

WisdomTree European thematic monthly update

November 2024

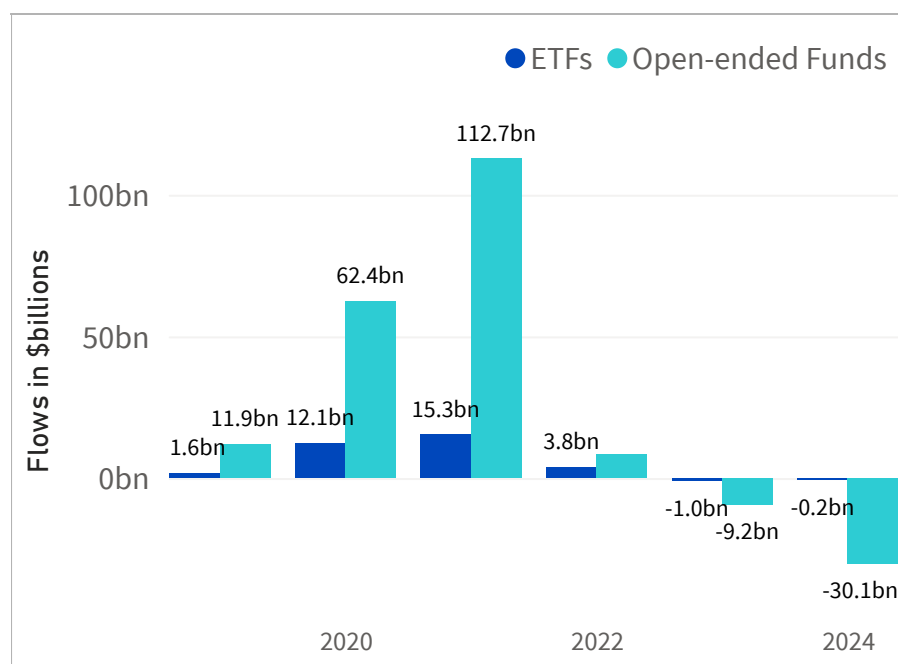
Thematic universe overview

+ AUM in thematic ETFs and open-ended funds rose to \$332.2 billion in November, despite recording outflows of \$3.1 billion during the month. This increase was primarily driven by strong market performance. The market share of thematic ETFs increased slightly to a record high of 14.3%, with AUM reaching an all-time high of \$47.6 billion on a monthly basis.

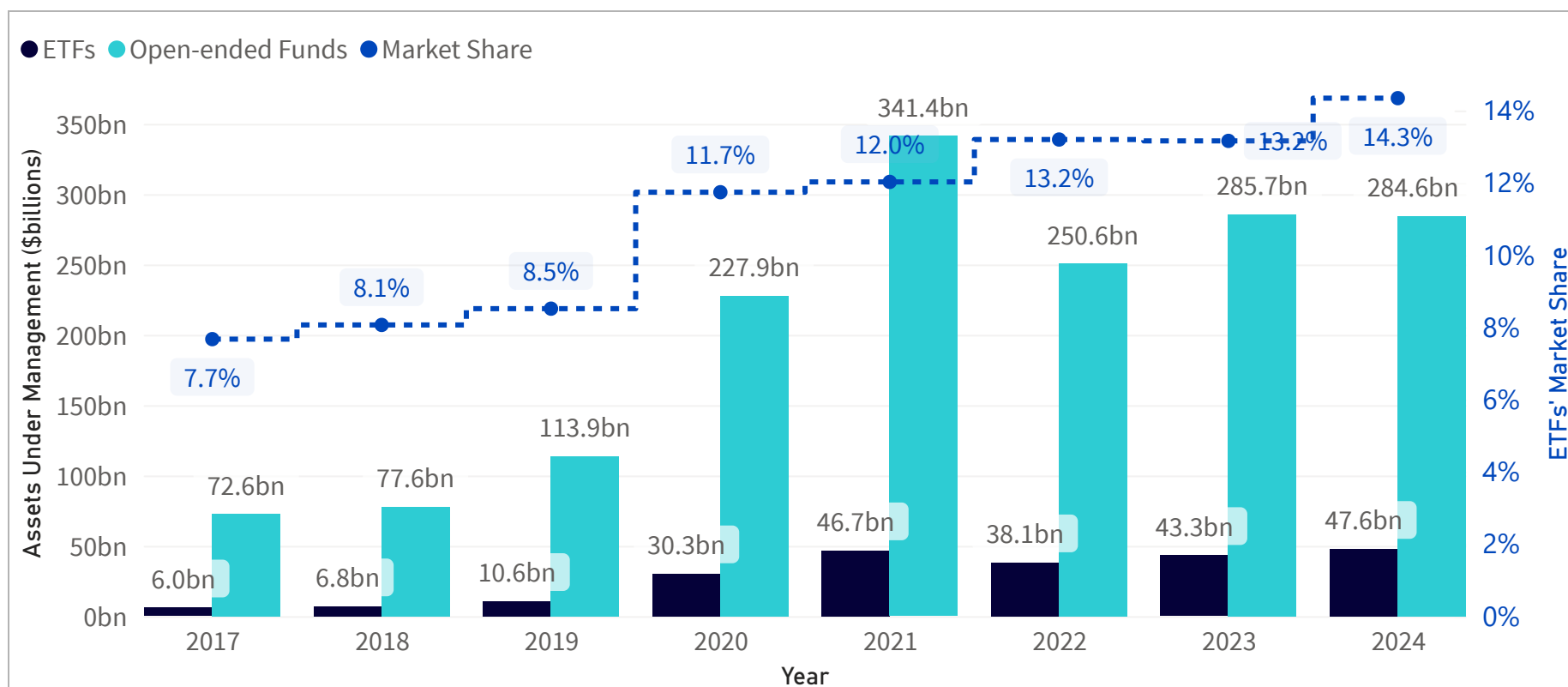
+ Performance in November rebounded from the weakness in October, with 15 themes outperforming the MSCI ACWI, which returned 3.7%. A total of 34 themes closed the month with positive returns. “Blockchain” emerged as the best-performing theme for November, delivering a 24.8% return and maintaining its position as the top-performing theme year-to-date (YTD). In contrast, “Decarbonisation” experienced a decline of 3.3%, making it the worst-performing theme of the month.

