Global Thematic Funds Landscape
These funds have captured investors' imagination and their assets, but buyers should beware.

Contents

Ben Johnson, CFA
Director of Global ETF Research
ben.johnson@morningstar.com

Kenneth Lamont, CAIA
Senior Analyst
kenneth.lamont@morningstar.com

Daniel Sotiroff
Analyst
daniel.sotiroff@morningstar.com

Executive Summary

The global menu of thematic funds has mushroomed in recent years. These funds attempt to harness secular growth themes ranging from artificial intelligence to cannabis. This steady supply of niche and often gimmicky funds from asset managers has increased demand for clarity and guidance from investors. In this report, we introduce a novel taxonomy for classifying these funds. Using this framework, we analyze key trends in the global thematic funds' landscape. We finish by sharing best practices for choosing from this expansive universe.

Key Takeaways

▶ Investor interest in thematic funds has increased. Over the three years ending Dec. 31, 2019, collective assets under management in thematic funds grew nearly threefold, from $75 billion to approximately $195 billion worldwide. This represented approximately 1% of total global equity-fund assets, up from 0.1% 10 years ago.

▶ The menu of thematic funds has swelled. A total of 154 new thematic funds debuted globally in 2019, falling just short of the record 169 new funds launched in 2018. As of the end of December 2019, there were 923 thematic funds in Morningstar's global database.

▶ We have developed a three-tiered taxonomy for classifying thematic funds to help investors make sense of this expansive and diverse universe.

▶ Europe is the largest market for thematic funds, accounting for 54% of global thematic fund assets.

▶ Actively managed funds account for most assets invested in thematic funds.

▶ With over $27 billion in assets, Robotics and Automation is the most popular theme globally.

▶ Just 45% of all thematic funds launched prior to 2010 survived to 2020. Of those that survived, just one in four outperformed the MSCI World Index over that 10-year span.

▶ These funds' lackluster performance is partly a result of thematic funds' fees being higher than those levied by their non-thematic counterparts.

▶ Investors in thematic funds are making a trifecta bet. They are betting that they are:
1. Picking a winning theme.
2. Selecting a fund that is well-placed to harness that theme.
3. Making their wager when valuations show that the market hasn't already priced in the theme's potential.
The odds of winning these bets are low, but the payouts can be meaningful.

Introduction

The global menu of thematic funds has mushroomed in recent years. These funds attempt to harness secular growth themes ranging from artificial intelligence to cannabis. The result has been a steady supply of greater complexity from asset managers and increased demand for greater clarity among investors. In this report, we introduce a novel taxonomy for classifying these funds. Using this framework, we analyze key trends in the global thematic funds' landscape.

Defining the Universe of Thematic Funds

For the purposes of this report, we have defined the universe of thematic funds as those that select holdings based on their exposure to one or more investment themes. These themes may pertain to macroeconomic or structural trends which transcend the traditional business cycle. Examples include demographic shifts or technological advances.

Our definition includes funds like cannabis ETFs, which hope to capitalize on the legalization and commercialization of cannabis globally. We exclude funds that might be useful for making tactical economic calls but lack a cohesive longer-term narrative, such as those that target Japanese exporters.

Although many active managers select investments based on exposure to a theme as part of their investment process, we have isolated a distinct subset of funds that explicitly target these themes. The purpose of this paper is to identify and analyze these funds to help investors better navigate this landscape.

Building a Framework

Our taxonomy for thematic funds is based on intentionality rather than on fund holdings. To identify intentionality, we have relied on a combination of fund name (a strong indicator of intentionality) as well as information gathered from funds' prospectuses, marketing materials, and index methodologies (in the case of index funds).

What's In, What's Out?

Our definition of thematic funds is generally inclusive, but there are some important omissions. We have limited our universe to equity funds, both active and passive. We have excluded other asset classes, most notably fixed-income funds. This is because their investment profile is less suited to capturing the growth potential of emerging themes, and consequently the market for these funds is largely nonexistent.

Sustainable funds are included, provided they seek to capture a specific theme. This means that alternative energy funds, which aim to capitalize on the transition to a low-carbon economy, are included; but most broad-ESG funds, which select a diverse group of stocks based on ESG scores, fall out of scope. Funds like the Generali IS SRI Ageing Population Fund--which tracks a demographics theme but applies ESG screens--are included.

Others like the SPDR SSGA Gender Diversity ETF, which, at first glance appear thematic, are excluded on the grounds that they are designed to reward a broad set of companies with strong gender-diversity metrics rather than attempting to track the trend toward a more equitable society.

A fund that utilizes artificial intelligence or machine learning in its stock-selection process will only be included if it also selects stocks connected with one or more themes. For example, the Xtrackers Artificial Intelligence & Big Data ETF uses artificial intelligence to select stocks that it deems well-positioned to harness its targeted theme.

Sector or Theme?

The line between sectors and themes can be blurry, especially as sectors' definitions have drifted through time. As a rule of thumb, we have excluded funds that too closely resemble mainline sector funds from our definition of thematic funds.

To help separate the two as cleanly as possible, we have referenced The Industry Classification Benchmark, The Global Industry Classification Standard, and Morningstar's own Global Equity Classification Structure.

Perhaps the most challenging distinction to make is between technology sector funds and those that track one or more technology-related themes.

To be included in our taxonomy for thematic funds, broad technology funds must explicitly target one or more technology themes, such as disruptive or next-generation technologies.

Evolving Themes

What is considered a theme can change through time. For example, at its launch in 2009, the Pictet Agriculture Fund focused on meeting the expected food needs of a growing global population. Since then, technological advances have helped boost global food production, and global food scarcity has become a less pressing issue. In response, the Pictet Fund pivoted toward a broader nutrition theme and now targets companies that it deems key to improving nutritional profiles in addition to those improving efficiencies within the food-value chain.

Some funds began as thematic before outgrowing the label. For example, the American Funds New Economy Fund, which launched in 1983, initially aimed to capitalize on the shift from a manufacturing-dominated economy to one based on services and information companies. The fund has subsequently broadened its remit and now resembles a more traditional growth fund. As such, it is outside the scope of our framework for classifying thematic funds.

Mapping the Universe

To make sense of the diverse universe of thematic funds offered to investors around the world, we have developed a three-tiered taxonomy, displayed in Exhibit 1.

At first glance, it appears that thematic funds tend to resist rigid categorization. However, after assessing the global universe of these funds, we found that themes do cluster into distinct groups. For example, funds tracking Smart Car, Next-Generation Automobile, Hybrid Car, and Automated Driving themes can all be comfortably collected under the umbrella of Future Mobility—which, in turn, can be grouped with other themes under a broader theme, in this case Technology.

Broad Themes

Our framework first arranges the universe into four broad buckets: Technology, Physical World, Social, and Broad Thematic.

Technological themes, as their name suggests, target the disruptive growth potential of technological change. These include popular themes like Fintech, Robotics and Automation, and Connectivity.

Physical World themes address the management of physical resources. Included in this bucket are funds that facilitate the transition to a low-carbon world, such as alternative energy funds.

Themes in the Social bucket deal with structural changes in society. These themes may be politically oriented or focus on demographic changes.

Finally, those funds that track multiple themes belonging to any of the above buckets are grouped under the Broad Thematic umbrella.

Themes

Collected under each of these broad themes are more-granular theme groupings. For example, Technology themes include Fintech, which brings together Fintech but also the more specific Crowdfunding, Blockchain, and Digital payments subthemes.

As a further example, the Social broad theme includes Political themes, which in turn gather funds targeting New Silk Road, Chinese Structural Reform, and even U.S. Policy themes.

Exhibit 1 Thematic Fund Taxonomy

Technology

Connectivity
Digital Economy
Internet
Data Sharing
Mobile Internet
5G
Telecoms Innovation
Wireless
Tech Platforms
Information Age
Internet of Things
Wearables
Smart Equipment
Smart Grid
Intelligent Cities
Smart Cities
web.x.0
Cloud Computing
Digitalization
Social Media
E-commerce
New Retail
Cybersecurity

Robotics + Automation
Smart Manufacturing
3D Printing
Drone
Smart Industrial Tech
Mechatronics

Artificial Intelligence + Big Data
Deep Learning
Quant Computing
Machine Learning
Big Data
Information Revolution

Battery Tech
Battery Tech
Battery Value Chain
Secondary Battery Industry

Fintech
Blockchain
ETF Industry
Pay Infrastructure
Crowdfunding

Future Mobility
Next-Gen Auto
Future Mobility
Automated Driving
Smart Car
Green Car
Hybrid Car

Health Tech
Innovative Healthcare
Medical Breakthroughs
Cancer
Genome
Digital Health
Generic Pharma
Pharma Breakthrough
Science Tech
Biotech Clinical Trials
Innovative BioPharma
Next-Gen Health
Immunology
Medical Innovation

Electronics
Innovative Electronics
Integrated Circuits

Digital Media
Gaming + Esports
Multimedia

Multiple Technology
New Economy
4th Industrial Revolution
China's Silicon Valley
Disruptive Technologies
Transformative Innovation
Mega Tech
Future Innovations
Innovative Tech
Exponential Tech
Manufacturing Revolt
Frontier Tech
Future Economy
Disputive Innovation

Other
Nano Technology
Space
Virtual Reality

Physical World

Agriculture
Fertilizers/Potash
Fishing
Agribusiness
Smart Food
Food
Nutrition
Paper and Forestry
Timber

Resource Management
Shale Revolution
Upstream Natural Resources
Rare Earth Resources
Resource Tech
Rare Resources
Clean Water
Water
Waste
Water Infrastructure
Air
Efficient Resources
New Resources

Energy Transition
Solar
Wind
Alternative Energy
Energy Transition
Environmental New Deal
Nuclear
Energy Innovation
Clean Tech
Clean Disruption
New Power
New Energy
Clean Tech
Green Energy
Smart Power

Digital Media
Shipping
Logistics

Industrial
Ship Building
Global Jets

Multiple Physical Themes
Multiple Physical Themes

Social

Consumer
EM Consumer
Luxury Consumer
Global Lifestyles
New Age Consumer
Alcohol
Classic Cars
Pets
Millennials
Baby Boomers
Kids
Cosmetics
Sports
Consumer Innovation
Entertainment

Demographics
Aging Population
Demographic Trends

Security
National Defense
General Security
Safety

Wellness
Healthy Lifestyle
Wellness
Alternative Health
Health and Fitness
Obesity
Organics
Education

Political
Energy Independence
New Silk Road
Structural Reform
National/Regional Interest
Trade War
State-Owned Enterprise
Korean Unification
U.S. Policy

Other
Marijuana
Holding Companies
Gig Economy

Broad Thematic

Mega Trends
Smart Future
Global Themes
Future Trends
Smart Industries
Secular Trends
Thematic New Trends

Source: Morningstar Research.

