



# PCS ADVISORS

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# Active ETFs

2025 Diligence Update

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# Executive Summary

# Overall Takeaways

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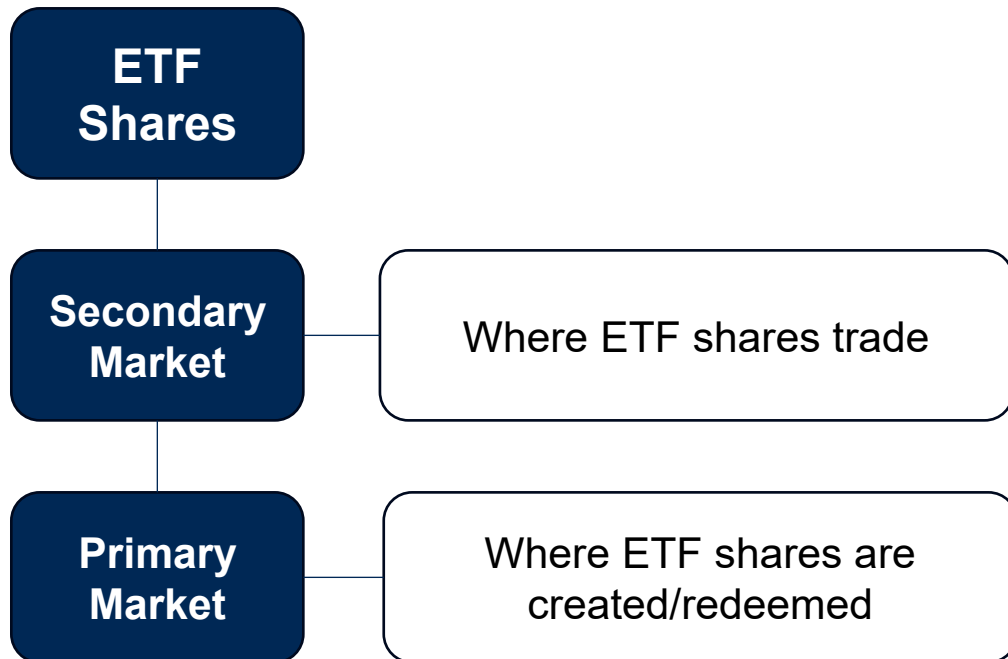
- ETF vehicle is an advantageous structure for most asset classes due to the tax efficiency **and** the placement of transaction costs on the transacting investor
- The average historical tax benefit across non-fixed income asset classes for active ETFs was **67 basis points** over the past three years
- Our current model portfolio shows little tax drag relative to the average category active ETF
- The universe is still underdeveloped in asset classes where we use active management – asset growth is concentrated to the top 25 managers and recent product launches have been in levered equity, derivative income, defined outcome, etc.
- Active ETFs can have limitations as interest and dividends may still create tax drag, certain markets or securities have restrictions on in-kind settlements (certain countries, OTC derivatives, etc.)
- Choosing vehicle over investment likely sacrifices performance and fails to fully evaluate trade-offs
- Massive growth of dual share class funds is likely on the horizon and introduces opportunity cost and conflicts between classes that require evaluation

# What is an ETF?

## Liquidity

ETFs offer two separate layers of liquidity as they can be traded in the primary market where shares in the ETF can be created and redeemed.

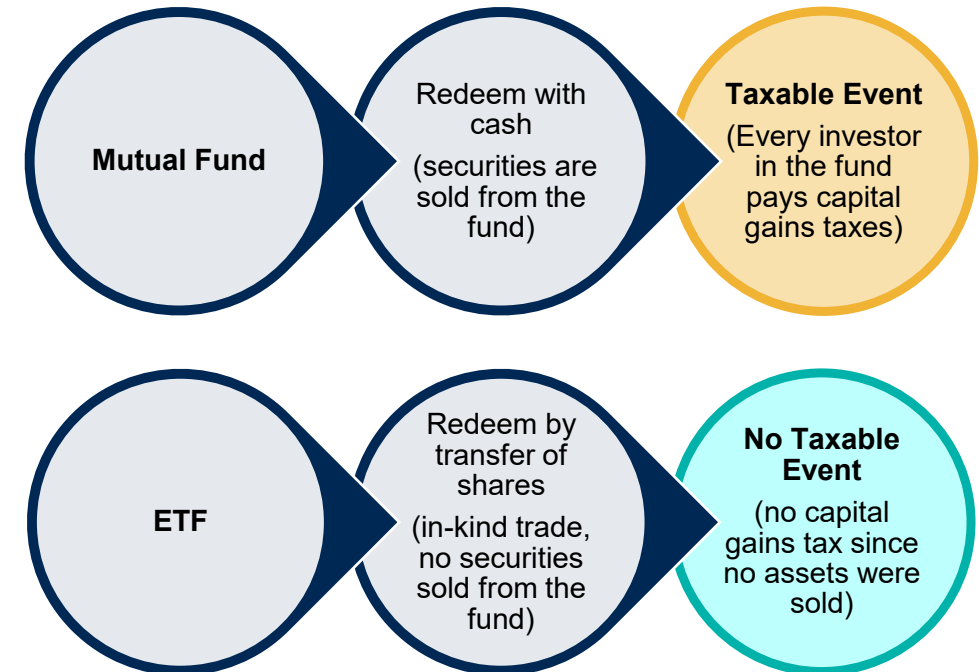
A secondary market exists for shares of the ETF itself; as a fund scales, the percentage of its total market activity accounted for by the primary market tends to decrease.



## Tax Efficiency

ETFs may provide favorable tax treatment relative to mutual funds via the in-kind settlement mechanism to create and redeem in the primary market; transactions between the market maker and the issuer are often settled in-kind, which prevents capital gains from being realized in the ETF vehicle.

Heartbeat trades enable ETFs to adjust their portfolios without incurring capital gains – this capability is critical reason that ETFs may be favorable from a tax perspective relative to mutual funds.



# Key Benefit of the ETF Wrapper

## ETF transaction cost burden is placed on the transacting investor

- ETFs utilize in-kind settlement for underlying securities in create and redeem transactions, allow transacting investors to exit the vehicle without impacting remaining investors

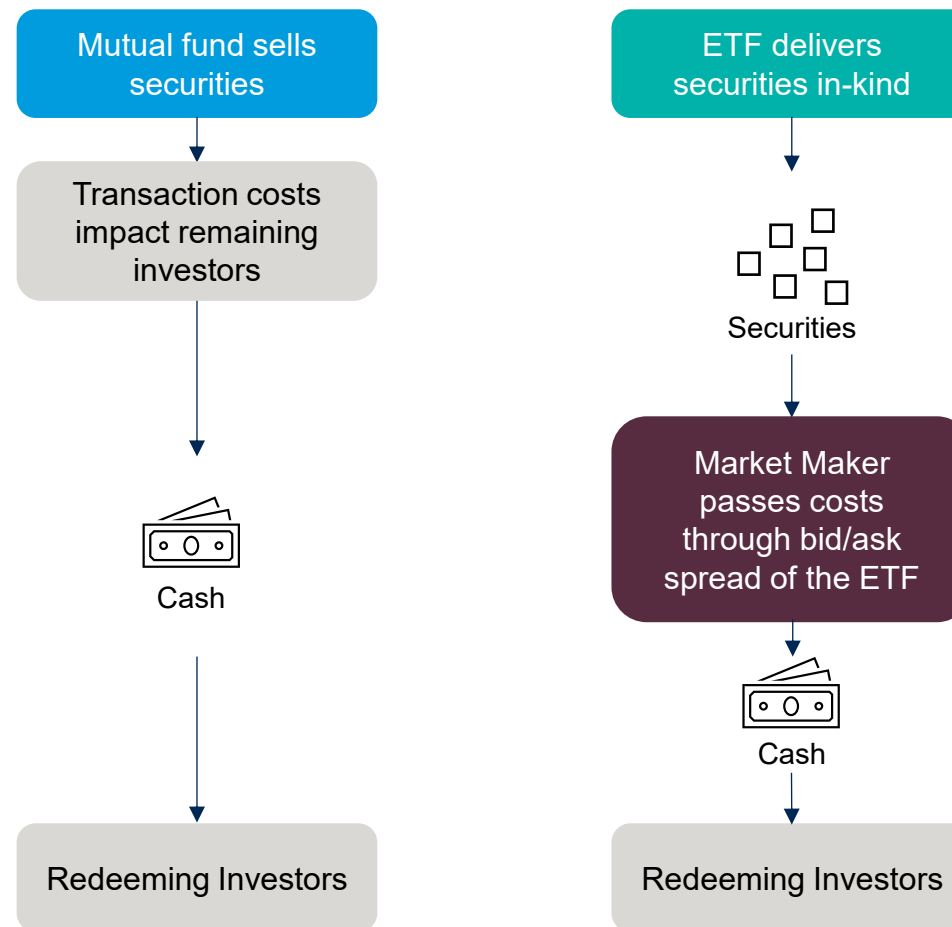
## Mutual fund transaction costs are borne by the remaining investors in the fund

- If a mutual fund has to raise money, they may sell assets at unattractive prices, and this negatively impacts returns for the remaining investors

## Asset class liquidity and other regulatory considerations can affect the ETF's ability for in-kind settlement

- In asset classes where liquidity in the underlying securities dries up, the bid-ask spread on shares in the ETF often becomes a reverse price discovery mechanism (i.e., think high yield, when the bonds fail to trade, the NAV is stale, but market makers will widen bid-ask spreads based on their view of NAV if the underlying was trading, and investors choosing to exit will bear the cost)
- The benefit from the ETF may be mitigated by 'cash-in-lieu' of settlements for underlying securities in the create/redeem baskets
- Cash settlements may be more likely in less liquid asset classes and could eliminate the benefits of the ETF vehicle

## Redemption Diagram



## Tax Benefit Analysis Takeaways

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- Historically tax benefit of ETF wrapper relative to mutual fund exists across most asset classes
- Fixed income and emerging markets equity have had little historical tax benefit, if any
- The largest historical tax benefit has been in US equity, an area that broadly favors passive management
- Our current model has overall competitive tax cost ratios to the average active ETF
- Model managers that have high tax cost have demonstrated significant alpha and/or are in asset classes where active ETFs have not had a historical tax benefit relative to mutual funds

# Vehicle Tax Benefit Analysis

Asset Class Category	Average Active Mutual Fund minus Active ETF Tax Cost Ratio	
	3YR	5YR
<b>FIXED INCOME / CREDIT</b>	<b>(0.14)</b>	<b>(0.05)</b>
Muni National Interm	0.00	0.02
High Yield Muni	(0.01)	0.01
Intermediate Core Bond	(0.22)	0.15
Intermediate Core-Plus Bond	(0.09)	0.06
High Yield Bond	(0.15)	(0.07)
Bank Loan	(0.08)	0.01
Global Bond USD-Hedged	(0.36)	(0.25)
Emerging Markets Bond	(0.22)	(0.29)
<b>US EQUITY</b>	<b>0.86</b>	<b>1.00</b>
Large Blend	1.08	0.97
Large Growth	1.01	0.88
Large Value	1.17	0.97
Mid-Cap Blend	0.76	0.76
Mid-Cap Growth	0.53	1.12
Mid-Cap Value	0.68	1.08
Small Blend	0.81	0.70
Small Growth	0.52	1.22
Small Value	1.21	1.34

Asset Class Category	Average Active Mutual Fund minus Active ETF Tax Cost Ratio	
	3YR	5YR
<b>INTERNATIONAL EQUITY</b>	<b>0.39</b>	<b>0.48</b>
Global Large-Stock Blend	0.70	0.73
Global Large-Stock Growth	0.42	0.60
Global Large-Stock Value	1.13	1.27
Foreign Large Blend	0.08	0.21
Foreign Large Growth	0.35	0.43
Foreign Large Value	0.19	0.13
Diversified Emerging Mkts	(0.14)	(0.02)
<b>REAL ASSETS</b>	<b>0.75</b>	<b>0.73</b>
Real Estate	0.78	0.38
Commodities Broad Basket	0.71	1.08

Source: Morningstar Direct. Data is as of October 31, 2025.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Current Model Tax Benefit Analysis

Current Model Asset Classes	Tax Cost Ratio - 3YR	Tax Cost Ratio - 5YR
<b>FIXED INCOME / CREDIT</b>		
Baird Strategic Municipal Bond	0.00	0.10
Vanguard Interm-Term Tx-Ex	0.00	0.01
<i>Intermediate Muni Active ETF Average</i>	<i>0.00</i>	<i>0.01</i>
<i>Intermediate Muni Mutual Fund Average</i>	<i>0.01</i>	<i>0.02</i>
NYLI MacKay High Yield Muni Bond	0.00	0.00
<i>High Yield Muni Active ETF Average</i>	<i>0.01</i>	<i>0.03</i>
<i>High Yield Muni Mutual Fund Average</i>	<i>0.01</i>	<i>0.04</i>
BlackRock Strategic Income Opps	1.92	1.65
<i>Core-Plus Bond Active ETF Average</i>	<i>1.78</i>	<i>1.52</i>
<i>Core-Plus Bond Mutual Fund Average</i>	<i>1.69</i>	<i>1.58</i>
<b>US EQUITY</b>		
Hotchkis & Wiley Sm Cp Divers Val	2.22	1.81
<i>Small Value Active ETF Average</i>	<i>0.67</i>	<i>0.67</i>
<i>Small Value Mutual Fund Average</i>	<i>1.88</i>	<i>2.01</i>
Conestoga Small Cap	0.37	0.46
<i>Small Growth Active ETF Average</i>	<i>0.18</i>	<i>0.39</i>
<i>Small Growth Mutual Fund Average</i>	<i>0.70</i>	<i>1.61</i>

Current Model Asset Classes	Tax Cost Ratio - 3YR	Tax Cost Ratio - 5YR
<b>INTERNATIONAL EQUITY</b>		
Dodge & Cox International Stock	0.79	0.77
<i>Intl. Large Cap Value Active ETF Average</i>	<i>1.36</i>	<i>1.48</i>
<i>Intl. Large Cap Value Mutual Fund Average</i>	<i>1.55</i>	<i>1.61</i>
JHancock International Dynamic Gr	0.09	1.69
<i>Intl. Large Cap Growth Active ETF Average</i>	<i>0.35</i>	<i>0.50</i>
<i>Intl. Large Cap Growth Mutual Fund Average</i>	<i>0.70</i>	<i>0.93</i>
ARGA Emerging Markets Value	1.40	
GQG Partners Emerging Markets	1.22	1.01
<i>Emerging Markets Active ETF Average</i>	<i>1.03</i>	<i>1.07</i>
<i>Emerging Markets Mutual Fund Average</i>	<i>0.88</i>	<i>1.05</i>
<b>REAL ASSETS</b>		
DWS RREEF Real Assets	1.22	1.25
Cohen & Steers Instl Realty	1.38	1.33
<i>Commodities Active ETF Average</i>	<i>2.32</i>	<i>3.44</i>
<i>Commodities Mutual Fund Average</i>	<i>3.03</i>	<i>4.51</i>
<i>REITS Active ETF Average</i>	<i>1.22</i>	<i>1.81</i>
<i>REITS Mutual Fund Average</i>	<i>1.99</i>	<i>2.19</i>

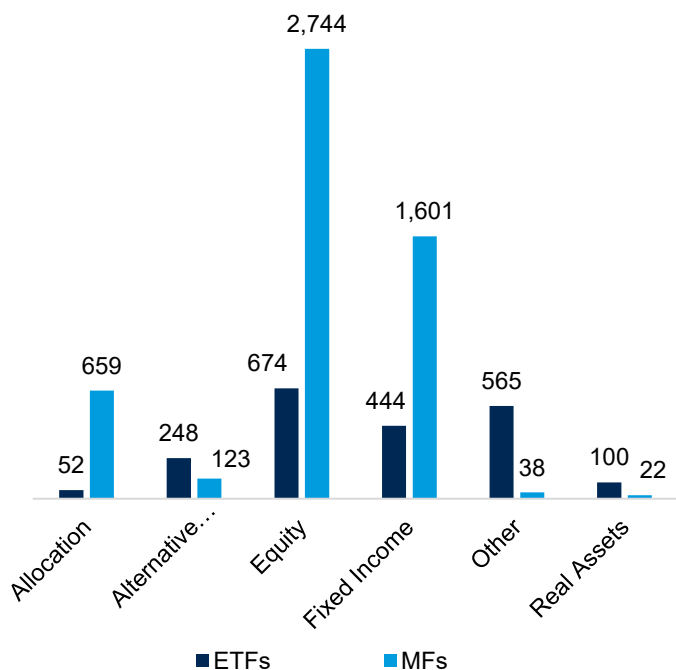
Source: Morningstar Direct. Data is as of October 31, 2025.

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# Product Universe at a Glance

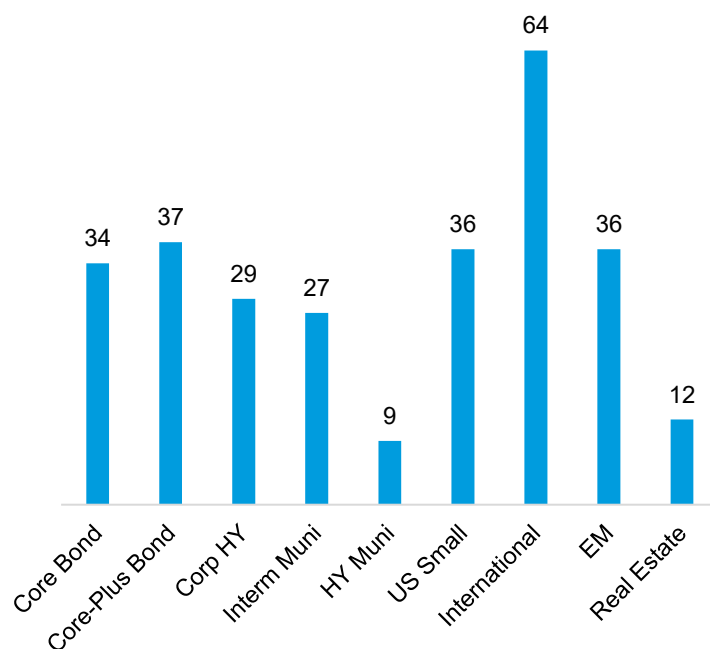
## Total Number of Products

Today, the total active ETF universe is over 2,000 funds, compared to the active mutual fund universe of over 5,000 strategies. Over 40% of available ETFs are in broad categories that we do not actively use in client portfolios.



