

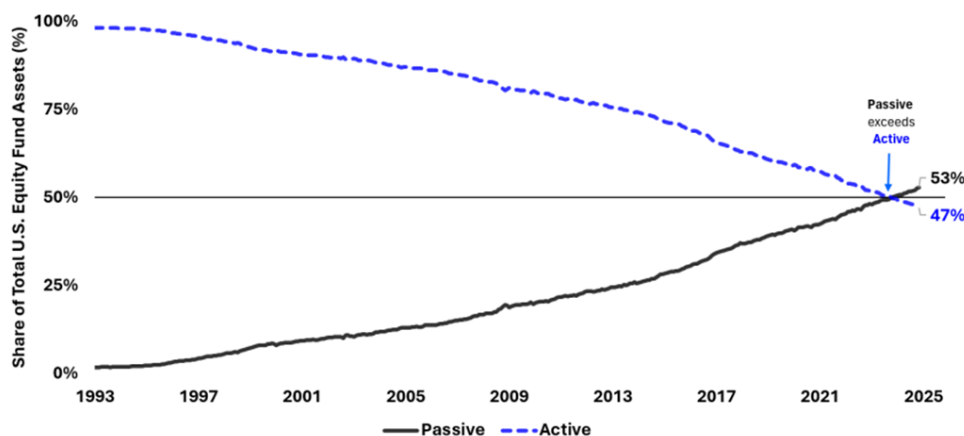
## Passive Investment Implications

Legendary investor Peter Lynch famously wrote, "know what you own, and know why you own it." Passive index-based products are the dominant asset held in investment portfolios today. Brokerage accounts, IRA's, 401(k) plans, and pensions all hold large percentages of their total assets in some form of passive investment vehicle. The first mainstream passive product (Vanguard 500) was launched through Vanguard in 1976 by Jack Bogle. Since that time thousands of offerings entered markets in the form of index mutual funds, target date funds, and index ETFs.

*What* investors own with products like the Vanguard 500 is, the largest 500 U.S. companies weighted by market capitalization. *Why* many investors own these products is low-cost diversification, and desire to capture historical market returns. For people with an employer sponsored plan like a 401(k), there is no appraisal of what they own or why they own it. Money is automatically allocated to a target date fund - the government supported qualified default investment alternative (QDIA), which shields employers from liability under the pension protection act of 2006. It's very difficult to sue an RIA or 401(k) sponsor for losing money if they bought the S&P 500 or total market index. When a dollar is allocated to a passive product, the fund mechanically buys the underlying index components irrespective of valuation. My goal with this letter is to draw attention to the size and market impact of these price agnostic flows.

In 2024 ETF net inflows reached nearly \$2 trillion or \$8 billion net inflows per trading day. I first wrote about the market structure shift toward passive dominance in my [letter from March 2021](#). Market share of passive investing strategies was between 40%-45% at that time. In February 2024, passive assets under management surpassed active management for the first time. By year end, passive assets represented 53% of the total U.S. equity fund market.

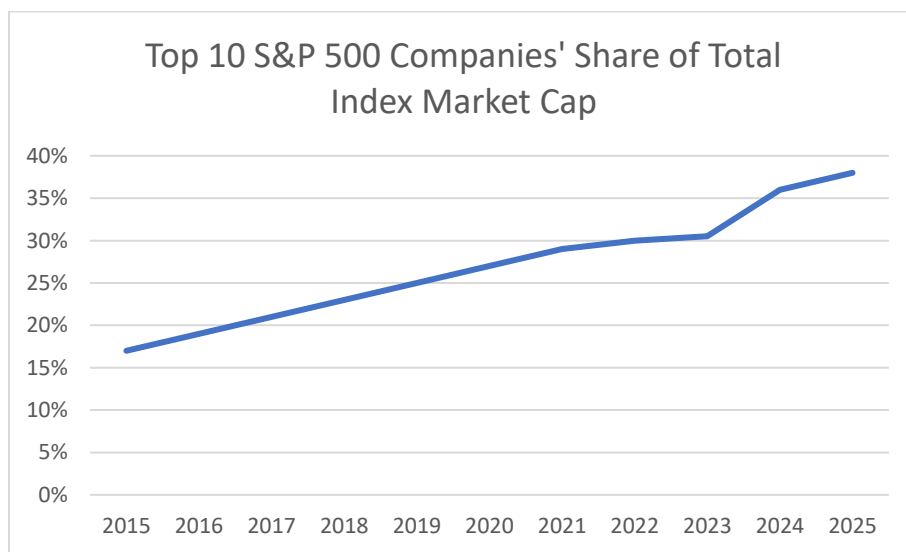
**Figure 1. Passive Strategies Surpass Active Management**



Source: Research Affiliates and Morningstar. Data as of December 31, 2024, and include U.S. open-ended funds and ETFs (with obsolete funds included). The lines represent the percentage of assets under management in actively and cap-weighted passively managed U.S. equity funds, 1993–2024. In February 2024, passive assets under management (black line) surpassed active (blue dashed line).

