies in index funds makes little sense anymore. Juggernauts like Amazon and Apple already have their future successes accounted for in their price. People continue to bet on these thriving companies at a rate that far outpaces the actual accumulation of value within these companies. Should these juggernauts ever find themselves facing the potentially world-changing threats of geopolitics, even this bubble may not survive. The question of index bubbles popping should be a question of when, not if.

Works Cited

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