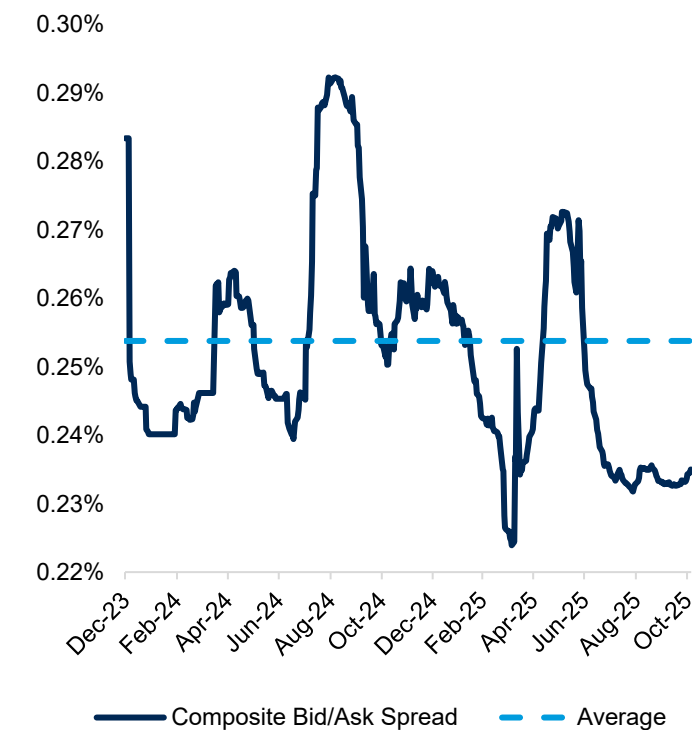
## Active ETFs Older than 12 Months

The active ETF universe is still underdeveloped in key asset classes where we favor active management. There are just over 30 options on average for each asset class. Many categories are dominated by the same providers.



## Average Bid/Ask Spread

Transaction costs add a new dynamic to portfolio management. The average bid ask spread across active ETFs is roughly 25bps since 2024. We observe trading costs fall as ETFs scale.



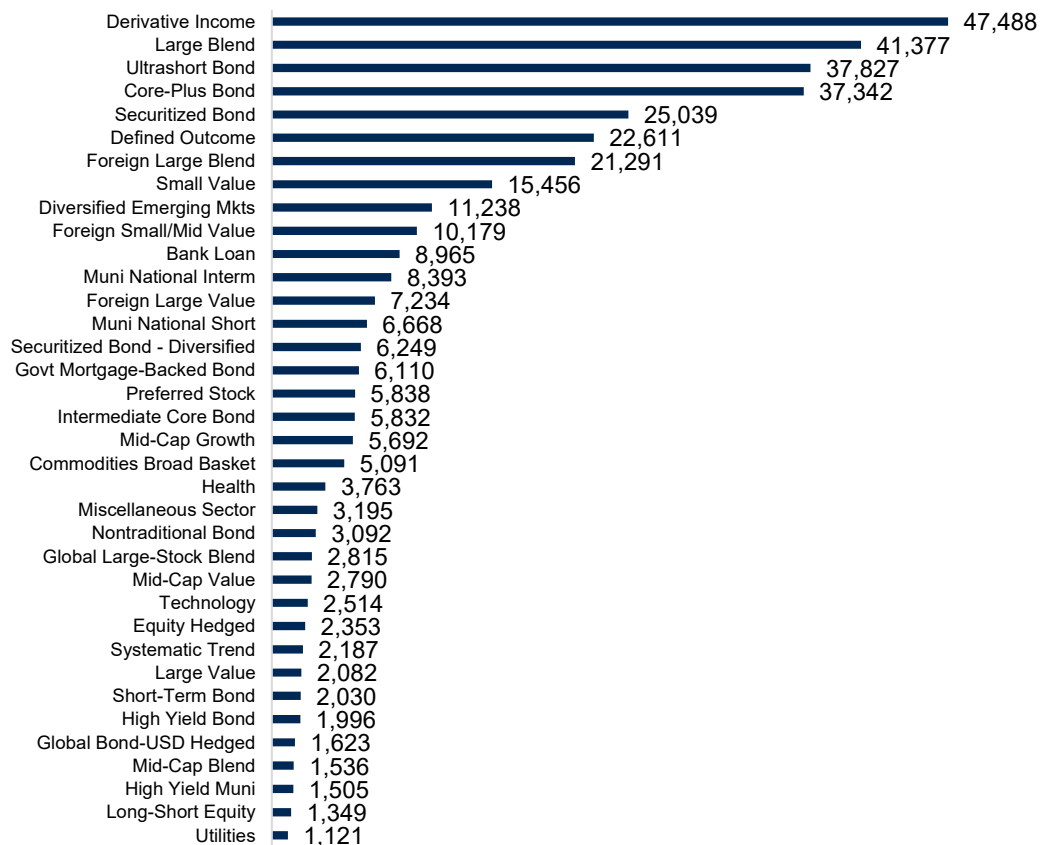
Source: Morningstar Direct, FactSet, as of October 31, 2025. Fiducient defines active ETFs as all funds that do not screen as index funds in Morningstar Direct. Active ETF composite is equal weighted for all Fiducient-defined Active ETFs in the following Morningstar categories: Core Bond, Core-Plus Bond, Corporate High Yield, National Intermediate Municipal, High Yield Municipal, US Small Value, US Small Blend, US Small Growth, Foreign Blend, Foreign Value, Foreign Growth, Diversified Emerging Markets, and US Real Estate.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Where is the Growth?

## Select 5YR Net Flow (\$mm)

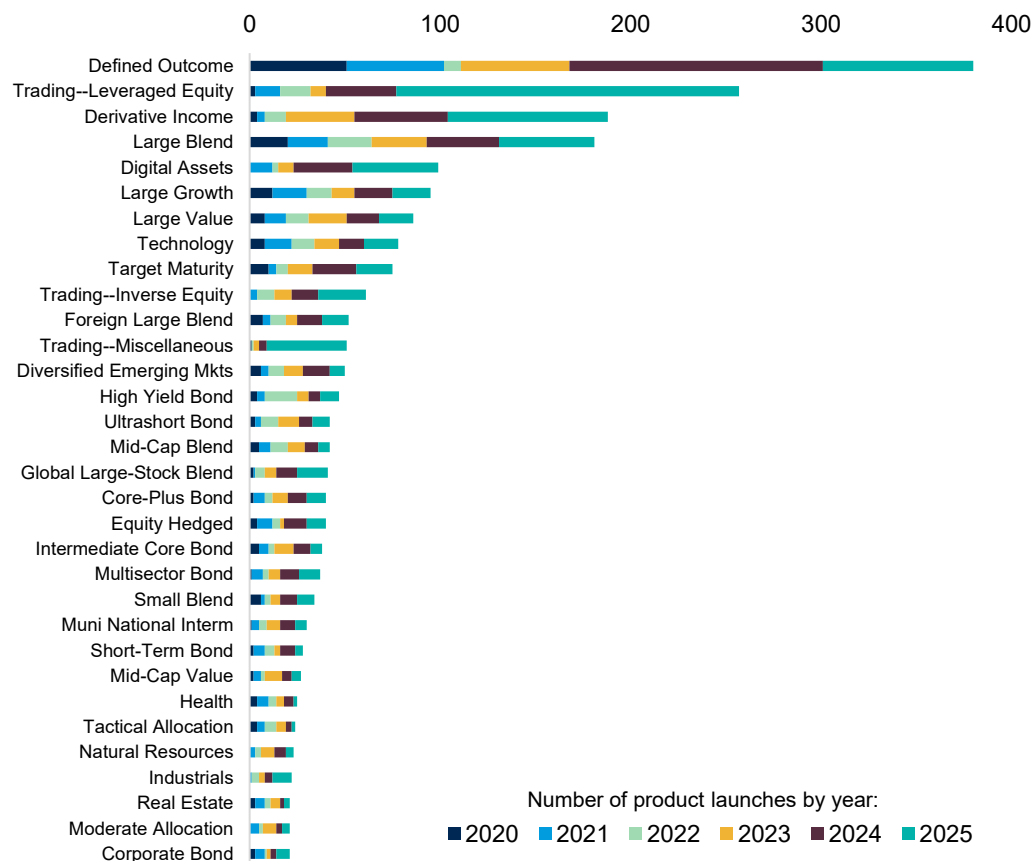
Active ETFs have grown exponentially over the past 5-years, making up over \$1.2tn in assets. We can observe that much of the flows have gone to US large cap, an asset class where we prefer passive management, and in mandates including leveraged stock, derivatives, factor tilt, buffered, cryptocurrency, etc.



Source: Morningstar as of October 31, 2025.

## Number of Product Launches

Fund launches have favored defined outcome, derivative income, US large cap, and digital assets. In 2025, fund launches for single-stock ETFs, primarily FAANGM companies, increased substantially.



See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Blackrock SIO Case Study: ETF Vehicle Limitations

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- Not all similar ETFs are the same as the recommended mutual funds

## **Blackrock SIO Mutual Fund**

- Use of swaps, futures, forward contracts, structured products are often bespoke or OTC
- Mutual funds are not daily transparent which limits vulnerability of proprietary strategies

## **iShares Flexible Income ETF**

- OTC derivatives are hard to transfer in-kind; ETFs typically stick to exchange traded derivatives or avoid heavy OTC derivative use
- Complex positions could increase use of cash baskets, potentially compromising tax benefit and shifting of burden of transaction costs
- Results in a 'spread-heavy' allocation

# EuroPac Growth Case Study: Similar Investment Process, Different Portfolios

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- Not all similar ETFs are the same as the recommended mutual funds

## **EuroPac Growth Mutual Fund**

- 11 portfolio managers (3 entities)
- Over 300 holdings
- 21% holdings in top 10

## **International Focus ETF**

- 4 portfolio managers (2 entities)
- Less than 100 holdings
- 33% holdings in top 10

# Large Waitlist Could Result in Surge of Active ETF Options

- Over 70 asset managers have pending applications for dual share class exemptive relief

<b>AB Municipal Income</b>	<b>Advisors Series Trust</b>	<b>Advisors Preferred Trust</b>	<b>Alger</b>	<b>Allspring</b>	<b>ALPS</b>
<b>AMG</b>	<b>Aristotle</b>	<b>Baillie Gifford</b>	<b>Baron</b>	<b>Blackrock</b>	<b>BNY</b>
<b>BondBloxx</b>	<b>Calamos</b>	<b>DWS</b>	<b>Columbia</b>	<b>DFA</b>	<b>DoubleLine</b>
<b>Exchange Traded Concepts</b>	<b>FM Investments</b>	<b>Fidelity</b>	<b>First Eagle</b>	<b>First Trust</b>	<b>Franklin</b>
<b>Gabelli</b>	<b>GMO</b>	<b>Goldman</b>	<b>Guinness Atkinson</b>	<b>Harbor</b>	<b>Hartford</b>
<b>Hotchkis</b>	<b>Impax</b>	<b>Innovator</b>	<b>Invesco</b>	<b>Investment Managers Select</b>	<b>Janus</b>
<b>JPM</b>	<b>Hancock</b>	<b>Lazard</b>	<b>Lord Abbett</b>	<b>Madison</b>	<b>TCW</b>
<b>Morgan Stanley</b>	<b>Mutual Fund Series Trust</b>	<b>Natixis</b>	<b>Neuberger Berman</b>	<b>New Age Alpha</b>	<b>NYL</b>
<b>North Capital</b>	<b>Northern</b>	<b>NuShares</b>	<b>Palmer Square</b>	<b>Pear Tree</b>	<b>PFS</b>
<b>PGIM</b>	<b>PIMCO</b>	<b>Principal</b>	<b>Akre</b>	<b>RMB</b>	<b>Schwab</b>
<b>Segall Bryant Hamill</b>	<b>SEI</b>	<b>Shelton</b>	<b>SPDR</b>	<b>T. Rowe</b>	<b>Thornburg</b>
<b>Thrivent</b>	<b>Tidal</b>	<b>Tortoise</b>	<b>Touchstone</b>	<b>Trust for Professional Managers</b>	<b>Tweedy Browne</b>
<b>Ultimus</b>	<b>Vanguard</b>	<b>Victory</b>	<b>Virtus</b>		

## Next Steps

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- New share class launches may create both opportunities and conflicts that will need evaluation
- Diligence of ETF capital markets capabilities and ETF infrastructure for boutique or new issuers
- Monitor asset classes where active ETFs have the most incremental tax efficiency
- Engage with recommended managers on launching an ETF vehicle
- Develop trading policies and procedures and operational best practices

# Appendix

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# ETF Vehicle Overview

## What is an ETF?

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- Most Exchange-Traded-Funds (ETFs) are registered investment vehicles under the Investment Company Act of 1940
- ETFs combine aspects of stocks and mutual funds

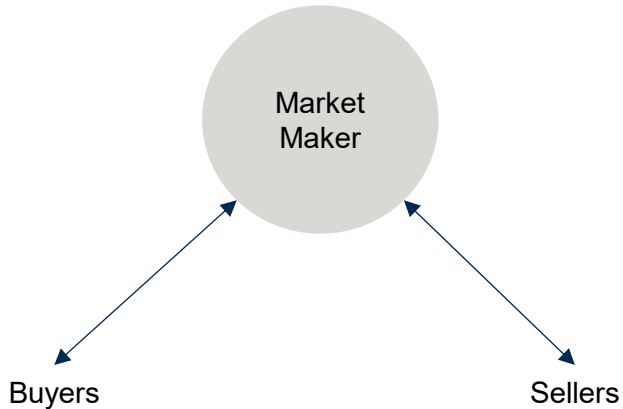


# Secondary Market Transactions

## Secondary Market Concept

In a secondary market transaction, investors buy and sell shares in the ETF directly with the Market Maker on an exchange.

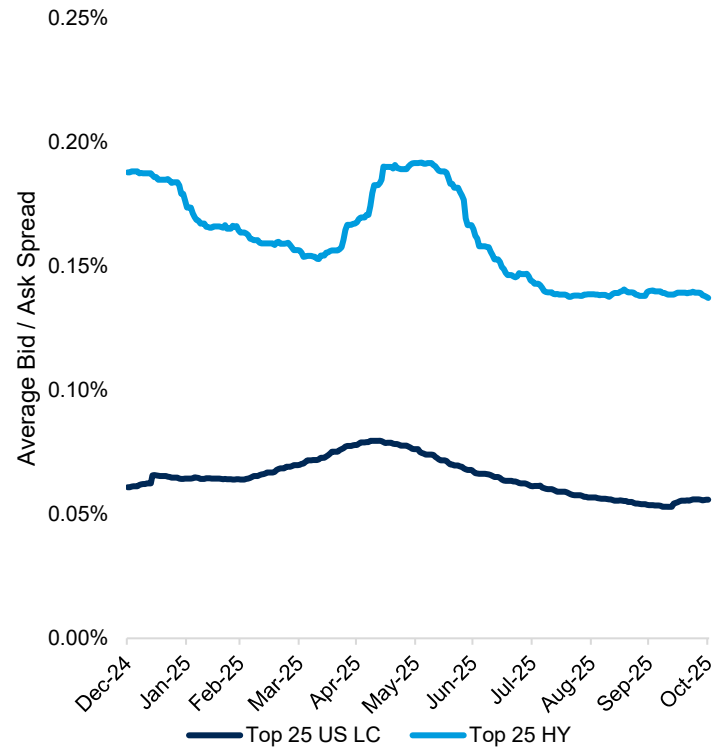
Market Makers quote bid-ask spreads on shares in the ETF and investors transact directly in the ETF shares.



## Liquidity Comparison

Liquidity is critical – very important to assess the liquidity of an ETF.

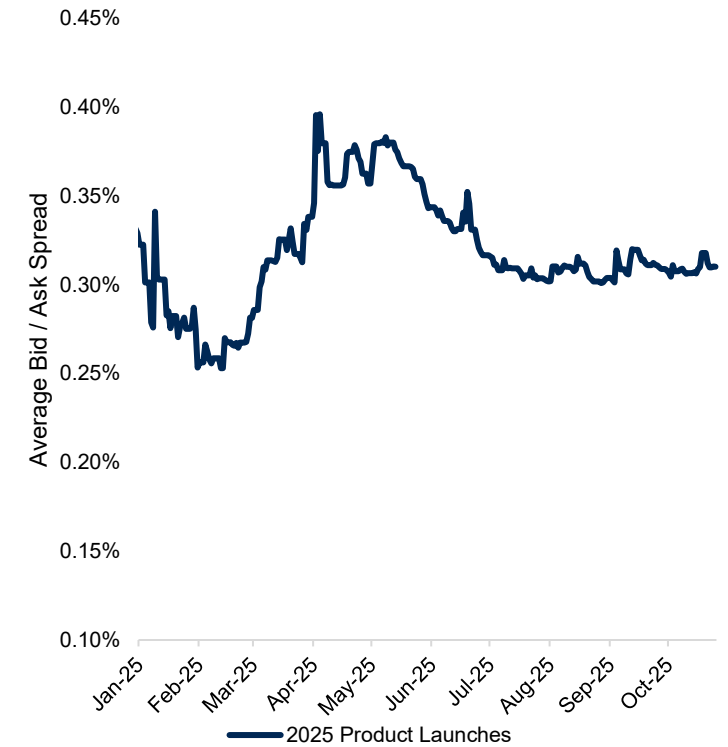
All else equal, the less liquid the underlying securities in the ETF, the wider the bid-ask spreads for shares in the ETF in the secondary market.



## New Launches

Liquidity in the secondary market tends to improve as an ETF scales and its assets increase.

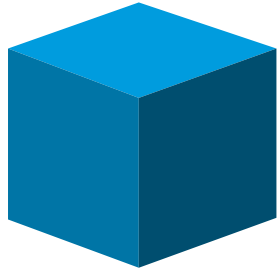
In previous times of crisis, total transaction activity in large, liquid ETFs shifted towards the secondary market.



Source: FactSet, Morningstar as of October 31, 2025.

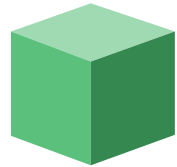
See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Liquidity – Evaluation Framework



## Overall Liquidity

Liquidity cannot just be assessed by looking at average daily share volume and average daily U.S. Dollar volume – directionally this gives a high-level idea of liquidity, but it is critical to look under the hood



### Volume

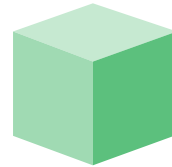
How much of the ETF shares trade

#### Share Volume

Minimum: 100,000/day  
Better: 250,000/day

#### Dollar Volume

Minimum: \$5 million/day  
Better: \$20 million/day



### Bid / Ask

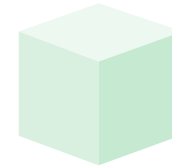
Cost to transact

#### ETF Spread

Minimum: 0.10 – 0.20%  
Best: 0.05%

#### Underlying Spread

Issuers should have process for monitoring and communicating with market makers



### Implied Liquidity

Tradability of the least liquid underlying security

#### Underlying Securities

Even if ETF volume looks low, high daily dollar volume of the underlying securities can facilitate ETF share creation

## Other Warnings

ETFs that have a large or volatile premium/discount could signal illiquidity

Issuers can halt creations in an ETF – this is always a bad sign!

