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# STOXX Thematic Indices

May 2022



Qontigo is a financial intelligence innovator, Optimizing Impact™ from risk to return with our client partners.

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# Introduction

# STOXX Thematic Indices

## What sets our offering apart?



### Expertise

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**Dedicated thematic product developers** researching new themes, allowing us to identify the recent trends ahead of the competition



### Long term

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**Solutions** that are intended to span business cycles

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Focus on **megatrends** rather than short termism



### Partnerships

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Work closely with clients from **idea generation to launch**

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Draw from both external and internal expertise (**Sustainability Think Tank**)



### Customization

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Our expertise allows us to easily tweak a concept, the starting universe, and **apply ESG filters**



### Open architecture

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Partnership with trusted, recognized and **reliable data providers**

# Creating thematic solutions that provide exposure to key megatrends



Theme is identified that could provide long term, structural and transformative shifts

Extensive research is conducted across specialized teams to decompose into main sub-themes

Key business activities / operations within each are established

Scope and best approach to capture related companies is determined

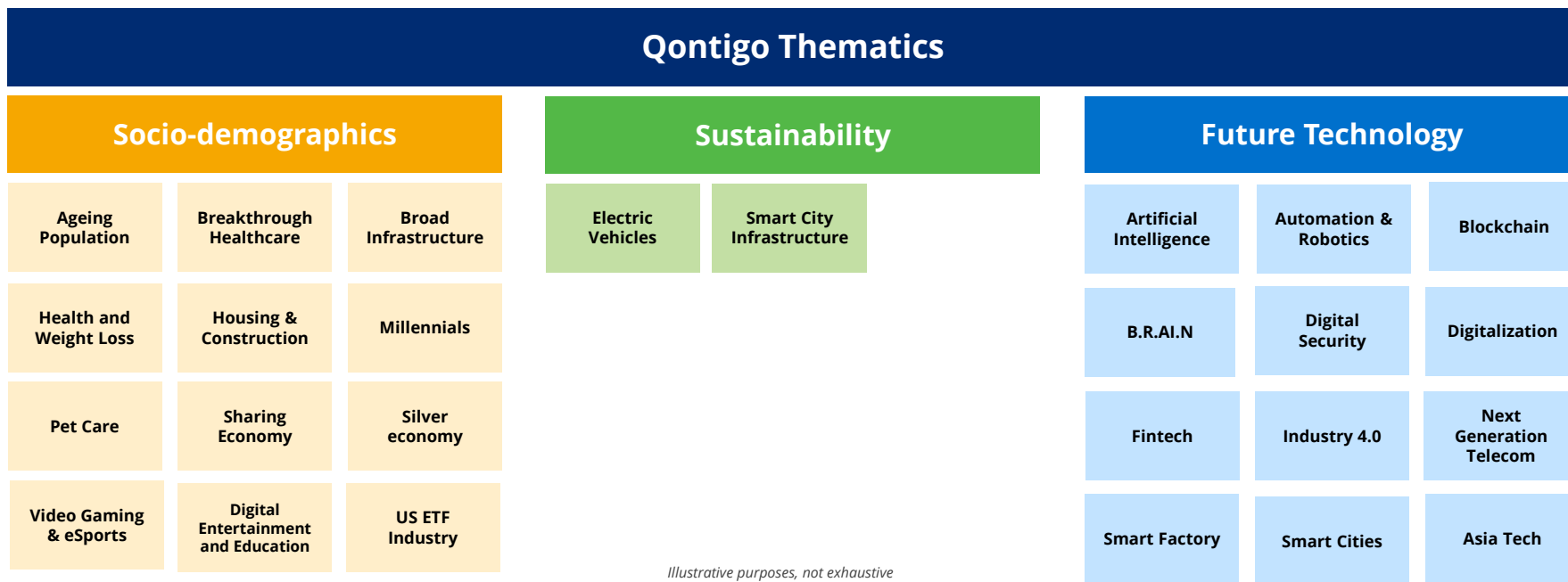
Transparent and rules-based methodology is applied to construct portfolio

# Thematic solutions that provide exposure to key megatrends

**Megatrends** – powerful, transformative forces that could change the global economy, business and society



# Broad range of themes accessible

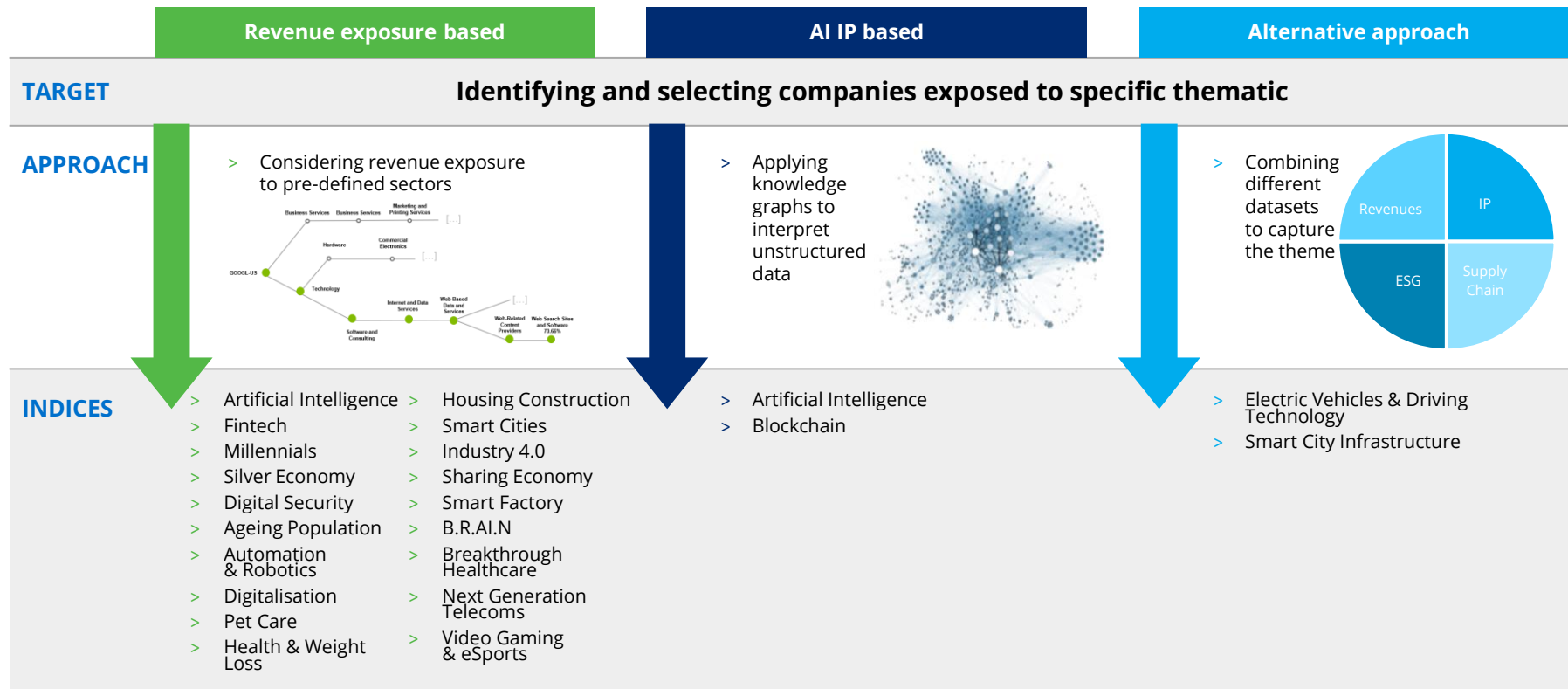


Approximately **EUR 11bn<sup>1</sup>** in ETF AUM linked to STOXX thematic indices

1) Source: Qontigo, November 2021



# Techniques to capture exposure to themes



*Illustrative purposes, not exhaustive*

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# Revenue exposure based thematic indices

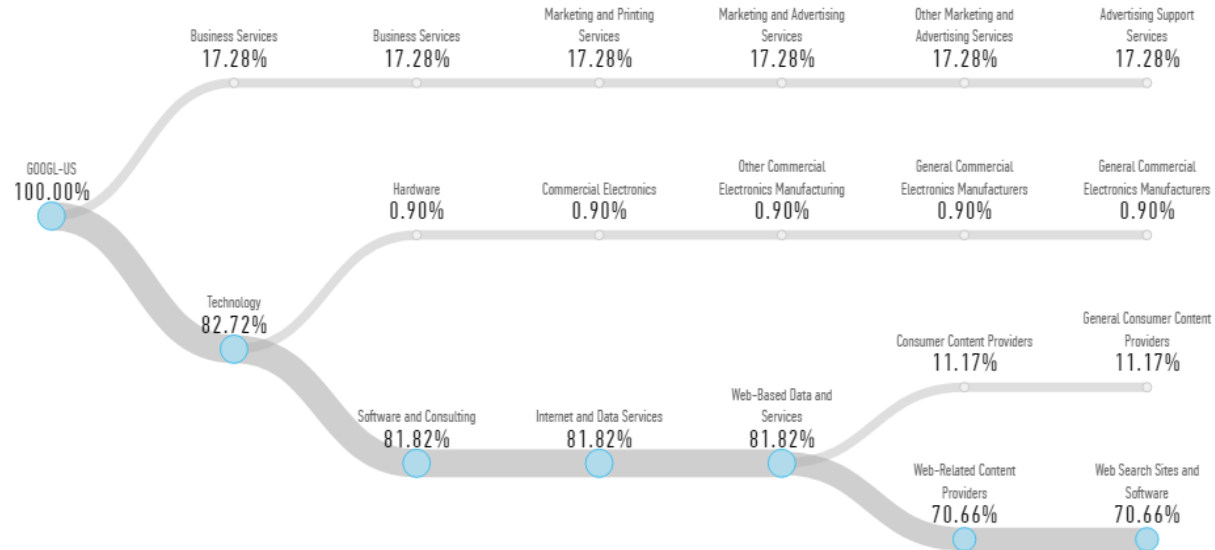
Construction

# Revenue exposure based thematic indices

## Step 1: Finding the right data-source - Factset RBICS

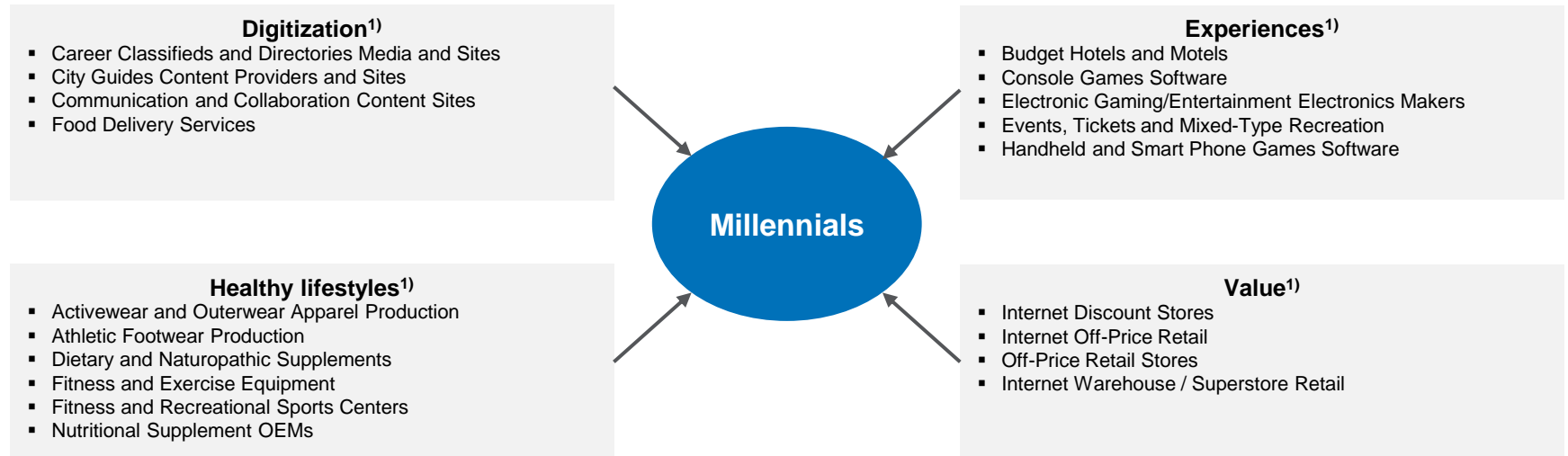
### Example: Revenue exposure by sector/industry breakdown for Google

Revenue Exposure by Sector / Industry



# Revenue exposure based thematic indices

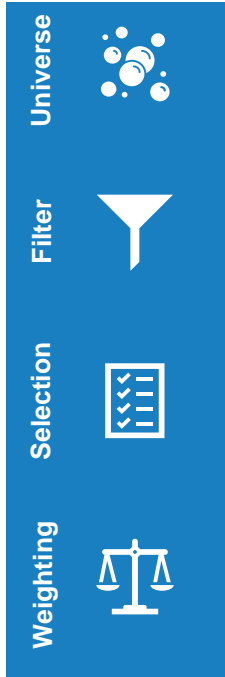
## Step 2: Identifying the relevant sectors (e.g. Millennials)



1. List of Level 6 RBICS Sectors is an indicative sample, and not meant to be exhaustive

# Revenue exposure based thematic indices

## Step 3: Constructing the index



- The index universe is the STOXX Developed and Emerging Markets TMI
- Only those companies with 3-month MDTV above EUR 1,000,000 are considered
- Companies that Sustainalytics considers as non-compliant with the United Nations Global Compact Principles or companies that Sustainalytics identifies to be involved with controversial weapons, are excluded<sup>1</sup>
- Companies are included in the index if they generate more than 50% of their revenues from the identified industries, related to each theme.
- The selected index components are weighted based on free-float market capitalization, adjusted for revenue exposure from the identified industries. Dual listed companies and/or multiple share classes are represented by the most liquid stock.
- Securities are capped according to 35/8/4.5 rule

1. For applicability to each index, please refer to the detailed STOXX Index Methodology Guide

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# Artificial intelligence IP based thematic indices

Construction

# Artificial intelligence IP based thematic indices

## Step 1: Finding the right partner

### Yewno

# Yewno

- Yewno builds knowledge discovery software and services, leveraging machine learning, computational linguistics, and a vast reservoir of information from the most respected content providers in the world
- Their technology began as academic research in applied mathematics. The goal was to best understand political, economic, financial, and social data
- Yewno currently has numerous partnerships across the finance sector, top research universities, publishers and content aggregators worldwide

# Artificial intelligence IP based thematic indices

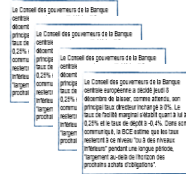
## Step 2: Setting the stage – development of knowledge graphs

### The use of “Knowledge Graphs” to *understand* and *identify* Blockchain

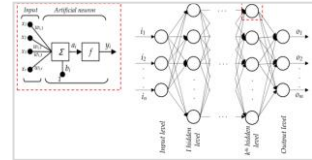
- Interpreting “*Blockchain*” as a **concept**
- A **concept** is an abstraction of an idea, a thought, a theme or an expression portrayed in various forms



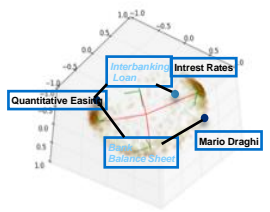
- Yewno’s **Knowledge Graph** is able to recognize a **concept** amongst an enormous volume of unstructured data and to project its significance into an inferential semantic space where such a concept is correlated to others so as to create a mesh of potential inferences



Identification and extraction of concepts



Analysis of correlation and construction of Inferential space

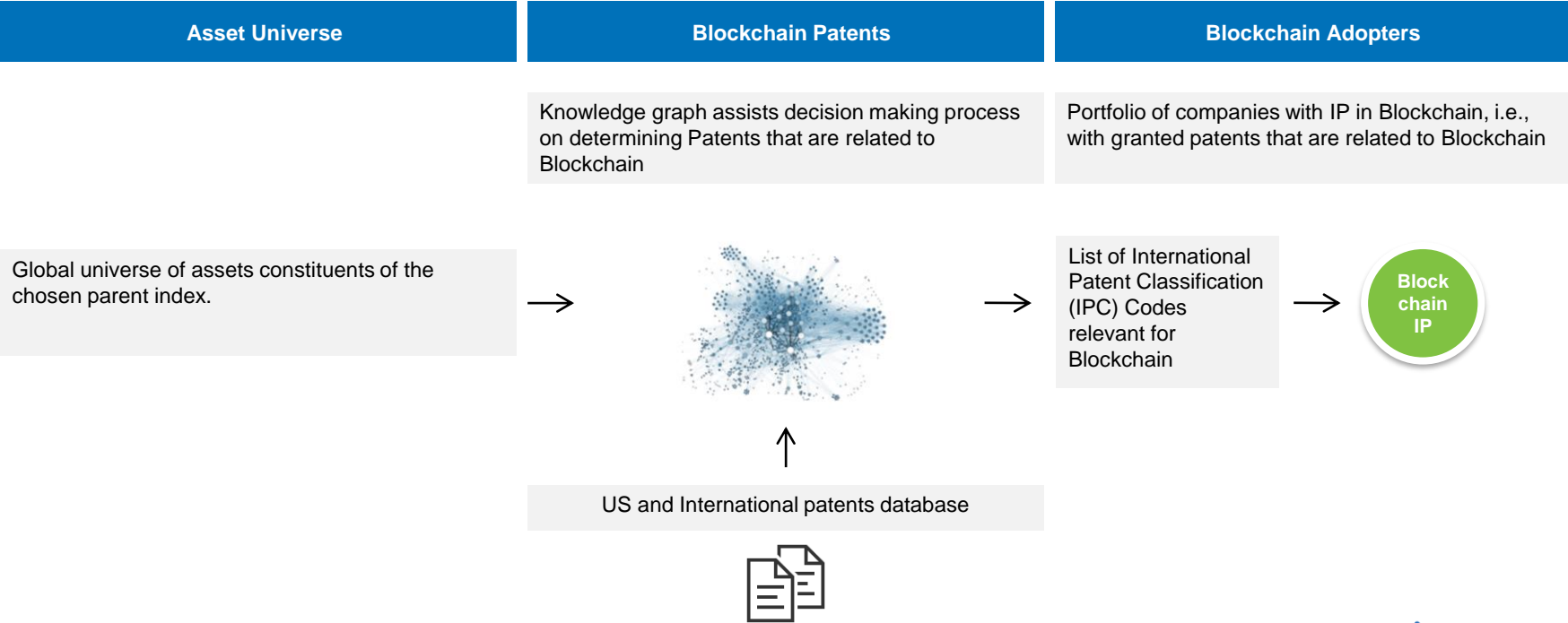


Projection of Knowledge space and elaboration of Inferences



# Artificial intelligence IP based thematic indices

## Step 3: Putting knowledge graphs to use



# Artificial intelligence IP based thematic indices

## Step 4: Defining Blockchain IP exposure and Blockchain IP contribution

### Blockchain IP Exposure

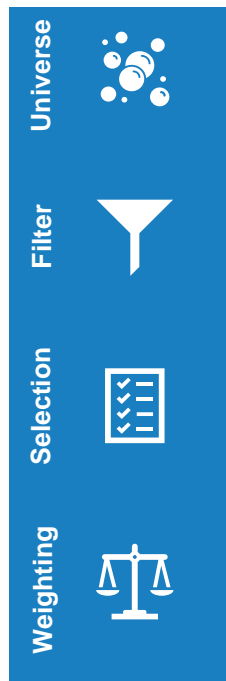
- This measure indicates the **percentage of total Blockchain patents** granted to a company vs. the total number of patents granted to that company over the same period.
- Indicates the significance of **Blockchain** intellectual property to the company's business activities.

### Blockchain IP Contribution

- This measure indicates the percentage of total **Blockchain** patents granted to a company vs. the total number of **Blockchain** patents granted globally over the same period.
- Indicates the significance of each company in the **Blockchain** space.

# Artificial Intelligence IP based methodology

## Step 5: Constructing the index



- Define emerging technology theme (e.g. AI), and starting index universe (e.g. STOXX Global Total Market Index)
- Utilize Yewno's knowledge graph to pinpoint companies that hold patents associated with respective theme
  - For each company in the starting universe the following factors are calculated: 1) pure-play (exposure) factor; 2) contribution factor
- Companies are included in the index if they own significant theme-related IP, indicated by having an:
  - IP Exposure as well as an
  - IP Contributionwhich falls into the top X% in both dimensions<sup>1)</sup>
- Equally weighted, or IP factor weighted
- Reviewed quarterly

1. Top 75% in the case of the "Artificial Intelligence" index. Ranking process may differ per theme/index

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# Alternative approaches

Construction

# Alternative approaches

## Challenges in applying a one-for-all approach

### Theme-specific

#### **Electric & Autonomous Vehicles:**

- revenues are a small fraction of car manufacturers
- not all car manufacturers produce electric and autonomous vehicle solutions

#### **Blockchain:**

- hard to capture a meaningful number of companies generating revenues from Blockchain

#### **Renewable Energy:**

- companies generating revenues from renewable energy sources or having relevant IP, are also heavily involved in activities linked to the depletion of natural resources

### Data limitations

#### **Revenues:**

Despite its granularity and diligence compared to other systems, for certain themes even RBICS' 6 Levels are not enough

- There are 26 different sector of Semiconductor Manufacturing products, however:
  - "General Analog and Mixed Signal Semiconductors" have a broad range of applications
- Challenge in separating companies generating revenues from this sector, with applications in autonomous vehicle systems, from irrelevant ones

#### **IP:**

Clinical trials are not included, posing challenges in themes like Biotech

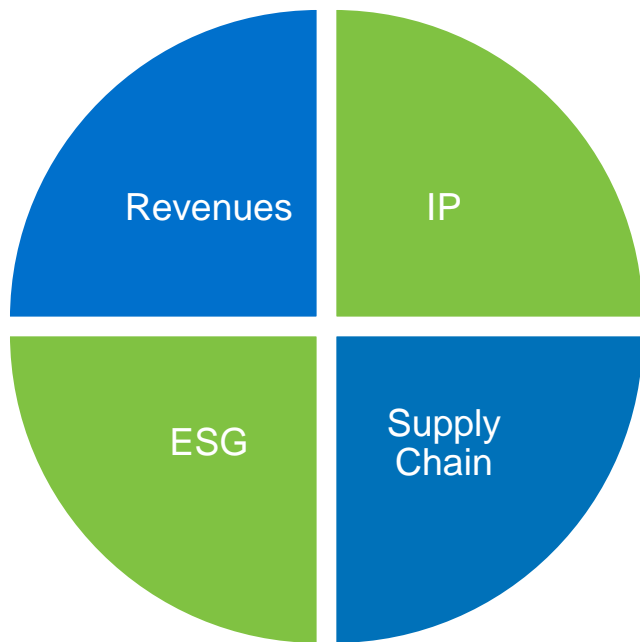
### Theme evolution

Every theme is constantly evolving at different rates

Challenges in putting together a concrete theme definition that will apply over time

# Alternative approaches

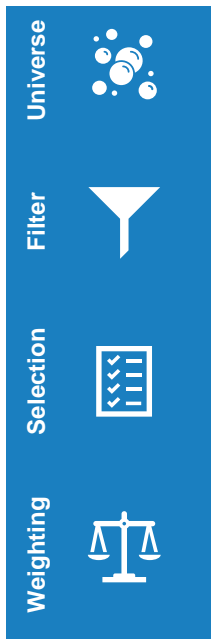
## Working around the challenges



- **Switching from one dataset to another**
  - Revenues-based approach is meaningless in the case of Blockchain  
→ IP-based dataset leveraged
- **Combining datasets**
  - Revenues as stand-alone solution doesn't work in the case of electric vehicles  
→ Combination of revenues with supply chain relationship dataset filters out irrelevant names
  - Similar case with Renewable Energy  
→ Combination of revenues and/or IP with ESG dataset filters out controversies

# Alternative approaches

## STOXX Global Electric Vehicles & Driving Technology Index: Combining revenues with supply chain relationships



- Based on the STOXX Global TMI
- Pre-selection process with **revenues**:
  - a) **“Potential Electric Vehicle (EV) Manufacturers”**: companies from the initial universe that have >50% revenue exposure to sectors related to vehicle manufacturing
  - b) **“Potential EV Battery Suppliers”**: >50% revenue exposure to battery manufacturing
  - c) **“Potential Other suppliers”**: >50% revenue exposure to sectors related to parts of vehicles
- **Supply chain relationship** data is used to identify the relationships between the 3 groups and select:
  1. **Pure EV manufacturers**: “potential” EV manufacturers with 1+ battery suppliers among the “potential” battery suppliers
  2. **Pure EV battery suppliers**: vice versa, “potential” battery suppliers that have 1+ “potential” EV manufacturers as customers
  3. **Pure EV other suppliers**: “potential” other suppliers that have 1+ Pure EV manufacturers as customer
- The companies in the 3 buckets are bundled together and country, size and liquidity filters are applied
- Equal-weighted
- Reviewed annually

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# Appendix

## Socio-demographics



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# STOXX Global Millennials Index

# Overview

## Millennials



Millennials are now the largest living generation in the world. In the US, they are 50% more than the the GenX generation<sup>1)</sup>. 23% more people are using peer-to-peer payments than prior to the crisis, and Gen Zers are the ones driving this<sup>2)</sup>



About one-third of millennials often or exclusively use investments that take ESG factors into account, compared with 19% of Gen Z, 16% of Gen X and 2% of baby boomers<sup>3)</sup>



47% of US-based Millennials have at least one smart home product within their homes. By 2027, the IoT market will yield over \$520 billion in market revenue<sup>4)</sup>

1) <https://www.goldmansachs.com/insights/archive/millennials/>

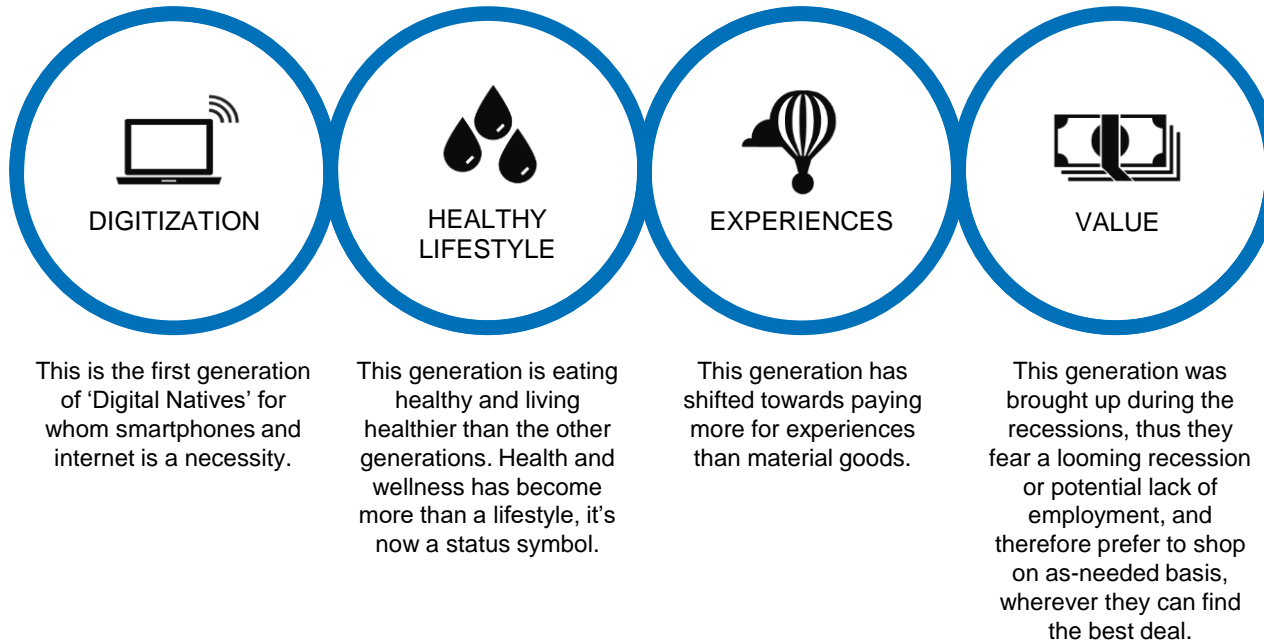
2) <https://www.forbes.com/sites/forbesbusinesscouncil/2021/01/21/gen-z-and-the-future-of-spend-what-we-know-about-this-generation-the-pandemic-and-how-they-pay/?sh=4cb19cb521eb>

3) <https://www.cnbc.com/2021/05/21/millennials-spurred-growth-in-esg-investing-now-all-ages-are-on-board.html>

4) <https://policyadvice.net/insurance/insights/smart-home-statistics/>

# Themes

## Millennials



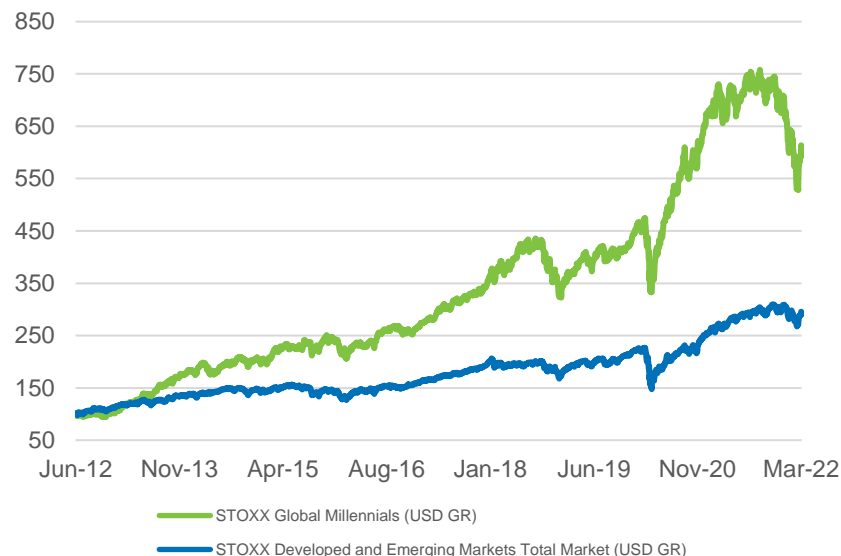
# STOXX Global Millennials Index

## Risk and Return Overview

### Risk and Return Characteristics<sup>1)2)3)</sup>

	STOXX Global Millennials	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	20.23%	11.68%
Perf. (1Y)	-12.76%	7.49%
Perf. (3Y) (annualized)	15.82%	14.28%
Perf. (5Y) (annualized)	16.16%	12.02%
Vol. overall (annualized)	18.41%	13.71%
Volatility (1Y) (annualized)	21.62%	13.01%
Volatility (3Y) (annualized)	23.26%	18.74%
Volatility (5Y) (annualized)	20.60%	15.84%
Sharpe ratio (overall)	1.06	0.83
Sharpe ratio (5Y)	0.78	0.73
Tracking error (overall)	10.85%	
Tracking error (5Y)	10.87%	
Dividend yield (overall)	2.94%	4.89%
Maximum drawdown	30.37%	34.84%
Constituents	209	10763

### Performance

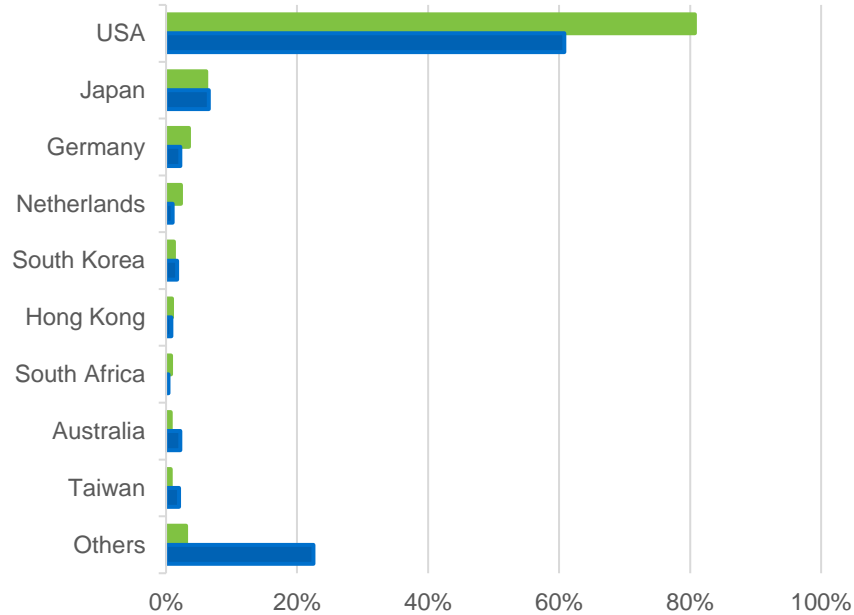


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

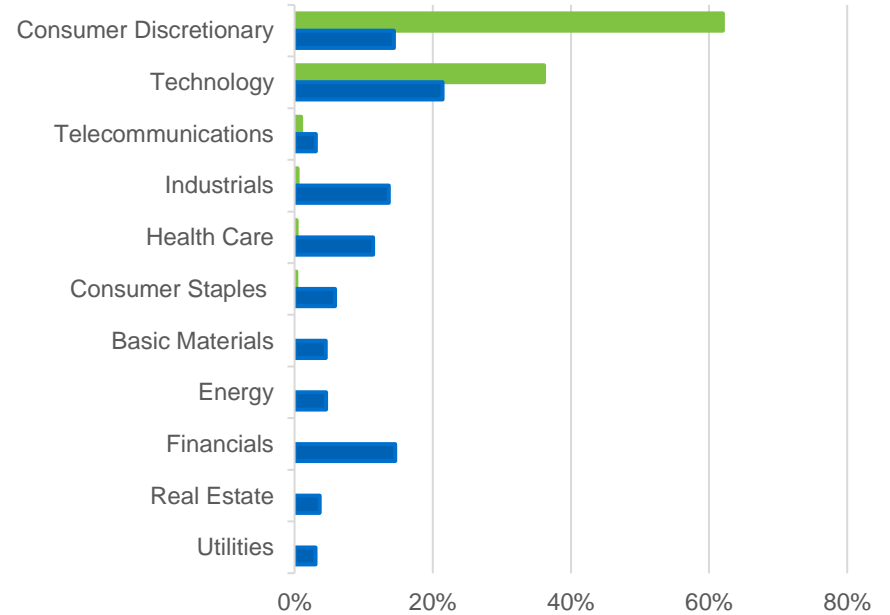
# STOXX Global Millennials Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Millennials Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
META PLATFORMS CLASS A	Technology	USA	8.49
Amazon.com Inc.	Retail	USA	8.27
Apple Inc.	Technology	USA	8.21
ALPHABET CLASS C	Technology	USA	7.84
Nike Inc. Cl B	Consumer Products and Services	USA	4.48
Netflix Inc.	Media	USA	4.40
BOOKING HOLDINGS	Travel and Leisure	USA	4.39
TJX Cos.	Retail	USA	3.29
Activision Blizzard Inc.	Consumer Products and Services	USA	2.84
AIRBNB A	Travel and Leisure	USA	2.71

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Silver Economy Index

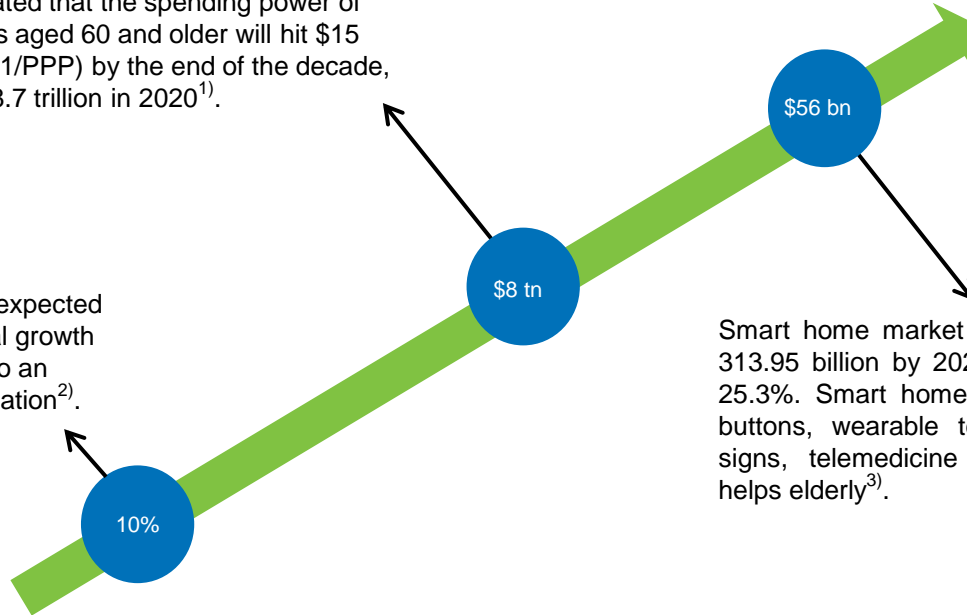
# Overview

## Silver Economy

It is estimated that the spending power of consumers aged 60 and older will hit \$15 trillion(2011/PPP) by the end of the decade, up from \$8.7 trillion in 2020<sup>1)</sup>.

