

# **AXA IM**

# **Framlington Equities**

Long term thematic investing

Matthew Lovatt – Global Head of Framlington Equities

June 2019

# AXA IM Framlington Equities

## Our offering

### Key Figures <sup>(1)</sup>

**\$52**

billion of assets

Managed across

**3**

global financial  
centres

**48**

Investment  
Professionals

Portfolio  
managers have an  
average of

**19**

years' experience

### EXPERTISE

- Our core philosophy: Growth at a reasonable price
- Proprietary research is at the heart of our stock selection process (Portfolio Manager/Analyst model)
- Judgmental approach with an emphasis on meeting company management

### PORTFOLIO

- Truly conviction based, our portfolio managers are fully empowered to make investment decisions
- High active share (>70% <sup>(2)</sup>)
- Risk aware - seven portfolio engineers fully embedded within our investment process

### PROCESS

- Active management grounded in rigorous fundamental research
- Long-term conviction based approach, on average 4-5 year holding period <sup>(2)</sup>
- Time tested and consistent approach since our inception in 1969

### PRODUCT

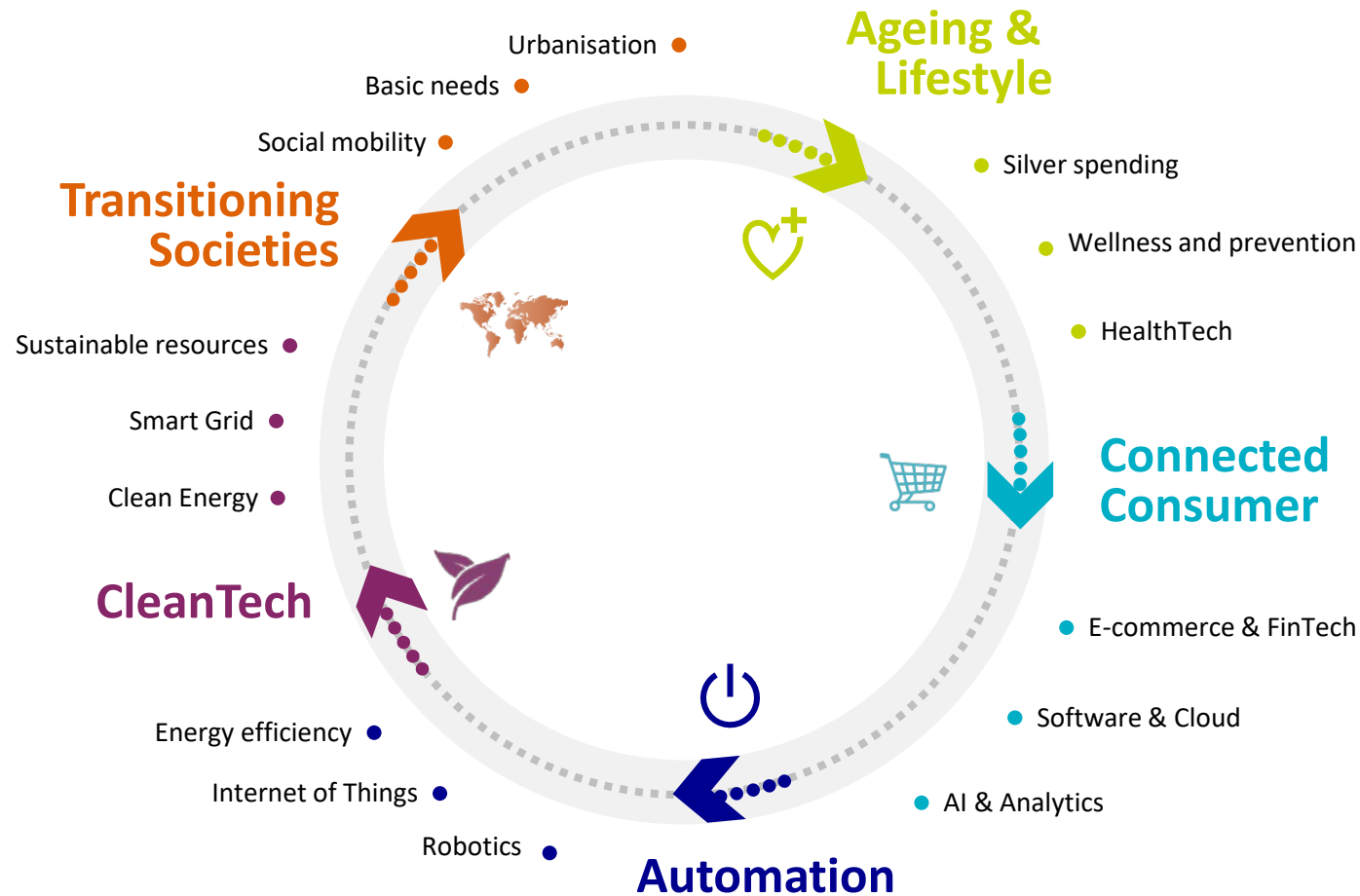
- Core equities – across the market cap spectrum as well as country, regional and global funds
- Thematic – a range of funds that give investors access to long-term growth themes
- Specialist investment capabilities and Responsible Investing (RI)

**Our fund managers are fully empowered and accountable for their investment decisions**

(1) AXA IM as at 31/12/2018 unless otherwise stated.

