

WisdomTree European thematic monthly update

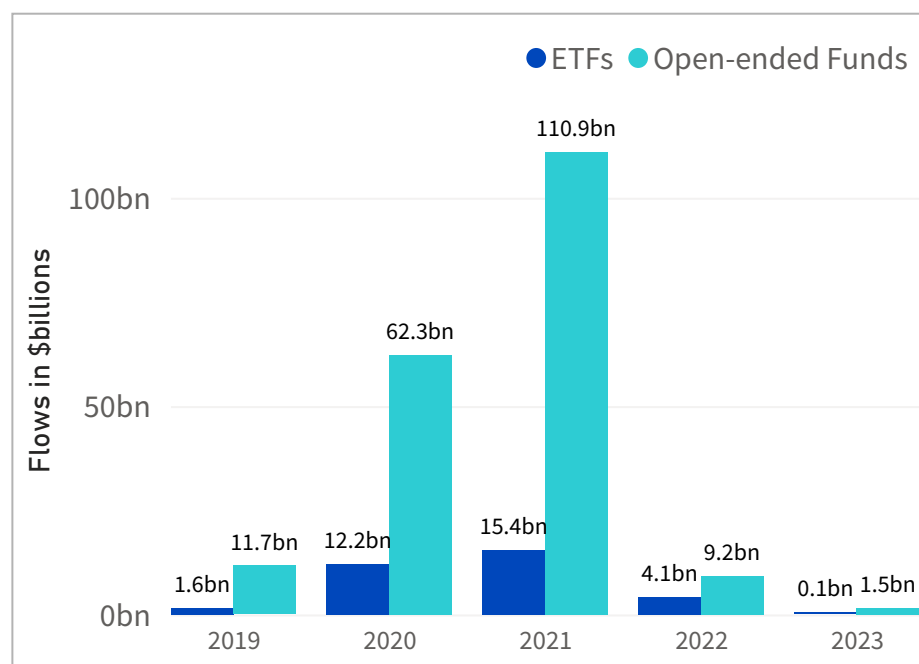
March 2023

Thematic universe overview

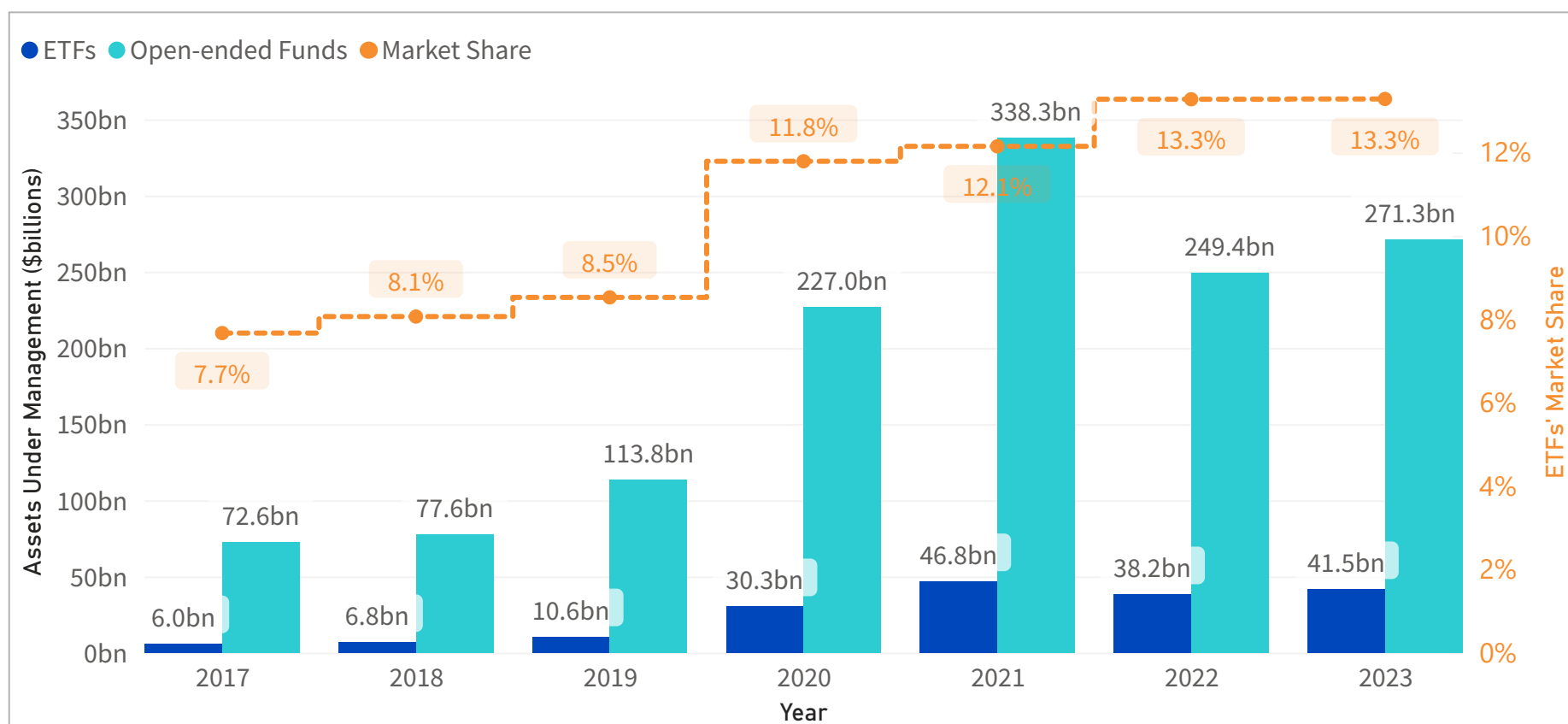
+ AUM in thematic Exchange Traded Funds (“ETFs”) and open-ended funds continues to grow at \$313 billion as of the end of March 2023. ETFs’ market share remains quite stable at 13.3%, with a total AUM of \$41.5 billion. Despite turbulent markets, the performance across many themes continued to be positive, leading to the increase in overall assets under management despite timid flow activity. AUM is up \$25.3 billion year-to-date and \$7.5 billion in March alone.

