

The Fast-Growing Market of Active ETFs

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Abstract

This study examines the general characteristics of a relatively new segment within the Exchange-Traded Fund (ETF) market: active ETFs. Despite representing a relatively small portion of the total ETF managed assets, the number and assets of active ETFs have experienced significant, steady growth in recent years, outpacing the growth rate of passive ETFs. Although high assets' growth rates are typical for a relatively new market segment, the rapid expansion of the number of active ETFs, which is now close to the number of passive funds, is noteworthy. Active ETFs generally appear to have higher levels of active portfolio management as indicated by their lower level of return alignment with the underlying benchmark return, higher portfolio turnover rates, and greater use of derivatives.

Introduction

Since the inception of the first ETF in 1993, the ETF market has witnessed substantial growth.² While ETFs were initially offered as passive vehicles that tracked an index,³ there is an emerging market of active ETFs,⁴ which are managed with the typical objective of outperforming the market or a market segment.⁵

¹ This white paper is provided in the authors' official capacity as economists in the Commission's Division of Economic and Risk Analysis but does not necessarily reflect the views of the Commission, the Commissioners, or other members of the staff.

² The history of ETFs goes back to 1993 when the SEC granted approval for the creation of the first ETF, the SPDR S&P 500 ETF (SPY), which tracks the S&P 500 index. Total net assets grew from \$464 million for one ETF in 1993 to over \$10 trillion for more than 3,600 ETFs (as of 2024). See INV. CO. INST., INVESTMENT COMPANY FACT BOOK (2025) ("ICI Factbook 2025"), available at <https://www.icifactbook.org/index.html>.

³ Note that some research papers argue that index tracking ETF managers may engage in active management, see Si Cheng et al., *The Unexpected Activeness of Passive Investors: A Worldwide Analysis of ETFs*, 9 REV. ASSET PRICING STUD. 296 (2019).

⁴ We only consider ETFs that are investment companies registered under the Investment Company Act of 1940. Other exchange-traded products are excluded from our analysis. To identify an active ETF, we reviewed a fund's response to Item C.3 in Form N-CEN. We categorize funds as active ETFs if a fund indicated "Y" in Item C.3.a.i (Exchange-Traded Fund) and did not indicate "Y" in item C.3.b (Index Fund). Similarly, we categorize funds as passive ETFs if a fund indicated "Y" in both Item C.3.a.i (Exchange-Traded Fund) and Item C.3.b (Index Fund). Among all the series that self-identified as ETFs, less than 5% of the funds also self-identified as a "Fund of Funds" (Item C.3.e), and these funds manage less than half a percent of total net assets of all the ETFs.

⁵ Please note that there may be other management objectives such as tax efficiency.

In 2008, the SEC approved the first active ETF, marking the emergence of active ETFs as a distinct category and a prominent innovation within the ETF sector.⁶ Following these regulatory changes, the market for active ETFs started to expand; by the mid-2010s, most major asset managers had entered the active ETF space.⁷ In 2016 the SEC approved exchanges' listing criteria⁸ for active ETFs, thereby removing the requirement for exchanges to seek the SEC's approval to list an active ETF.⁹

In 2019, the SEC adopted Rule 6c-11, also known as the ETF Rule, which permitted ETFs that satisfied certain conditions to operate without the need to obtain an exemptive order.¹⁰ Both active and passive ETFs that operate under Rule 6c-11 are governed by the Investment Company Act of 1940 and the Commission rules issued pursuant to the Act. The Rule applies to both passive ETFs and active ETFs that provide daily portfolio transparency and meet other conditions under the Rule,¹¹ and currently most active ETF products provide daily transparency. Since 2019, active ETF sector has been growing rapidly; the number of active ETFs is now close to, and on the trajectory of surpassing the number of traditional passive funds.¹²

Recent Growth in Active ETF Sector

Although it constitutes a relatively small portion of the ETF managed assets, the active ETF segment has experienced rapid expansion. The number of active ETFs (1,531 as of 2024) is now close to the number

⁶ The Bear Stearns Current Yield Fund (YYY) began trading on the American Stock Exchange on March 25, 2008, which is composed of a variety of short-term fixed income instruments. See also Exchange-Traded Funds, Investment Company Act Release No. 28193 (Mar. 11, 2008) [73 Fed. Reg. 14618 (Mar. 18, 2008)] ("2008 ETF Proposing Release").

⁷ For example, T. Rowe Price launched T. Rowe Price Diversified Bond ETF in 2013, see T. Rowe Price Associates, Inc., et al., Investment Company Act Release No. 30336 (Jan. 2, 2013) (order), available at <https://www.sec.gov/files/rules/ic/2013/ic-30336.pdf>; Fidelity launched Fidelity Corporate Bond ETF in 2013, see Fidelity Merrimack Street Trust, et al., Investment Company Act Release No. 30513 (May 10, 2013) (order), available at <https://www.sec.gov/files/rules/ic/2013/ic-30513.pdf>. By 2015, dozens of advisers have requested and granted exemptive order to offer actively managed ETFs. See Investment Company Act Notices and Orders Category: Exchange Traded Funds – Active (available at <https://www.sec.gov/rules-regulations/investment-company-act-notice-orders>).

⁸ These listing criteria include provisions such as minimum market value, minimum trading volume, minimum diversification, the minimum number of index components, among others.

⁹ See BATS Exchange, Inc., Release No. 34-78396 (July 22, 2016) [81 FR 49698 (July 28, 2016)] (order); NYSE Arca, Inc., Release No. 34-78397 (July 22, 2016) [81 FR 49320 (July 27, 2016)] (order). On September 23, 2016, the SEC approved similar rules proposed by NASDAQ Stock Market, LLC (together with BATS and Arca, the "Exchanges"); see The NASDAQ Stock Market LLC, Release No. 34-78918 (Sept. 23, 2016) [81 FR 67033 (Sept. 29, 2016)] (order). Actively managed ETFs that do not satisfy the generic listing standards may still seek to list under the Rule 19b-4 listing process.

¹⁰ 17 CFR 270.6c-11; Exchange-Traded Funds, Investment Company Act Release No. 33646 (Sept. 25, 2019) [84 FR 57162 (Oct. 24, 2019)] (the "ETF Release"). Before the adoption of Rule 6c-11, all ETFs required exemptive relief from the SEC, as the regulations under the Investment Company Act of 1940 did not initially contemplate ETFs.