Through this framework we hope to shine a light on the fast-growing world of thematic investing. By grouping them in this way, investors can more readily compare these funds.

The Global Landscape

As of the end of December 2019, there were 923 funds in our global database that fit our definition of thematic. Over the trailing three years, collective assets under management in these funds grew nearly threefold, from $75 billion to approximately $195 billion worldwide. This represented approximately 1% of total global equity-fund assets, up from 0.1% 10 years ago.

The menu of thematic funds has mushroomed. A total of 154 new thematic funds debuted globally in 2019, falling just short of the record 169 new funds launched in 2018.

**Exhibit 2** Global Thematic AUM Growth by Region (USD Billion)
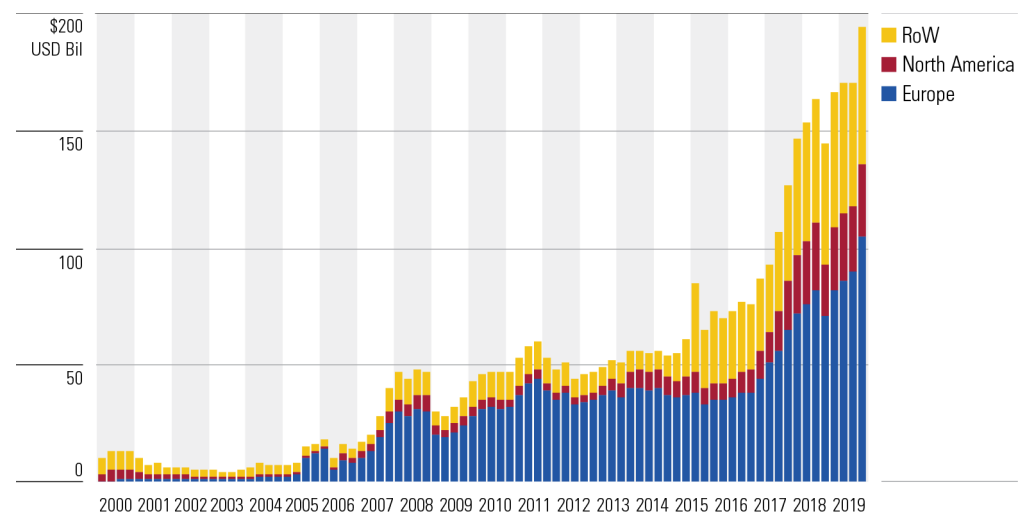
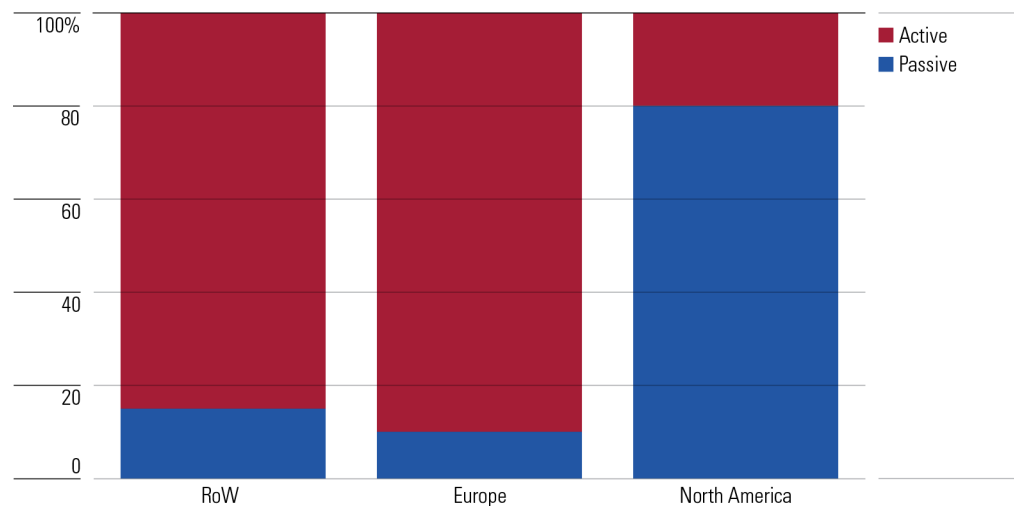Source: Morningstar Research. Data as of 31 December 2019

Europe Is the Largest Thematic Fund Market

Thematic funds' growth has been uneven across geographies. European-domiciled thematic funds' share of the global pie has expanded from 2% to 54% since the year 2000. Despite growing tenfold in size, the market share of thematic funds domiciled in North America decreased from 28% to 16% over the same period.

While all regions have experienced net inflows over the trailing five years, Europe and Rest of the World have been the main beneficiaries, netting $45 billion and $36 billion in new flows over the period, respectively.

Exhibit 3 Global Net Asset Flows by Region (USD Billion)
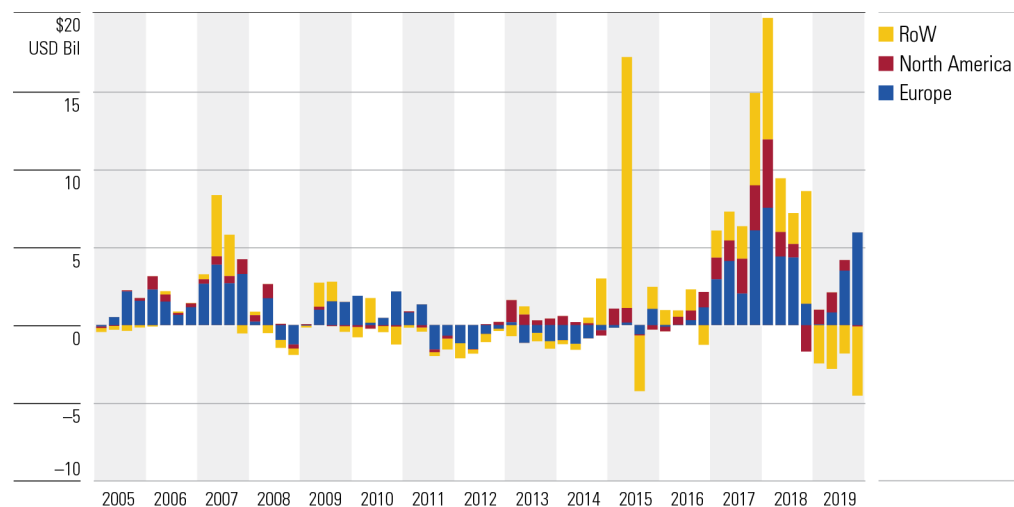
Source: Morningstar Research. Data as of 31 December 2019

Exhibit 4 Active vs Passive Regional Thematic AUM

Source: Morningstar Research. Data as of 31 December 2019

Most assets invested in thematic funds globally are actively managed, including more than 90% of assets under management in Europe. Bucking the trend is North America, where over 80% of thematic fund assets are passively managed. This reflects the success of thematic ETFs in the region.

No Dominant Thematic Asset Manager Globally

Exhibit 5 illustrates the regional nature of the global thematic fund market. No asset manager is dominant in all regions. Most are only major players in a single region.

Take as an example, Pictet Asset Management, the world's largest provider of thematic funds. Pictet is dominant within the European thematic market but, aside from a small footprint in Asia, is absent from other markets.

Japans' Nikko Asset Management takes the second spot in the global ranking of thematic fund sponsors. The firm's actively managed robotics strategies are particularly popular. In 2018, Nikko successfully partnered with ARK Invest to launch disruptive technology funds in Europe and Australia, but the firm's presence outside of Japan remains small.

Exhibit 5 Global Thematic AUM by Provider (USD Billion)
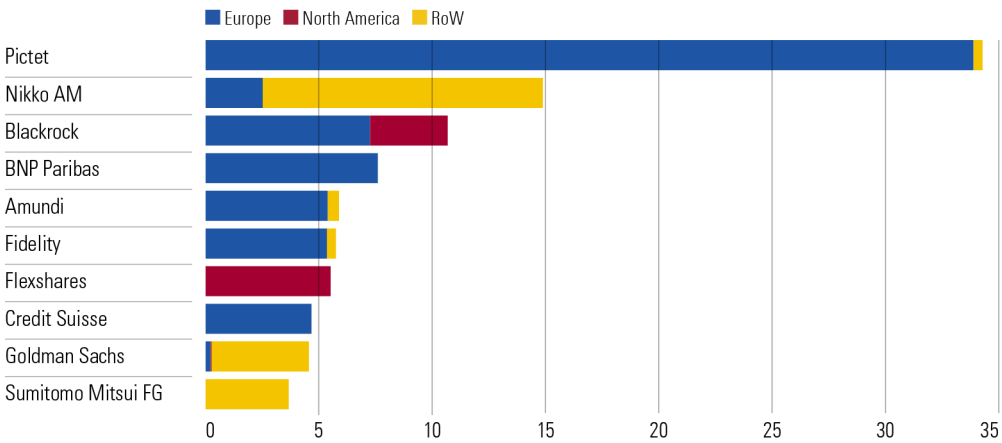
Source: Morningstar Research. Data as of 31 December 2019

