

# The Rise of Passive and Consequences for Market Dynamics

Breakout 2C

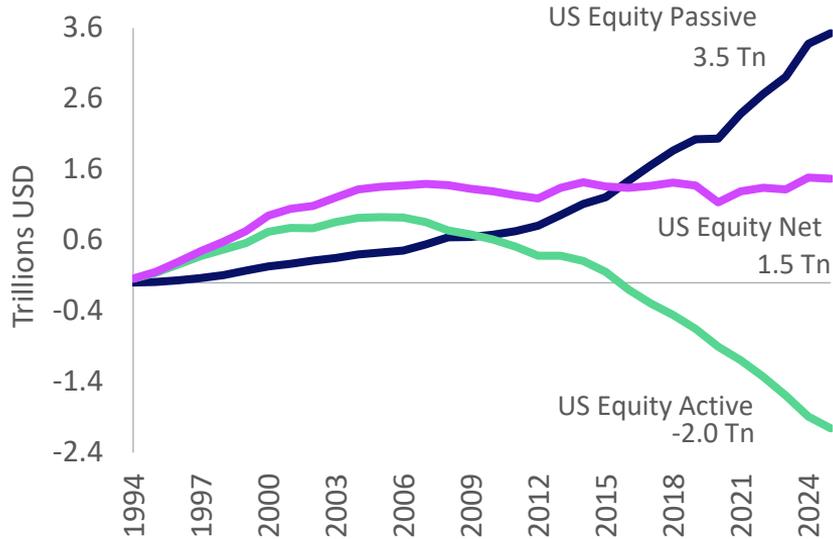
Steven Boothe, CFA

Head of Investment Grade | T. Rowe Price

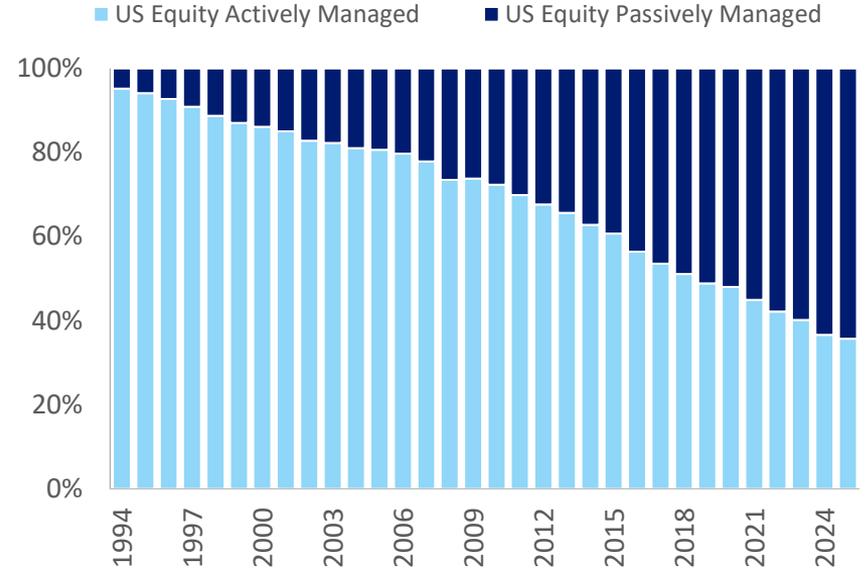
Moderated by Justin Tay

# Equity markets increasingly dominated by passive

## Cumulative Net Flows by Manager Type

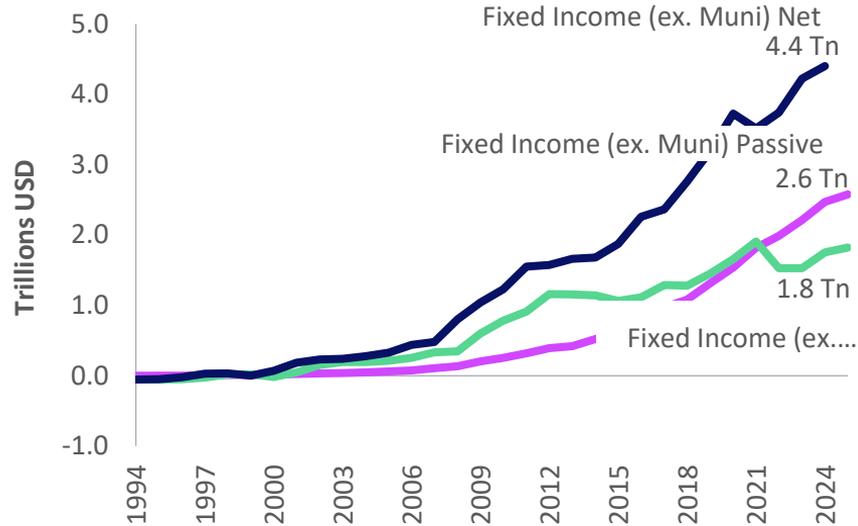