¹¹ For active ETFs that seek to limit disclosures to protect proprietary strategies and thus are considered non-transparent or semi-transparent, separate SEC exemptive relief is still required. The SEC has granted exemptive relief to certain ETFs permitting them to operate without full portfolio transparency, subject to terms and conditions that seek to ensure effective arbitrage and hedging opportunities, and sufficient market functionality while allowing certain portfolio details to be kept confidential. For example, the semi-transparent active ETFs approved in 2019 include structures such as Precidian ActiveShares Model, T. Rowe Price's Proxy Portfolio Model, Blue Tractor Shielded Alpha Model, and Fidelity Beach Street Model. See also *supra* footnote 7.

¹² More recent industry data suggests that the number of active ETFs has surpassed the number of passive ones in 2025. See, e.g., <https://www.bloomberg.com/news/articles/2025-06-16/active-etfs-now-outnumber-passive-funds-in-industry-watershed-moment>

of passive ETFs (1,907 for the same period).¹³ As shown in Table 1, from 2020 to 2024, the total number of all ETFs increased by 66%, with an average annual growth rate of 14%. Active ETF series grew by over 300% during this period, exhibiting an average annual growth rate of 39%. Over the same period, passive ETFs saw a 15% increase in the number of series, corresponding to an average annual growth rate of 3%. Consequently, the proportion of active ETFs – measured by their number of series relative to all ETFs – grew from 20% in 2020 to 45% in 2024.

Active ETFs comprised approximately 9% of ETF assets by the end of 2024. Active ETFs’ share of total assets under management (AUM) by ETFs has been gradually increasing in recent years, as indicated by Figure 1 Panel A.¹⁴ Specifically, the AUM of active ETFs grew on average by 65% per year, rising from \$122 billion in 2020 to \$768 billion in 2024 (right y-axis). The AUM of passive ETFs has also continued to grow during the same period, experiencing an average annual growth rate of 19% and rising from \$3,963 billion to \$7,709 billion in AUM (left y-axis).¹⁵

Table 1. Number of ETF Series

Year	All ETF		Passive ETF		Active ETF		Active ETF %
	No. of Series	Growth (%)	No. of Series	Growth (%)	No. of Series	Growth (%)	
2020	2,073		1,661		412		20
2021	2,381	15	1,743		638	55	27
2022	2,725	14	1,841	6	884	39	32
2023	2,972	9	1,841	0	1,131	28	38
2024	3,438	16	1,907	4	1,531	35	45
Average		14		4		39	

Source: N-CEN and N-PORT data.

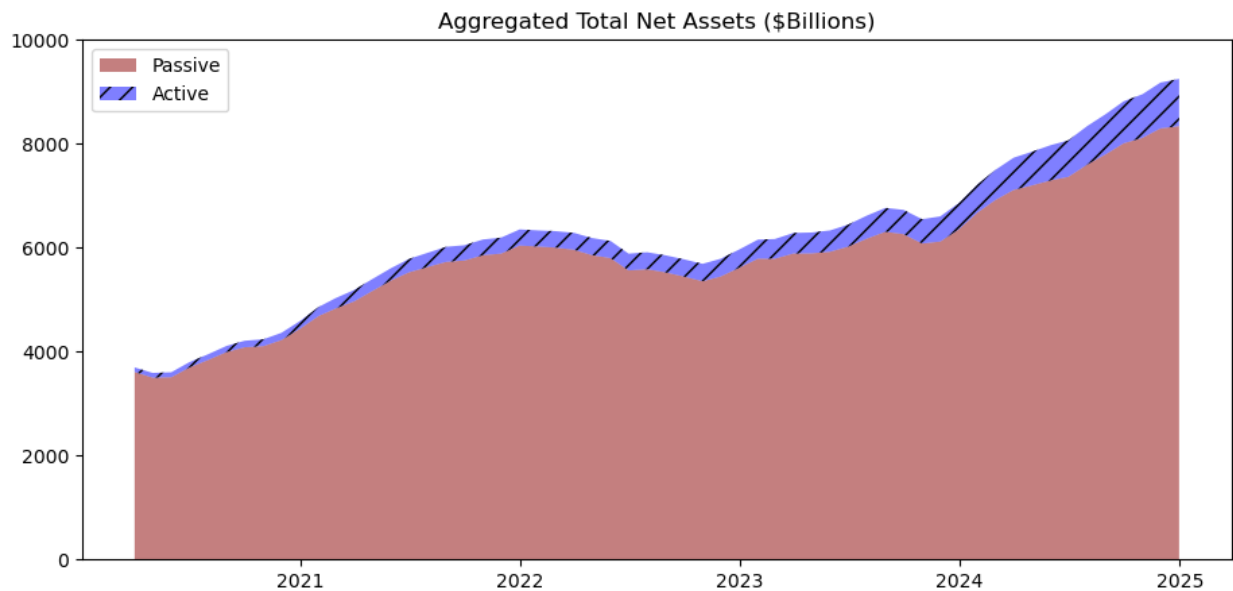
¹³ Data analyses are based on Form N-CEN reporting received by the SEC as of June 30, 2025, for reporting period ending December 31, 2024. Number of series are calculated as a count of the unique combination of Central Index Key (CIK) and Series Identification Number (Series Id) on Form N-CEN. According to more recent Morningstar Direct data, the number of active ETFs is larger than the number of passive ETF series (2,302 and 2,151, respectively, as of August 1, 2025).

¹⁴ Data analyses are based on Form N-PORT reporting received by the SEC as of July 30, 2025, for reporting period ending on December 31, 2024. Total Assets are calculated as the average total assets (Item B.1.a of Form N-PORT) for each series each year and then aggregated separately for active ETFs and passive ETFs.