Organic food market is expected to witness 14.5% annual growth till 2025, largely owing to an increasing ageing population<sup>2)</sup>.

Smart home market is expected to reach USD 313.95 billion by 2026 and register a CAGR of 25.3%. Smart homes include the use of panic buttons, wearable technology to monitor vital signs, telemedicine systems and robots that helps elderly<sup>3)</sup>.



1) <https://www.brookings.edu/blog/future-development/2021/01/14/the-silver-economy-is-coming-of-age-a-look-at-the-growing-spending-power-of-seniors/>

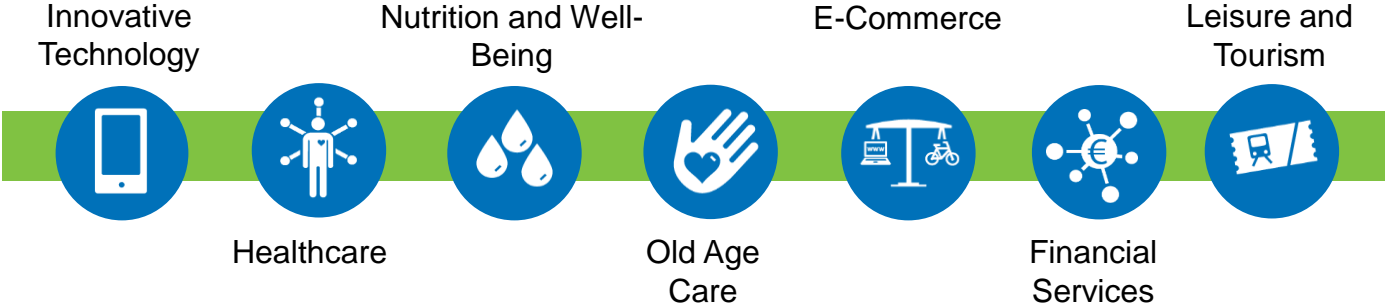
<https://www.thebusinessresearchcompany.com/report/organic-food-global-market-report>

2) <https://www.mordorintelligence.com/industry-reports/global-smart-homes-market-industry>



# Themes (1)

## Silver Economy



# Themes (2)

## Silver Economy



### Innovative Technology

Innovative technology covers a range of ideas, from next generation hearing aids to door sensors that help monitor the rehabilitation of ageing population



### Nutrition and Well-Being

Much of the focus in the healthy ageing market is on foods that preserve health and wellbeing as long as possible, but when age-related health problems do occur, products that help improve nutrition are vital.



### E-Commerce

The aging population is bound to have a certain impact on the development of e-commerce. Baby Boomers reportedly spend more time online than millennials. 10% more than millennials.



### Leisure and Tourism

The oldest consumer group spends the most particularly when it comes to international holidays, the gym and theme parks etc. They travel for recreation as well as wellness.



### Healthcare

Owing to tech innovations, the health care needs of ageing populations are continuing to diversify. This trend is reflected in increasing life expectancies.



### Old Age Care

This segment includes acute care, assisted living, death care and funeral services.



### Financial Services

A significant number of older consumers appear to have very limited provisions for retirement such as savings, pension funds, or disposable income. This pushes the need for Pension Funds and Wealth Management services providers.

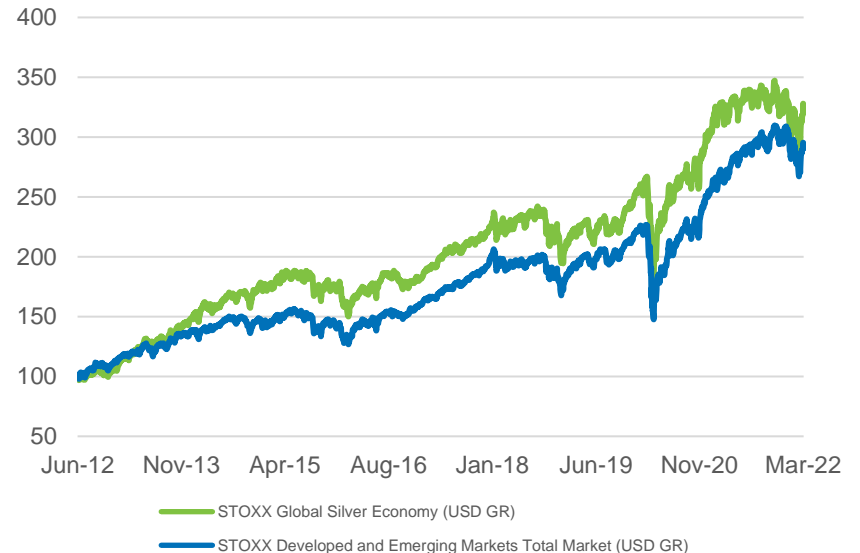
# STOXX Global Silver Economy Index

## Risk and Return Overview

### Risk and Return Characteristics <sup>1)2)3)</sup>

	STOXX Global Silver Economy	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	12.83%	11.68%
Perf. (1Y)	0.18%	7.49%
Perf. (3Y) (annualized)		14.28%
Perf. (5Y) (annualized)		12.02%
Vol. over 5Y		13.71%
Volatility (5Y)		13.01%
Volatility (1Y)		18.74%
Volatility (5Y)		15.84%
Sharpe ratio (overall)		0.83
Sharpe ratio (5Y)	0.59	0.73
Tracking error (overall)	6.78%	
Tracking error (5Y)	6.87%	
Dividend yield (overall)	4.34%	4.89%
Maximum drawdown	31.86%	34.84%
Constituents	435	10763

### Performance

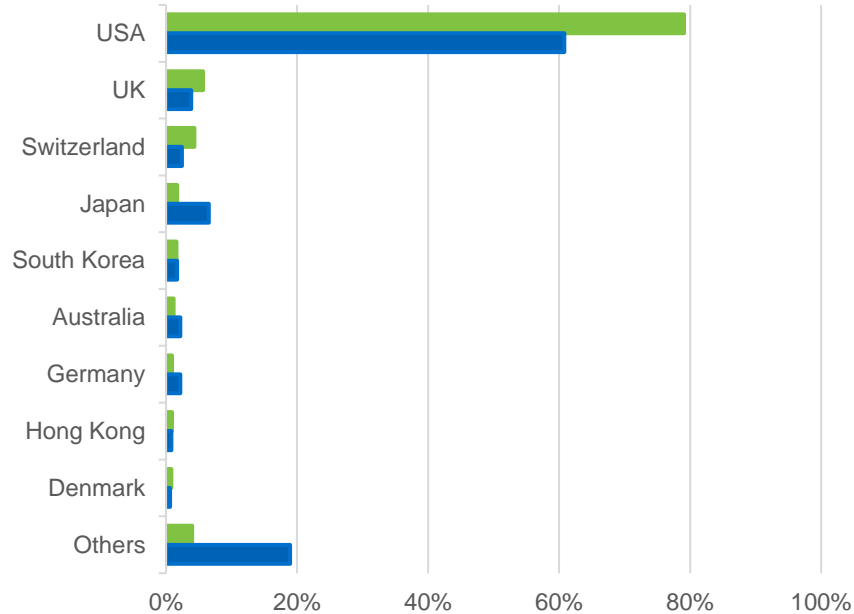


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

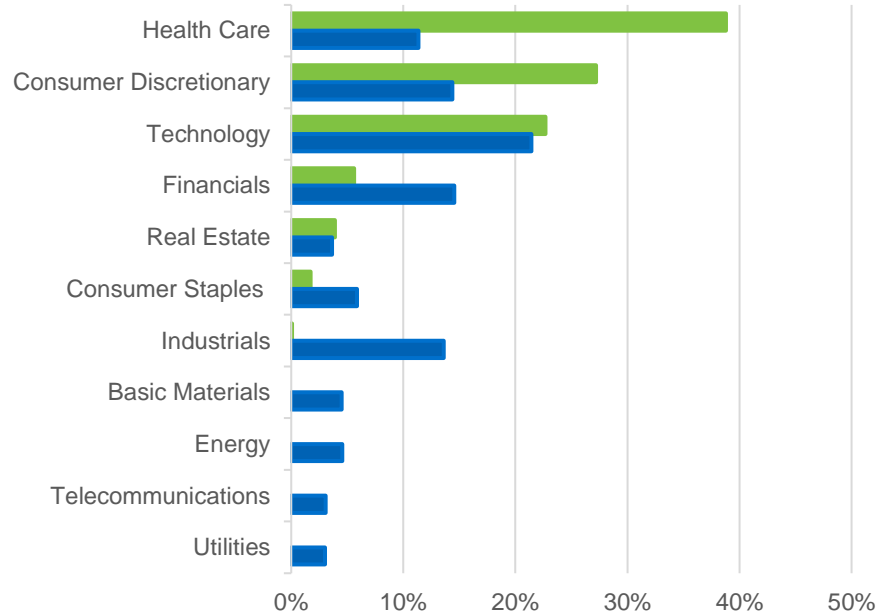
# STOXX Global Silver Economy Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Silver Economy Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
Amazon.com Inc.	Retail	USA	8.29
Intel Corp.	Technology	USA	5.02
Qualcomm Inc.	Technology	USA	4.91
Texas Instruments Inc.	Technology	USA	3.63
ASTRAZENECA	Health Care	UK	3.51
Bristol-Myers Squibb Co.	Health Care	USA	3.39
BOOKING HOLDINGS	Travel and Leisure	USA	2.75
Analog Devices Inc.	Technology	USA	2.13
Edwards Lifesciences Corp.	Health Care	USA	2.09
Micron Technology Inc.	Technology	USA	2.05

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Broad Infrastructure

# STOXX Global Broad Infrastructure Index

## Risk and Return Overview

### Risk and Return Characteristics <sup>1)2)3)</sup>

	STOXX Global Broad Infrastructure	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	9.12%	10.52%
Perf. (1Y)	6.32%	7.46%
Perf. (3Y) (annualized)	8.61%	14.20%
Perf. (5Y) (annualized)	8.39%	11.94%
Vol. overall (annualized)	12.38%	13.70%
Volatility (1Y) (annualized)	10.19%	12.98%
Volatility (3Y) (annualized)	16.78%	18.69%
Volatility (5Y) (annualized)	14.02%	15.80%
Sharpe ratio (overall)	0.72	0.75
Sharpe ratio (5Y)	0.57	0.73
Tracking error (overall)	6.05%	
Tracking error (5Y)	7.12%	
Dividend yield (overall)	5.33%	4.61%
Maximum drawdown	32.39%	34.84%
Constituents	178	10763

### Performance

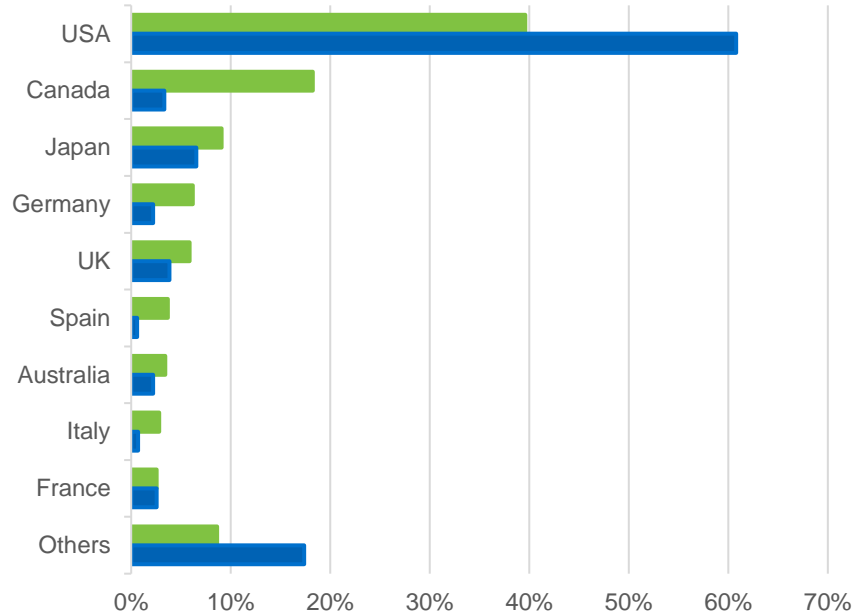


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Dec 30, 2011 – Mar 31, 2022

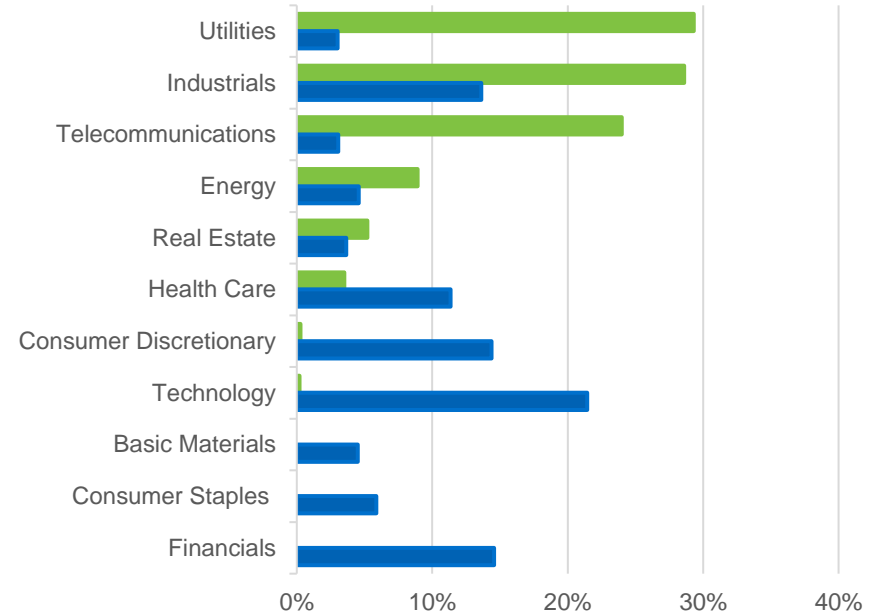
# STOXX Global Broad Infrastructure Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.



## STOXX Global Broad Infrastructure Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
Canadian National Railway Co.	Industrial Goods and Services	Canada	4.80
Canadian Pacific Railway Ltd.	Industrial Goods and Services	Canada	3.92
Comcast Corp. Cl A	Telecommunications	USA	3.22
Verizon Communications Inc.	Telecommunications	USA	3.21
Enbridge Inc.	Energy	Canada	3.13
Union Pacific Corp.	Industrial Goods and Services	USA	2.67
AT&T Inc.	Telecommunications	USA	2.57
NextEra Energy Inc.	Utilities	USA	2.53
DEUTSCHE POST	Industrial Goods and Services	Germany	2.43
IBERDROLA	Utilities	Spain	2.17

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Sharing Economy Index

# Overview

## Sharing Economy

Sharing Economy is a deep socio-economic trend that permit users to gain temporary access to various assets. According to Forbes, trillions of dollars of assets are underutilized.

Millennials constitute of 25% of the world's population and have spending already over \$600 billion annually, are expected to be the biggest facilitators of the sharing economy model<sup>1)</sup>.

Shared mobility - Currently, China and the United States are the two largest markets for shared mobility, at \$24 billion and \$23 billion, respectively. Both dominated by e-hailing players, which hold market shares that exceed 80 percent in each country<sup>2)</sup>.

Tourism Industry - The sharing economy is changing the tourism marketplace, giving people new options for where to stay, what to do and how to get around. The biggest disrupter in this space is Airbnb which averages 425,000 guests per night, nearly 22% more than Hilton Worldwide<sup>3)</sup>.



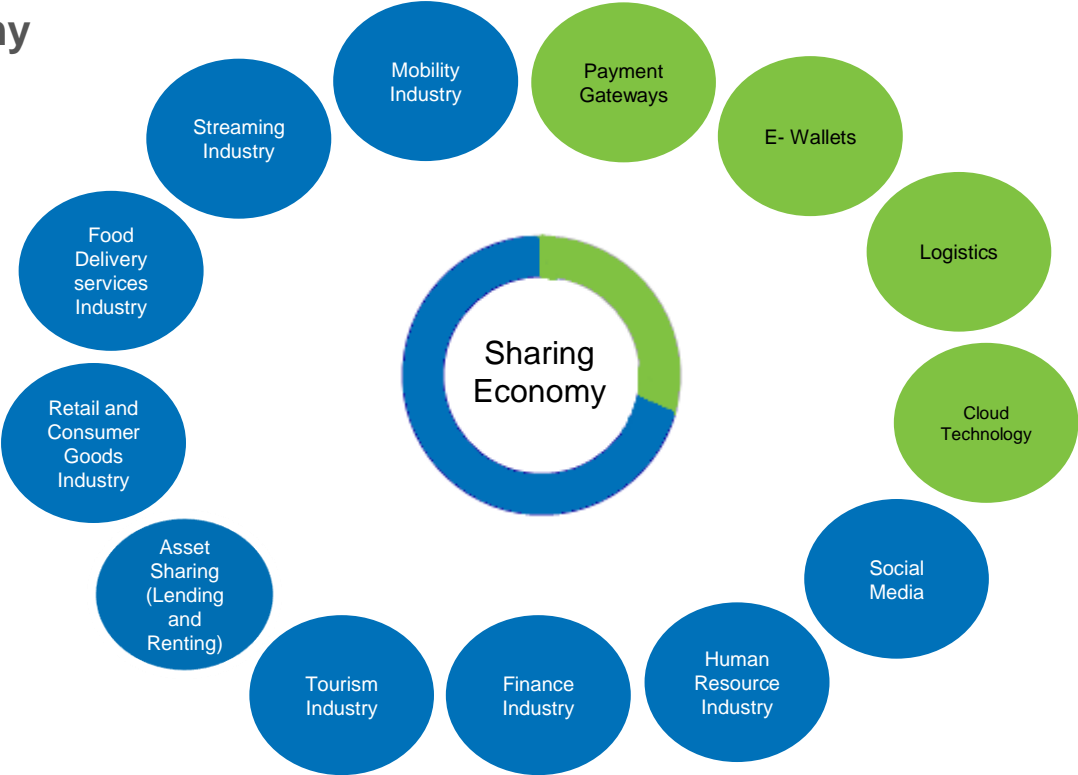
1) <https://www.ft.com/content/f81ac17a-68ae-11e8-b6eb-4acfcfb08c11>

2) <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/how-shared-mobility-will-change-the-automotive-industry>

3) [https://www.pwc.fr/fr/assets/files/pdf/2015/05/pwc\\_etude\\_sharing\\_economy.pdf](https://www.pwc.fr/fr/assets/files/pdf/2015/05/pwc_etude_sharing_economy.pdf)

# Themes (1)

## Sharing Economy



# Themes (2) – Drivers

## Mobility Industry

Shared mobility includes car sharing and on-demand ride services. Currently, China and US are its largest markets at \$24 billion and \$23 billion, respectively.

## Food Delivery Services Industry

It is expanding choice and convenience, with a single tap of the mobile phone. Mckinsey estimates that the market will reach more than \$ 22.76 billion by 2025.

## Tourism Industry

The sharing economy is changing tourism, giving people new options of stay, of getting around. For ex, Airbnb averages 425,000 guests per night, nearly 22% more than Hilton Worldwide.

## Streaming Industry

Video streaming segment will be worth \$ 30.6bn in 2022. Also, for the first time in 2016, digitally streamed music revenues exceeded physically recorded music revenues.

## Retail & Consumer Goods

The segment involves Online Markets, Fashion, Furniture & Sports Rental. For ex, Organized markets facilitate interaction among sellers and buyers.

## Finance Industry

The sharing economy is reshaping finance through P2P lending, social payments, crowdfunding and P2P insurance. Global P2P lending market expected to be worth \$897.85 bn by 2024.

## Social Media

Social media is a direct facilitator of the sharing economy model. Due to its collaborative platforms, people are more willing to share information, and opinions with complete strangers.

## Asset sharing

The implication of sharing economy enables individuals to monetize assets that are fully utilized (pertains to assets like heavy equipment and construction machinery).

## Human Resource Industry

Sharing Economy allows individuals to make use of their specialist knowledge and experience to provide c2c services for free or in return for payment.

# Themes (3) – Facilitators

## Payment Gateways

A payment gateway is a service that helps merchants accept payments online. The global market accounted for \$ 17.2 bn in 2020 and is expected to grow at an annual rate of 16.43% in 2021-2026<sup>6)</sup>.

## E-Wallets

Digital payments have become a key component of this new sharing economic reality, ensuring the seamless and secure transfer of funds from renter to owner.

## Cloud Technology

Sharing-economy companies require easily expandable networks are needed to manage complex and growing business ventures. Cloud platforms meets such complex requirements.

## Logistics Industry

Logistics generate over \$1.25 trillion annually. However, the fragmented industry is plagued by underutilization of assets, Shared economy is set to disrupt this space.

- 1) <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/how-shared-mobility-will-change-the-automotive-industr>
- 2) <https://www.mckinsey.com/industries/high-tech/our-insights/the-changing-market-for-food-delivery>
- 3) [https://www.pwc.fr/fr/assets/files/pdf/2015/05/pwc\\_etude\\_sharing\\_economy.pdf](https://www.pwc.fr/fr/assets/files/pdf/2015/05/pwc_etude_sharing_economy.pdf)
- 4) <https://www.pwc.nl/en/publicaties/dutch-entertainment-and-media-outlook-2017-2021/music.html>
- 5) <https://www.prnewswire.com/news-releases/peer-to-peer-lending-market-to-be-worth-us-897-85-billion-by-2024-tmr-883066968.html>
- 6) <https://www.mordorintelligence.com/industry-reports/payment-gateway-market>

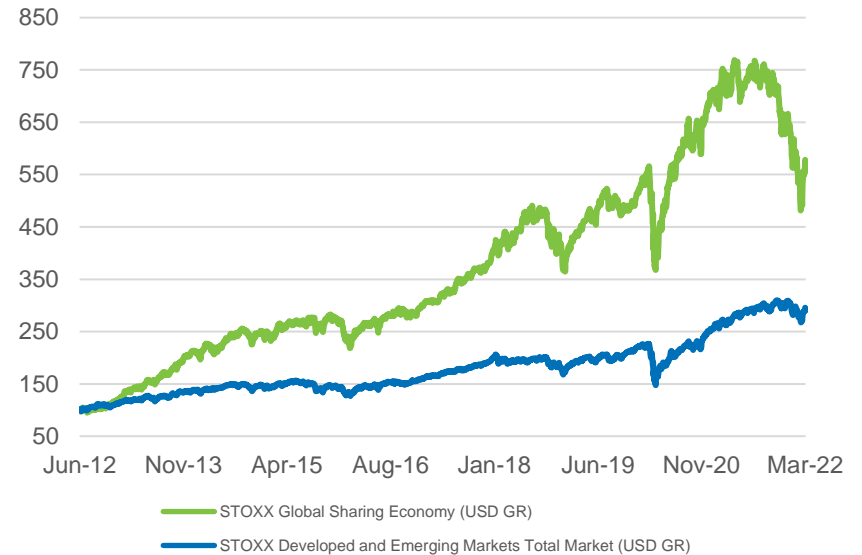
# STOXX Global Sharing Economy Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Sharing Economy	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	19.48%	11.68%
Perf. (1Y)	-22.03%	7.49%
Perf. (3Y) (annualized)	7.43%	14.28%
Perf. (5Y) (annualized)	12.73%	12.02%
Vol. overall (annualized)	20.25%	13.71%
Volatility (1Y) (annualized)	23.78%	13.01%
Volatility (3Y) (annualized)	25.59%	18.74%
Volatility (5Y) (annualized)	22.65%	15.84%
Sharpe ratio (overall)	0.95	0.83
Sharpe ratio (5Y)	0.60	0.73
Tracking error (overall)	11.53%	
Tracking error (5Y)	11.78%	
Dividend yield (overall)	2.46%	4.89%
Maximum drawdown	37.38%	34.84%
Constituents	127	10763

### Performance

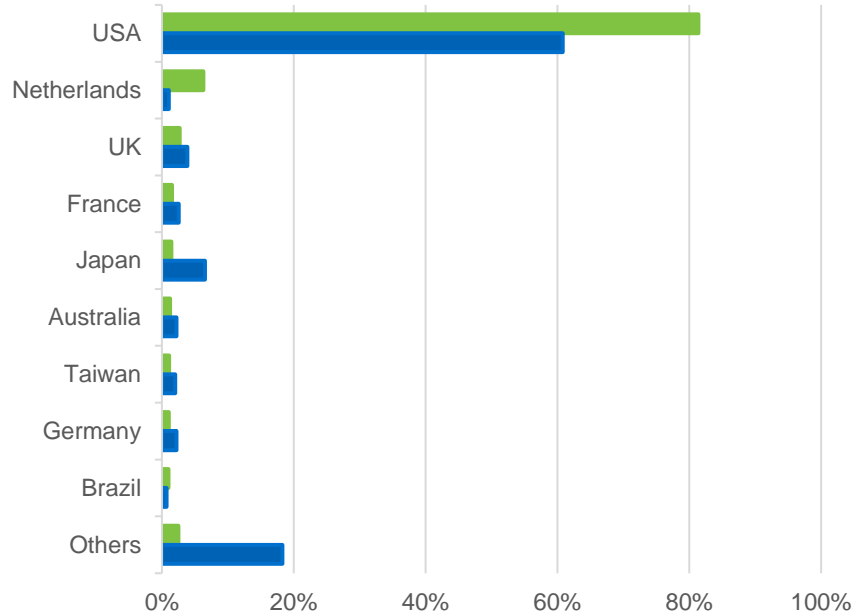


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

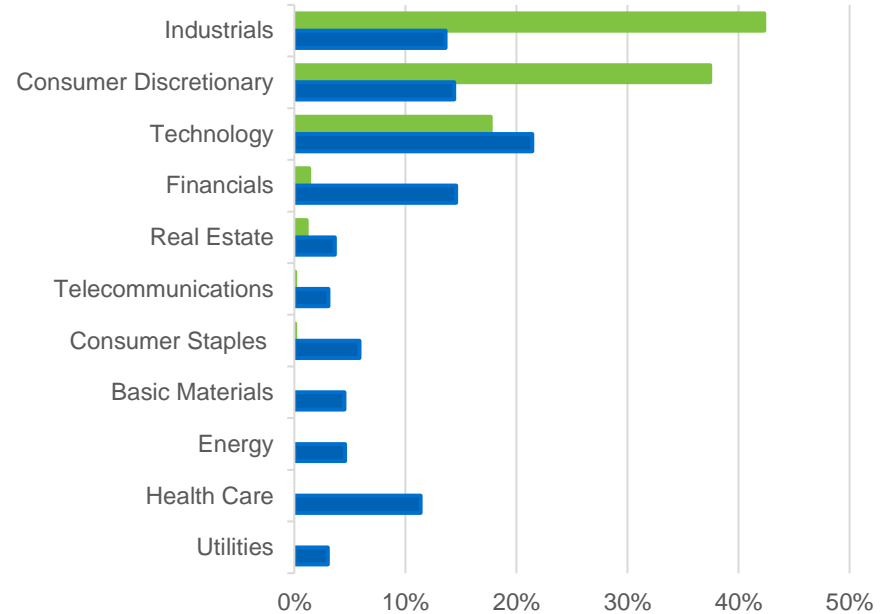
# STOXX Global Sharing Economy Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.