## Market Share of Assets by Manager Type

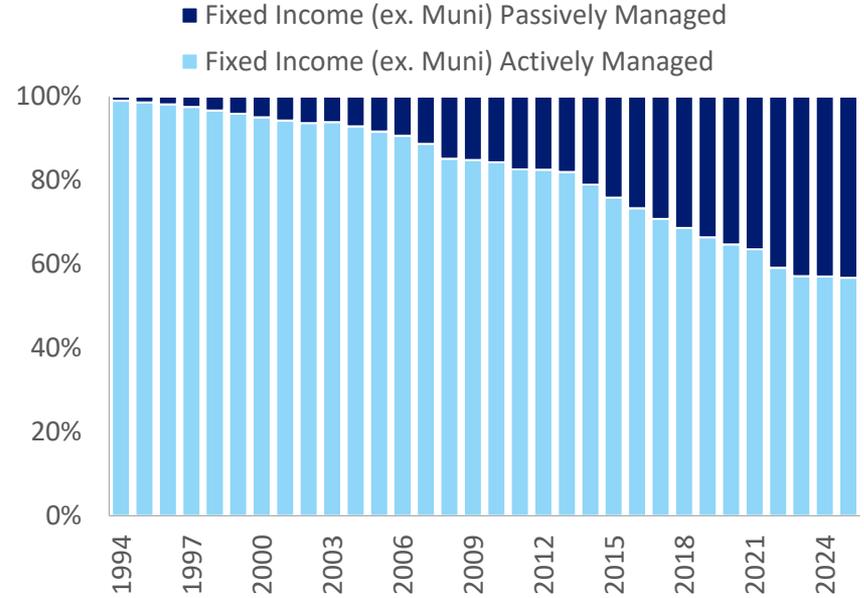


# Fixed income increasingly following suit

## Cumulative Net Flows by Manager Type

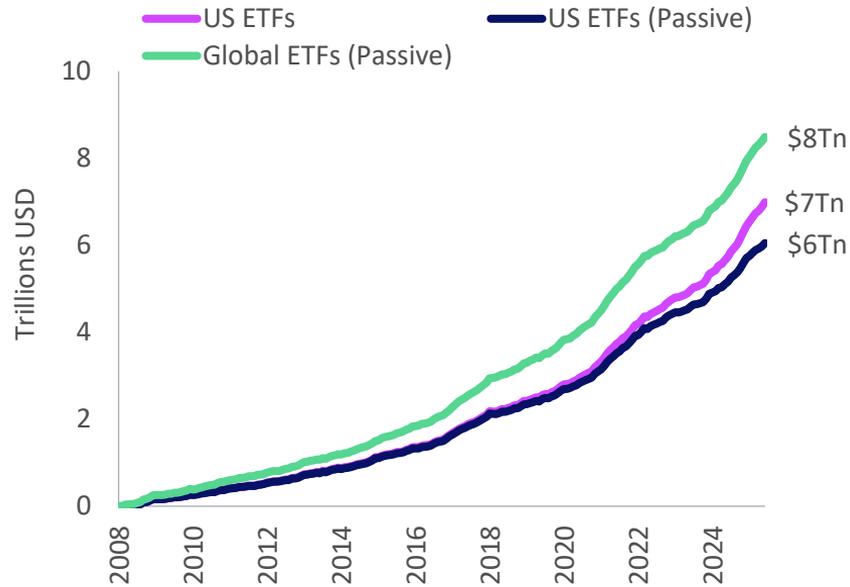


## Market Share of Assets by Manager Type

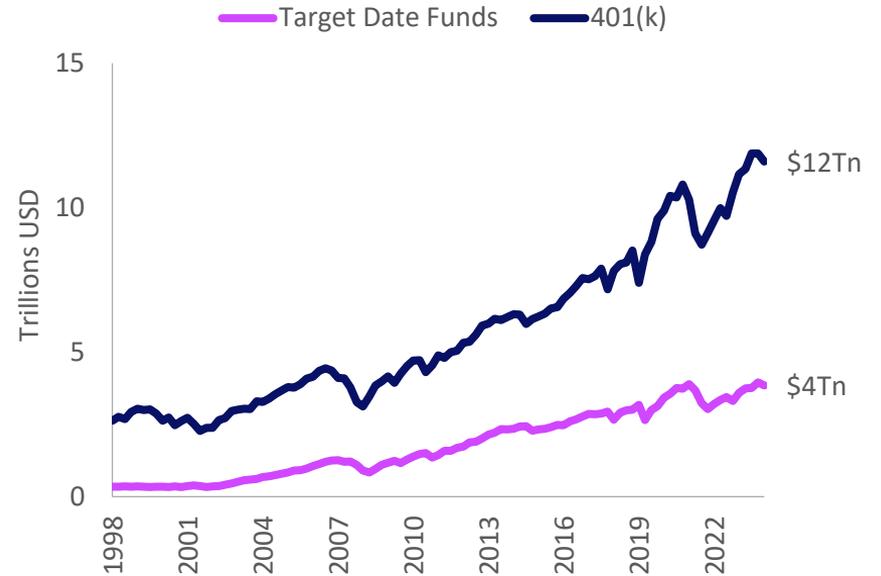