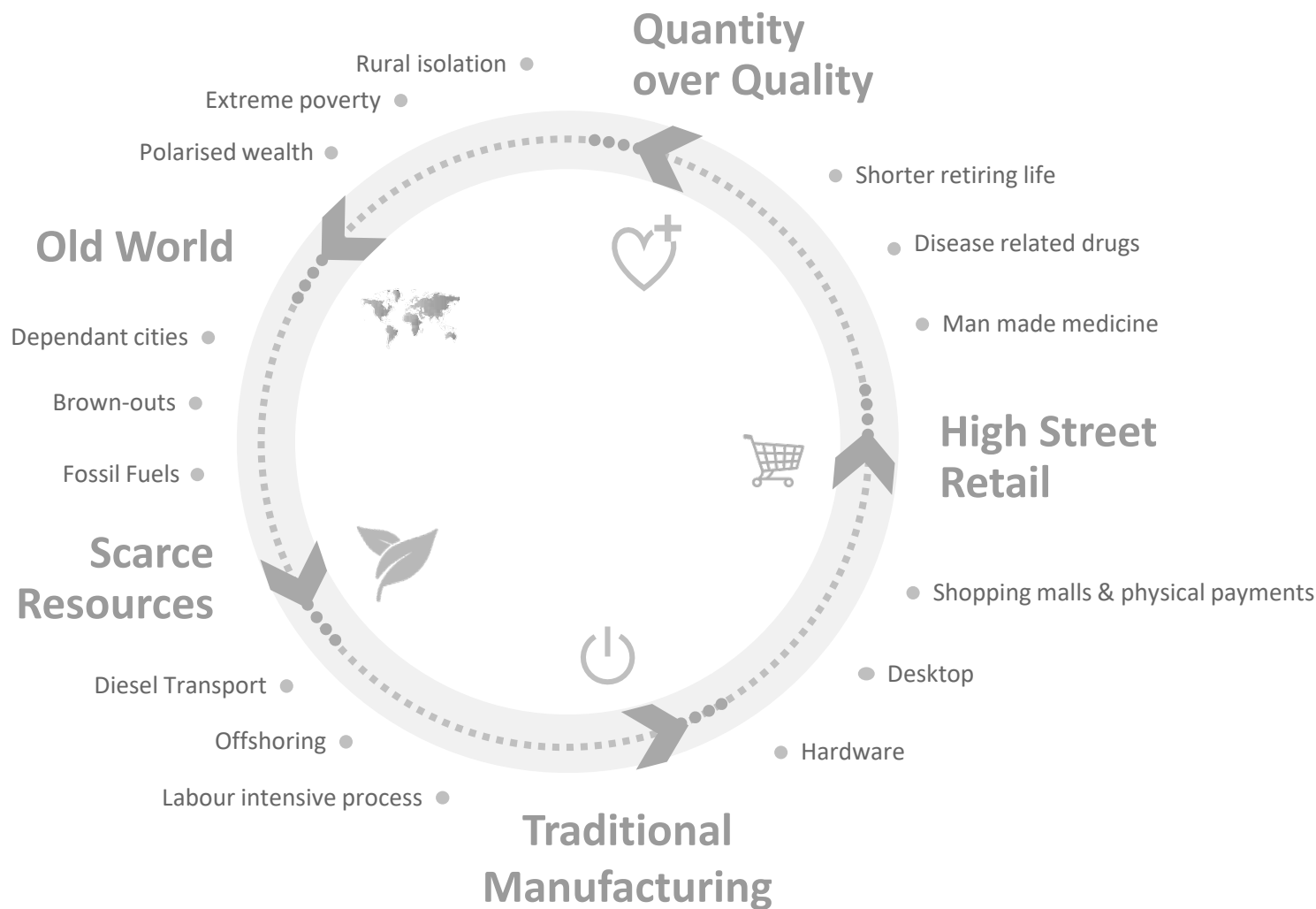
(2) For illustrative purposes only. **Past performance is not a guide to future performance**

# Evolving economy investment themes at Framlington Equities



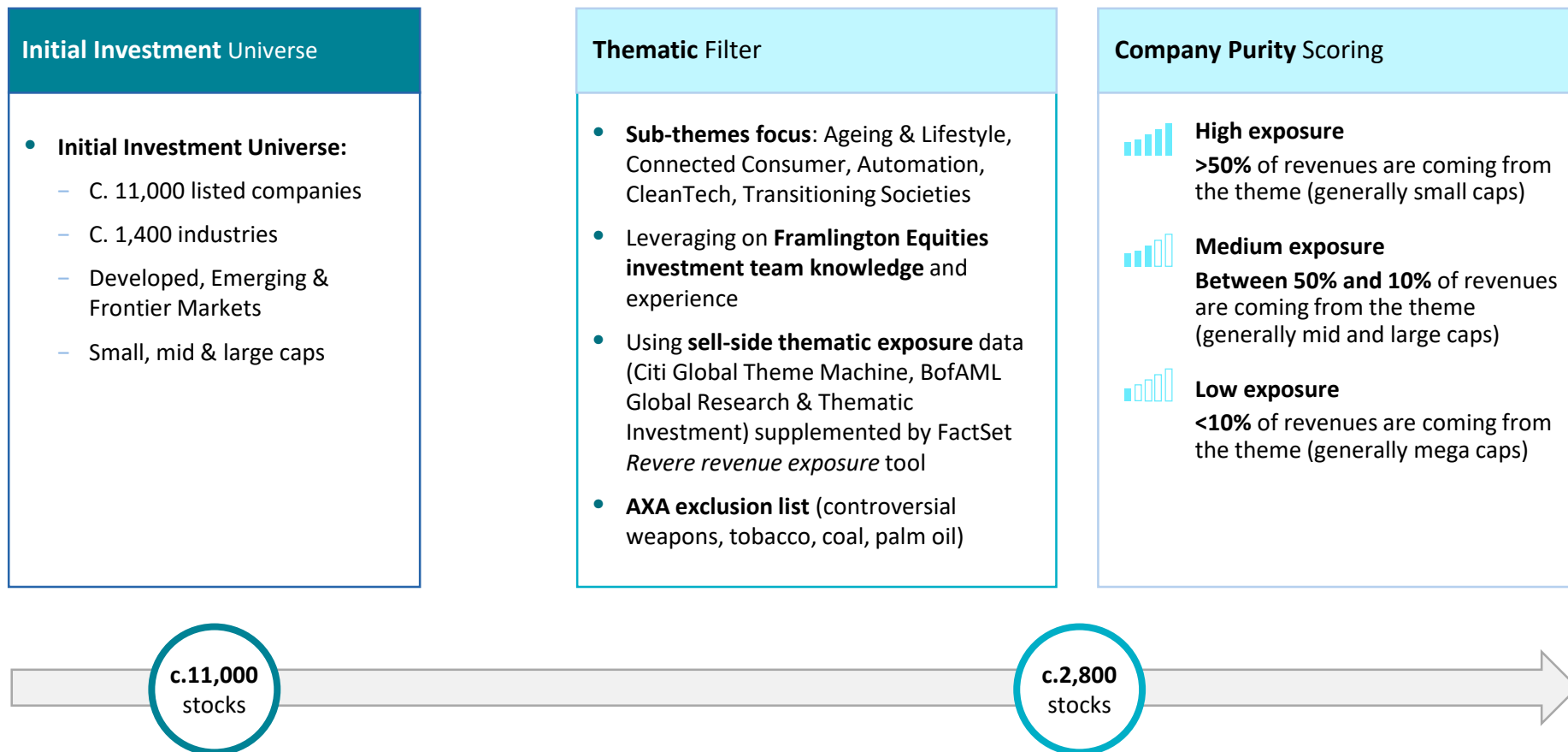
For illustrative purposes only. CR09360/05-19

