From Passive to Proactive:
The Rise of Active ETFs

Disclosure

Carefully consider the Fund's investment objectives, risk factors, charges and expenses before investing. This and additional information can be found in the Fund's prospectus or summary prospectus, which may be obtained by visiting www.temaetfs.com.

Read the prospectus carefully before investing.

Risk Information

Investing involves risk including possible loss of principal. There is no guarantee the adviser's investment strategy will be successful.

Diversification does not ensure profits or prevent losses.

Investing involves risk including possible loss of principal. The Funds may invest a significant portion of their assets in one or more sectors and thus will be more susceptible to the risks affecting those sectors than funds that have more diversified holdings across a number of sectors. There is no guarantee the adviser's investment will be successful in identifying and investing in thematic trends.

The small- and mid-capitalization companies in which the Funds invest may be more vulnerable to adverse business or economic events than larger, more established companies, and may underperform other segments of the market or the equity market as a whole.

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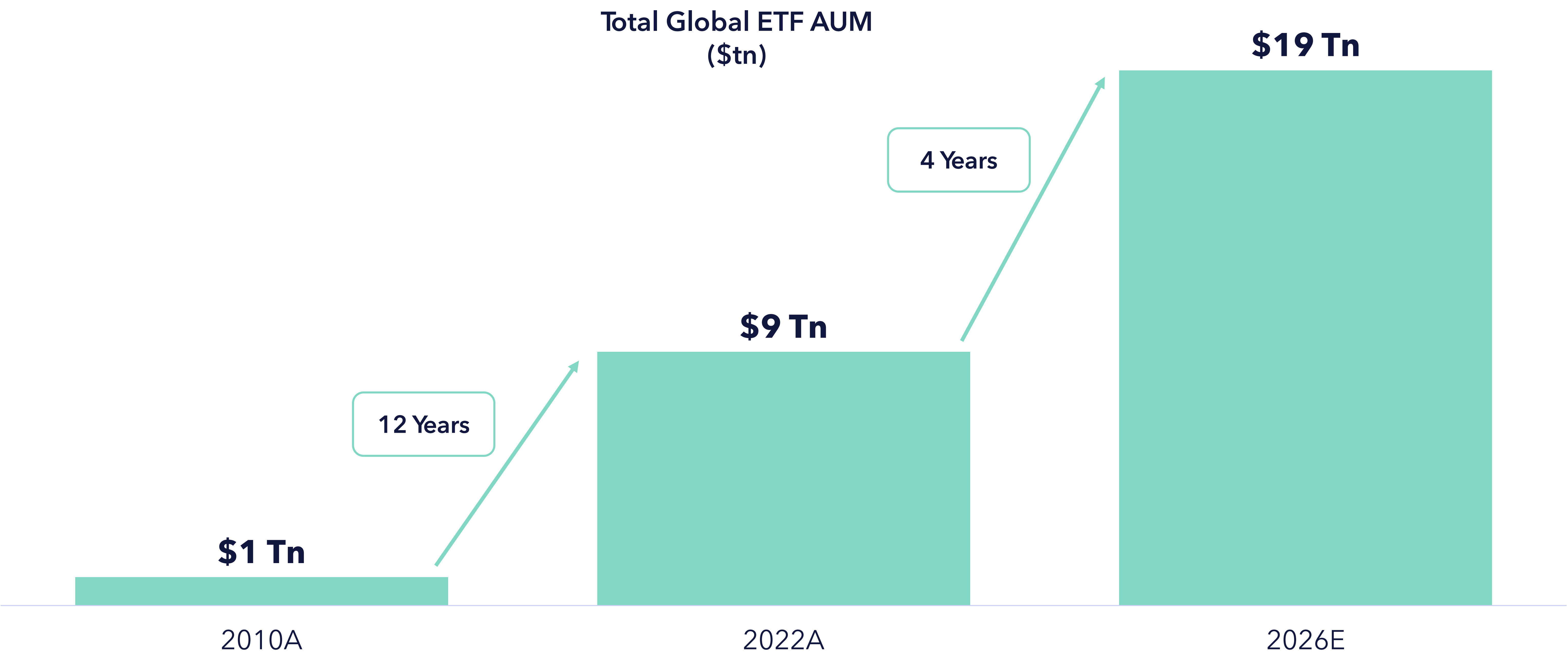
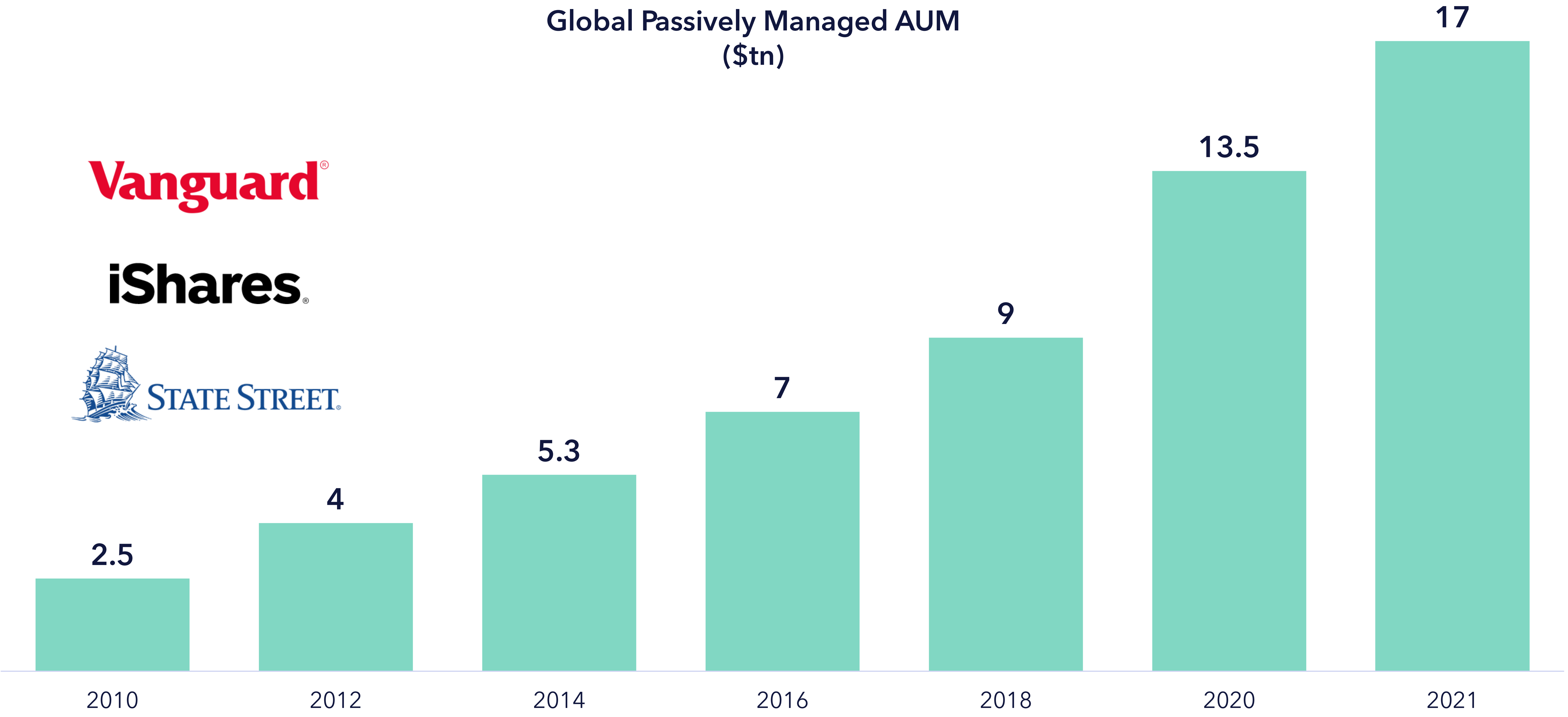
ETFs are the fastest growing segment within asset management