## STOXX Global Sharing Economy Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
META PLATFORMS CLASS A	Technology	USA	8.22
VISA Inc. Cl A	Industrial Goods and Services	USA	8.09
Amazon.com Inc.	Retail	USA	8.01
MasterCard Inc. Cl A	Industrial Goods and Services	USA	7.95
PayPal Holdings	Industrial Goods and Services	USA	4.77
BOOKING HOLDINGS	Travel and Leisure	USA	4.70
Netflix Inc.	Media	USA	4.26
AIRBNB A	Travel and Leisure	USA	4.01
ADYEN	Industrial Goods and Services	Netherlands	3.73
MERCADOLIBRE	Consumer Products and Services	USA	3.72

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Housing Construction Index

# Infrastructure Construction Industry: At a Glance



The global infrastructure development industry is expected to be worth \$10.5 trillion by 2023, growing at an annual rate of 4.2%<sup>1)</sup>

Within the infrastructure industry, The Global Construction Materials Market is expected to grow by \$ 1123.07 bn during 2021-2025 progressing at a CAGR of almost 16% during the forecast period<sup>2)</sup>

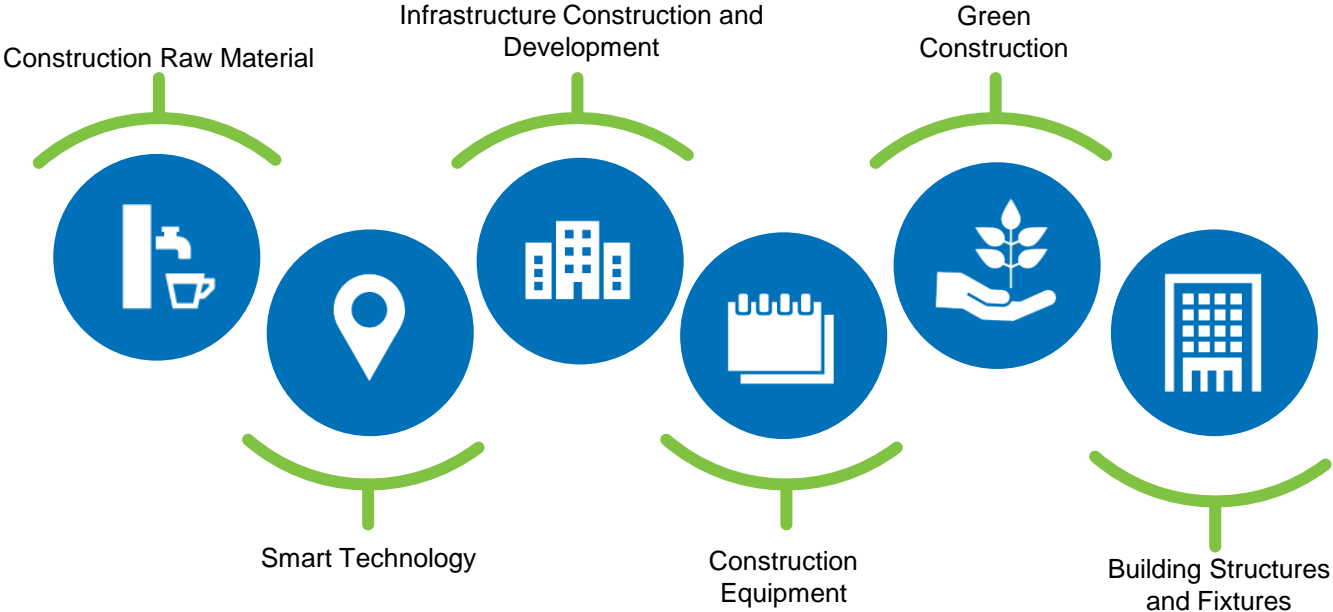
Potential growth factors include:  
Increasing use of green construction, life-enhancing devices for aging structures, BIS for efficient building management.

1) <https://www.prnewswire.com/news-releases/growth-opportunities-for-the-global-construction-industry-2018-2023---a-potential-105-trillion-market-300578103.html>

2) <https://www.globenewswire.com/news-release/2021/04/15/2211130/0/en/The-Global-Construction-Materials-Market-is-expected-to-grow-by-1123-07-bn-during-2021-2025-progressing-at-a-CAGR-of-almost-16-during-the-forecast-period.html>

# Themes (1)

## Housing Construction



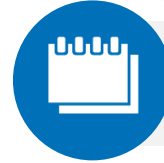
## Themes (2)

### Construction Raw Material



The Global Building Materials Market size was estimated at USD 271.98 billion in 2020, and projected to grow at a CAGR of 5.57% reaching USD 376.72 billion by 2026<sup>1)</sup>.

### Construction Equipment



The global heavy construction equipment market was valued at \$ 55.9 billion in 2016. It is expected to register a CAGR of 5.4% from 2017 to 2025<sup>2)</sup>.

### Smart Technology



Connected devices give real-time information, which helps in improving downtime, optimizing construction processes, utilizing resources.

### Green Construction



The Global Green Building Materials industry was worth \$158.8 billion in 2016, rising from \$106 billion in 2012, growing at an annual rate of 10.5%<sup>3)</sup>.

### Infrastructure Construction & Dev.



the Global Infrastructure Construction market is expected to see growth rate of 6.8% and may see market size of \$3.9 Trillion by 2026.

### Building Structures and Fixtures



Systems are required for the safe, comfortable and environmentally friendly operation of modern buildings.

1) <https://www.technavio.com/pressrelease/global-building-materials-market-new-market-research-report>  
2) <https://www.advancemarketanalytics.com/reports/12283-global-infrastructure-construction-market>  
3) <https://bisresearch.com/industry-report/global-construction-sustainable-materials-market-2026.html>

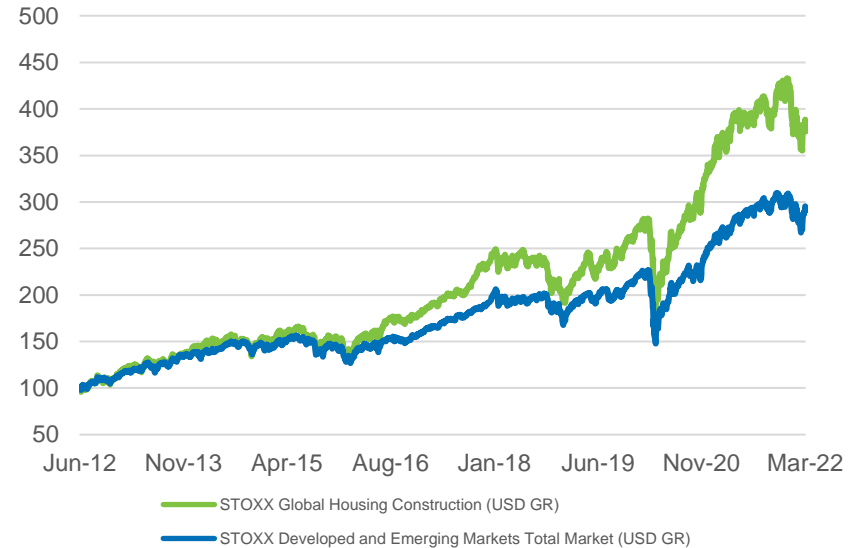
# STOXX Global Housing Construction Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Housing Construction	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	14.69%	11.68%
Perf. (1Y)	-0.83%	7.49%
Perf. (3Y) (annualized)	18.71%	14.28%
Perf. (5Y) (annualized)	14.64%	12.02%
Vol. overall (annualized)	17.52%	13.71%
Volatility (1Y) (annualized)	17.83%	13.01%
Volatility (3Y) (annualized)	23.05%	18.74%
Volatility (5Y) (annualized)	19.71%	15.84%
Sharpe ratio (overall)	0.83	0.83
Sharpe ratio (5Y)	0.74	0.73
Tracking error (overall)	7.84%	
Tracking error (5Y)	7.90%	
Dividend yield (overall)	5.10%	4.89%
Maximum drawdown	36.22%	34.84%
Constituents	267	10763

### Performance

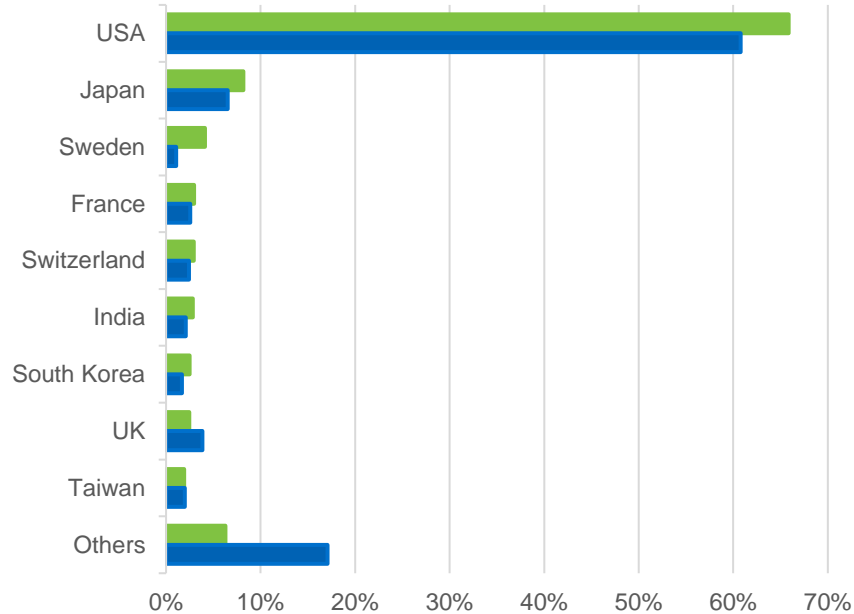


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

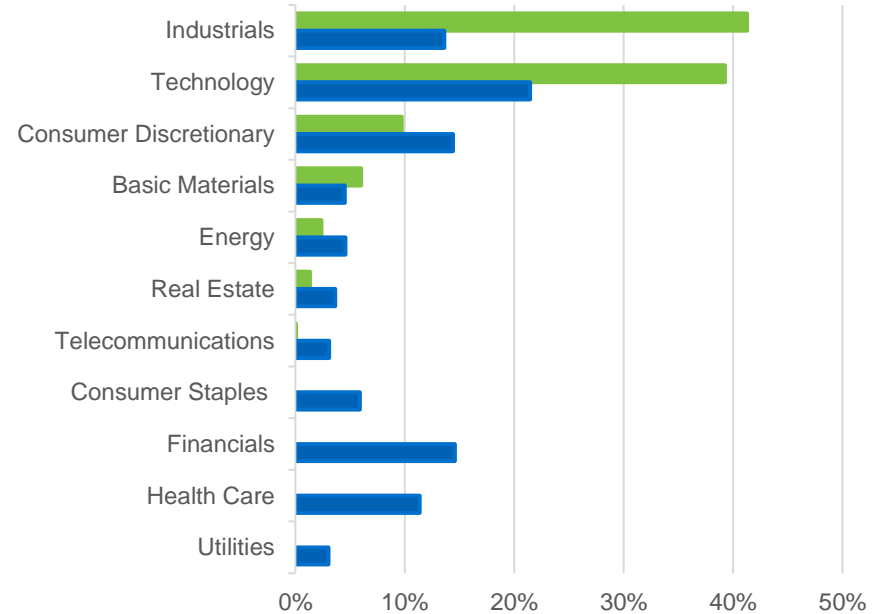
# STOXX Global Housing Construction Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Housing Construction Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
Intel Corp.	Technology	USA	8.28
Qualcomm Inc.	Technology	USA	7.70
Texas Instruments Inc.	Technology	USA	6.76
Analog Devices Inc.	Technology	USA	3.96
Micron Technology Inc.	Technology	USA	3.80
Daikin Industries Ltd.	Construction and Materials	Japan	2.59
Johnson Controls PLC	Industrial Goods and Services	USA	2.44
SYNOPSYS	Technology	USA	2.44
Sherwin-Williams Co.	Industrial Goods and Services	USA	2.30
SK HYNIX INC	Technology	South Korea	1.96

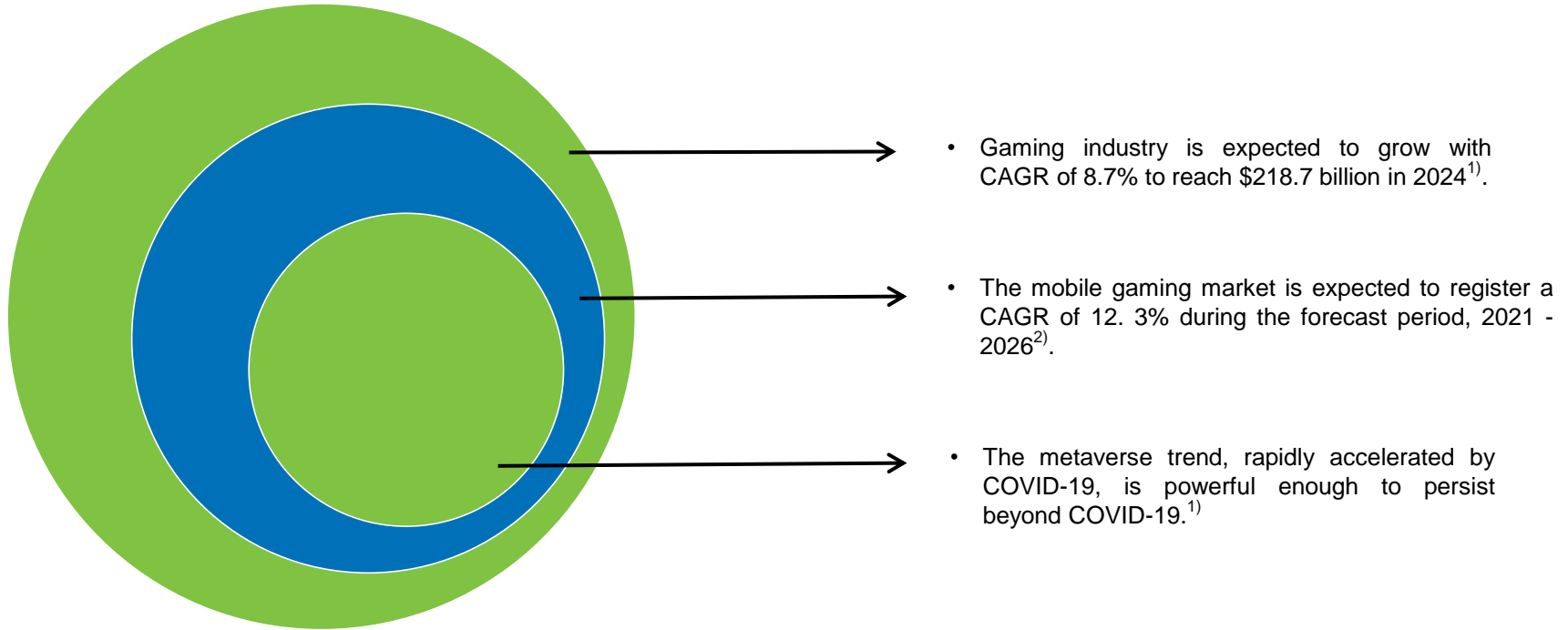
1) Source: Qontigo. Data as of Mar 31, 2022.



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# STOXX Global Video Gaming and eSports Index

# Overview



1) Newzoo 2021 Global Game Market Report: <https://newzoo.com/insights/trend-reports/newzoo-global-games-market-report-2021-free-version/>

2) <https://www.globenewswire.com/news-release/2021/12/15/2352382/0/en/Mobile-Gaming-Market-Growth-Trends-COVID-19-Impact-and-Forecasts-2021-2026.html>

# Themes

**An increase in demand of video games and eSports is expected to grow global games market with a CAGR of +9% (2019-2024)<sup>1)</sup>.**

## Game software



- Game developers to reduce dependency on producing games on hardware with better software performance.
- Availability of multiple software libraries and faster internet.
- Disruption of current video gaming trend with the idea to play video games without owning the physical hardware or console.
- With an increase in demand of download PlayStation games, Sony captured USD 3 billion of revenue from software sales in FY2021<sup>2)</sup>.

## Peripherals, hardware, platforms (beneficiaries)



- Conventional players prefer to buy latest gadget/peripheral in market to fulfil gaming needs.
- Expansion of product range to gaming specific mice, keyboard and headsets to leverage video gaming trend.
- Upsell opportunities include improved battery life and wireless charging of peripherals.
- Leading by market share, NVIDIA is capitalizing on graphic processing unit (GPU) which renders images in video gaming.

1) Global games Market by newzoo  
2) <https://www.gamesindustry.biz/articles/2021-10-28-sony-q2-fy2021>

# Drivers and Beneficiaries

## Game software



### Drivers

- Game software companies
- Online games websites
- Dedicated console software companies such as Sony PlayStation

### Beneficiaries

- Boxed games – Games copied on a disc
- Cloud computing storage providers

## Peripherals, hardware, platforms (beneficiaries)



- Gaming specific equipment providers such as Logitech
- Graphic processing unit manufactures
- Console manufacturers

- Smart phones
- AR/VR
- Semiconductor companies

# STOXX Global Video Gaming and eSports Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Video Gaming & eSports	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	24.14%	11.61%
Perf. (1Y)	0.21%	7.46%
Perf. (3Y) (annualized)	26.45%	14.20%
Perf. (5Y) (annualized)	22.16%	11.94%
Vol. overall (annualized)	17.51%	13.66%
Volatility (1Y) (annualized)	19.14%	12.98%
Volatility (3Y) (annualized)	21.73%	18.69%
Volatility (5Y) (annualized)	19.56%	15.80%
Sharpe ratio (overall)	1.29	0.82
Sharpe ratio (5Y)	1.07	0.73
Tracking error (overall)	10.73%	
Tracking error (5Y)	11.34%	
Dividend yield (overall)	8.05%	4.86%
Maximum drawdown	26.07%	34.84%
Constituents	107	10763

### Performance

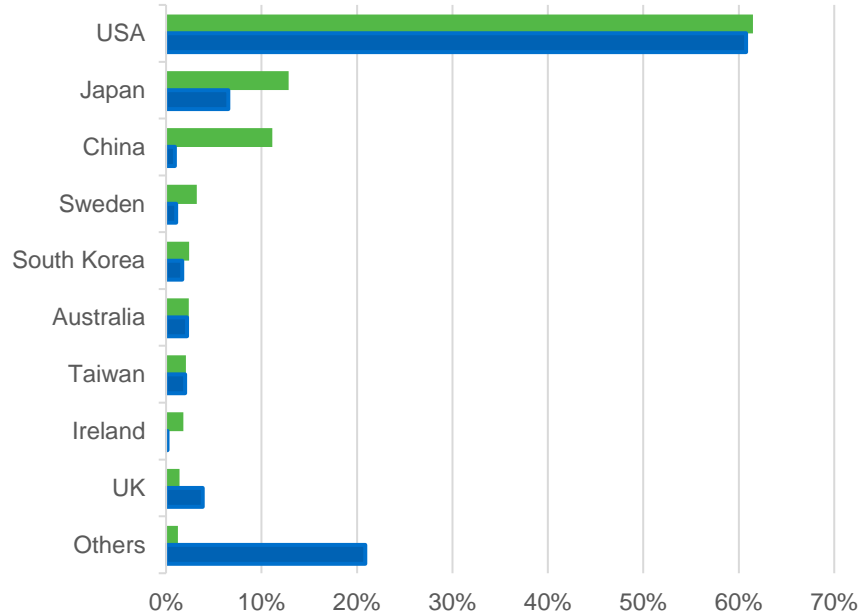


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

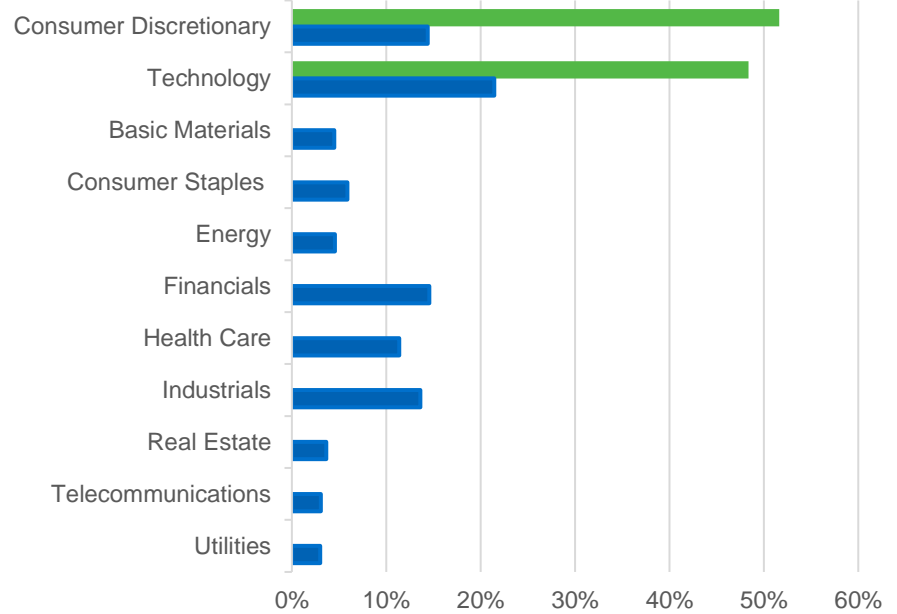
# STOXX Global Video Gaming and eSports Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Video Gaming and eSports Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NVIDIA Corp.	Technology	USA	9.07
Apple Inc.	Technology	USA	8.29
Microsoft Corp.	Technology	USA	8.13
Intel Corp.	Technology	USA	8.00
Amazon.com Inc.	Retail	USA	4.70
ADVANCED MICRO DEVICES	Technology	USA	4.35
Nintendo Co. Ltd.	Consumer Products and Services	Japan	4.26
Electronic Arts Inc.	Consumer Products and Services	USA	4.24
Activision Blizzard Inc.	Consumer Products and Services	USA	4.20
TENCENT HOLDINGS	Technology	China	4.11

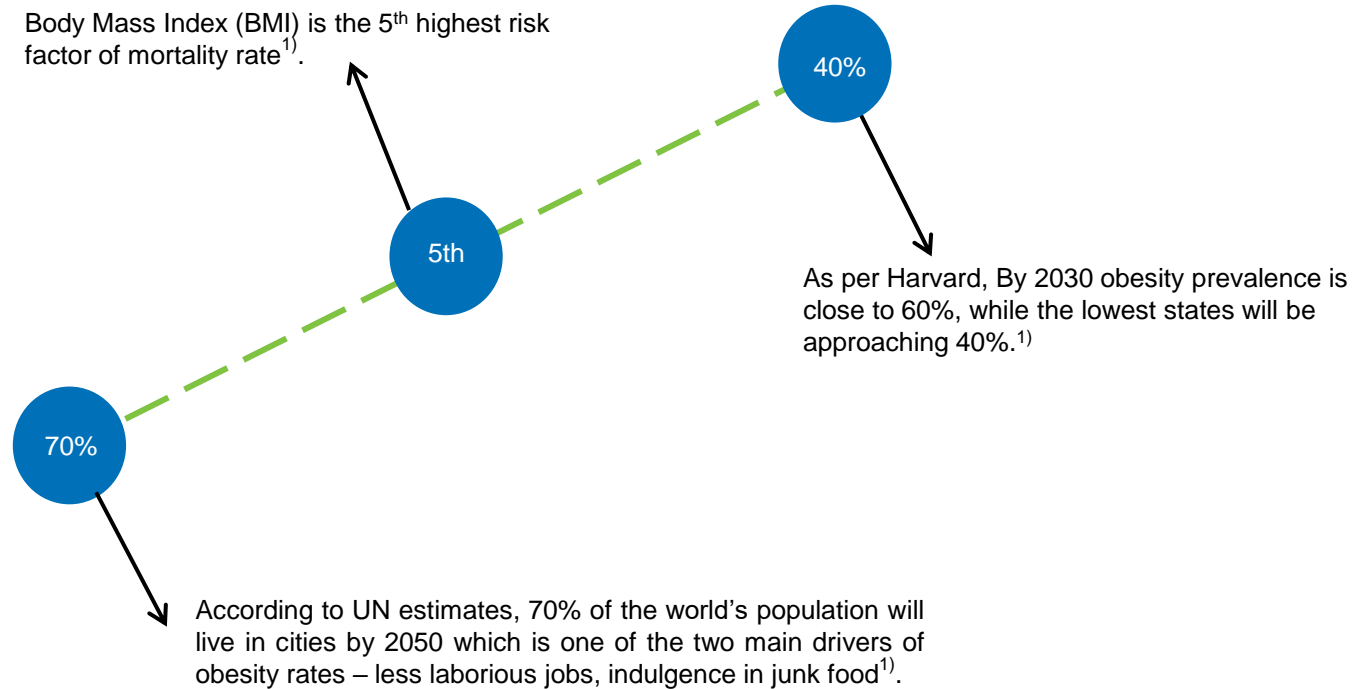
1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Health and Weight Loss Index



# Overview



1) <https://www.hsph.harvard.edu/news/press-releases/half-of-us-to-have-obesity-by-2030/>

# Themes

## Physical activity & sportswear apparel

- Growing numbers of affordable equipment to engage in physical activities
- Expansion of sportswear industry both in developed and emerging markets



## Diet, healthy food & beverage

- Rise in demand of low calorie food replacements and organic products
- Weight watcher centers reduce obesity
- Supplement industry is benefited with increase in health awareness

## Obesity pharma, health care & med-tech

- Increasing support to weight-loss medicines
- Rise in demand of dialysis services due to kidney failures (45% are attributed to obesity) <sup>1)</sup>
- High correlation with Type 2 Diabetes leading to increase in demand of Insulin

1) Globesity and Health & Wellness primer by BoAML

# Drivers and Beneficiaries

## Diet, healthy food & beverage



### Drivers

- Weight management centers
- Fruits and vegetables retailers

### Beneficiaries

- Supplement manufactures
- Alternative medicine providers-naturopathic

## Obesity pharma, health care & med-tech



### Drivers

- Manufacturers of weight-loss medicines

### Beneficiaries

- Medical devices
- Clinical diagnostics

## Physical activity & sportswear apparel



### Drivers

- Health and fitness clubs
- Sports clubs
- Exercise equipment manufactures
- Sports wear manufacturers

### Beneficiaries

- Wearable technology gadgets
- Sports goods stores

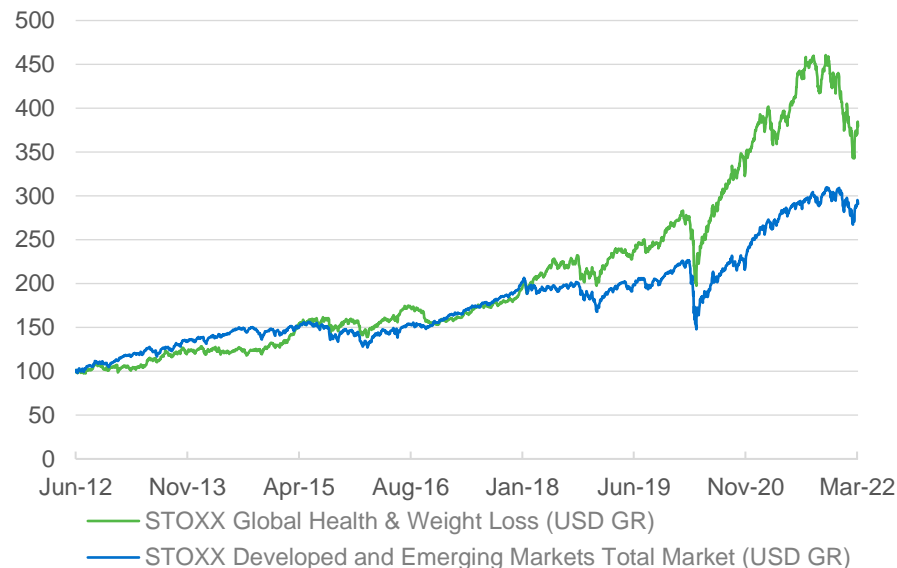
# STOXX Global Health and Weight Loss Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Health & Weight Loss	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	14.70%	11.61%
Perf. (1Y)	2.76%	7.46%
Perf. (3Y) (annualized)	16.82%	14.20%
Perf. (5Y) (annualized)	18.81%	11.94%
Vol. overall (annualized)	15.08%	13.66%
Volatility (1Y) (annualized)	17.23%	12.98%
Volatility (3Y) (annualized)	18.44%	18.69%
Volatility (5Y) (annualized)	16.16%	15.80%
Sharpe ratio (overall)	0.94	0.82
Sharpe ratio (5Y)	1.08	0.73
Tracking error (overall)	9.59%	
Tracking error (5Y)	9.56%	
Dividend yield (overall)	3.11%	4.86%
Maximum drawdown	30.27%	34.84%
Constituents	107	10763

### Performance

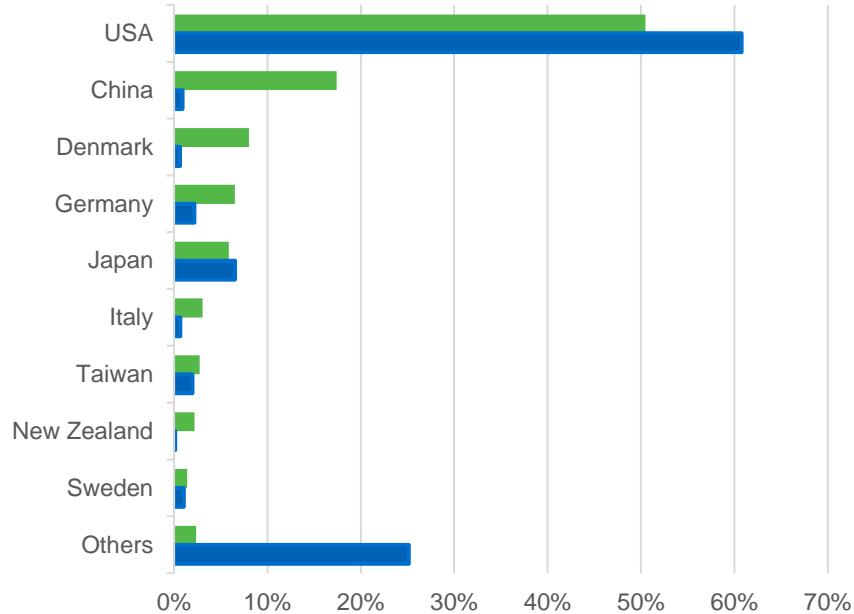


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

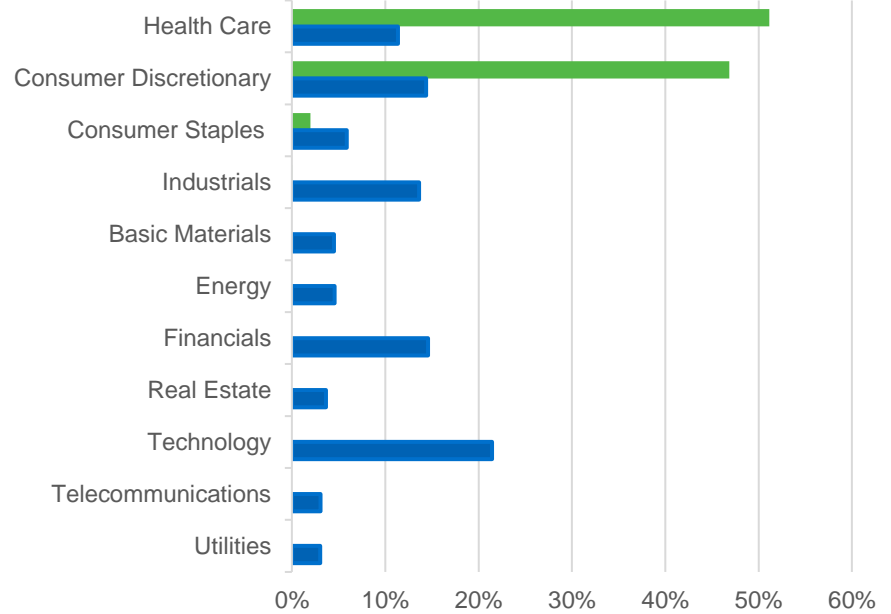
# STOXX Global Health and Weight Loss Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Health and Weight Loss Index – Top 10 Constituents

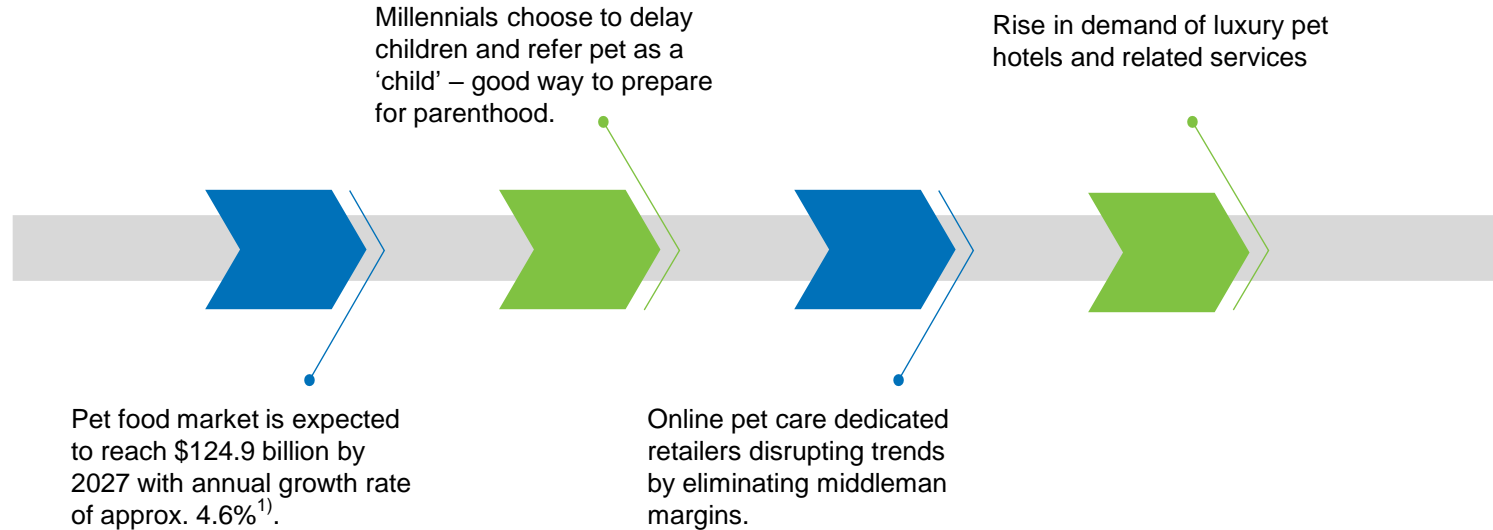
Name	Supersector	Country	Weight (%)
DEXCOM	Health Care	USA	9.38
Edwards Lifesciences Corp.	Health Care	USA	8.28
NOVO NORDISK B	Health Care	Denmark	8.02
Nike Inc. Cl B	Consumer Products and Services	USA	7.94
LI NING	Consumer Products and Services	China	4.57
ADIDAS	Consumer Products and Services	Germany	4.54
VF Corp.	Consumer Products and Services	USA	4.45
ResMed Inc.	Health Care	USA	4.18
Shimano Inc.	Consumer Products and Services	Japan	3.50
ABIOMED	Health Care	USA	3.40