+ Thematic open-ended funds faced outflows of \$3.0 billion in November, exceeding the \$2.8 billion recorded in October. Meanwhile, thematic ETFs recorded relatively modest outflows of \$162 million for the month. Notably, thematic open-ended funds have seen consistent monthly outflows over the past 12 months.

Recent yearly flows in Europe



Europe-domiciled thematic AUM evolution and ETFs' market share



Source: WisdomTree, Morningstar, Bloomberg. All data as of 30/11/2024 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar. More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance, and any investments may go down in value.**

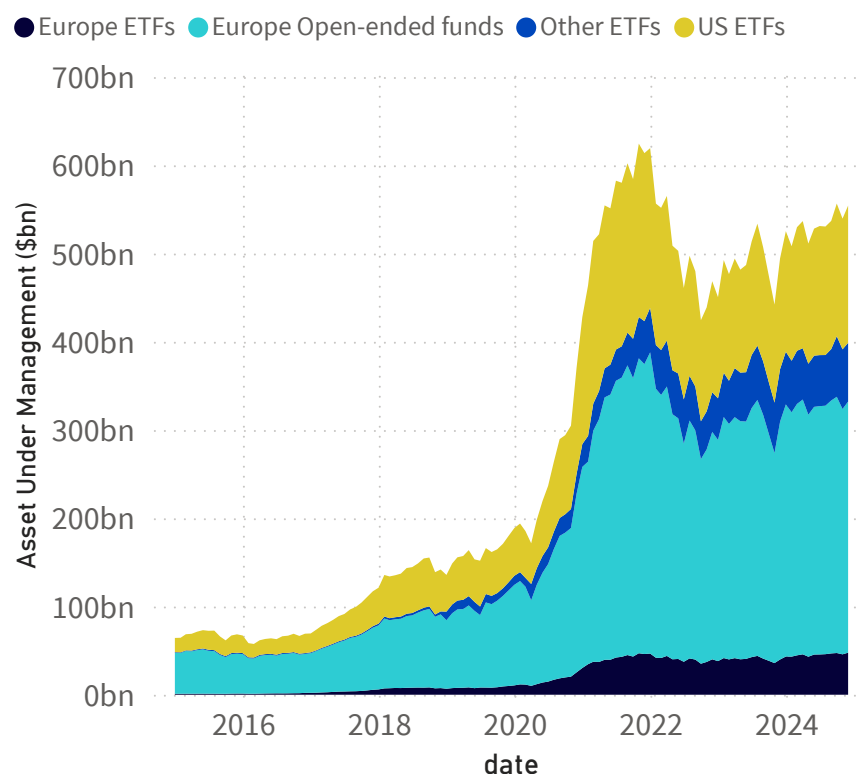
Thematic universe overview (continued)

+ The combined AUM in global thematic ETFs and open-ended funds increased to \$554.2 billion, driven by strong market performance. Specifically, the AUM in European thematic ETFs reached a new all-time high of \$47.6 billion in November, while the AUM in European open-ended thematic funds stood at \$284.6 billion, \$56.8 billion below their historical peak in December 2021.

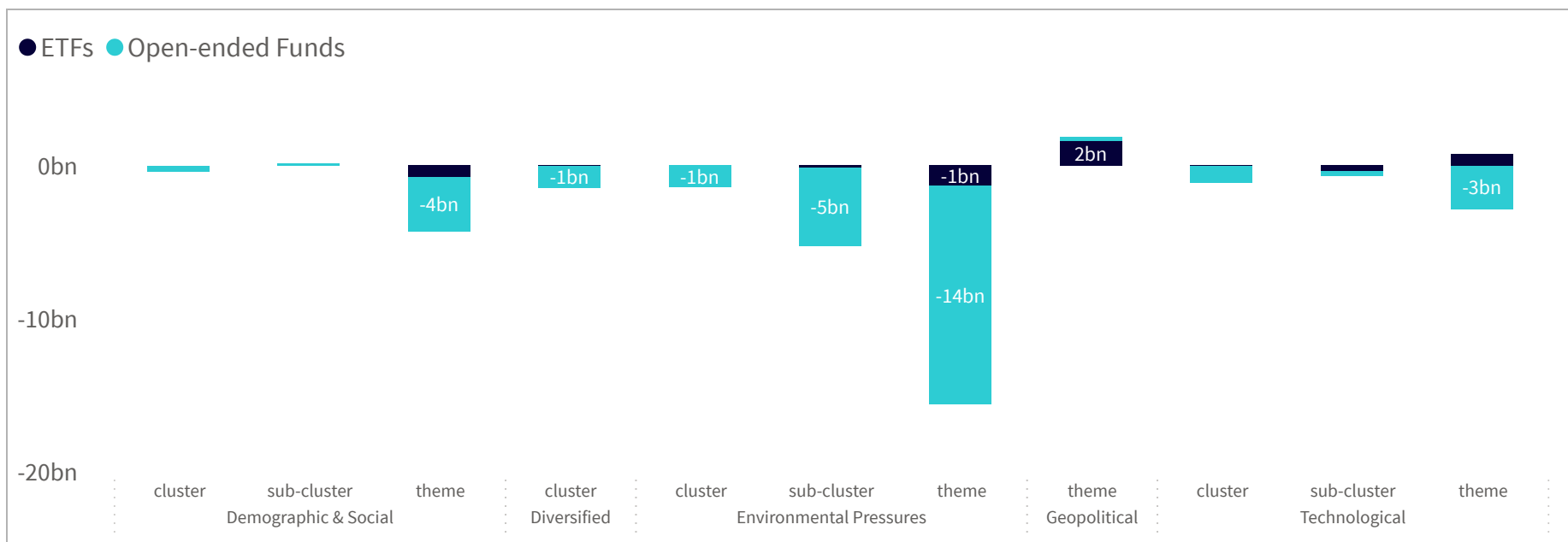
+ In Europe, the “Geopolitical Shifts” cluster was the only one to record inflows in November, attracting \$339 million across ETFs and open-ended funds. YTD, this cluster has garnered approximately \$1.9 billion in inflows, with \$1.6 billion directed towards ETFs. Conversely, the “Environmental Shifts” cluster experienced the largest outflows, losing \$2.4 billion in November and \$22.2 billion YTD.