+ Overall flows remain timid but positive in 2023, with \$1.6 billion across ETFs and open-ended funds. In March, only \$228 million entered European thematic strategies. Despite some rebound in performance and increased interest in themes like Artificial Intelligence, investors remain prudent in a highly uncertain and volatile market.

Recent yearly flows in Europe



Europe-domiciled thematic AUM evolution and ETFs’ market share



Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/03/2023 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)

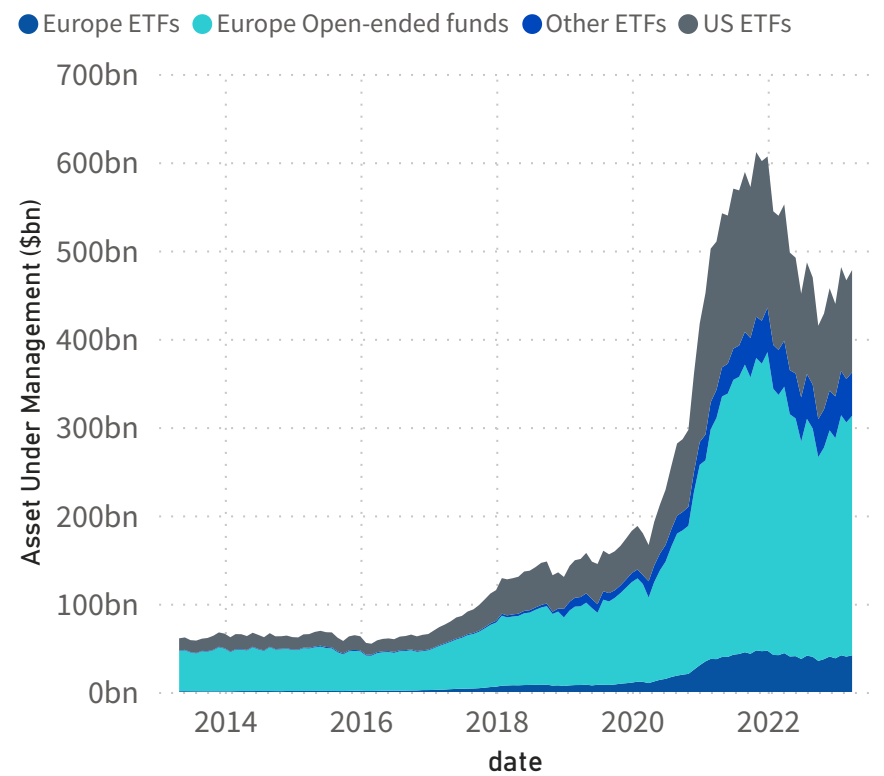
+ Globally, AUM in thematic strategies continue to increase, gaining \$11.6 billion in March, to \$478 billion. This increase was driven by the good performance of equities and growth equities in particular over the quarter. AUM are still down \$133.5 billion from their peak in the end of October 2021.

+ Year-to-date, US ETFs have seen the largest increase in AUM, with a growth of 10.5%.

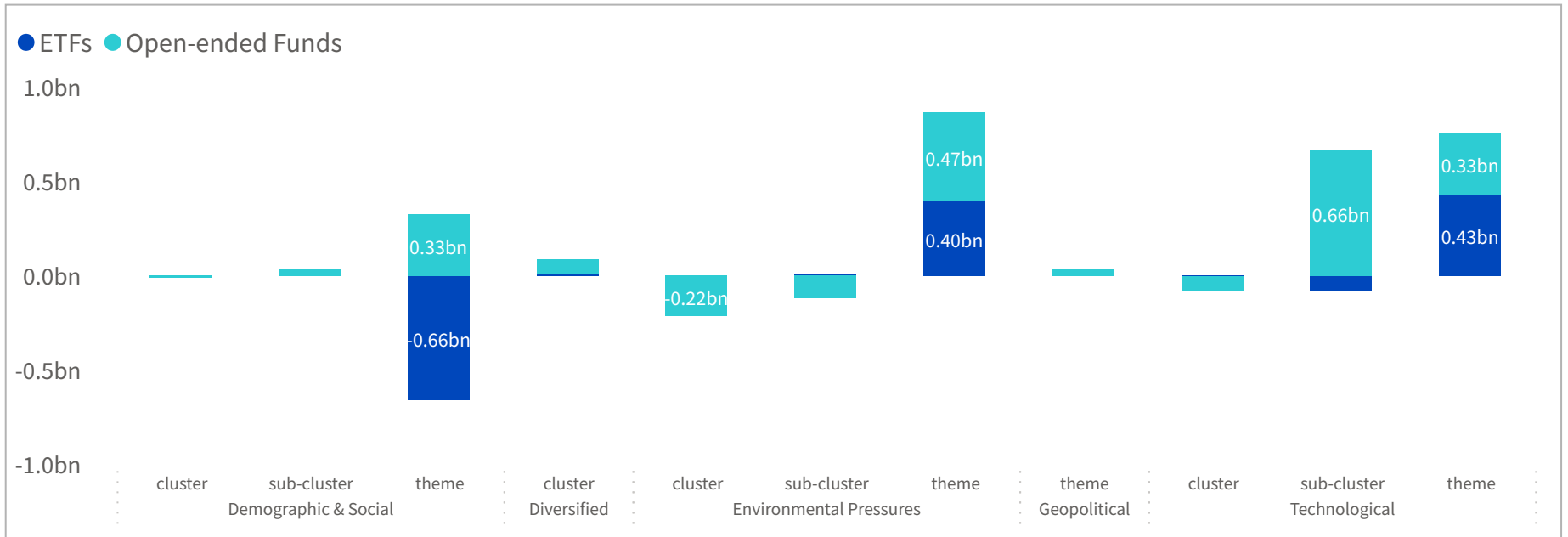
+ Year-to-date, European open-ended funds and ETFs have gathered the most flows in the "Technological Shifts" cluster, following markets' expectations of a Central Banks' pivot. However, theme-specific strategies in "Environmental Pressures" are starting to catch up. While most of the year-to-date flows are going into theme-focused strategies in both clusters, the sub-clusters "Disruptive Technologies" and "HyperConnectivity & Digitalisation" are seeing significant interest, having raised more than \$300m in open-ended funds each.