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Pet Care Index

# Overview



1) <https://www.grandviewresearch.com/industry-analysis/pet-food-industry>



# Themes



## Pet and pet supplies retail



- Online pet treat stores are on rise
- Innovative pet product range - pet stroller and tech products (tracking gadgets, cameras) in retail stores

## Pet food and supply manufacturing



- Manufacturers tweaking treats formulated as per the age and weight of pets
- Revenues from pet grooming, pet hotels, pet care are on rise

## Veterinary products and services



- Veterinary services accounts for highest expense of pet care per year

# Drivers and Beneficiaries



## Pet and pet supplies retail

### Drivers

- Specialized pet retailers selling directly to consumers (online and offline)

### Beneficiaries

- General online retailers such as Amazon



## Pet food and supply manufacturing

### Drivers

- Manufacturers of pet food
- Manufacturers of pet grooming equipment
- Pet hotels

### Beneficiaries

- Wearable technology



## Veterinary products and services

### Drivers

- Pet pharmaceutical and diagnostic distributor
- Veterinary health providers

### Beneficiaries

- Pharmaceutical companies
- Surgical and diagnostic devices for pet diseases

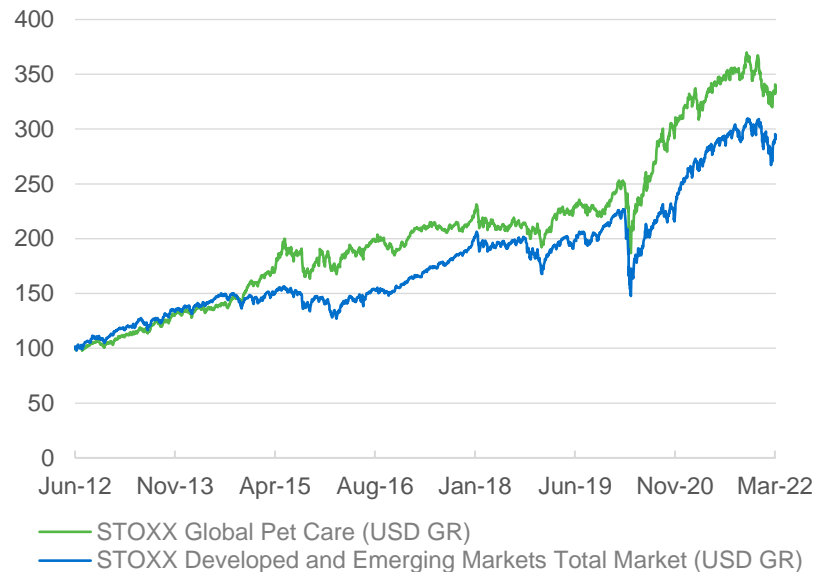
# STOXX Global Pet Care Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Pet Care	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	13.16%	11.61%
Perf. (1Y)	2.55%	7.46%
Perf. (3Y) (annualized)	13.86%	14.20%
Perf. (5Y) (annualized)	9.82%	11.94%
Vol. overall (annualized)	13.76%	13.66%
Volatility (1Y) (annualized)	11.57%	12.98%
Volatility (3Y) (annualized)	17.05%	18.69%
Volatility (5Y) (annualized)	14.72%	15.80%
Sharpe ratio (overall)	0.92	0.82
Sharpe ratio (5Y)	0.64	0.73
Tracking error (overall)	8.93%	
Tracking error (5Y)	9.02%	
Dividend yield (overall)	4.25%	4.86%
Maximum drawdown	26.24%	34.84%
Constituents	34	10763

### Performance

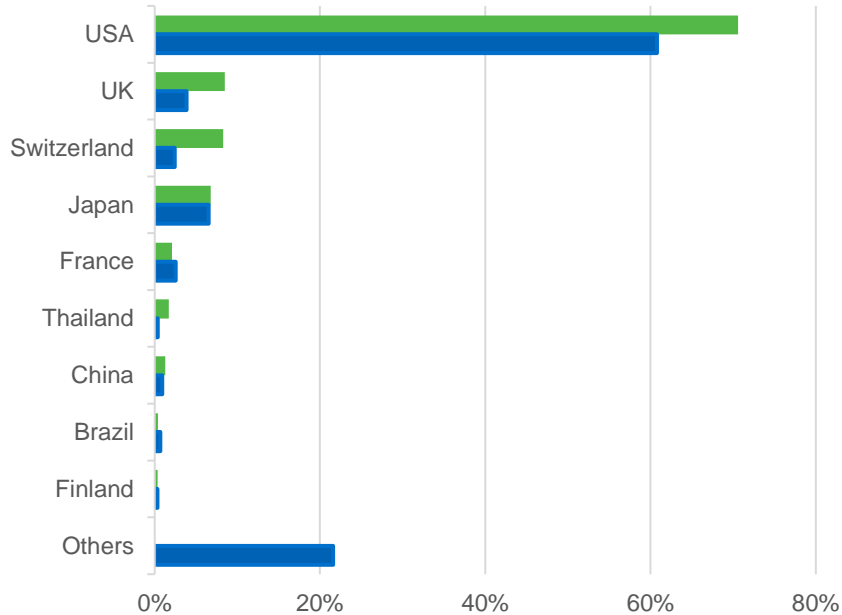


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

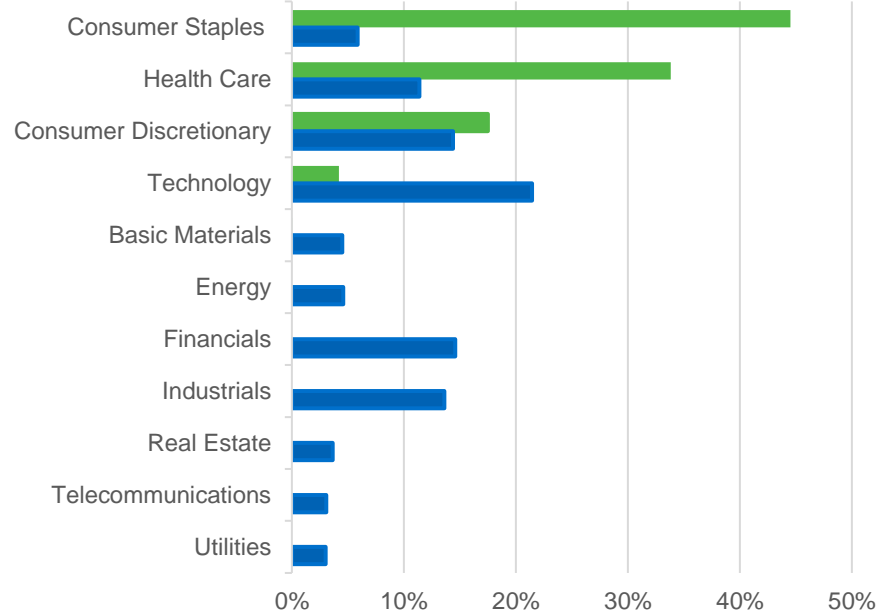
# STOXX Global Pet Care Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Pet Care Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NESTLE	Food, Beverage and Tobacco	Switzerland	8.31
Merck & Co. Inc.	Health Care	USA	8.20
Colgate-Palmolive Co.	Personal Care, Drug and Grocery Stores	USA	7.99
ZOETIS 'A'	Health Care	USA	7.76
General Mills Inc.	Food, Beverage and Tobacco	USA	4.70
CHEWY A	Retail	USA	4.65
AmerisourceBergen Corp.	Personal Care, Drug and Grocery Stores	USA	4.63
J.M. Smucker Co.	Food, Beverage and Tobacco	USA	4.61
IDEXX LABORATORIES	Health Care	USA	4.57
PETCO HLTH & WELLNESS CMPY A	Retail	USA	4.54

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Ageing Population

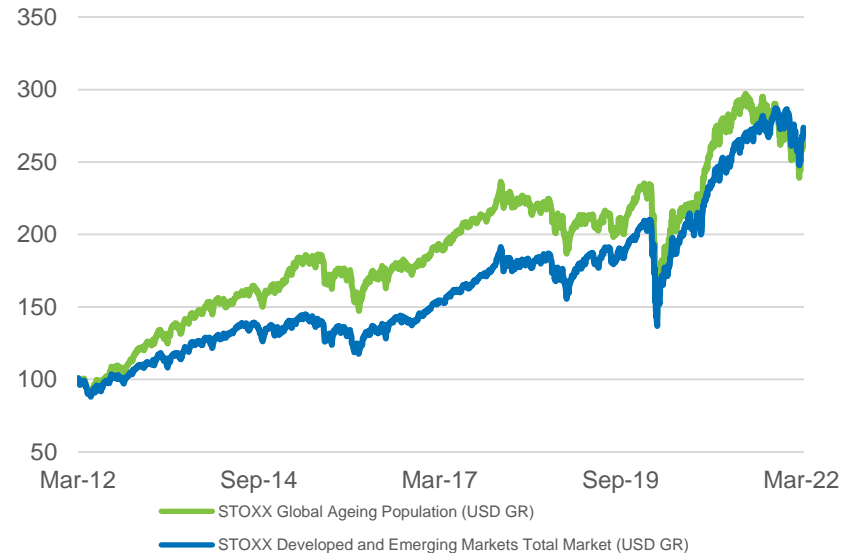
# STOXX Global Ageing Population Index

## Risk and Return Overview

### Risk and Return Characteristics <sup>1)2)3)</sup>

	STOXX Global Ageing Population	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	10.33%	10.57%
Perf. (1Y)	-4.63%	7.49%
Perf. (3Y) (annualized)	8.11%	14.28%
Perf. (5Y) (annualized)	6.75%	12.02%
Vol. overall (annualized)	14.55%	13.74%
Volatility (1Y) (annualized)	14.51%	13.01%
Volatility (3Y) (annualized)	20.46%	18.74%
Volatility (5Y) (annualized)	17.01%	15.84%
Sharpe ratio (overall)	0.70	0.75
Sharpe ratio (5Y)	0.41	0.73
Tracking error (overall)	4.80%	
Tracking error (5Y)	5.52%	
Dividend yield (overall)	3.96%	1.37%
Maximum drawdown	39.09%	34.84%
Constituents	345	10763

### Performance

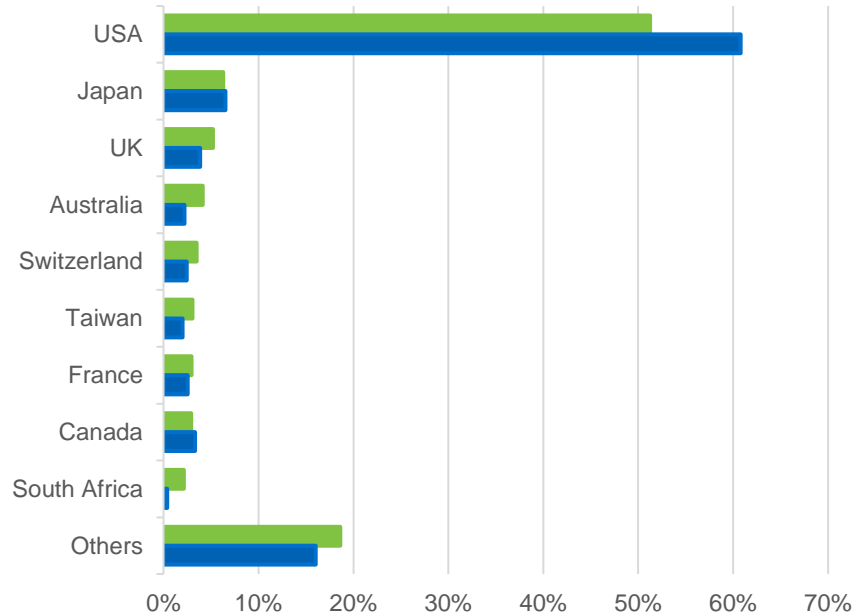


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Mar 30, 2012 – Mar 31, 2022

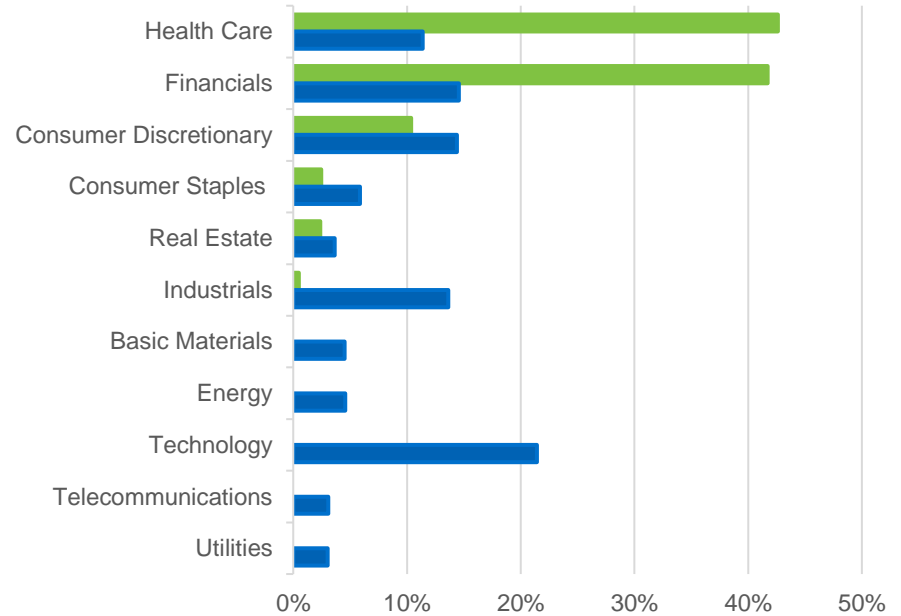
# STOXX Global Ageing Population Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.



## STOXX Global Ageing Population Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
CDIBH	Financial Services	Taiwan	0.68
INTRA CELLULAR THERAPIES	Health Care	USA	0.64
BROWN & BROWN	Insurance	USA	0.63
LPL FINANCIAL HOLDINGS	Financial Services	USA	0.60
REGENERON PHARMS.	Health Care	USA	0.60
AON PLC	Insurance	USA	0.59
TRACTOR SUPPLY	Retail	USA	0.59
RAYMOND JAMES FINL.	Financial Services	USA	0.58
SWISS LIFE HLDG	Insurance	Switzerland	0.58
UnitedHealth Group Inc.	Health Care	USA	0.58

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Breakthrough Healthcare

# STOXX Global Breakthrough Healthcare Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Breakthrough Healthcare	STOXX Global 1800
Perf. overall (annualized)	13.35%	11.51%
Perf. (1Y)	-14.73%	9.37%
Perf. (3Y) (annualized)	8.49%	15.32%
Perf. (5Y) (annualized)	11.50%	12.91%
Vol. overall (annualized)	16.86%	14.10%
Volatility (1Y) (annualized)	19.58%	13.32%
Volatility (3Y) (annualized)	23.08%	19.22%
Volatility (5Y) (annualized)	20.10%	16.29%
Sharpe ratio (overall)	0.79	0.80
Sharpe ratio (5Y)	0.59	0.76
Tracking error (overall)	10.39%	
Tracking error (5Y)	12.00%	
Dividend yield (overall)	1.75%	5.03%
Maximum drawdown	32.56%	33.77%
Constituents	188	1800

### Performance

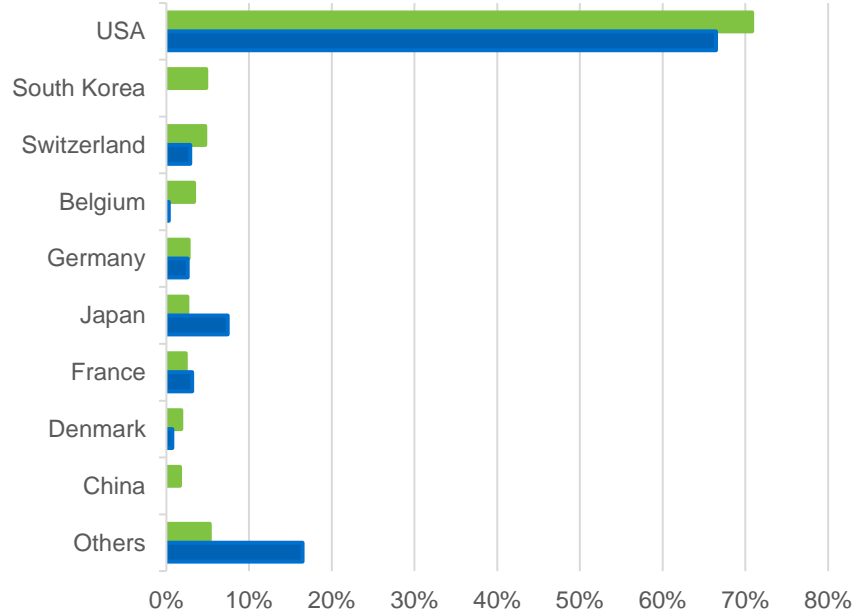


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Mar 30, 2012 – Mar 31, 2022

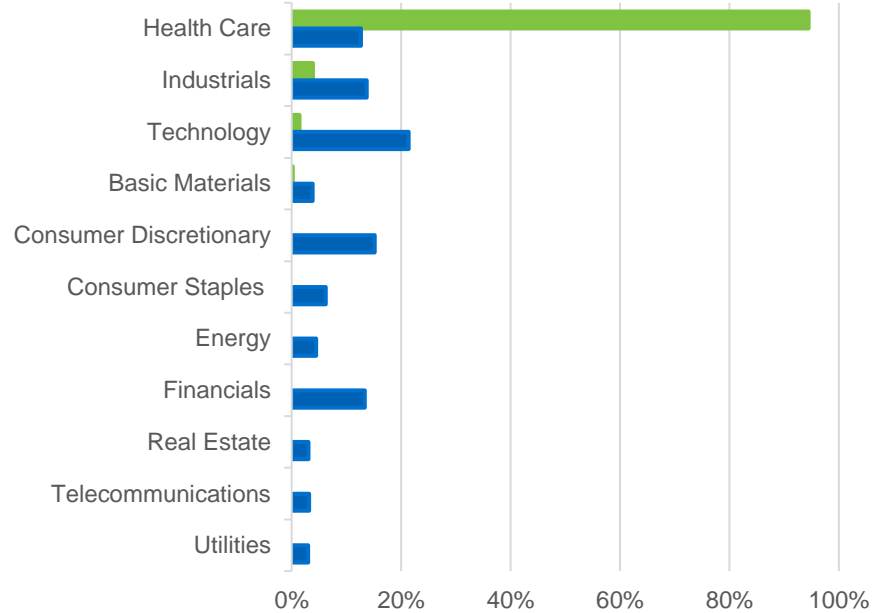
# STOXX Global Breakthrough Healthcare Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Breakthrough Healthcare Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
ABBVIE	Health Care	USA	1.61
DEXCOM	Health Care	USA	1.48
Thermo Fisher Scientific Inc.	Health Care	USA	1.46
Hologic Inc.	Health Care	USA	1.42
UCB	Health Care	Belgium	1.39
Edwards Lifesciences Corp.	Health Care	USA	1.36
Cerner Corp.	Health Care	USA	1.33
BIOHAVEN PHARMACEUTICAL HDG	Health Care	USA	1.32
ABIOMED	Health Care	USA	1.28
Bristol-Myers Squibb Co.	Health Care	USA	1.25

1) Source: Qontigo. Data as of Mar 31, 2022.

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# Appendix

## Sustainability

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# STOXX Global Electric Vehicles & Driving Technology

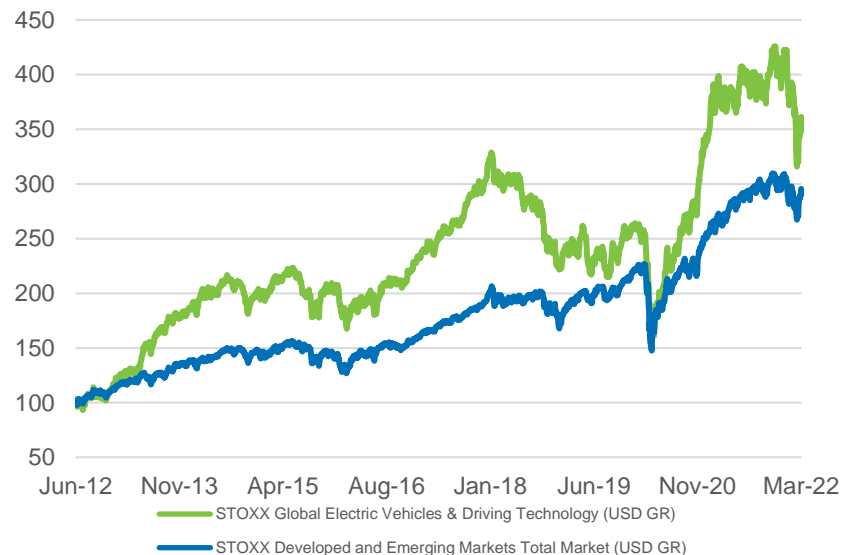
# STOXX Global Electric Vehicles & Driving Technology Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Electric Vehicles & Driving Technology	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	13.95%	11.68%
Perf. (1Y)	-5.96%	7.49%
Perf. (3Y) (annualized)	14.64%	14.28%
Perf. (5Y) (annualized)	7.64%	12.02%
Vol. overall (annualized)	18.11%	13.71%
Volatility (1Y) (annualized)	19.26%	13.01%
Volatility (3Y) (annualized)	23.32%	18.74%
Volatility (5Y) (annualized)	19.80%	15.84%
Sharpe ratio (overall)	0.78	0.83
Sharpe ratio (5Y)	0.42	0.73
Tracking error (overall)	10.03%	
Tracking error (5Y)	10.50%	
Dividend yield (overall)	4.07%	4.89%
Maximum drawdown	53.80%	34.84%
Constituents	88	10763

### Performance



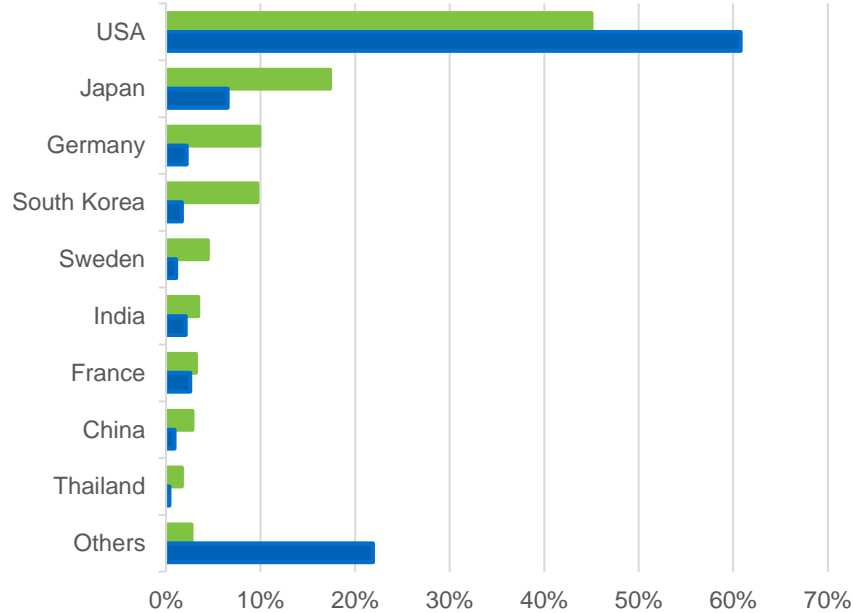
- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022



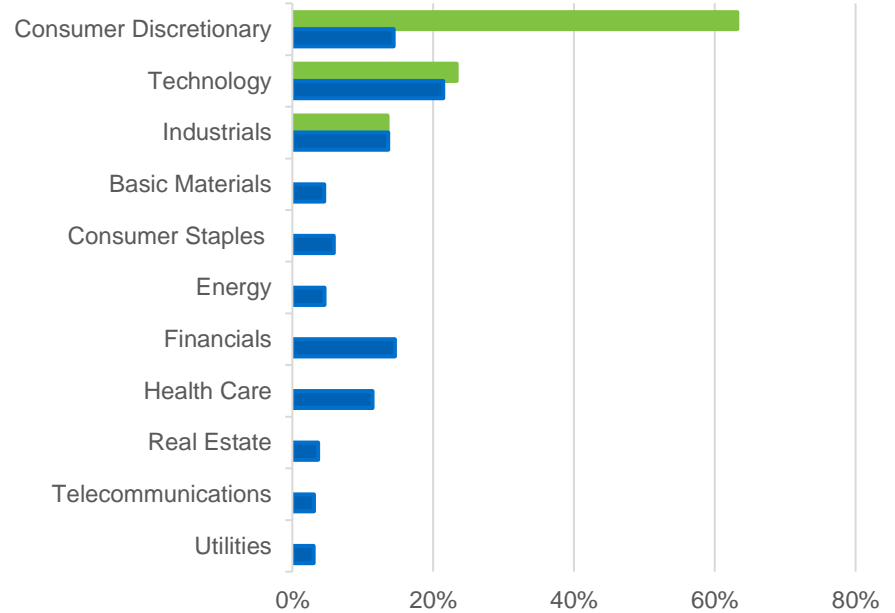
# STOXX Global Electric Vehicles & Driving Technology Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

# STOXX Global Electric Vehicles & Driving Technology Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
TESLA	Automobiles and Parts	USA	4.68
NVIDIA Corp.	Technology	USA	4.15
Ford Motor Co.	Automobiles and Parts	USA	2.96
BYD 'H'	Automobiles and Parts	China	2.78
EATON CORP. PLC	Industrial Goods and Services	USA	2.74
Toyota Motor Corp.	Automobiles and Parts	Japan	2.69
Maruti Suzuki	Automobiles and Parts	India	2.68
HEXAGON B	Technology	Sweden	2.57
Paccar Inc.	Industrial Goods and Services	USA	2.54
Denso Corp.	Automobiles and Parts	Japan	2.41

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Smart City Infrastructure Index

# STOXX Global Smart City Infrastructure Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Smart City Infrastructure	STOXX Global Total Market index
Perf. overall (annualized)	11.85%	11.12%
Perf. (1Y)	6.29%	7.50%
Perf. (3Y) (annualized)	13.15%	14.26%
Perf. (5Y) (annualized)	13.61%	12.00%
Vol. overall (annualized)	14.13%	13.93%
Volatility (1Y) (annualized)	13.45%	13.00%
Volatility (3Y) (annualized)	19.00%	18.73%
Volatility (5Y) (annualized)	15.80%	15.83%
Sharpe ratio (overall)	0.81	0.78
Sharpe ratio (5Y)	0.82	0.73
Tracking error (overall)	5.54%	
Tracking error (5Y)	5.57%	
Dividend yield (overall)	4.97%	4.37%
Maximum drawdown	37.18%	34.83%
Constituents	175	10989

### Performance

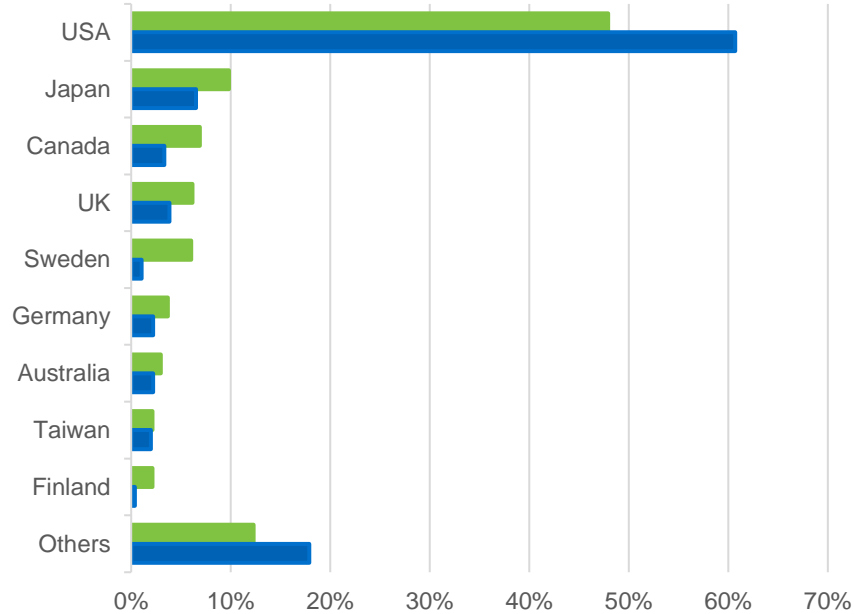


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 24, 2013 – Mar 31, 2022

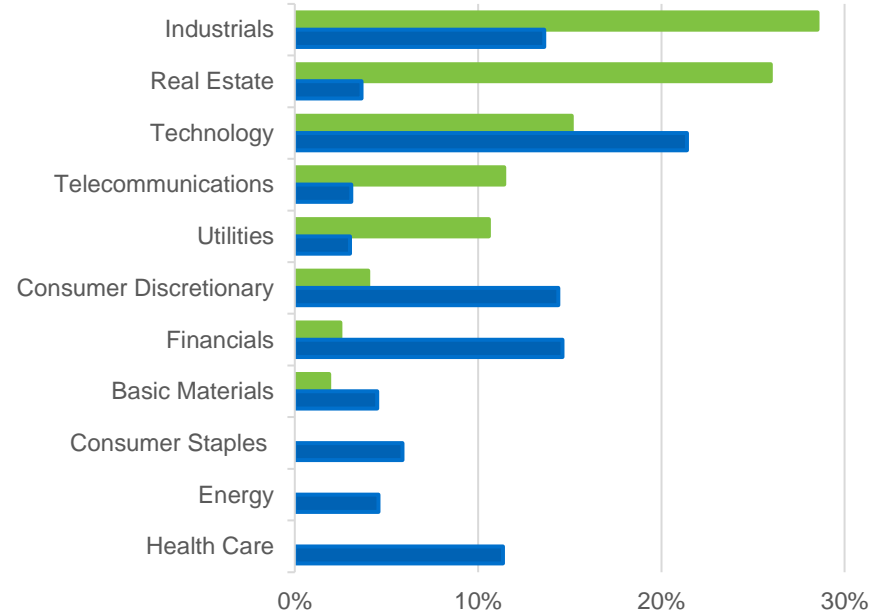
# STOXX Global Smart City Infrastructure Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Smart City Infrastructure Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
PALO ALTO NETWORKS	Technology	USA	1.36
FORTINET	Technology	USA	1.18
MONOLITHIC PWR.SYS.	Technology	USA	1.12
CASELLA WST.SYS.'A'	Utilities	USA	1.02
Juniper Networks Inc.	Telecommunications	USA	1.01
EVOQUA WATER TECHS.	Utilities	USA	1.01
CAMDEN PROPERTY TST.	Real Estate	USA	0.97
BOLIDEN	Basic Resources	Sweden	0.97
OPERADORA DE SITES MEXICANOS	Telecommunications	Mexico	0.97
MID-AMER.APT COMMUNITIES	Real Estate	USA	0.96

1) Source: Qontigo. Data as of Mar 31, 2022.

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# Appendix

## Future Technology

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# STOXX Global Industry 4.0 Index



# Industry 4.0 – At a Glance

15%

Additive manufacturing is poised to grow at a rate of 15.0% CAGR between 2015 – 2025, with Aerospace, Automotive and Medical industries expected to account for 51% of the 3D printing market<sup>1)</sup>.

9.3%

The smart factory market is projected to be valued at \$ 205.42 billion by 2022, reflecting a Compound Annual Growth Rate, CAGR, of 9.3%, between 2017 and 2022<sup>3)</sup>.



\$75b

The industrial robotics market (including the prices of peripherals, software, and system engineering) is projected to grow from USD 42.2 billion in 2021 to reach USD 75.3 billion by 2026<sup>2)</sup>.