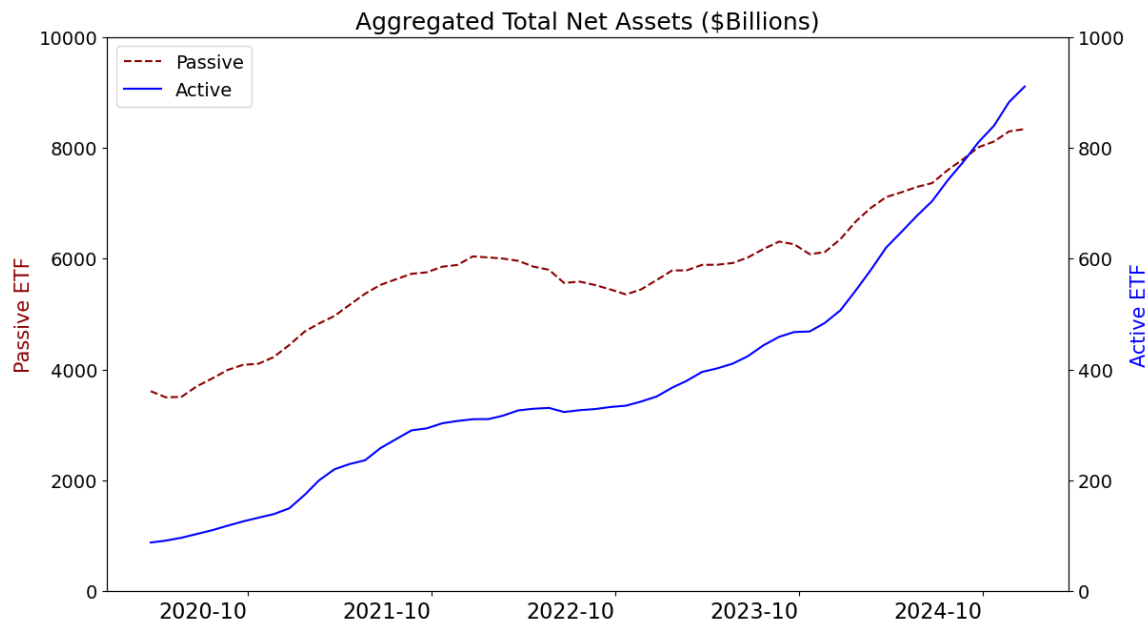
¹⁵ The year-end total assets by passive ETFs are: \$3,963 billion (2020), \$5,575 billion (2021), \$5,650 billion (2022), \$6,134 billion (2023), and \$7,709 (2024). The year-end total assets by active ETFs are: \$122 billion (2020), \$293 billion (2021), \$340 billion (2022), \$452 billion (2023), and \$768 (2024).

Figure 1. Aggregated Total Assets by Type¹⁶

Panel A.



Panel B.

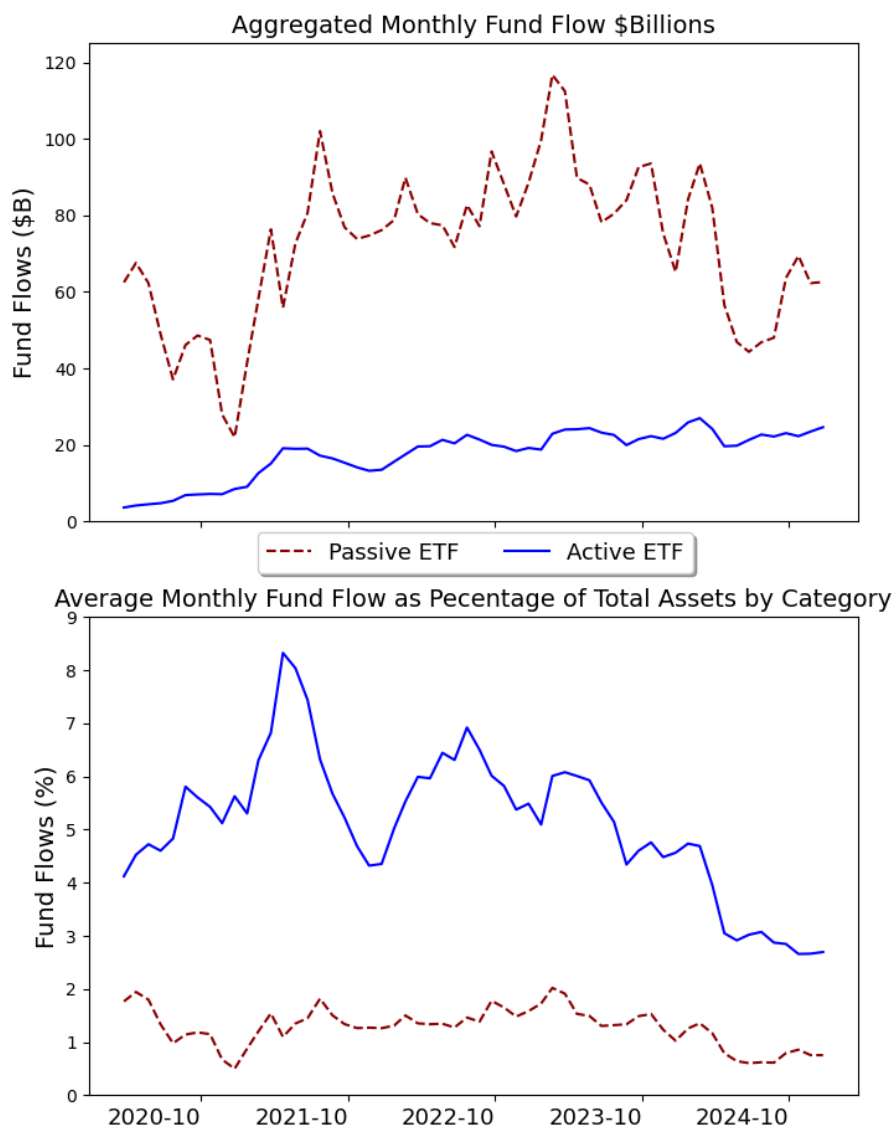


Source: N-CEN and N-PORT data.

¹⁶ For each series, we first calculate the rolling average of total assets of the previous three months; then we aggregate the average monthly assets of all series separately for active ETFs and passive ETFs. See also *supra* footnote **Error! Bookmark not defined.**.

Figure 2 shows that, between 2020 and 2024, active ETFs saw average monthly inflows of 5.1%, and passive ETFs saw average monthly inflows of 1.3%.¹⁷ This growth in the active ETF sector contrasts with the trend observed in mutual funds, where there has been a shift away from active mutual funds.¹⁸ The data also show that the flows of active and passive ETFs are positively correlated.¹⁹

Figure 2. Aggregated Monthly Fund Flows



Source: N-CEN and N-PORT data.

¹⁷ A fund's net flow for each month is calculated by its sales flows plus reinvestment flows minus redemptions flows, all reported on Form N-PORT.

¹⁸ See ICI Factbook 2025, *supra* footnote 2.

¹⁹ The correlation of aggregated dollar flow between active and passive ETFs is 0.42; the correlation of aggregated percentage flow between active and passive ETFs is 0.36.