+ In the "Demographic and Social Shifts" cluster, we observe that ETFs suffered a large outflow in one product in the "Equality, Inclusion & Diversity" theme. This outflow is masking strong interest in the "Rise of the Middle Class" theme, which gathered \$157 million in ETFs and \$648 million in open-ended funds.

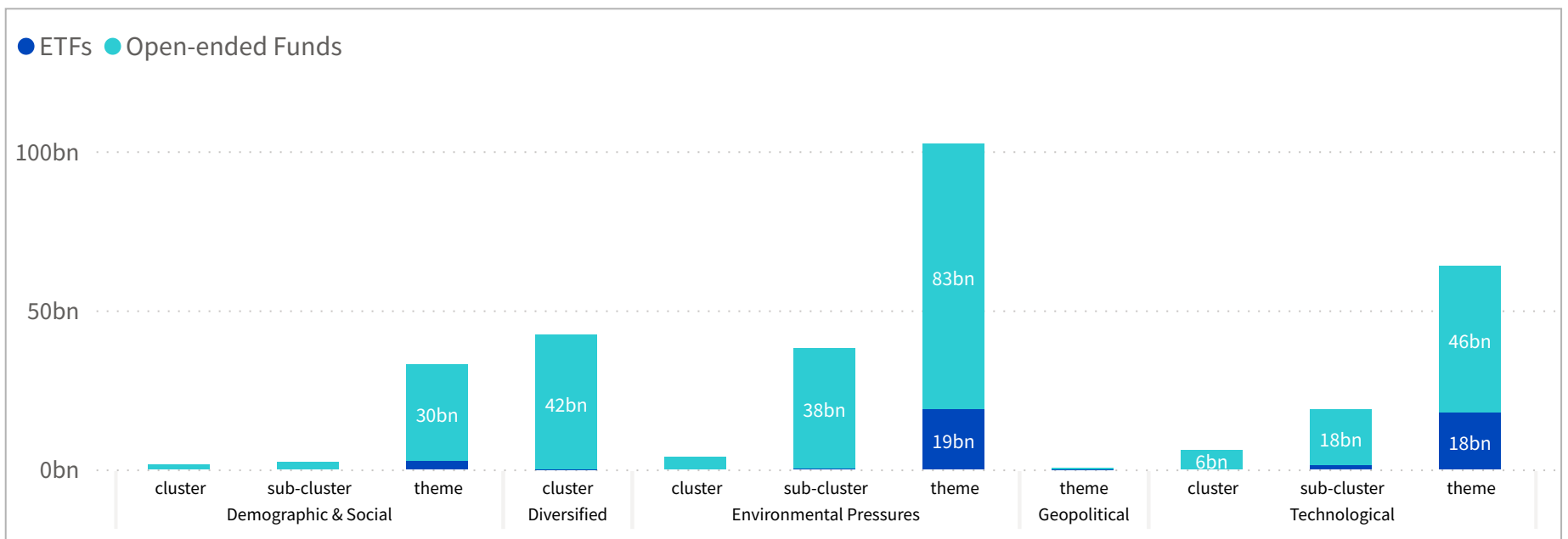
AuM in Thematics by region (Last 10Y)



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 31/03/2023 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 March remain very muted, with \$82 million outflows in open-ended funds and \$310 million inflows in ETFs. Overall, year-to-date, mutual funds gathered \$1.51 billion in flows vs. \$100 million in ETFs.