- 1) Frost and Sullivan, [http://namic.sg/wp-content/uploads/2018/04/global-additive-manufacturing-market\\_1.pdf](http://namic.sg/wp-content/uploads/2018/04/global-additive-manufacturing-market_1.pdf)
- 2) Markets and Markets, <https://www.marketsandmarkets.com/Market-Reports/Industrial-Robotics-Market-643.html>
- 3) Markets and Markets, <https://www.marketsandmarkets.com/PressReleases/smart-factory.asp>

# Themes (1)

## Industry 4.0



Automation



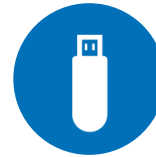
Digitization/Cyber-Physical Systems



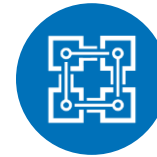
Virtual/Augmented Reality



Rapid Prototyping



Industrial Connectivity



Blockchain

# Themes (2)



## Automation

Industrial/ Manufacturing Automation involves everything from self-driving trucks, to supply-chain management software. Industrial automation has the ability to pack and ship items using advanced technology



## Digitization/ Cyber-Physical Systems

BCG analysis found that use of AI can reduce producers' conversion costs by up to 20%<sup>1)</sup> In manufacturing, improvements and efficiencies in the analysis of big data are expected to bring millions of dollar to this industry.



## Virtual/ Augmented Reality

Augmented-reality-based systems support a variety of services, such as selecting parts in a warehouse and sending repair instructions over mobile devices.



## Rapid Prototyping

With Industry 4.0, additive-manufacturing methods are expected to be widely used to produce small batches of customized products that offer construction advantages, such as complex, lightweight designs.



## Industrial Connectivity

By 2025, 100 billion connections – 90 per cent from intelligent sensors in machines of all kinds – will link the globe as a direct result of information and communication technologies (ICT)<sup>2)</sup>.



## Blockchain

Blockchain enables the creation of smart contracts, with terms and conditions both sides can specify and that assures trust in the enforceability of the contract and the identity of the counterparty.

1) The Boston Consulting Group, [http://image-src.bcg.com/Images/BCG-AI-in-the-Factory-of-the-Future-Apr-2018\\_tcm9-188726.pdf](http://image-src.bcg.com/Images/BCG-AI-in-the-Factory-of-the-Future-Apr-2018_tcm9-188726.pdf)

2) BBC, <http://www.bbc.com/future/bspoke/specials/connected-world/industry-4-0.html>

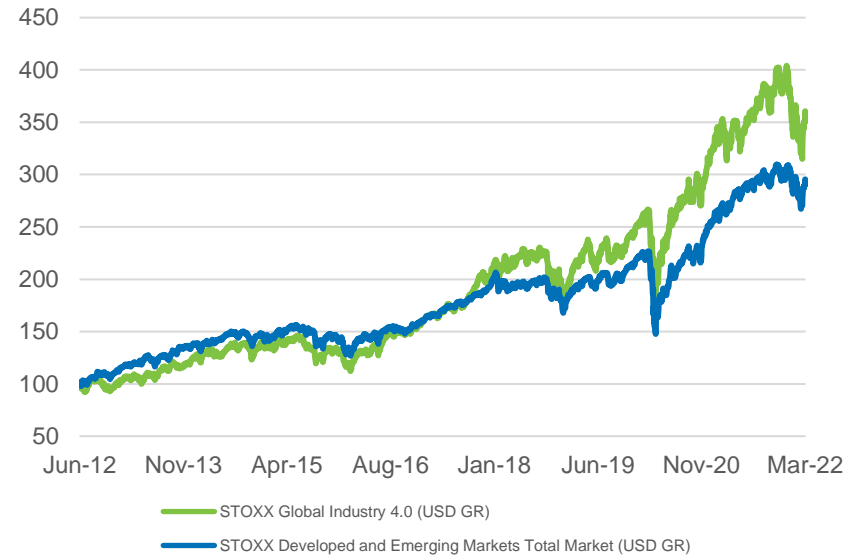
# STOXX Global Industry 4.0 Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Industry 4.0	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	13.88%	11.68%
Perf. (1Y)	5.17%	7.49%
Perf. (3Y) (annualized)	16.86%	14.28%
Perf. (5Y) (annualized)	16.21%	12.02%
Vol. overall (annualized)	18.42%	13.71%
Volatility (1Y) (annualized)	19.74%	13.01%
Volatility (3Y) (annualized)	24.21%	18.74%
Volatility (5Y) (annualized)	20.98%	15.84%
Sharpe ratio (overall)	0.76	0.83
Sharpe ratio (5Y)	0.77	0.73
Tracking error (overall)	9.35%	
Tracking error (5Y)	9.67%	
Dividend yield (overall)	4.17%	4.89%
Maximum drawdown	31.62%	34.84%
Constituents	217	10763

### Performance

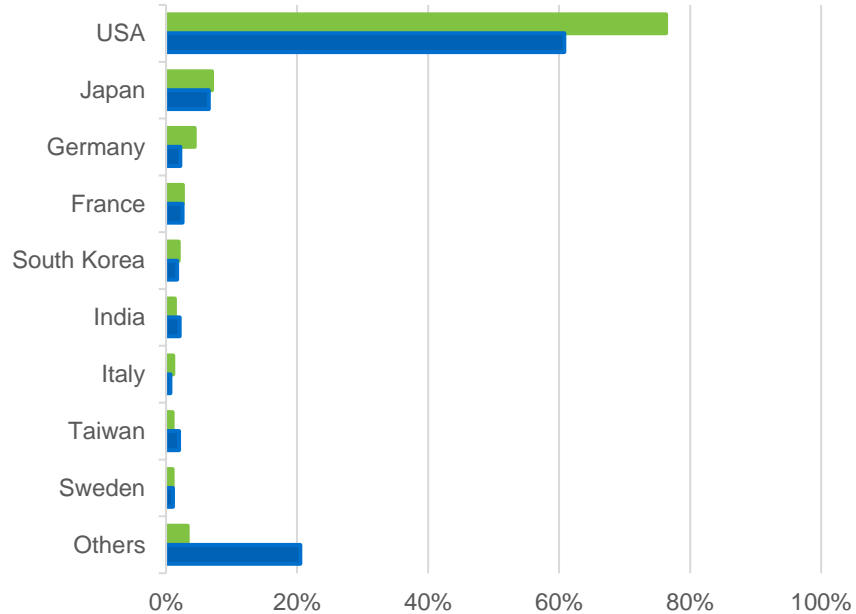


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

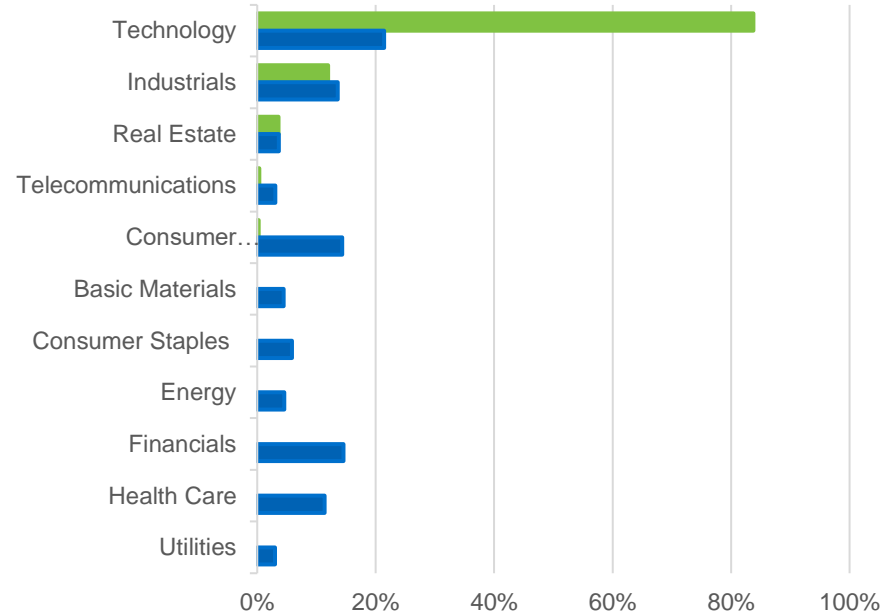
# STOXX Global Industry 4.0 Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Industry 4.0 Index – Top 10 Constituents

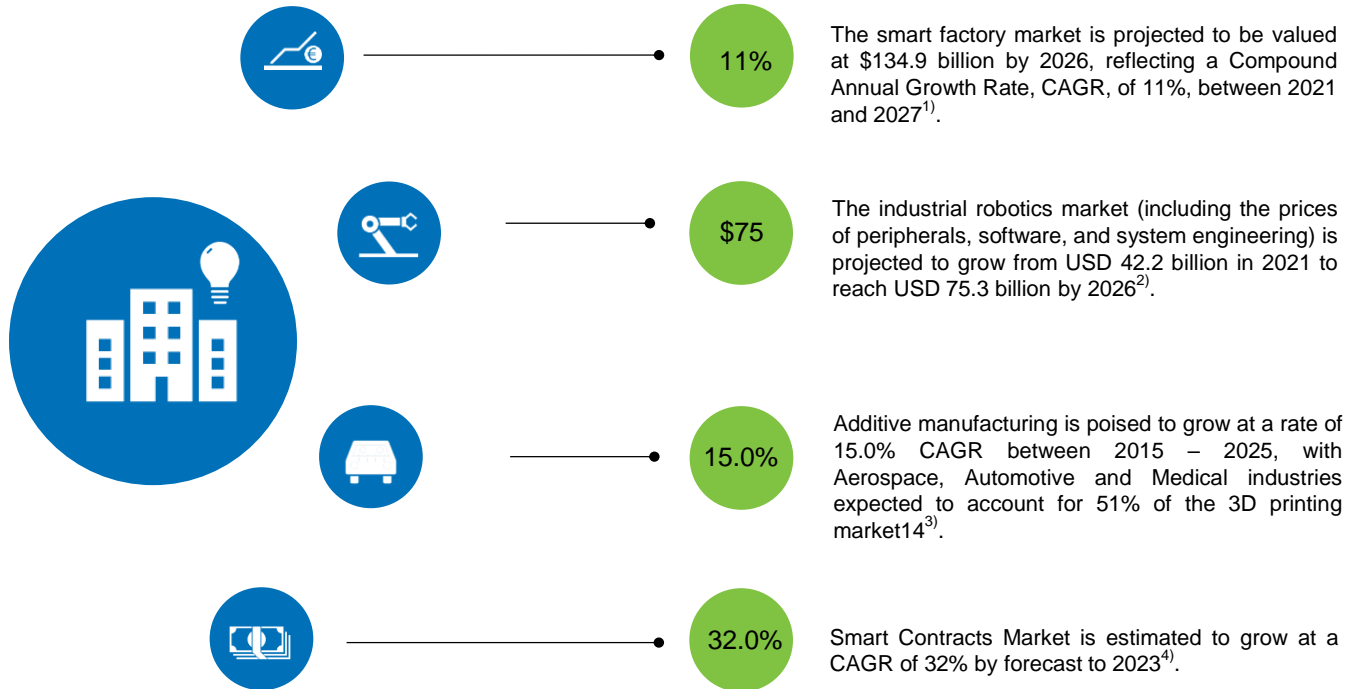
Name	Supersector	Country	Weight (%)
Intel Corp.	Technology	USA	6.31
BROADCOM	Technology	USA	6.24
Texas Instruments Inc.	Technology	USA	5.23
Accenture PLC Cl A	Industrial Goods and Services	USA	4.62
Qualcomm Inc.	Technology	USA	4.50
SAP	Technology	Germany	4.03
SERVICENOW	Technology	USA	3.70
International Business Machine	Technology	USA	3.51
Keyence Corp.	Industrial Goods and Services	Japan	3.00
Analog Devices Inc.	Technology	USA	2.88

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Smart Factory Index

# Smart Factory – At a Glance

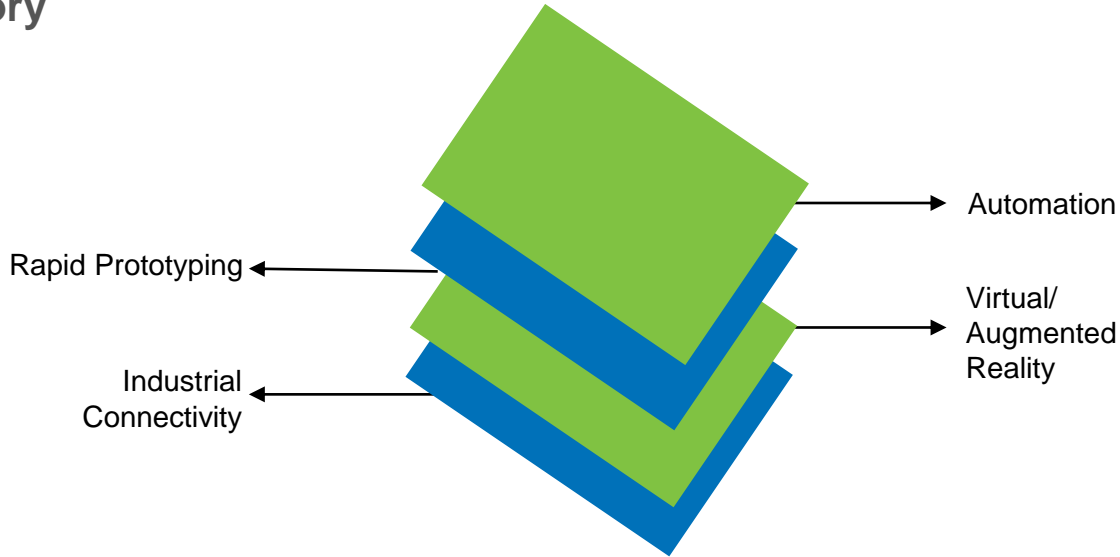


1) Markets and Markets, <https://www.marketsandmarkets.com/Market-Reports/smart-factory-market-1227.html>  
2) Markets and Markets, <https://www.marketsandmarkets.com/Market-Reports/Industrial-Robotics-Market-643.html>  
3) Frost and Sullivan, [http://namic.sg/wp-content/uploads/2018/04/global-additive-manufacturing-market\\_1.pdf](http://namic.sg/wp-content/uploads/2018/04/global-additive-manufacturing-market_1.pdf)  
4) Reuters, <https://www.reuters.com/brandfeatures/venture-capital/article?id=33313>



# Themes (1)

## Smart Factory



STOXX views the “Smart Factory” trend as the sub-part of Industry 4.0 that focuses on the automation of the manufacturing process, detached from the total group of technologies that are driving the 4<sup>th</sup> industrial revolution, but may have broader applications.

The companies examined in this field, combine physical production and operations with smart digital technology, machine learning and big data to create a more holistic and well-connected ecosystem for companies that focus on manufacturing and supply chain management.

# Themes (2)

## Smart Factory



### Automation

Industrial/ Manufacturing Automation involves everything from self-driving trucks, to supply-chain management software. Industrial automation has the ability to pack and ship items using advanced technology termed as 'Smart Manufacturing'.



### Rapid Prototyping

With Industry 4.0, additive-manufacturing methods are expected to be widely used to produce small batches of customized products that offer construction advantages, such as complex, lightweight designs.



### Industrial Connectivity

By 2025, 100 billion connections – 90 per cent from intelligent sensors in machines of all kinds – will link the globe as a direct result of information and communication technologies (ICT)<sup>1)</sup>



### Virtual/ Augmented Reality

Augmented-reality-based systems support a variety of services, such as selecting parts in a warehouse and sending repair instructions over mobile devices.

1) BBC, <http://www.bbc.com/future/ bespoke/ specials/ connected-world/ industry-4-0.html>

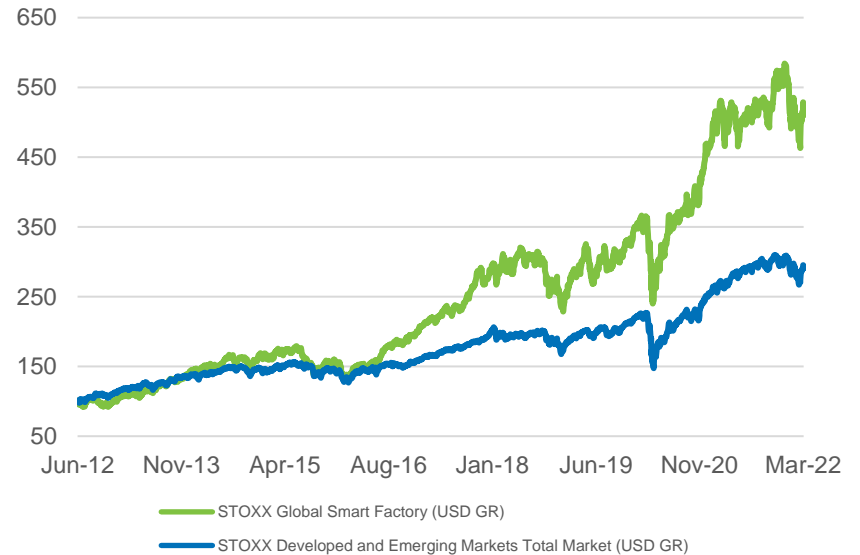
# STOXX Global Smart Factory Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Smart Factory	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	18.37%	11.68%
Perf. (1Y)	1.45%	7.49%
Perf. (3Y) (annualized)	21.36%	14.28%
Perf. (5Y) (annualized)	18.55%	12.02%
Vol. overall (annualized)	21.58%	13.71%
Volatility (1Y) (annualized)	21.96%	13.01%
Volatility (3Y) (annualized)	28.18%	18.74%
Volatility (5Y) (annualized)	25.01%	15.84%
Sharpe ratio (overall)	0.86	0.83
Sharpe ratio (5Y)	0.76	0.73
Tracking error (overall)	12.82%	
Tracking error (5Y)	14.23%	
Dividend Yield (overall)	5.72%	4.89%
Maximum drawdown	34.36%	34.84%
Constituents	84	10763

### Performance

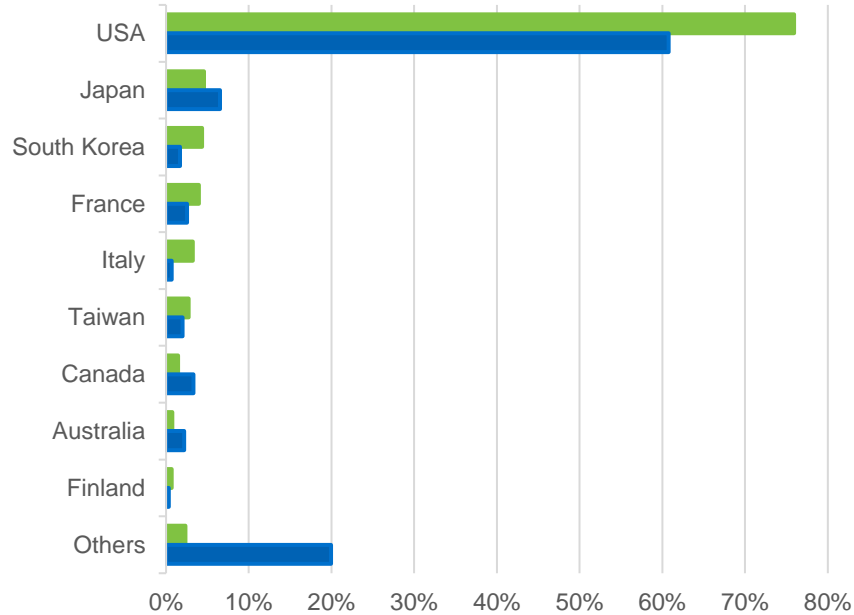


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

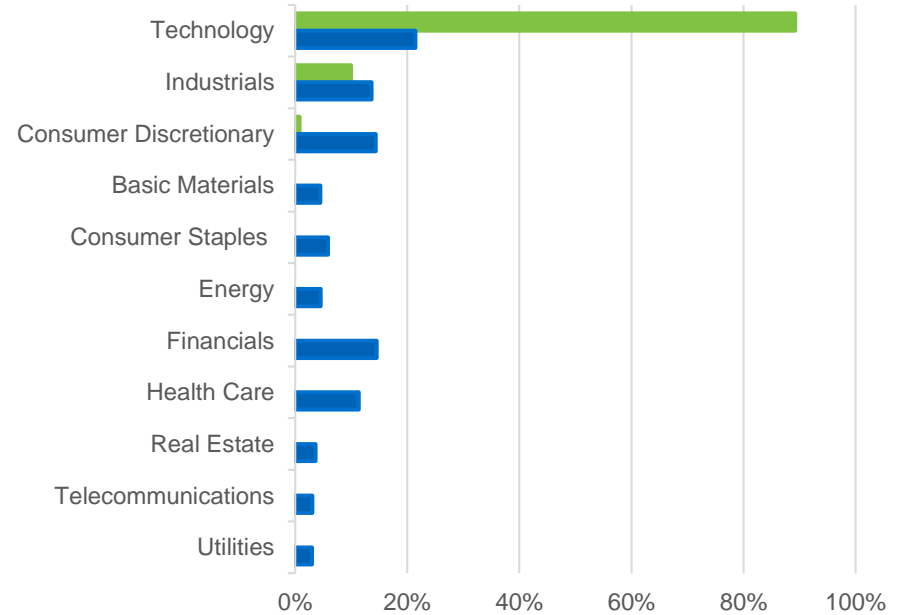
# STOXX Global Smart Factory Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Smart Factory Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
BROADCOM	Technology	USA	8.12
Intel Corp.	Technology	USA	8.05
Texas Instruments Inc.	Technology	USA	8.05
Qualcomm Inc.	Technology	USA	7.49
Analog Devices Inc.	Technology	USA	4.68
Microchip Technology Inc.	Technology	USA	4.59
Autodesk Inc.	Technology	USA	4.57
Micron Technology Inc.	Technology	USA	4.38
SK HYNIX INC	Technology	South Korea	4.25
DASSAULT SYSTEMS	Technology	France	3.96

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Artificial Intelligence Index

# A Megatrend and the Key Investment Opportunity

## Artificial Intelligence

### Current State: As of end 2017<sup>1)</sup>

- > There is a gap between R&D investments in AI and commercial applications.
- > This is a typical sign of early technology development curves.
- > AI has the potential to accelerate shifts in market share, revenue, and profit pools – these are characteristics of digitally disrupted sectors.

### Future State: Forecast for 2035<sup>2)</sup>

- > By 2035 AI technologies have the potential to increase productivity by 40% or more.
- > AI will increase economic growth by an average of 1.7% across 16 industries by 2035.
- > Top 3 Industries: Information and **Communication**, **Manufacturing and Financial Services** are expected to gain the **highest economic growth** in 2035 from AI's benefits.
- > AI will have the most **positive effect on Education, Accommodation and Food Services and Construction** sectors' profitability in 2035.

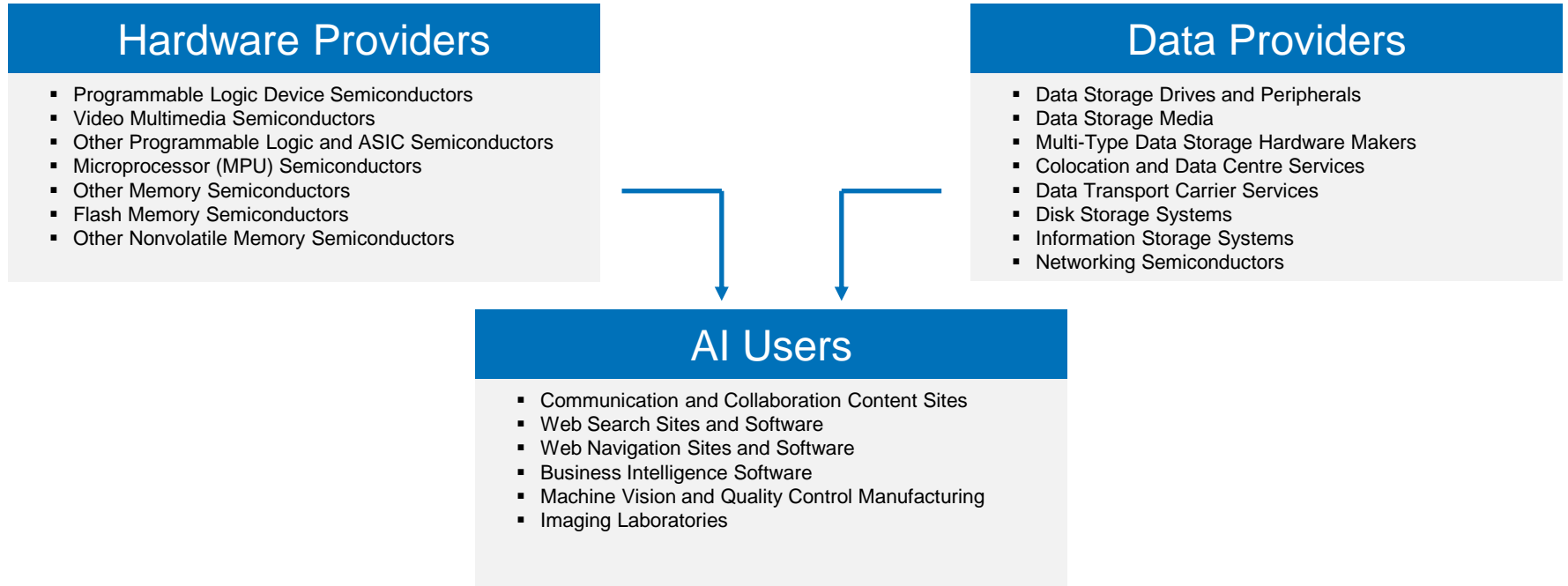
AI is expected to drive economic growth and the profitability of entire industries.

1) "Artificial Intelligence: The Next Digital Frontier", Discussion paper by Jacques Bughin et al., McKinsey Global Institute, Jun. 2017.

2) "AI is the Future of Growth", by Mark Purdy and Paul Daugherty, Accenture, 2016.

# Identifying the Relevant Sectors

## Artificial Intelligence





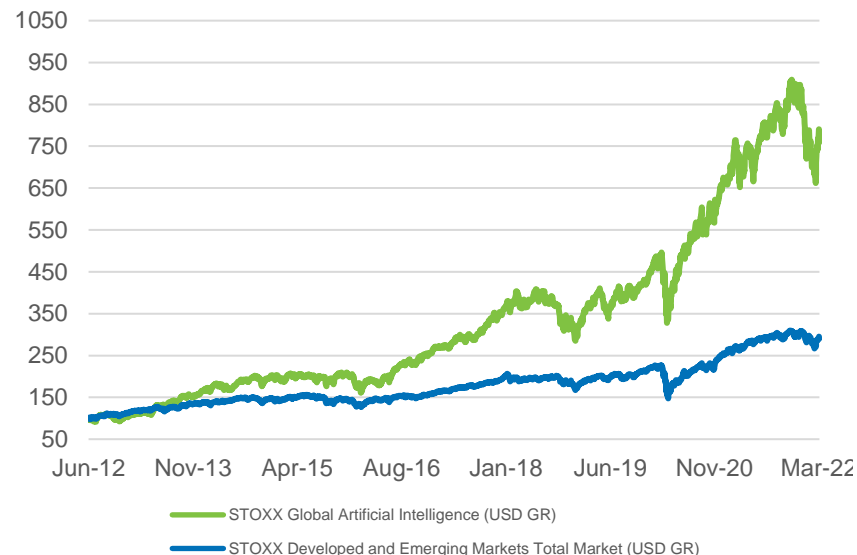
# STOXX Global Artificial Intelligence Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Artificial Intelligence	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	23.35%	11.68%
Perf. (1Y)	7.76%	7.49%
Perf. (3Y) (annualized)	26.25%	14.28%
Perf. (5Y) (annualized)	22.87%	12.02%
Vol. overall (annualized)	23.45%	13.71%
Volatility (1Y) (annualized)	25.88%	13.01%
Volatility (3Y) (annualized)	30.47%	18.74%
Volatility (5Y) (annualized)	27.11%	15.84%
Sharpe ratio (overall)	0.99	0.83
Sharpe ratio (5Y)	0.86	0.73
Tracking error (overall)	15.02%	
Tracking error (5Y)	16.77%	
Dividend yield (overall)	5.88%	4.89%
Maximum drawdown	33.94%	34.84%
Constituents	54	10763

### Performance

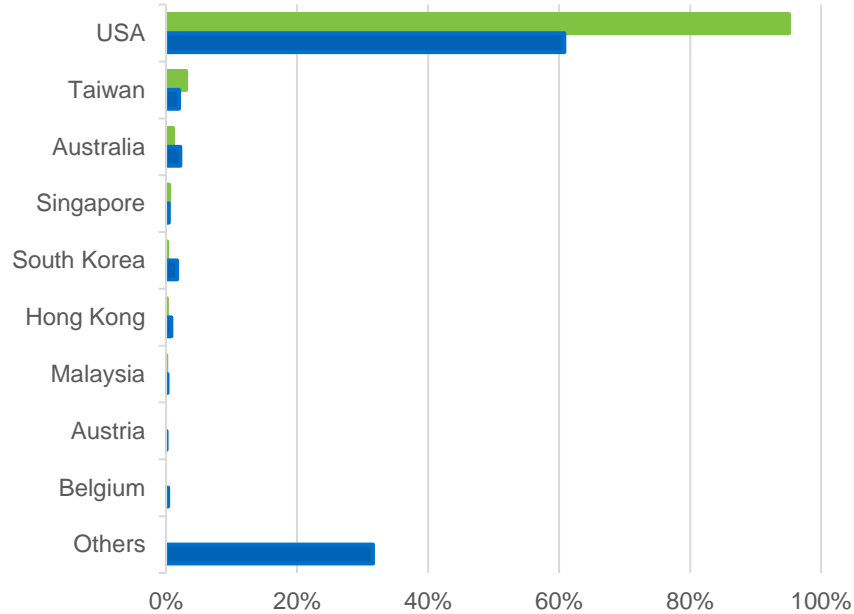


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

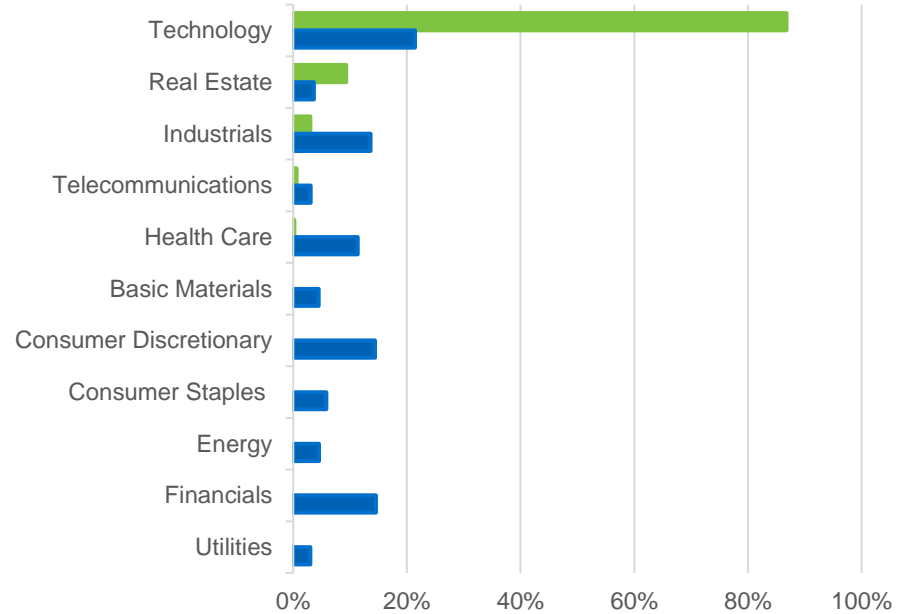
# STOXX Global Artificial Intelligence Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Artificial Intelligence Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NVIDIA Corp.	Technology	USA	9.06
META PLATFORMS CLASS A	Technology	USA	8.57
Intel Corp.	Technology	USA	7.99
ALPHABET CLASS C	Technology	USA	7.92
SPLUNK	Technology	USA	4.95
SNOWFLAKE A	Technology	USA	4.90
TWITTER	Technology	USA	4.80
MARVELL TECHNOLOGY	Technology	USA	4.65
Equinix Inc.	Real Estate	USA	4.44
Digital Realty Trust Inc.	Real Estate	USA	4.43