Fees and Expenses

While passive ETFs track the performance of an index, active ETFs have actively managed portfolios. As shown in Table 2, active ETFs tend to have higher operating expenses, on average, than passive ETFs.²⁰ The asset-weighted average expenses for passive ETFs have been gradually declining for the past few years from 0.16% in 2020 to 0.12% in 2024; the equal-weighted averages remain stable around 0.45%.²¹ In comparison, the asset-weighted average expense ratio for active ETFs has remained within a range of 0.43% to 0.5%, while the equal-weighted average expense ratio has increased over time.²² The most recent average expense ratio for active ETFs as of 2024 is 25 to 37 basis points (bps) higher than those for passive ETFs.²³

Table 2. ETF Operating Expenses as Percentage of Net Assets

Year	Asset-weighted		Equal-weighted	
	Passive	Active	Passive	Active
2020	0.16	0.48	0.44	0.66
2021	0.13	0.50	0.45	0.69
2022	0.13	0.46	0.45	0.67
2023	0.13	0.43	0.45	0.68
2024	0.12	0.49	0.45	0.70

Source: N-1A and N-PORT data.

Fund Families

Over the past decade the U.S. fund industry has experienced a decrease in the number of fund families, coupled with an increase in the concentration of assets managed by the largest fund families.²⁴ For example, in 2014, the largest four fund families together managed 43% of assets; by 2024, this proportion has increased to nearly 60%.²⁵

Investors' demand for passive funds may have contributed to the increasing concentration of assets managed by large fund families with a large proportion of assets in index funds.²⁶ For example, Figure 3 suggests that BlackRock, Vanguard, State Street, and Schwab dominate the market share within the

²⁰ Data analyses are based on Form N-1A reporting received by the SEC as of March 31, 2025, for reporting period ending on December 31, 2024. Funds' operating expenses are based on Item 3 Total Annual Fund Operating Expenses of Form N-1A.

²¹ Asset-weighted average expense ratio is a calculation of the average expense ratio of a category of funds based on the dollar amount invested in each fund. Equal-weighted average expense ratio is the arithmetic average of funds' expense ratios. Generally, large funds have lower expense ratios; as a result, the asset-weighted expense ratio is typically lower than the equal-weighted average expense ratio.

²² This is possibly explained by an increasing number of active ETFs with relatively small AUM but higher operating expenses.

²³ The equal-weighted (asset-weighted) average expense ratio for active and passive ETFs are 0.7% vs 0.45% (0.49% vs 0.12%).

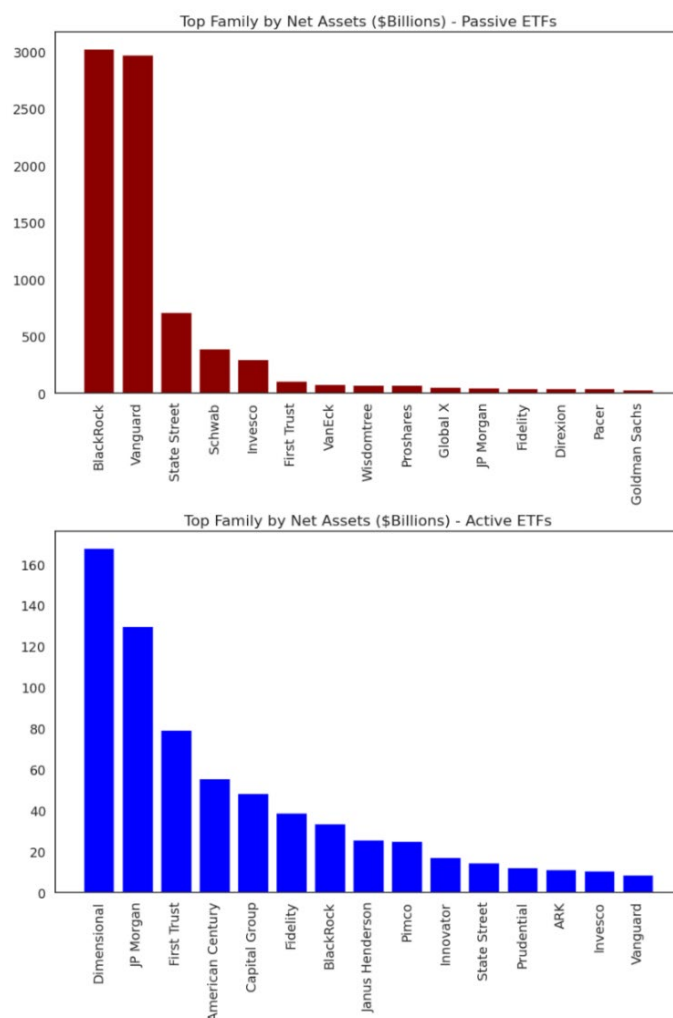
²⁴ See ICI Factbook 2025, *supra* footnote 2.

²⁵ See [MORNINGSTAR RSCH., FUND FAMILY DIGEST: US IN 2024](https://www.morningstar.com/business/insights/research/fund-family-150), at 6 (2024), available at <https://www.morningstar.com/business/insights/research/fund-family-150>.

²⁶ See, e.g., Caitlin D. Dannhauser & Harold D. Spilker III, *The Modern Mutual Fund Family*, 148 J. FIN. ECON. 1 (2023). The study finds that fund families with greater representation of index funds generate higher gross performance and have lower management and operating expenses.

passive ETF segment. Market concentration in the passive ETF segment is also considerably higher than in the broader U.S. asset management industry, with the largest four fund families consistently holding at least 87% of the market share (compared to 60% for the broader U.S. asset management industry) and the largest ten fund families averaging 97% (see Table 3). In contrast, the active ETF market exhibits a significantly lower market concentration and different leading issuers, including Dimensional, JP Morgan, First Trust, American Century and Capital Group Families (see Figure 3). As of 2024, the largest four (ten) families account for 58% (80%) of the active ETF market share (see Table 3).²⁷

Figure 3. Top 15 Families by Net Assets²⁸



Source: N-CEN and N-PORT data.

²⁷ Concentration measures include total market share of the top 4 and top 10 Fund Families, and also in Table 3 the Herfindahl-Hirschman Index. Herfindahl-Hirschman Index (HHI), a commonly accepted measure of market concentration. The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. See <https://www.justice.gov/atr/herfindahl-hirschman-index>.

²⁸ Fund family indicators are from funds' reporting on Form N-CEN (Item B.5.) and funds' net assets are from Form N-PORT as of December 2024.