+ As of the end of November, “Environmental Pressures” remained the largest thematic cluster in Europe, with \$124.9 billion in assets, closely followed by “Technological Shifts” at \$120.9 billion. Continued YTD outflows from “Environmental Pressures” have reduced the gap between these two clusters to just \$4 billion.

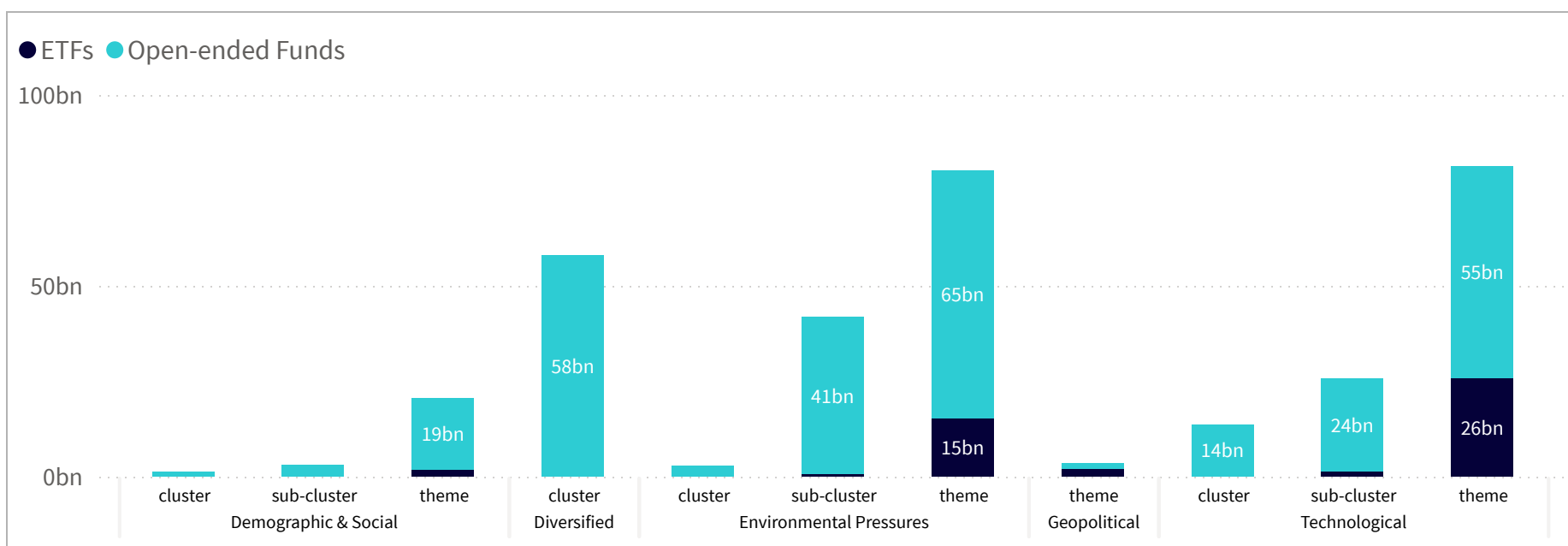
AuM in Thematics by region (Last 10Y)



YTD flows in Europe by wrapper in cluster, sub-cluster and focused themes



AuM in Europe by wrapper in cluster, sub-cluster and focused themes



Source: WisdomTree, Morningstar, Bloomberg. All data as of 30/11/2024 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar. More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance, and any investments may go down in value.**

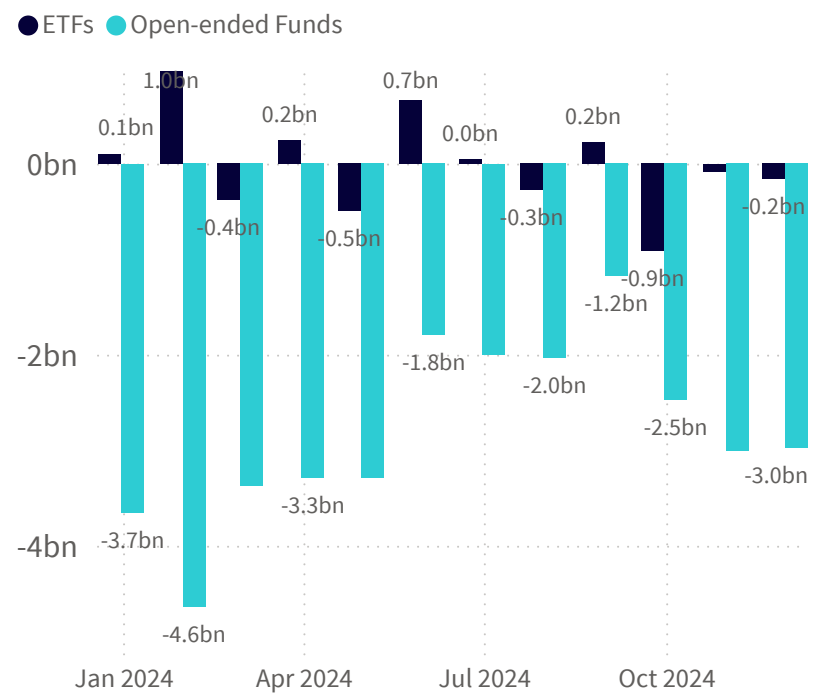
Thematic flows in Europe

+ November recorded net outflows from thematic ETFs (\$162 million) and open-ended funds (\$3.0 billion). Open-ended funds have consistently experienced outflows over the past 12 months, ranging between \$1.2 billion and \$4.6 billion per month. ETFs, however, showed greater resilience, with inflows recorded in five of the last 12 months.