Source: Morningstar and ETFGI as of H1-2023

Passive ETFs thrived in a low volatility decade when passive investing ballooned



Source: Morningstar as of H2-2022

Active is significantly underrepresented in ETFs vs other fund wrappers

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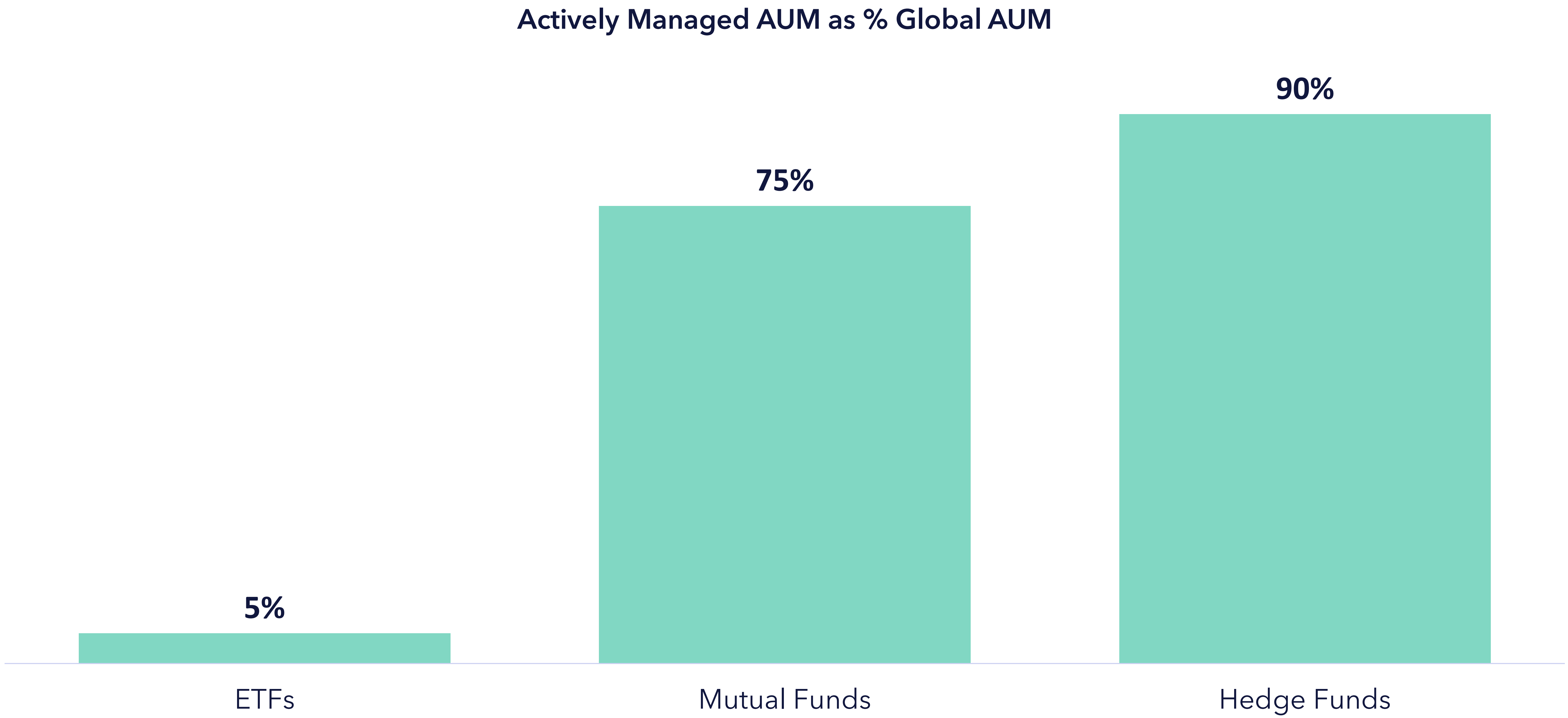
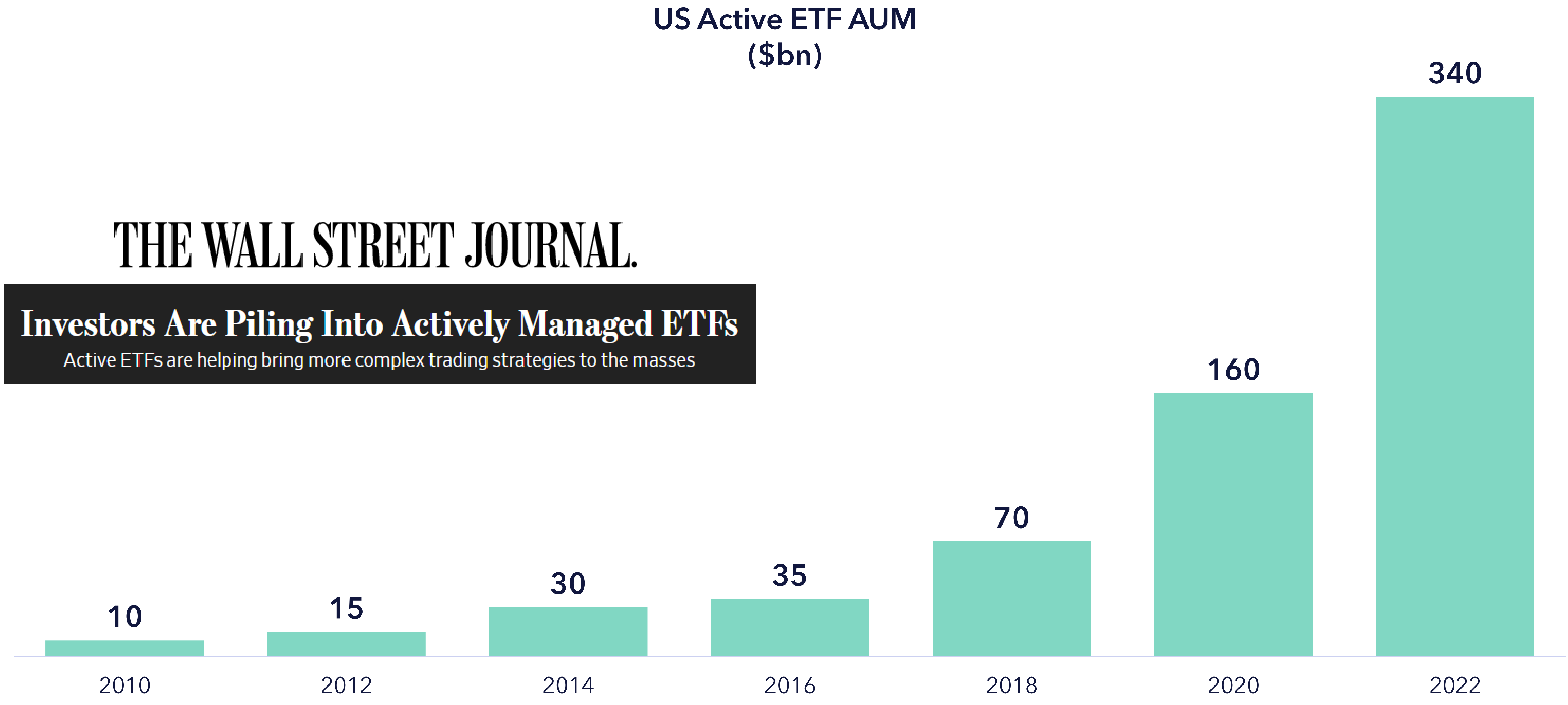


Source: Morningstar and NYSE as of H1-2023

Active ETFs are now taking off fast, representing 5% of ETF assets but 30% of YTD 2023 ETF flows



THE WALL STREET JOURNAL.

