



Investing Success in Emerging Industries

The automobile, airplane, and microprocessor are three of the most prolific technological advancements of the modern age. In the last 100 years, 1,500 automobile manufacturing companies started and failed in the United States. During the same time period, over 2,000 (now defunct) airline companies rose and fell. Computer hardware companies first appeared in the early 1970's. Since that time around 400 companies have come and gone. The internet deserves mention as well, but it's hard to approximate the large number of internet/software company failures.

Success is tough to sustain in any industry for the long run. The formative years of a new industry represent one of the most difficult survival periods for business models as innovation and progress advance at a rapid pace. Competition at that stage is fierce and the range of potential outcomes widen as the number of competitors rise.

Investors throughout those time periods understood the potential monumental impact on human civilization. Their mistake was to misjudge the probability of success for a given company in the early stages of newfound evolving industries.

Simple narratives of broad "trends" tend to funnel investor dollars into seemingly good ideas but bad investments. Similar to how Microsoft was a wonderful business in 1999, but a terrible investment for 15 years. Some revolutionary industries never materialize into good investments. Just look at the history of investing in airline companies.

Fast forward to present day and observe the A.I. narrative noise that drowns out any whisper of true signal. I'm willing to bet the vast majority of investors in A.I. don't have a basic understanding of the technology beyond the broad world changing narrative that's served daily.

How can someone expect to achieve long-term investment success, by investing in things they don't understand? Warren Buffett and Charlie Munger would rationally designate that type of investment as "outside their circle of competence". Investing outside one's circle of competence transfers the odds of success into the hands of Lady Luck.

Luck plays a massive role in trying to make predictions about a stochastic process like generative A.I. At a technical level, luck is involved in the actual A.I. model successfully outputting information that adds value. Uncertainty compounds at the investor level as they try to pick a winner of which model will get lucky more often. The A.I. industry's rapid pace of change further reduces the probability of early-stage investment success. This example qualifies as a prime candidate for the "too hard" decision bucket.

What should investor's do if they cannot invest in a new industry with confidence in a high probability of success?

Conventional wisdom suggests buying a low-cost S&P 500 index fund to capture the average market return of 9% to 10% per year. Low-cost diversification is an attractive attribute of index funds for individual investors. It reduces risk associated with picking winners and losers by purchasing everything.

Over the last year something very interesting has happened to the S&P 500 index. Since January 2023, almost 100% of the S&P 500's return has come from a group of stocks known as the Magnificent 7 (Google, Amazon, Apple, Microsoft, Facebook, Tesla, and Nvidia), with Nvidia accounting for over 40%.

A thoughtful person should ask, if 100% of my "diversified" index fund return was driven by 7 companies, is it actually diversified? If 7 companies are weighted at 25% of a 500-company index and account for 100% of the index's prior year return, what opportunities are likely to arise if future performance is below expectations? It's always beneficial to pause, take a step back, and think to recalibrate one's perspective.

The S&P 500's energy sector consists of 23 companies with a combined market cap of \$1.6 trillion. Nvidia currently trades at \$1.8 trillion or \$200 billion more than **the entire U.S. Oil and Gas industry**. Microsoft trades at nearly 2x that number with a market cap above \$3 trillion.

\$1 of future earnings is worth the same amount of money if it comes from a magical A.I. chip designer or a dirty oil and gas driller. Important **qualitative** questions to ask for this type of comparison are... What does the future runway look like for the business? Is the runway wide, long, and possess adequate visibility? How confident am I in the businesses ability to generate a high return on capital over the next 10, 15, 20 years? Is there an adequate margin of safety provided by cash the business can generate to compensate for my added risk?

History shows that periods of irrationality tend to last much longer than expected. As investors, it's vital to constantly evaluate the playing field, ask pertinent questions, and improve our thinking to make decisions of the highest quality.

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