

WisdomTree European thematic monthly update

August 2023

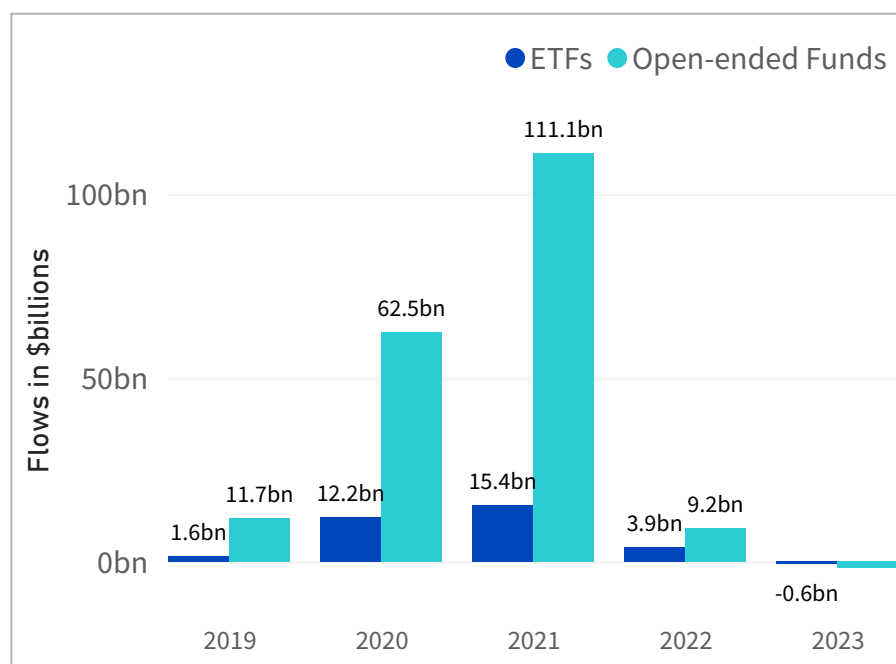
Thematic universe overview

+ AUM in thematic Exchange Traded Funds (“ETFs”) and open-ended funds decreased by 5% in August to \$317 billion driven, mostly, by negative performance. ETFs’ market share remained steady at around 13%, with a total AUM of \$41 billion. Year-to-date, AUM increased by \$29 billion, or by 10%. Performance across themes was the key contributor to the AUM growth, as the net flows into both wrappers were negative with -\$2.3 billion.

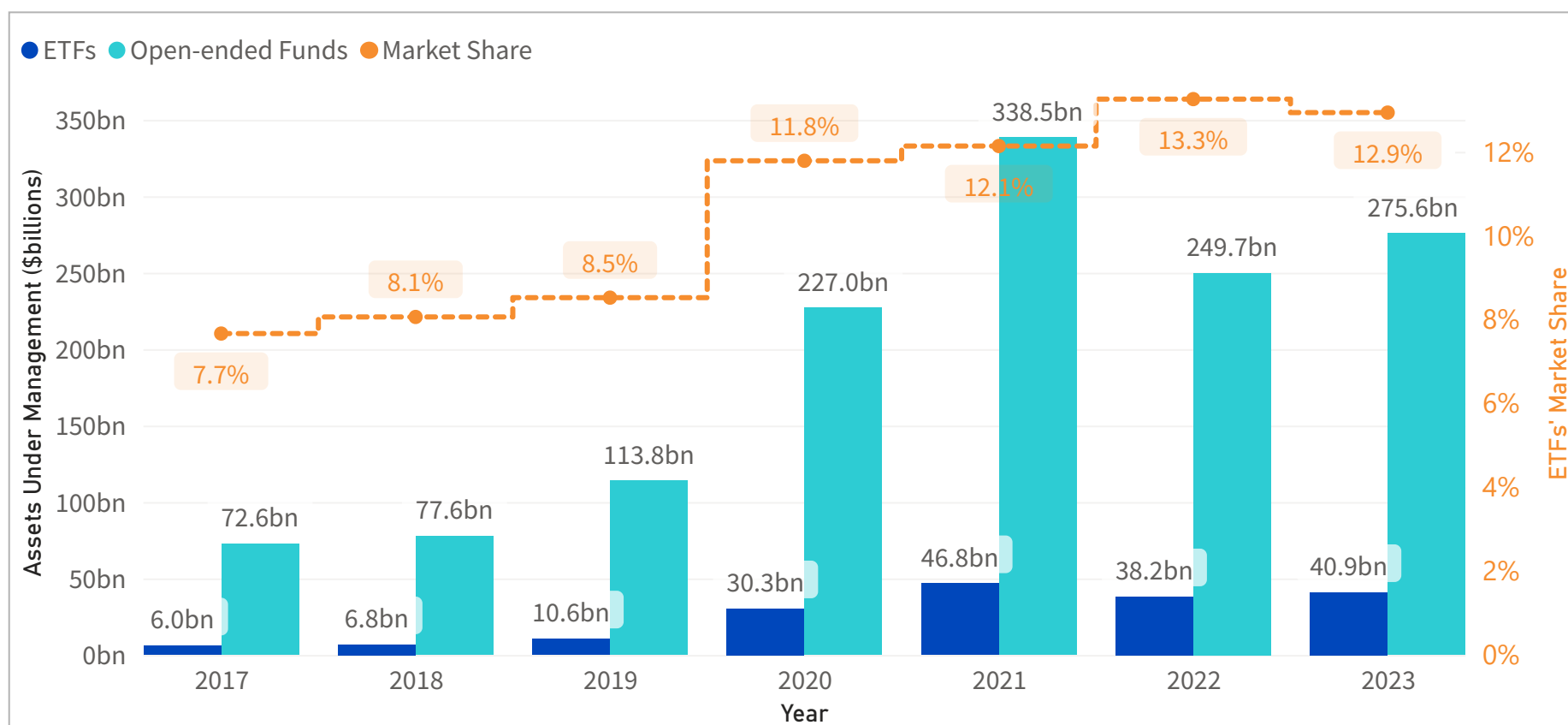
+ Performance in August was negative across all themes, with only 6 themes beating the MSCI ACWI. Year-to-date, 13 themes have outperformed the global equity benchmark, most of which are tech-related themes, with "Semiconductors" and "Blockchain" claiming the highest returns.