The ETF vehicle does not provide any liquidity benefit for the underlying securities – be skeptical of anybody who tells you otherwise

# Implied Liquidity Concept

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- What is Implied Liquidity?
  - The ability to create shares in the ETF without exceeding a volume threshold for trading in the least liquid underlying security in the ETF
  - Answers the question of how many shares of the ETF you can create without moving price in the least liquid underlying security

## Least Liquid Underlying Stock in the ETF

Underlying (Stock XYZ Price)	\$12.41
Stock XYZ Average Daily Trading Volume	15,000
Stock XYZ Volume Threshold	20%
Stock XYZ Threshold - Maximum Amount of Shares to Trade Daily	<b>3,000</b>

## ETF

Weight of Stock XYZ in the ETF	0.20%
ETF Creation Unit Size	25,000
ETF NAV	\$51.25
ETF Creation Unit Notional	<b>\$1,281,250</b>

## Implied Liquidity

Stock XYZ Weight * ETF Creational Unit Notional Amount	\$2,562
Shares to buy per Creation Unit	206.49
Implied Liquidity - # of Creation Units	14.53
Implied Liquidity - # of ETF Shares	<b>363,220</b>

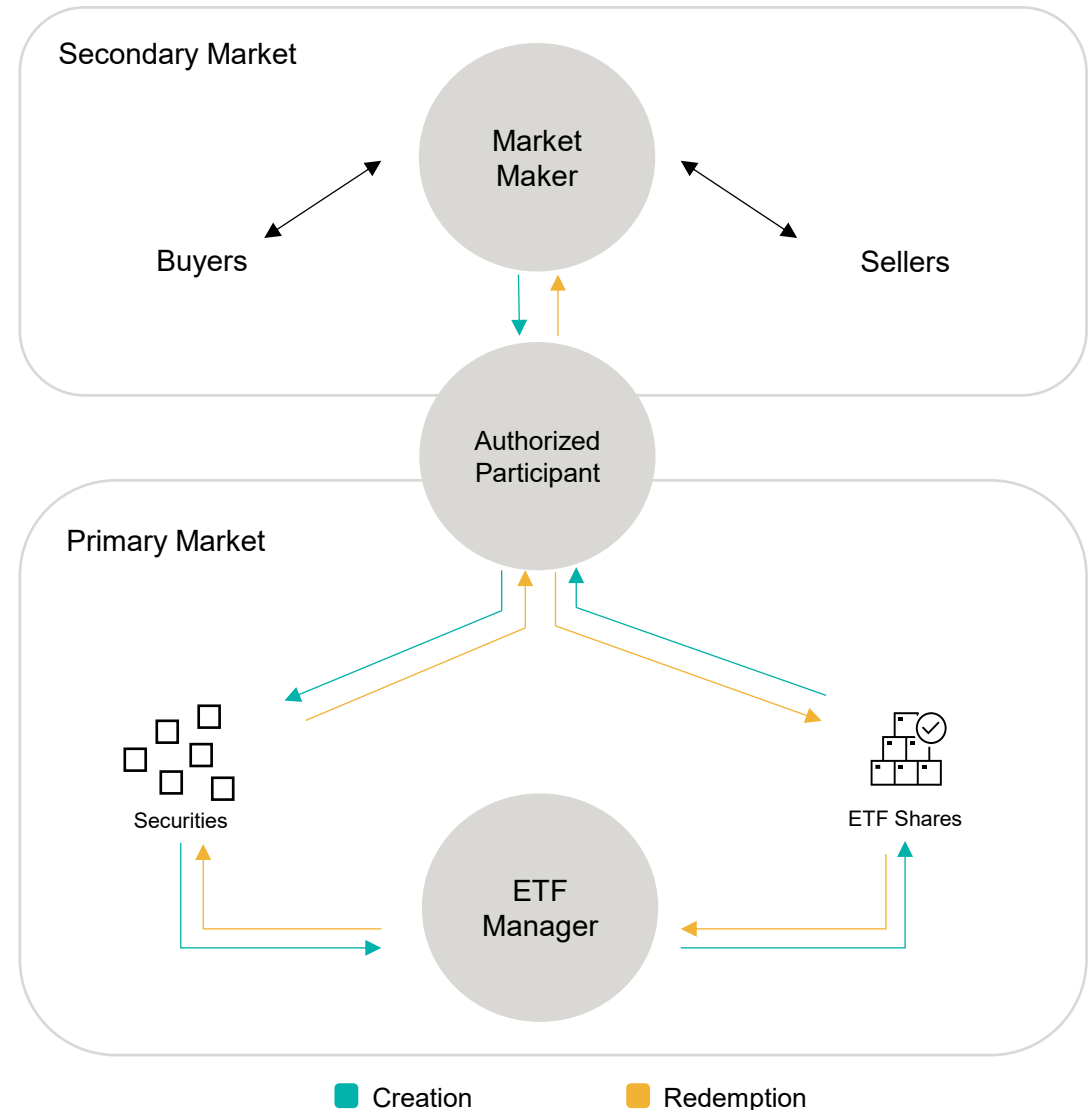
# How ETFs Work – Primary Market Transactions

**Investor wants to purchase shares in an ETF; investor goes to market maker (“MM”) who quotes bid-ask spreads on the ETF Shares**

- If the MM does not have shares of the ETF in their inventory, they have two options
- 1) Purchase shares of ETF in Secondary market; or 2) Create shares in the ETF
- **Creation Process:**
- MM arranges to create shares in the ETF; they contact an authorized participant (“AP”), and go out and acquire the underlying securities in the “Create” basket; through the AP, the MM provides the securities to the ETF issuer and the ETF issuer provides the market maker with shares of the ETF
- Creation Unit notional amount: Nav of the ETF \* number of shares in the creation unit size
- Market makers prefer smaller creation unit sizes, as it is easier for them to hedge their exposures; portfolio managers, all else equal, typically prefer larger basket sizes
- Throughout the life on an ETF, the amount of total transaction activity accounted for by primary market transactions tends to decline as a fund scales

**Investor wants to sell shares in an ETF; investor goes to market maker who quotes big-ask spreads on the ETF shares**

- If market maker does not want to receive shares in the ETF and prefers to receive the underlying securities, they can redeem shares in the ETF
- **Redemption Process:**
- MM arrange to redeem shares in the ETF; the MM contacts an AP and takes the underlying shares in the ETF provided by the investor and provides them through the AP to the issuer, in exchange for the underlying securities in the “Redeem” basket
- Think of the authorized participant as an entity that instantaneously delivers shares or securities to both the market maker and the issuer; an AP can also be a market maker for a given ETF, this varies a bit by AP.



# How Arbitrage Mechanism Works

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- Typically, the arbitrage mechanism prevents the ETF from trading at a premium/discount outside of the arbitrage band

## **ETF is Trading at Premium to NAV**

- Market makers will create shares in the ETF and sell them for a profit
- Market makers will buy up the underlying securities in the create basket and deliver these to the issuer and will exchange them for shares in the underlying ETF, which they will then sell and pocket the difference in an arbitrage transaction
- This pushes prices of the underlying securities up as the market maker buys the underlying securities and the price of the ETF shares down as the market maker sells the ETF shares and works to arbitrage out the excess premium (relative to NAV) in the ETF shares

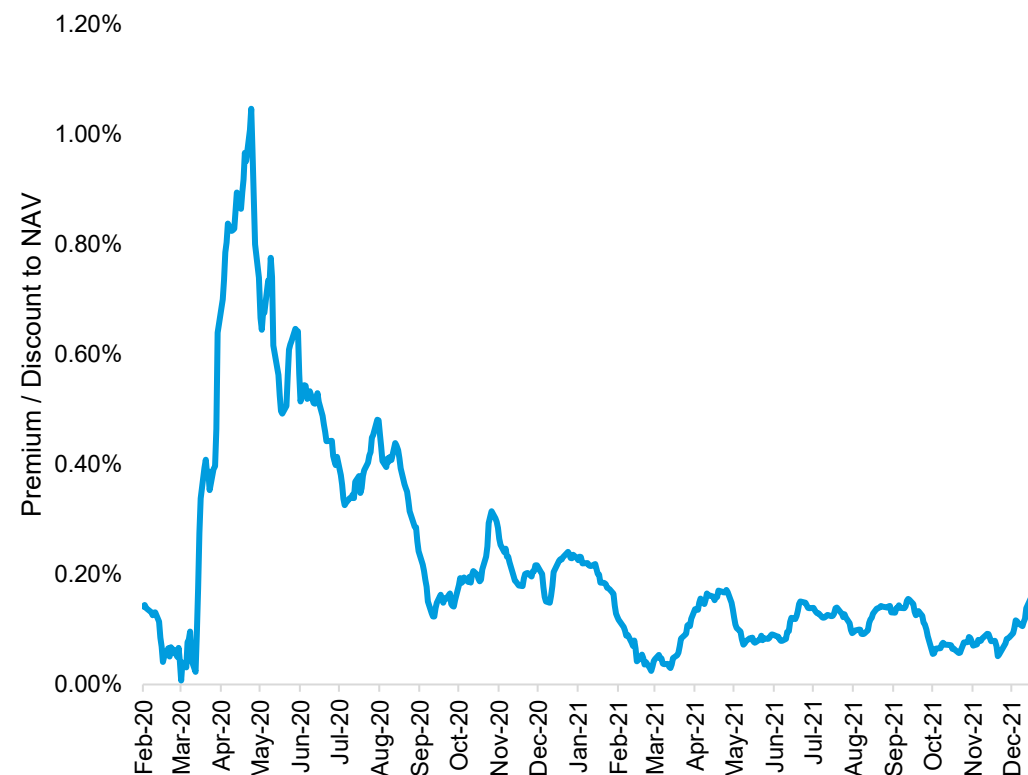
## **ETF is Trading at Discount to NAV**

- Market makers will redeem shares in the ETF and sell the underlying securities for a profit
- Market makers will take shares of the ETF and provide them to the issuer for a basket of the underlying securities; they will then sell the underlying securities in the market and pocket the difference in an arbitrage transaction
- This pushes up the price of the ETF shares and pushes down the prices of the underlying securities and arbitrages out some of the excess discount (relative to NAV) in the ETF shares

# Arbitrage Mechanism Example

- When arbitrage cannot be executed during market stress the premium or discount can widen significantly, where the ETF can become a reverse price discovery mechanism for the underlying securities
- High-yield corporate bonds became extremely illiquid in March 2020
- ETF shares were easier to trade than the underlying bonds, so demand for HYG surged as investors sought exposure without transacting in the cash bond market. This pushed the ETF's market price above its NAV
- Market Makers faced difficulty sourcing bonds to create new ETF shares because of wide bid-ask spreads and poor dealer inventories. This limited arbitrage activity, allowing premiums to persist

## iShares iBoxx High Yield (HYG)



Source: FactSet, as of October 31, 2025. Premium / Discount to NAV calculated as a 30-day moving average.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

## Heartbeat Trades

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- Essentially a “fake” (not driven by demand) create and redeem transaction, that allows the ETF to get rid of appreciated securities by offloading them on the market maker
- In the redeem transaction, the issuer fills the redeem basket with appreciated securities, which the market maker takes off the issuers hands in exchange for providing shares in the ETF
- The market maker does not care if the underlying securities have embedded gains as all trading activity gets treated as income for the market maker

## Key Risks

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- If all-cash or too much cash-in-lieu settlement, tax and transaction cost benefits can be reduced or eliminated
  - Particularly relevant in markets with odd-lots, or international markets with regulatory barriers to in-kind settlement (Brazil, China A-Shares, India, Korea, Taiwan)
- Poor track record of historical product launch and scale
- Not enough APs or poorly underwritten APs; few market makers actively quoting
- Like mutual funds, would avoid owning illiquid assets
- Counter party risk with APs
- Capacity constrained asset classes – ETFs cannot close to new investors

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# Product Universe

## Key Considerations

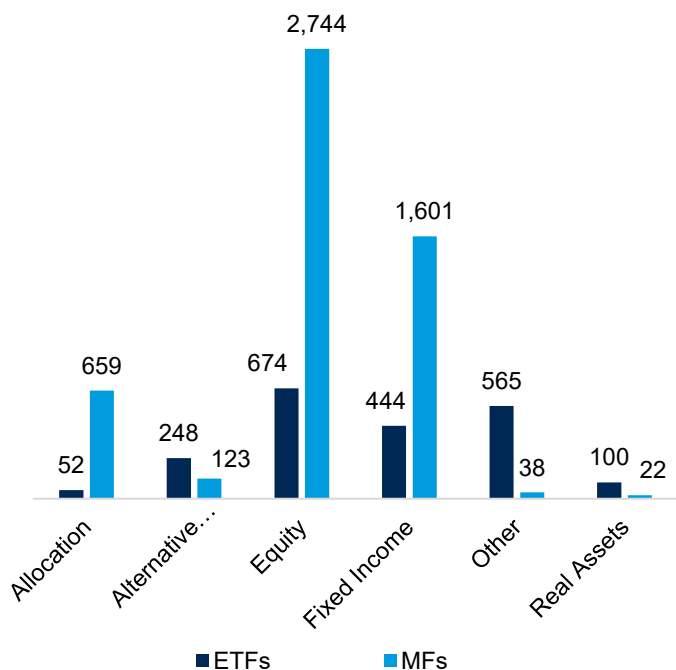
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- While we view the vehicle positively, the existing universe of core asset classes where we favor active management is still small
- Most new active ETF launches are outside of core asset classes
- Investment track record can vary greatly even for products “similar” to the mutual fund
- Tradability takes time as new ETFs scale
- Transaction costs and intra-day pricing raises operational considerations

# Product Universe at a Glance

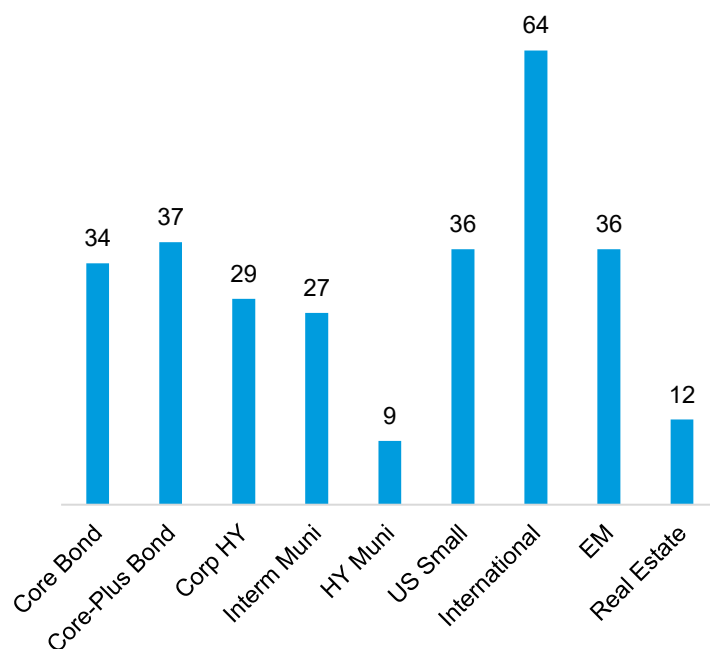
## Total Number of Products

Today, the total active ETF universe is over 2,000 funds, compared to the active mutual fund universe of over 5,000 strategies. Over 40% of available ETFs are in broad categories that we do not actively use in client portfolios.



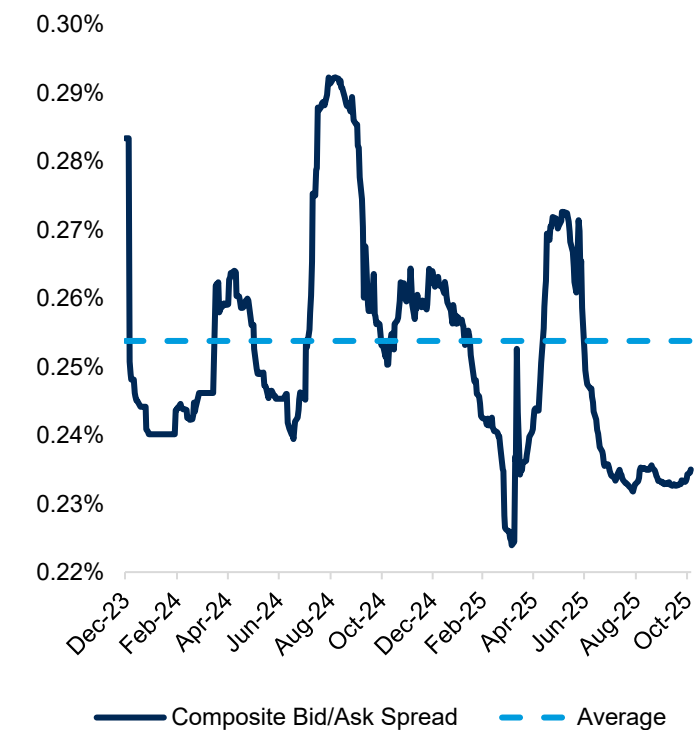
## Active ETFs Older than 12 Months

The active ETF universe is still underdeveloped in key asset classes where we favor active management. There are just over 30 options on average for each asset class. Many categories are dominated by the same providers.



## Average Bid/Ask Spread

Transaction costs add a new dynamic to portfolio management. The average bid ask spread across active ETFs is roughly 25bps since 2024. We observe trading costs fall as ETFs scale.