# Old Economy investment themes



For illustrative purposes only. CR09360/05-19

# Proprietary thematic exposure database



Source: AXA IM – for illustrative purposes only. CR08543/02-19

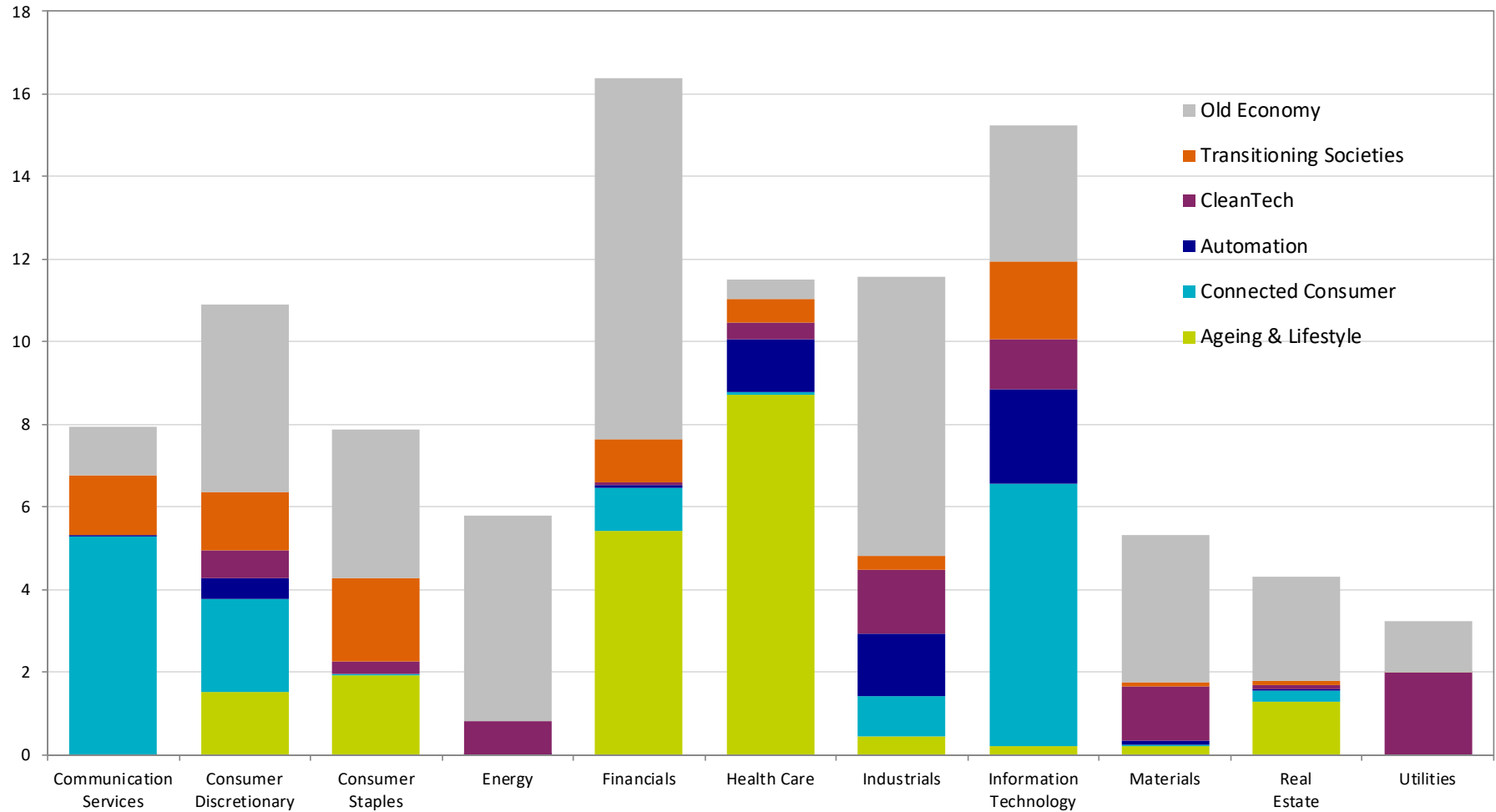
# Historic performance of Evolving Economy vs Old Economy universe