+ Year-to-date flows are negative across both wrappers, driven by negative flows into themes in "Environmental Pressures" and "Demographic & Social Shifts" that jointly shed -\$3.2 billion. The strongest clusters are "Diversified Thematics" with \$344 million of inflows and "Geopolitical Shifts" with \$857 million.

Recent yearly flows in Europe



Europe-domiciled thematic AUM evolution and ETFs’ market share



Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/08/2023 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.**

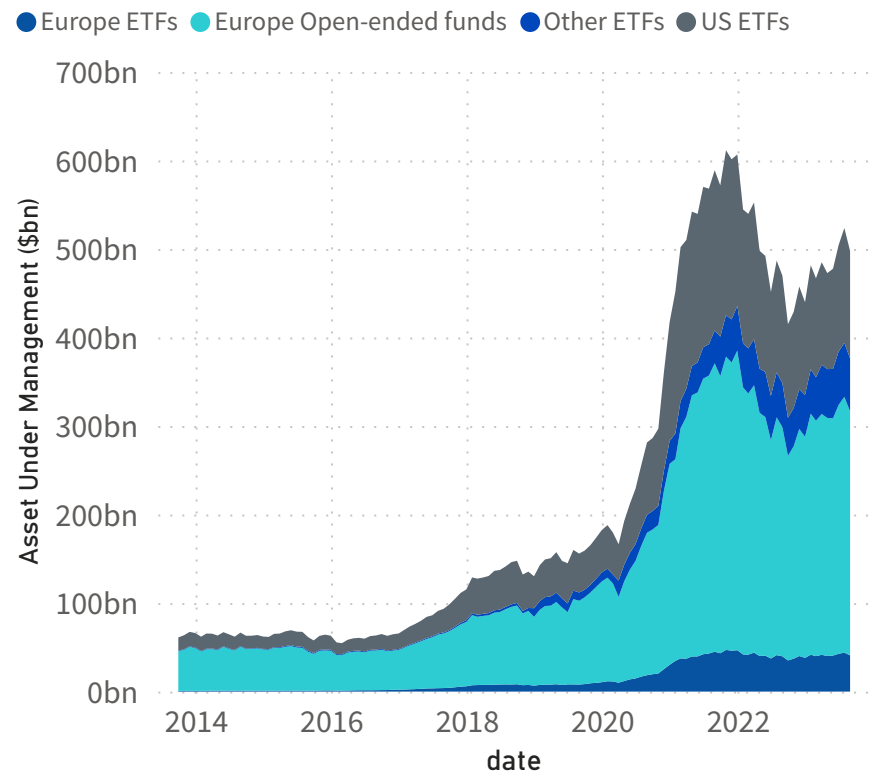
Thematic universe overview (continued)

+ Joint AUM in global thematic ETFs and open-ended funds in Europe have dropped in August by 5% to \$498 billion but are still up \$58 billion compared to the end of last year. This increase was driven by the performance of equities generally and tech-focused themes specifically.

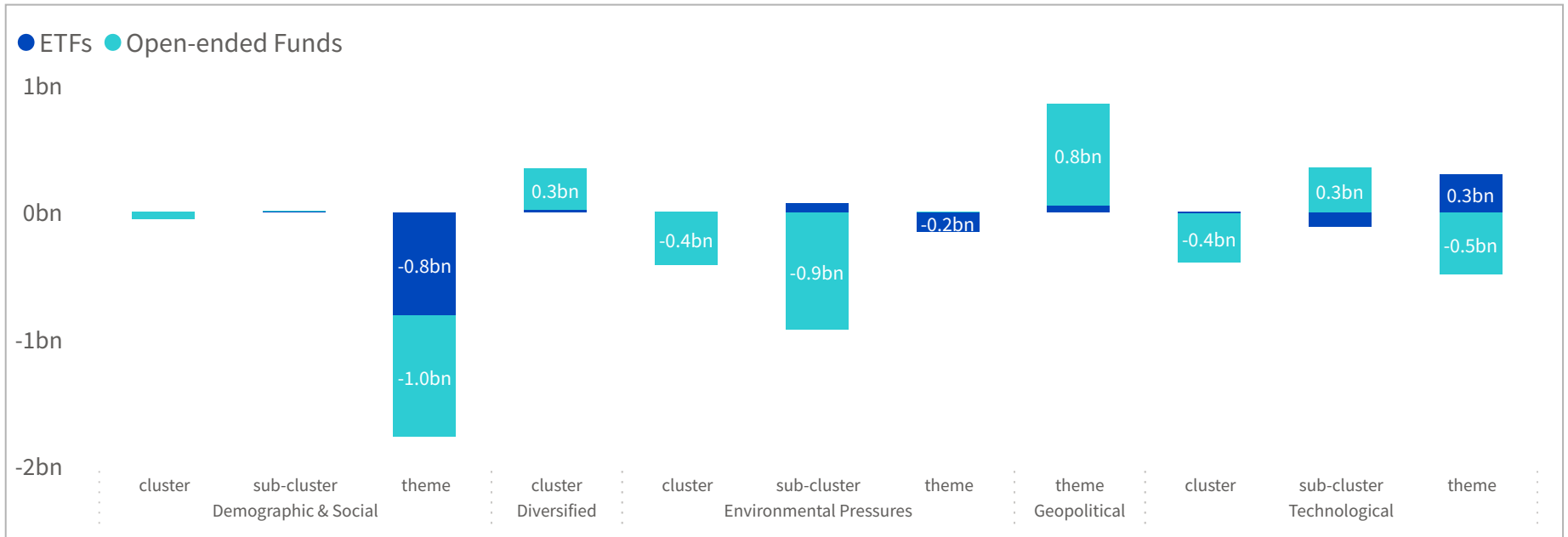
+ Year-to-date, European open-ended funds have gathered the most flows in the "Geopolitical Shifts" cluster, in particular in the "China's Rise" and "Near/Reshoring" themes. In turn, ETFs have seen the most flows in the "Technological Shifts" cluster with \$179 year-to-date inflows despite -\$319 million outflows in August, mostly out of "Semiconductors" and "Robotics & Automation".