Exhibit 6 Global Thematic AUM by Broad Theme (USD Billion)
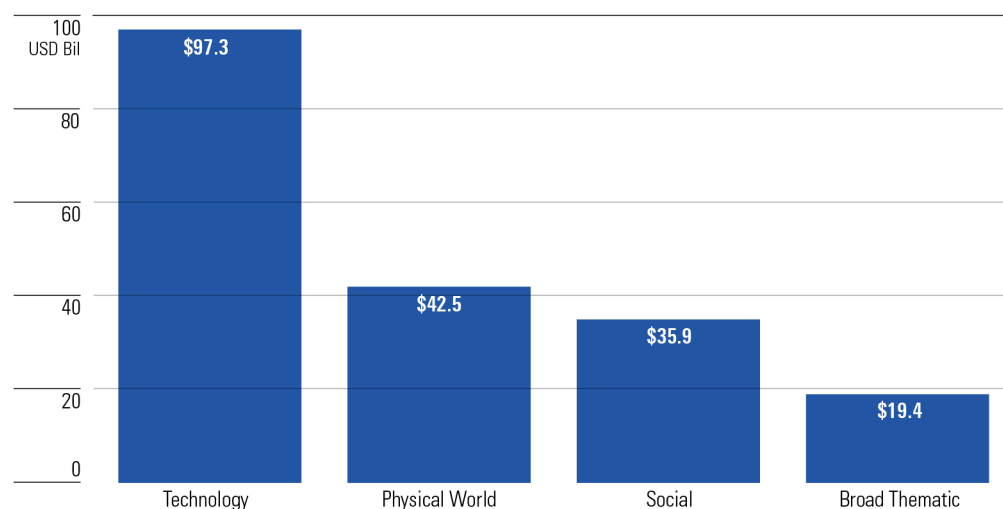
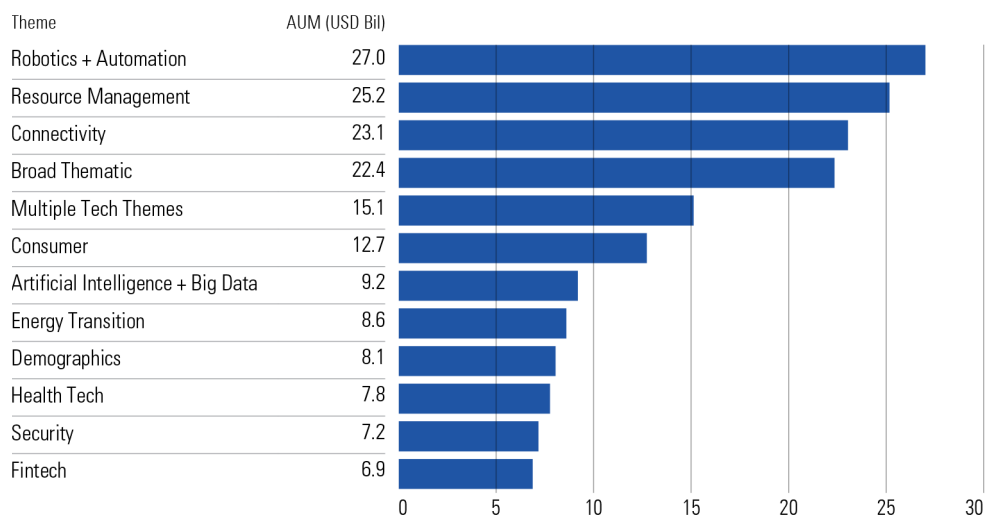Source: Morningstar Research. Data as of 31 December 2019

Technology Funds Prove Popular; Robotics Is the Largest Single Theme

Technology is the most popular broad theme, hoarding half of assets in thematic funds globally. With over $27 billion in assets, Robotics and Automation is the most popular theme globally.

Interestingly, North American funds account for just 6% of global Robotics and Automation assets, with the remainder divvied up 55%/45% between funds in Europe and Rest of the World.

Resource Management funds, a grouping largely populated by water-focused strategies snatches second place, with $25 billion in assets under management.

The third step on the podium goes to funds with a connectivity theme. This grouping includes funds tracking themes focused on an increasingly connected world such as Smart Cities and Internet of Things.

Exhibit 7 Global Thematic AUM by Theme (USD Billion)

Theme	AUM (USD Bil)
Robotics + Automation	27.0
Resource Management	25.2
Connectivity	23.1
Broad Thematic	22.4
Multiple Tech Themes	15.1
Consumer	12.7
Artificial Intelligence + Big Data	9.2
Energy Transition	8.6
Demographics	8.1
Health Tech	7.8
Security	7.2
Fintech	6.9

Source: Morningstar Research. Data as of 31 December 2019

Exhibit 8 Global Thematic Funds Style Box (%)

	Value	Blend	Growth
Large	4	14	44
Mid	3	9	21
Small	1	1	3

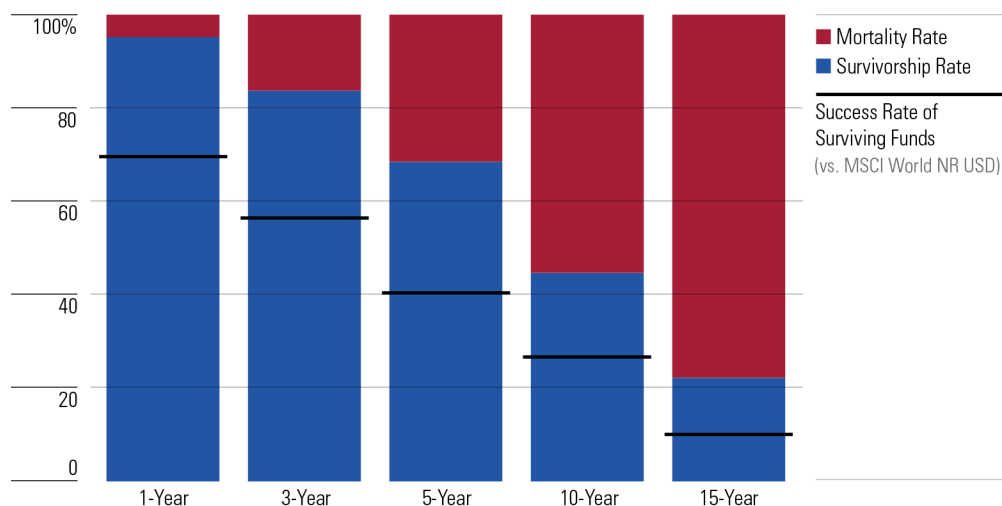Source: Morningstar Research. Data as of 31 December 2019

A Pronounced Growth Tilt

Exhibit 8 shows where the funds in the thematic universe plot on the Morningstar Style Box™. In total, 68% of thematic funds globally have a growth bias, and this number rises to over 75% for technology-themed funds. Only 9% of all thematic funds have an explicit value tilt at the time of writing. Nearly all (93%) the assets in value-leaning thematic funds sit in those funds grouped into the Physical World broad theme.

Mortality Rates Run High and Most Funds Don't Beat Global Equities

Of the thematic funds launched globally prior to 2015, 69% have survived. This figure tumbles to just 45% for those funds launched prior to 2010.

Exhibit 9 Global Thematic Fund Survival and Success Rate

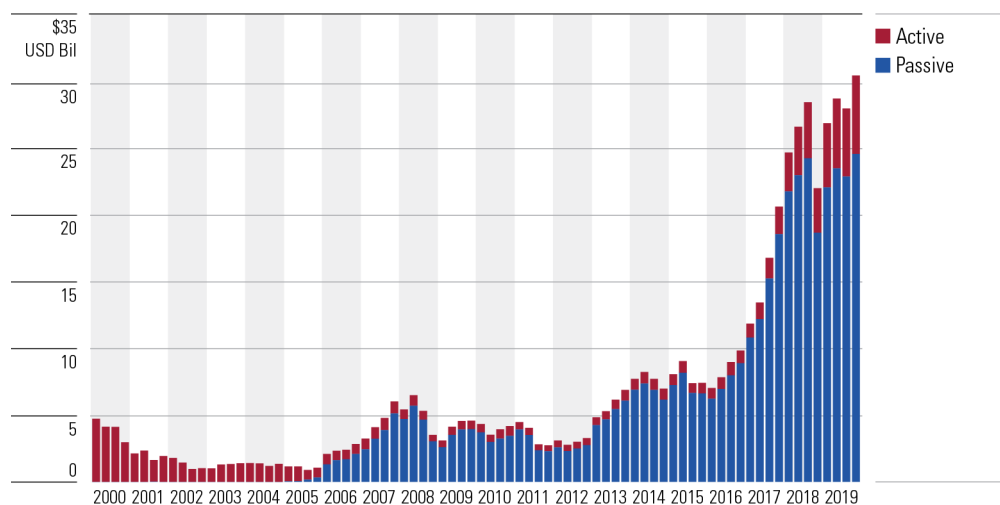Source: Morningstar Research. Data as of 31 December 2019

Of those that have survived, just 41% and 26% have outperformed the MSCI World Index over the trailing five and 10 years, respectively.

Taken together, these figures paint a bleak picture for investors. They suggest that the odds of picking a thematic fund that survives and outperforms global equities are firmly stacked against them.
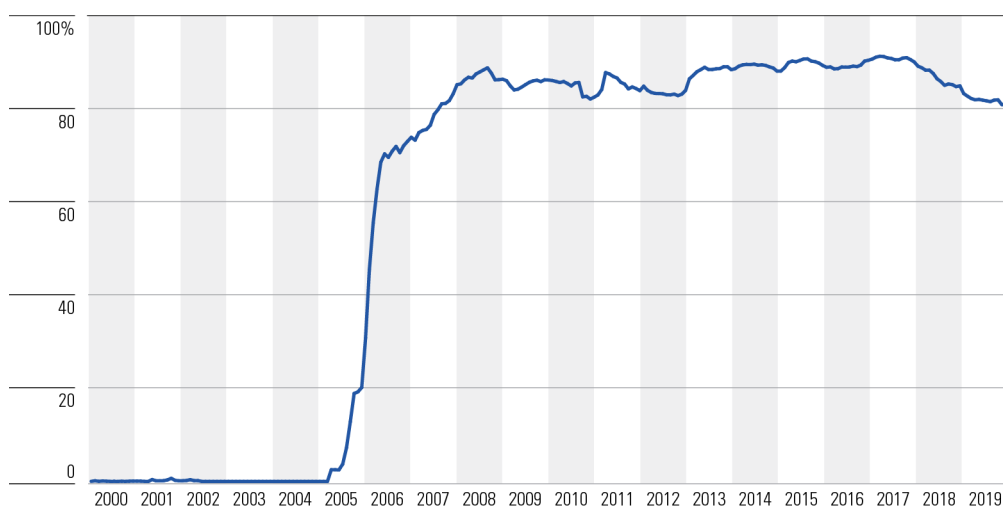
North America

Thematic funds domiciled in Canada and the United States make up the North American cohort. Funds from the U.S. dominated the thematic landscape in this region, accounting for 85% by count and more than 98% of total assets. Supported by strong net inflows, thematic assets in the region have tripled to $30.5 billion during the trailing three years through Dec. 31, 2019.