Why should an individual investor care about this large structural shift in markets? The primary impact to consider is the gradual destruction of price discovery. Passive funds do not react to fundamental changes of information on the companies they own. Every dollar inflow is allocated based on the size of each holding regardless of valuation. Funds invest more into stocks whose prices have gone up and less into stocks whose prices have fallen. The growth of passive strategies has come at the expense of active management (as shown in the chart above). Active managers behave less mechanically than passive funds and perform a vital role in price discovery. When valuations rise, active managers are more inclined to sell and less inclined to buy. When valuations fall, active managers are less inclined to sell and more inclined to buy. As passive gains market share, historical valuation metrics become less relevant because the dominant market participant buys at any price as money flows in. Capital flows trending into passive reveals a decreasing demand for fundamental signal. Flows and price momentum have become the primary signal for buy or sell actions rather than fundamental analysis.

Over the past 20 years, the growth of passive investing has had a secondary impact of making the stock market more inelastic. Elasticity measures how much demand for a product or stock changes in response to shifts in price. Electric utility prices are generally considered inelastic for consumers. The quantity of power demanded by consumers does not significantly change in response to a change in price. Passive's impact on market elasticity stems from the "buy/sell regardless of price" mechanism and the growing percentage of the overall market exhibiting this behavior. A biproduct of this increasingly inelastic market is, the larger stocks get larger and less liquid as passive gains market share. Today, the top 10 companies in the S&P 500 account for nearly 40% of the total index, up from 17% in 2015.



Unfortunately, liquidity does not scale with market capitalization. Microsoft is 100x larger than Delta Airlines by market capitalization, but Microsoft's average daily volume is only 2.25x Delta's. Because larger stocks are less liquid and more inelastic than smaller ones, it's harder for passive to allocate capital inflows without impacting the underlying stock's price. This is similar to problems Warren Buffett ran into as Berkshire grew. Size made it harder to buy equities in sufficient quantity to move the needle for Berkshire's growth, without dramatically impacting the underlying price of the targeted equities. Passive funds have a set quantity to buy when an order comes in, but unlike Buffett, the passive machine must

mechanically buy at the market price. To allocate inflows and accurately track the index, the fund must immediately purchase the largest stocks (NVIDIA, Microsoft, Apple, Amazon, Alphabet, etc.). The fund can wait to add smaller companies like Domino's or Moderna because they account for only 0.02% of the index weight and won't impact index replication. Market makers attempt to minimize this effect, but as passive grows, market maker liquidity becomes increasingly strained. Evidence of this liquidity stress shows up in markets when massive companies experience outsized price swings from small buy/sell orders. For a recent example, see what happened with Oracle on September 10, 2025. Oracle's market cap increased \$244 billion on \$42 billion of dollar volume traded. The market cap increased nearly 6x the dollar volume traded that day. Other recent examples include Alphabet, Apple, and NVIDIA (all top 10 components of the S&P 500).

Company	Date	Market Cap Increase	Dollar Volume Traded	Ratio
Alphabet (GOOGL/GOOG)	26-Apr-24	\$197 billion	\$21 billion	9.38x
Apple (AAPL)	11-Jun-24	\$215 billion	\$34 billion	6.32x
Nvidia (NVDA)	31-Jul-24	\$327 billion	\$54 billion	6.05x

Price inelasticity and reduced liquidity act as an inflationary force on stock prices when capital flows are positive. But in times of market stress or outflows, the current market structure makes it harder to slow down falling stock prices. The result is progressively larger and more volatile price swings, driven by fewer dollars. This structural shift increases market fragility and magnifies liquidity risk related to outflows. If sellers of passive funds outpace buyers, liquidity risk rises as net flows cancel out and turn negative. Every buyer must find a seller and every seller must find a buyer is why stock markets are called exchanges. The size of passive is meaningful because sellers have potential to overwhelm the liquidity of the market without adequate capital on the buying side. On a [podcast](#) earlier this year, Andy Maack – Head of US Equity Portfolio Management at Vanguard was asked about the impact of passive fund outflows on the broader stock market. His response was, “What’s an outflow?”

Passive investment funds were founded with the purpose of providing a simple, low-cost, diversified investment option. In the past two decades, passive funds have emerged as the dominant force in the stock market. The growth of passive has produced unintended shifts in market structure, resulting in an overall increase in market fragility. In *The Black Swan*, Nassim Taleb states, "invest in preparedness, not in prediction." It's unproductive to forecast or time a potential passive liquidity crisis. It's also foolish to ignore structural weakness under some “too big to fail” rationale. Government bailouts have a history of providing temporary relief with long-term consequences. The stock market is a tool, not a guaranteed vehicle for retirement. As you approach retirement, the intelligent action is to build resilience. If markets undergo structural changes, assess whether adjustments are needed to hedge against – or capitalize on – rising volatility. If you own an index fund for diversification, ensure the product is in fact providing diversification benefits. Know what you own, why you own it, and remember the three most important words in investing – margin of safety.

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September 30, 2025