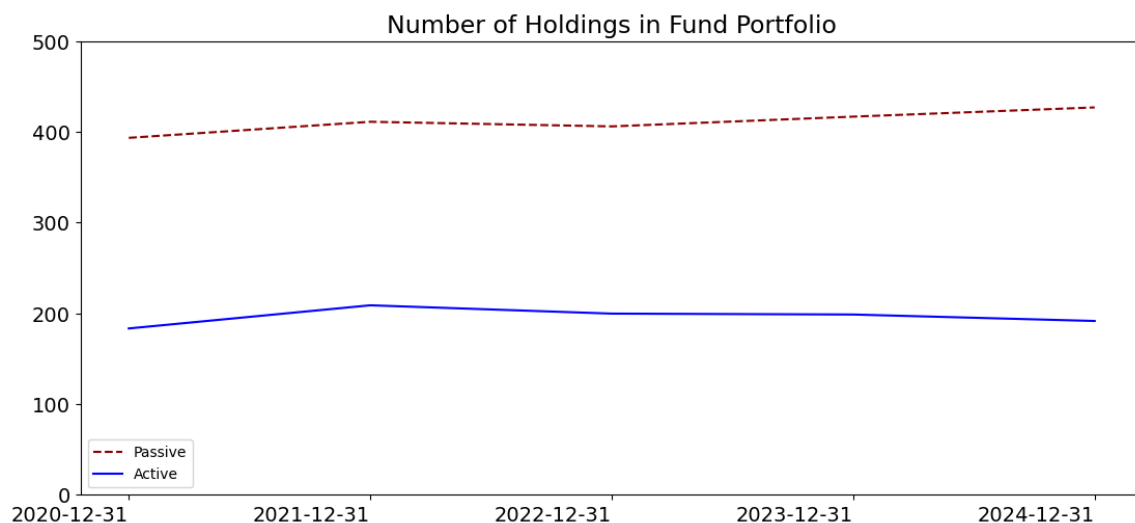
Table 3. Market Concentration by Fund Family²⁹

Panel A. Passive ETF			
Year	Top 4 Market Share (%)	Top 10 Market Share (%)	Herfindahl-Hirschman Index
2020	89	97	0.31
2021	89	97	0.30
2022	89	97	0.29
2023	88	97	0.29
2024	87	96	0.28
Panel B. Active ETF			
Year	Top 4 Market Share (%)	Top 10 Market Share (%)	Herfindahl-Hirschman Index
2020	64	88	0.13
2021	59	85	0.10
2022	57	83	0.11
2023	61	81	0.12
2024	58	80	0.11

Source: N-CEN and N-PORT data.

ETFs' Portfolio Holdings

Passive ETFs typically hold a considerable number of securities, known as index constituents, in their portfolio since the indices they track generally have a large number of index constituents.³⁰ Active ETFs, on the other hand, may not necessarily aim at broad market coverage and therefore are more likely to hold fewer securities. As shown in Figure 4, active ETFs on average hold half the number of assets in their portfolio compared to passive ETFs.

Figure 4. Number of Holdings in Fund Portfolio³¹

²⁹ See *Id.*

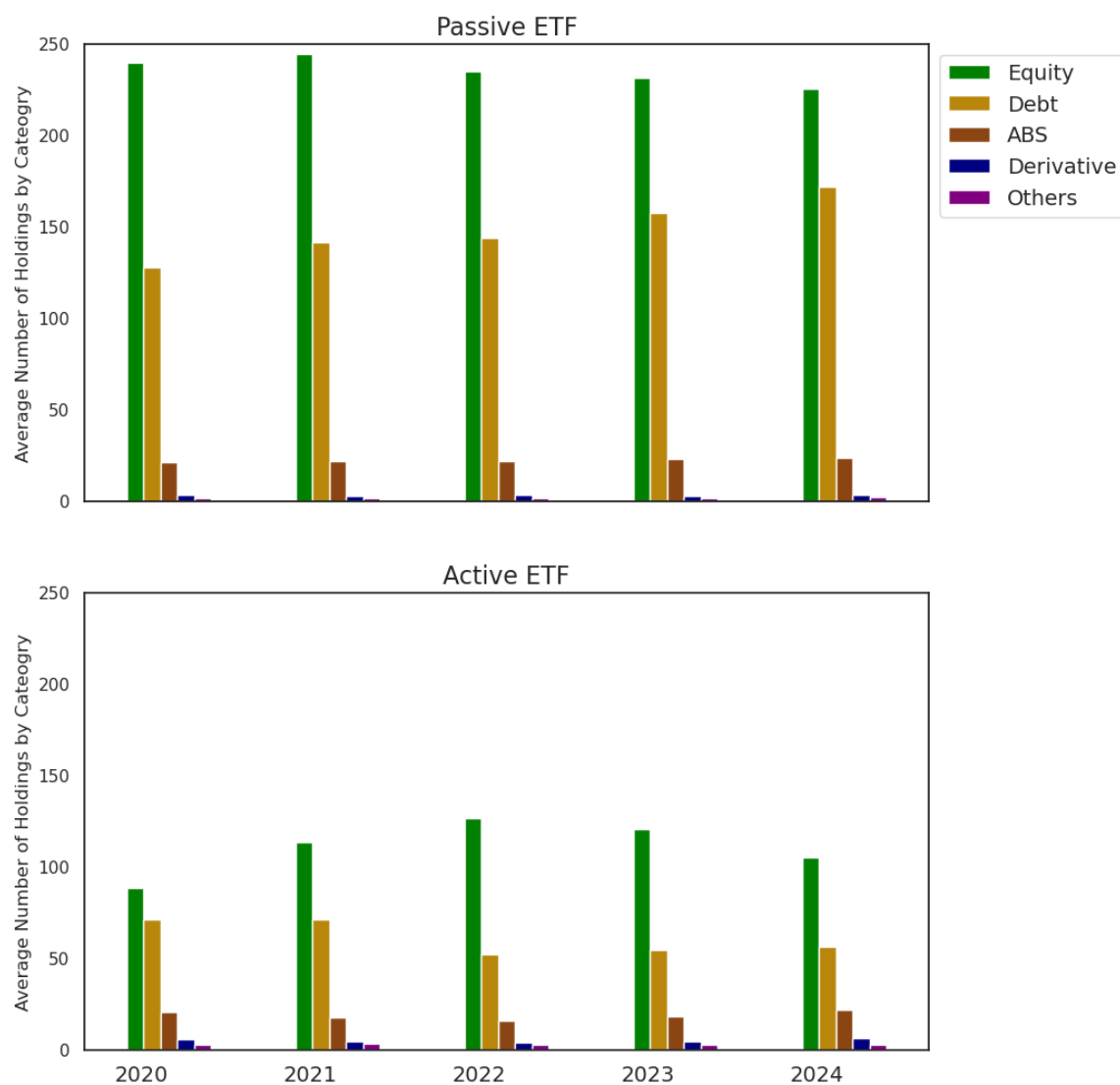
³⁰ Synthetic passive funds, which use financial engineering to replicate the return of a selected index, typically do not hold the underlying securities of the index. Therefore, these funds may hold fewer securities and financial instruments in their portfolios.

³¹ The data is obtained from N-PORT filings.

Source: N-PORT data.