+ Year to Date outflows in "Environmental Pressures" cluster have been mostly driven by redemptions in open-ended funds at the cluster and sub-cluster level as well as "Sustainable Food" theme. This was not fully compensated by the almost \$2 billion that went into "Sustainable Energy Production". "Equality, Inclusion & Diversity" with -\$1.9 billion across both wrappers largely contributed to the year-to-date outflows in the "Demographic and Social Shifts". At the same time, "Rise of the Middle Class", on the contrary, has gathered strong interest with almost \$1 billion of net flows.

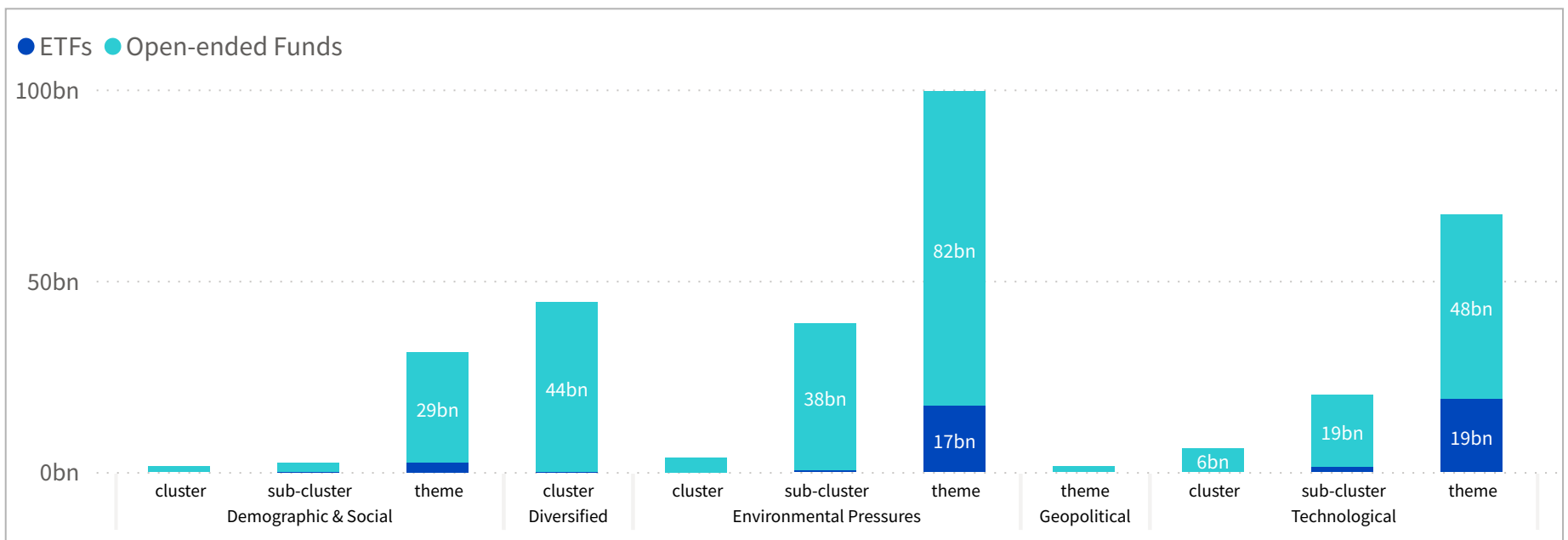
AuM in Thematics by region (Last 10Y)



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 31/08/2023 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

+ Flows in August were negative in both wrappers with \$633 million outflows in ETFs and \$182 million outflows in open-ended funds. Year-to-date, ETFs have suffered \$638 million of outflows vs. \$1,736 million outflows in open-ended funds.