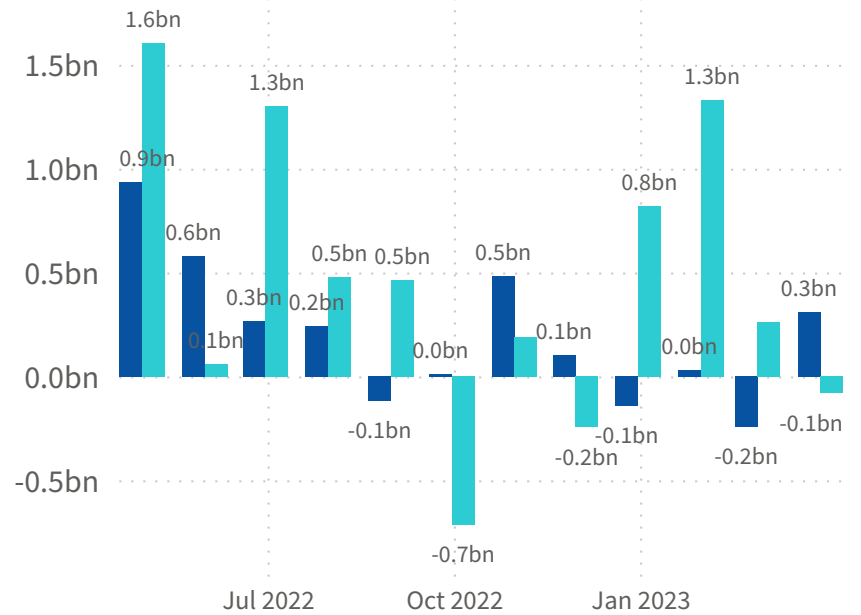
+ In March, flows, overall, were dominated by "Sustainable Energy Production". However, in ETFs, the continued interest around ChatGPT, deep fakes and other artificial intelligence developments, led to inflows in "Artificial Intelligence & Big Data", "Semiconductors", and "Cybersecurity". In open-ended funds, "Rise of the Middle Class" continued to raise significant assets.

+ Year-to-date, "Sustainable Energy Production" retains its top spot for flows with \$819 million. "Rise of the Middle Class" is just behind with \$805 million. "HealthTech" and "Artificial Intelligence & Big Data" are battling it out for the top 3 with \$431 million and \$389 million respectively.

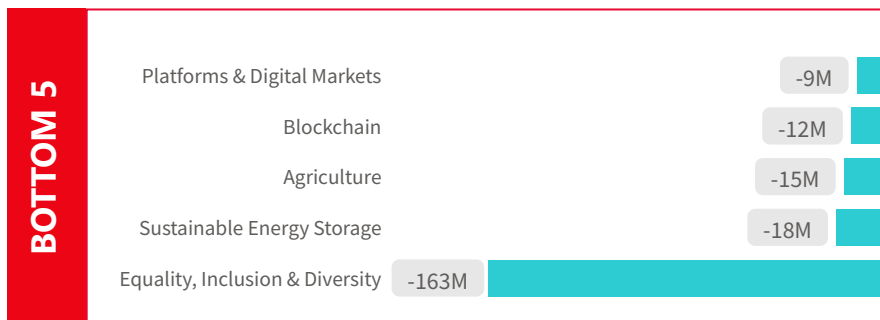
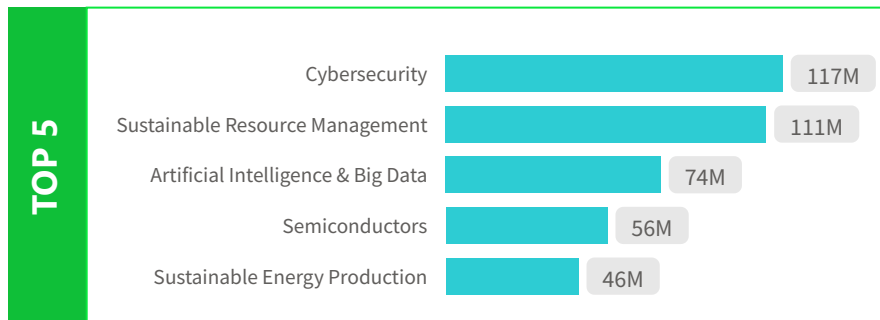
+ On the outflow side, "Equality, Inclusion & Diversity" is leading. "Aging Population", Sustainable Food", "Agriculture" and "Fintech" are closing the bottom 5.

Month-on-month thematic flows

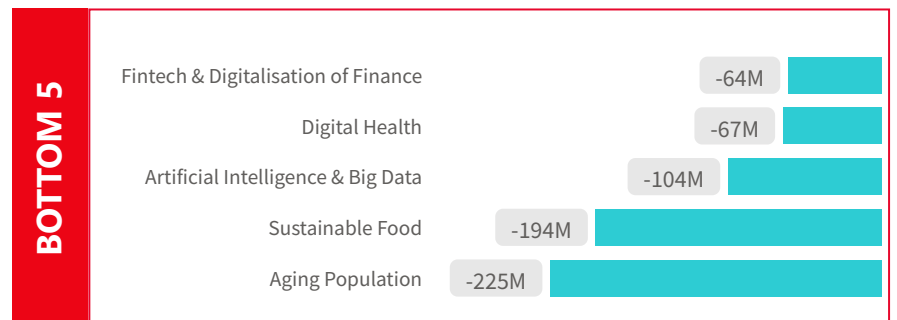
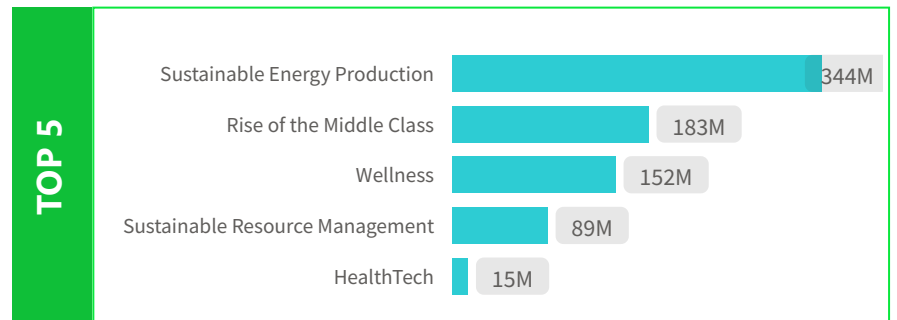
● ETFs ● Open-ended Funds