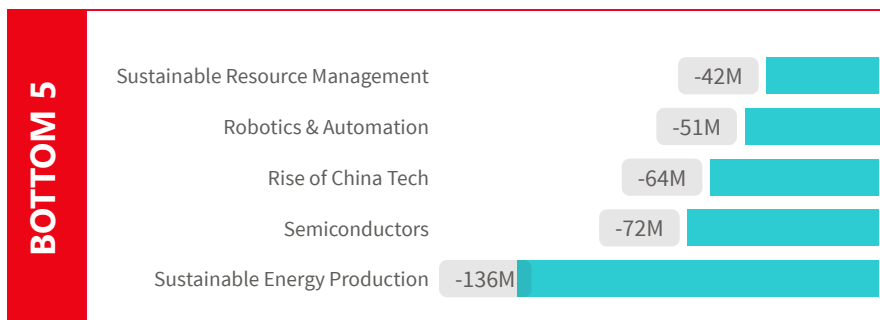
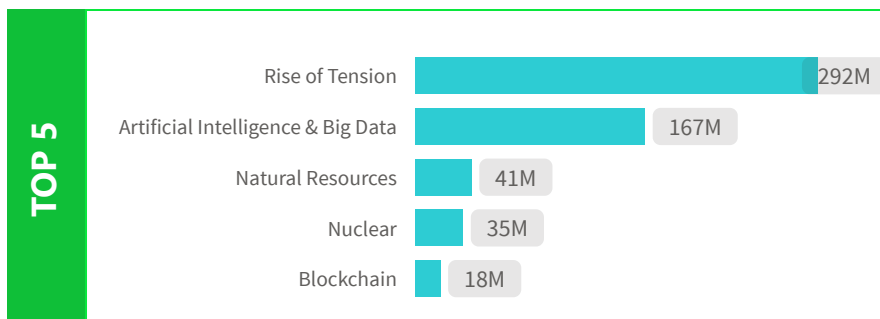
+ “Rise of Tension” theme led November’s inflows with \$292 million. On a year-to-date basis, the combined inflows to ETFs and open-ended funds in this theme reached \$1.6 billion, surpassing the \$1.5 billion combined YTD inflows to “AI and Big Data,” making it the top YTD theme by inflows. Despite October outflows, “AI and Big Data” attracted \$105 million in November, making it the second-best theme for inflows during the month. “Near/Reshoring,” buoyed by the outcome of the U.S. presidential election, ranked third with \$89 million in November inflows.

+ On the outflows side, “Sustainable Energy Production” led with \$884 million in November, increasing its YTD outflows to \$8.4 billion. “HealthTech” and “Sustainable Resource Management” followed, rounding out the three worst-performing themes in terms of flows. Collectively, these three themes have experienced \$11.9 billion in YTD outflows.

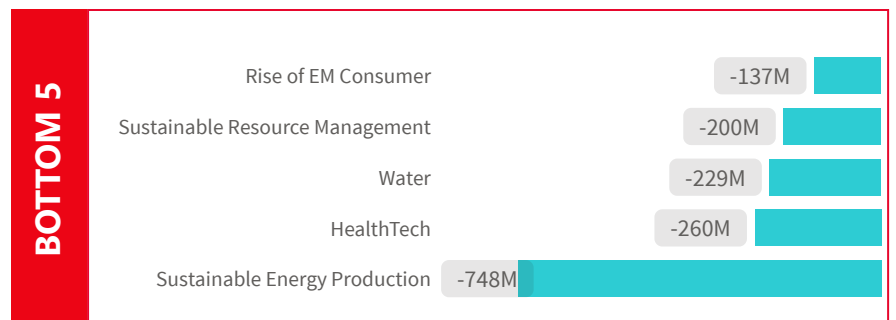
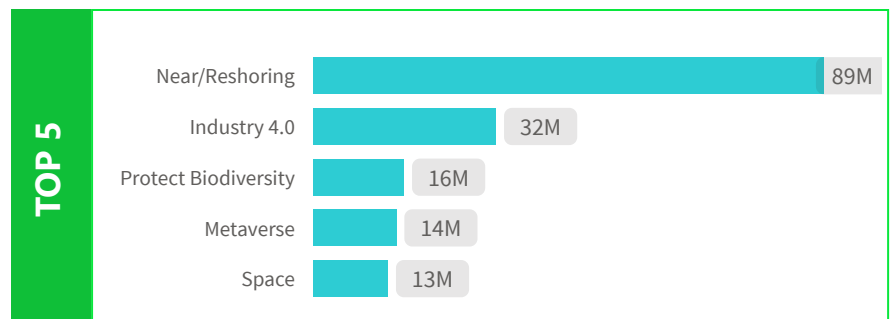
Month-on-month thematic flows



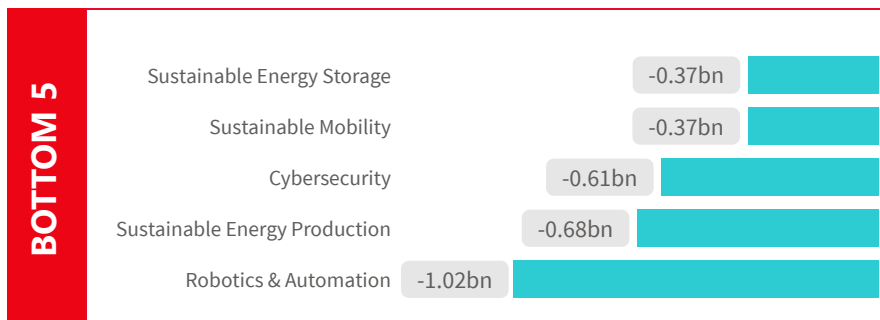
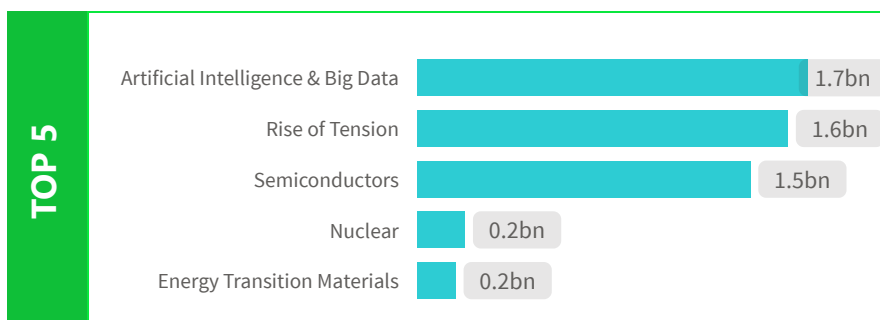
November Top/Bottom flows in Europe ETFs