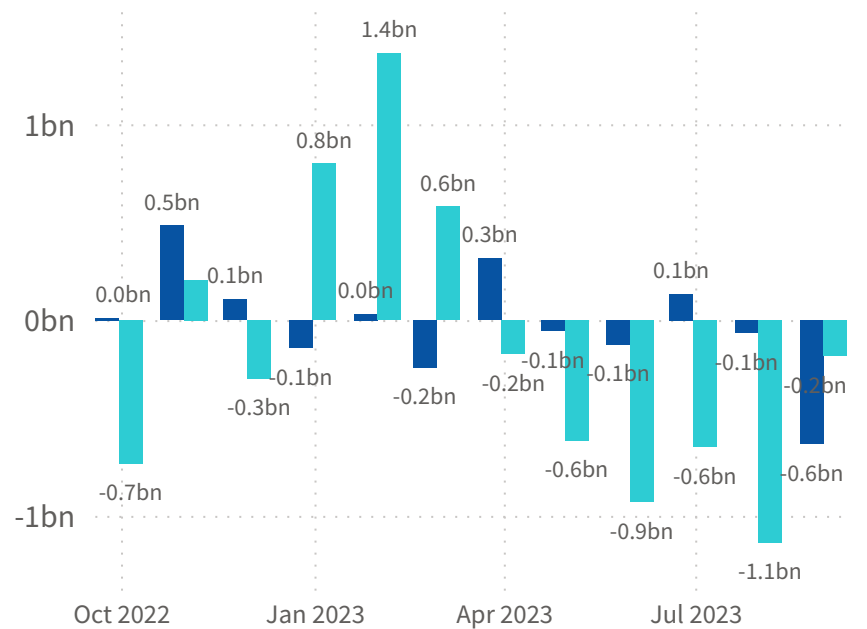
+ In August, "Sustainable Energy Production" gathered the most assets with \$425 million across, exclusively in open-ended funds. "AI and Big Data" follows with \$210 million. No other theme raised more than \$30 million.

However, "Robotics & Automation" theme saw the highest combined outflows with -\$171 million. "Semiconductors", "Sustainable Resource Management" and "Equality, Diversity and Inclusion" follow with around \$150 million of outflow each.

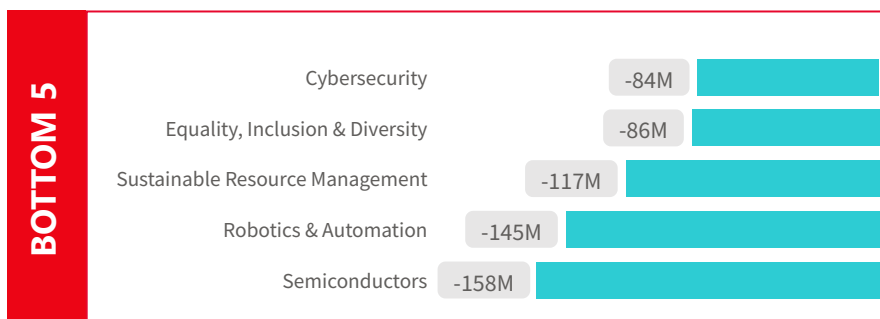
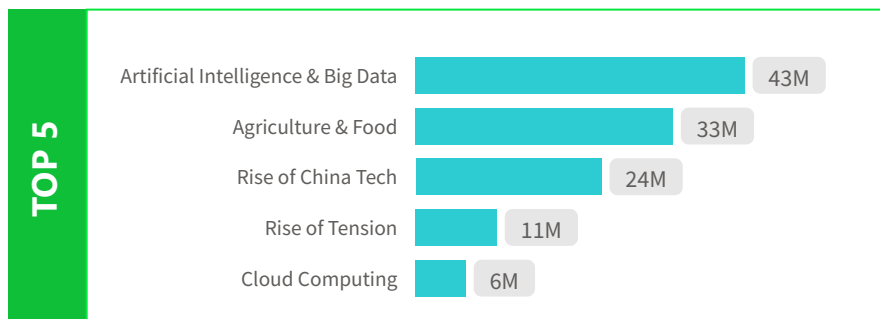
+ Year-to-date, three themes: "Sustainable Energy Production", "Rise of the Middle Class" and "AI & Big Data" have raised the most flows by far. In contrast, "Equality, Inclusion & Diversity" saw outflows of \$1.9 billion, followed by "Sustainable Food" and "Agriculture & Food" where investors jointly redeemed \$1.6 billion.

Month-on-month thematic flows

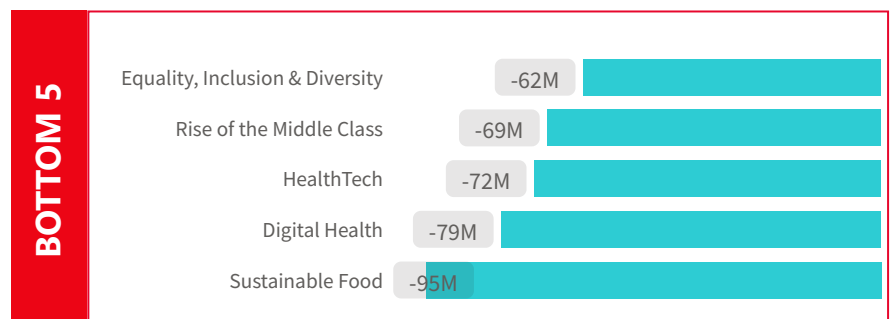
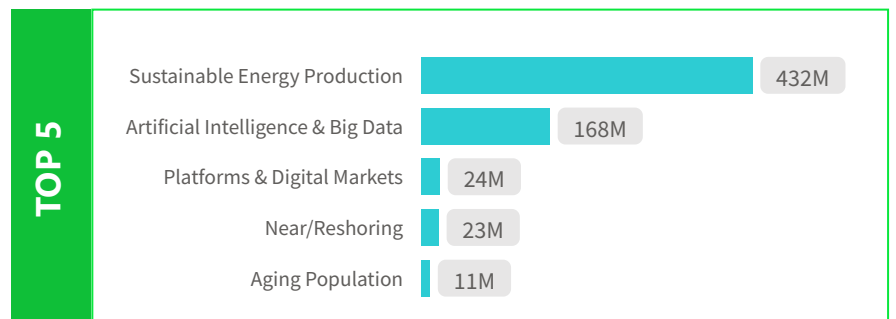
● ETFs ● Open-ended Funds