## Evolving Economy vs Old Economy Relative performance - 5 years to March 2019



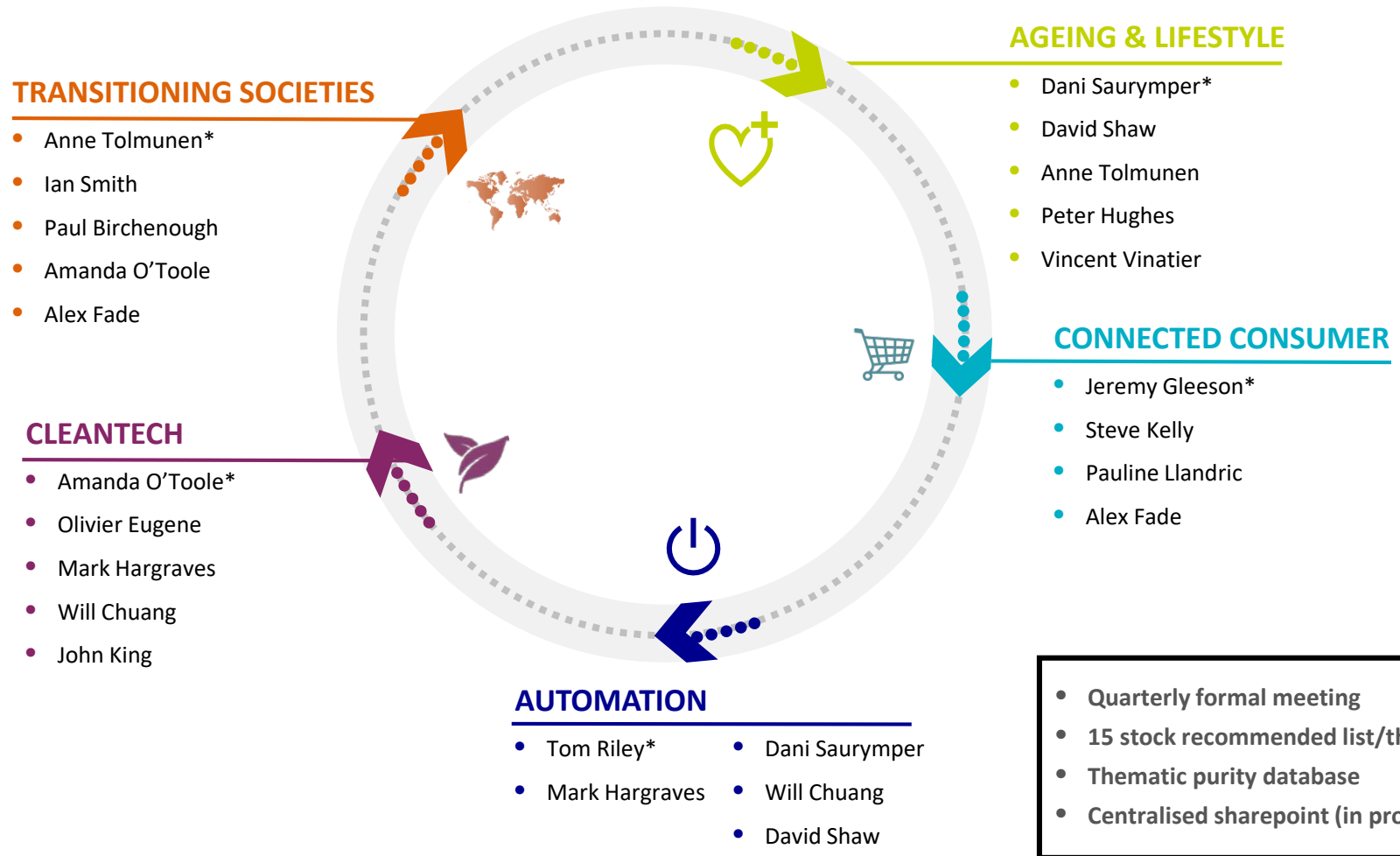
Source: AXA IM, FactSet as at 31/03/2018. For illustrative purposes only. Past performance of the AXA IM constructed thematic universes are not a guide to future performance. The figures provided do not relate to actual portfolios in the strategy. Actual portfolios are subject to the risks of portfolio management and trading, including but not limited to trading costs, market impact and fill rates, and may not resemble the universes presented herein as a result. The strategy is not yet live and to the extent it becomes available for investment, an investor's actual experience may vary. The relative benchmark for the thematic universes is the S&P Global Broad Market Index. The returns and fundamental characteristics presented are for thematic universes constructed by AXA IM – Ageing & Lifestyle, Connected Consumer, Automation, CleanTech and Transitioning Societies. Thematic universe inclusion is based on revenue exposure and constituent weightings of the S&P Global Broad Market Index. The "Evolving Economy" universe contains index constituents with high or medium exposure to our themes. The "Old Economy" universe contains constituents with low and no exposure, which accounted for 52% of the S&P Global Broad Market Index market capitalisation as of 31/12/2017. The weighted average of the universes will equal the S&P Global Broad Market Index. CR09360/05-19

## Thematics exposure by sector



Source: FactSet/AXA IM - Thematic exposure by GICS sector within the S&P Global BMI. Companies with high or medium exposure to a theme considered thematic as at 31/03/2019. CR09360/05-19

# Evolving economy – Global thematic internal research



\* Pod co-ordinator. For illustrative purposes only. Note that some resources are shared by the entire AXA IM Organisation. There is no assurance that any particular individual will be involved in the management of the portfolio for any given period of time, if at all. AXA IM reserves the right to modify any of the procedures, process and controls described herein at its discretion. CR09360/05-19



# Portfolio construction principles for thematic strategies



## Conviction

- Typically **40-60 names** per thematic portfolio.
- Weight scheme driven by a mix of **conviction of return, business impact, market cap/liquidity and risk.**

## Long term Investment Horizon

- **Long term investor** with **low turnover.**
- Sell discipline – ongoing review of investment thesis and theme exposure.