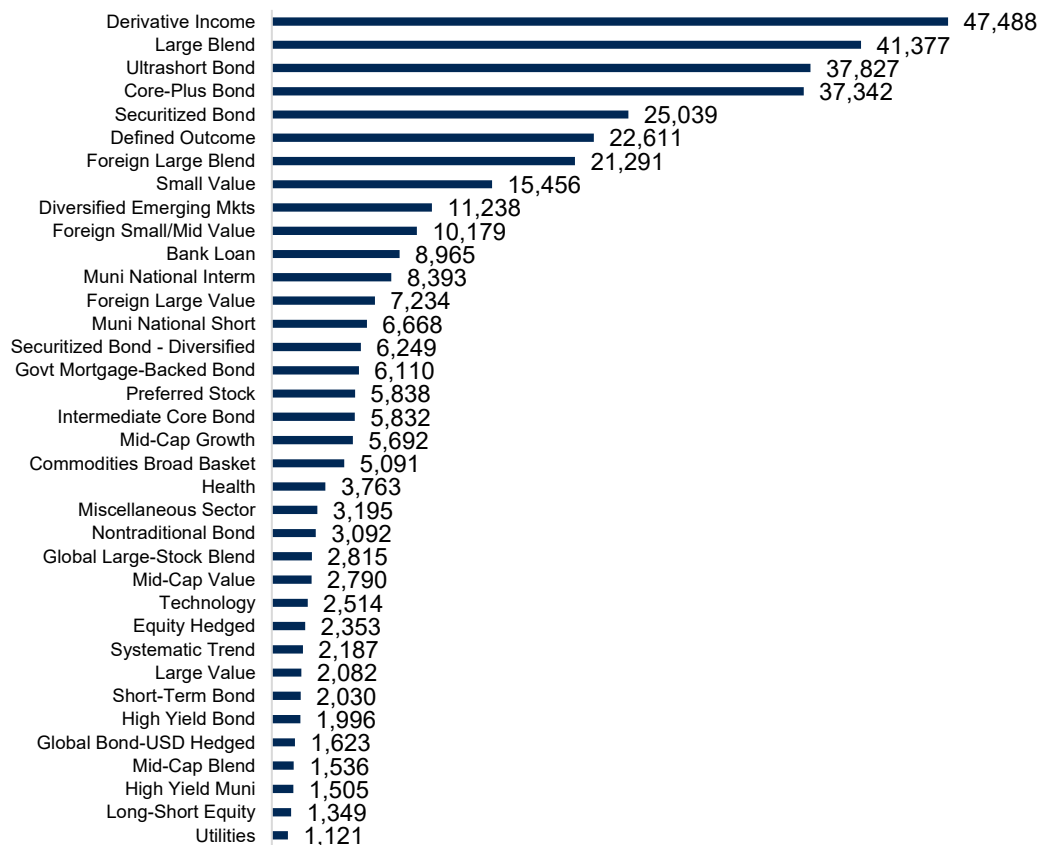
Source: Morningstar Direct, FactSet, as of October 31, 2025. Fiducient defines active ETFs as all funds that do not screen as index funds in Morningstar Direct. Active ETF composite is equal weighted for all Fiducient-defined Active ETFs in the following Morningstar categories: Core Bond, Core-Plus Bond, Corporate High Yield, National Intermediate Municipal, High Yield Municipal, US Small Value, US Small Blend, US Small Growth, Foreign Blend, Foreign Value, Foreign Growth, Diversified Emerging Markets, and US Real Estate.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Where is the Growth?

## Select 5YR Net Flow (\$mm)

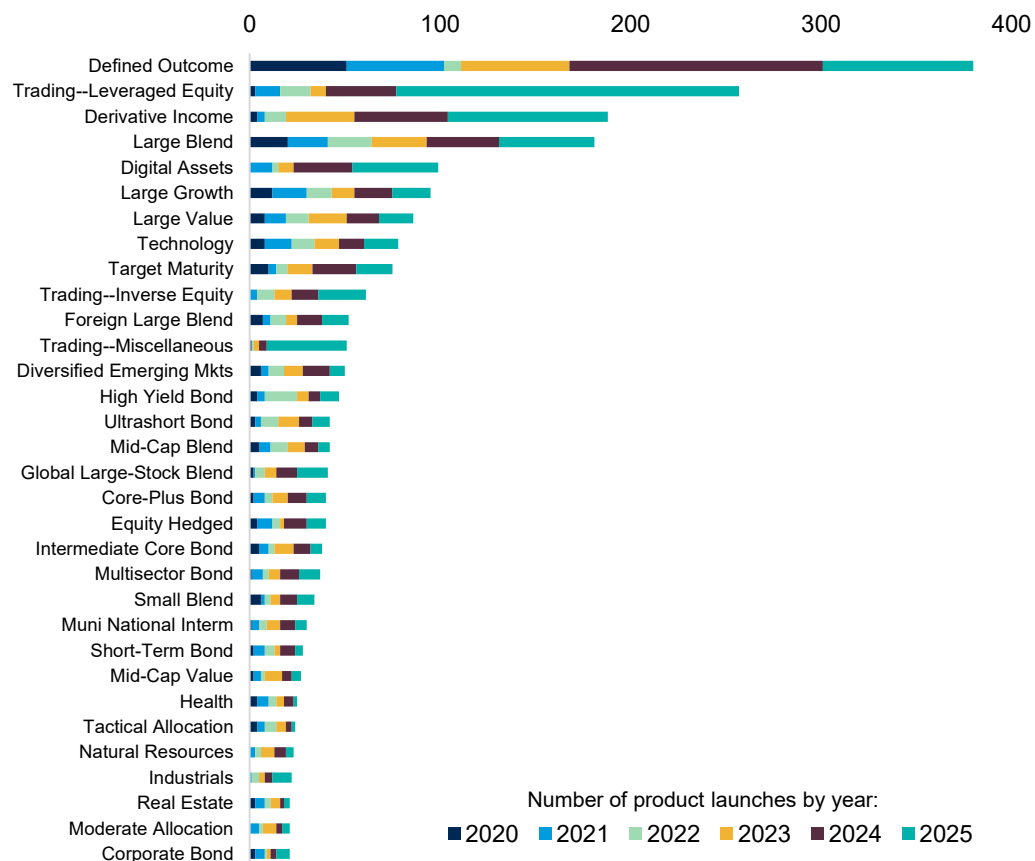
Active ETFs have grown exponentially over the past 5-years, making up over \$1.2tn in assets. We can observe that much of the flows have gone to US large cap, an asset class where we prefer passive management, and in mandates including leveraged stock, derivatives, factor tilt, buffered, cryptocurrency, etc.



Source: Morningstar as of October 31, 2025.

## Number of Product Launches

Fund launches have favored defined outcome, derivative income, US large cap, and digital assets. In 2025, fund launches for single-stock ETFs, primarily FAANGM companies, increased substantially.

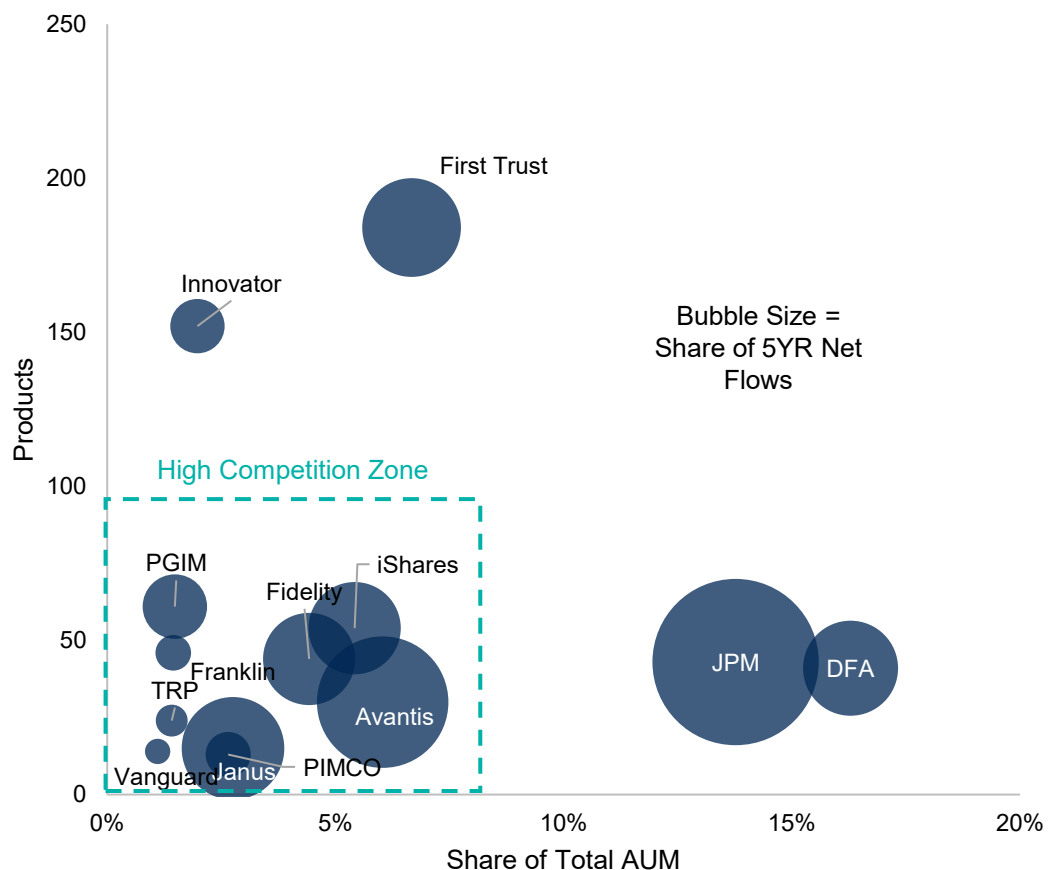


See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Growth is Concentrated

## Big Firms Dominate Market Share

Managers continue to launch product to attempt to capture market share, with competition heating up between many large asset managers. Today, the offerings remain concentrated. Time will tell if product breadth converts to market share, in addition to mutual fund conversions (such as DFA).



Source: Morningstar as of October 31, 2025.

## Limited Providers by Firm and Product

The top 25 ETF managers make up over 80% of total assets, and the top 25 products make up 33%. Many of the top products have over 30% of their category AUM on average.

Firm	AUM	Share of Total Active AUM	Active ETF	AUM	Share of Total Active AUM	Share of Category Active AUM
DFA	230,234	16.3%	JPMorgan Equity Premium Income	40,449	2.9%	31.9%
JPMorgan	194,628	13.8%	Dimensional US Core Equity 2	38,736	2.7%	19.6%
Capital Group	97,617	6.9%	JPMorgan Ultra-Short Income	34,641	2.5%	31.6%
First Trust	94,274	6.7%	JPMorgan Nasdaq Equity Premium	31,661	2.2%	25.0%
Avantis	85,316	6.0%	iShares U.S. Equity Fac Rotation Act	28,803	2.0%	14.6%
iShares	76,639	5.4%	Janus Henderson AAA CLO	25,174	1.8%	68.6%
Fidelity	62,549	4.4%	Capital Group Dividend Value	23,860	1.7%	31.4%
Janus	38,962	2.8%	Fidelity Total Bond	22,319	1.6%	31.5%
PIMCO	37,462	2.6%	Avantis US Small Cap Value	18,351	1.3%	46.5%
Innovator	27,952	2.0%	Dimensional US Equity Market	17,822	1.3%	9.0%
PGIM	20,955	1.5%	Capital Group Growth	17,683	1.3%	27.3%
Franklin	20,458	1.4%	Avantis Emerging Markets Equity	14,411	1.0%	39.5%
T. Rowe Price	19,980	1.4%	PIMCO Enhanced Short Maturity	14,282	1.0%	13.0%
Vanguard	15,620	1.1%	Dimensional International Value	14,031	1.0%	82.5%
SPDR State Street	15,571	1.1%	iShares Flexible Income Active	13,744	1.0%	36.1%
YieldMax	15,207	1.1%	Avantis International Small Cap Val	13,252	0.9%	73.9%
ARK	14,906	1.1%	PGIM Ultra Short Bond	13,000	0.9%	11.8%
Neos	14,740	1.0%	Dimensional US Marketwide Value	12,187	0.9%	16.0%
Invesco	13,938	1.0%	Dimensional International Cr Eq Mkt	11,874	0.8%	16.2%
Direxion	12,509	0.9%	Dimensional US Small Cap	11,302	0.8%	57.8%
Alpha Architect	10,845	0.8%	Dimensional US Targeted Value	11,291	0.8%	28.6%
AllianceBernstein	10,475	0.7%	Dimensional International Core Eq 2	10,924	0.8%	14.9%
Akre	10,260	0.7%	Avantis International Equity	10,266	0.7%	14.0%
Granithshares	10,085	0.7%	Akre Focus	10,260	0.7%	15.9%
Roundhill	8,979	0.6%	Avantis US Equity	9,959	0.7%	5.0%
<b>Grand Total</b>	<b>1,160,160</b>	<b>82.1%</b>	<b>Grand Total</b>	<b>470,282</b>	<b>33.3%</b>	

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

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# Active ETFs 2.0

## Key Considerations

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- There are over 70 managers awaiting SEC approval for launching ETF share classes of active mutual funds
- The amount of active ETFs available is expected to increase substantially as a result
- The commingling of share classes creates potential conflicts that will need deeper diligence

# Dual Share Class Exemptive Relief

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## Current SEC Position

- Historically, ETFs and mutual funds had to be separate vehicles because of structural and tax differences. Vanguard was the only firm allowed to offer ETF share classes of passive mutual funds under a patent and exemptive relief dating back to 2000. That patent expired in 2023, triggering many new applications for similar relief
- The SEC is expected to give exemptive relief to mutual funds to add ETF share classes. Dimensional Fund Advisors recently received approval, and dozens of other managers have filed similar requests

## Implication

- Managers want to use exemptive relief because it may attract more taxable investors to established products
- Most of the current active ETFs are 'similar' to legacy mutual funds. Launching a cloned strategy risks cannibalizing product and creates operational complexity
- The SEC is concerned that ETF investors may subsidize tax efficiency for mutual fund investors
- This is because mutual fund investors benefit from ETF redemptions in-kind. ETF investors effectively 'pay' for this through bid/ask spreads

# Large Waitlist Could Result in Surge of Active ETF Options

- Over 70 asset managers have pending applications for dual share class exemptive relief

<b>AB Municipal Income</b>	<b>Advisors Series Trust</b>	<b>Advisors Preferred Trust</b>	<b>Alger</b>	<b>Allspring</b>	<b>ALPS</b>
<b>AMG</b>	<b>Aristotle</b>	<b>Baillie Gifford</b>	<b>Baron</b>	<b>Blackrock</b>	<b>BNY</b>
<b>BondBloxx</b>	<b>Calamos</b>	<b>DWS</b>	<b>Columbia</b>	<b>DFA</b>	<b>DoubleLine</b>
<b>Exchange Traded Concepts</b>	<b>FM Investments</b>	<b>Fidelity</b>	<b>First Eagle</b>	<b>First Trust</b>	<b>Franklin</b>
<b>Gabelli</b>	<b>GMO</b>	<b>Goldman</b>	<b>Guinness Atkinson</b>	<b>Harbor</b>	<b>Hartford</b>
<b>Hotchkis</b>	<b>Impax</b>	<b>Innovator</b>	<b>Invesco</b>	<b>Investment Managers Select</b>	<b>Janus</b>
<b>JPM</b>	<b>Hancock</b>	<b>Lazard</b>	<b>Lord Abbett</b>	<b>Madison</b>	<b>TCW</b>
<b>Morgan Stanley</b>	<b>Mutual Fund Series Trust</b>	<b>Natixis</b>	<b>Neuberger Berman</b>	<b>New Age Alpha</b>	<b>NYL</b>
<b>North Capital</b>	<b>Northern</b>	<b>NuShares</b>	<b>Palmer Square</b>	<b>Pear Tree</b>	<b>PFS</b>
<b>PGIM</b>	<b>PIMCO</b>	<b>Principal</b>	<b>Akre</b>	<b>RMB</b>	<b>Schwab</b>
<b>Segall Bryant Hamill</b>	<b>SEI</b>	<b>Shelton</b>	<b>SPDR</b>	<b>T. Rowe</b>	<b>Thornburg</b>
<b>Thrivent</b>	<b>Tidal</b>	<b>Tortoise</b>	<b>Touchstone</b>	<b>Trust for Professional Managers</b>	<b>Tweedy Browne</b>
<b>Ultimus</b>	<b>Vanguard</b>	<b>Victory</b>	<b>Virtus</b>		

## Potential Conflicts From Dual Share Classes

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- Impact of cash flows and costs associated with portfolio transactions, cash levels, capital gains, and other cross-subsidization
- Dividend reinvestment may not be supported for ETF class, or may take longer and may leave investors 'out of the market' for the additional time period
- How capital markets teams, infrastructure, operational, and compliance costs are shared across portfolios
- Dual share class vehicles will have costs associated with updated compliance regime, additional board oversight ("best-interests monitoring"), and regulatory review policy
- Strategy capacity – you cannot close an ETF to new investors

## Takeaways

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- Mutual funds that offer ETF share classes will need diligence on the potential conflicts of share classes
  - This impacts ALL clients
- As share classes become available diligence will focus on relative asset levels, portfolio construction changes, use of custom in-kind baskets, capacity management, and other problem areas
- The 'lower fee' of Active ETFs should be compared to the institutional share classes we have waivers for

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# Diligence Summary

## Key Takeaways

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- Capital markets capabilities are critical for issuers
- We believe active ETFs require some specialized capabilities relative to passive ETFs, including capability to construct and utilize custom in-kind baskets, infrastructure to monitor secondary market activity and communicate with and incorporate market maker feedback
- Relationships with APs and market makers, process for diligence and selecting a lead market maker and APs
- Flexibility of settlement windows for ETF shares and cash-in-lieu of create/redeem baskets
- Enhanced support for market makers
- Product development strategy requires understanding of distribution (new strategies vs. clones, past success in scaling strategies)

## Scope of Work

- Developed ETF RFI that focuses on capital markets resources and processes. Collected for over 10 strategies that are similar to recommended mutual funds
- Conducted 3 onsite meetings with ETF capital markets teams at Capital Group, First Trust, and Invesco
- Developed FactSet template to quickly pull relevant ETF data for evaluation

Firm	Type	Meetings	Notes
Capital Group	Manager	6	Favorable view of leadership, team, infrastructure. Enhanced Liquidity Program is a differentiator. ETF launches have proven to scale.
DFA	Manager	2	Favorable view of team and infrastructure. Electronic system for custom in-kind baskets is a differentiator.
Invesco	Manager	2	Capabilities seemed more geared towards passive ETFs.
JPM	Manager	2	Strong capital markets capabilities, focus on risk management and monitoring liquidity.
BondBloxx	Manager	1	Highly experienced team, lots of tactical product, would probably avoid the “private credit” ETF.
Jane Street	Market Maker	1	Widely used and regarded by issuers as a top market maker, especially in fixed income and international equities.
PIMCO	Manager	1	Strong capital markets team/infrastructure.
First Trust	Manager	2	Experienced team, would like to see more capability around custom basket creation. Tons of product that have not scaled.
Vanguard	Manager	1	Strong capital markets team/infrastructure.