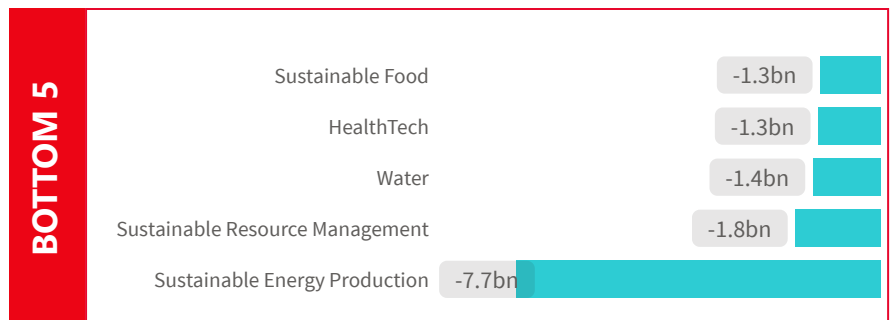
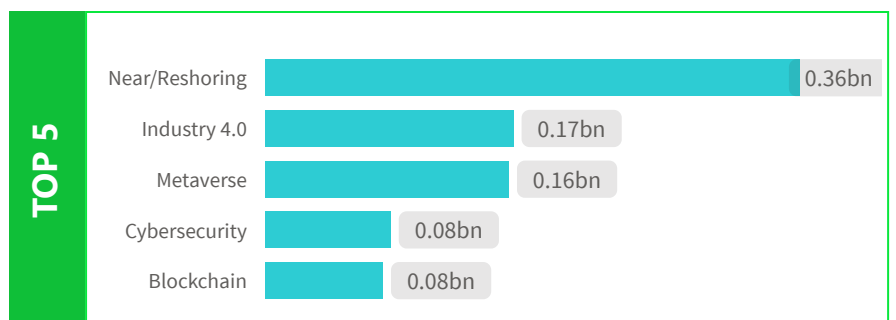
November Top/Bottom flows in Mutual Funds



YTD Top/Bottom flows in Europe ETFs



YTD Top/Bottom flows in Mutual Funds



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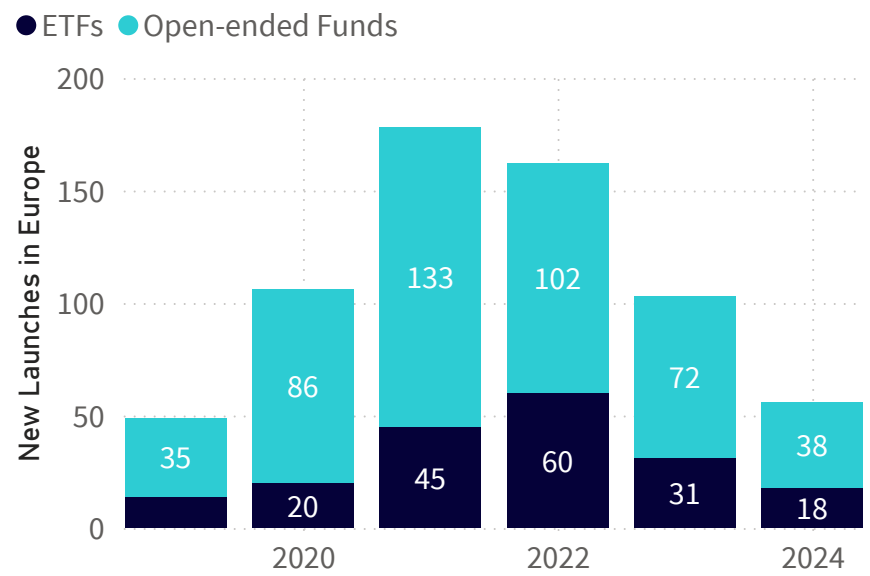
Thematic performance and launches in Europe

+ In November, 15 themes outperformed the market, with the top 10 performing themes all belonging to the “Technological Shifts” cluster. “Blockchain” continued its strong showing with a 24.8% return in November and 47.2% YTD, mirroring the robust performance of cryptocurrencies. “Space” delivered an 18.6% return, entering the top five YTD performers. “Cloud Computing” maintained its momentum from October, rising 14.3%, and ranked among the top three performers for the month.

+ On the other hand, “Decarbonisation,” impacted by the outcome of the U.S. presidential election, declined by 3.3%, becoming the worst-performing theme for November and one of the bottom five YTD. “Energy Transition Materials” fell by 2.9%, reversing its YTD performance to -0.3%. “Rise of EM Consumer” declined by 2.6%, completing the trio of the month’s worst-performing themes. Weak returns in “Semiconductors” persisted, contributing to reduced flows, with the theme experiencing \$72 million in outflows during November, reversing earlier upward trend in 2024.

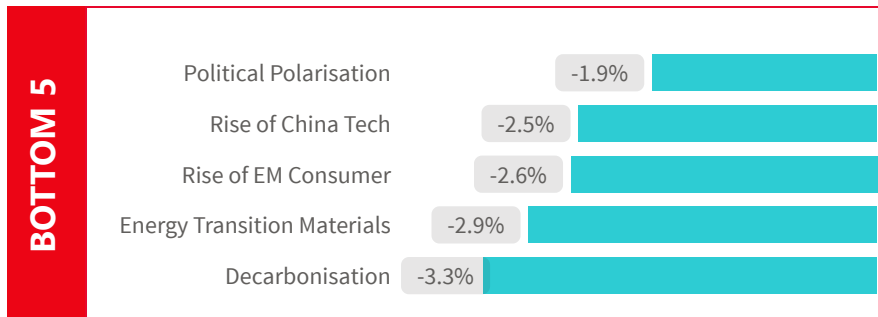
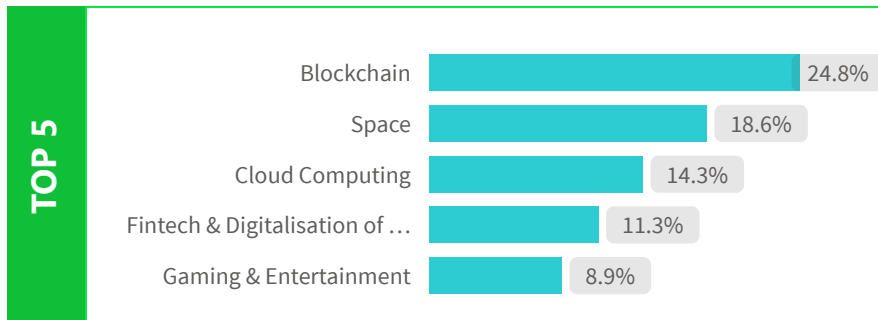
+ YTD, only 18 thematic ETFs and 38 thematic open-ended funds have been launched, marking the lowest number of new launches since 2020.