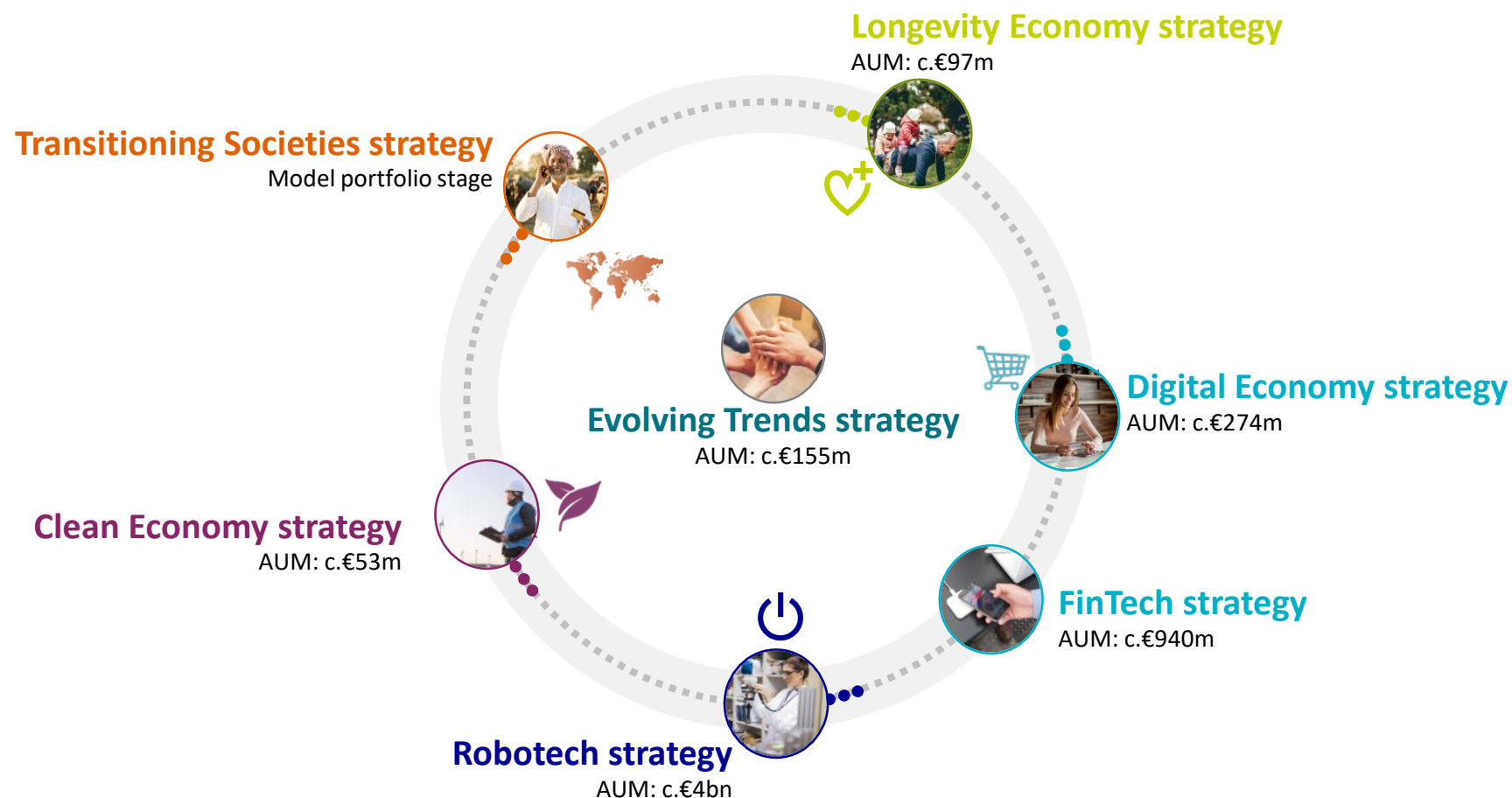
## Absolute risk mindset

- **High active share** vs MSCI ACWI (MSCI EM for Emerging Inclusion strategy).
- No tracking error limits, **risks well diversified** across portfolio.

Measure	Metrics
<b>Investable universe (&gt;500m Market cap)</b>	Typically 200-300 stocks*
<b>Theme purity</b>	Typically >70% in high & medium exposure stocks
<b>Stock concentration</b>	Typically 40-60 stocks
<b>Active Share (vs. ACWI)</b>	Typical >80% Min >60%
<b>Turnover</b>	Circa 30%
<b>Typical weighting at cost:</b>	
<b>Larger cap</b>	2-4%
<b>Smaller cap</b>	1-3%
<b>Max single position</b>	Max 6%

Source: AXA IM. For illustrative purposes only. \*Global Evolving Economy strategy the investible universe will be at circa 1,000 stock.s AXA IM, Inc. reserves the right to modify any of the procedures, process and controls described herein at its discretion. No guarantee or representation is made that investment objectives stated will be achieved. Each specific client or investor's experience may vary. There can be no assurance that the strategy will achieve the results illustrated or achieve its objectives. CR09360/05-19