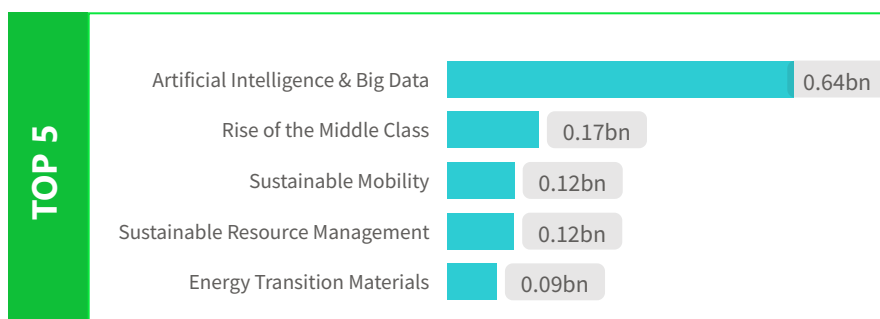
August Top/Bottom flows in Europe ETFs



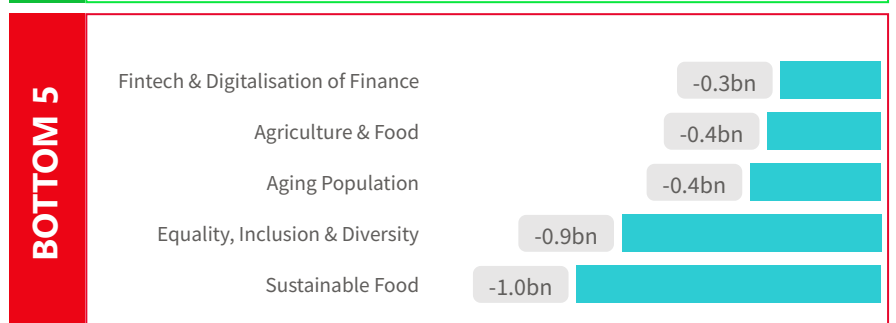
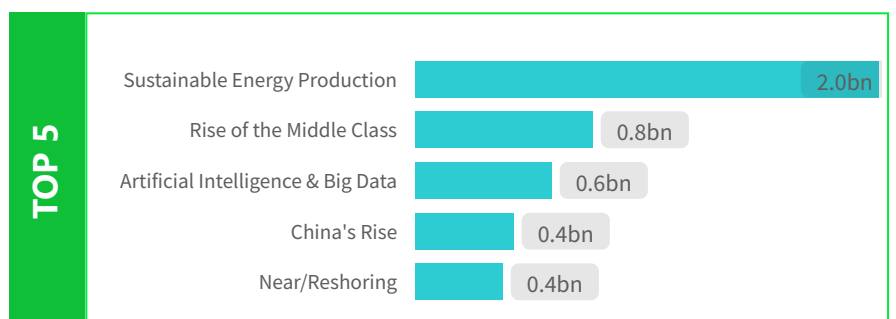
August Top/Bottom flows in Mutual Funds



YTD Top/Bottom flows in Europe ETFs



YTD Top/Bottom flows in Mutual Funds



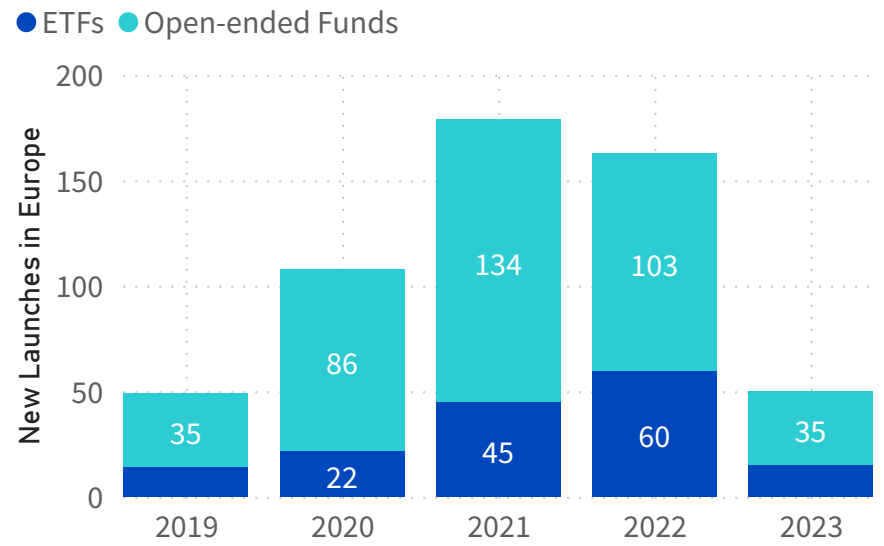
Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/08/2023 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar. More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Thematic performance and launches in Europe

+ Year-to-date, technology-focused thematic strategies are leading the pack. "Blockchain" is benefitting from a rebound in cryptocurrencies and positive news about a Bitcoin ETF in the US. "Semiconductors" benefitted from AI-related demand in specific semiconductors, while strong performance of NVIDIA and Meta might have propelled the "Metaverse" theme. "AI & Big Data" and "Cloud Computing" are closing the Top 5 best-performing themes year-to-date. In turn, Chinese equities are suffering this year alongside food-related themes but also Sustainable Energy Production which is raising assets despite negative performance year to date.