Yearly thematic launches in Europe*

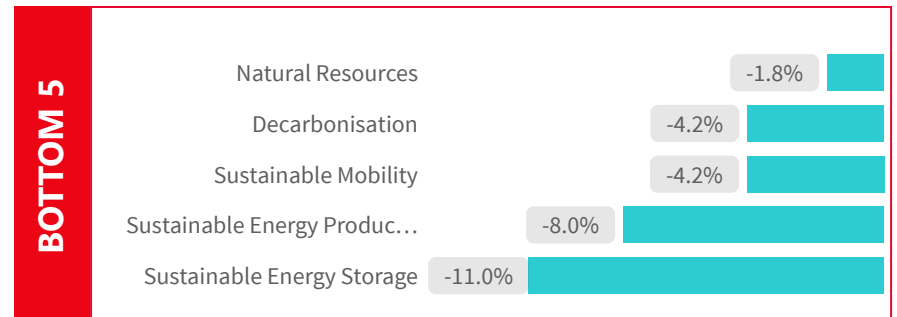
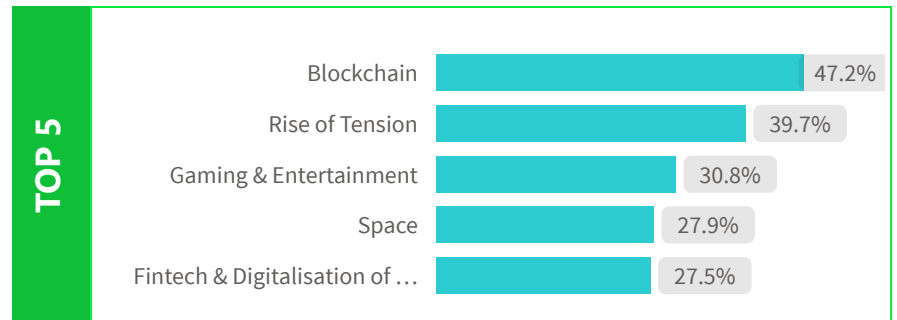


* New launches are updated quarterly

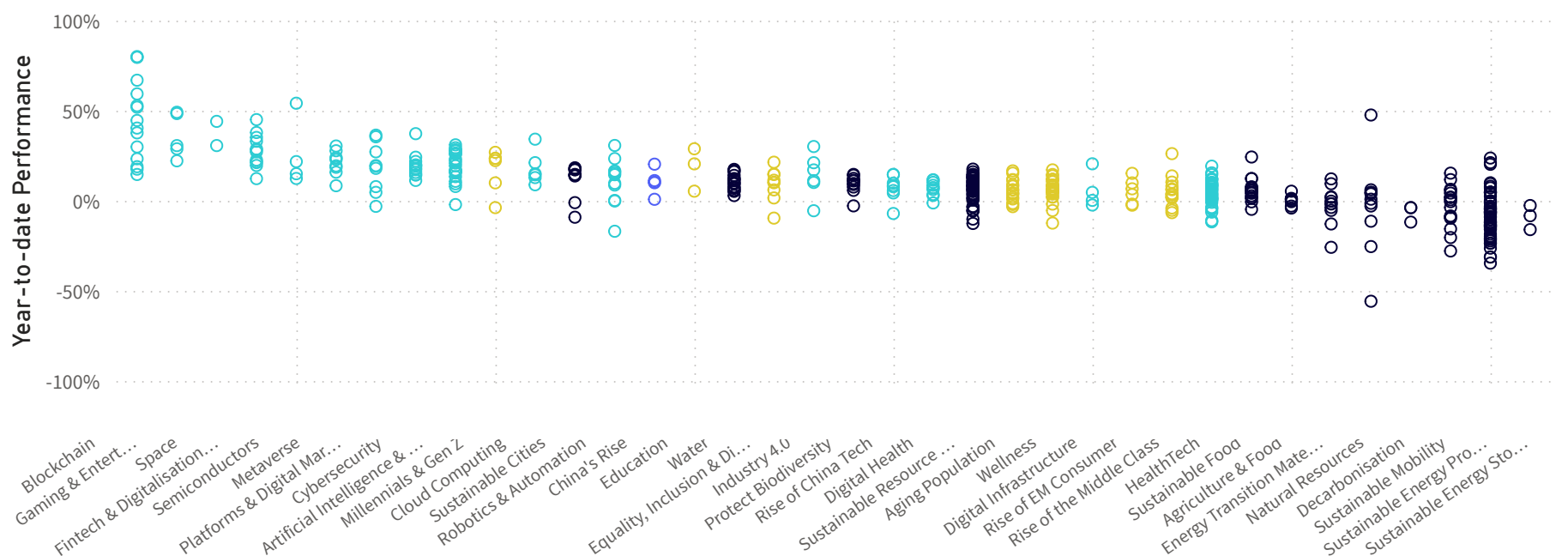
Top 5/Bottom 5 by performance in November