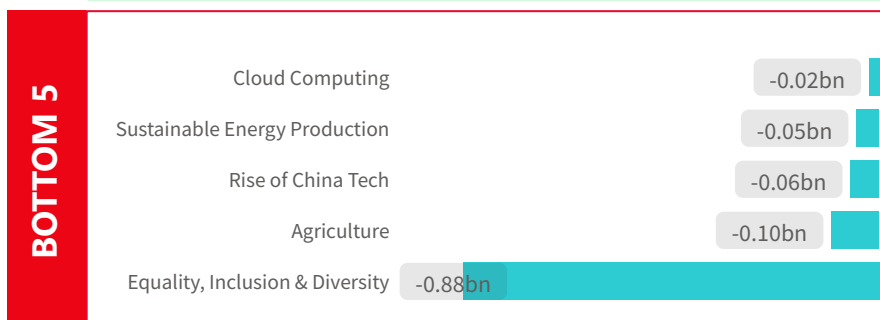
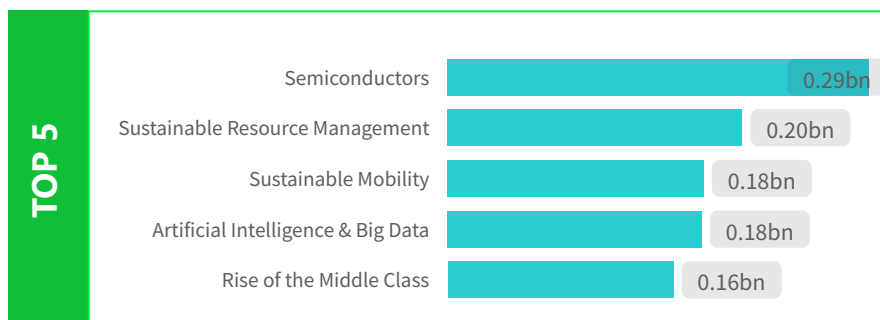
March Top/Bottom flows in Europe ETFs



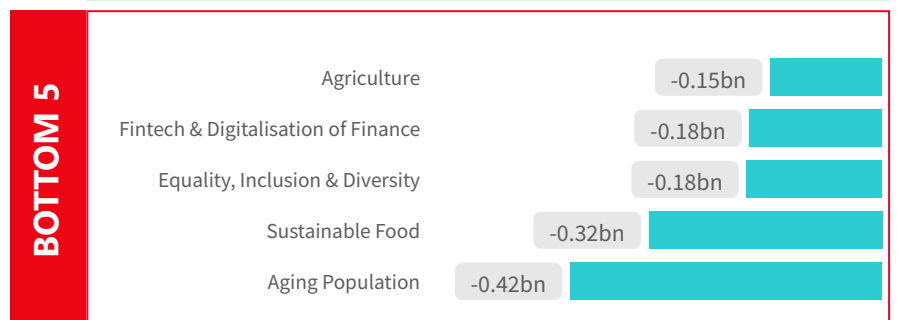
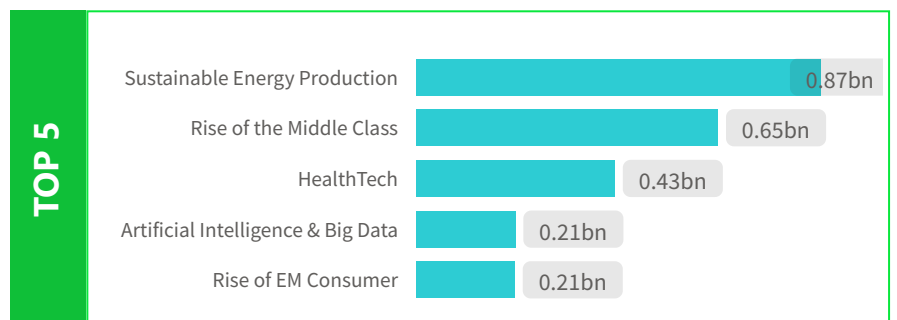
March Top/Bottom flows in Mutual Funds



YTD Top/Bottom flows in Europe ETFs



YTD Top/Bottom flows in Mutual Funds



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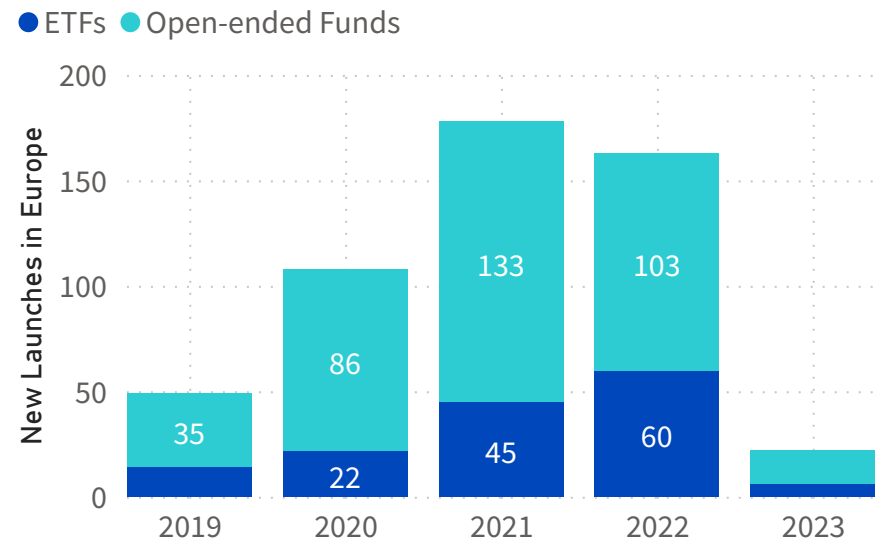
Thematic performance and launches in Europe

+ Year-to-date, technology-focused thematic strategies are leading the pack, with "Semiconductors" and "Blockchain" posting the bigger gains. "Metaverse", "Cloud Computing", and "Artificial Intelligence & Big Data" have also benefitted from the news frenzy unleashed by ChatGPT as well as the upcoming Federal Reserve's pivot. Overall, every single theme posted positive returns in the first three months of the year. March saw thematics do well. The top 5 themes are almost identical to the year-to-date ones, with only "Gaming & Entertainment" replacing "Blockchain".