# Evolving Economy investment strategies at Framlington Equities

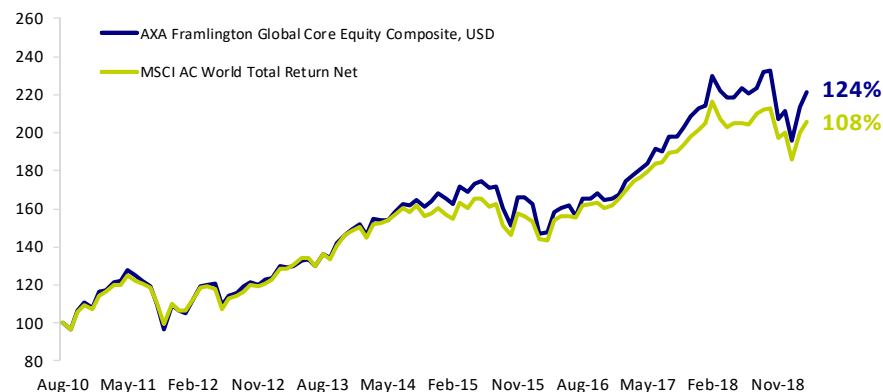


Source: FactSet as at 31/03/2019. For illustrative purposes only. CR09360/05-19

# Existing expertise in global and disruptive themes

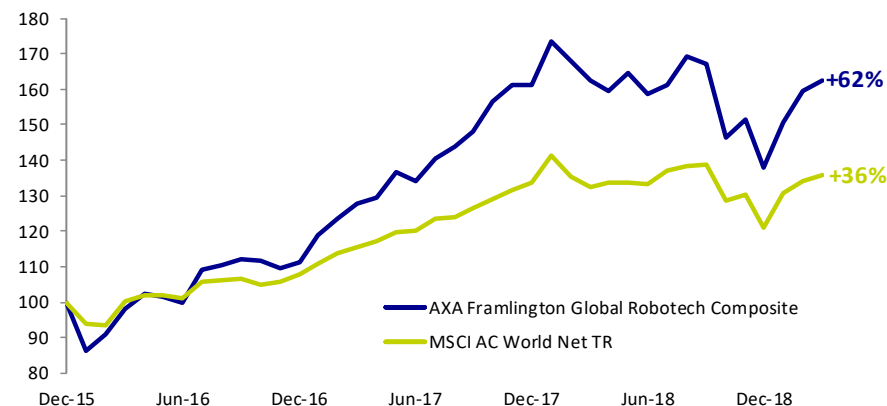
## Global Equity strategy<sup>1</sup>

Cumulative performance since inception on August 2010



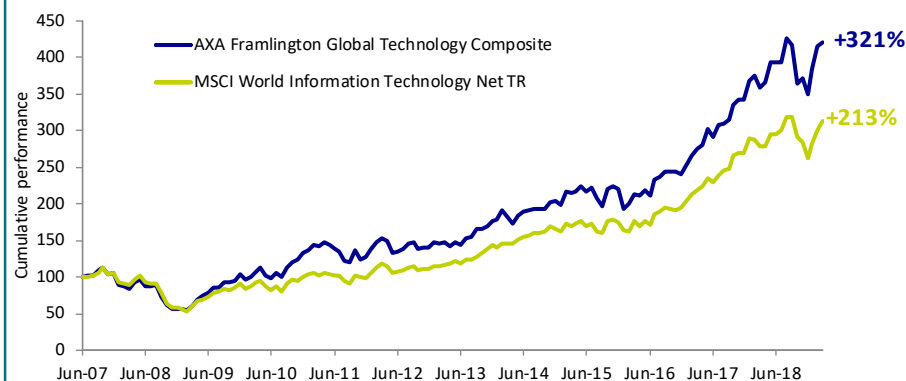
## Global Robotech strategy<sup>2</sup>

Cumulative performance since inception (08/12/2015)



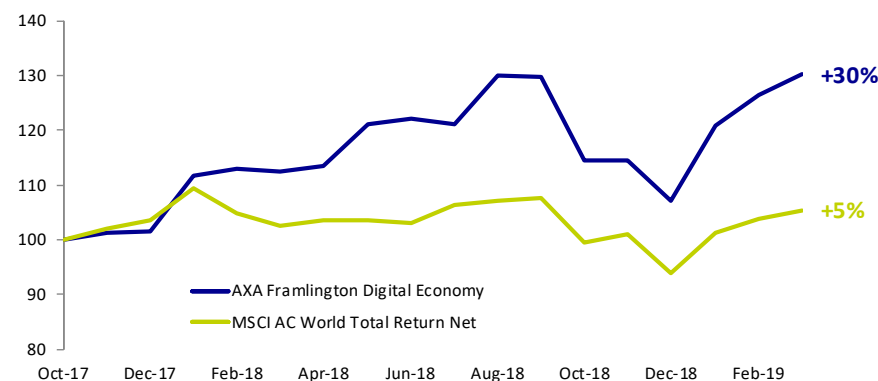
## Global Technology strategy<sup>3</sup>

Cumulative performance since  
Jeremy Gleeson took over the strategy on June 07



## Digital Economy strategy<sup>4</sup>

Cumulative performance since inception (24/10/2017)