# ETFs gaining share and currently ruled by passive

## ETFs Cumulative Net Flows



## Retirement Assets



As of 30 June 2025

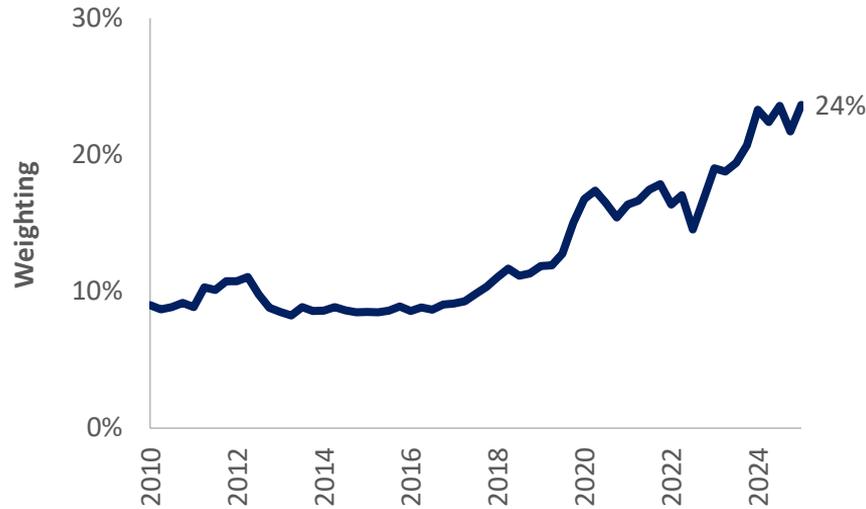
Source: Morningstar Direct

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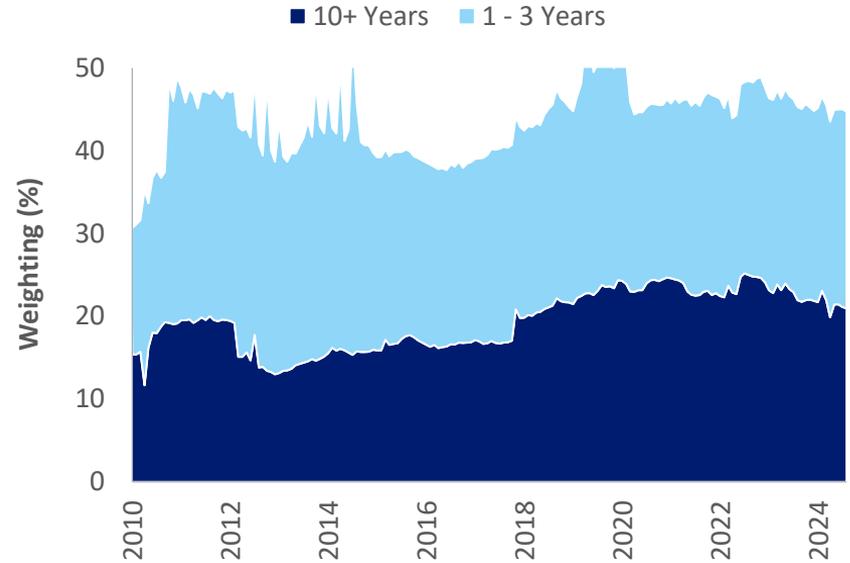
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# Passive lacks diversification in equities and bonds