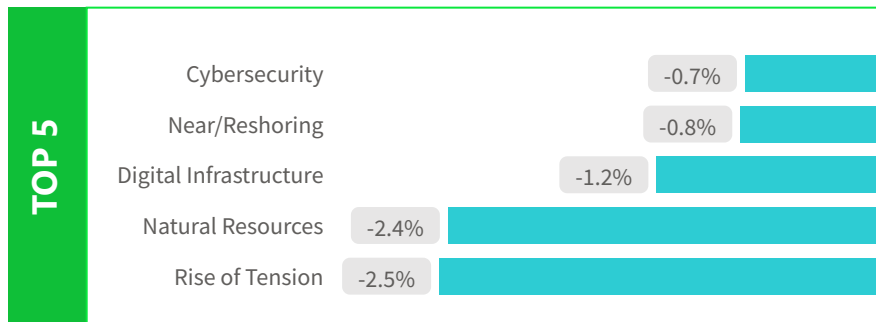
+ Notably, all themes in August finished the month in the red. The top 5 best-performing themes still beat the MSCI all Country. "Cybersecurity" was the top theme this month followed by "Near/Reshoring" and "Digital Infrastructure". In turn, "Blockchain" and "Sustainable Energy Storage" were the laggards and returned -15.6% and -10.5% respectively.

Yearly thematic launches in Europe*

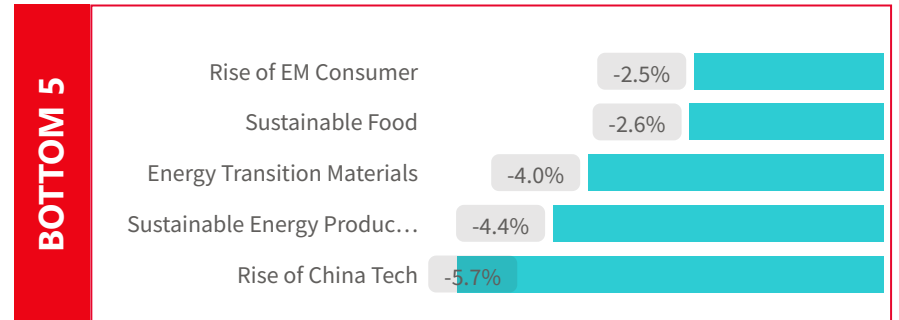
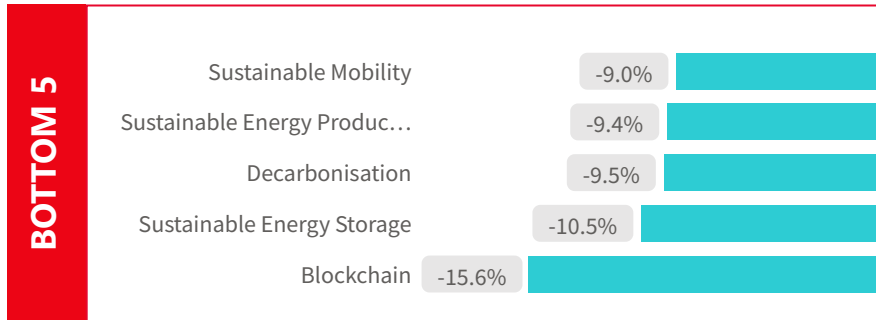
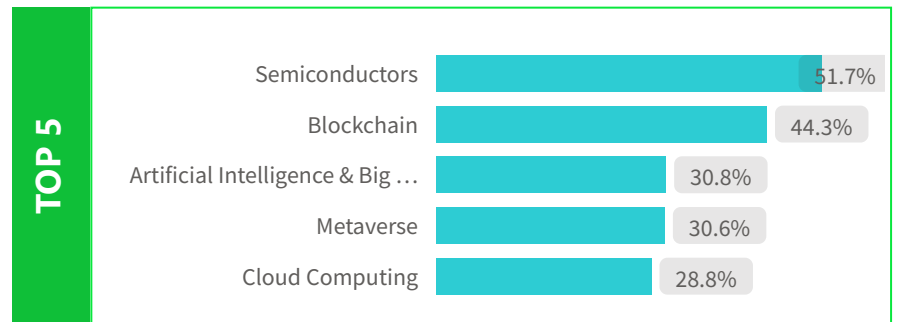