Investors Are Piling Into Actively Managed ETFs

Active ETFs are helping bring more complex trading strategies to the masses

Source: Morningstar and NYSE as of H1-2023

ETF landscape

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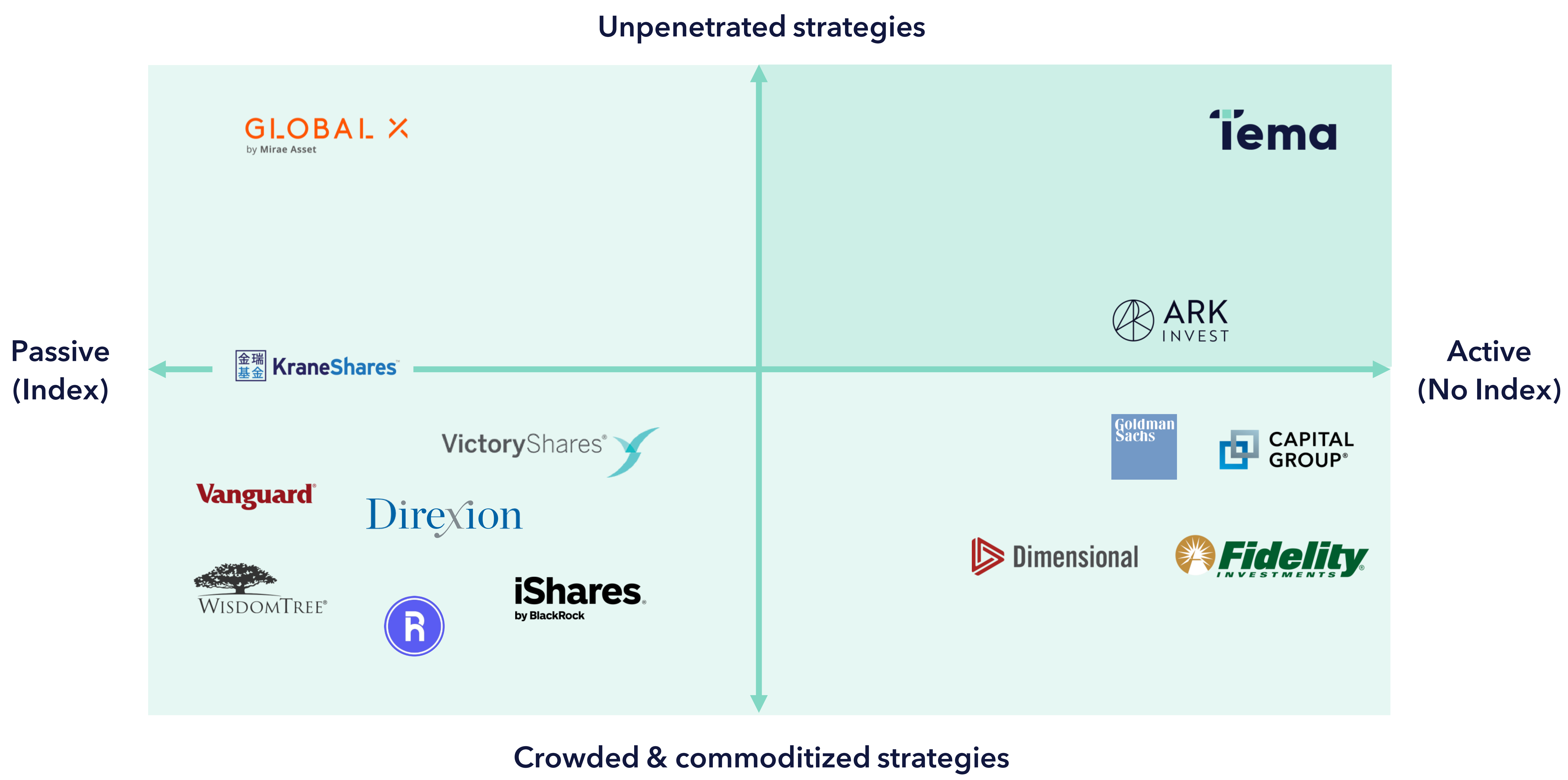

80% of US investors prefer ETFs over mutual funds for active exposure

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US Investor Active Vehicle Preference

Source: Morningstar, Trackinsight and NYSE as of H1-2023

Active ETFs are the preferred vehicle for many investors

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	ETF		Mutual Fund	Hedge Fund
	Active ETF	Passive ETF		
Transparency	Fully transparent*	Fully transparent*	Quarterly holdings	Opaque
Fees	Low single fee	Very low single fee	Higher management fee + costs	Very high management fee + performance fee + costs + hidden charges
Investor liquidity	Intraday, slightly higher spreads	Intraday, tight spreads	Daily	Quarterly with lockups
Leverage	None	None	Rare	High
Investment approach	Active	Passive index	Active	Active
Turnover	Low	Very Low	Low	High
Risk	Alpha and beta risk	Beta risk, herding and crowding risk	Alpha and beta risk	Drawdown risk
Tax efficiency	In kind process = minimal capital gains distributions	In kind process = hardly any capital gains distributions	Least tax efficient due to distributable capital gains	Complicated tax structures
Accessibility	Widely with any brokerage account	Widely with any brokerage account	Platform has to offer	Restricted

Notes: *Most are fully transparent, but it is possible to be semi- or non- transparent as well. See slide 9.