**Exhibit 10** North American AUM Growth by Region (USD Billion)

Source: Morningstar Research. Data as of 31 December 2019

As of December 2019, passive funds controlled just over 80% of thematic fund assets in North America. Exhibit 11 shows that the rise to current levels came in one burst in the mid-2000s. Between January 2005 and June 2007, outflows from actively managed strategies that focused on Internet and e-commerce stocks overlapped with the launch of several passively managed funds from Invesco that quickly grabbed assets. Over that period, the market share of passive strategies surged from less than 1% of North American thematic assets to almost 80%. These early thematic ETFs from Invesco primarily focused on various forms of clean energy and water, with all but one surviving to December 2019. Since then, passive thematic funds have accounted for the bulk of growth in the region.

Exhibit 11 Passive Market Share of North American Thematic Funds

Source: Morningstar Research. Data as of 31 December 2019

Exhibit 12 North American Thematic Launches by Year
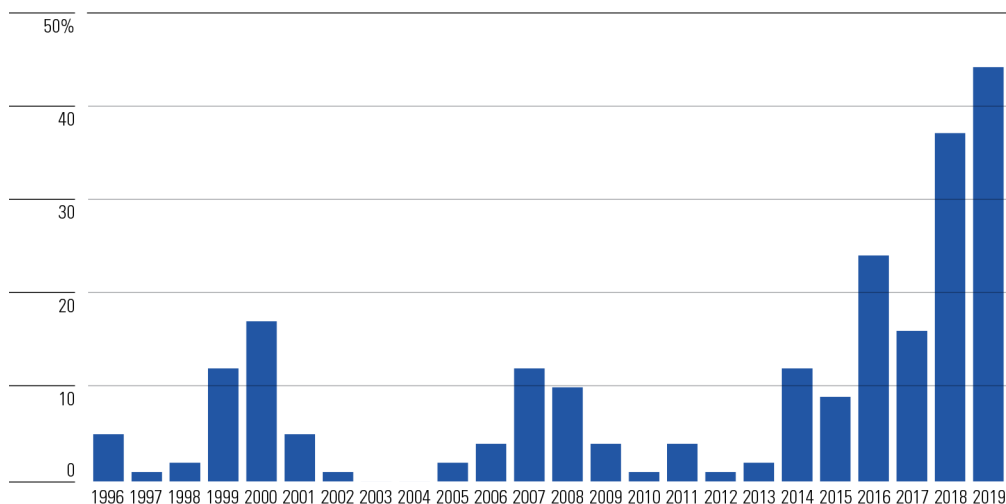
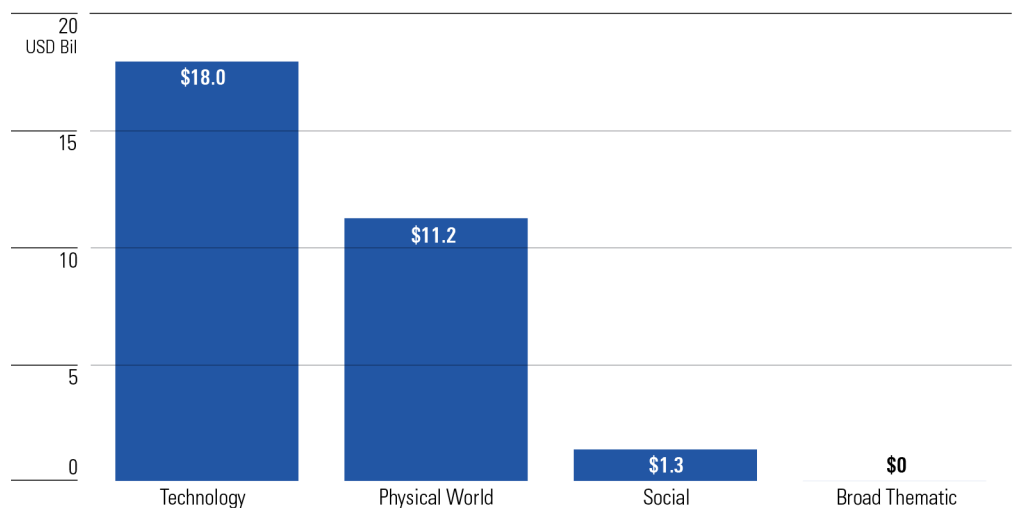Source: Morningstar Research. Data as of 31 December 2019

Historically, thematic fund launches have aligned with periods of strong market performance, like the new millennium, the mid-2000s and the five years through December 2019. Launches have waned during downturns, as Exhibit 12 illustrates. This indicates that investors' appetites for these strategies and the desire for providers to offer them tends to move in sync with the broader market. In short, thematic fund launches tend to be a bull market phenomenon.

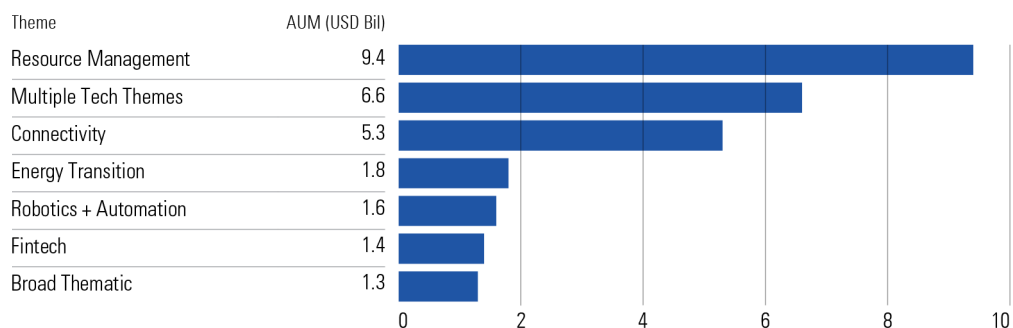**Exhibit 13** The Largest Thematic Funds in North America

Name	Theme	Sub-Theme	Passive	Fund Size (USD Bil)
FlexShares Mstar Glbl Upstrm Nat Res ETF	Resource Management	Upstream Natural Resources	Yes	5.5
iShares Exponential Technologies ETF	Multiple Tech Themes	Exponential Tech	Yes	2.7
ARK Innovation ETF	Multiple Tech Themes	Innovative Tech	No	1.9
Global X Robotics & Artfcl Intllgnc ETF	Multiple Tech Themes	Robotics + AI	Yes	1.5
ETFMG Prime Cyber Security ETF	Connectivity	Cyber Security	Yes	1.5
Robo Global® Robotics&Automation ETF	Robotics + Automation	Robotics	Yes	1.3
First Trust NASDAQ Cybersecurity ETF	Connectivity	Cyber Security	Yes	1.2
Invesco Water Resources ETF	Resource Management	Water	Yes	1.1
Artisan Thematic Investor	Broad Thematic	Broad Thematic	No	0.8
Invesco S&P Global Water ETF	Resource Management	Water	Yes	0.7

Source: Morningstar Research. Data as of 31 December 2019

Most of the assets in North American thematic funds are controlled by a handful of funds. As of the end of 2019 only eight funds had assets exceeding $1 billion. Those eight funds collectively controlled over half of the region's thematic fund assets.

Exhibit 14 North American Thematic AUM by Broad Theme (USD Billion)

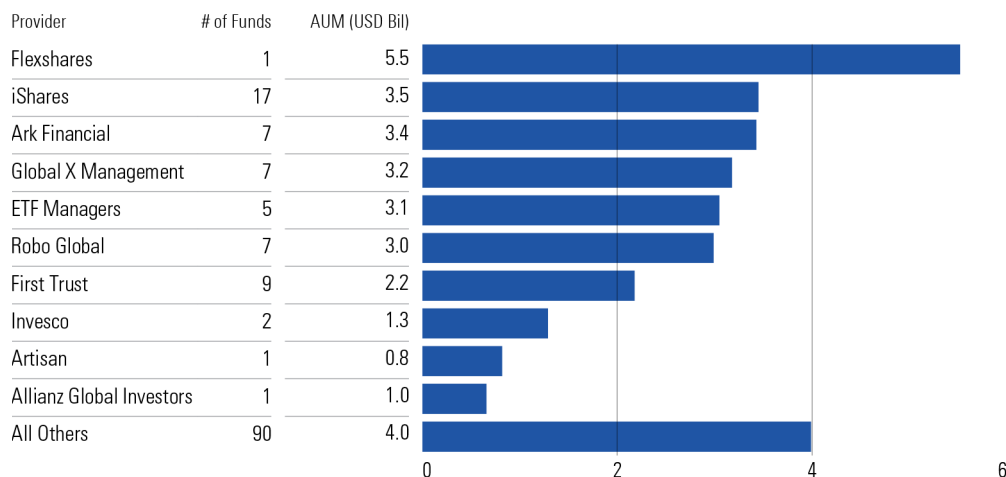Source: Morningstar Research. Data as of 31 December 2019

Exhibit 15 North American Thematic AUM by Theme (USD Billion)

Theme	AUM (USD Bil)	
Resource Management	9.4	
Multiple Tech Themes	6.6	
Connectivity	5.3	
Energy Transition	1.8	
Robotics + Automation	1.6	
Fintech	1.4	
Broad Thematic	1.3	

Source: Morningstar Research. Data as of 31 December 2019

Technology is the most popular broad theme in North America, with almost 60% of thematic assets. Those with Multiple Technology themes, such the iShares Exponential Technologies ETF[1], which tracks nine distinct technology themes, claim the most assets. Also popular are those with a Connectivity theme, a grouping which includes Cyber Security strategies.