# Blackrock SIO Case Study: ETF Vehicle Limitations

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- Not all similar ETFs are the same as the recommended mutual funds

## **Blackrock SIO Mutual Fund**

- Use of swaps, futures, forward contracts, structured products are often bespoke or OTC
- Mutual funds are not daily transparent which limits vulnerability of proprietary strategies

## **iShares Flexible Income ETF**

- OTC derivatives are hard to transfer in-kind; ETFs typically stick to exchange traded derivatives or avoid heavy OTC derivative use
- Complex positions could increase use of cash baskets, potentially compromising tax benefit and shifting of burden of transaction costs
- Results in a 'spread-heavy' allocation

# EuroPac Growth Case Study: Similar Investment Process, Different Portfolios

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- Not all similar ETFs are the same as the recommended mutual funds

## **EuroPac Growth Mutual Fund**

- 11 portfolio managers (3 entities)
- Over 300 holdings
- 21% holdings in top 10

## **International Focus ETF**

- 4 portfolio managers (2 entities)
- Less than 100 holdings
- 33% holdings in top 10

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# Tax Cost Analysis

## Tax Benefit Analysis Takeaways

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- Historically tax benefit of ETF wrapper relative to mutual fund exists across most asset classes
- Fixed income and emerging markets equity have had little historical tax benefit, if any
- The largest historical tax benefit has been in US equity, an area that broadly favors passive management
- Our current model has overall competitive tax cost ratios to the average active ETF
- Model managers that have high tax cost have demonstrated significant alpha and/or are in asset classes where active ETFs have not had a historical tax benefit relative to mutual funds

# Vehicle Tax Benefit Analysis

Asset Class Category	Average Active Mutual Fund minus Active ETF Tax Cost Ratio	
	3YR	5YR
<b>FIXED INCOME / CREDIT</b>	<b>(0.14)</b>	<b>(0.05)</b>
Muni National Interm	0.00	0.02
High Yield Muni	(0.01)	0.01
Intermediate Core Bond	(0.22)	0.15
Intermediate Core-Plus Bond	(0.09)	0.06
High Yield Bond	(0.15)	(0.07)
Bank Loan	(0.08)	0.01
Global Bond USD-Hedged	(0.36)	(0.25)
Emerging Markets Bond	(0.22)	(0.29)
<b>US EQUITY</b>	<b>0.86</b>	<b>1.00</b>
Large Blend	1.08	0.97
Large Growth	1.01	0.88
Large Value	1.17	0.97
Mid-Cap Blend	0.76	0.76
Mid-Cap Growth	0.53	1.12
Mid-Cap Value	0.68	1.08
Small Blend	0.81	0.70
Small Growth	0.52	1.22
Small Value	1.21	1.34

Asset Class Category	Average Active Mutual Fund minus Active ETF Tax Cost Ratio	
	3YR	5YR
<b>INTERNATIONAL EQUITY</b>	<b>0.39</b>	<b>0.48</b>
Global Large-Stock Blend	0.70	0.73
Global Large-Stock Growth	0.42	0.60
Global Large-Stock Value	1.13	1.27
Foreign Large Blend	0.08	0.21
Foreign Large Growth	0.35	0.43
Foreign Large Value	0.19	0.13
Diversified Emerging Mkts	(0.14)	(0.02)
<b>REAL ASSETS</b>	<b>0.75</b>	<b>0.73</b>
Real Estate	0.78	0.38
Commodities Broad Basket	0.71	1.08

Source: Morningstar Direct. Data is as of October 31, 2025.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Current Model Tax Benefit Analysis

Current Model Asset Classes	Tax Cost Ratio - 3YR	Tax Cost Ratio - 5YR
<b>FIXED INCOME / CREDIT</b>		
Baird Strategic Municipal Bond	0.00	0.10
Vanguard Interm-Term Tx-Ex	0.00	0.01
<i>Intermediate Muni Active ETF Average</i>	<i>0.00</i>	<i>0.01</i>
<i>Intermediate Muni Mutual Fund Average</i>	<i>0.01</i>	<i>0.02</i>
NYLI MacKay High Yield Muni Bond	0.00	0.00
<i>High Yield Muni Active ETF Average</i>	<i>0.01</i>	<i>0.03</i>
<i>High Yield Muni Mutual Fund Average</i>	<i>0.01</i>	<i>0.04</i>
BlackRock Strategic Income Opps	1.92	1.65
<i>Core-Plus Bond Active ETF Average</i>	<i>1.78</i>	<i>1.52</i>
<i>Core-Plus Bond Mutual Fund Average</i>	<i>1.69</i>	<i>1.58</i>
<b>US EQUITY</b>		
Hotchkis & Wiley Sm Cp Divers Val	2.22	1.81
<i>Small Value Active ETF Average</i>	<i>0.67</i>	<i>0.67</i>
<i>Small Value Mutual Fund Average</i>	<i>1.88</i>	<i>2.01</i>
Conestoga Small Cap	0.37	0.46
<i>Small Growth Active ETF Average</i>	<i>0.18</i>	<i>0.39</i>
<i>Small Growth Mutual Fund Average</i>	<i>0.70</i>	<i>1.61</i>

Current Model Asset Classes	Tax Cost Ratio - 3YR	Tax Cost Ratio - 5YR
<b>INTERNATIONAL EQUITY</b>		
Dodge & Cox International Stock	0.79	0.77
<i>Intl. Large Cap Value Active ETF Average</i>	<i>1.36</i>	<i>1.48</i>
<i>Intl. Large Cap Value Mutual Fund Average</i>	<i>1.55</i>	<i>1.61</i>
JHancock International Dynamic Gr	0.09	1.69
<i>Intl. Large Cap Growth Active ETF Average</i>	<i>0.35</i>	<i>0.50</i>
<i>Intl. Large Cap Growth Mutual Fund Average</i>	<i>0.70</i>	<i>0.93</i>
ARGA Emerging Markets Value	1.40	
GQG Partners Emerging Markets	1.22	1.01
<i>Emerging Markets Active ETF Average</i>	<i>1.03</i>	<i>1.07</i>
<i>Emerging Markets Mutual Fund Average</i>	<i>0.88</i>	<i>1.05</i>
<b>REAL ASSETS</b>		
DWS RREEF Real Assets	1.22	1.25
Cohen & Steers Instl Realty	1.38	1.33
<i>Commodities Active ETF Average</i>	<i>2.32</i>	<i>3.44</i>
<i>Commodities Mutual Fund Average</i>	<i>3.03</i>	<i>4.51</i>
<i>REITS Active ETF Average</i>	<i>1.22</i>	<i>1.81</i>
<i>REITS Mutual Fund Average</i>	<i>1.99</i>	<i>2.19</i>

Source: Morningstar Direct. Data is as of October 31, 2025.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Fact Sheet – Small Value

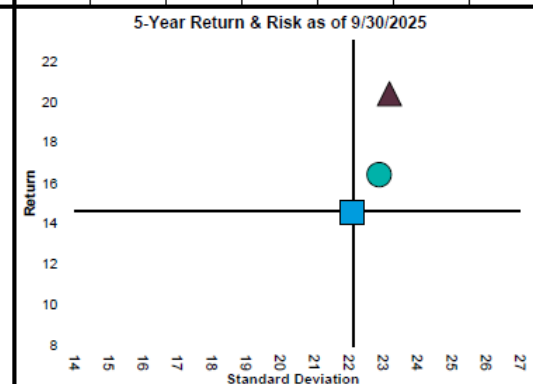
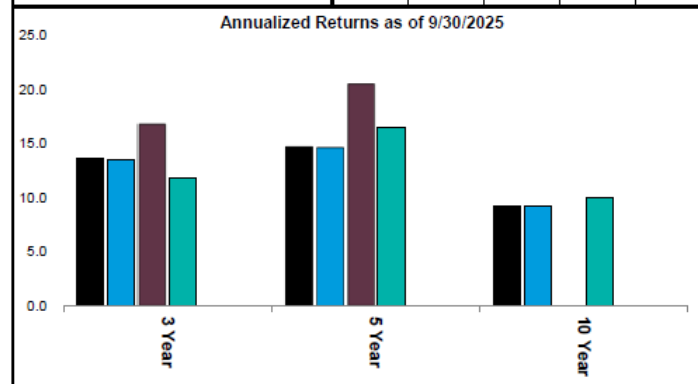


## U.S. Small Cap Value Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Fund	Tax Cost Ratio 3YR	Tax Cost Ratio 5YR
Vanguard Russell 2000 Value ETF	0.62	0.63
Avantis US Small Cap Value ETF	0.73	0.69
Hotchkis & Wiley Sm Cp Divers Val I	2.22	1.81

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
Russell 2000 Value	7.9	13.6	14.6	6.4	9.2	9.0	8.1	14.6	(14.5)	28.3	4.6	22.4	19.5	21.7	22.1	24.0	21.4
Vanguard Russell 2000 Value ETF	7.9	13.5	14.5	6.4	9.2	9.1	8.0	14.7	(14.6)	28.1	4.7	22.3	19.5	21.7	22.1	24.0	21.4
Avantis US Small Cap Value ETF	5.6	16.7	20.4	N/A	N/A	4.5	9.3	22.6	(4.8)	42.3	6.6	N/A	21.1	22.9	23.2	N/A	N/A
Hotchkis & Wiley Sm Cp Divers Val I	1.4	11.8	16.4	6.3	10.0	1.2	4.4	16.2	(6.3)	35.3	1.3	21.7	20.6	22.5	22.9	26.0	23.1



Differentiators	
<b>Batting Average<sup>A</sup></b>	<b>Loss Protection (5 Yrs)</b>
1) Avantis (100%)	1) Avantis (97%)
2) Hotchkis (68%)	2) Hotchkis (97%)
3) Vanguard (0%)	3) Vanguard (100%)

Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
Russell 2000 Value	19	53	60	64	46	13	57	66	85	62	42	48
Vanguard Russell 2000 Value ETF	19	53	61	64	47	13	58	66	85	64	41	49
Avantis US Small Cap Value ETF	43	18	6	N/A	N/A	57	46	13	16	6	31	N/A
Hotchkis & Wiley Sm Cp Divers Val I	77	75	32	67	27	83	84	52	23	26	69	56

Differentiators	
<b>High Alpha (5 Yrs)</b>	<b>Low-to-High Beta (5 Yrs)</b>
1) Avantis (5.5)	1) Vanguard (1.00)
2) Hotchkis (1.7)	2) Hotchkis (1.01)
3) Vanguard (-0.1)	3) Avantis (1.02)

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
10th Percentile	11.1	18.8	19.7	9.8	11.0	9.8	14.9	23.0	(3.5)	40.1	12.4	28.0
25th Percentile	7.3	15.9	17.2	8.2	10.1	7.3	11.5	19.5	(6.6)	35.4	8.1	25.1
50th Percentile	5.1	13.9	15.1	7.0	9.1	5.0	9.0	16.4	(10.4)	30.6	3.6	22.3
75th Percentile	1.6	11.8	13.4	5.8	8.1	2.2	5.9	13.0	(13.5)	26.3	0.2	19.8
90th Percentile	(0.7)	9.7	11.6	4.7	7.4	0.3	3.5	9.7	(16.1)	22.7	(4.3)	17.0
Top/Bottom Quartile spread	+5.7	+4.1	+3.8	+2.4	+2.0	+5.1	+5.6	+6.5	+6.9	+9.1	+7.9	+5.3

Differentiators	
<b>Low Vol (5 Yrs)</b>	<b>Low-to-High Expense</b>
1) Vanguard (22.1)	1) Vanguard (0.10)
2) Hotchkis (22.9)	2) Avantis (0.25)
3) Avantis (23.2)	3) Hotchkis (0.81)

Source: Morningstar Direct. Tax Cost Ratio data is as of October 31, 2025, search book data is as of September 30, 2025.

<sup>A</sup>The Batting Average measures the frequency of rolling 3-year periods outperforming the peer group from the lesser of 10 years or each fund's inception date.

# Fact Sheet – Small Value

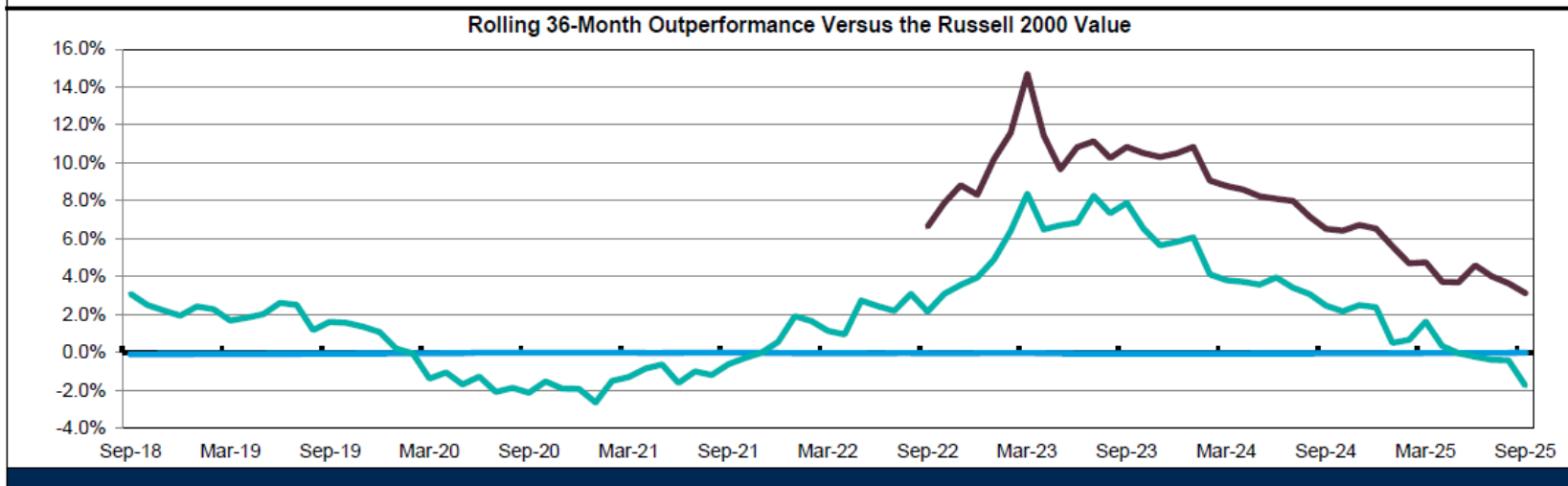


## U.S. Small Cap Value MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. Russell 2000 Value	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	9/2018 - 3/2020	1/2022 - 9/2022	12/2024 - 4/2025
Russell 2000 Value	1 / 1	1	0	0.33	0 / 0	100%	100%	1 / 1	1	0	0.52	0 / 0	100%	100%	-37.5%	-21.1%	-18.8%
Vanguard Russell 2000 Value ETF	1 / 1	1.00	(0.0)	0.33	0 / -1.1	100%	100%	1 / 1	1.00	(0.1)	0.52	0 / -1.66	100%	100%	-37.6%	-21.2%	-18.8%
Avantis US Small Cap Value ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.98 / 0.98	1.02	5.5	0.75	4.8 / 1.22	114%	97%	N/A	-16.0%	-20.9%
Hotchkis & Wiley Sm Cp Divers Val I	0.98 / 0.98	1.06	0.4	0.34	4.6 / 0.17	106%	103%	0.97 / 0.95	1.01	1.7	0.58	5.1 / 0.35	103%	97%	-44.1%	-17.8%	-20.6%

Managers vs. Russell 2000 Value	Monthly, 12-month and 36-month batting averages vs. Russell 2000 Value for 10 Years (or manager inception date)							Graph Legend		
	1 Month Periods	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months	Return Start Date	— Vanguard Russell 2000 Value ETF	— Avantis US Small Cap Value ETF	— Hotchkis & Wiley Sm Cp Divers Val I
Vanguard Russell 2000 Value ETF	120	31%	109	22%	85	0%	Sep-15			
Avantis US Small Cap Value ETF	72	63%	61	82%	37	100%	Sep-19			
Hotchkis & Wiley Sm Cp Divers Val I	120	57%	109	57%	85	68%	Sep-15			



Source: Morningstar Direct. Data is as of September 30, 2025.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Fact Sheet – Small Growth

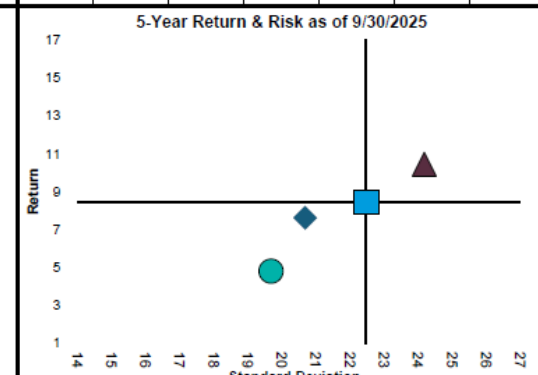
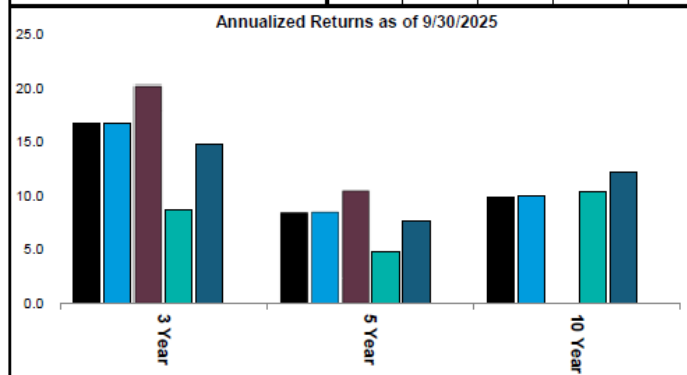


## U.S. Small Cap Growth Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Fund	Tax Cost Ratio 3YR	Tax Cost Ratio 5YR
Vanguard Russell 2000 Growth ETF	0.22	0.21
Janus Henderson Small Cap Gr Alpha ETF	0.41	0.31
American Century Small Cap Growth I	0.04	1.66
Conestoga Small Cap Institutional	0.37	0.46

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
Russell 2000 Growth	13.6	16.7	8.4	6.6	9.9	11.7	15.2	18.7	(26.4)	2.8	34.6	28.5	22.0	21.2	22.5	23.9	21.2
Vanguard Russell 2000 Growth ETF	13.6	16.7	8.4	6.7	9.9	11.7	15.2	18.7	(26.3)	2.8	34.7	28.6	22.0	21.2	22.5	23.9	21.2
Janus Henderson Small Cap Gr Alpha ETF	16.5	20.2	10.5	8.1	N/A	15.2	12.4	29.8	(29.0)	2.7	35.8	31.1	23.9	23.2	24.2	25.4	N/A
Conestoga Small Cap Institutional	(7.6)	8.7	4.8	4.4	10.4	(9.0)	9.0	22.4	(28.1)	16.4	30.6	25.4	20.1	18.9	19.7	20.7	19.0
American Century Small Cap Growth I	7.4	14.7	7.6	9.3	12.2	6.9	15.1	17.3	(26.2)	7.3	51.1	37.1	21.1	19.6	20.7	22.7	20.3