* New launches are updated quarterly

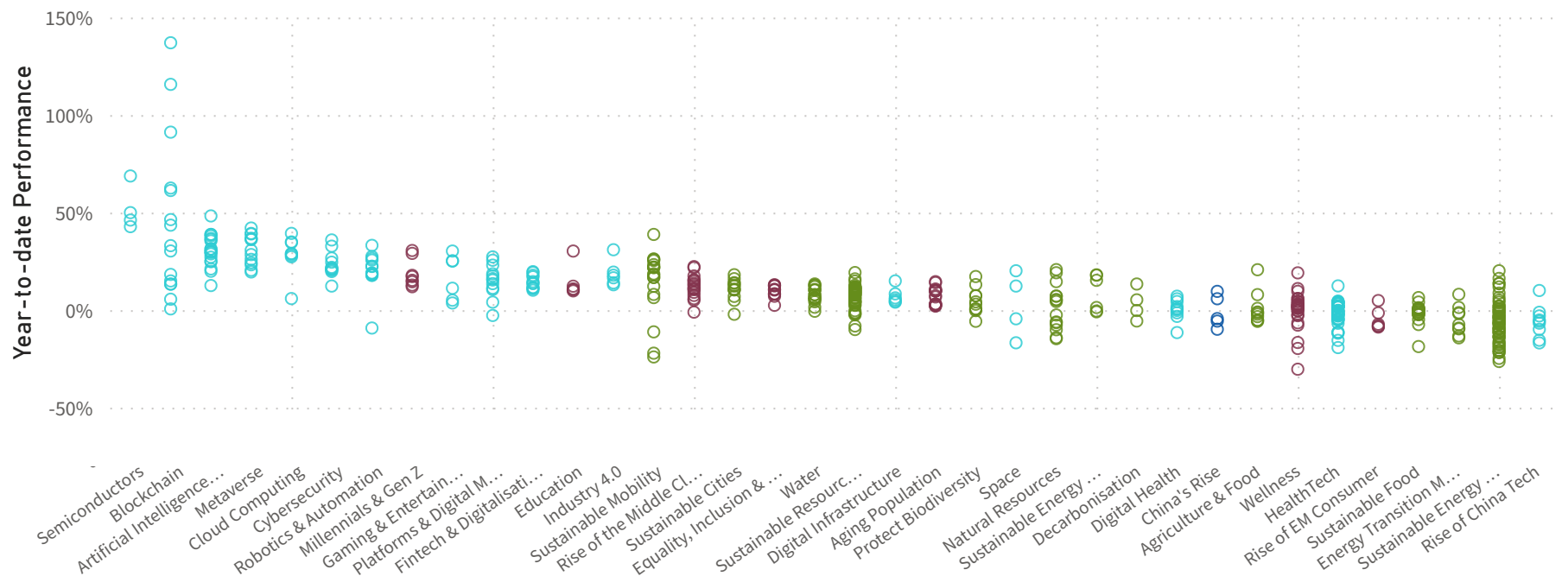
Top 5/Bottom 5 by performance in August



Top 5/Bottom 5 by YTD performance

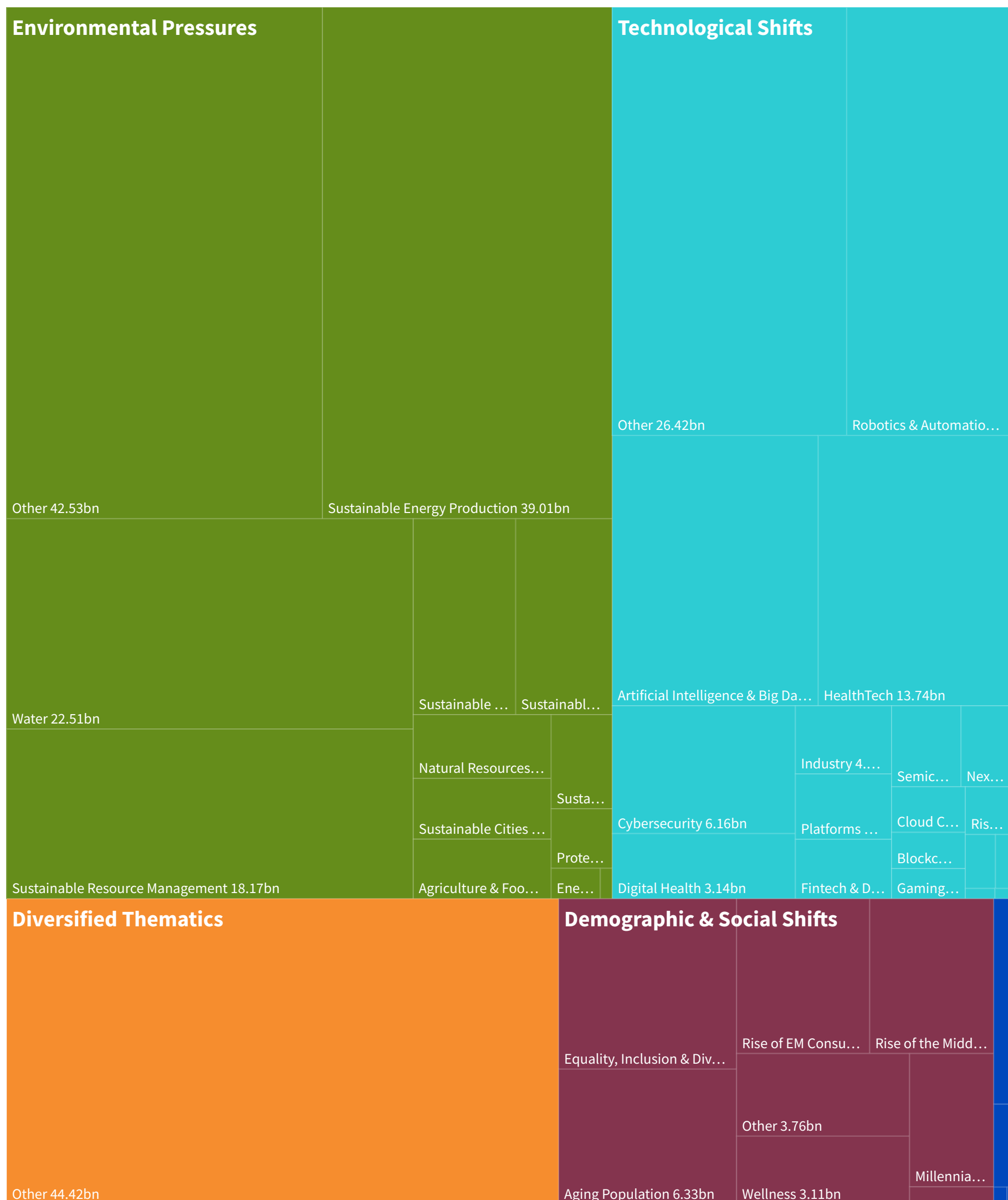


Dispersion of YTD performance of all ETFs and mutual funds by themes in Europe



Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/08/2023 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 [31/08/2023](#) 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		6,205.52M	-39.51M	-395.12M
Technological Shifts	Disruptive Technologies	13,924.46M	-36.35M	133.65M
Technological Shifts	HyperConnectivity & Digitalisation	6,288.58M	-21.21M	106.04M
Environmental Pressures		3,786.00M	-11.34M	-415.52M
Environmental Pressures	Climate Change & Sustainability	38,737.64M	-81.55M	-851.16M
Environmental Pressures	Limited Resources	10.92M	0.03M	-1.54M
Diversified Thematics		44,416.58M	101.79M	343.93M
Demographic & Social Shifts		1,440.00M	-24.17M	-54.86M
Demographic & Social Shifts	Demographic Shifts	2,290.20M	-1.89M	7.89M
Demographic & Social Shifts	Social Shifts	30.30M	-0.55M	2.26M

Appendix - Theme focused ETFs and Open-ended funds

Theme Name	AuM (\$)	Flows Last Month (\$)	Flows YTD (\$)	Performance Last Month	Performance YTD
Cybersecurity	6,159.93M	-95.44M	-278.49M	-0.7%	25.0%
Near/Reshoring	383.89M	22.63M	375.87M	-0.8%	1.5%
Digital Infrastructure	80.79M	1.03M	-48.05M	-1.2%	7.5%
Natural Resources	2,314.57M	-21.49M	-305.00M	-2.4%	2.6%
Rise of Tension	60.68M	10.50M	57.90M	-2.5%	16.3%
NextGen Communications	1,071.77M	-22.16M	-180.00M	-2.6%	22.7%
Education	389.77M	-5.01M	-77.71M	-2.9%	14.9%
Equality, Inclusion & Diversity	7,970.16M	-148.47M	-1,873.12M	-3.1%	9.8%
Water	22,511.15M	-11.86M	-115.19M	-3.5%	8.4%
Semiconductors	1,480.52M	-158.16M	-13.45M	-3.5%	51.7%
Aging Population	6,334.52M	14.50M	-460.71M	-3.5%	7.2%
Protect Biodiversity	956.17M	7.27M	150.88M	-3.6%	6.2%
Sustainable Cities	2,202.53M	-70.11M	-222.61M	-3.7%	10.9%
Industry 4.0	1,725.53M	3.67M	73.32M	-3.7%	14.3%