## Top 5 Equity Holdings in VTI



## Maturity Allocations



As of 30 June 2025

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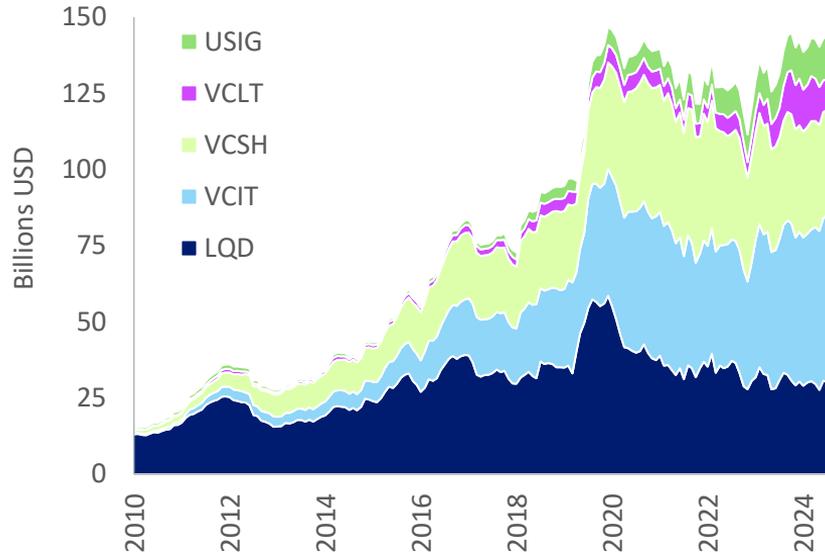
VTI = Vanguard Total Stock Market ETF Class USD Inc (U.S.)

Source: Morningstar Direct, Bloomberg Finance L.P.

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# Growth in corporate bond ETFs has suppressed compensation for liquidity

## Corporate Bond ETF AUM Growth



## Investment Grade Corporate Bond Liquidity Premium



As of 30 June 2025

Source: Morningstar Direct, Bloomberg Finance L.P.

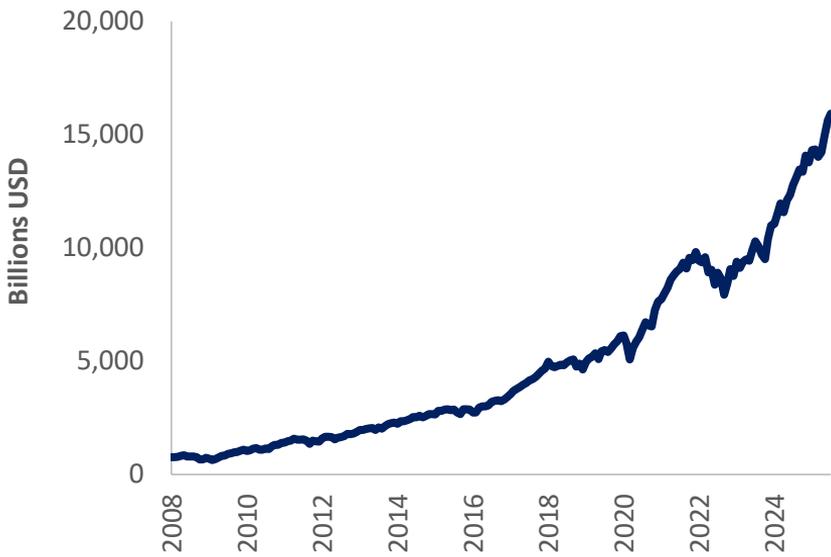
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USIG = iShares Broad USD Investment Grade Corporate Bond ETF Class USD Inc (U.S.) VCLT = Vanguard Long-Term Corporate Bond ETF Class USD Inc (U.S.) VCSH = Vanguard Short-Term Corporate Bond ETF (U.S.) VCIT = Vanguard Intermediate-Term Corporate Bond ETF Class USD Inc (U.S.) LQD = iShares iBoxx \$ Investment Grade Corporate Bond ETF Class USD Inc (U.S.)

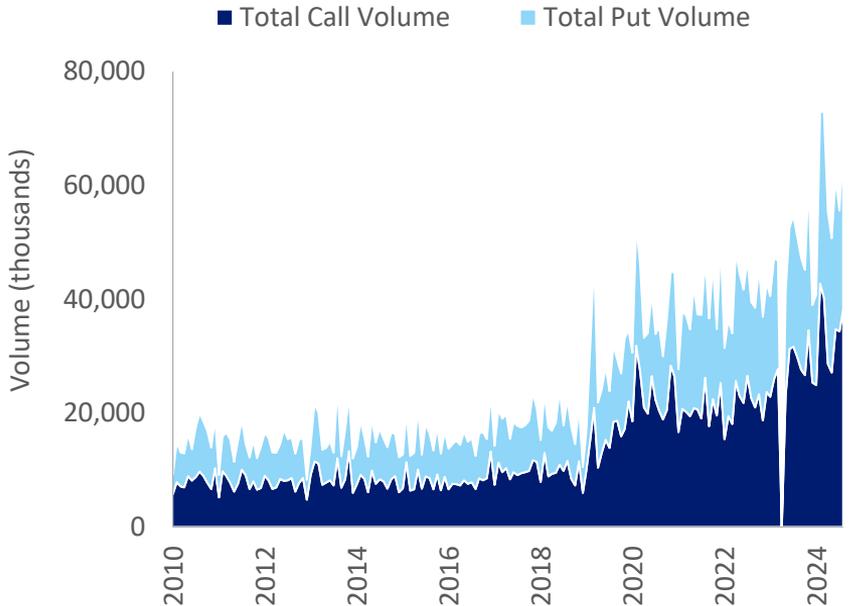
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# As ETF industry as grown, so has options volume