+ On the other side of the ledger, themes related to health suffered year-to-date, with both "Wellness", "Digital Health" and "HealthTech" featuring in the bottom 5. In March, "Space" posted the worst returns. "Agriculture" and "Natural Resources" which performed very well in 2022, started to show signs of weaknesses.

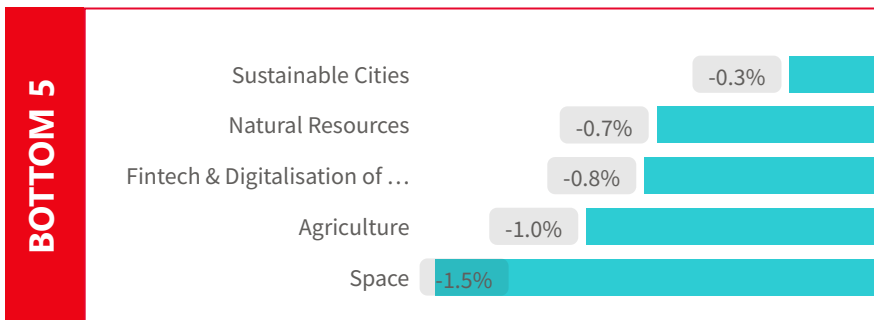
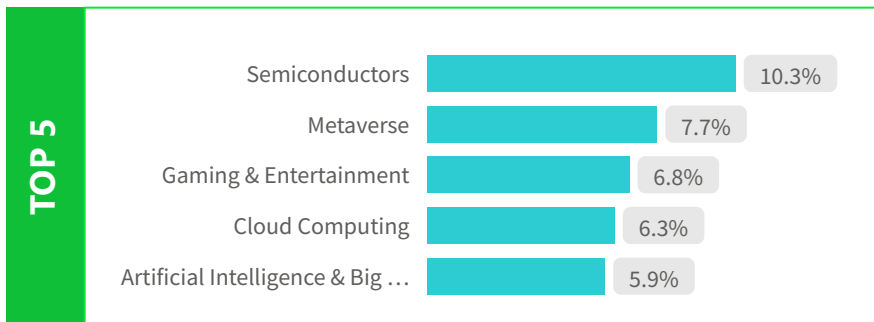
+ Thematic launches slowed down in Q1 2023, with 9 ETFs and 16 open-ended funds, behind the record pace of 2021 or 2022, but on par with the pace in 2020.

Yearly thematic launches in Europe*

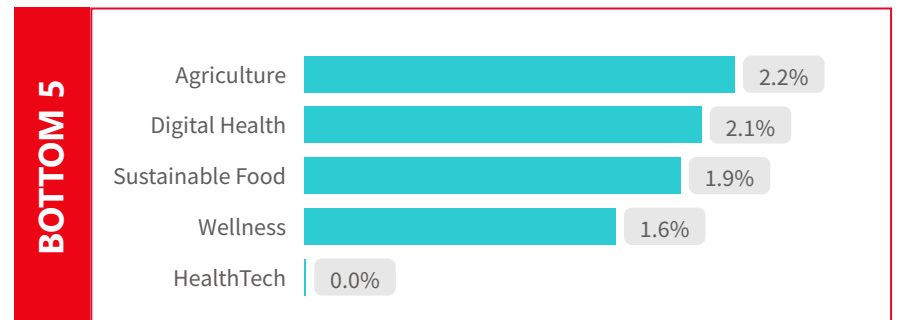
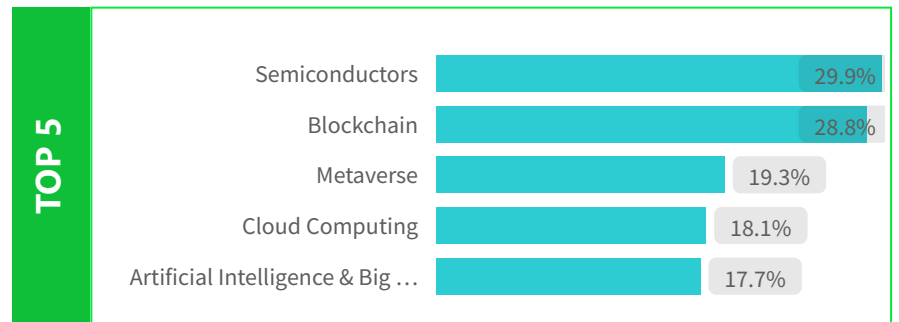