The growth of active is coinciding with growing institutional ETF adoption

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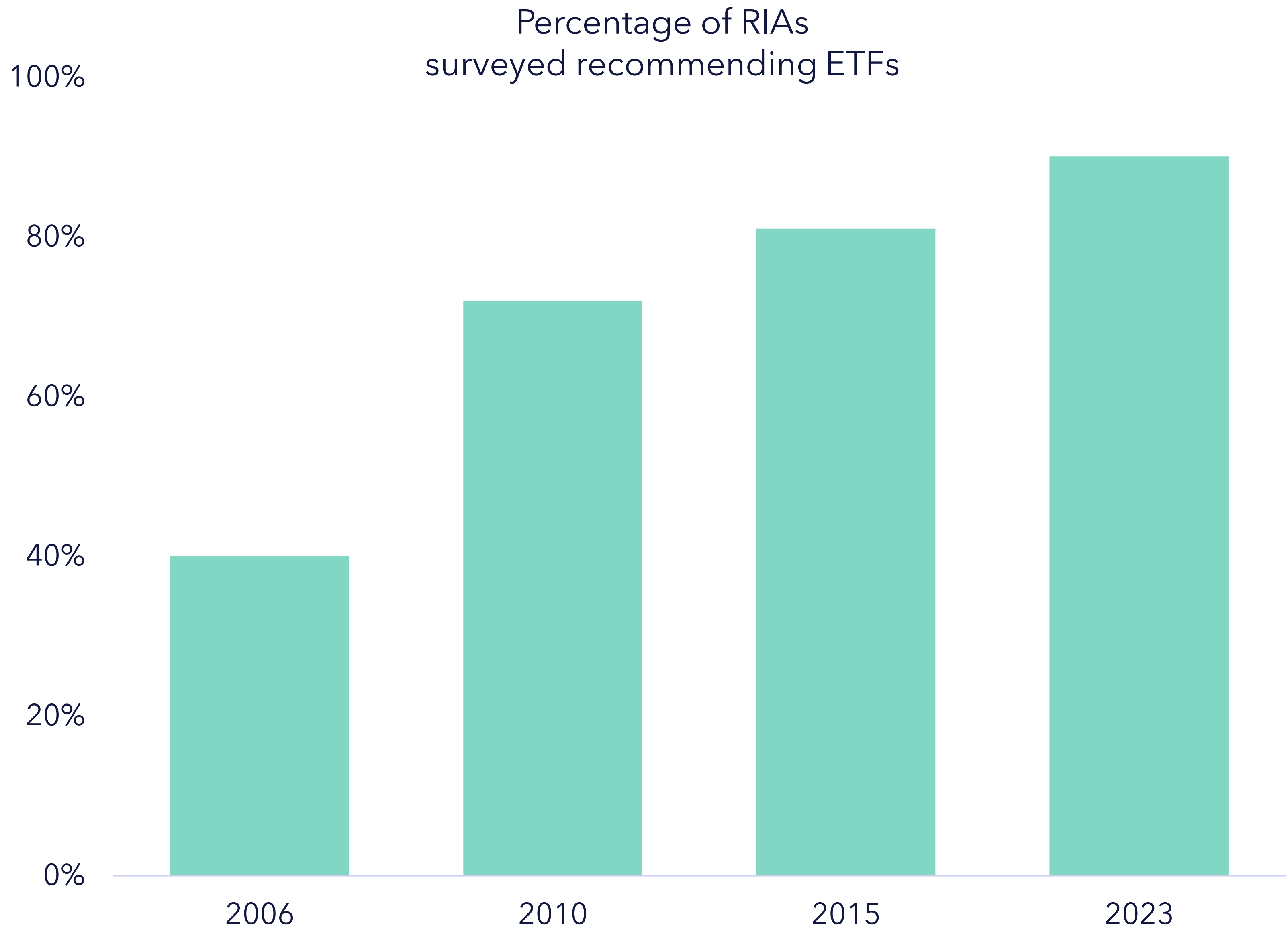
Registered investment advisors (RIAs) are increasingly recommending ETFs to clients



Large well-known pension funds are adopting ETFs

	Q2-2023 ETF AUM
Alaska Permanent	$1.1bn
CalPers	$970m
Michigan ERS	$6.5bn
New Jersey	$2.4bn
Tennessee	$4.5bn
Wisconsin	$1.3bn

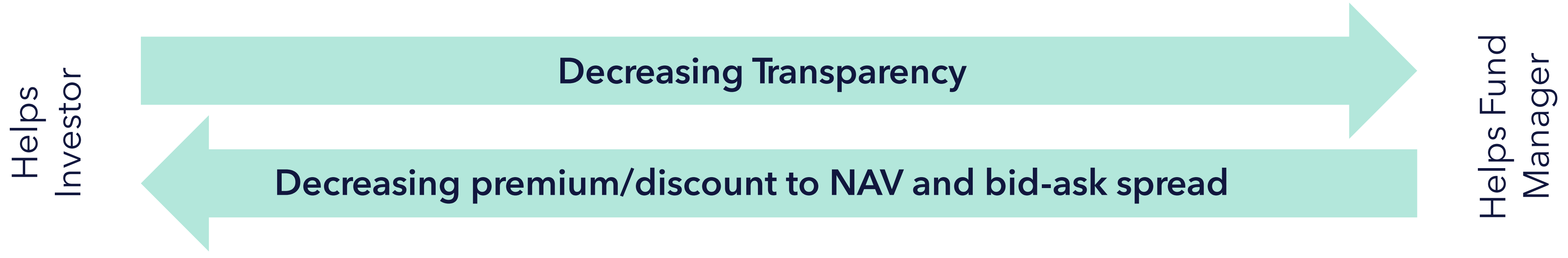
Focussing on three less discussed features of active ETFs

Transparency

Precision
of exposure

In-kind process
for fund
managers

ETF transparency benefits investors, non-transparency helps fund managers



Criteria	Fully Transparent	Semi-Transparent	Non-Transparent ETF
What is it?	Publish all holdings daily	Uses a model to disclose some elements of the daily portfolio	No disclosure of daily portfolio
Actual portfolio disclosure	Daily	Monthly to Quarterly (60-day lag)	Quarterly (60-day lag)
Models	Daily publication of holdings (name and weight) file on website and to AP*s and other market participants	*Blue Tractor* – disclose all names but only 90% of weights (within guardrails) *Proxy Basket* (e.g., NYSE, T. Rowe Price) – disclose some holdings or non-holdings that are representative. Can use factors	Precidian (ActiveShares)
Fund manager concern	Can be copied	Harder to copy	Very hard to copy
Premium/discount to NAV and bid-ask spreads	Tight	Wider	Widest
Hedging mechanism	Full holdings	Information signal	Verified intraday indicative value (VIIV)
Custom baskets	Possible	Possible but not all models use	No custom baskets
Available underlying investments	Anything	Only US equities, US contemporaneous time zone listed equities, futures	Only US stocks and futures

Notes: *Authorized participants

Precision of exposure is a big issue in passive thematic ETFs. Why?