Total ETF Assets Under Management Worldwide

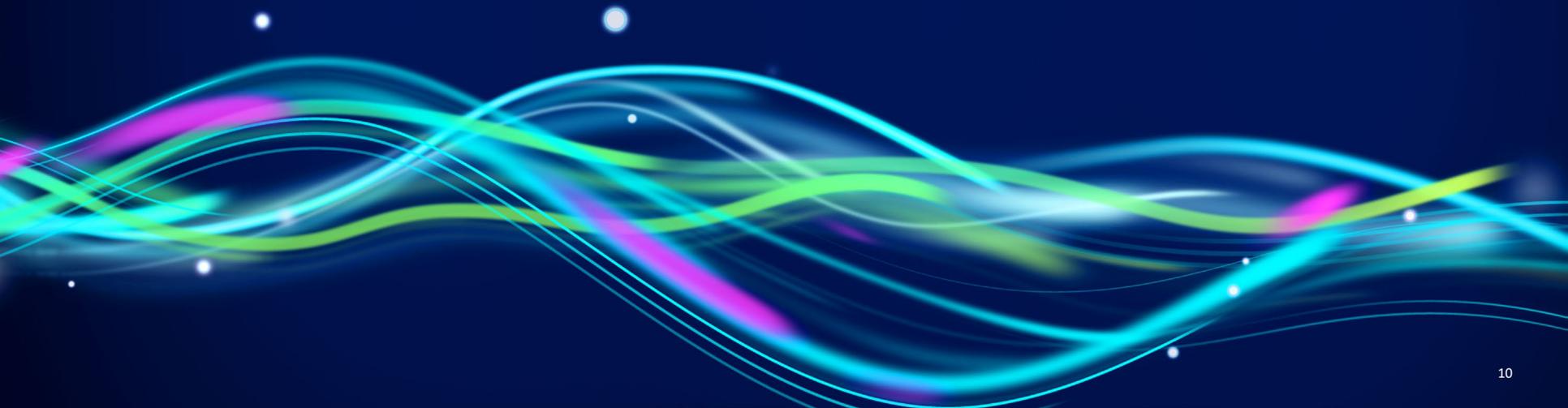


Options Volume



As of 30 June 2025  
Source: Morningstar Direct, Bloomberg Finance L.P.

# Why passive matters



# What is a “passive” investor?



## Passive Investor

A *passive investor* always holds every security from the market, with each represented in the same manner as in the market. Thus, if security X represents 3 percent of the value of the securities in the market, a passive investor’s portfolio will have 3 percent of its value invested in X. Equivalently, a passive manager will hold the same percentage of the total outstanding amount of each security in the market.



## Active Investor

An *active investor* is one who is not passive. His or her portfolio will differ from that of the passive managers at some or all times. Because active managers usually act on perceptions of mispricing, and because such misperceptions change relatively frequently, such managers tend to trade fairly frequently—hence the term ‘active.’

**Over any specified time period, the market return will be a weighted average of the returns on the securities within the market, using beginning market values as weights. Each passive manager will obtain precisely the market return, before costs.<sup>1</sup>**

—William F. Sharpe, *The Arithmetic of Active Management*, <https://web.stanford.edu/~wfsarpe/art/active/active.htm>

<sup>1</sup>We assume here that passive managers purchase their securities before the beginning of the period in question and do not sell them until after the period ends

# Purely passive investors don't exist

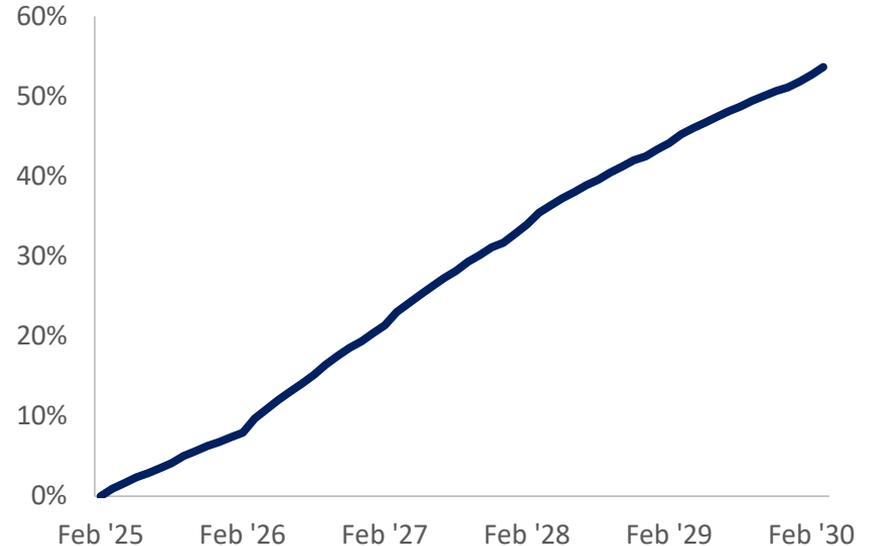
## Pure passive investors are theoretical...