* New launches are updated quarterly

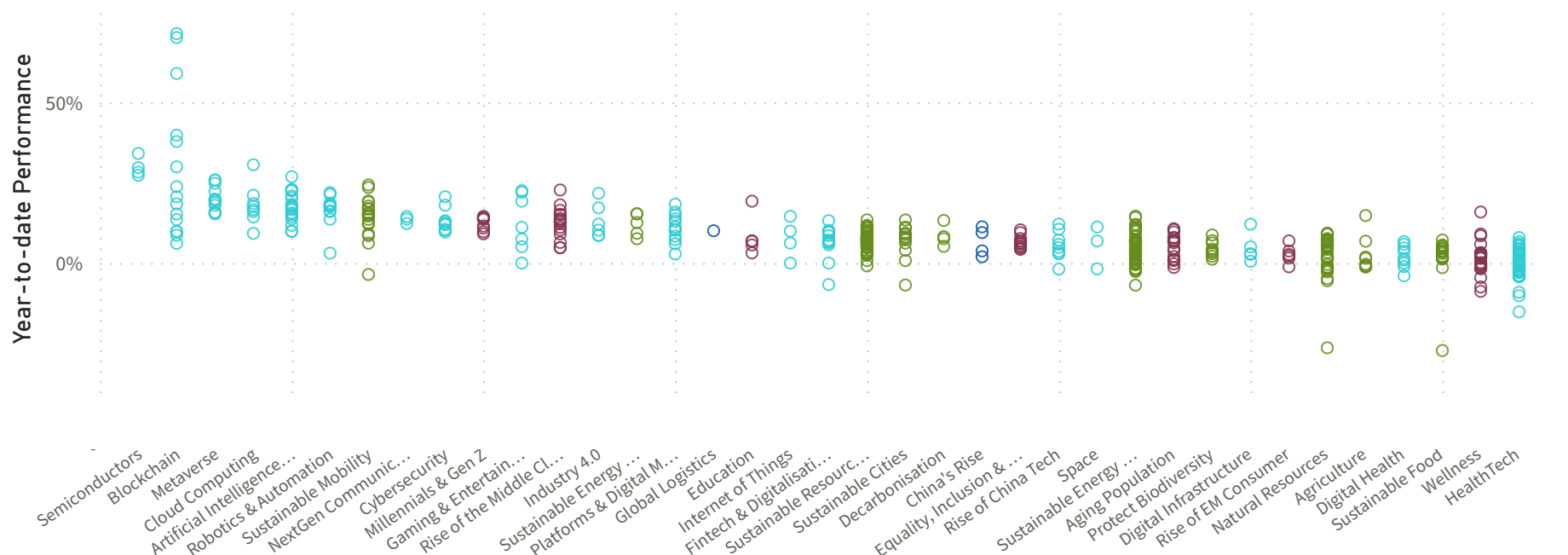
Top 5/Bottom 5 by performance in March



Top 5/Bottom 5 by YTD performance

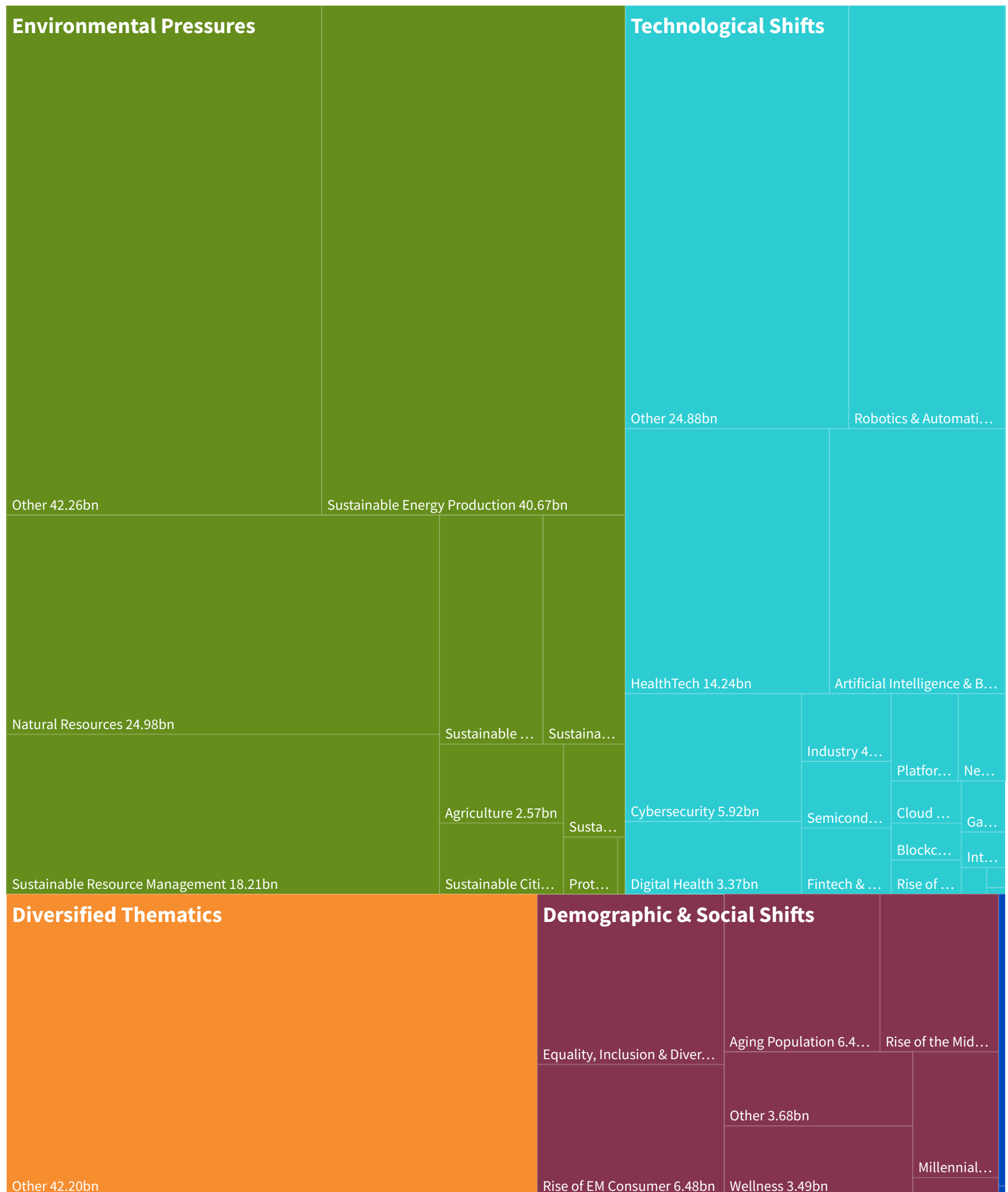


Dispersion of YTD performance of all ETFs and mutual funds by themes in Europe



Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/03/2023 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 [31/03/2023](#) 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		6,000.62M	-48.13M	-76.79M
Technological Shifts	Disruptive Technologies	13,117.41M	188.71M	360.77M
Technological Shifts	HyperConnectivity & Digitalisation	5,763.87M	44.92M	219.22M
Environmental Pressures		3,991.22M	-65.51M	-215.84M
Environmental Pressures	Climate Change & Sustainability	38,255.35M	117.88M	-112.67M
Environmental Pressures	Limited Resources	11.61M	0.06M	-1.01M
Diversified Thematics		42,195.11M	-232.84M	85.21M
Demographic & Social Shifts		1,445.89M	-17.22M	-13.39M
Demographic & Social Shifts	Demographic Shifts	2,206.90M	1.44M	39.09M
Demographic & Social Shifts	Social Shifts	26.78M	-0.10M	-0.26M

Appendix - Theme focused ETFs and Open-ended funds

Theme Name	AuM (\$)	Flows Last Month (\$)	Flows YTD (\$)	Performance Last Month	Performance YTD
Aging Population	6,456.10M	-221.96M	-377.78M	1.3%	5.0%
Agriculture	2,574.00M	-50.63M	-252.69M	-1.0%	2.2%
Artificial Intelligence & Big Data	12,253.19M	-30.06M	389.32M	5.9%	17.7%
Blockchain	682.18M	-14.72M	10.97M	3.2%	28.8%
China's Rise	505.27M	-1.25M	35.91M	2.1%	6.6%
Cloud Computing	777.71M	12.06M	20.38M	6.3%	18.1%
Cybersecurity	5,924.88M	103.60M	56.41M	3.7%	13.1%
Decarbonisation	111.73M	0.83M	2.48M	0.3%	6.6%
Digital Health	3,372.19M	-57.75M	-130.00M	1.3%	2.1%
Digital Infrastructure	97.81M	-4.26M	-29.87M	0.7%	4.3%
Education	425.12M	-12.63M	-24.92M	2.6%	8.3%
Equality, Inclusion & Diversity	8,365.79M	-163.00M	-1,064.60M	1.1%	6.5%
Fintech & Digitalisation of Finance	1,561.86M	-65.53M	-179.87M	-0.8%	7.2%