Legend:

- Index (Russell 2000 Growth)
- Vanguard Russell 2000 Growth ETF
- Janus Henderson Small Cap Gr Alpha ETF
- Conestoga Small Cap Institutional
- American Century Small Cap Growth I

Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
Russell 2000 Growth	23	28	45	53	55	19	40	38	44	84	60	46
Vanguard Russell 2000 Growth ETF	22	28	44	52	54	18	40	38	44	84	60	45
Janus Henderson Small Cap Gr Alpha ETF	14	10	23	30	N/A	9	62	4	61	85	55	36
Conestoga Small Cap Institutional	98	92	76	90	43	98	86	12	51	29	71	68
American Century Small Cap Growth I	45	40	51	15	17	49	41	50	42	67	27	12

**Differentiators**

Batting Average <sup>A</sup>	Loss Protection (5 Yrs)
1) Vanguard (99%)	1) Conestoga (85%)
2) American (96%)	2) American (92%)
3) Janus (90%)	3) Vanguard (100%)
4) Conestoga (84%)	4) Janus (103%)

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
10th Percentile	19.6	20.2	12.2	10.5	13.2	14.6	24.0	22.6	(18.9)	24.4	64.6	37.9
25th Percentile	12.9	17.0	10.4	8.5	11.5	10.3	18.4	20.1	(23.4)	17.7	53.3	34.0
50th Percentile	6.7	13.9	7.8	6.7	10.1	6.6	13.8	17.3	(27.8)	11.1	38.2	28.1
75th Percentile	2.4	11.1	4.8	5.5	9.1	1.7	10.3	13.7	(31.4)	4.7	27.9	24.8
90th Percentile	(3.2)	9.1	2.4	4.4	8.2	(3.2)	7.7	9.4	(37.4)	(1.0)	20.1	20.9
Top/Bottom Quartile spread	+10.5	+5.9	+5.5	+3.0	+2.3	+8.7	+8.1	+6.3	+8.0	+13.0	+25.4	+9.1

**High Alpha (5 Yrs)**

1) Janus (1.9)
2) Vanguard (0.0)
3) American (-0.2)
4) Conestoga (-2.6)

**Low-to-High Beta (5 Yrs)**

1) Conestoga (0.81)
2) American (0.89)
3) Vanguard (1.00)
4) Janus (1.02)

**Low Vol (5 Yrs)**

1) Conestoga (19.7)
2) American (20.7)
3) Vanguard (22.5)
4) Janus (24.2)

**Low-to-High Expense**

1) Vanguard (0.10)
2) Janus (0.30)
3) Conestoga (0.90)
4) American (0.94)

<sup>A</sup>The Batting Average measures the frequency of rolling 3-year period outperformance from the lesser of 10 years or each fund's inception date.

Source: Morningstar Direct. Tax Cost Ratio data is as of October 31, 2025, search book data is as of September 30, 2025.

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# Fact Sheet – Small Growth

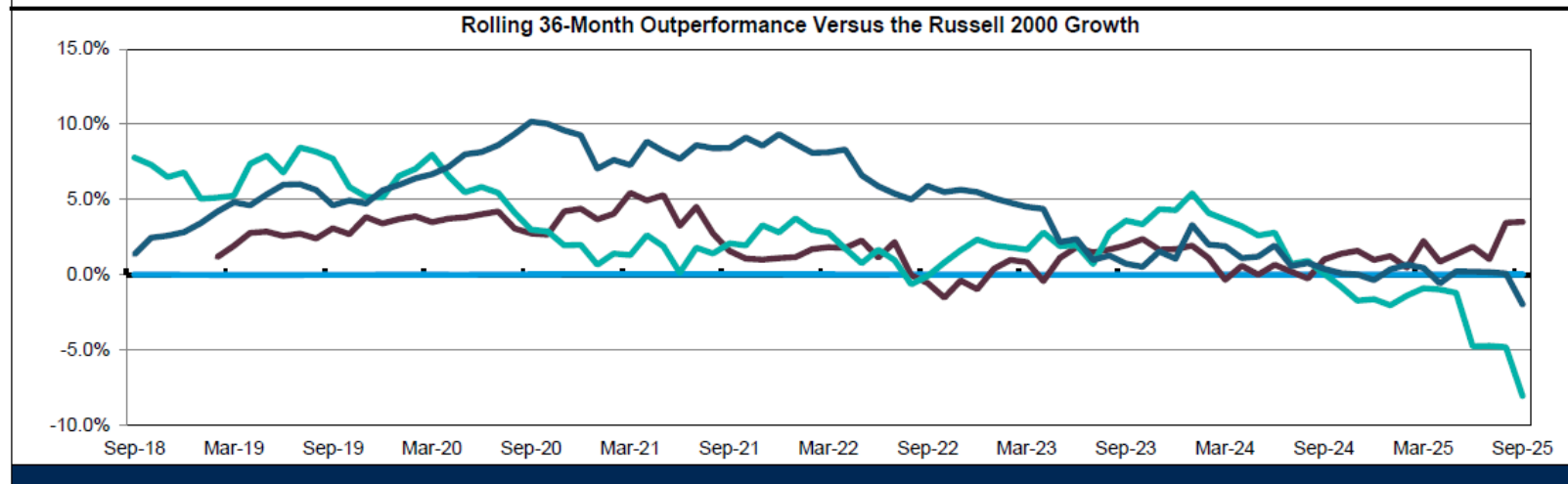


## U.S. Small Cap Growth MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. Russell 2000 Growth	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	7/2021 - 6/2022	9/2018 - 3/2020	12/2024 - 4/2025
Russell 2000 Growth	1 / 1	1	0	0.37	0 / 0	100%	100%	1 / 1	1	0	0.24	0 / 0	100%	100%	-33.4%	-27.0%	-18.9%
Vanguard Russell 2000 Growth ETF	1 / 1	1.00	0.0	0.37	0 / 0.94	100%	100%	1 / 1	1.00	0.0	0.24	0 / 1.07	100%	100%	-33.5%	-26.9%	-18.9%
Janus Henderson Small Cap Gr Alpha ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.95 / 0.9	1.02	1.9	0.31	7.8 / 0.26	112%	103%	-31.4%	-25.9%	-18.1%
Conestoga Small Cap Institutional	0.93 / 0.87	0.83	1.8	0.44	7.8 / 0.06	82%	83%	0.93 / 0.86	0.81	(2.6)	0.09	8.6 / -0.42	69%	85%	-22.5%	-19.4%	-18.1%
American Century Small Cap Growth I	0.97 / 0.94	0.93	2.9	0.50	5.1 / 0.46	97%	91%	0.96 / 0.93	0.89	(0.2)	0.22	6 / -0.13	86%	92%	-28.9%	-15.5%	-15.9%

Managers vs. Russell 2000 Growth	Monthly, 12-month and 36-month batting averages vs. Russell 2000 Growth for 10 Years (or manager inception date)							Graph Legend	
	1 Month Periods	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months	Return Start Date	— Vanguard Russell 2000 Growth ETF	— Janus Henderson Small Cap Gr Alpha ETF
Vanguard Russell 2000 Growth ETF	120	58%	109	71%	85	99%	Sep-15	— Vanguard Russell 2000 Growth ETF	— Janus Henderson Small Cap Gr Alpha ETF
Janus Henderson Small Cap Gr Alpha ETF	115	53%	104	64%	80	90%	Feb-16	— Conestoga Small Cap Institutional	— American Century Small Cap Growth I
Conestoga Small Cap Institutional	120	53%	109	63%	85	84%	Sep-15		
American Century Small Cap Growth I	120	62%	109	82%	85	96%	Sep-15		



Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet – International Equity

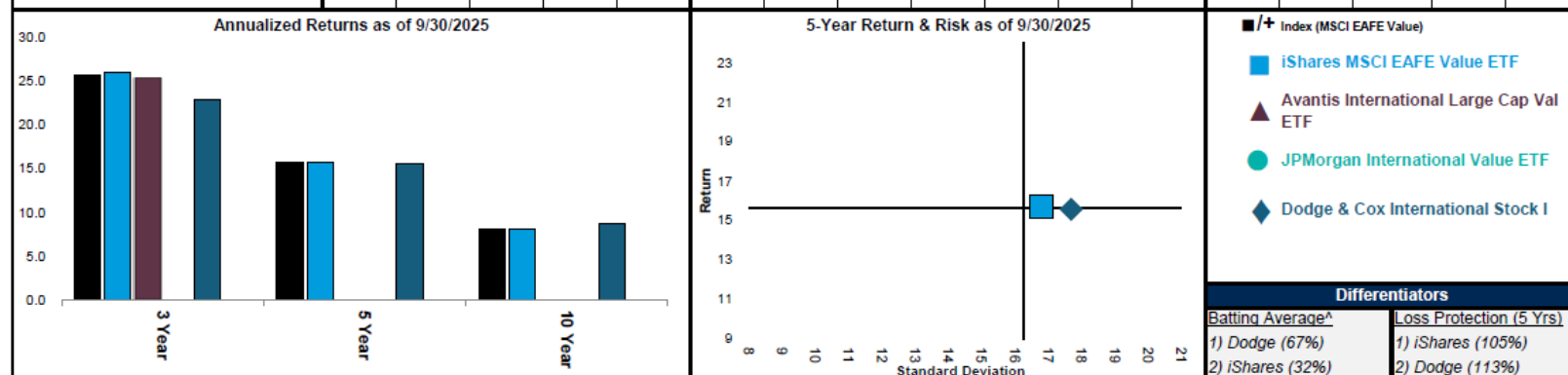


## International Large Cap Value (EAFE) Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Fund	Tax Cost Ratio 3YR	Tax Cost Ratio 5YR
iShares MSCI EAFE Value ETF	1.14	1.13
Avantis International Large Cap Val ETF	1.33	NA
JPMorgan International Value ETF	NA	NA
Dodge & Cox International Stock I	0.79	0.77

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
MSCI EAFE Value	22.5	25.7	15.7	8.2	8.2	31.9	5.7	19.0	(5.6)	10.9	(2.6)	16.1	10.7	13.2	16.3	17.6	16.0
iShares MSCI EAFE Value ETF	22.9	26.0	15.7	8.2	8.1	32.6	5.4	18.9	(5.4)	10.8	(2.8)	16.0	11.1	14.0	16.8	17.9	16.3
Avantis International Large Cap Val ETF	24.2	25.3	N/A	N/A	N/A	32.8	4.1	18.6	(8.3)	N/A	N/A	N/A	10.9	15.0	N/A	N/A	N/A
JPMorgan International Value ETF	29.2	N/A	N/A	N/A	N/A	37.2	10.9	N/A	N/A	N/A	N/A	N/A	10.3	N/A	N/A	N/A	N/A
Dodge & Cox International Stock I	20.6	22.8	15.6	8.9	8.7	31.9	3.8	16.7	(6.8)	11.0	2.1	22.8	11.4	14.7	17.7	19.4	17.9



Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank							Differentiators	
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	Batting Average <sup>a</sup>	Loss Protection (5 Yrs)
MSCI EAFE Value	35	24	21	47	48	34	34	34	19	57	83	77	1) Dodge (67%) 2) iShares (32%) 3) Avantis (0%)	1) iShares (105%) 2) Dodge (113%)
iShares MSCI EAFE Value ETF	32	21	20	47	50	28	39	37	17	59	84	78	High Alpha (5 Yrs) 1) iShares (-0.2) 2) Dodge (-0.7)	Low-to-High Beta (5 Yrs) 1) iShares (1.02) 2) Dodge (1.05)
Avantis International Large Cap Val ETF	25	27	N/A	N/A	N/A	26	55	41	42	N/A	N/A	N/A		
JPMorgan International Value ETF	4	N/A	N/A	N/A	N/A	7	2	N/A	N/A	N/A	N/A	N/A		
Dodge & Cox International Stock I	48	59	23	30	32	34	58	64	28	55	51	13		

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads							Low Vol (5 Yrs)		Low-to-High Expense	
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1) iShares (16.8) 2) Dodge (17.7)	1) Avantis (0.25) 2) iShares (0.33) 3) JPMorgan (0.55) Dodge (0.62)		
10th Percentile	26.4	27.0	17.1	10.1	9.5	35.9	8.6	21.1	(3.5)	17.3	8.4	23.4				
25th Percentile	24.2	25.4	15.5	9.1	8.9	32.8	6.8	19.7	(6.4)	14.5	5.3	20.9				
50th Percentile	20.3	23.5	13.6	8.1	8.1	29.9	4.6	17.8	(9.2)	11.4	2.2	18.6				
75th Percentile	16.2	21.1	11.8	6.9	7.2	25.7	2.4	15.3	(12.3)	9.5	(1.6)	16.4				
90th Percentile	13.4	18.6	9.9	6.0	6.7	23.4	(0.5)	12.7	(15.2)	7.1	(4.8)	14.9				
Top/Bottom Quartile spread	+8.0	+4.4	+3.8	+2.2	+1.7	+7.1	+4.4	+4.3	+5.9	+5.0	+6.9	+4.5				

<sup>a</sup>The Batting Average measures the frequency of rolling 3-year periods outperforming from the lesser of 10 years or each fund's inception date.

Source: Morningstar Direct. Tax Cost Ratio data is as of October 31, 2025, search book data is as of September 30, 2025.

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# Fact Sheet – International Equity

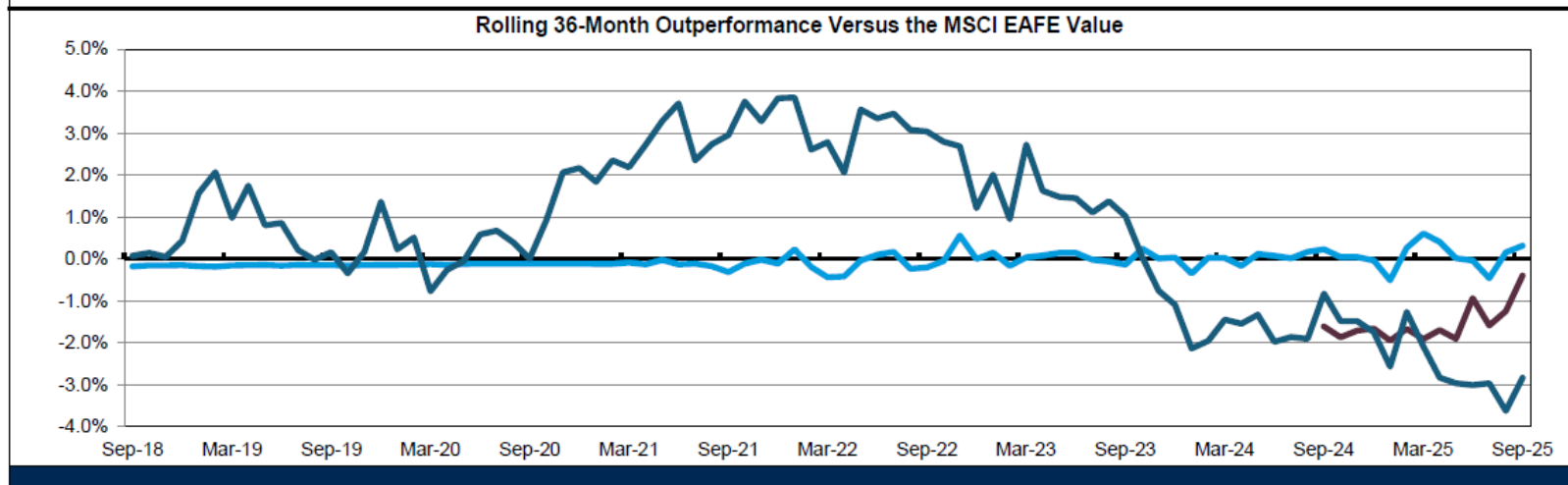


## International Large Cap Value (EAFE) MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. MSCI EAFE Value	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	2/2018 - 3/2020	6/2021 - 9/2022	11/2015 - 2/2016
MSCI EAFE Value	1 / 1	1	0	0.38	0 / 0	100%	100%	1 / 1	1	0	0.78	0 / 0	100%	100%	-32.6%	-22.8%	-13.8%
iShares MSCI EAFE Value ETF	1 / 0.99	1.01	(0.1)	0.37	1.6 / -0.03	102%	102%	0.99 / 0.98	1.02	(0.2)	0.75	2.2 / 0.03	104%	105%	-32.8%	-23.4%	-13.9%
Avantis International Large Cap Val ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
JPMorgan International Value ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dodge & Cox International Stock I	0.97 / 0.94	1.08	0.0	0.37	4.6 / 0.11	114%	110%	0.96 / 0.93	1.05	(0.7)	0.71	4.8 / -0.02	110%	113%	-34.2%	-21.7%	-17.7%

Managers vs. MSCI EAFE Value	Monthly, 12-month and 36-month batting averages vs. MSCI EAFE Value for 10 Years (or manager inception date)							Return Start Date	Graph Legend
	1 Month Periods	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months			
iShares MSCI EAFE Value ETF	120	39%	109	24%	85	32%	Sep-15	<ul style="list-style-type: none"> <li>iShares MSCI EAFE Value ETF</li> <li>Avantis International Large Cap Val ETF</li> <li>JPMorgan International Value ETF</li> <li>Dodge &amp; Cox International Stock I</li> </ul>	
Avantis International Large Cap Val ETF	48	46%	37	8%	13	0%	Sep-21		
JPMorgan International Value ETF	24	63%	13	100%		N/A	Sep-23		
Dodge & Cox International Stock I	120	51%	109	53%	85	67%	Sep-15		



Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet – International Equity

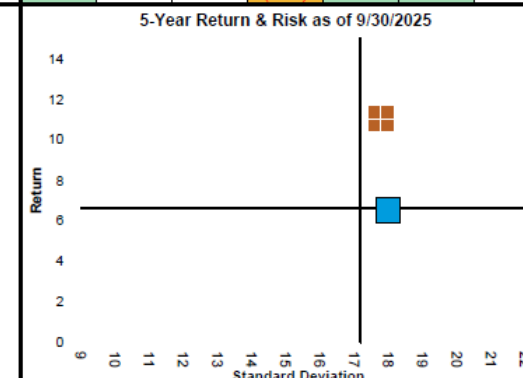
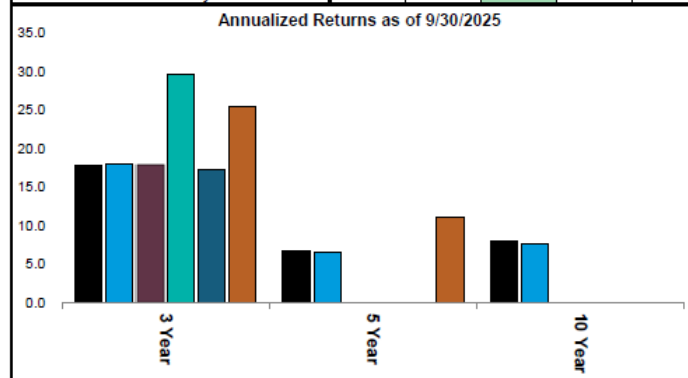


## International Large Cap Growth (EAFE) Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Fund	Tax Cost Ratio 3YR	Tax Cost Ratio 5YR
iShares MSCI EAFE Growth ETF	0.40	0.40
Capital Group International Focus Eq ETF	0.38	NA
Harbor International Compounders ETF	0.14	NA
JHancock International Dynamic Gr I	0.09	1.69

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
MSCI EAFE Growth	7.8	17.8	6.6	6.9	7.9	18.5	2.0	17.6	(22.9)	11.3	18.3	27.9	13.4	15.2	17.2	17.0	15.3
iShares MSCI EAFE Growth ETF	7.9	18.1	6.5	6.8	7.7	19.3	1.5	17.2	(22.9)	11.0	18.0	27.6	14.0	16.6	18.0	17.6	15.7
Capital Group International Focus Eq ETF	11.3	17.8	N/A	N/A	N/A	20.7	4.8	15.4	N/A	N/A	N/A	N/A	13.7	15.6	N/A	N/A	N/A
JPMorgan Active Growth ETF	22.1	29.6	N/A	N/A	N/A	15.7	32.8	37.7	N/A	N/A	N/A	N/A	16.2	16.2	N/A	N/A	N/A
Harbor International Compounders ETF	3.1	17.2	N/A	N/A	N/A	13.6	(0.4)	21.1	N/A	N/A	N/A	N/A	10.9	14.6	N/A	N/A	N/A
JHancock International Dynamic Gr I	18.4	25.5	11.0	N/A	N/A	20.8	24.9	18.9	(31.5)	18.5	36.6	N/A	11.8	15.6	17.8	N/A	N/A



Differentiators	
Batting Average <sup>a</sup>	Loss Protection (5 Yrs)
1) JPMorgan (100%)	1) JHancock (88%)
2) JHancock (79%)	2) iShares (104%)
3) iShares (9%)	
4) Harbor (0%)	
5) Capital (0%)	
High Alpha (5 Yrs)	Low-to-High Beta (5 Yrs)
1) JHancock (4.7)	1) JHancock (0.93)
2) iShares (-0.2)	2) iShares (1.03)
Low Vol (5 Yrs)	Low-to-High Expense
1) JHancock (17.8)	1) iShares (0.36)
2) iShares (18.0)	2) JPMorgan (0.44)
	3) Capital (0.54)
	4) Harbor (0.55)
	5) JHancock (0.95)

Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
MSCI EAFE Growth	64	56	48	56	53	51	65	43	35	35	70	62
iShares MSCI EAFE Growth ETF	63	55	51	59	58	46	70	47	35	39	71	68
Capital Group International Focus Eq ETF	45	56	N/A	N/A	N/A	38	50	65	N/A	N/A	N/A	N/A
JPMorgan Active Growth ETF	7	1	N/A	N/A	N/A	66	1	1	N/A	N/A	N/A	N/A
Harbor International Compounders ETF	87	60	N/A	N/A	N/A	81	85	10	N/A	N/A	N/A	N/A
JHancock International Dynamic Gr I	13	5	2	N/A	N/A	37	2	25	86	6	12	N/A

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
10th Percentile	19.7	23.8	9.9	9.8	10.3	26.3	11.9	21.1	(17.8)	17.4	43.2	35.2
25th Percentile	14.0	20.7	8.6	8.4	9.2	22.9	8.0	19.0	(20.8)	12.7	30.8	32.1
50th Percentile	10.4	18.5	6.6	7.4	8.1	18.7	4.8	16.8	(24.7)	9.4	22.4	29.2
75th Percentile	4.7	15.5	3.8	5.7	6.8	14.0	0.9	14.7	(29.9)	5.4	17.0	27.1
90th Percentile	2.2	13.6	1.5	4.2	5.9	12.1	(1.2)	12.3	(32.5)	0.9	14.4	24.9
Top/Bottom Quartile spread	+9.3	+5.2	+4.8	+2.7	+2.4	+8.8	+7.1	+4.3	+9.2	+7.3	+13.8	+5.0

<sup>a</sup>The Batting Average measures the frequency of rolling 3-year period outperformance from the lesser of 10 years or each fund's inception date.

Source: Morningstar Direct. Tax Cost Ratio data is as of October 31, 2025, search book data is as of September 30, 2025.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Fact Sheet – International Equity

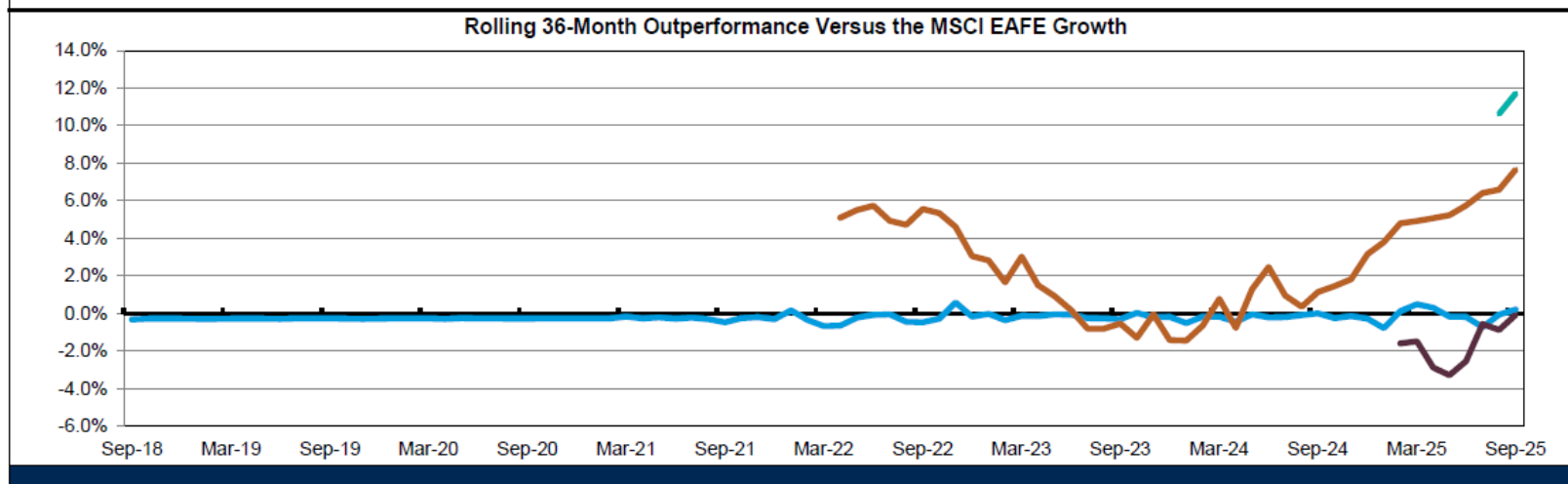


## International Large Cap Growth (EAFE) MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. MSCI EAFE Growth	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	1/2022 - 9/2022	1/2020 - 3/2020	2/2018 - 12/2018
<b>MSCI EAFE Growth</b>	1 / 1	1	0	0.38	0 / 0	100%	100%	1 / 1	1	0	0.21	0 / 0	100%	100%	-33.0%	-17.5%	-16.7%
iShares MSCI EAFE Growth ETF	0.99 / 0.99	1.02	(0.3)	0.36	1.9 / -0.11	102%	103%	0.99 / 0.99	1.03	(0.2)	0.19	2.7 / -0.04	105%	104%	-33.5%	-17.6%	-16.8%
Capital Group International Focus Eq ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
JPMorgan Active Growth ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Harbor International Compounders ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
JHancock International Dynamic Gr I	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.9 / 0.82	0.93	4.7	0.45	7.7 / 0.57	105%	88%	-37.8%	-16.7%	N/A

Managers vs. MSCI EAFE Growth	Monthly, 12-month and 36-month batting averages vs. MSCI EAFE Growth for 10 Years (or manager inception date)							Graph Legend				
	1 Month Periods	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months	Return Start Date	iShares MSCI EAFE Growth ETF	Capital Group International Focus Eq ETF	JPMorgan Active Growth ETF	Harbor International Compounders ETF	JHancock International Dynamic Gr I
iShares MSCI EAFE Growth ETF	120	32%	109	21%	85	9%	Sep-15	—	—	—	—	—
Capital Group International Focus Eq ETF	43	47%	32	34%	8	0%	Feb-22	—	—	—	—	—
JPMorgan Active Growth ETF	37	59%	26	100%	2	100%	Aug-22	—	—	—	—	—
Harbor International Compounders ETF	36	39%	25	36%	1	0%	Sep-22	—	—	—	—	—
JHancock International Dynamic Gr I	77	55%	66	67%	42	79%	Apr-19	—	—	—	—	—



Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet - Municipals



## Municipal Bond Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
Bloomberg Municipal Bond: 5 Year (4-6)	3.4	4.4	1.1	2.3	1.9	4.5	1.2	4.3	(5.3)	0.3	4.3	5.4	2.6	4.1	4.2	4.0	3.6
Vanguard Tax-Exempt Bond ETF	1.2	4.5	0.9	2.3	2.3	2.2	1.4	6.2	(8.2)	1.5	5.0	7.5	4.4	6.2	6.0	5.6	5.0
Vanguard Core Tax-Exempt Bond ETF	N/A	N/A	N/A	N/A	N/A	3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanguard Interm-Term Tx-Ex Adm	2.4	5.0	1.3	2.7	2.4	3.4	1.8	5.9	(6.8)	1.2	5.2	6.9	3.7	5.3	5.2	5.0	4.4

**Annualized Returns as of 9/30/2025**

**5-Year Return & Risk as of 9/30/2025**

**Differentiators**

<b>Batting Average<sup>^</sup></b> 1) Vanguard (89%) 2) Vanguard (59%)	<b>Loss Protection (5 Yrs)</b> 1) Vanguard (120%) 2) Vanguard (139%)
<b>High Alpha (5 Yrs)</b> 1) Vanguard (0.6) 2) Vanguard (0.4)	<b>Low-to-High Beta (5 Yrs)</b> 1) Vanguard (1.20) 2) Vanguard (1.35)
<b>Low Vol (5 Yrs)</b> 1) Vanguard (5.2) 2) Vanguard (6.0)	<b>Low-to-High Expense</b> 1) VTEB (0.03) 2) VWIUX (0.09) 3) VCRM (0.12)

Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
Bloomberg Municipal Bond: 5 Year (4-6)	2	66	40	45	62	1	78	90	6	85	57	90
Vanguard Tax-Exempt Bond ETF	76	56	58	40	35	79	69	25	56	45	21	25
Vanguard Core Tax-Exempt Bond ETF	N/A	N/A	N/A	N/A	N/A	21	N/A	N/A	N/A	N/A	N/A	N/A
Vanguard Interm-Term Tx-Ex Adm	22	23	23	9	18	23	55	39	25	56	17	48

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
10th Percentile	2.8	5.3	1.6	2.7	2.6	3.8	2.9	6.8	(5.8)	2.9	5.7	8.1
25th Percentile	2.4	4.9	1.3	2.5	2.4	3.4	2.4	6.2	(6.8)	2.1	4.9	7.5
50th Percentile	1.9	4.6	1.0	2.2	2.1	2.9	1.8	5.7	(7.9)	1.3	4.4	6.8
75th Percentile	1.2	4.2	0.6	2.0	1.8	2.3	1.2	5.1	(9.1)	0.7	4.0	6.3
90th Percentile	0.8	3.7	0.4	1.5	1.4	1.8	0.8	4.3	(10.4)	0.1	3.2	5.4
Top/Bottom Quartile spread	+1.1	+0.8	+0.6	+0.5	+0.6	+1.1	+1.2	+1.1	+2.2	+1.4	+1.0	+1.2

Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet - Municipals

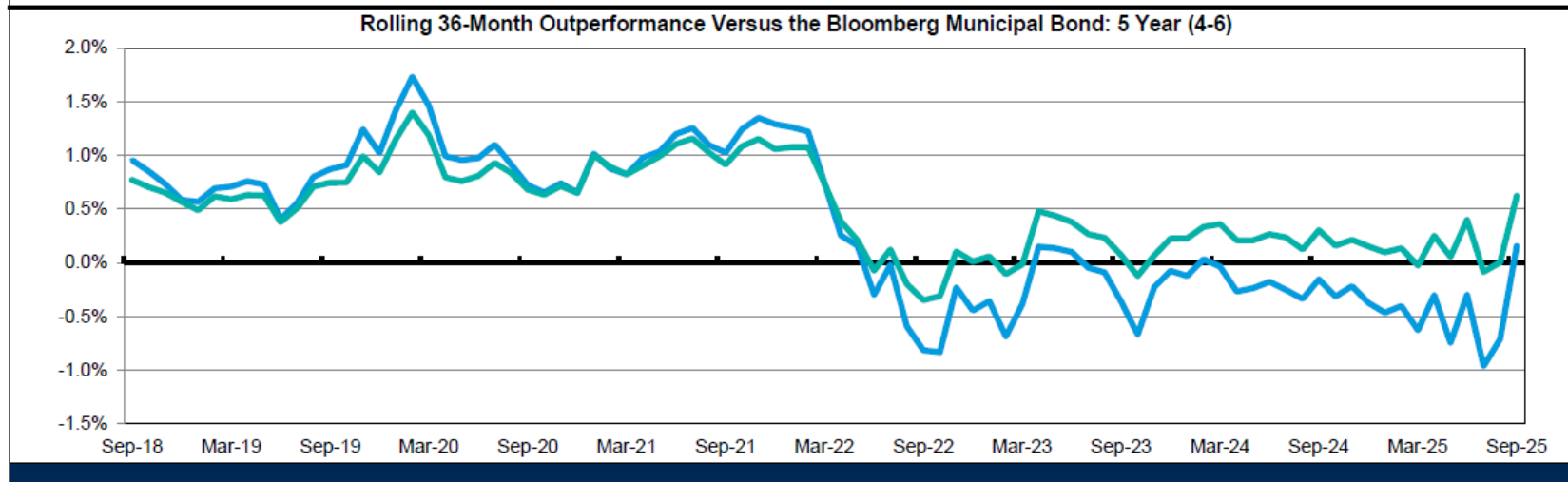


## Municipal Bond MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. Bloomberg Municipal Bond: 5 Year (4-6)	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	8/2021 - 10/2022	8/2016 - 11/2016	3/2020 - 4/2020
<b>Bloomberg Municipal Bond: 5 Year (4-6)</b>	1 / 1	1	0	(0.04)	0 / 0	100%	100%	1 / 1	1	0	(0.46)	0 / 0	100%	100%	-8.7%	-3.5%	-2.9%
Vanguard Tax-Exempt Bond ETF	0.93 / 0.87	1.29	0.4	0.04	2.1 / 0.15	128%	130%	0.94 / 0.89	1.35	0.4	(0.36)	2.5 / -0.1	133%	139%	-12.4%	-4.8%	-4.8%
Vanguard Core Tax-Exempt Bond ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanguard Interm-Term Tx-Ex Adm	0.95 / 0.91	1.17	0.5	0.08	1.5 / 0.33	120%	115%	0.96 / 0.92	1.20	0.6	(0.33)	1.7 / 0.13	123%	120%	-11.0%	-4.4%	-4.3%

Managers vs. Bloomberg Municipal Bond: 5 Year (4-6)	Monthly, 12-month and 36-month batting averages vs. Bloomberg Municipal Bond: 5 Year (4-6) for 10 Years (or manager inception date)							Return Start Date	Graph Legend		
	1 Month Periods	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months	Vanguard Tax-Exempt Bond ETF		Vanguard Core Tax-Exempt Bond ETF	Vanguard Interm-Term Tx-Ex Adm	
Vanguard Tax-Exempt Bond ETF	120	53%	109	65%	85	59%	Sep-15	—	—	—	
Vanguard Core Tax-Exempt Bond ETF	10	40%		N/A		N/A	Nov-24	—	—	—	
Vanguard Interm-Term Tx-Ex Adm	120	58%	109	69%	85	89%	Sep-15	—	—	—	



Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet – High Yield Municipals



## High Yield Municipal Bond Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
Bloomberg High Yield Muni	0.2	6.8	2.9	3.6	4.4	1.3	6.3	9.2	(13.1)	7.8	4.9	10.7	5.4	8.0	8.1	8.7	7.7
Capital Group Municipal High-Income ETF	1.1	N/A	N/A	N/A	N/A	2.5	N/A	N/A	N/A	N/A	N/A	N/A	5.3	N/A	N/A	N/A	N/A
American High-Income Municipal Bond F3	1.7	7.1	2.9	3.6	3.9	2.8	6.6	8.3	(11.5)	5.9	4.7	9.2	5.2	7.2	7.3	7.4	6.4

**Annualized Returns as of 9/30/2025**

**5-Year Return & Risk as of 9/30/2025**

Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank							Differentiators	
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	Batting Average <sup>^</sup>	Loss Protection (5 Yrs)
Bloomberg High Yield Muni	47	10	6	3	2	54	17	9	35	9	25	11	1) American (24%) 2) Capital (0%)	1) American (89%)
Capital Group Municipal High-Income ETF	21	N/A	N/A	N/A	N/A	14	N/A	N/A	N/A	N/A	N/A	N/A	High Alpha (5 Yrs) 1) American (0.0)	Low-to-High Beta (5 Yrs) 1) American (0.89)
American High-Income Municipal Bond F3	14	7	5	3	9	9	11	18	25	37	27	45	Low Vol (5 Yrs) 1) American (7.3)	Low-to-High Expense 1) American (0.32) 2) Capital (0.34)