Furthermore, Figure 5 suggests that passive ETFs tend to have a higher average number of holdings within each asset category.³² Active ETFs on the other hand usually incorporate a greater number of derivative contracts within their portfolios.³³

Figure 5. Composition of Number of Holdings by Asset Category



Source: N-PORT data.

³² Please note that our comparison of active and passive ETFs should be considered with a caveat since a more precise and direct comparison of active and passive funds can be achieved in principle, for example, by comparison of funds with the same benchmark. However, such exercise is beyond the scope of this paper.

³³ For example, active ETFs typically have 2.6% of their portfolio holdings, by number of holdings, in derivatives, while passive ETFs use fewer than 1% in derivatives.

As of 2024, both active and passive ETFs frequently incorporate derivatives into their portfolios, with over 40% of funds utilizing derivatives (Table 4 and Figure 5). The most prevalent type of derivative among both active and passive ETFs is Equity Derivatives. Passive ETFs predominantly use Equity and Foreign Exchange derivatives, with about 42% and 6% of funds holding these derivative types, respectively, as of 2024.³⁴ Active ETFs more often utilize Commodity, Credit, and Interest Rate derivatives, with 3.91%, 3.73%, and 11.49% of funds, respectively, investing in these derivative categories as of 2024. Although the proportion of active ETFs investing in Equity derivatives has slightly increased in the past five years (from 33.97% in 2020 to 39.85% in 2024), overall, the proportions of ETFs using derivatives in their portfolios have remained stable, showing little variability over the years.

Table 4. Percentage of Series with Derivative Holdings by Derivative Types³⁵

Panel A. Passive Funds						
Year	Commodity	Credit	Equity	Foreign Exchange	Interest Rate	Other
2020	0.42	0.16	42.77	8.68	2.31	6.42
2021	0.53	0.16	42.30	8.23	1.95	1.95
2022	0.65	0.20	41.59	8.34	2.05	0.50
2023	0.98	0.20	40.97	8.00	2.11	0.79
2024	1.08	0.24	41.97	6.32	2.20	0.59

Panel B. Active Funds						
Year	Commodity	Credit	Equity	Foreign Exchange	Interest Rate	Other
2020	4.01	2.61	33.97	6.45	10.28	0.70
2021	3.27	2.92	34.35	5.84	10.63	0.58
2022	3.38	3.74	35.43	7.21	10.68	0.82
2023	3.73	3.87	36.79	7.54	10.65	0.69
2024	3.91	3.73	39.85	6.83	11.49	0.53

Source: N-PORT data.

Portfolio Management

In this section we analyze the degree of active portfolio management in active ETFs.³⁶ Activeness of portfolio management is often measured by the deviation of fund holdings from a diversified benchmark portfolio. To compare the portfolio management practices of active and passive ETFs, we use data from Morningstar Direct database,³⁷ from which we obtain estimated Benchmark Index Model R-Squared to

³⁴ Note that traditional leveraged ETFs rely on derivatives extensively due to the nature of their strategies.

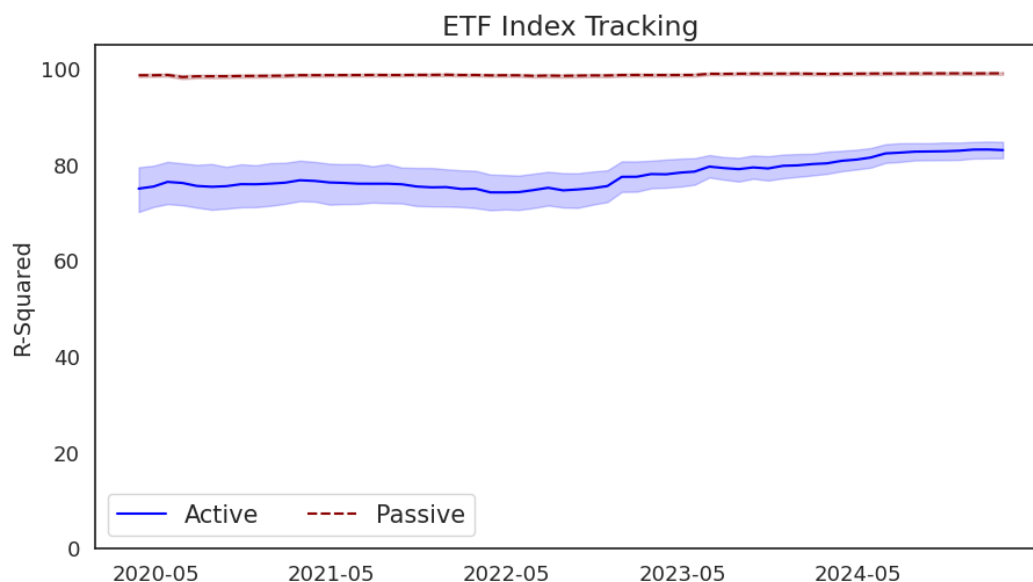
³⁵ Percent of funds with derivative holdings are calculated as the number of funds with reported holdings on Form N-PORT with derivatives asset types, divided by the total number of ETFs in the reporting month. Derivatives asset types include derivative-commodity, derivative-credit, derivative-equity, derivative-foreign exchange, derivative-interest rate, derivatives-other.

³⁶ Active portfolio management refers to a fund's attempt to outperform a benchmark through techniques such as investment selection, market timing, investment style, among others.

³⁷ Morningstar provides data on stocks, mutual funds, and ETFs, as well as other relevant investment data.

examine the level of activeness of active ETF managers.³⁸ R-Squared is a commonly used metric for determining how closely a fund's portfolio returns align with its underlying benchmark index. A higher R-Squared value indicates that the fund returns are more closely aligned with the selected benchmark, which may suggest a lower degree of active portfolio management. Note that a higher or lower degree of active management as measured by R-Squared does not inherently implicate better performance.³⁹ R-Squared measures are estimated by regressing the fund returns against its benchmark returns, indicating the proportion of the fund return variance attributable to the variance of the benchmark returns.⁴⁰

Figure 6A R-squared of Active and Passive ETFs.⁴¹



Source: Morningstar Direct database.

As shown in Figure 6A, passive ETFs exhibit an average R-Squared value that is close to 100%. This aligns with expectations, as it indicates that the variation in a passive fund return is nearly completely explained by that of the index it tracks. Active ETFs on the other hand have lower R-Squared values on

³⁸ See, e.g., K. J. Martijn Cremers & Antti Petajisto, *How Active Is Your Fund Manager? A New Measure That Predicts Performance*, 22 REV. FIN. STUD. 3329 (2009); Yakov Amihud & Ruslan Goyenko, *Mutual Fund's R2 as Predictor of Performance*, 26 REV. FIN. STUD. 667 (2013). R-Square estimations are obtained from Morningstar Direct. Please refer to Morningstar link available [here](#) for details on the custom calculations of R-squared, beta, and other variables. Analysis of Morningstar data includes a sample period from January 2019 to January 2025.