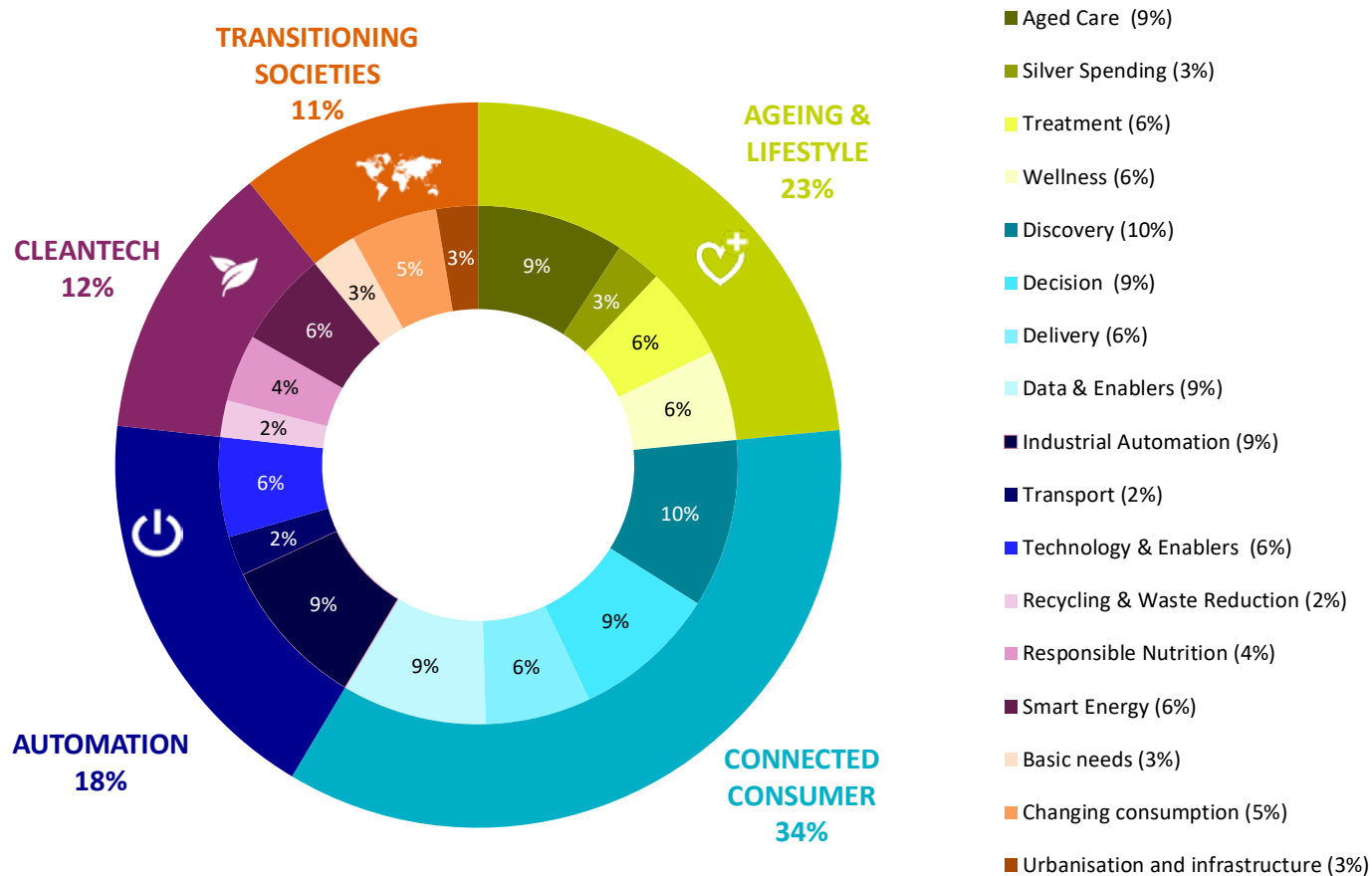


Source AXA IM and FactSet as at 31/03/2019. 1: Performance of the Global Equity. Basis: Gross of Fees in USD. Comparative benchmark: MSCI AC World Net TR. 2: Performance of the Global Robotech. Basis: Gross of Fees in USD. Comparative benchmark: MSCI AC World Net TR. 3: Performance of the AXA Framlington Global Technology. Basis: Gross of Fees in USD. Comparative benchmark: MSCI World Information Technology Net TR. 4: Performance of the Digital Economy Equity. Source FactSet, Basis: Gross of Fees in USD. Comparative benchmark: MSCI AC World Net TR. The deduction of fees reduces the level of return. Past performance is not a guide to future performance. AXA IM claims compliance with the \*Global Investment Performance Standards (GIPS). Please refer to the full GIPS Compliant Report attached at the end of this presentation for overall information.

# **Evolving Trends strategy**

# AXA WF Framlington Evolving Trends

## Sub-theme breakdown



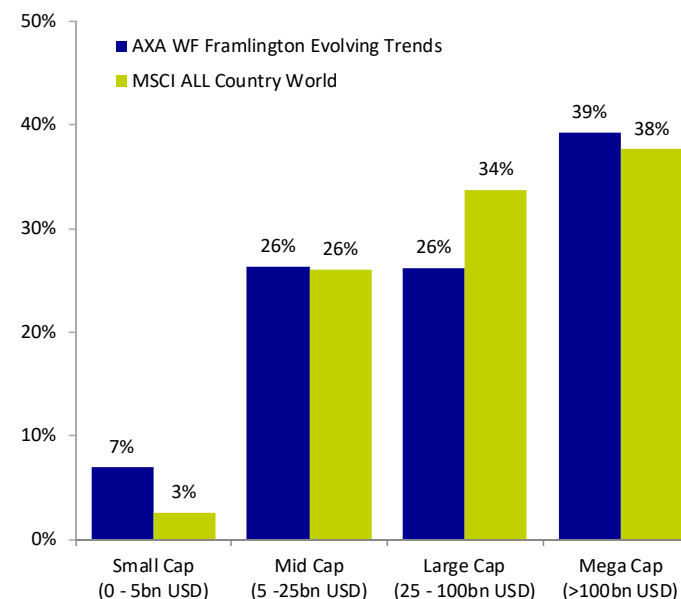
Source: AXA IM as at 31/03/2019. No assurance can be given that the strategy will be successful or that investors will not lose some or all of their capital. AXA IM reserves the right to modify any of the investment process described herein at its discretion. CR10177/08-19

# AXA WF Framlington Evolving Trends

Top 15 holdings and market cap breakdown (as at 31/03/2019)

Top 15 holdings	Fund %	Country	Sector
Alphabet Inc.	4.2	United States	Communication Services
AIA Group Limited	3.5	Hong Kong	Financials
Alibaba Group Holding Ltd.	3.5	China	Consumer Discretionary
Taiwan Semiconductor Manufact	3.3	Taiwan	Information Technology
Microsoft Corporation	2.9	United States	Information Technology
Facebook, Inc.	2.7	United States	Communication Services
Amazon.com, Inc.	2.5	United States	Consumer Discretionary
Kingspan Group Plc	2.4	Ireland	Industrials
Trimble Inc.	2.4	United States	Information Technology
HOYA CORPORATION	2.4	Japan	Health Care
Xylem Inc.	2.3	United States	Industrials
Thermo Fisher Scientific Inc.	2.3	United States	Health Care
UnitedHealth Group Incorporated	2.3	United States	Health Care
A. O. Smith Corporation	2.2	United States	Industrials
Adobe Incorporated	2.2	United States	Information Technology
<b>TOTAL</b>	<b>41.1</b>		
<b>Number of holdings</b>	<b>53</b>		