Themes focused on the Physical World take up more than a third of assets. Resource Management funds are the most popular theme within this bucket. This grouping includes the largest Thematic fund in the region: the FlexShares Morningstar Global Upstream Natural Resources ETF[2] and several large water funds.

Exhibit 16 North American Thematic AUM by Provider (USD Billion)

Provider	# of Funds	AUM (USD Bil)
Flexshares	1	5.5
iShares	17	3.5
Ark Financial	7	3.4
Global X Management	7	3.2
ETF Managers	5	3.1
Robo Global	7	3.0
First Trust	9	2.2
Invesco	2	1.3
Artisan	1	0.8
Allianz Global Investors	1	1.0
All Others	90	4.0

Source: Morningstar Research. Data as of 31 December 2019

Market dominance extended beyond individual funds to fund providers. Exhibit 16 shows the 10 largest providers by assets in the North American cohort, which controlled more than 85% of all thematic fund assets in North America. Most of the funds and providers have small asset bases. As of December 2019, the median assets under management among North American thematic funds stood at just $30.1 million. Funds with smaller asset bases, meaning those with less than $100 million, indicate that a strategy or theme has not gained (and may not ever gain) traction. Caution is warranted with these smaller funds as they could potentially liquidate due to a lack of interest.
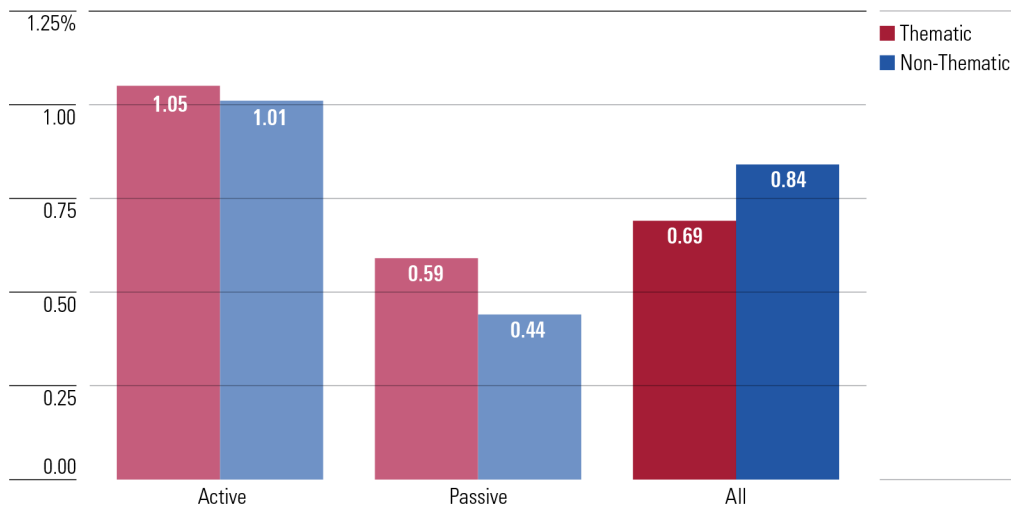
Exhibit 17 North American Thematic Funds Style Box (%)

	Value	Blend	Growth
Large	2.2	7.1	32.2
Mid	3.3	10.9	33.9
Small	0.0	1.6	8.7

Source: Morningstar Research. Data as of 31 December 2019

At the end of 2019, three fourths of all thematic funds in North America exhibited a growth tilt. Just 5% showed a value bias.

**Exhibit 18** North American Average Management Fee

Source: Morningstar Research. Data as of 31 December 2019

While the average annual management fee for North American thematic funds is technically lower than for non-thematic funds, closer inspection reveals that the large number of relatively cheaper passive funds in the sample has weighed down the average.

By splitting active and passive, we can see that the average fee is higher for both. Also, these funds' fees are much higher than the cheapest core beta products, which might charge a few basis points annually--if they charge anything at all.

The higher fees charged by thematic funds have contributed to their relatively poor aggregate returns over longer periods.

Exhibit 19 North American Thematic Fund Survival and Success Rate

Source: Morningstar Research. Data as of 31 December 2019
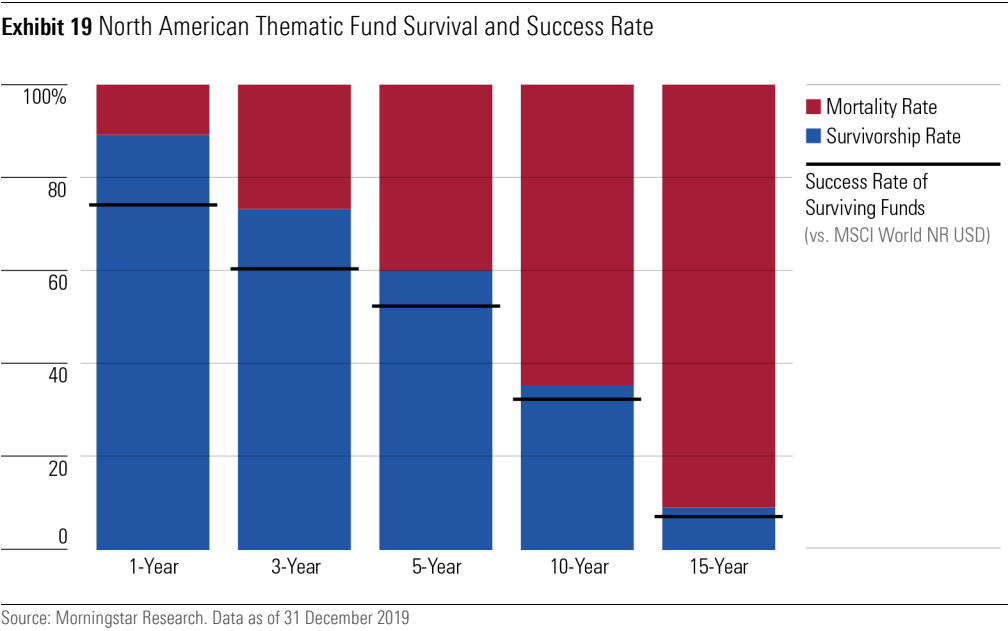
Almost two thirds of North American thematic funds launched prior to 2010 had closed by the end of 2019. Of those surviving funds, just one in three outperformed the MSCI World Index.

Even over shorter periods success rates are low. Over the five years through December 2019, 40% of thematic funds shuttered and just over half of those remaining outperformed the broad global equity benchmark.

Exhibit 19 details the formidable challenges facing investors in selecting a thematic fund that will survive and outperform global equities over longer periods.
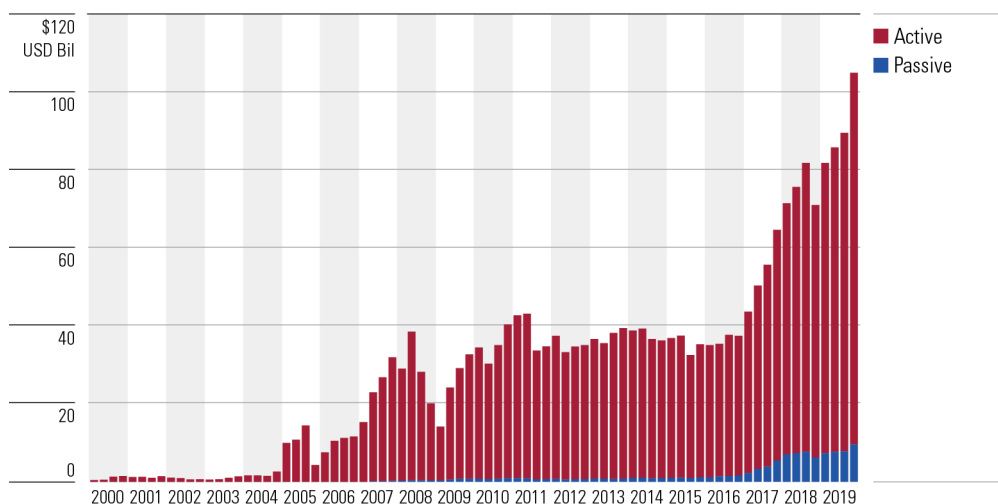
Europe

Europe is home to the largest market for thematic funds by assets. There are 293 thematic funds domiciled in the region, which together accounted for more than half (54%) of all assets in thematic funds globally as of the end of December 2019.

Assets in the region have almost tripled over the past three years to $105 billion. This has been supported by an unbroken streak of positive quarterly net inflows amounting to $43 billion over the period.

Most thematic funds in Europe are actively managed, although indexed funds have been gaining ground. Passive funds now account for 9% of assets, up from 4% three years ago.