Millennials & Gen Z	2,951.80M	-43.82M	-117.22M	-3.7%	18.6%
HealthTech	13,738.93M	-74.70M	-236.43M	-3.9%	-0.4%
Wellness	3,109.58M	-23.10M	-273.15M	-4.0%	-0.1%
Artificial Intelligence & Big Data	14,658.76M	210.12M	1,227.47M	-4.1%	30.8%
Sustainable Resource Management	18,169.28M	-155.31M	28.90M	-4.1%	7.7%
Agriculture & Food	2,164.29M	27.41M	-578.18M	-4.5%	0.1%
Fintech & Digitalisation of Finance	1,505.48M	-33.31M	-347.54M	-4.8%	15.7%
Global Logistics	19.76M	0.11M	2.85M	-5.1%	10.6%
Sustainable Food	5,280.91M	-97.43M	-1,065.87M	-5.2%	-2.6%
Robotics & Automation	18,557.90M	-171.48M	-205.54M	-5.2%	21.2%
Cloud Computing	884.17M	7.19M	21.88M	-5.3%	28.8%
Internet of Things	427.47M	10.65M	88.80M	-5.4%	12.4%
Metaverse	224.91M	7.00M	56.50M	-5.6%	30.6%
Rise of the Middle Class	5,049.48M	-83.44M	931.21M	-5.6%	12.5%
Platforms & Digital Markets	1,653.35M	28.91M	-18.98M	-6.2%	15.8%
Rise of EM Consumer	5,420.15M	-46.32M	101.28M	-6.4%	-2.5%
Space	44.73M	1.41M	14.51M	-6.7%	3.9%
China's Rise	951.45M	0.48M	420.66M	-7.0%	0.3%
Digital Health	3,143.67M	-82.57M	-338.29M	-7.3%	0.7%
Gaming & Entertainment	586.32M	-1.99M	-25.44M	-7.4%	16.2%
Rise of China Tech	578.03M	18.79M	10.52M	-7.8%	-5.7%
Energy Transition Materials	394.20M	-0.29M	126.36M	-8.9%	-4.0%
Sustainable Mobility	4,974.84M	-103.22M	161.74M	-9.0%	12.8%
Sustainable Energy Production	39,006.45M	424.47M	1,654.38M	-9.4%	-4.4%
Decarbonisation	95.34M	-7.59M	-10.54M	-9.5%	0.9%
Sustainable Energy Storage	1,512.18M	-40.10M	27.19M	-10.5%	1.2%
Blockchain	703.12M	0.95M	9.19M	-15.6%	44.3%

Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/08/2023 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	
DISRUPTIVE TECHNOLOGIES	HYPER CONNECTIVITY & DIGITALISATION	DEMOGRAPHIC SHIFTS	SOCIAL SHIFTS	GLOBALISATION	MULTI-POLARITY	CLIMATE CHANGE & SUSTAINABILITY	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	
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 30/06/2023

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