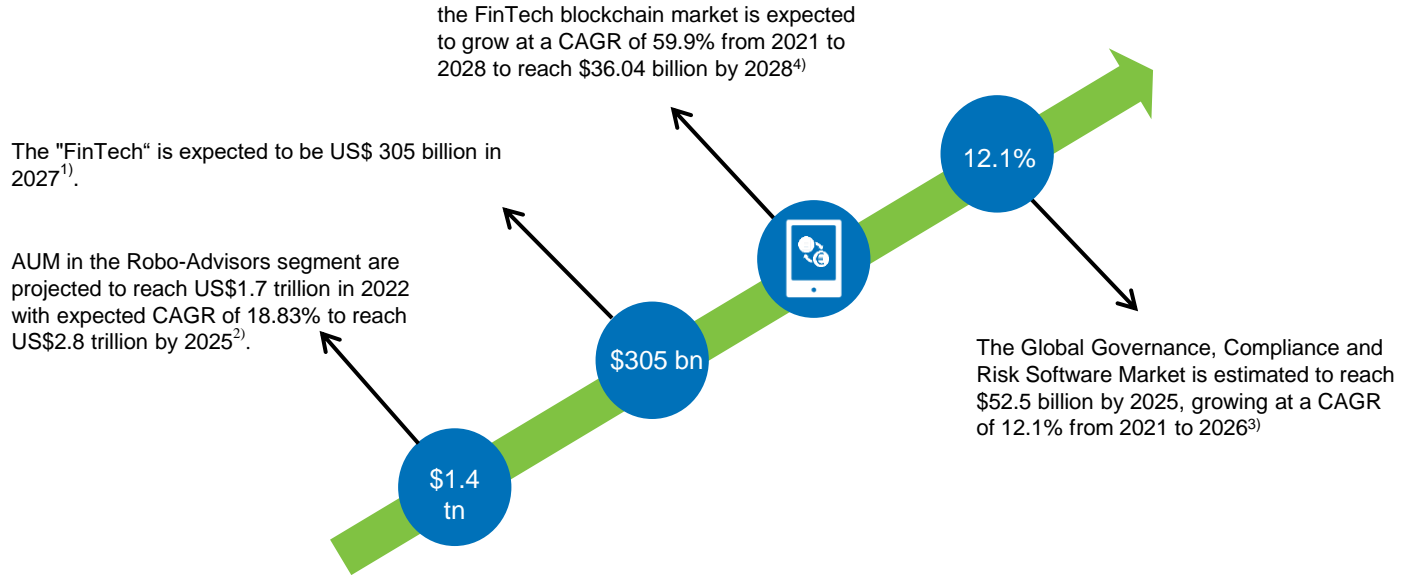
1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Fintech Index

# Overview

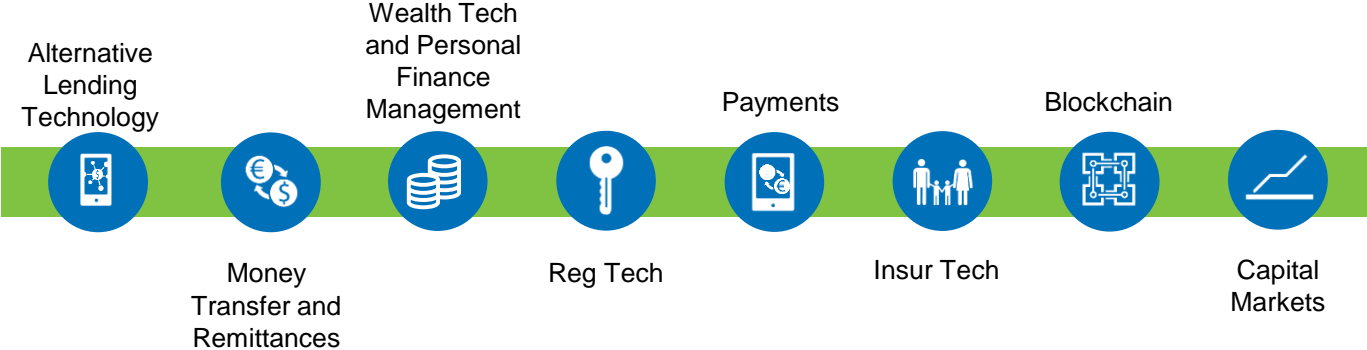
## The Fintech Innovation



1) Market Data Forecast : <https://www.marketdataforecast.com/market-reports/fintech-market>  
2) Statista: <https://www.statista.com/outlook/dmo/fintech/digital-investment/robo-advisors/worldwide>  
3) Industry Arc: <https://www.industryarc.com/Report/18637/governance-compliance-and-risk-software-market.html>  
4) Global Newswire: <https://www.globenewswire.com/news-release/2021/10/05/2308836/0/en/FinTech-Blockchain-Market-Worth-36-04-billion-by-2028-Market-Size-Share-Forecasts-Trends-Analysis-Report-with-COVID-19-Impact-by-Meticulous-Research.html>

# Themes (1)

## Fintech



# Themes (2)

## Fintech



### Money Transfer and Remittances

The use of technology has made remittances extremely cost-effective. transaction value of B2B cross-border payments of all payment types will exceed \$42.7 trillion in 2026, from \$34 trillion in 2021<sup>5)</sup>



### Reg Tech

The Global Governance, Compliance and Risk Software Market is estimated to reach \$52.5 billion by 2025, growing at a CAGR of 12.1% from 2021 to 2026<sup>4)</sup>



### Insur Tech

Global Insurtech Market revenue is growing at a CAGR of 48.8% from 2021 to 2028<sup>3)</sup>



### Capital Markets

Fintech activity within the capital market infrastructure has grown by almost 300% since 2010. Capital market FinTechs are providing aid by building capabilities to improve existing client relationships and experiences, streamlining front-to-back costs, and optimizing regulatory compliance through advance analytics



### Alternative Lending Technology

Total transaction value in alternative lending technology is expected to show an annual growth rate (CAGR 2022-2025) of 3.22%<sup>1)</sup>



### WealthTech & Personal Finance Mgmt

AUM in the Robo-Advisors segment are projected to reach US\$1.7 trillion in 2022 with expected CAGR of 18.83% to reach US\$2.8 trillion by 2025<sup>2)</sup>



### Payments

Key drivers: financial inclusion, smartphone/internet penetration, cashless and emergence of attractive digital payment solutions powered by the advent of Fintech



### Blockchain

Blockchain technology is expected to source future financial market innovation and help lower the worldwide cost of cross-border payments

- 1) Statista: <https://www.statista.com/outlook/dmo/fintech/alternative-lending/worldwide>
- 2) Statista: <https://www.statista.com/outlook/dmo/fintech/digital-investment/robo-advisors/worldwide>
- 3) Grnd View Research: <https://www.grandviewresearch.com/industry-analysis/insurtech-market>
- 4) Industry Arc: <https://www.industryarc.com/Report/18637/governance-compliance-and-risk-software-market.html>
- 5) Juniper Research: <https://www.juniperresearch.com/press/b2b-cross-border-payment-transaction-values>

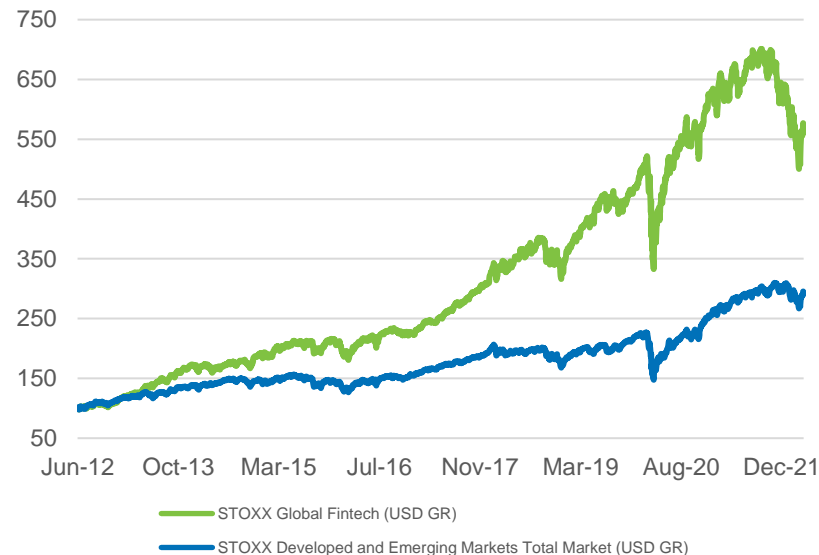
# STOXX Global Fintech Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Fintech	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	19.56%	11.68%
Perf. (1Y)	-9.53%	7.49%
Perf. (3Y) (annualized)	12.46%	14.28%
Perf. (5Y) (annualized)	18.34%	12.02%
Vol. overall (annualized)	18.46%	13.71%
Volatility (1Y) (annualized)	20.04%	13.01%
Volatility (3Y) (annualized)	25.52%	18.74%
Volatility (5Y) (annualized)	21.87%	15.84%
Sharpe ratio (overall)	1.03	0.83
Sharpe ratio (5Y)	0.83	0.73
Tracking error (overall)	9.01%	
Tracking error (5Y)	10.29%	
Dividend yield (overall)	4.88%	4.89%
Maximum drawdown	36.21%	34.84%
Constituents	165	10763

### Performance



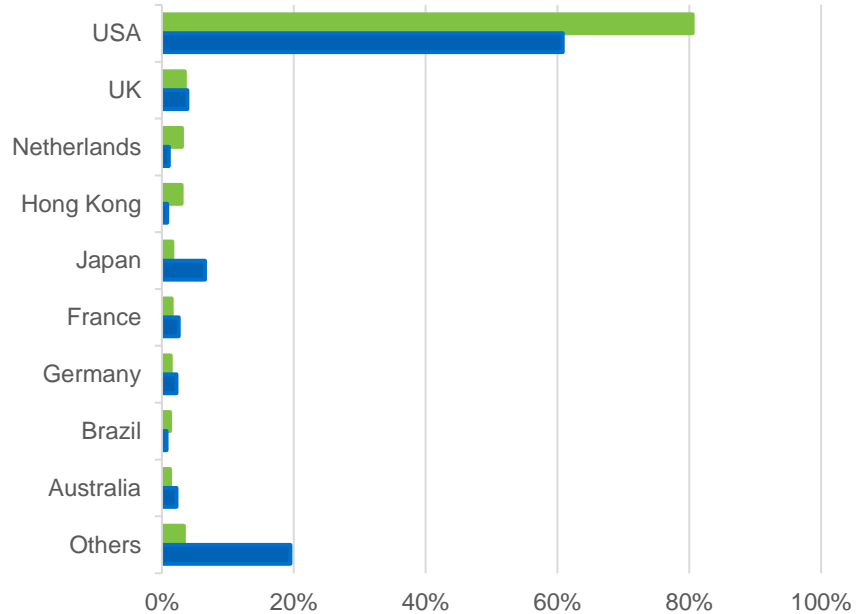
- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022



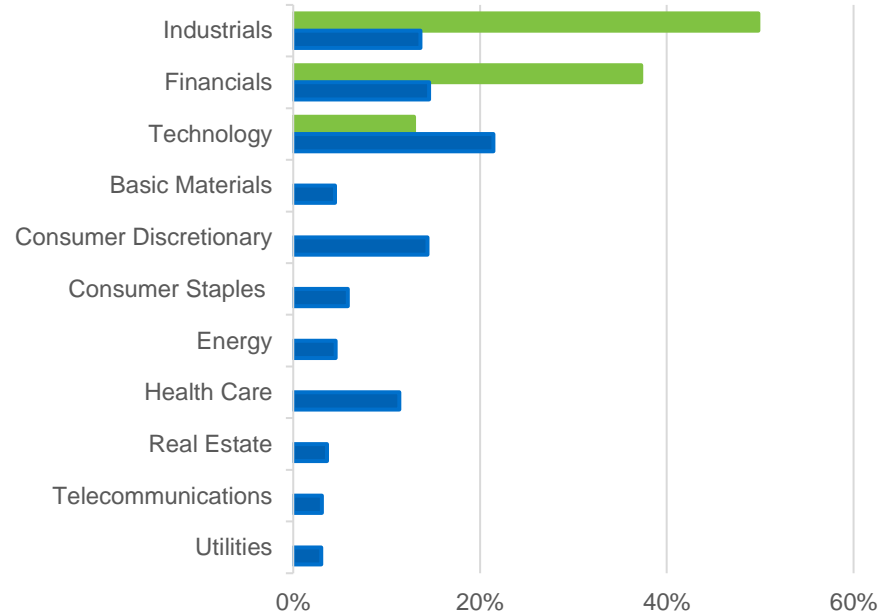
# STOXX Global Fintech Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Fintech Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
VISA Inc. Cl A	Industrial Goods and Services	USA	8.22
MasterCard Inc. Cl A	Industrial Goods and Services	USA	8.08
S&P GLOBAL	Financial Services	USA	7.48
PayPal Holdings	Industrial Goods and Services	USA	6.94
CME Group Inc. Cl A	Financial Services	USA	4.40
Intuit Inc.	Technology	USA	3.70
INTERCONTINENTALEXCHANGE INC	Financial Services	USA	3.55
BLOCK CL.A	Industrial Goods and Services	USA	3.54
Fiserv Inc.	Industrial Goods and Services	USA	3.02
ADYEN	Industrial Goods and Services	Netherlands	2.94

1) Source: Qontigo. Data as of Mar 31, 2022.

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# iSTOXX Developed Markets B.R.A.I.N. Index

# Methodology

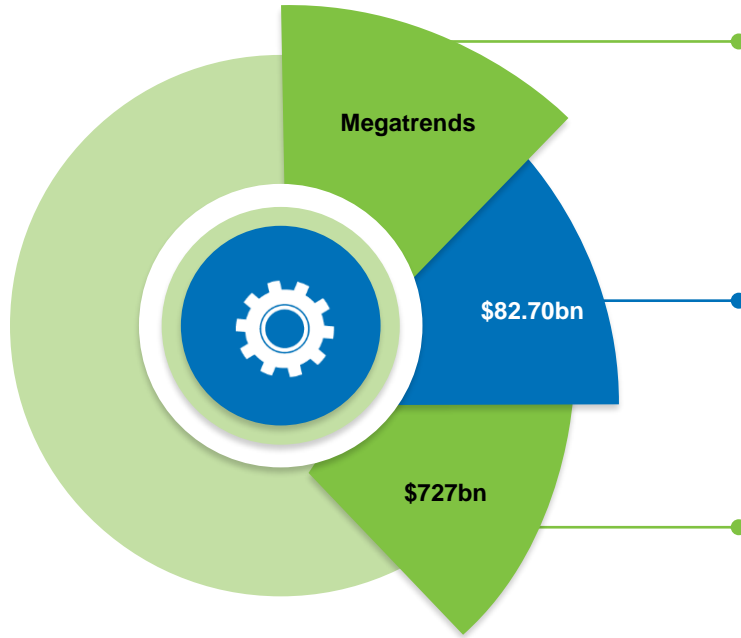
## iSTOXX Developed Markets B.R.AI.N. Index



- STOXX Developed Markets Total Market Index
- Companies with 3m MDTV below € 1m are excluded
- Only companies with >50% aggregated revenue exposures to at least one of the four thematic sector lists are eligible
- Within each of the 4 thematic baskets, stocks are ranked based on their exposure to the corresponding theme
- The 20 stocks within each thematic basket with the highest exposure to the theme are eligible for selection
- If a company ranks in the top 20 in more than one themes, then that company is considered eligible for selection only once
- By definition due to the overlap of the themes (common sectors between 2+ themes) the index will have a variable number of components (maximum 80)
- The index is weighted according to free-float market cap times exposure<sup>1)</sup>
- Additional caps:
  - Maximum 8% at a component level
  - The sum of all weights above 4.5% should not exceed 35%
- The index is reviewed annually, rebalanced quarterly

1) Exposure to all the B.R.AI.N. themes

## Combining Megatrends



Exposure to four megatrends that will shape the future: Biotechnology, Robotics, Artificial Intelligence and Nanotechnology.

The Global Robotics Technology market is expected to reach \$189.6 billion by 2027, registering a CAGR of 13.5% during 2020 – 2027<sup>1)</sup>.

The global biotechnology market is expected to reach USD \$727.10 billion by 2025<sup>2)</sup>.

1) Allied Market Research, <https://www.alliedmarketresearch.com/robotics-technology-market>

2) <https://www.grandviewresearch.com/press-release/global-biotechnology-market>

## Themes: Biotechnology



### Medical Biotechnology

Red biotechnology is the application of biotechnology in biopharmaceuticals and pharmaceuticals production was valued at USD 320.76 billion in 2019 and is projected to reach \$510 billion by 2027<sup>1</sup>.

- Biopharmaceutical companies



### Bio services

Bioservices relate to the services that aid the discovery, development and manufacture of biotechnology products/technologies. These companies provide support services to the biotechnology sector (e.g. storage facilities for biological products, contract manufacturing etc)

- Molecular Diagnostic Devices
- Biological Product Storage Laboratories
- Genetic Test Kit Providers



### Agribiotech

Agricultural biotechnology market is forecasted to attain a value of \$55.5 bn by 2023, growing at a CAGR of 10.1% during 2017-2023<sup>2</sup>.

- Bio fertilizer and biopesticide providers
- Genetically modified food crops providers, seed producers



### Biotechnology applications

Global Biofuel market was valued at \$168 bn in 2016 and is expected to reach \$218.7 bn in 2022 at a grow rate of 4.5% (CAGR)<sup>3</sup>. The global Bioinformatics market is forecasted to grow at a CAGR of 19.37% from 2018 to 2026<sup>4</sup>.

- Biofuel providers.
- Bioinformatic companies
- Biomaterial manufacturers

1) <https://www.marketwatch.com/story/red-biotechnology-market---size-share-trends-and-global-forecast-to-2027-precedence-research-2021-05-24?siteid=bigcharts&dist=bigcharts>  
2) <https://www.psmarketresearch.com/press-release/agricultural-biotechnology-market>  
3) <https://globenewswire.com/news-release/2018/01/09/1285912/0/en/Biofuels-Market-Size-Will-Reach-USD-218-7-Billion-by-2022-Globally-Zion-Market-Research.html>  
4) <https://www.qiiresearch.com/report/ink523671-global-bioinformatics-market-forecast.html>

## Themes: Robotics



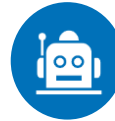
### Industrial Robots

The industrial robotics market (including the prices of peripherals, software, and system engineering) is projected to grow from USD 42.2 billion in 2021 to reach USD 75.3 billion by 2026<sup>1)</sup>.



### Unmanned Aerial Vehicles/ Drones

The UAV market is estimated to be \$ 20.71 bn in 2018 and is projected to reach \$ 52.30 bn by 2025, at a CAGR of 14.15% from 2018 to 2025. Within this segment, the military drone market is expected to be worth over \$13bn by 2024<sup>3)</sup>.



### Industrial Robots

- Consumer robot market is projected to witness a CAGR of 22.35% during the forecast period to reach a total market size of \$14.9 billion by 2023, increasing from \$5.4 billion in 2018<sup>2)</sup>.
- It is expected that the global Surgical Robotics Market will be valued at \$12.6 bn in 2025.



### Autonomous Transport

The global autonomous vehicles market revenue is expected to grow at a CAGR of 39.6% during the forecast period 2017-2027 reaching \$126.8 bn by 2027<sup>4)</sup>.

1) Markets and Markets, <https://www.marketsandmarkets.com/Market-Reports/Industrial-Robotics-Market-643.html>

2) PR Newswire, <https://www.prnewswire.com/news-releases/global-consumer-robot-market-2017-2023-market-to-grow-at-a-cagr-of-2235-to-reach-1491-billion---key-players-are-irobot-jibo-3d-robotics-honda-bossa-nova-robotics-dji-and-softbank-300573167.html>

3) Aerospace and Defence News, <http://www.asdnews.com/news/defense/2018/03/02/unmanned-aerial-vehicle-uav-market-worth-5230-bn-2025>

4) PR Newswire, <https://www.prnewswire.com/news-releases/1268-billion-autonomous-vehicle-market-global-drivers-restraints-opportunities-trends-and-forecasts-2017-2023-300486159.html>

## Themes: Artificial Intelligence



### AI Users

- Companies investing heavily in AI research and/or applications
- Companies with access to interesting datasets/large user base
- Social networking/web advertising companies
- Business software providers
- Some automation specialists (e.g. machine vision)



### Big Data Enablers

- Data storage providers for large datasets
- Online data storage allowing access from multiple locations
- Online storage providers
- Colocation providers (for financial applications)
- Data chip manufacturers



### Hardware Providers

- Providers of specialist hardware for artificial intelligence applications
- Graphics card manufacturers (graphics cards are especially useful for some AI applications as they are optimized for certain mathematical operations that are prevalent in AI)
- Overall chip and CPU manufacturers



## Themes: Nanotechnology



### Nanomaterials

Nanomaterials are material having particles or constituents of nanoscale dimensions. The global nanomaterial market is projected to grow from \$4.75bn in 2017 to \$13.1bn by 2024<sup>1)</sup>.

- Producers and suppliers of nanomaterials (nano-wires and tubes, nano-coatings etc)
- Intermediate users of nanomaterials

1) <https://www.inkwoodresearch.com/reports/global-nanomaterials-market-forecast/>  
2) <https://www.mordorintelligence.com/industry-reports/internet-of-nano-things-market>



### Internet of Nano Things (IoNT)

IoNT is a network of nanoscale devices, sensors and machines integrated into everyday physical objects that are connected to the internet for effective data communication. The IoNT market was valued at \$6.5bn in 2017 and is expected to reach \$22bn by 2023<sup>2)</sup>.

- Manufacturers of nanoscale devices
- Nano chip manufacturers
- Nano sensor and processor manufacturers

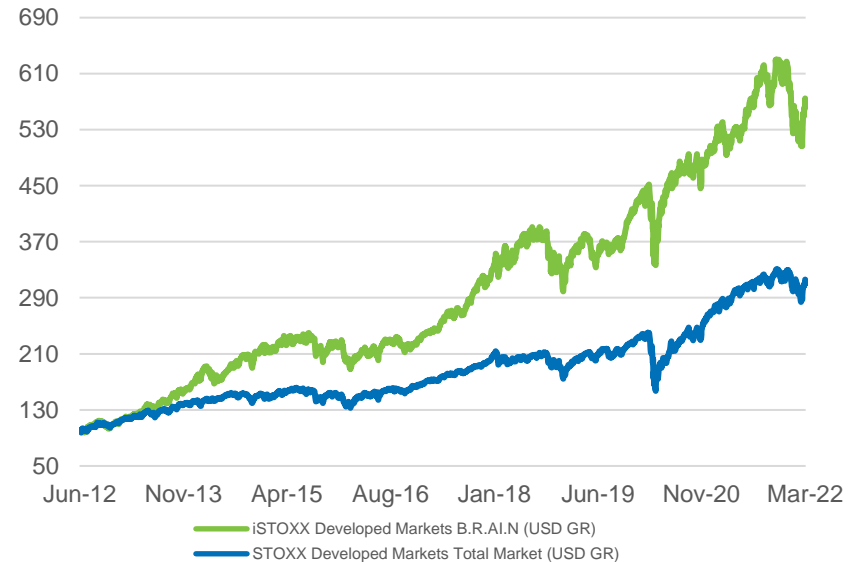
# iSTOXX Developed Markets B.R.AI.N.

## Risk and Return Overview

### Risk and Return Characteristics

	iSTOXX Developed Markets B.R.AI.N	STOXX Developed Markets Total Market
Perf. overall (annualized)	19.59%	12.44%
Perf. (1Y)	9.32%	8.23%
Perf. (3Y) (annualized)	15.21%	14.94%
Perf. (5Y) (annualized)	18.24%	12.58%
Vol. overall (annualized)	18.25%	14.18%
Volatility (1Y) (annualized)	17.87%	13.58%
Volatility (3Y) (annualized)	21.25%	19.51%
Volatility (5Y) (annualized)	19.77%	16.50%
Sharpe ratio (overall)	1.04	0.85
Sharpe ratio (5Y)	0.89	0.74
Tracking error (overall)	10.33%	
Tracking error (5Y)	10.17%	
Dividend yield (overall)	4.99%	5.14%
Maximum drawdown	25.47%	34.62%
Constituents	75	6740

### Performance

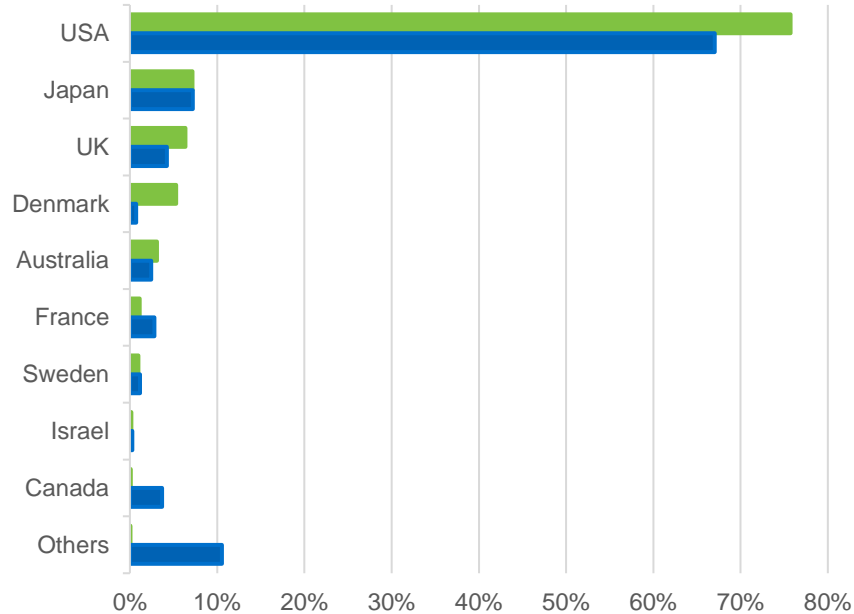


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

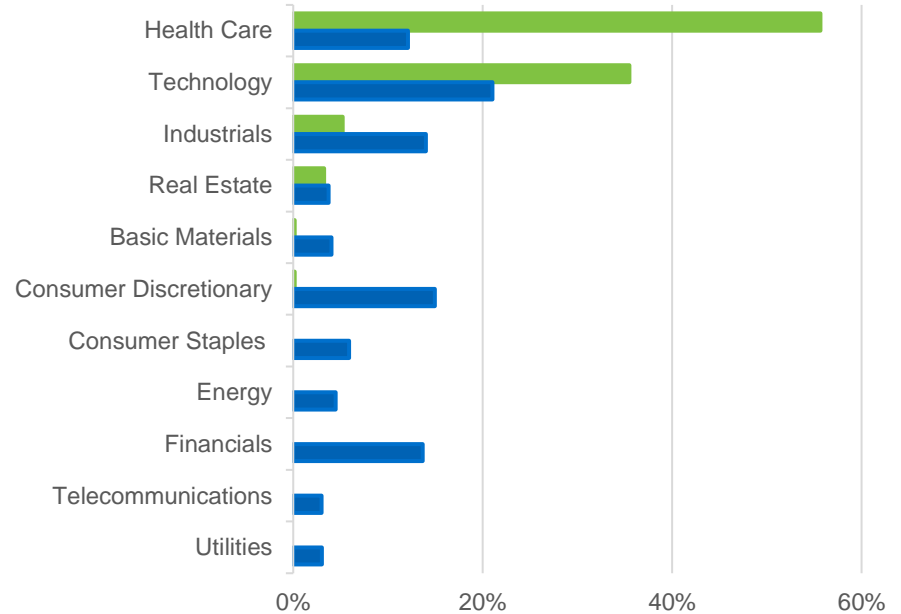
# iSTOXX Developed Markets B.R.AI.N.

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## iSTOXX Developed Markets B.R.A.I.N. – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NVIDIA Corp.	Technology	USA	8.88
META PLATFORMS CLASS A	Technology	USA	8.40
Eli Lilly & Co.	Health Care	USA	7.17
ASTRAZENECA	Health Care	UK	6.10
Bristol-Myers Squibb Co.	Health Care	USA	4.98
NOVO NORDISK B	Health Care	Denmark	4.48
Intel Corp.	Technology	USA	4.41
Amgen Inc.	Health Care	USA	4.18
ADVANCED MICRO DEVICES	Technology	USA	4.03
Thermo Fisher Scientific Inc.	Health Care	USA	3.84

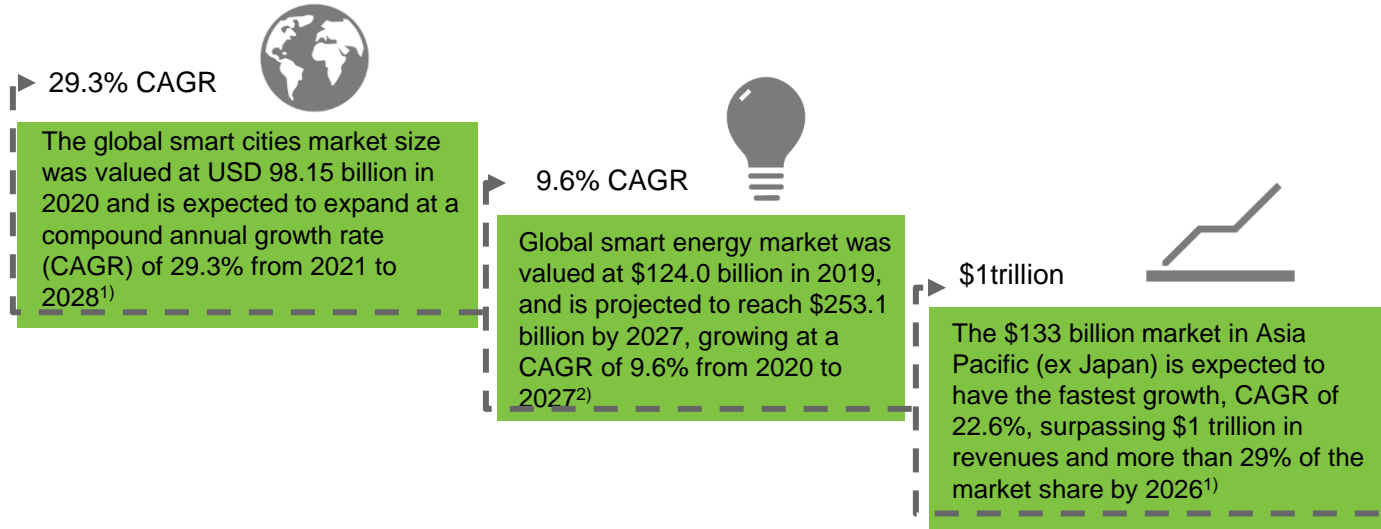
1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Smart Cities

# Overview

## Smart Cities

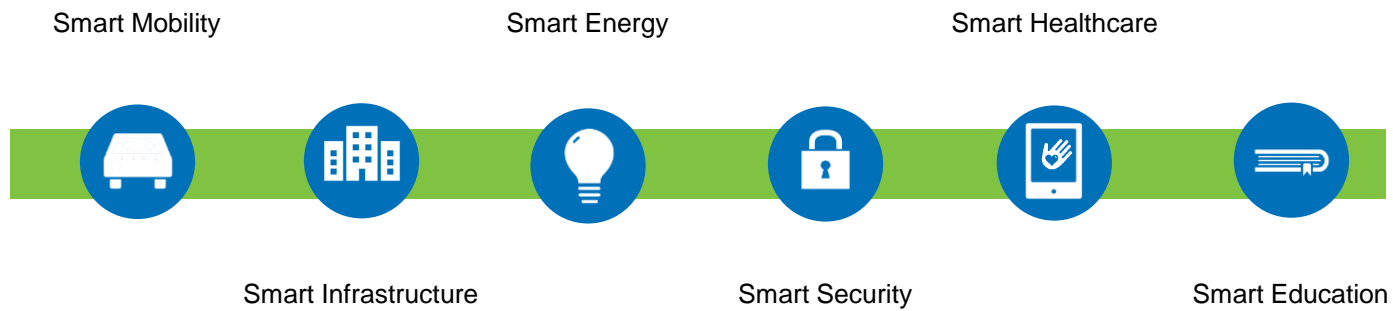


1) <https://www.grandviewresearch.com/industry-analysis/smart-cities-market>

2) <https://www.prnewswire.com/news-releases/global-smart-energy-market-2020-to-2027---by-product-end-user-industry-and-region-301257417.html>

# Themes (1)

## Smart Cities



# Themes (2)

## Smart Cities



### Smart Mobility

Intelligent Transportation System is expected to revolutionize the way people commute in smart cities. The segment is projected to grow at a CAGR of 19.9% from 2017 to 2023<sup>1)</sup>.

L6 RBICS sector example: Vehicle Autonomous Control Electronics Makers



### Smart Infrastructure

This segment caters to both public and home infrastructure markets. Smart highways and management systems fall under the public infrastructure subdivision, whereas controlling, automating and optimizing household functions (smart home) are classified under home infrastructure.