Top 5/Bottom 5 by YTD performance

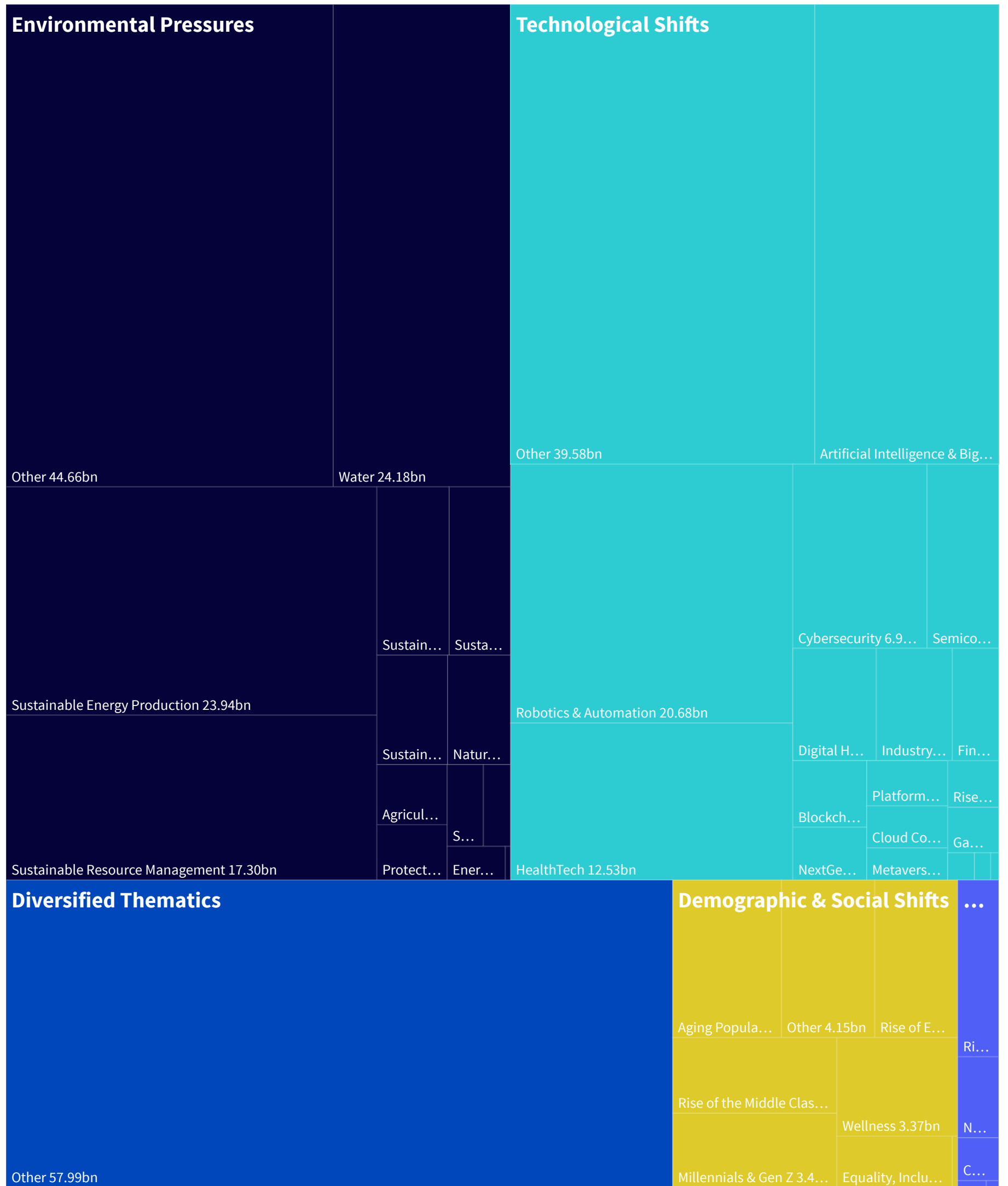


Dispersion of YTD performance of all ETFs and mutual funds by themes in Europe



Source: WisdomTree, Morningstar, Bloomberg. All data as of 30/11/2024 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar. More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance, and any investments may go down in value.**

AUM per theme in ETFs and open-ended funds domiciled in Europe (\$billions)



Source: WisdomTree, Morningstar, Bloomberg. All data as of 30/11/2024 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Appendix - Multi themes & diversified thematic ETFs and Open-ended funds

Cluster	Sub-Cluster	AuM (\$)	Flows Last Month (\$)	Flows YTD (\$)
Technological Shifts		13,751.83M	0.30M	-1,120.99M
Technological Shifts	Disruptive Technologies	16,852.73M	-144.29M	-856.80M
Technological Shifts	HyperConnectivity & Digitalisation	8,971.95M	-71.52M	167.45M
Environmental Pressures		2,860.05M	-80.85M	-1,384.45M
Environmental Pressures	Climate Change & Sustainability	41,710.22M	-815.14M	-5,325.83M
Environmental Pressures	Limited Resources	91.40M	1.25M	82.17M
Diversified Thematics		57,991.57M	96.98M	-1,429.11M
Demographic & Social Shifts		1,233.02M	-28.89M	-384.92M
Demographic & Social Shifts	Demographic Shifts	2,917.79M	30.47M	130.50M
Demographic & Social Shifts	Social Shifts			-9.40M

Appendix - Theme focused ETFs and Open-ended funds

Theme Name	AuM (\$)	Flows Last Month (\$)	Flows YTD (\$)	Performance Last Month	Performance YTD
Aging Population	4,852.59M	-30.98M	-1,102.69M	0.4%	5.9%
Agriculture & Food	1,196.22M	-26.39M	-568.58M	0.3%	0.3%
Artificial Intelligence & Big Data	23,923.07M	104.58M	1,477.14M	6.7%	21.5%
Blockchain	1,393.43M	30.54M	76.11M	24.8%	47.2%
China's Rise	497.39M	-23.74M	-96.99M	-0.8%	11.1%
Cloud Computing	962.82M	-33.90M	-168.50M	14.3%	14.0%
Cybersecurity	6,992.57M	-47.47M	-524.30M	8.7%	19.4%
Decarbonisation	48.65M	-0.68M	-9.84M	-3.3%	-4.2%
Digital Health	2,654.76M	-67.61M	-427.46M	4.1%	7.1%
Digital Infrastructure	61.82M	2.13M	6.19M	1.2%	5.6%
Education	80.71M	0.45M	-256.79M	4.2%	10.5%
Energy Transition Materials	553.72M	-14.14M	208.64M	-2.9%	-0.3%
Equality, Inclusion & Diversity	1,680.02M	1.89M	-376.50M	1.0%	10.1%
Fintech & Digitalisation of Finance	1,474.32M	-21.81M	-268.02M	11.3%	27.5%
Gaming & Entertainment	656.81M	-7.54M	-180.78M	8.9%	30.8%
Global Logistics	24.37M	-0.23M	-11.19M	2.5%	5.2%
HealthTech	12,533.96M	-291.92M	-1,603.94M	2.2%	4.5%
Industry 4.0	2,415.01M	31.75M	153.48M	2.7%	9.4%
Internet of Things	205.96M	-10.60M	42.51M	5.8%	10.5%
Metaverse	735.04M	11.48M	300.43M	5.8%	23.5%
Millennials & Gen Z	3,455.79M	-27.47M	-496.41M	2.9%	16.9%
Natural Resources	1,944.67M	43.23M	-214.08M	-0.7%	-1.8%
Near/Reshoring	938.32M	88.51M	357.38M	5.6%	26.6%
NextGen Communications	1,104.58M	-24.86M	-279.26M	0.4%	16.9%
Nuclear	626.22M	34.67M	208.74M	3.2%	15.2%
Platforms & Digital Markets	1,036.00M	-33.56M	-619.52M	5.4%	20.6%
Political Polarisation	55.75M	-17.44M	15.54M	-1.9%	3.4%
Protect Biodiversity	1,101.62M	15.63M	-3.80M	2.0%	8.5%
Rise of China Tech	673.55M	-64.23M	-57.41M	-2.5%	8.0%
Rise of EM Consumer	3,698.08M	-163.75M	-1,048.79M	-2.6%	5.5%
Rise of Tension	2,045.25M	292.04M	1,615.10M	5.2%	39.7%
Rise of the Middle Class	3,518.97M	-94.92M	-1,103.20M	1.8%	4.5%
Robotics & Automation	20,675.12M	-109.43M	-1,521.64M	6.0%	14.6%
Semiconductors	3,732.36M	-72.17M	1,451.45M	-1.0%	25.0%
Space	125.19M	25.85M	58.84M	18.6%	27.9%
Sustainable Cities	2,187.81M	-28.04M	-300.71M	3.0%	12.0%
Sustainable Energy Production	23,943.40M	-884.34M	-8,379.60M	-0.5%	-8.0%
Sustainable Energy Storage	836.97M	-23.11M	-432.63M	1.3%	-11.0%
Sustainable Food	3,445.27M	-108.92M	-1,348.14M	1.1%	4.1%
Sustainable Mobility	2,916.51M	-92.43M	-1,450.82M	1.6%	-4.2%
Sustainable Resource Management	17,298.81M	-242.72M	-1,957.96M	1.5%	6.7%
Water	24,178.59M	-211.24M	-1,361.24M	2.5%	10.2%
Wellness	3,370.94M	-33.79M	111.06M	0.6%	5.5%