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads							Low Vol (5 Yrs)		Low-to-High Expense	
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1) American (7.3)	1) American (0.32) 2) Capital (0.34)		
10th Percentile	2.2	6.8	2.5	3.1	3.8	2.8	6.8	9.0	(8.9)	7.7	6.2	10.9				
25th Percentile	1.0	6.2	1.9	2.8	3.3	1.9	5.9	8.1	(11.5)	6.3	4.9	10.1				
50th Percentile	0.1	5.5	1.6	2.5	2.9	1.4	5.2	7.0	(13.9)	5.4	3.7	9.1				
75th Percentile	(0.6)	4.8	1.0	1.9	2.4	0.7	4.4	5.2	(15.3)	4.2	2.8	8.0				
90th Percentile	(1.5)	3.8	0.6	1.5	2.1	(0.2)	3.4	3.8	(16.7)	3.4	1.0	7.1				
Top/Bottom Quartile spread	+1.6	+1.4	+1.0	+0.8	+0.9	+1.2	+1.5	+2.8	+3.7	+2.1	+2.1	+2.1				

Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet – High Yield Municipals

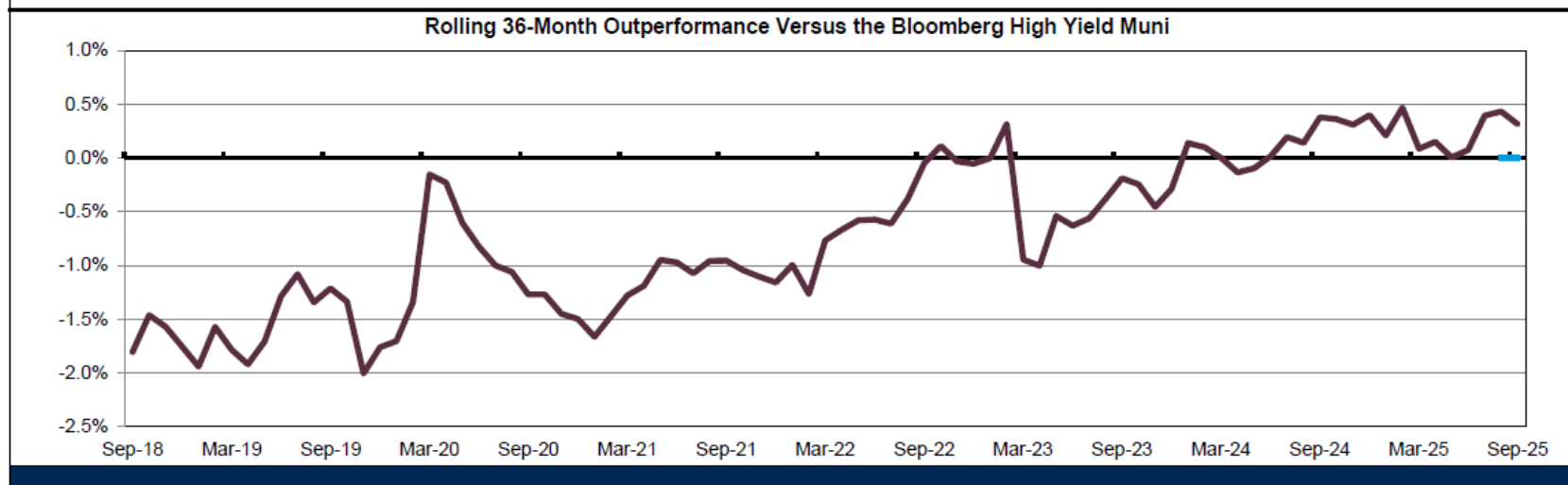


## High Yield Municipal Bond MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. Bloomberg High Yield Muni	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	1/2022 - 10/2022	3/2020 - 4/2020	10/2016 - 11/2016
<b>Bloomberg High Yield Muni</b>	1 / 1	1	0	0.30	0 / 0	100%	100%	1 / 1	1	0	(0.02)	0 / 0	100%	100%	-17.7%	-14.0%	-7.1%
Capital Group Municipal High-Income ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
American High-Income Municipal Bond F3	0.98 / 0.98	0.82	(0.1)	0.28	1.9 / -0.28	84%	85%	0.99 / 0.98	0.89		(0.02)	1.4 / 0.01	90%	89%	-16.0%	-10.9%	-5.3%

Managers vs. Bloomberg High Yield Muni	Monthly, 12-month and 36-month batting averages vs. Bloomberg High Yield Muni for 10 Years (or manager inception date)							Graph Legend	
	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months	Return Start Date	Capital Group Municipal High-Income ETF	American High-Income Municipal Bond F3	
Capital Group Municipal High-Income ETF	15	67%	4	75%	2	0%	Jun-24	—	
American High-Income Municipal Bond F3	120	43%	109	37%	85	24%	Sep-15	—	



Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet – Emerging Markets



## Emerging Markets Core Equity Return, Standard Deviation and Peer Group Comparisons

9/30/2025

Manager or Index	Annual Returns (%) as of 9/30/2025					Calendar Year Returns (%)							Volatility (%) as of 9/30/2025				
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019	1 Year	3 Year	5 Year	7 Year	10 Year
MSCI Emerging Markets	17.3	18.2	7.0	6.2	8.0	27.5	7.5	9.8	(20.1)	(2.5)	18.3	18.4	11.7	15.7	16.0	17.6	16.6
First Trust WCM Devpg Wild Eq ETF	20.8	18.4	7.4	N/A	N/A	34.1	0.4	6.9	(13.6)	(1.9)	N/A	N/A	13.1	16.3	16.3	N/A	N/A
WCM Focused Emerging Markets Instl	30.1	18.4	4.1	8.4	9.8	31.3	10.1	4.5	(30.7)	(1.7)	36.5	37.6	12.2	15.9	17.2	18.9	17.7
GQG Partners Emerging Markets EquityInst	(1.4)	14.4	5.3	8.4	N/A	6.1	6.2	28.8	(20.9)	(2.4)	34.0	21.1	9.0	11.3	12.8	14.9	N/A
ARGA Emerging Markets Value Instl	24.0	26.3	N/A	N/A	N/A	36.3	8.2	16.7	(1.2)	N/A	N/A	N/A	13.0	18.2	N/A	N/A	N/A

**Annualized Returns as of 9/30/2025**

**5-Year Return & Risk as of 9/30/2025**

**Differentiators**

<b>Batting Average<sup>A</sup></b>	<b>Loss Protection (5 Yrs)</b>
1) ARGA (100%)	1) GQG (71%)
2) GQG (93%)	2) First (94%)
3) First (84%)	3) WCM (107%)
4) WCM (61%)	

Manager or Index	Peer Group Rankings as of 9/30/2025					Calendar Year Peer Group Rank						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
MSCI Emerging Markets	44	44	52	55	41	33	35	66	45	68	40	59
First Trust WCM Devpg Wild Eq ETF	17	42	48	N/A	N/A	6	88	86	11	64	N/A	N/A
WCM Focused Emerging Markets Instl	1	40	82	12	9	12	19	95	94	62	7	1
GQG Partners Emerging Markets EquityInst	99	84	72	12	N/A	100	52	1	51	67	10	40
ARGA Emerging Markets Value Instl	7	1	N/A	N/A	N/A	3	28	21	1	N/A	N/A	N/A

Peer Group Range	Peer Group Spreads as of 9/30/2025					Calendar Year Peer Group Spreads						
	1 Year	3 Year	5 Year	7 Year	10 Year	2025 YTD	2024	2023	2022	2021	2020	2019
10th Percentile	23.2	21.6	12.0	8.6	9.8	32.4	12.3	21.1	(13.0)	12.4	34.4	28.1
25th Percentile	19.7	19.6	9.5	7.5	8.8	28.4	8.5	16.2	(16.7)	6.1	23.8	23.7
50th Percentile	16.5	17.9	7.2	6.4	7.6	25.1	6.4	11.7	(20.5)	0.3	17.1	19.6
75th Percentile	12.8	16.0	5.1	5.3	6.6	20.6	3.3	8.8	(24.5)	(3.4)	10.5	16.7
90th Percentile	7.8	13.7	3.0	3.8	5.6	15.9	(0.6)	6.1	(28.4)	(7.7)	2.6	12.7
Top/Bottom Quartile spread	+6.9	+3.6	+4.4	+2.2	+2.1	+7.8	+5.2	+7.4	+7.8	+9.4	+13.3	+7.0

Low Vol (5 Yrs)		Low-to-High Beta (5 Yrs)	
1) GQG (12.8)	2) First (16.3)	1) GQG (0.62)	2) First (0.93)
3) WCM (17.2)		3) WCM (0.98)	

Low-to-High Expense	
1) ARGA (0.84)	2) First (0.95)
3) GQG (0.98)	4) WCM (1.26)

<sup>A</sup>The Batting Average measures the frequency of rolling 3-year period outperformance from the lesser of 10 years or each fund's inception date.

Source: Morningstar Direct. Data is as of September 30, 2025.

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# Fact Sheet – Emerging Markets

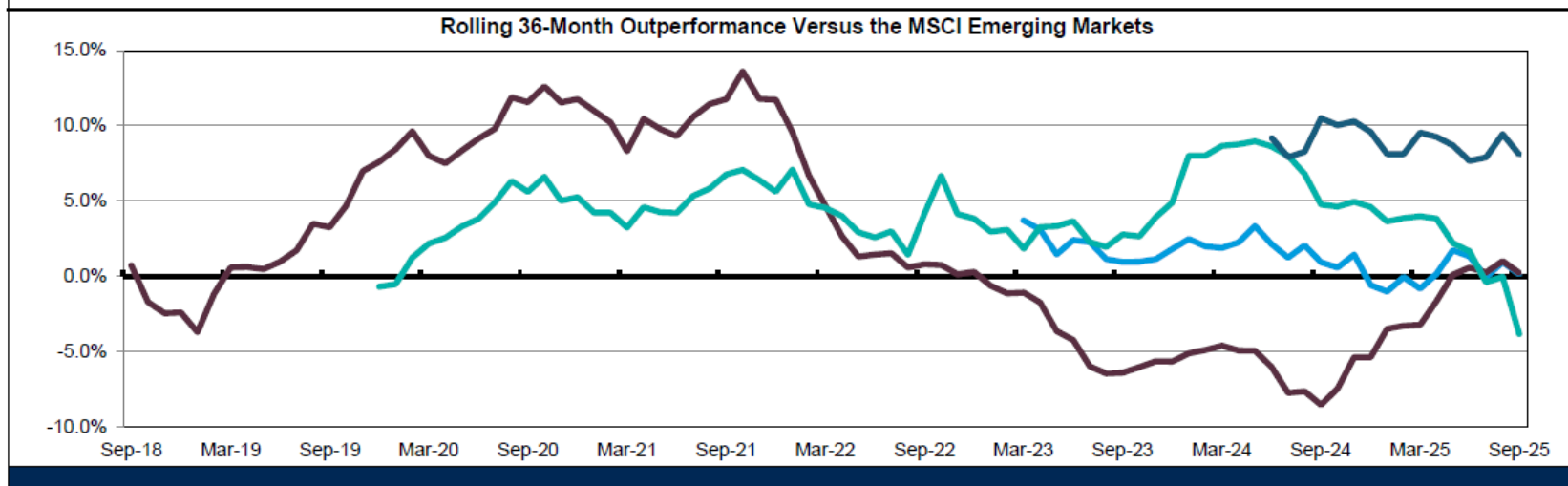


## Emerging Markets Core Equity MPT and Other Quantitative Risk and Return Metrics

9/30/2025

Managers vs. MSCI Emerging Markets	Past 10-Year Metrics as of 9/30/2025							Past 5-Year Metrics as of 9/30/2025							Max Drawdowns (10 yrs)		
	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	Correl / R <sup>2</sup>	Beta	Alpha (%)	Sharpe Ratio (%)	Track Error / Info. Ratio (%)	UP Capture	DOWN Capture	7/2021 - 10/2022	2/2018 - 3/2020	11/2015 - 2/2016
MSCI Emerging Markets	1 / 1	1	0	0.36	0 / 0	100%	100%	1 / 1	1	0	0.25	0 / 0	100%	100%	-36.0%	-28.7%	-12.3%
First Trust WCM Devpg Wid Eq ETF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.92 / 0.84	0.93	0.6	0.27	6.6 / 0.05	95%	94%	-26.2%	N/A	N/A
WCM Focused Emerging Markets Instl	0.91 / 0.83	0.97	2.0	0.44	7.3 / 0.25	104%	96%	0.92 / 0.85	0.98	(2.8)	0.06	6.7 / -0.43	95%	107%	-43.4%	-12.2%	-10.2%
GQG Partners Emerging Markets EquityInst	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.78 / 0.61	0.62	(0.2)	0.18	10 / -0.17	64%	71%	-26.7%	-23.3%	N/A
ARGA Emerging Markets Value Instl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-24.4%	N/A	N/A

Managers vs. MSCI Emerging Markets	Monthly, 12-month and 36-month batting averages vs. MSCI Emerging Markets for 10 Years (or manager inception date)							Graph Legend	
	1 Month Periods	% + Months	12 Month periods	% + 12-Months	36 Month Periods	% + 36 Months	Return Start Date	Line Color	Asset Name
First Trust WCM Devpg Wid Eq ETF	66	44%	55	51%	31	84%	Mar-20	Blue	First Trust WCM Devpg Wid Eq ETF
WCM Focused Emerging Markets Instl	120	55%	109	55%	85	61%	Sep-15	Red	WCM Focused Emerging Markets Instl
GQG Partners Emerging Markets EquityInst	105	50%	94	65%	70	93%	Dec-16	Green	GQG Partners Emerging Markets EquityInst
ARGA Emerging Markets Value Instl	51	57%	40	90%	16	100%	Jun-21	Teal	ARGA Emerging Markets Value Instl



Source: Morningstar Direct. Data is as of September 30, 2025.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.

# Disclosures

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# Material Risks & Limitations

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**Domestic Equity** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to, changes to underlying company conditions, sector or industry factors, or other macro events. These may happen quickly and unpredictably.

**International Equity** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to, changes to underlying company conditions, sector or industry impacts, or other macro events. These may happen quickly and unpredictably. International equity allocations may also be impact by currency and/or country specific risks which may result in lower liquidity in some markets.

**Currencies** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to, changes in interest rates, underlying macroeconomic conditions in the economy, or other macro events. These may happen quickly and unpredictably.

# Disclosures – Index & Benchmark Definitions

## Equity

- **The S&P 500 Index** is a capitalization-weighted index designed to measure performance of the broad domestic economy through changes in the aggregate market value of approximately 500 stocks representing all major industries.
- **Russell 3000 Index** is a market-cap-weighted index which consists of roughly 3,000 of the largest companies in the U.S. as determined by market capitalization. It represents nearly 98% of the investable U.S. equity market.
- **Russell 1000 Index** is a market-cap-weighted index which consists of the largest 1,000 companies in the Russell 3000 Index.
- **MSCI ACWI (All Country World Index) Index** is an equity index which captures large and mid cap representation across 23 Developed Markets countries and 24 Emerging Markets countries. The index covers approximately 85% of the global investable equity opportunity set.
- **MSCI ACWI (All Country World Index) IMI Index** is an equity index which captures large, mid and small cap representation across 23 Developed Markets Countries and 24 Emerging Markets countries. The index covers approximately 99% of the global equity investment opportunity set.
- **MSCI ACWI (All Country World Index) ex USA Index** is an equity index which captures large and mid cap representation across Developed Markets countries, excluding the United States, and Emerging Markets countries. The index covers approximately 85% of the global equity opportunity set outside the United States.
- **MSCI ACWI (All Country World Index) ex USA IMI Index** is an equity index which captures large, mid and small cap representation across Developed Markets, excluding the United States, and Emerging Markets countries around the world. The index covers approximately 99% of the global equity opportunity set outside the United States.
- **MSCI Brazil Index** is an equity index which captures large and mid cap segments of the Brazilian market. The index covers approximately 85% of the Brazilian equity universe.
- **MSCI China Index** is an equity index which captures large and mid cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). The index covers approximately 85% of this China equity universe. Currently, the index includes Large Cap A and Mid Cap A shares represented at 20% of their free float-adjusted market capitalization.
- **MSCI EAFE Index** is an equity index which captures large and mid cap representation across Developed Markets countries around the world, excluding the United States and Canada. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
- **MSCI EAFE IMI Index** is an equity index which captures large, mid and small cap representation across Developed Markets countries around the world, excluding the United States and Canada. The index covers approximately 99% of the free float-adjusted market capitalization in each country.
- **MSCI Emerging Markets Index** is an equity index which captures large and mid cap representation across Emerging Markets countries. The index covers approximately 85% of the free-float adjusted market capitalization in each country.
- **MSCI Emerging Markets IMI Index** is an equity index which captures large, mid and small cap representation across Emerging Markets countries. The index covers approximately 99% of the free float-adjusted market capitalization in each country.
- **MSCI USA Index** is an equity index which captures large and mid cap segments of the U.S. market. The index covers approximately 85% of the free float-adjusted market capitalization in the United States.
- **MSCI USA IMI Index** is an equity index which captures large, mid and small cap segments of the U.S. market. The index covers approximately 99% of the free float-adjusted market capitalization in the United States.
- **MSCI World ex USA Index** is an equity index which captures large and mid cap representation across Developed Markets countries around the world, excluding the United States. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
- **MSCI World ex USA IMI Index** is an equity index which captures large, mid and small cap representation across Developed Markets countries around the world, excluding the United States. The index covers approximately 99% of the free float-adjusted market capitalization in each country.

# Disclosures – Index & Benchmark Definitions

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## *Currencies*

- **ICE U.S. Dollar Index** tracks the strength of the U.S. Dollar against a basket of major currencies. The following six currencies are used to calculate the index: Euro, Japanese Yen, UK Pound, Canadian Dollar, Swedish Krona, and Swiss Franc.
- **The U.S. Dollar** is the currency of the United States of America (“the U.S.”) and is issued by the United States Federal Reserve.
- **The U.K. Pound** is the currency of the United Kingdom (“the U.K.”) and is issued by the Bank of England.
- **The Euro** is the currency of the European Union (“the E.U.”) and is issued by the European Central Bank.
- **The Yen** is the currency of Japan and is issued by the Bank of Japan.
- **The Swedish Krona** is the currency of the Kingdom of Sweden and is issued by the Sveriges Riskbank, the central bank of Sweden.

## *Additional Information*

- Equity sector returns are calculated by S&P, Russell, and MSCI for domestic and international markets, respectively. S&P and MSCI sector definitions correspond to the GICS® classification (Global Industry Classification System); Russell uses its own sector and industry classifications.
- MSCI country indices are free float-adjusted market capitalization indices that are designed to measure equity market performance of approximately 85% of the market capitalization in each specific country. MSCI country IMI indices are free float-adjusted market capitalization indices that are designed to measure equity market performance of approximately 99% of the market capitalization in each specific country.
- Currency returns are calculated using FactSet’s historical spot rates and are calculated using the U.S. dollar as the base currency.