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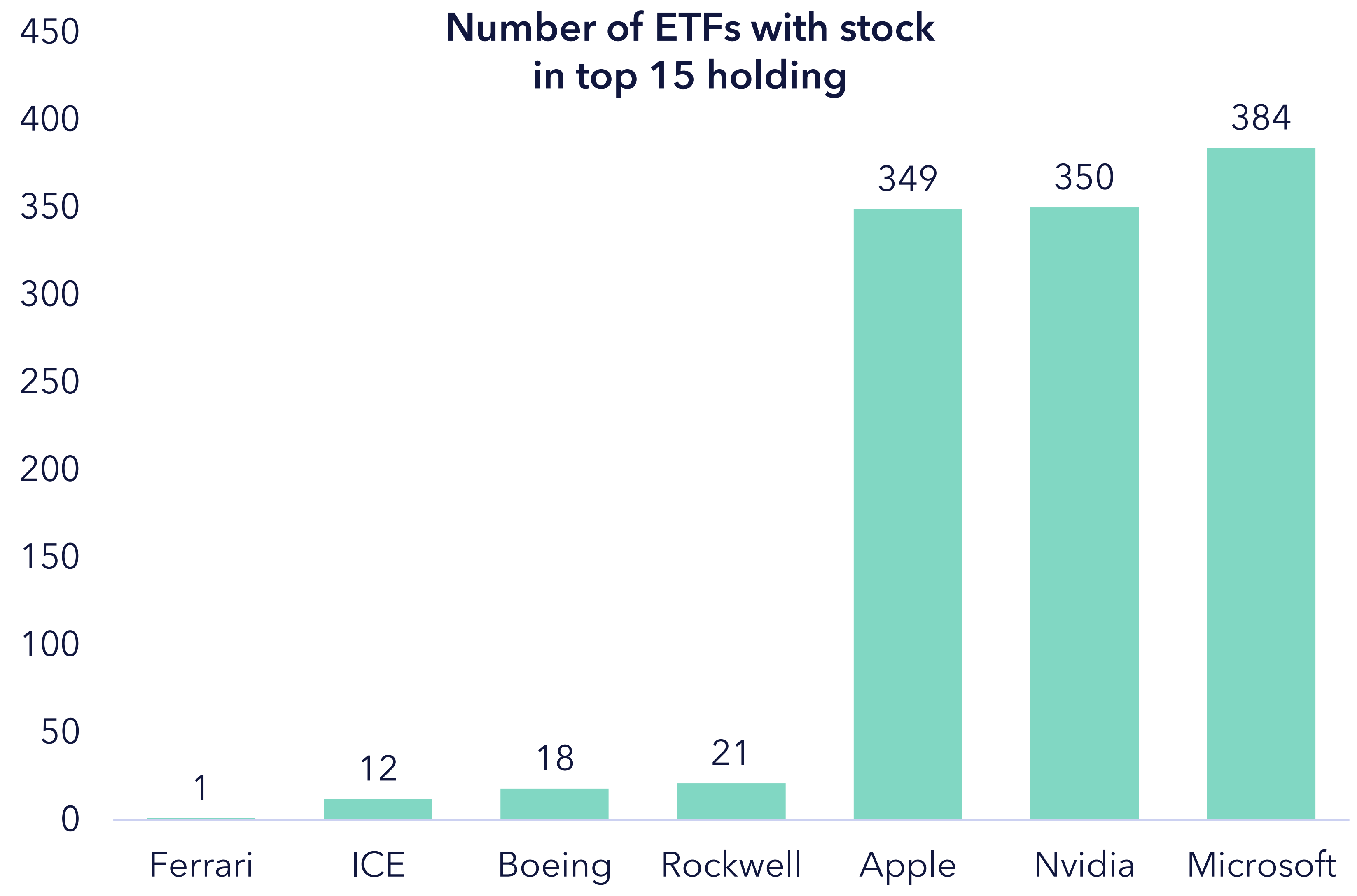
1. Many ETFs just hold the same stocks…