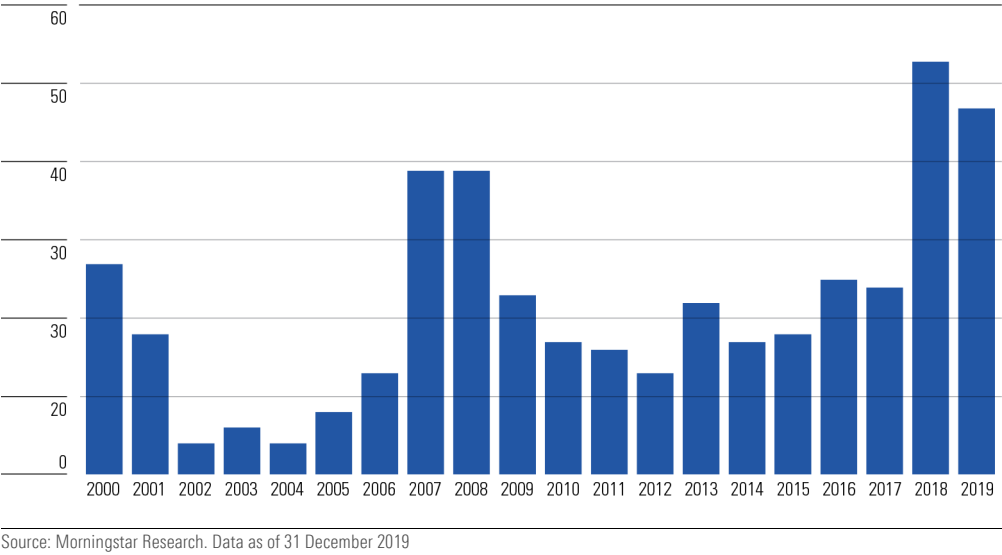**Exhibit 20** European Thematic AUM Growth (USD Billion)

Source: Morningstar Research. Data as of 31 December 2019

Exhibit 21 European Net Asset Flows (USD Billion)

Source: Morningstar Research. Data as of 31 December 2019
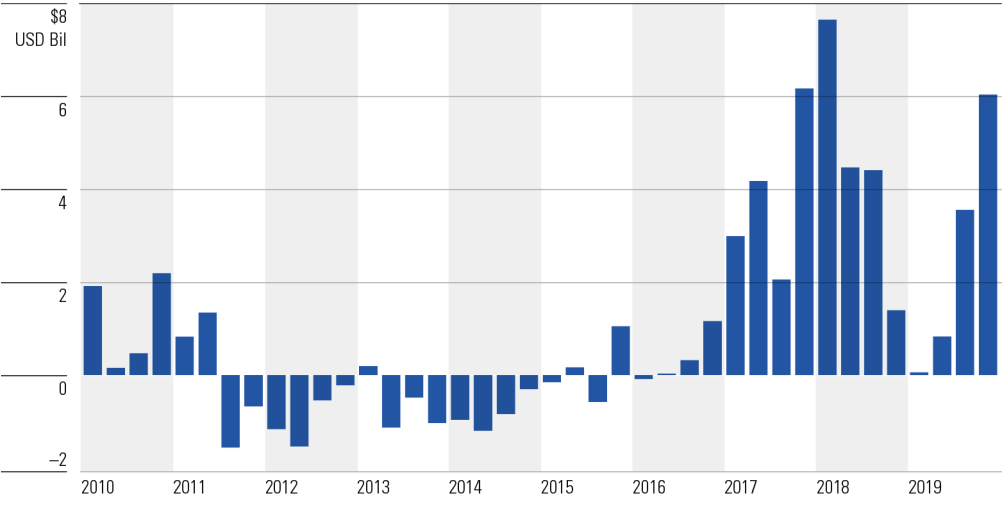
Over the trailing three years, Technology themes have proved the most popular, attracting 51% of net inflows, followed by Social and Physical World themes, which each collected close to $7.5 billion, or 17%, of net new money.

Exhibit 22 European Thematic Launches by Year

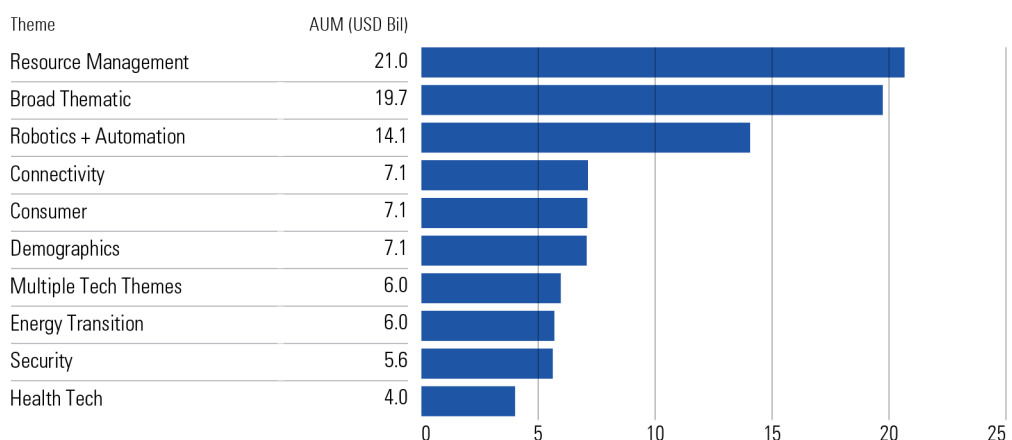Source: Morningstar Research. Data as of 31 December 2019

In Europe, 2019 was another bumper year for thematic launches with 47 new entrants. The number of launches has been positively correlated with the performance of the broader equity markets, with the number of new launches increasing as markets have risen.

Exhibit 23 European Thematic AUM by Broad Theme (USD Billion)

Broad Theme	AUM (USD Bil)
Tech	37.3
Physical World	29.0
Social	20.0
Broad Thematic	19.4
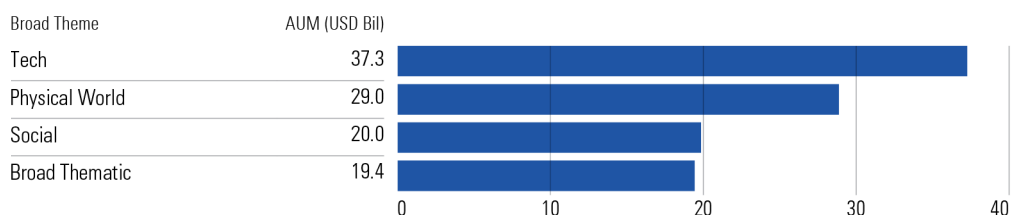
Source: Morningstar Research. Data as of 31 December 2019

Exhibit 24 European Thematic AUM by Theme (USD Billion)

Theme	AUM (USD Bil)
Resource Management	21.0
Broad Thematic	19.7
Robotics + Automation	14.1
Connectivity	7.1
Consumer	7.1
Demographics	7.1
Multiple Tech Themes	6.0
Energy Transition	6.0
Security	5.6
Health Tech	4.0

Source: Morningstar Research. Data as of 31 December 2019

The popularity of water funds has made Resource Management the largest theme in Europe. Funds in this bucket had a combined $21 billion in assets as of the end of 2019. It is followed closely by Broad Thematic funds.

Robotics and Automation funds have also proved popular, having amassed $14 billion in assets.

Exhibit 25 European Thematic AUM by Provider (USD Billion)

Branding Name	AUM (USD Bil)
Pictet	33.9
BNP Paribas	7.6
iShares	5.6
Amundi	5.4
Fidelity	5.4
Credit Suisse	4.7
M&G	3.3
Allianz Global Investors	2.6
RobecoSAM	2.6
Nikko AM	2.5
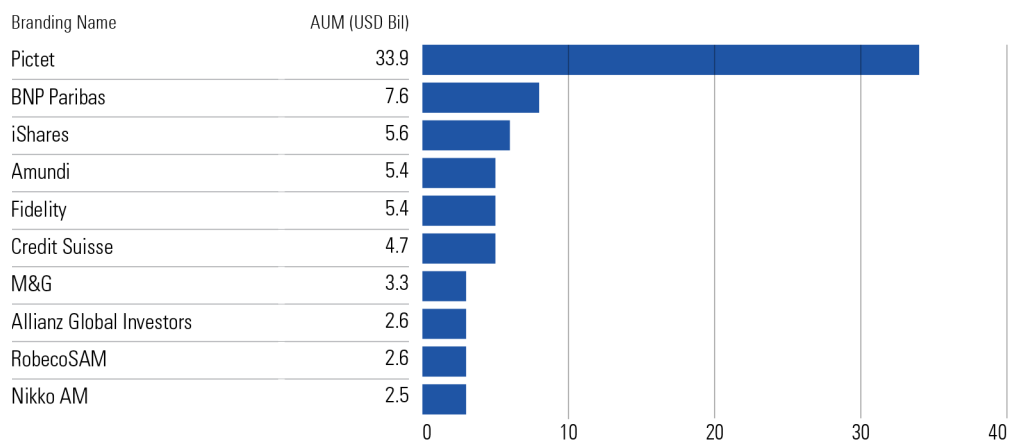
Source: Morningstar Research. Data as of 31 December 2019

Pictet Asset Management is the largest thematic fund provider in Europe by a considerable margin, boasting more than 4 times the assets of its nearest rival, BNP Paribas. Pictet has a range of nine actively managed thematic funds, which includes the five largest in Europe.