- Passive investors are assumed to:
  - Always holds every security in their market cap weights.
  - Never trade.
- In reality, these assumptions are violated constantly:
  - Passive investors must trade to enter the market.
  - They must also trade whenever there is an index. reconstitution event, or if there is a new issue or maturity.
- Consider an investor in the US corporate bond index:
  - Cash from coupons and maturities account for ~50% of the portfolio just 5 years after inception.
- To remain passive, an investor must trade—violating the very definition of passive!

## ...regular trading is needed to stay invested

### Cash Weight in Hypothetical Portfolio

(Cash % of Total Market Value, 5-year simulation)



# Portfolio construction process: Active vs. Passive

	Active Managers	Passive Managers
Cash	Held	Minimise cash held
Relative Value	Considered	Not considered
Flows	Carefully allocated	Forced buying/selling
Fundamentals	Part of decision-making process	Ignored in decision-making process
Benchmark	Viewed as an opportunity cost	Strict compliance with randomly generated rules



**Passive is the world's simplest algo: If you give it money, buy. If you ask for money, sell.**

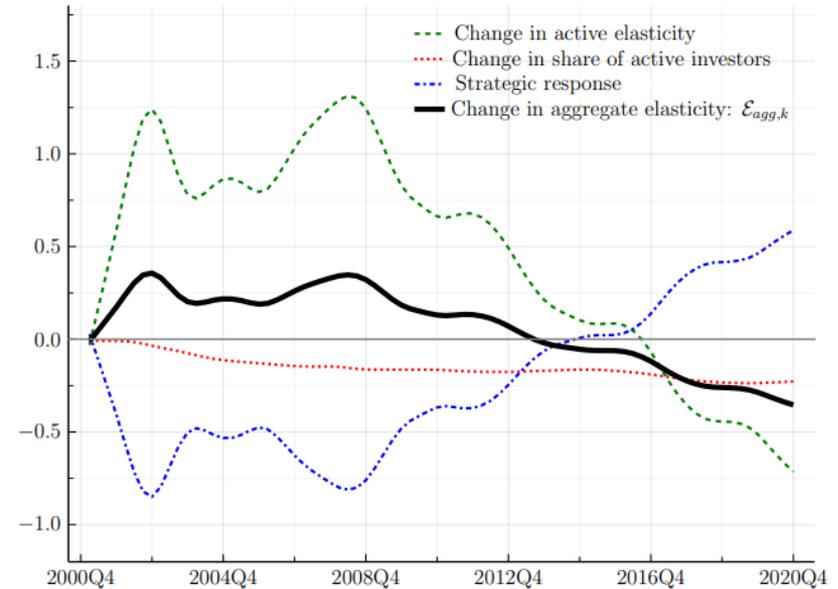
—Mike Green, Simplify Asset Management

# Why does trading by passive investors matter?

Active fails to respond enough to passive...

- When presented with cash, a passive fund will invest until all the cash has been deployed.
  - This investment takes place regardless of valuations.
- Buying irrespective of valuations makes passive investors inelastic to price.
  - As the share of passive has grown, this can have the effect of making the market more inelastic.
- In theory, active managers should respond by trading more aggressively (to capture mispricings).
- However, this doesn't happen—leading to the market becoming increasingly inelastic over time.

...leading to a decrease in market elasticity



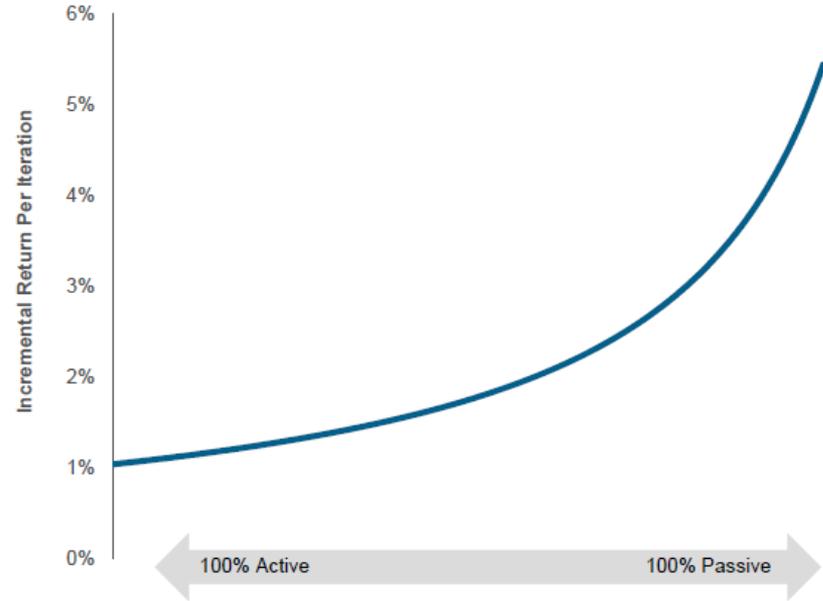
# A simple illustration

A \$10 flow to active from passive...