…despite carrying markedly different names

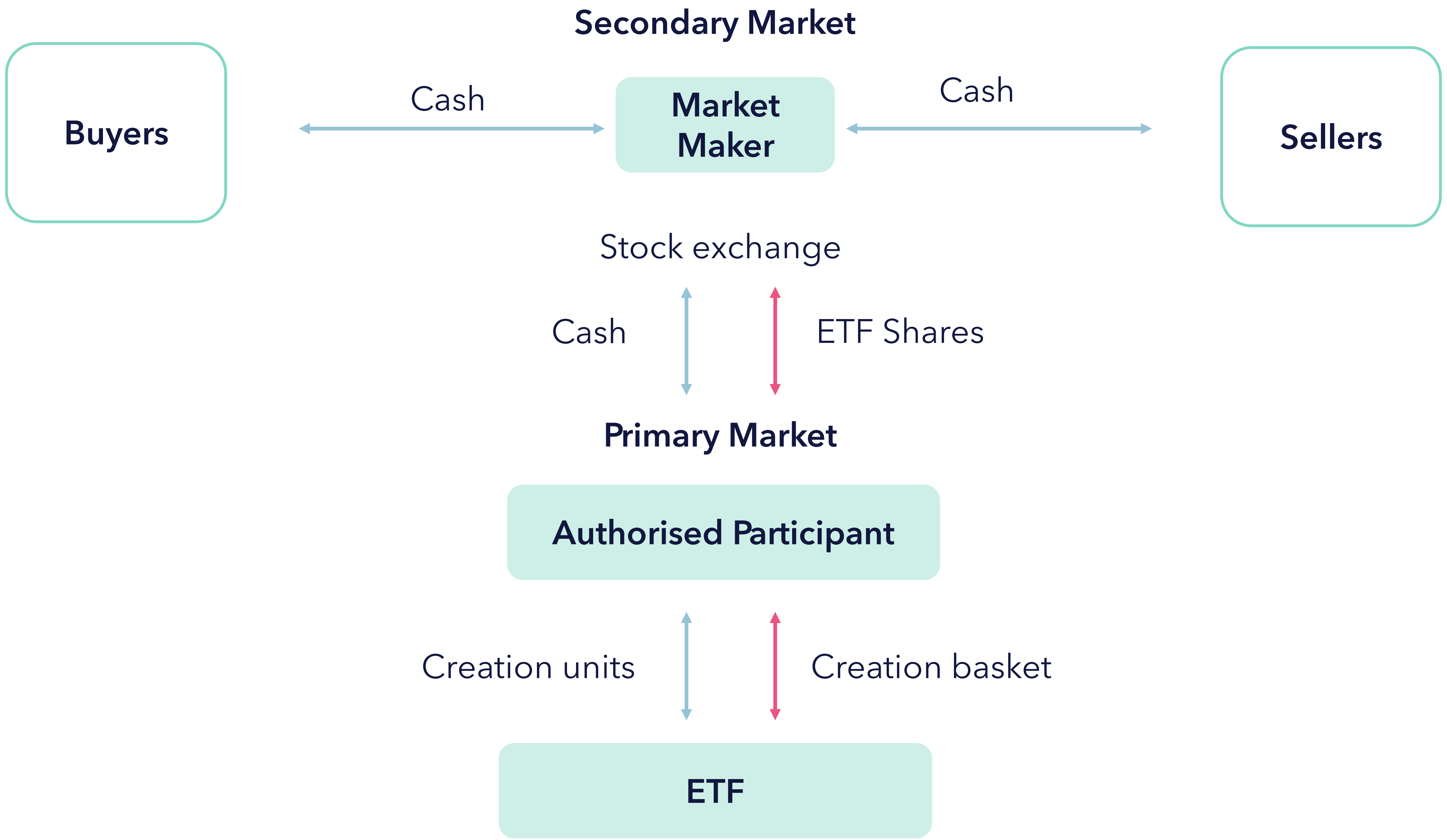
Themes that hold NVDA & MSFT

- Artificial Intelligence
- US Carbon Transition Readiness
- Video Games
- Millennials
- Robocar Disruption
- Cloud and Cybersecurity
- Longevity Economy
- Metaverse

In-kind process is THE unique feature of ETFs

The creation & redemption process

ETFs optimize for liquidity, transparency and tax-efficiency



- Portfolio manager does not need to hold cash
- Nor sell stocks for redemptions (usually coincide with worst point)
- Reduces cash drag to performance
- Big behavioural benefits:
  - Stay invested
  - Don't use cash to try to time the market – not good at it

Risk management required for full adoption of active ETFs

ETF risk management has historically been neglected but this is now changing

ETF risk management has not been prioritized

Active ETFs have flexibility to manage risk

Required for institutionalization of (active) ETFs