Exhibit 26 The Largest Thematic Funds in Europe

Name	Theme	Sub-Theme	Passive	Fund Size (USD Bil)
Pictet-Global Megatrend Sel I USD	Broad Thematic	Broad Thematic	No	9.4
Pictet-Water I EUR	Resource Management	Water	No	6.5
Pictet - Robotics I dy EUR	Robotics + Automation	Robotics	No	5.7
Pictet-Security I USD	Security	Broad Security	No	5.4
Pictet-Digital PUSD	Connectivity	Digital Economy	No	3.3
Fidelity China Consumer Y-Acc-USD	Consumer	China Consumer	No	3.2
BNP Paribas Aqua I	Resource Management	Water	No	3.0
M&G Global Themes GBP A Acc	Broad Thematic	Broad Thematic	No	2.9
CS (Lux) Robotics Equity SB USD	Robotics + Automation	Robotics	No	2.5
Nikko AM ARK Disruptive Innovation A USD	Multiple Tech Themes	Disruptive Technologies	No	2.5

Source: Morningstar Research. Data as of 31 December 2019

The most popular fund in Europe is the Pictet Global Megatrend Select Fund, which targets several themes, including Robotics, Security, and Clean Energy.
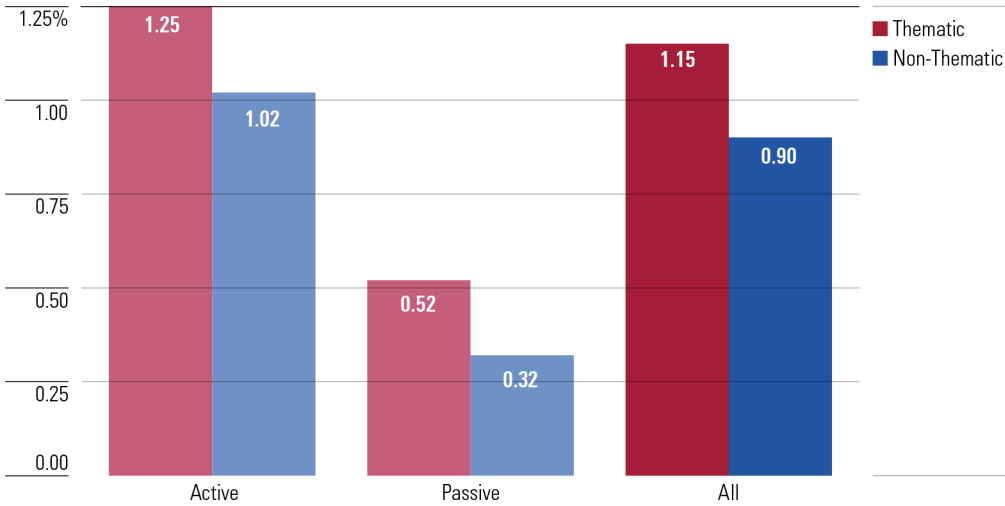
Exhibit 27 European Thematic Funds Style Box (%)

	Value	Blend	Growth
Large	2.9	16.2	43.2
Mid	2.1	10.1	20.2
Small	1.6	1.6	2.1

Source: Morningstar Research. Data as of 31 December 2019

The style and size breakdowns of European thematic funds resemble those of their global counterparts. The majority have a growth tilt and just 7% have a value bias.
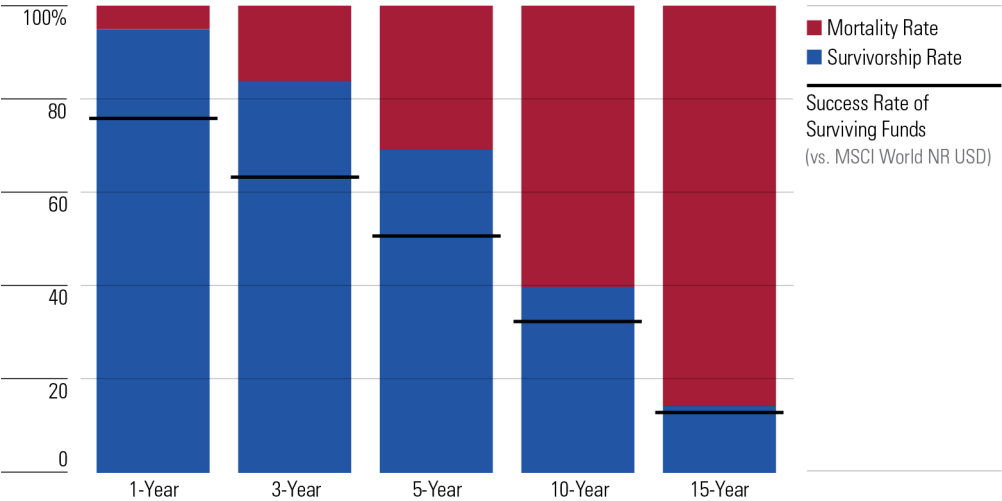
Exhibit 28 European Average Management Fee

Source: Morningstar Research. Data as of 31 December 2019

Both active and passive European thematic funds have significantly higher management fees than their non-thematic counterparts.

Exhibit 29 European Thematic Fund Survival and Success Rate

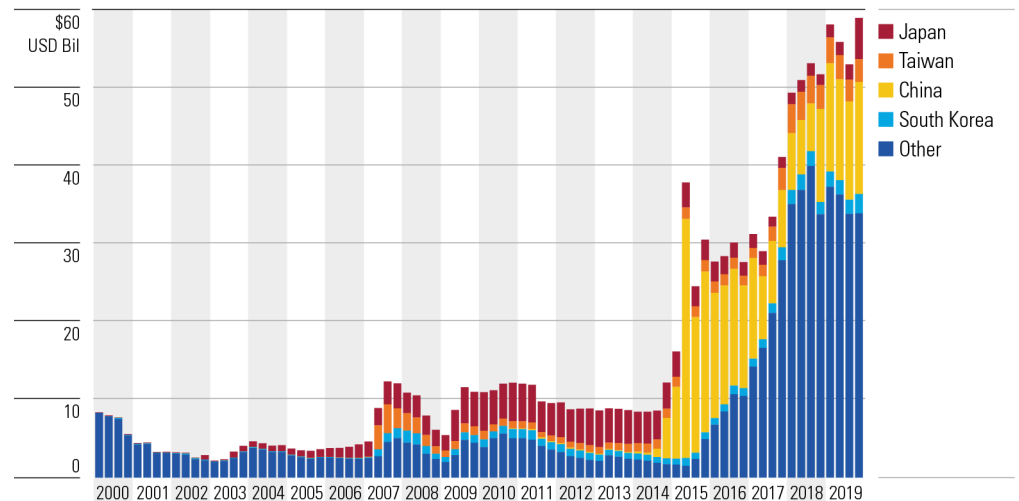Source: Morningstar Research. Data as of 31 December 2019

Exhibit 29 documents the mortality rates for thematic funds in Europe, which make grisly readings for long-term investors.

The survival rate for European Thematic funds that launched prior to 2015 was 69% at the end of December 2019. Around half of the surviving funds beat the MSCI World Index.

The survival rate plummeted to 40% for thematic funds launched before 2010. Of these, just one in three managed to beat the MSCI World Index.

Rest of the World

Exhibit 30 Rest of World Thematic AUM Growth by Country (USD Billion)

Source: Morningstar Research. Data as of 31 December 2019

Assets in thematic funds domiciled outside of North America and Europe have also been soaring.

Japan
Japan is the largest thematic fund market outside of Europe and North America. More than 95% of assets in Japan-domiciled thematic funds is invested in Technology themes. Funds tracking Robotics and Automation, Connectivity, and Artificial Intelligence themes are particularly popular.

Since the beginning of 2018, 42 new thematic funds have hit the Japanese market. Almost nine out of 10 launches since the beginning of 2017 have been technology focused.

The dominant player in the Japanese thematic market is Nikko Asset Management. Within the firm's range of thematic offerings, the Robotics and Fintech funds are the largest by size.

China
Over the past decade China has risen from nothing to become the second-largest thematic fund market in Asia with assets of $14 billion.

Political themes are the most popular among Chinese investors, as funds in this group held over $6 billion in assets at the end of 2019. Most of these assets sit in Chinese Structural Reform funds, which aim to allow investors to profit from the privatization of Chinese state-owned enterprises.

South Korea

Trailing behind in terms of size, but also growing fast, is the South Korean thematic fund market. Consumer themes focused on capturing the growth of the middle class in Asia have proven popular amongst Korean investors.

Analyzing Thematic Funds

A Trifecta Bet

Before getting into specifics with respect to best practices for thematic fund due diligence, selection, and implementation, a bit of framing is in order.

Investors in thematic funds are making a trifecta bet (a term from the racetrack). Specifically, they are implicitly betting that they are:

1. Picking a winning theme.
2. Selecting a fund that is well-placed to harness that theme.
3. Making their wager when valuations show that the market hasn't already priced in the theme's potential. The odds of winning these bets are low, but the payouts can be meaningful.

The long-term performance figures for thematic funds are not flattering. They suggest that investors' odds of selecting a fund that will survive and outperform over the long run are slim.

For those intrepid investors looking to choose a thematic fund from the menu, the following section summarizes our thoughts regarding best practices when analyzing, selecting, and allocating to these funds.

Analyzing the Theme

The first port of call when evaluating a thematic fund is the theme itself. First and foremost a robust theme should be logical. Is the narrative convincing? Is there a coherent and compelling growth story behind that pet care strategy? Is there data to back it up?

A robust strategy should be loose enough to adapt, as the specifics of the chosen theme inevitably evolve through time. Will that trade war strategy still be relevant given a change in U.S. foreign policy?[3] On the other hand, it shouldn't be so loose that it dilutes any potential gains or becomes too similar to often cheaper, plain-vanilla existing sector or broad equity strategies. How different is an innovative healthcare ETF from a plain-vanilla GICs healthcare strategy?

Over what time frame is the theme expected to play out? How will you know when to exit? Having pre-set exit criteria based on robust metrics, such as valuation ratios, will help protect against poor investment decisions. These should be monitored regularly.

---

3 It appears in this case we will never know, as the Innovation Alpha Trade War ETF (ticker: TWAR) shuttered in December 2019, just seven months after its launch.

It is also important to understand the key risk and return drivers embedded in the theme. For example, when investing in a cannabis fund it would be important look beyond the growth projections and to fully understand the regulatory risks associated with that theme.

Once these unique risk and return drivers have been isolated, it should be determined whether they are either complementary or redundant when framed within an investors' portfolio.

Implementation

A strong narrative should not distract us from looking more closely to see exactly how well a fund tracks its theme.

While at face value the theme in question may be intuitive and appear to have durable investment merit, it might not be possible to capitalize on it via publicly traded stocks. This is because there are often few firms that represent pure plays on any given theme. Even when there are pure play companies, there is no guarantee that they stand positioned to profit directly from a given theme. And even if they are, their growth might already be priced into their shares.

Also, for any given theme there tends to be several different approaches to harnessing it. Funds tracking a similar theme can end up being very different from one another. This creates an additional due diligence and ongoing monitoring burden for investors.

Active or Passive?

There are pros and cons to active and passive approaches to managing thematic funds.

The Pros of an Active Approach

► The pros of an active approach generally pertain to having a greater flexibility than an index strategy.
► Mangers can constantly monitor exposure to the theme as it evolves and can overweight better holdings and/or exclude poorly run businesses.
► Managers can incorporate a broader variety of data sources and analytical tools to inform their security selection and weighting decisions.
► Managers can invest in less liquid, less seasoned securities than most passive peers. This might allow them broader and/or earlier access to companies positioned to capitalize on the theme relative to indexed peers.