L6 RBIC sector example: Household Robots



### Smart Energy

This segment caters to smart grid, smart solar, and home energy management systems. Smart grid and smart solar markets are expecting to witness a CAGR of 20.9% (2023)<sup>2)</sup>

L6 RBICS sector example: Power, Control and Mixed Signal Semiconductors



### Smart Security

The Global smart security market is anticipated to grow at a 15.97% CAGR between 2017 and 2025<sup>3)</sup>. Some of the driving factors are: rising demand for public safety, growing urbanization, increased crime rates and smart city projects in developing countries

L6 RBICS sector example: Network Security Software



### Smart Healthcare

This segment is involved in connected system of medical devices and applications that generate and monitor data. Remote patient monitoring systems and the Internet of Medical Things enable efficient use of resources to provide preventative measures through real time data collection

L6 RBIC sector example: Healthcare Management Software



### Smart Education

The global smart education market size is expected to register an annual growth rate of 15.2% from 2018 to 2025<sup>4)</sup>. Growth can be attributed to increasing preference for eLearning, rising demand for innovative and interactive techniques such as educational apps and gamification

L6 RBIC sector example: Education Information and News Media and Sites

1) <https://www.prnewswire.com/news-releases/global-smart-mobility-market-2023---market-is-expected-to-grow-at-a-cagr-of-19-9-300547231.html>

2) <https://www.marketsandmarkets.com/PressReleases/global-smart-grid.asp>; <https://www.marketsandmarkets.com/PressReleases/smart-solar.asp>

3) <https://www.reportsnreports.com/reports/1212725-global-smart-security-market-forecast-2017-2025.html>

4) <https://www.grandviewresearch.com/industry-analysis/smart-education-learning-market>



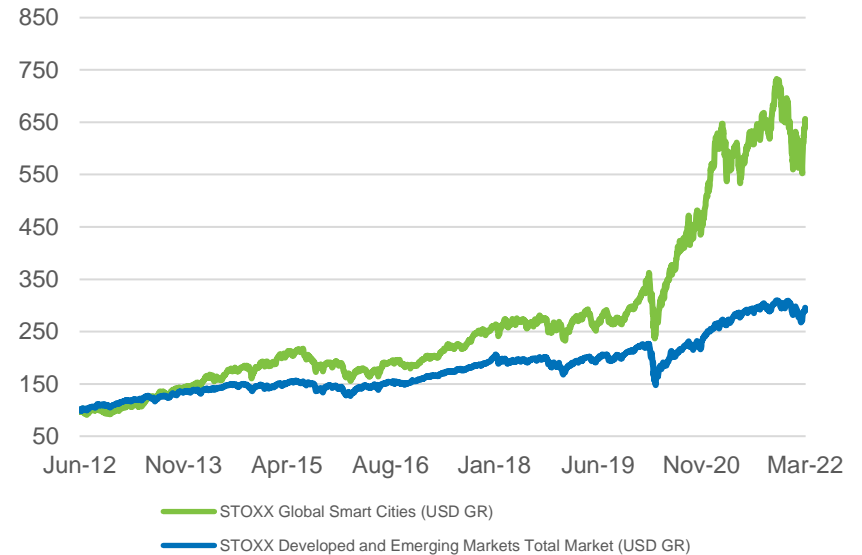
# STOXX Global Smart Cities Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Smart Cities	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	21.26%	11.68%
Perf. (1Y)	12.47%	7.49%
Perf. (3Y) (annualized)	32.83%	14.28%
Perf. (5Y) (annualized)	26.22%	12.02%
Vol. overall (annualized)	20.59%	13.71%
Volatility (1Y) (annualized)	25.09%	13.01%
Volatility (3Y) (annualized)	27.74%	18.74%
Volatility (5Y) (annualized)	23.53%	15.84%
Sharpe ratio (overall)	1.01	0.83
Sharpe ratio (5Y)	1.06	0.73
Tracking error (overall)	12.99%	
Tracking error (5Y)	14.57%	
Dividend yield (overall)	5.02%	4.89%
Maximum drawdown	34.66%	34.84%
Constituents	101	10763

### Performance

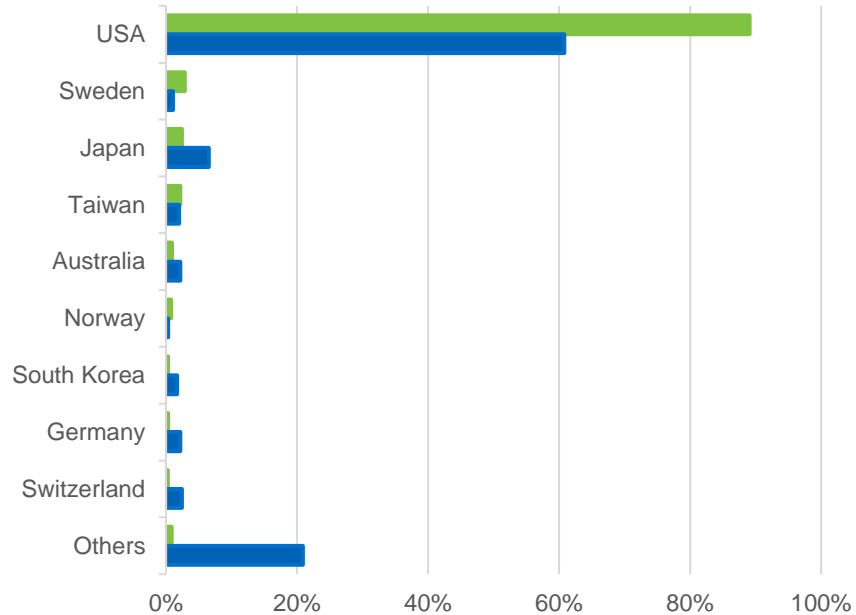


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

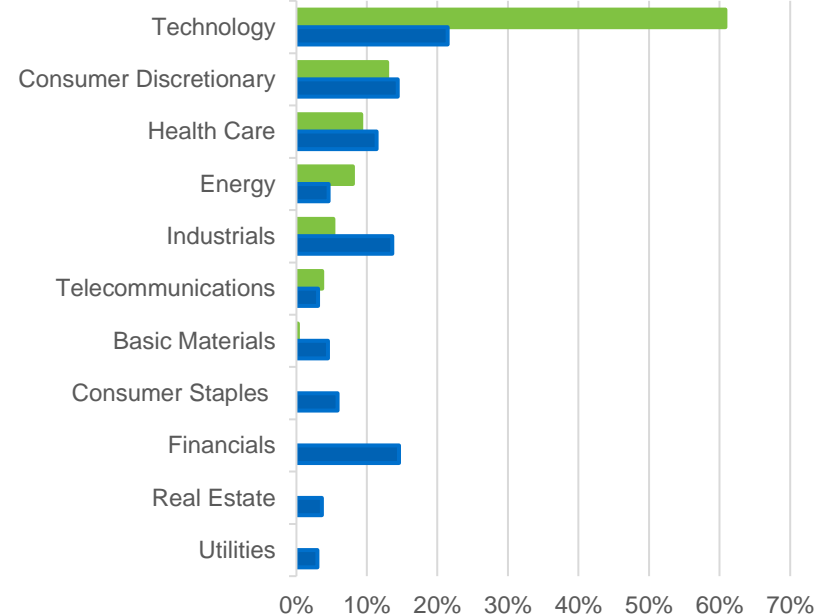
# STOXX Global Smart Cities Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Smart Cities Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
TESLA	Automobiles and Parts	USA	9.32
PALO ALTO NETWORKS	Technology	USA	8.18
BROADCOM	Technology	USA	7.77
Intel Corp.	Technology	USA	7.70
FORTINET	Technology	USA	4.86
CROWDSTRIKE HOLDINGS A	Technology	USA	4.85
VEEVA SYSTEMS CL.A	Health Care	USA	4.13
ENPHASE ENERGY	Energy	USA	3.81
Cerner Corp.	Health Care	USA	3.81
TE CONNECTIVITY LTD.	Technology	USA	3.71

1) Source: Qontigo. Data as of Mar 31, 2022.

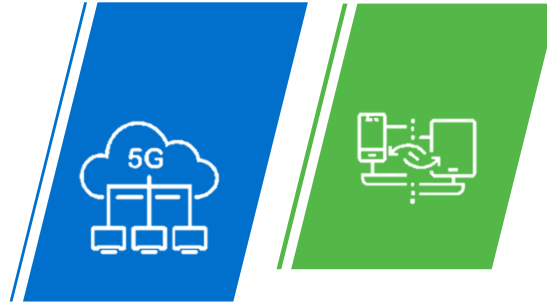
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# STOXX Global Next Generation Telecoms Index

# Continuous Technological Advancement in the Telecommunications Industry

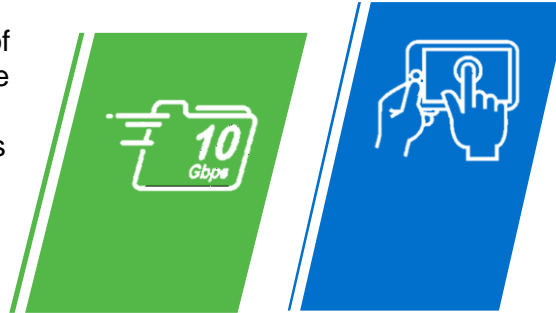
## The most recent change that the industry is undergoing is the deployment of 5G

The global telecom electronic manufacturing services (EMS) market size is likely to reach USD 230.1 billion by 2025, expanding at a CAGR of 7% during the 2018-2025 period<sup>1)</sup>



M-2M connections industry is expected to demonstrate revenue growth at 9.9% CAGR between the years 2017 to 2023<sup>2)</sup>

The continuous increase of mobile data traffic will drive 5G emergence. 5G will increase download speeds up to 1-10 Gbps



About 1 billion people worldwide are likely to be 5G-enabled, contributing \$12.3 trillion in global economic output by the mid-2030s on a cumulative basis<sup>3)</sup>

1) MarketWatch: ["Telecom EMS Market Size Worth \\$230.1 Billion by 2025 | CAGR: 7.0%: Grand View Research, Inc."](#)

2) MarketWatch: [M2M Connections Market 2021 Global Market](#)

3) IHS Economics/IHS Technology Economic Impact Analysis: ["The 5G Economy: How 5G technology will contribute to the global Economy"](#)

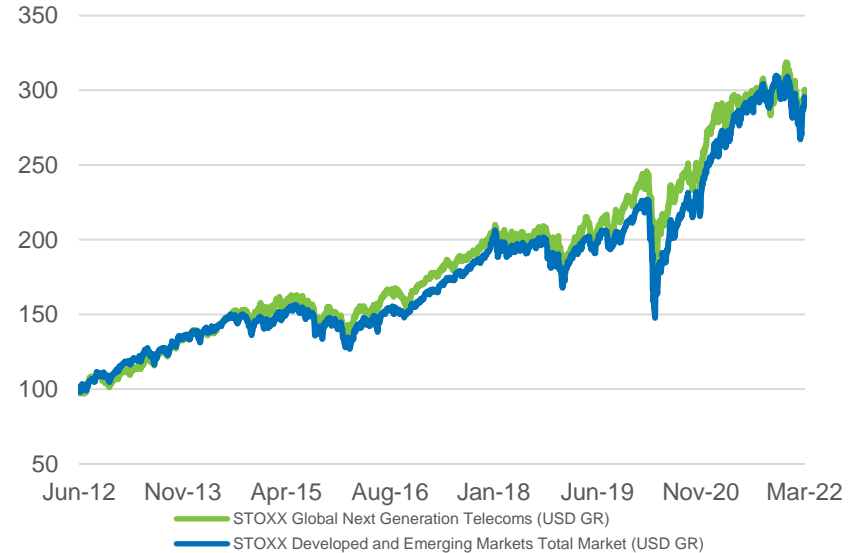
# STOXX Global Next Generation Telecoms Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Next Generation Telecoms	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	11.88%	11.68%
Perf. (1Y)	3.23%	7.49%
Perf. (3Y) (annualized)	13.15%	14.28%
Perf. (5Y) (annualized)	10.93%	12.02%
Vol. overall (annualized)	14.04%	13.71%
Volatility (1Y) (annualized)	12.90%	13.01%
Volatility (3Y) (annualized)	18.75%	18.74%
Volatility (5Y) (annualized)	16.05%	15.84%
Sharpe ratio (overall)	0.82	0.83
Sharpe ratio (5Y)	0.66	0.73
Tracking error (overall)	5.77%	
Tracking error (5Y)	6.03%	
Dividend yield (overall)	5.60%	4.89%
Maximum drawdown	28.33%	34.84%
Constituents	250	10763

### Performance

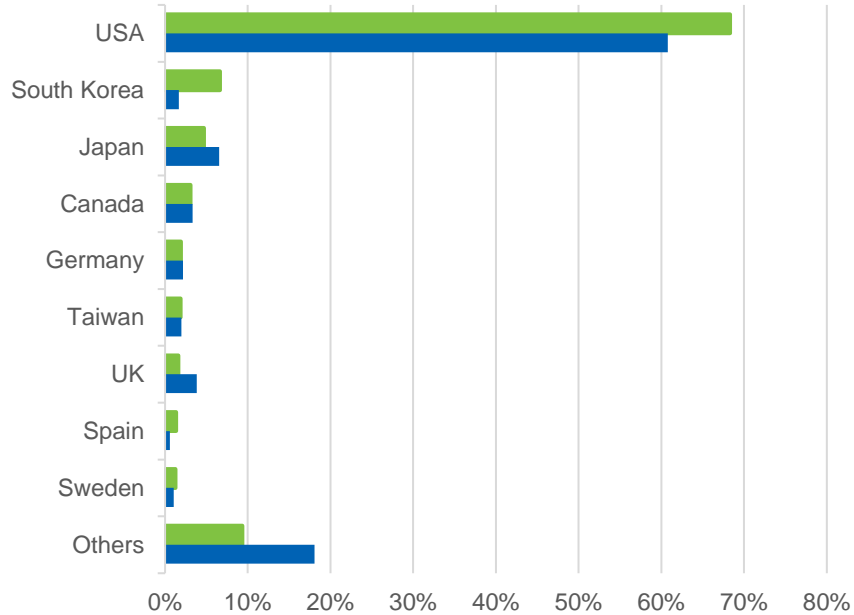


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) EONIA used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

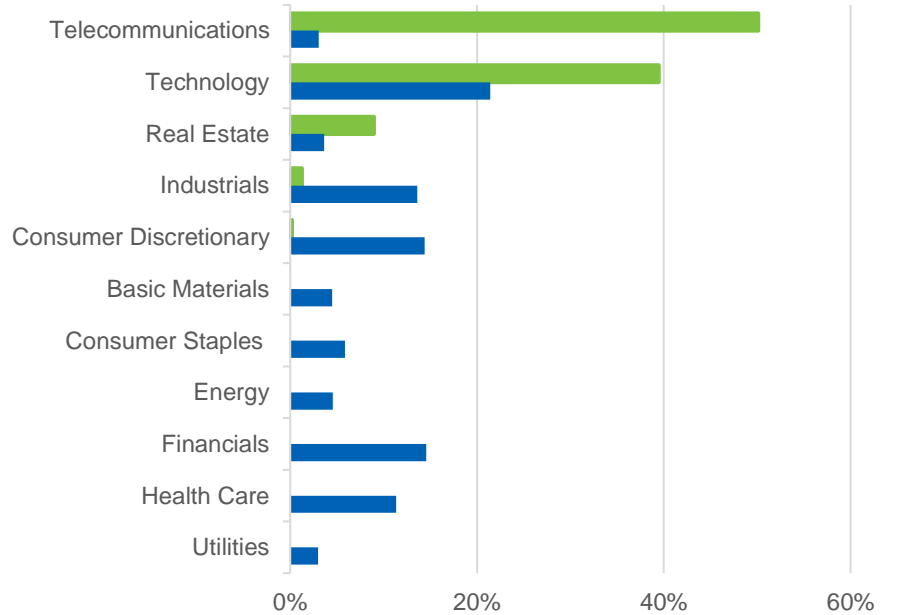
# STOXX Global Next Generation Telecoms Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Next Generation Telecoms Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
Apple Inc.	Technology	USA	8.50
Verizon Communications Inc.	Telecommunications	USA	5.48
Samsung Electronics Co Ltd	Technology	South Korea	5.38
Cisco Systems Inc.	Telecommunications	USA	5.02
BROADCOM	Technology	USA	4.89
Intel Corp.	Technology	USA	4.61
Qualcomm Inc.	Technology	USA	4.48
AT&T Inc.	Telecommunications	USA	4.02
Comcast Corp. Cl A	Telecommunications	USA	3.79
AMERICAN TOWER	Real Estate	USA	2.98

1) Source: Qontigo. Data as of Mar 31, 2022.



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# STOXX Global Digitalization

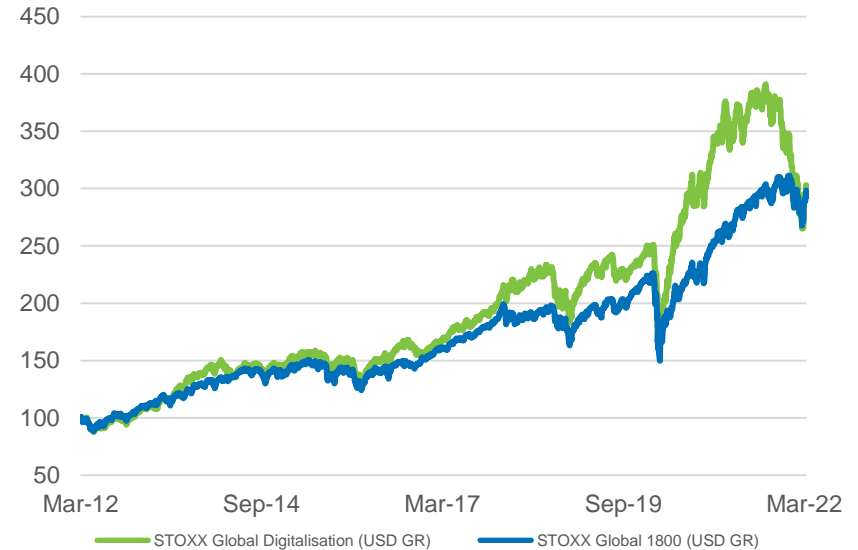
# STOXX Global Digitalization Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Digitalisation	STOXX Global 1800
Perf. overall (annualized)	11.52%	11.51%
Perf. (1Y)	-15.64%	9.37%
Perf. (3Y) (annualized)	9.36%	15.32%
Perf. (5Y) (annualized)	11.67%	12.91%
Vol. overall (annualized)	16.37%	14.10%
Volatility (1Y) (annualized)	20.70%	13.32%
Volatility (3Y) (annualized)	22.74%	19.22%
Volatility (5Y) (annualized)	19.41%	16.29%
Sharpe ratio (overall)	0.71	0.80
Sharpe ratio (5Y)	0.61	0.76
Tracking error (overall)	7.61%	
Tracking error (5Y)	8.89%	
Dividend yield (overall)	2.48%	5.03%
Maximum drawdown	35.72%	33.77%
Constituents	204	1800

### Performance

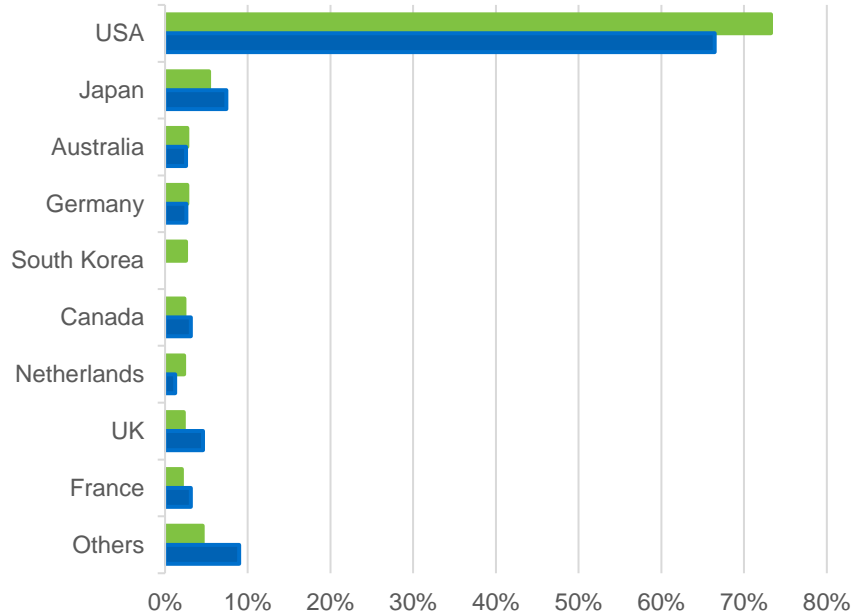


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Mar 30, 2012 – Mar 31, 2022

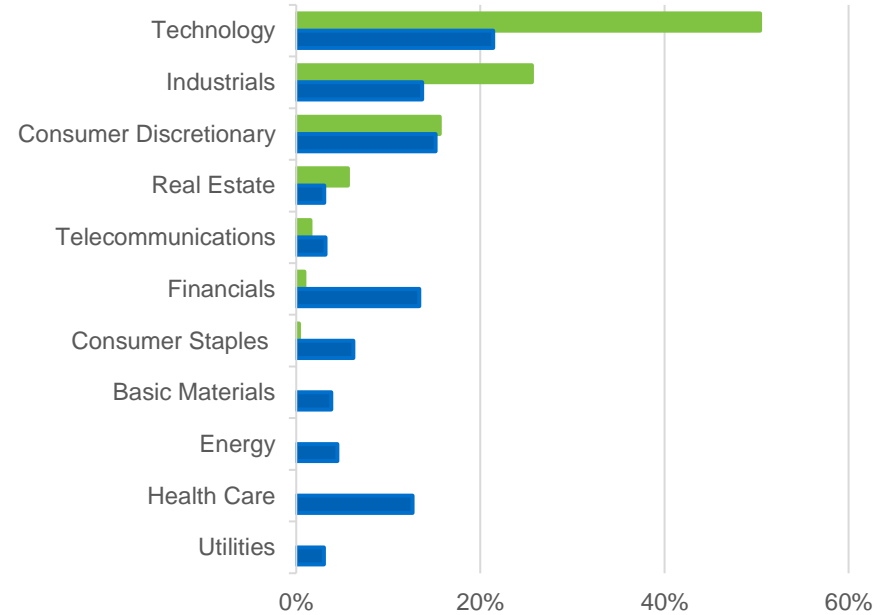
# STOXX Global Digitalization Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Digitalization Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
PALO ALTO NETWORKS	Technology	USA	2.49
DATADOG A	Technology	USA	2.32
FORTINET	Technology	USA	2.16
CONSTELLATION SOFTWARE	Technology	Canada	1.70
United Parcel Service Inc. Cl	Industrial Goods and Services	USA	1.53
Roper Technologies Inc.	Technology	USA	1.51
SS&C TECHNOLOGIES HOLDING	Technology	USA	1.47
Akamai Technologies Inc.	Technology	USA	1.45
CROWDSTRIKE HOLDINGS A	Technology	USA	1.44
NetApp Inc.	Technology	USA	1.44

1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX Global Digital Security

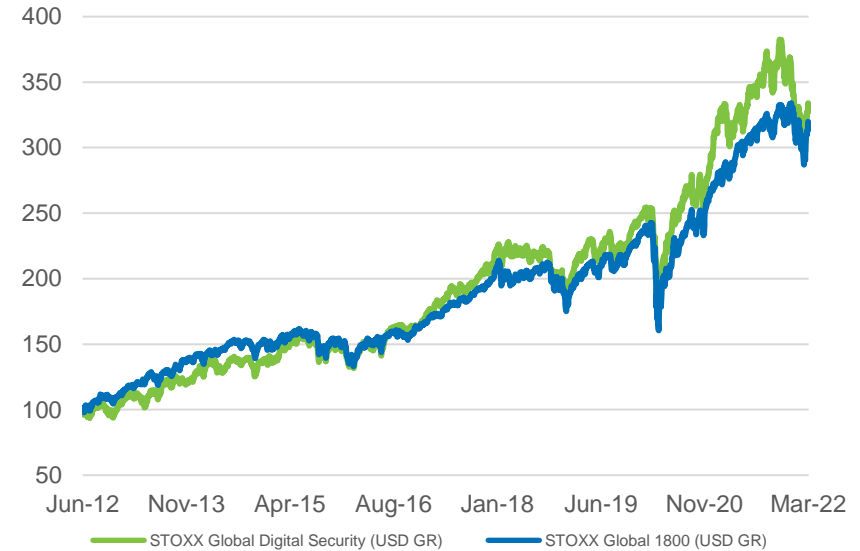
# STOXX Global Digital Security Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Digital Security	STOXX Global 1800
Perf. overall (annualized)	13.10%	12.58%
Perf. (1Y)	4.86%	9.37%
Perf. (3Y) (annualized)	14.50%	15.32%
Perf. (5Y) (annualized)	12.56%	12.91%
Vol. overall (annualized)	15.89%	14.07%
Volatility (1Y) (annualized)	17.47%	13.32%
Volatility (3Y) (annualized)	19.96%	19.22%
Volatility (5Y) (annualized)	17.19%	16.29%
Sharpe ratio (overall)	0.81	0.87
Sharpe ratio (5Y)	0.71	0.76
Tracking error (overall)	8.30%	
Tracking error (5Y)	7.99%	
Dividend yield (overall)	3.32%	5.29%
Maximum drawdown	32.25%	33.77%
Constituents	119	1800

### Performance

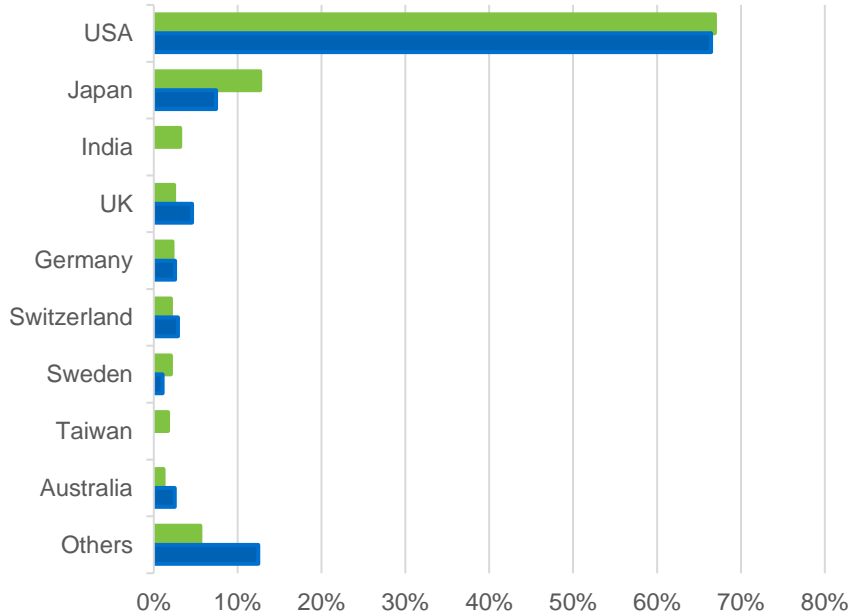


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Jun 18, 2012 – Mar 31, 2022

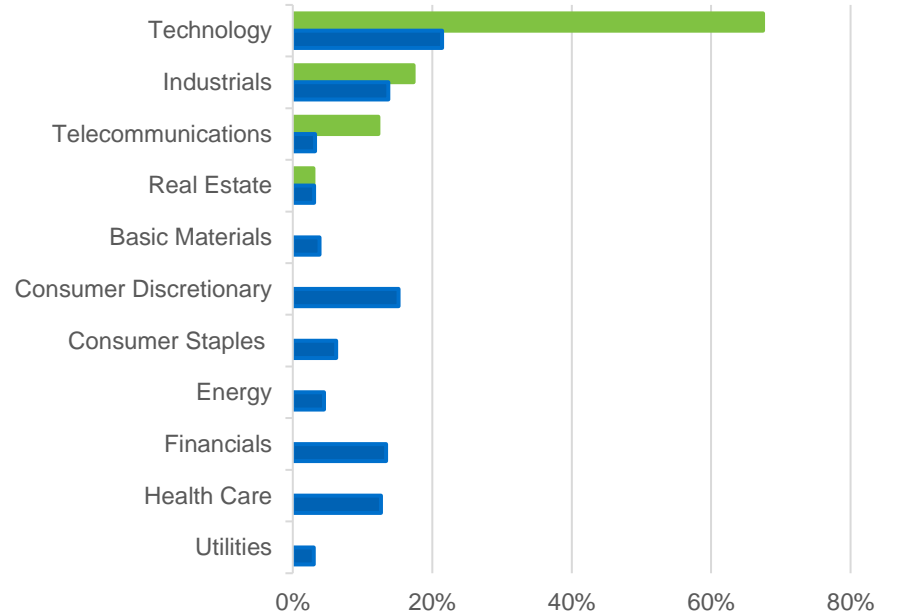
# STOXX Global Digital Security Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Digital Security Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
PALO ALTO NETWORKS	Technology	USA	2.26
DATADOG A	Technology	USA	2.11
ARISTA NETWORKS	Telecommunications	USA	1.98
FORTINET	Technology	USA	1.97
Tech Mahindra	Technology	India	1.79
Juniper Networks Inc.	Telecommunications	USA	1.69
CLOUDFLARE A	Technology	USA	1.69
RAPID7	Technology	USA	1.66
CYBER ARK SOFTWARE	Technology	USA	1.63
Accenture PLC Cl A	Industrial Goods and Services	USA	1.56

1) Source: Qontigo. Data as of Mar 31, 2022.