Which risk management concerns are important for active ETFs – liquidity risk

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- Key is that underlying equities or bonds are not illiquid
- Liquidity analysis rule of thumb - liquidation of a basket (typically 10%) without significantly moving price in under 8 days
- Illiquid positions can't be >15% of NAV
- Active have more room as can use custom baskets, change portfolio composition
- IMF analysis of 2020 stress of Bond ETFs – shows funds went to 5% discount, but weathered storm well

ETF Hub Exchange traded funds

The inside story of how ETFs weathered the March 2020 storm

As markets went into meltdown the people who worked in the industry stepped into overdrive

Source: IMF Global Financial Stability Report

Which risk management concerns are important for active ETFs – company fundamental risk

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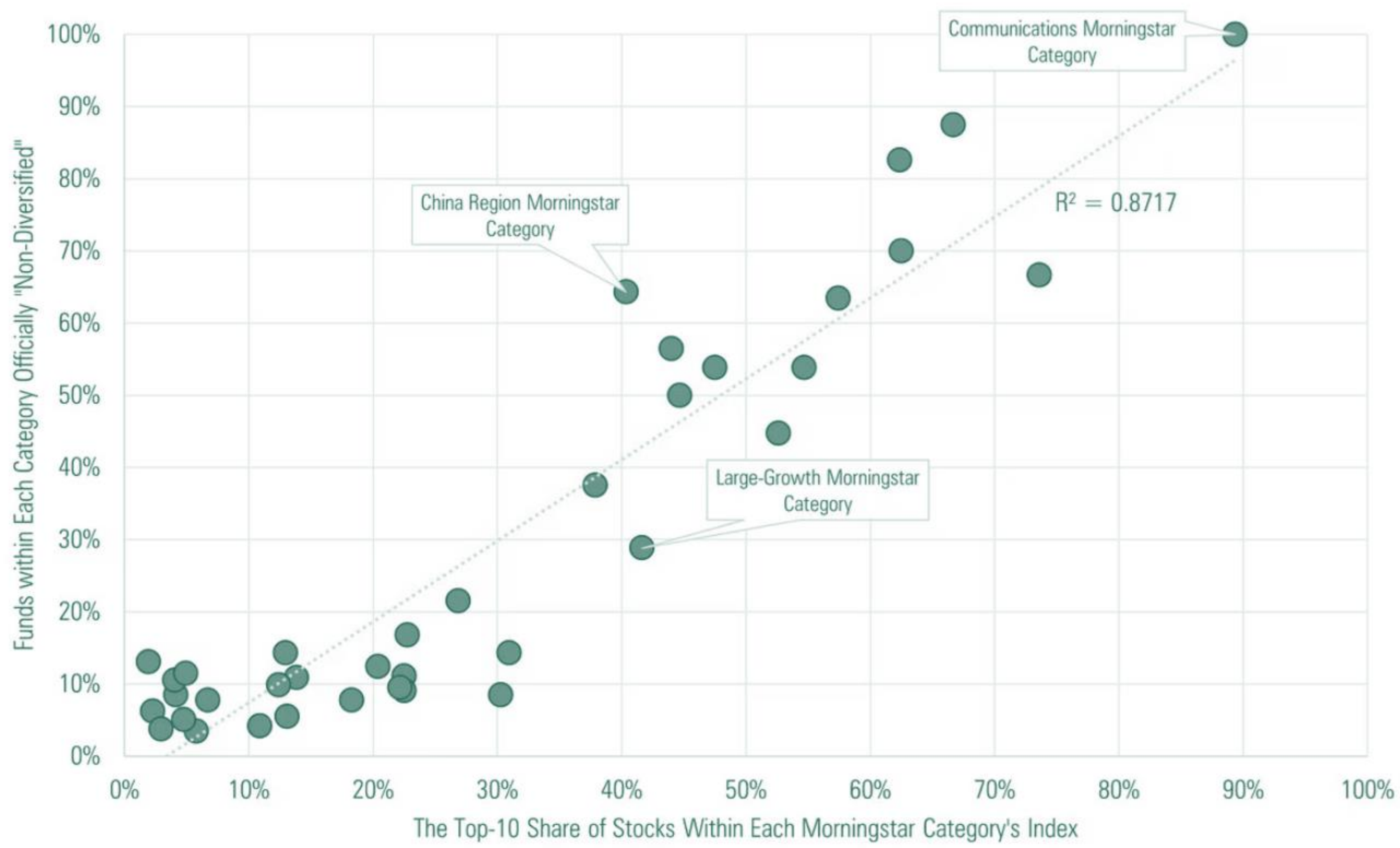
Factors to actively managed to reduce individual equity risk