The Cons of an Active Approach

► Active thematic funds are more expensive than their passive peers.
► There is scant evidence that as a group, active managers use their flexibility to great effect.

The Pros of a Passive Approach

► The pros of a passive approach generally tie back to their rigidness. Tracking an index results in relatively lower fees and greater transparency than an active strategy.

The Cons of a Passive Approach

▶ Rigidity can also be a disadvantage. Thematic indexes rely on fixed rules to select and weight stocks. As themes and data sets evolve an index approach may be at risk of being caught flat-footed.

Thematic Index-Selection Criteria

Most passive thematic strategies use one or more of the below approaches to select stocks.

Revenue

The majority of thematic ETFs select stocks based on the revenues that companies derive from a defined set of activities. For example, an alternative energy fund may select constituents based on the percentage of revenues tied to solar, wind, or wave power.

This approach is logical and the data are readily available.

A potential downside of a strictly revenue-based approach is that it is primarily backward-looking. This can leave investors gazing in the rearview mirror, which may be particularly problematic in rapidly developing areas like technology.

Committee

In some cases, a committee of experts meets regularly to decide which stocks align with the desired theme, usually supplementing quantitative inputs like revenue sources with a more qualitative assessment. The committee can offer a soft touch approach, which allows the strategy to adapt to meet changes in the investment landscape. On the other hand, it means the strategy is reliant on the judgement of the committee and is therefore opaque. The committee is often given credibility by being overseen by specialist organizations (like a trade association) or well-known experts in their fields.

Other

Some modern index/data providers such as Motif and Yewno use cutting-edge technology to scrape data from more obscure sources such as academic papers and patent submissions. The advantage of this approach, particularly in the fast-moving world of technology, is that it is forward looking (patents signal intention). There are also claims that this approach can help generate an informational edge. A downside is the black box nature of these strategies.

Thematic Index-Weighting Criteria

After selecting stocks, an index must choose how to weight them. Given the narrow nature of most thematic funds' selection universes, a standard market-cap-weighting approach will often result in large weightings in a small handful of stocks. To correct for this, most indexes have single stock, sector, or geographic weighting caps and/or floors. Another popular solution to this single-stock concentration problem is to equally weight constituents. Both approaches balance the influence of larger companies and result in a small-cap bias.

Some funds implement more-complex tiered or graded weighting approaches that prioritize firms that offer greater exposure to the underlying theme. For example, a specialized robotics company like U.S.-based iRobot would be given a higher weighting than a huge conglomerate like Siemens, for whom robotics forms a smaller part of overall operations.

Understanding Thematic Funds' Biases

As always, it is crucial that investors understand what they own, but this is particularly true when picking thematic funds, which come in a variety of flavors. Below we examine these funds' holdings and make some observations.

Size

At the time of writing, 88% of thematic funds globally had a smaller size profile than the MSCI World Index, a proxy for global large and mid-caps. This is important because smaller stocks tend to have elevated risk profiles relative to their larger brethren.

Style

By their nature, thematic funds are trying to profit from areas of anticipated growth. It should therefore come as no surprise that more than two thirds of these funds have a growth bias. This number rises to over 75% for technology-themed funds. Only 9% of all thematic funds had a value tilt at the time of writing. Among that minority, 93% of assets sit in funds grouped into the Physical World broad theme.

Sectors and Geography

One hallmark of thematic investing is a disregard for traditional sectors or geographies. Depending on the themes tracked, investment footprints can be strikingly different from broad global benchmarks like the MSCI World Index.

Almost 90% of thematic funds globally offer diversified exposure spanning traditional market sectors. The remaining 10% of funds offer more concentrated sector exposure by selecting stocks largely within the confines of a single GICS sector[4].

Often, these focused subsector themes underpin passive vehicles, particularly ETFs.

We see a similar story with geographic exposures. Three out of every four thematic funds globally are geographically diversified (no country takes up more than 75% of the portfolio). Those that do focus on one country tend to isolate large markets like the U.S., China, Japan, or South Korea.

As themes are constantly evolving, and many funds don't include explicit constraints, geographic and sector exposures can and will change over time and must be monitored regularly.

4 Number of funds with more than 75% exposure to a single sector.

Fees

It is hard to understate the importance of compounded fees on long-term fund performance. Indeed, fees have been shown to be the most reliable indicator of future fund performance.

As shown in Exhibits 18 and 28, thematic funds tend to be more expensive than their non-thematic counterparts. These higher fees should be scrutinized closely; are they justified?

Assessing Performance

As highlighted above, the odds of picking a thematic fund that outperforms a low-cost global equity index fund over long time horizons are stacked firmly against the investor in all regions.

Globally, just 45% of all thematic funds launched prior to 2010 had survived to see 2020. Of these, only a quarter managed to beat the MSCI World Index.

Although, those that do win, can win big. For example, those who invested in the ARK Next Generation Internet ETF back at the beginning of 2015, would have raked in annualized returns of 27% through the end of 2019—3 times the return of the MSCI World Index over the same period.

Exhibit 31 Global Thematic Fund 5-Year Risk and Return
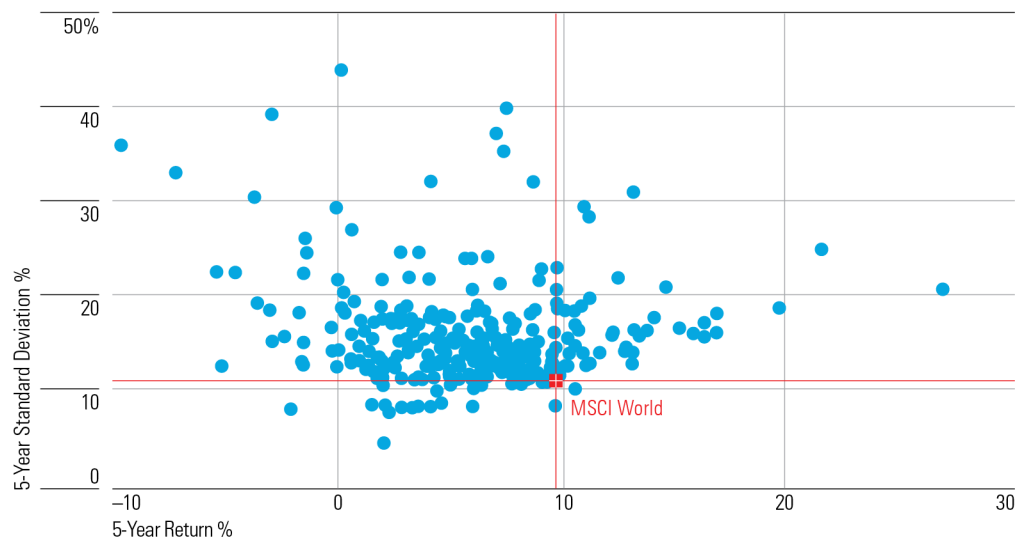
Source: Morningstar Research. Data as of 31 December 2019

In Exhibit 31 we can see that more than 90% of all surviving thematic funds registered a higher standard deviation than the MSCI World Index over the five years to Dec. 31, 2019. For some, like the ETFMG Alternative Harvest ETF, which gained 39.9% in 2017 only to lose 28.5% in 2019, the volatility has been upsetting.

Some extra risk is to be expected given the speculative nature and the narrow remit of many thematic strategies, but it also means they miss out on the risk-dampening diversification benefits of broader equity holdings.

Fitting Thematic Funds Into Your Portfolio

Because of their narrow exposure and higher risk profile, thematic funds are best used to complement rather than replace existing core holdings. Some, like Pictet Multi Theme Fund, may be used as part of a core allocation, as they are broadly diversified and retain some of the characteristics of a broad global benchmark. More-narrow exposures might also be considered as single-stock substitutes for those investors looking to express a view on a particular theme, but who lack the time, tools, and inclination to conduct due diligence on individual companies.

The best themes are expected to play out over many years. This means that they are most suitably deployed over longer investment horizons.

Return Booster or Risk Reducer?

Most thematic funds will be used with the hope of boosting returns over the investment period, but some can be specifically used to reduce portfolio risk. For example, alternative energy funds can be substituted for core energy holdings to reduce carbon risk. They fit especially well with ex-energy exposures.

Even if we set aside the claims of prospective outperformance from asset managers, if a thematic fund has drivers of risk and return that are distinct from other portfolio holdings, adding them around the margins of a core portfolio might yield diversification benefits.

Ultimately, the risk and return drivers should be well-understood before any attempt is made to blend them into a broader portfolio. Equally, portfolio overlap, and potential style drift should be monitored carefully through time. M

About Morningstar Manager Research

Morningstar Manager Research provides independent, fundamental analysis on managed investment strategies. Analyst views are expressed in the form of Morningstar Analyst Ratings, which are derived through research of five key pillars — Process, Performance, Parent, People, and Price. A global research team issues detailed Analyst Reports on strategies that span vehicle, asset class, and geography. Analyst Ratings are subjective in nature and should not be used as the sole basis for investment decisions. An Analyst Rating is an opinion, not a statement of fact, and is not intended to be nor is a guarantee of future performance.

About Morningstar Manager Research Services

Morningstar Manager Research Services combines the firm's fund research reports, ratings, software, tools, and proprietary data with access to Morningstar's manager research analysts. It complements internal due-diligence functions for institutions such as banks, wealth managers, insurers, sovereign wealth funds, pensions, endowments, and foundations. Morningstar's manager research analysts are employed by various wholly owned subsidiaries of Morningstar, Inc. including but not limited to Morningstar Research Services LLC (USA), Morningstar UK Ltd, and Morningstar Australasia Pty Ltd.

For More Information

Michael Laske
Product Manager, Manager Research
+1 312 696-6394
michael.laske@morningstar.com

M⭘RNINGSTAR®

22 West Washington Street
Chicago, IL 60602 USA