Source: WisdomTree, Morningstar, Bloomberg. All data as of 30/11/2024 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar. More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Appendix - Definitions

The WisdomTree Thematic classification is built around 4 main thematic clusters

Technological Shifts

This cluster focuses on the different themes that originate from the introduction of new technologies and innovation. It incorporates disruptive and emerging technologies as well as their impact on societies and economies, such as the increasing digitalisation and connectivity of the world.

Demographic and Social Shifts

This cluster focuses on the themes that originate from changes in population and societies alike. For example, it incorporates changes in the world's pyramid of age, the impact of the growing, younger, wealthier populations in emerging markets, as well as changes to societal values and lifestyles.

Environmental Pressures

Focusing on the environment and, more importantly, on the impact of human activities on the planet, this cluster incorporates changes driven by sustainability issues, the increasing scarcity of resources and the need to address global warming and climate change.

Geopolitical Shifts

This cluster focuses on the themes driven by the globalisation and the changes in the global geopolitical order with the rise of new geopolitical powers like China. It also taps into the increasing polarisation of modern societies as a counterforce to globalisation.

All thematic ETFs and open-ended funds in the WisdomTree Thematic classification are classified into

- **Diversified thematics**, if they try to harness a large number of megatrends in one go. Those funds tend to have a very diluted focus, which could mean that it might be harder to find sources of potential differentiation against a broad market benchmark.
- **A specific cluster**, if they try to harness multiple themes across sub-clusters but within one particular cluster. For example, a fund investing in Artificial Intelligence, Robotics, Cloud, and Cybersecurity would be classified as a 'Technological Shifts' fund.
- **A particular sub cluster**, if a strategy aims to invest in most of the themes within that sub cluster. For example, a fund investing in Cloud Computing, Platforms, Cybersecurity, and Fintech would be classified as a 'Hyperconnectivity & Digitalisation' fund.
- **A theme**, if the investment strategy is focused on a specific, clear theme.

YTD stands for Year to Date

MTD stands for Month to Date

For all of our calculations, we use the WisdomTree Thematic Classification that we have previously introduced here and can be found in the next page.

Performance of a theme. For any given theme, we consider each month all the ETFs and open-ended funds classified in that specific theme that have published a monthly return for that month in Morningstar. We then calculate the average of all those monthly returns to compute the average monthly return for that theme. So, the monthly return for January 2020 for the theme may include 19 funds, while the February 2020 return may comprise 21 funds (if two funds classified in that theme have been launched in the meantime). By collating monthly returns for the theme, we get the theme's average historical performance. Therefore, the theme's average historical performance incorporates every ETF, and open-ended fund focused on this theme. The theme's average historical performance is not biased towards surviving funds or successful funds. Every fund alive in a given month is included irrespective of its future survival or success. Investments that try to focus on multiple themes and, therefore, classified either at Cluster or Sub-Cluster Level are not included.

The WisdomTree Thematic Classification

DIVERSIFIED THEMATICS							
TECHNOLOGICAL SHIFTS		DEMOGRAPHIC AND SOCIAL SHIFTS		GEOPOLITICAL SHIFTS		ENVIRONMENTAL PRESSURES	
HYPER CONNECTIVITY & DIGITALISATION		SOCIAL SHIFTS		MULTI-POLARITY		LIMITED RESOURCES	
Artificial Intelligence & Big Data	Cloud Computing	Aging Population	Education	Global Logistics	China's Rise	Decarbonisation	Agriculture & Food
Rise of China Tech		Millennials & Gen Z	Equality, Inclusion & Diversity		Political Polarisation	Protect Biodiversity	Natural Resources
Blockchain	Cybersecurity		Rise of the Middle Class		Rise of Tension	Sustainable Mobility	Water
HealthTech	Digital Health		Rise of EM Consumer		Near/Reshoring	Sustainable Energy Production	Nuclear
Industry 4.0	Digital Infrastructure		Wellness			Sustainable Energy Storage	
Next Gen Communications	Fintech & Digitalisation of Finance					Sustainable Food	
Robotics & Automation	Gaming & Entertainment					Sustainable Cities	
Semiconductors	Internet of Things					Sustainable Resource Management	
Smart Materials & Nano Tech	Metaverse					Extreme Events	
Space	Platforms & Digital Markets					Energy Transition Materials	
	Social Media & Media						

Source: WisdomTree, as of 31/12/2023

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