³⁹ For a relevant discussion of mutual funds' activeness and performance see, for example, Antti Petajisto, *Active Share and Mutual Fund Performance*, 69 FIN. ANALYSTS J. 73 (2013).

⁴⁰ According to the Morningstar database, R-Squared is estimated using rolling 36-month regressions of gross monthly fund returns on the Primary Portfolio reported Benchmark for each fund.

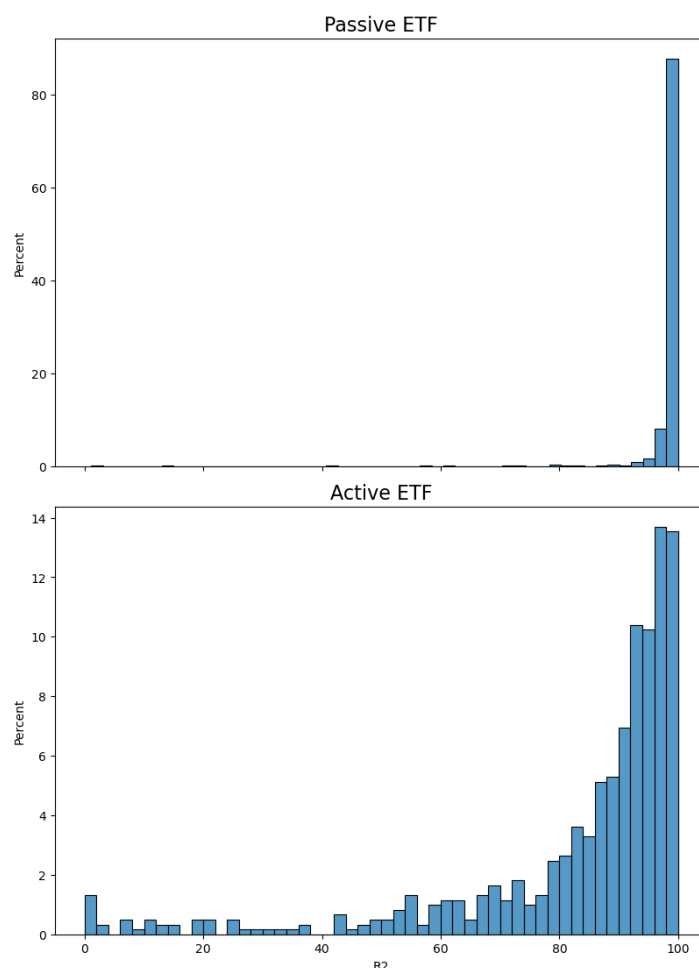
⁴¹ The data on R-squared are obtained from the Morningstar Direct database. R-Squared is estimated using rolling 36-month regressions of gross monthly fund returns on the Portfolio reported Focus Prospectus Benchmark, which selects from the three prospectus disclosed benchmarks that most closely aligns with the fund's strategy, for each fund. The shaded area represents 95% confidence interval.

average, ranging between 70% and 80%.⁴² This variation in the average activeness appears to be at least partially driven by the changing composition of the funds. For example, the data suggests that very active ETFs may be becoming less common: in 2021, 14.1% of active ETFs had an R-Squared below 30%, whereas in 2024, only 5.3% of Active ETFs had an R-Squared below 30%. Meanwhile, less active ETFs may be becoming more prevalent – the proportion of active ETFs with an R-Squared over 90% increased from 47.8% in 2021 to 54.8% in 2024. Furthermore, among active ETFs, the R-Squared values show a wide variation, with a significant number of funds exhibiting an R-Squared value below 80% (see Figure 6B.)⁴³

⁴² Active ETFs, being a recent development in financial markets, are also a new area of research. One study indicates that newer ETFs tend to be more active than older ETFs based on their measure of activeness; see David Easley et al., *The Active World of Passive Investing*, 25 REV. FIN. 1433 (2021).

⁴³ If a fund tracks the underlying benchmark exactly, the R-Squared estimate will be 100%. It is not necessarily true, however, that if R-Squared equals 100%, the fund's portfolio holdings do not deviate from the benchmark holdings. It is possible that for certain funds that the prospectus benchmarks do not fully represent the fund's investment strategy.

Figure 6B. R-Squared Distribution - December 2024⁴⁴



Source: Morningstar Direct database.

Additionally, we investigate the extent to which active portfolio management is reflected in funds' portfolio turnover.⁴⁵ The data show that active ETFs have a higher turnover than passive ETFs. For instance, the average portfolio turnover of active ETFs is 36% per year, while the average portfolio turnover for passive ETFs is 31% per year, which is consistent with more active portfolio management by active ETFs.⁴⁶ As shown in Figure 6C, the median portfolio turnover for active ETFs is also higher than

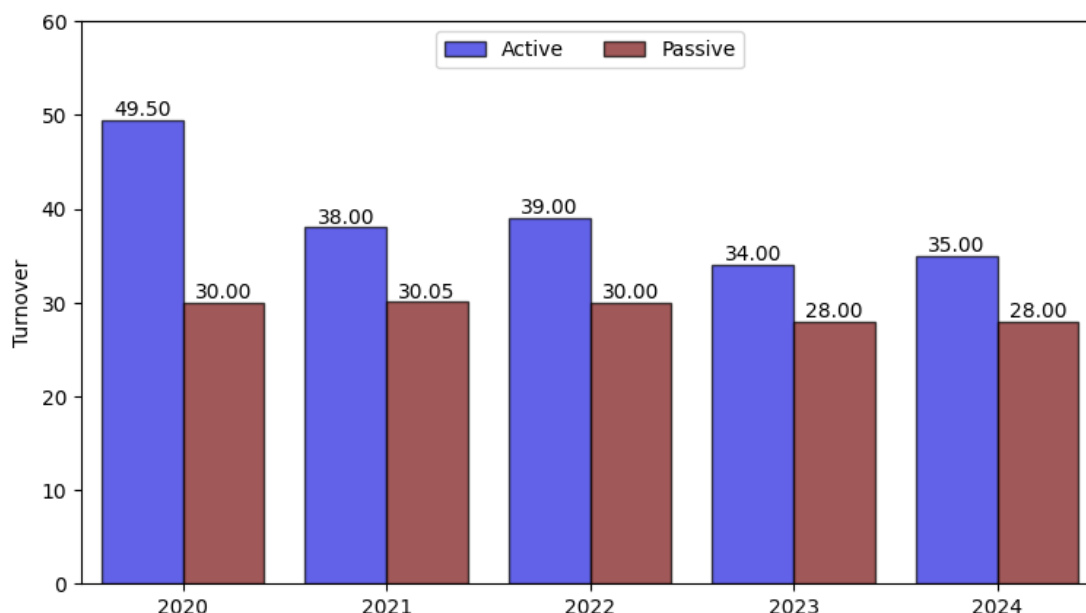
⁴⁴ The plot also shows a kernel density estimate of the R-Squared distribution. The data on estimated R-Squared comes directly from the Morningstar Direct database.