Factor	Example variables to consider	Bad examples	Good examples
Business model	Gross margin economics at scale	High fixed cost with high discounting	Network effects
Well invested business	R&D as % of sales over time	R&D as % of sales below peers	• Flat to rising R&D as % of sales • Budgets protected in downcycles
Management incentives/shareholding	• Long term investment plan (LTIP) criteria in proxy statements • Management shareholdings as % of fixed pay	• No personal shareholding • Incentives on sales or EPS • History of changing targets	• Shareholding 3-6x fixed annual pay • LTIP focussed on free cash flow and ROIC
Profitability	Focus on firms that are profitable	Unprofitable tech firms	High ROIC businesses
Accounting red flags	• F-score – accounting misstatement risk model • Z-score – bankruptcy risk model	• Frequent material exceptional • Receivables factoring	• Conservative revenue recognition
Cash flow profile	Free cash flow modelling	• Persistent negative free cash flow • Not accounting for share issuance	• High free cash flow conversion
Balance sheets	Debt profile, off-balance sheet arrangements, pensions	• High financial leverage combined weak cash generation	• Low financial debt • Clean profile of non-financial debt

Which risk management concerns are important for active ETFs – concentration risk

- Funds can be diversified or non-diversified (IRS/SEC)
- Non-diversified – positions over 5% of the fund can't sum to >50% of the fund
- Diversified – positions over 5% of the fund can't sum to >25% of the fund
- Non-diversified does not equal more risk
- Key is managing top position size, number of stocks, and stock selection
- As ETFs are always open – monitor shareholding size of underlying

More concentrated categories naturally have more non-diversified funds



Source: Morningstar

Tema's risk management framework – foundation of investment process

Theme	• Uncrowded, attractively valued, structural themes
Stock Level	• See discussion above • Ex ante analysis of downside risks • Avoid permanent capital impairment risks e.g. balance sheets
Portfolio	• Portfolio construction guidelines
Investment Oversight	• Bi-weekly CIO oversight meeting • Full agenda and dashboard
Portfolio Execution	• Bloomberg AIM • NEOS Investments execution • Tema internal operations controls
Firm Wide	• Quarterly firmwide risk meeting • Scenario analysis and factor analysis

Conclusion

ETF is the most efficient wrapper for active management

Active facilitates product precision and integrity

Institutional adoption drives risk management focus

Tema: Active ETFs managed differently

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Mission

Our mission is to democratize access to institutional grade active investing through ETFs

Backed by top-tier[1] investors & led with expertise[2]

Index Ventures

Accel

Goldman Sachs, State Street Global Advisors SPDR, TIAA CREF, Rockefeller Capital Management, Majedie Asset Management, iShares by BlackRock, Vitol, pwc, B.A.M: Balyasny Asset Management L.P.

Management team

Maurits Pot
Founder and CEO

Yuri Khodjamirian, CFA
CIO & PM

Matt Keeling
COO

Tema ETFs product sample

LUX
Luxury

RSHO
American Reshoring

TOLL
Monopolies and Oligopolies

[1]Tema's products are created with the aim to be suitable for financial institutions, e.g., pension funds or endowment funds. These institutions often have strict investment requirements based on factors such as risk management and precision of exposure. [2]Index Ventures and Accel ranked among the top 10 VCs globally according to 2022 Global Venture Capital Investor Prominence Ranking report issued by dealroom.co. Criteria for evaluation are based on a comprehensive and quantitative list, including investors' success in backing unicorns (privately held startup company with a value of over $1 billion) and future unicorns, as well as their level of deal activity in the last 12 months.[3]Company logos in this slide (excluding Index Ventures and Accel) showcase the past experiences of Tema's management team.

Reading list

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- **CFA Comprehensive Primer on ETFs** (2015)
- **Introduction to thematic investing**
- **Legal handbook on ETFs** (Third Edition)
- CFA brief on **ETFs and Systematic Risks** and **webinar**
- **Overcoming performance anxiety through purity of exposure**