Gaming & Entertainment	588.46M	-3.41M	-8.18M	6.8%	12.2%
Global Logistics	17.91M	0.29M	1.05M	2.0%	10.1%
HealthTech	14,236.72M	25.43M	431.17M	0.5%	0.0%
Industry 4.0	1,597.64M	8.22M	32.68M	3.7%	11.6%
Internet of Things	409.11M	10.77M	56.69M	2.7%	7.7%
Metaverse	177.65M	9.65M	26.14M	7.7%	19.3%
Millennials & Gen Z	2,838.54M	-5.14M	-29.06M	5.0%	12.2%
Natural Resources	24,975.32M	-6.83M	114.31M	-0.7%	2.6%
NextGen Communications	1,076.74M	-20.19M	-80.12M	4.9%	13.5%
Platforms & Digital Markets	1,539.17M	-9.62M	-14.76M	3.2%	11.1%
Protect Biodiversity	811.92M	3.70M	28.57M	1.2%	4.9%
Rise of China Tech	626.70M	1.00M	1.55M	4.4%	5.4%
Rise of EM Consumer	6,483.66M	12.75M	229.92M	2.4%	2.6%
Rise of the Middle Class	4,918.55M	205.81M	804.75M	2.7%	11.9%
Robotics & Automation	17,416.28M	-31.64M	-119.03M	5.6%	17.1%
Semiconductors	1,572.95M	55.98M	293.01M	10.3%	29.9%
Space	32.10M	0.47M	2.18M	-1.5%	5.4%
Sustainable Cities	2,319.09M	-46.48M	2.23M	-0.3%	6.7%
Sustainable Energy Production	40,669.00M	390.23M	819.34M	0.3%	5.2%
Sustainable Energy Storage	1,506.25M	-18.61M	-2.26M	0.6%	11.2%
Sustainable Food	6,234.33M	-185.12M	-321.79M	0.0%	1.9%
Sustainable Mobility	4,950.61M	-4.70M	143.91M	1.1%	14.2%
Sustainable Resource Management	18,210.53M	199.57M	332.43M	1.5%	6.9%
Wellness	3,490.92M	151.98M	128.12M	1.1%	1.6%

Source: WisdomTree, Morningstar, Bloomberg. All data as of 31/03/2023 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
Rise of China Tech		Millennials & Gen Z	Equality, Inclusion & Diversity		Polarisation	Protect Biodiversity	Natural Resources
Blockchain	Cybersecurity		Rise of the Middle Class		Rise of Tension	Sustainable Mobility	
HealthTech	Digital Health		Rise of EM Consumer			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						
	Social Media & Media						

Source: WisdomTree, as of 31/12/2022

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WisdomTree European Thematic Monthly Update

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