⁴⁵ See e.g., Mark Grinblatt & Sheridan Titman, *A Study of Monthly Mutual Fund Returns and Performance Evaluation Techniques*, 29 J. FIN. & QUANTITATIVE ANALYSIS 419 (1994); S. P. Kothari & Jerold B. Warner, *Evaluating Mutual Fund Performance*, 56 J. FIN. 1985 (2001).

⁴⁶ Portfolio Turnover is obtained from the Morningstar Direct database, which defines it as follows: "A measure of how frequently an investment buys or sells its holdings. Expressed as a percentage of how much of the investment's holdings have been traded over a given year as reported in the investment's periodic disclosure document. There are many methods for calculating turnover ratios. This data is collected from disclosure documents and therefore, corresponds to regulator turnover calculation and provision requirements in the investment's domicile."

for the passive ETFs; however, the median portfolio turnover has also declined from 49.50% in 2020 to 35% in 2024.

Figure 6C. Median ETF Portfolio Turnover



Source: Morningstar Direct database.

Prevalent Investment Categories of Active ETFs

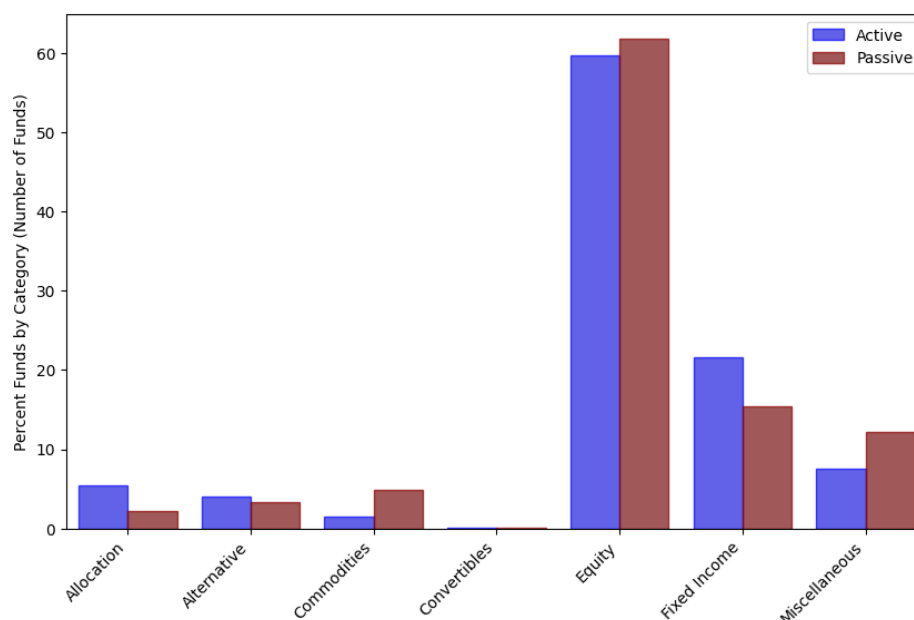
To understand the landscape of active ETFs, we also consider funds across different investment categories.⁴⁷ Although equity funds dominate both passive and active ETF segments, active ETFs differ from passive ETFs in the distribution of their investment categories. For instance, there is a slightly higher proportion of fixed income active ETFs relative to passive ones, as indicated by the number of funds (22% vs. 15%, see Figure 7) and net assets (about 33% vs. about 16%, see Table 5) as of 2024.⁴⁸

The investment category composition remains relatively stable among passive ETFs. There is, however, a more significant dynamics in the relative size of assets by investment category among active ETFs. For example, active equity ETFs grew substantially between 2020 and 2024, from about 37% in 2020, to more than 60% in 2024. This proportion, however, is still much lower than that of passive ETFs, which average 80% in 2024 (but increased modestly from 78% in 2020).

⁴⁷ Investment category information is obtained from the Morningstar Direct database based on the field "Global Broad Category Group."

⁴⁸ Morningstar defines a fund's net assets as the difference between a fund's assets and its liabilities.

Figure 7. Shares of Total Number of Active and Passive ETFs by Investment Category



Source: Morningstar Direct database.

Table 5. Percentage of Net Asset by Investment Category*

Panel A: Passive ETF							
Year	Allocation	Alternative	Commodities	Convertibles	Equity	Fixed Income	Miscellaneous
2020	0.2	0.4	2.7	0.2	77.1	18.4	1.1
2021	0.2	0.7	1.9	0.1	79.7	16.2	1.3
2022	0.2	0.3	2.0	0.1	77.8	18.6	1.1
2023	0.1	0.5	1.6	0.1	78.9	17.6	1.2
2024	0.1	1.3	1.6	0.1	80.0	15.8	1.1
Panel B: Active ETF							
Year	Allocation	Alternative	Commodities	Convertibles	Equity	Fixed Income	Miscellaneous
2020	2.2	0.5	1.8	0.2	36.9	58.3	0.3
2021	2.4	1.1	2.3	0.1	47.5	46.3	0.3
2022	2.0	0.9	3.0	0.1	53.6	40.0	0.5
2023	1.3	1.0	1.5	0.0	62.3	33.3	0.6
2024	1.1	1.3	0.8	0.0	61.9	32.6	2.2

Source: Morningstar Direct database.

Conclusion

Active ETFs have experienced significant growth and inflows for the past five years. Though active ETFs represent a relatively small portion of the overall ETF market in terms of the managed assets, the growth rate of the number of active ETFs has outpaced that of the passive ETFs, and currently the number of available active ETFs is comparable to that of the passive ETFs. Active funds are more likely to utilize derivatives and invest in a broader range of investment categories beyond equity than passive ETFs.

Additionally, the active ETF families appear to be less concentrated compared to the passive ETF families. Active ETFs also exhibit a high level of active management, as indicated by a lower level of return alignment with the underlying benchmark return and a high portfolio turnover.