		Risk Value	Cash Value	Total Value	Cash Value
<b>Period 1</b>	Active	\$950	\$50	\$1,000	5.0%
	Passive	\$0	\$0	\$0	0.0%
	<b>Total</b>	<b>950</b>	<b>50</b>	<b>1,000</b>	<b>5.0%</b>
<b>Period 2—Active Passive Swap</b>	Active	\$950	\$40	\$990	4.0%
	Passive	\$0	\$10	\$10	100.0%
	<b>Total</b>	<b>\$950</b>	<b>\$50</b>	<b>\$1,000</b>	<b>5.0%</b>
<b>Period 3—Active targets 5% Cash, Passive 10bps.</b>	Active	\$949.81	\$49.99	\$999.8	5.0%
	Passive	\$10.09	\$0.01	\$10.1	0.1%
	<b>Total</b>	<b>\$959.9</b>	<b>\$50</b>	<b>\$1,009.9</b>	<b>5.0%</b>

Since cash is zero variance and constant, the price of risk must adjust to reach the cash target. The result is a mechanical appreciation of total market value.

...leads to a mechanical bidding up of risk



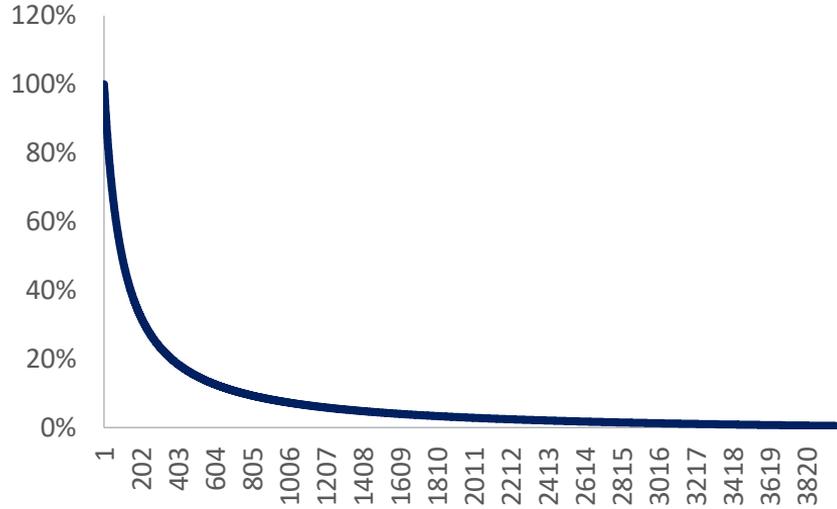
The information presented is hypothetical in nature and is shown for illustrative, informational purposes only. Actual results experienced may vary significantly from the hypothetical illustration shown.  
Analysis by T. Rowe Price.

# A simple illustration (cont.)

As active managers lose share...

## Market Share of Active Managers

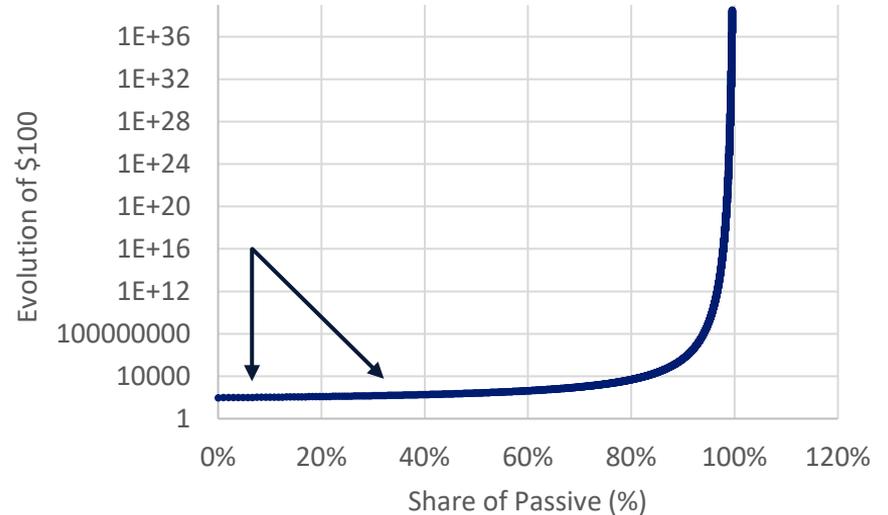
(Share evolution over iterations of \$10 flows)



...this process becomes exponential

## Evolution of \$100

(vs. share of market held by passive)



The information presented is hypothetical in nature and is shown for illustrative, informational purposes only. Actual results experienced may vary significantly from the hypothetical illustration shown.  
Analysis by T. Rowe Price.