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# STOXX Global Automation & Robotics

# STOXX Global Automation & Robotics Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX Global Automation & Robotics	STOXX Global 1800
Perf. overall (annualized)	12.88%	11.51%
Perf. (1Y)	-0.92%	9.37%
Perf. (3Y) (annualized)	17.64%	15.32%
Perf. (5Y) (annualized)	16.24%	12.91%
Vol. overall (annualized)	16.86%	14.10%
Volatility (1Y) (annualized)	20.44%	13.32%
Volatility (3Y) (annualized)	22.50%	19.22%
Volatility (5Y) (annualized)	19.73%	16.29%
Sharpe ratio (overall)	0.76	0.80
Sharpe ratio (5Y)	0.81	0.76
Tracking error (overall)	8.57%	
Tracking error (5Y)	9.92%	
Dividend yield (overall)	3.48%	5.03%
Maximum drawdown	36.16%	33.77%
Constituents	130	1800

### Performance

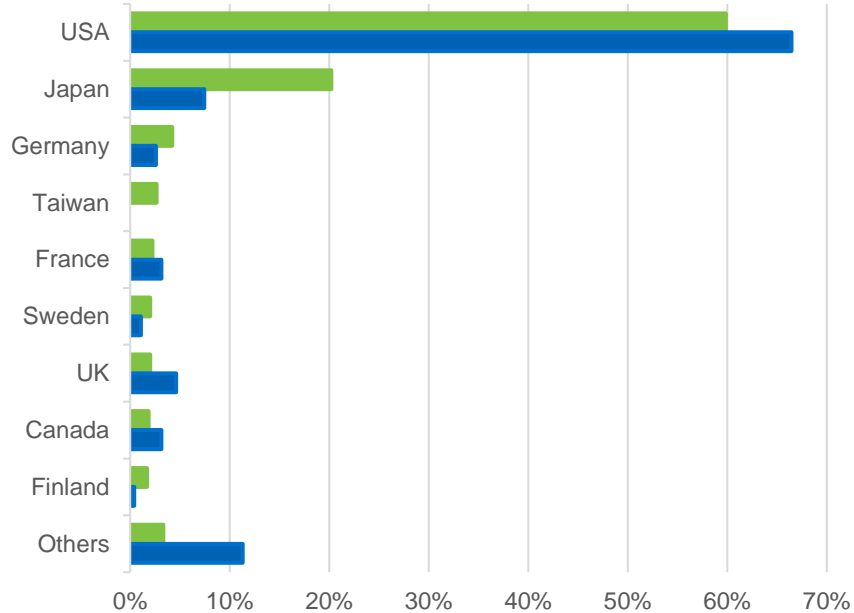


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Mar 30, 2012 – Mar 31, 2022

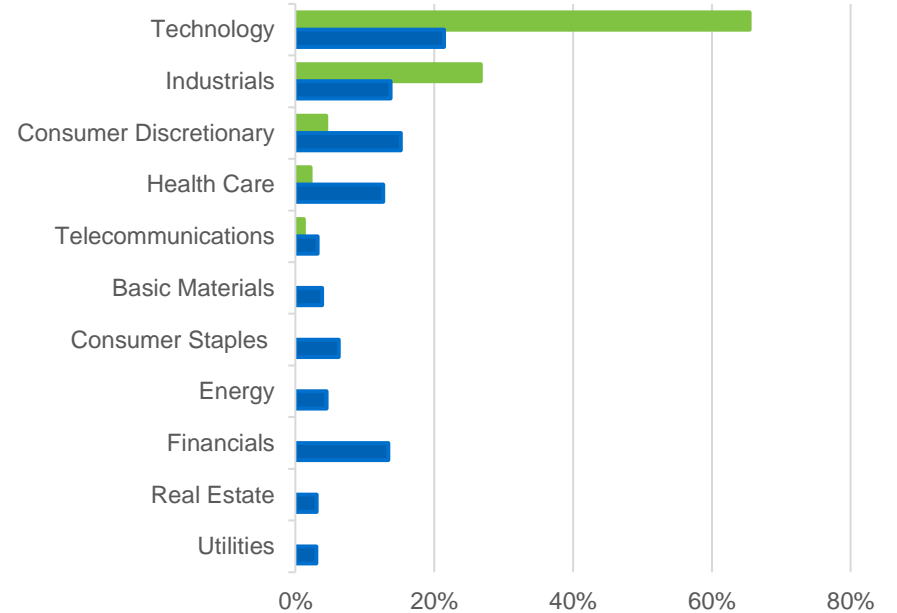
# STOXX Global Automation & Robotics Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX Global Automation & Robotics Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NVIDIA Corp.	Technology	USA	3.24
Apple Inc.	Technology	USA	2.86
ADVANCED MICRO DEVICES	Technology	USA	2.77
SPLUNK	Technology	USA	2.55
KLA	Technology	USA	2.37
Qualcomm Inc.	Technology	USA	2.36
SERVICENOW	Technology	USA	2.35
DASSAULT SYSTEMS	Technology	France	2.24
Intuitive Surgical Inc.	Health Care	USA	2.18
Rockwell Automation Corp.	Industrial Goods and Services	USA	2.06

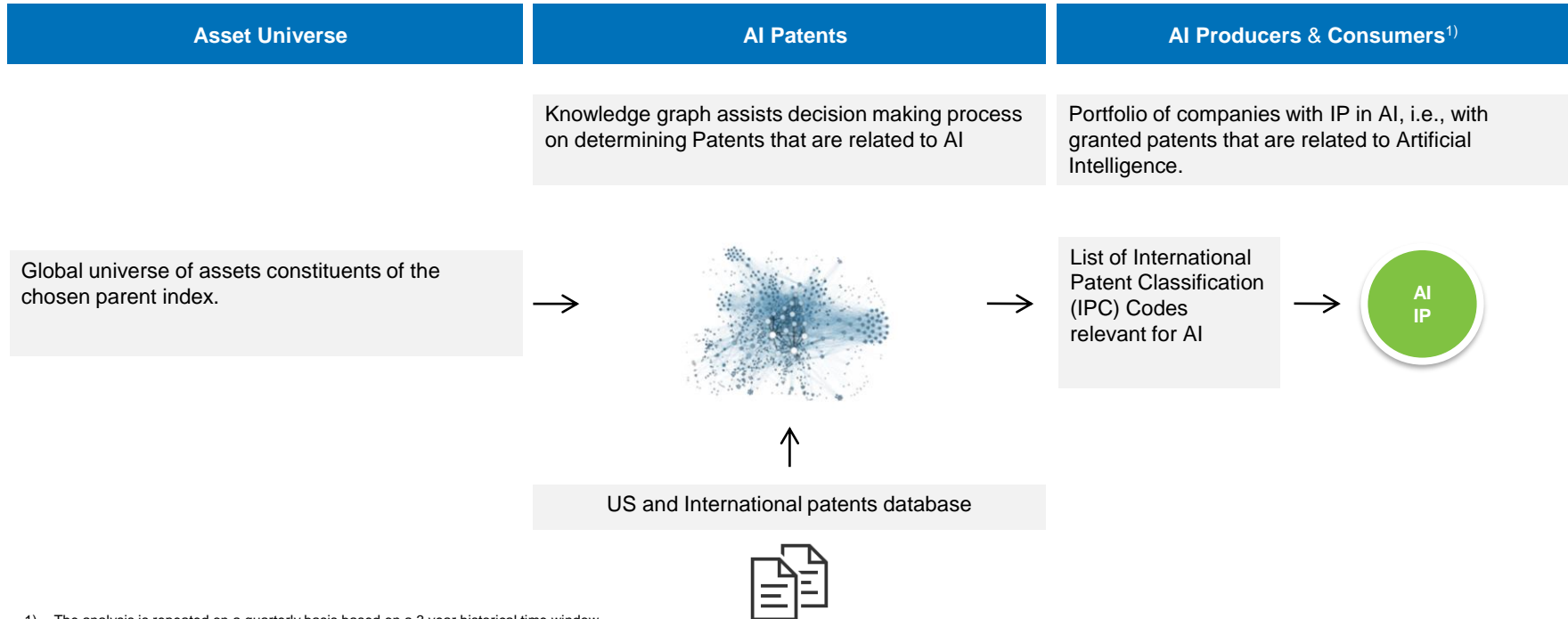
1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX AI Global Artificial Intelligence Index

# Overview

## Use of knowledge graphs



1) The analysis is repeated on a quarterly basis based on a 3 year historical time window.

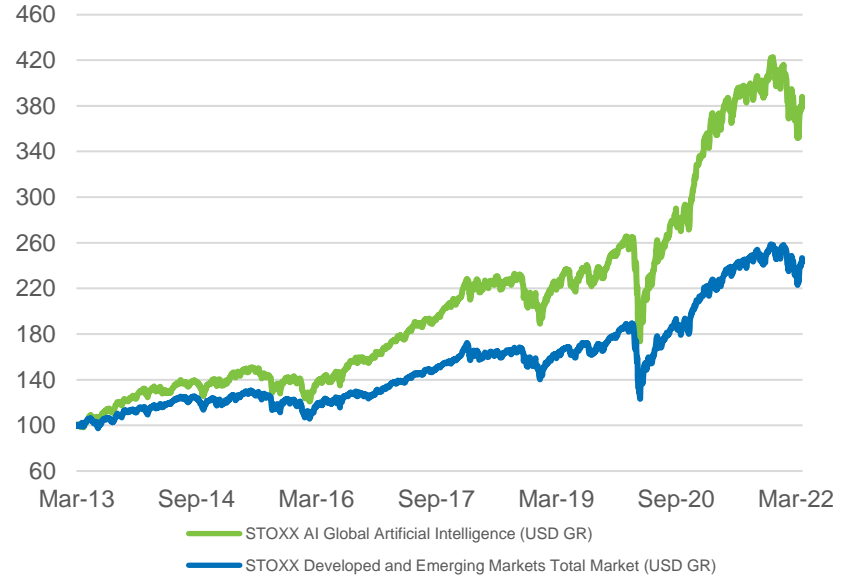
# STOXX AI Global Artificial Intelligence Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX AI Global Artificial Intelligence	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	16.10%	10.45%
Perf. (1Y)	2.90%	7.49%
Perf. (3Y) (annualized)	19.18%	14.28%
Perf. (5Y) (annualized)	16.46%	12.02%
Vol. overall (annualized)	14.86%	13.89%
Volatility (1Y) (annualized)	14.88%	13.01%
Volatility (3Y) (annualized)	19.98%	18.74%
Volatility (5Y) (annualized)	17.05%	15.84%
Sharpe ratio (overall)	1.03	0.74
Sharpe ratio (5Y)	0.92	0.73
Tracking error (overall)	4.18%	
Tracking error (5Y)	4.37%	
Dividend yield (overall)	4.78%	4.31%
Maximum drawdown	34.63%	34.84%
Constituents	313	10763

### Performance

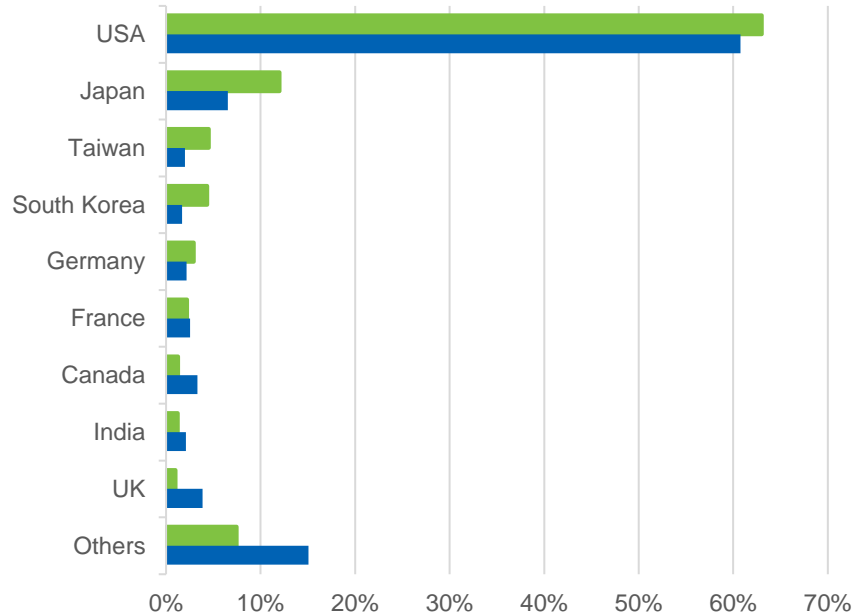


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) LIBOR used as a proxy for riskless returns
- 3) Qontigo Data Mar 18, 2013 – Mar 31, 2022

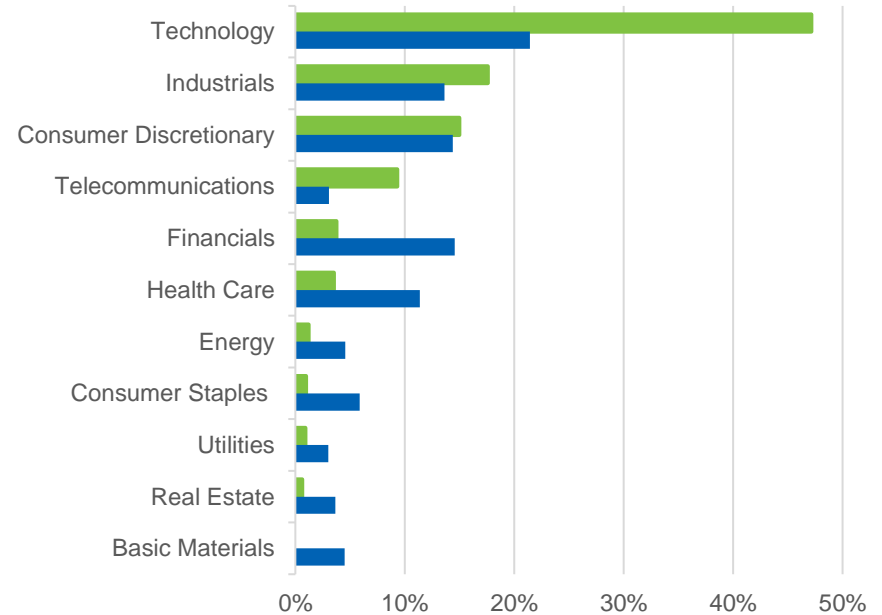
# STOXX AI Global Artificial Intelligence Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.



## STOXX AI Global Artificial Intelligence Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NUVOTON TECHNOLOGY	Technology	Taiwan	0.40
MONGODB A	Technology	USA	0.40
TESLA	Automobiles and Parts	USA	0.39
DEXCOM	Health Care	USA	0.38
BLOCK CL.A	Industrial Goods and Services	USA	0.38
AVID TECHNOLOGY	Technology	USA	0.38
CLOUDFLARE A	Technology	USA	0.37
TELECOM ITALIA	Telecommunications	Italy	0.37
ROYAL CARIBBEAN GROUP	Travel and Leisure	USA	0.37
NVIDIA Corp.	Technology	USA	0.37

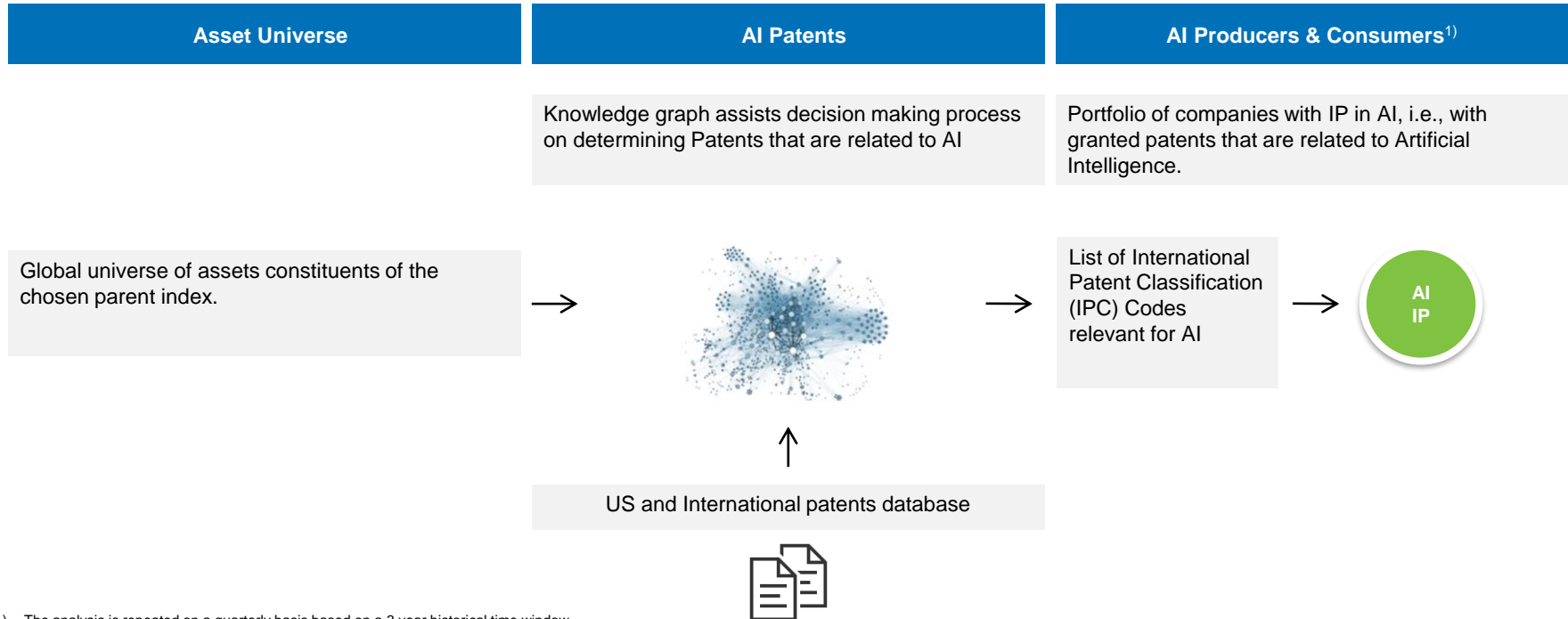
1) Source: Qontigo. Data as of Mar 31, 2022.

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# STOXX AI Global Artificial Intelligence ADTV5 Index

# Overview

## Use of knowledge graphs



1) The analysis is repeated on a quarterly basis based on a 3 year historical time window.

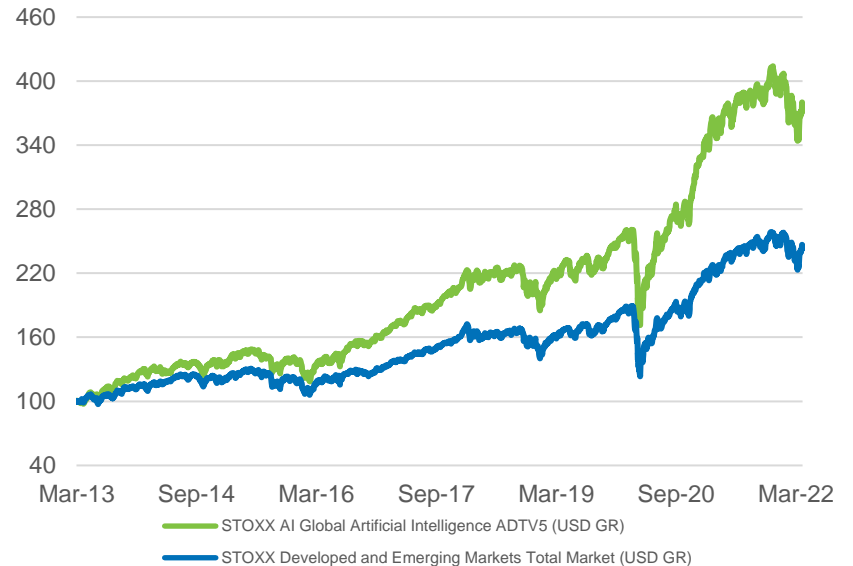
# STOXX AI Global Artificial Intelligence ADTV5 Index

## Risk and Return Overview

### Risk and Return Characteristics

	STOXX AI Global Artificial Intelligence ADTV5	STOXX Developed and Emerging Markets Total Market
Perf. overall (annualized)	15.82%	10.45%
Perf. (1Y)	2.92%	7.49%
Perf. (3Y) (annualized)	19.13%	14.28%
Perf. (5Y) (annualized)	16.40%	12.02%
Vol. overall (annualized)	15.06%	13.89%
Volatility (1Y) (annualized)	14.98%	13.01%
Volatility (3Y) (annualized)	20.25%	18.74%
Volatility (5Y) (annualized)	17.27%	15.84%
Sharpe ratio (overall)	1.01	0.74
Sharpe ratio (5Y)	0.90	0.73
Tracking error (overall)	4.23%	
Tracking error (5Y)	4.42%	
Dividend yield (overall)	4.64%	4.31%
Maximum drawdown	34.32%	34.84%
Constituents	302	10763

### Performance

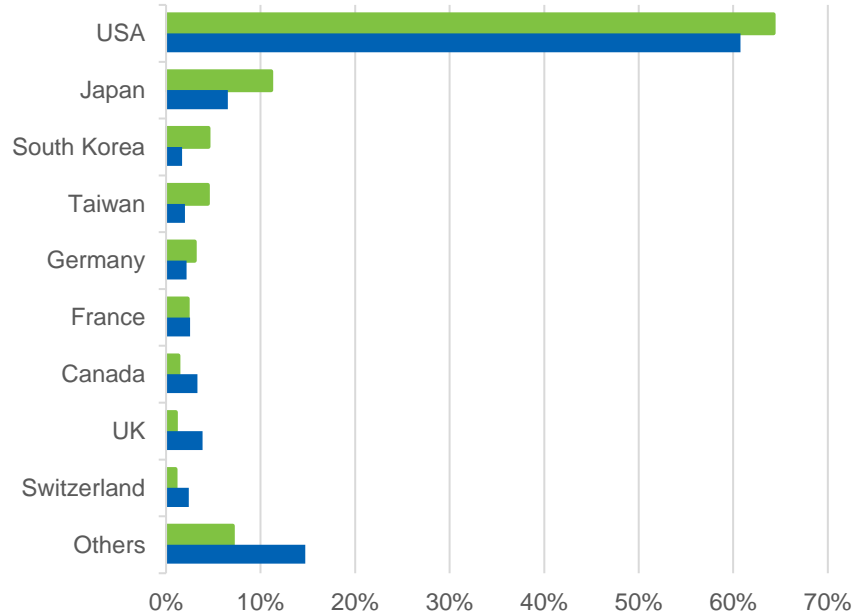


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) EONIA used as a proxy for riskless returns
- 3) Qontigo Data Mar 18, 2013 – Mar 31, 2022

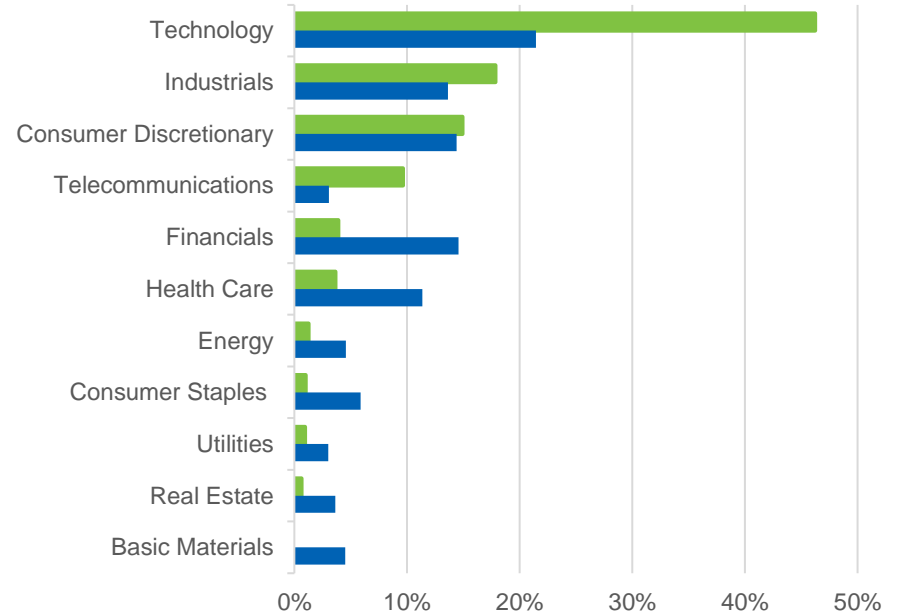
# STOXX AI Global Artificial Intelligence ADTV5 Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## STOXX AI Global Artificial Intelligence ADTV5 Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
NUVOTON TECHNOLOGY	Technology	Taiwan	0.42
MONGODB A	Technology	USA	0.41
TESLA	Automobiles and Parts	USA	0.40
DEXCOM	Health Care	USA	0.40
BLOCK CL.A	Industrial Goods and Services	USA	0.39
AVID TECHNOLOGY	Technology	USA	0.39
CLOUDFLARE A	Technology	USA	0.39
TELECOM ITALIA	Telecommunications	Italy	0.38
ROYAL CARIBBEAN GROUP	Travel and Leisure	USA	0.38
NVIDIA Corp.	Technology	USA	0.38

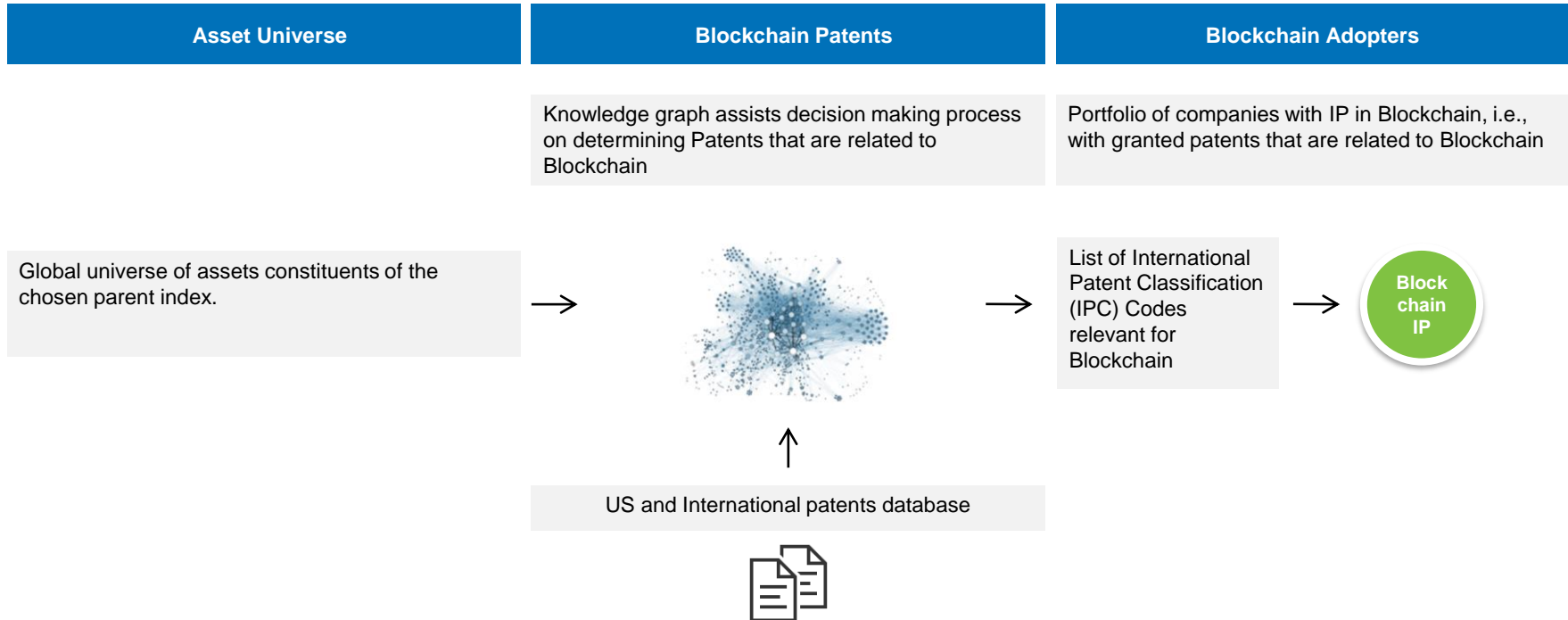
1) Source: Qontigo. Data as of Mar 31, 2022.

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# iSTOXX Yewno Developed Markets Blockchain Index

# Overview

## Use of knowledge graphs





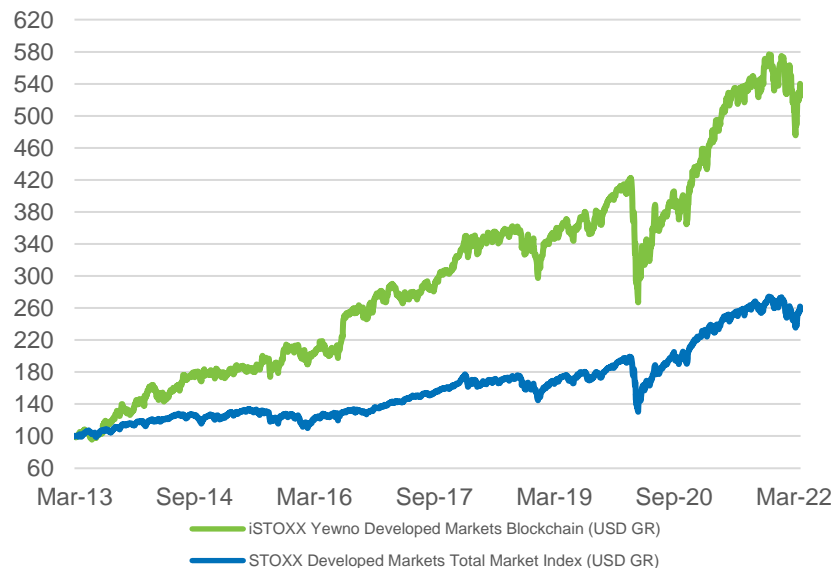
# iSTOXX Yewno Developed Markets Blockchain Index

## Risk and Return Overview

### Risk and Return Characteristics

	iSTOXX Yewno Developed Markets Blockchain	STOXX Developed Markets Total Market Index
Perf. overall (annualized)	20.41%	11.17%
Perf. (1Y)	7.32%	8.23%
Perf. (3Y) (annualized)	14.27%	14.94%
Perf. (5Y) (annualized)	13.83%	12.58%
Vol. overall (annualized)	20.80%	14.37%
Volatility (1Y) (annualized)	17.29%	13.58%
Volatility (3Y) (annualized)	24.20%	19.51%
Volatility (5Y) (annualized)	20.73%	16.50%
Sharpe ratio (overall)	0.96	0.76
Sharpe ratio (5Y)	0.68	0.74
Tracking error (overall)	12.96%	
Tracking error (5Y)	8.20%	
Dividend yield (overall)	7.18%	4.50%
Maximum drawdown	36.76%	34.62%
Constituents	100	6740

### Performance

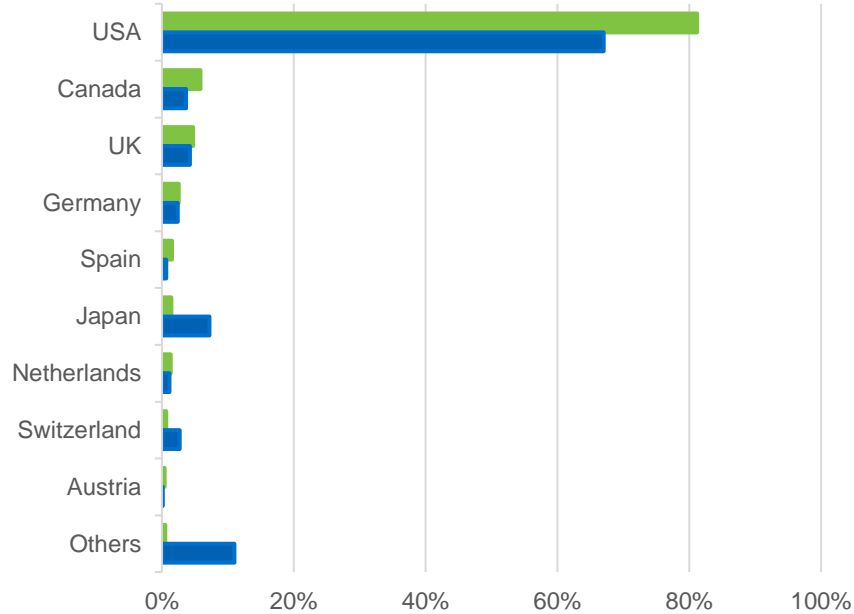


- 1) Source: Qontigo, daily data. Relative figures calculated against Benchmark
- 2) EONIA used as a proxy for riskless returns
- 3) Qontigo Data Mar 18, 2013 – Mar 31, 2022

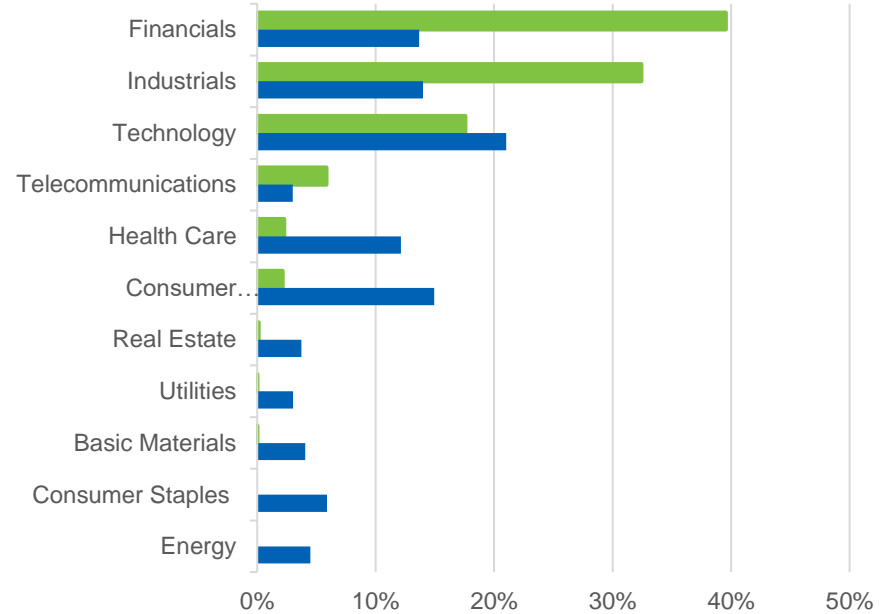
# iSTOXX Yewno Developed Markets Blockchain Index

## Country and Industry Allocation

### Country Allocation<sup>1)</sup>



### Industry Allocation<sup>1)</sup>



1) Source: Qontigo. Data as of Mar 31, 2022.

## iSTOXX Yewno Developed Markets Blockchain Index – Top 10 Constituents

Name	Supersector	Country	Weight (%)
MasterCard Inc. Cl A	Industrial Goods and Services	USA	8.27
Accenture PLC Cl A	Industrial Goods and Services	USA	8.19
Microsoft Corp.	Technology	USA	8.11
Bank of America Corp.	Banks	USA	7.62
VISA Inc. Cl A	Industrial Goods and Services	USA	4.74
COINBASE GLOBAL A	Financial Services	USA	4.64
International Business Machine	Technology	USA	4.42
HSBC	Banks	UK	4.37
JPMorgan Chase & Co.	Banks	USA	4.37
American Express Co.	Industrial Goods and Services	USA	4.15

1) Source: Qontigo. Data as of Mar 31, 2022.

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Learn more about STOXX Thematic Indices on [www.qontigo.com](http://www.qontigo.com)

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# Disclaimer

## About Qontigo

Qontigo is a financial intelligence innovator and a leader in the modernization of investment management, from risk to return.

The combination of the company's world-class indices and best-of-breed analytics, with its technological expertise and customer-driven innovation enables its clients to achieve competitive advantage in a rapidly changing marketplace.

Qontigo's global client base includes the world's largest financial products issuers, capital owners and asset managers.

Created in 2019 through the combination of STOXX, DAX and Axioma, Qontigo is part of Deutsche Börse Group, headquartered in Eschborn with key locations in New York, Zug and London.

## About STOXX

Qontigo's index provider STOXX is part of Deutsche Börse Group, and the administrator of the DAX indices under the European Benchmark Regulation.

STOXX Ltd. is Qontigo's global index provider, currently calculating a global, comprehensive index family of about 13,000 strictly rules-based and transparent indices. Best known for the leading European equity indices EURO STOXX 50, STOXX Europe 50 and STOXX Europe 600, STOXX Ltd. maintains and calculates the STOXX Global index family which consists of total market, broad and blue-chip indices for the regions Americas, Europe, Asia/Pacific and sub-regions Latin America and BRIC (Brazil, Russia, India and China) as well as global markets.

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