# Conclusion

It is critical to embed market structure considerations at the heart of the investment process

## Passive flows are making the market less elastic

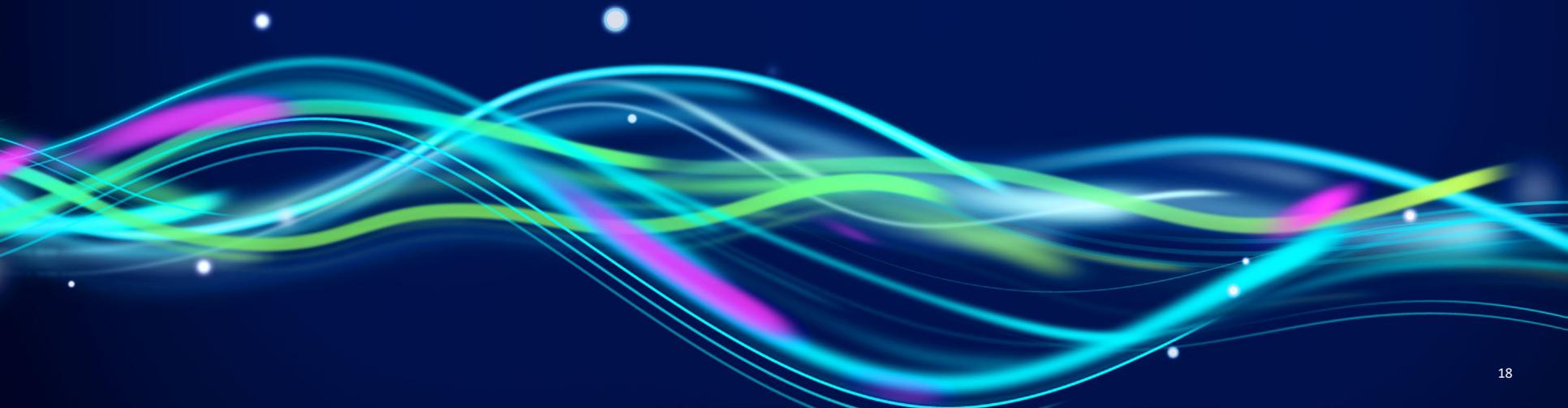
- Not only does this make the market more sensitive to flows, but it can also mechanically cause asset prices to inflate.
- In this world, it becomes harder and harder for active managers to outperform using a *traditional* playbook.

## Less elastic markets call for a closer examination of investment theses

1. **Asset class level:** Can we find instances where non-discretionary flows are magnifying market moves? Can we use this insight to identify troughs and peaks that allow us to take tactical views at the asset class level?
2. **Security selection:** Can we find instances where extreme price outcomes are possible at the security level? Especially if there are “free” options on these mispriced securities.
3. **Tails:** These are more likely in an inelastic world. How can we explicitly layer protection and upside participation into portfolios to “smooth the ride”, and generate stronger geometric compounded returns?

**An inelastic market argues for a very different type of portfolio construct. We believe these trends will only grow in importance.**

# Appendix



# Sources and additional content

- **Passive Ownership and Price Informativeness**
  - [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3243910](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3243910)
- **Market Tremors: Quantifying Structural Risks in Modern Financial Markets**
  - <https://www.amazon.com/Market-TremorsQuantifying-Structural-Risks-in-Modern-Financial-Markets/dp/3030792528>
- **Trillions: How a Band of Wall Street Renegades Invented the Index Fund and Changed Finance Forever**
  - <https://www.amazon.com/Trillions-Renegades-Invented-Changed-Finance/dp/0593087682>
- **Index Driven Price Pressure in Corporate Bonds**
  - [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2022956](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2022956)
- **Sharpening the Arithmetic of Active Management**
  - [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2849071](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2849071)
- **In Search of the Origins of Financial Fluctuations: The Inelastic Market Hypothesis**
  - [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3686935](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3686935)
- **How Competitive is the Stock Market? Theory, Evidence from Portfolios, and Implications for the Rise of Passive Investing**
  - [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3821263](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3821263)
- **The Arithmetic of Active Management**
  - <https://web.stanford.edu/~wfsarpe/art/active/active.htm>
- **Steering a Ship in Illiquid Waters: Active Management of Passive Funds**
  - [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4053844](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4053844)

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