## Breakdown by market capitalisation (in USD)



Market cap typically >500m USD

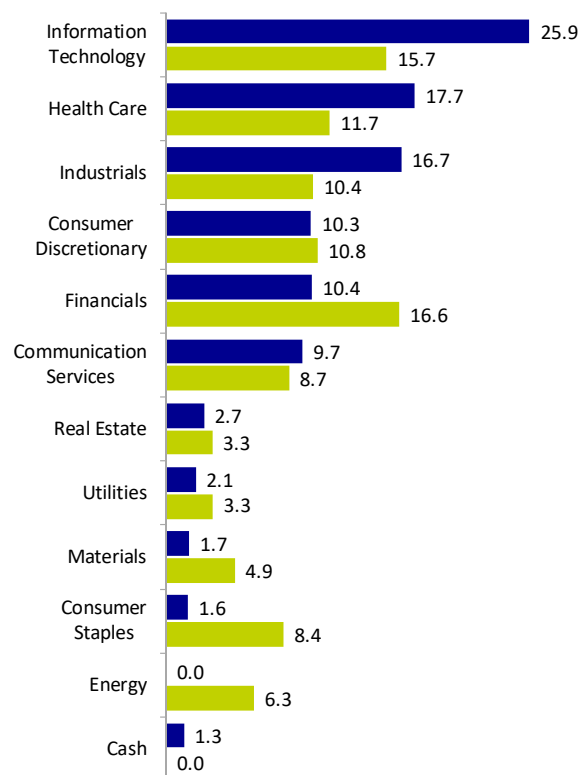
Mega Cap	=> 100bn USD	Mid Cap	5-25bn USD
Large Cap	25-100bn USD	Small Cap	0-5bn USD

Source: AXA IM as at 31/03/2019. CR10177/08-19

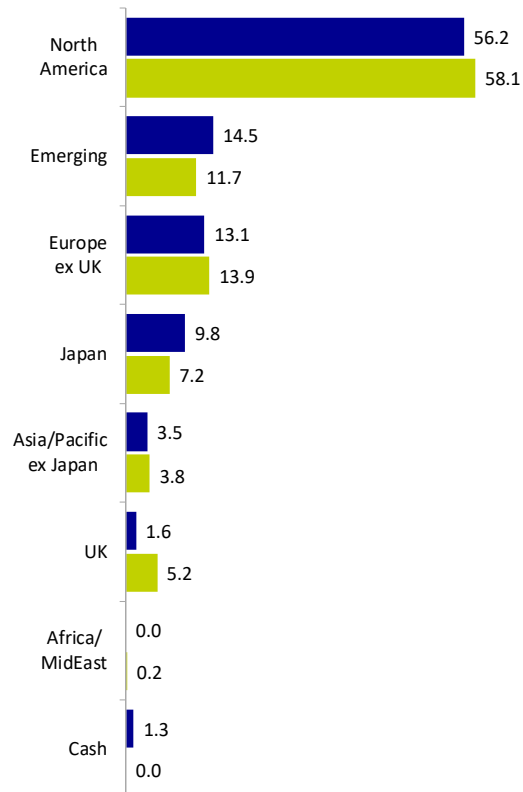
# AXA WF Framlington Evolving Trends

Sector, geographic & sales split (as at 31/03/2019)

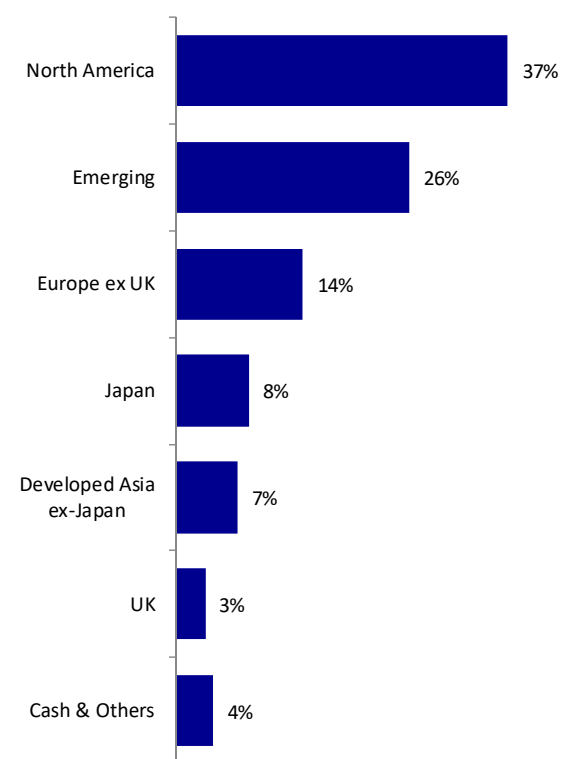
**Sector split**



**Geographical split**



**Sales split\***



■ AXA WF Framlington Evolving Trends

■ MSCI AC World NR

Source: FactSet as at 31/03/2019. Strategy unconstrained - MSCI All Country World used for comparative purposes . \*Sales breakdown as at 31/03/2019 updated quarterly. CR10177/08-19

# AXA WF Framlington Evolving Trends



## Risk metrics (vs. MSCI ACWI)

### RISK DISTRIBUTION

Tracking Error*	4.2%
Active Share	85.2%

### VALUE

	Portfolio	Benchmark
Price to Book	4.3	2.2
Dividend Yield (12m Forward) %	1.3	2.7
Price to Earnings (12m Forward)	20.8	14.9
Price to Sales	3.1	1.7
Price to EBITDA	14.2	9.0
EV/EBITDA	14.5	10.9

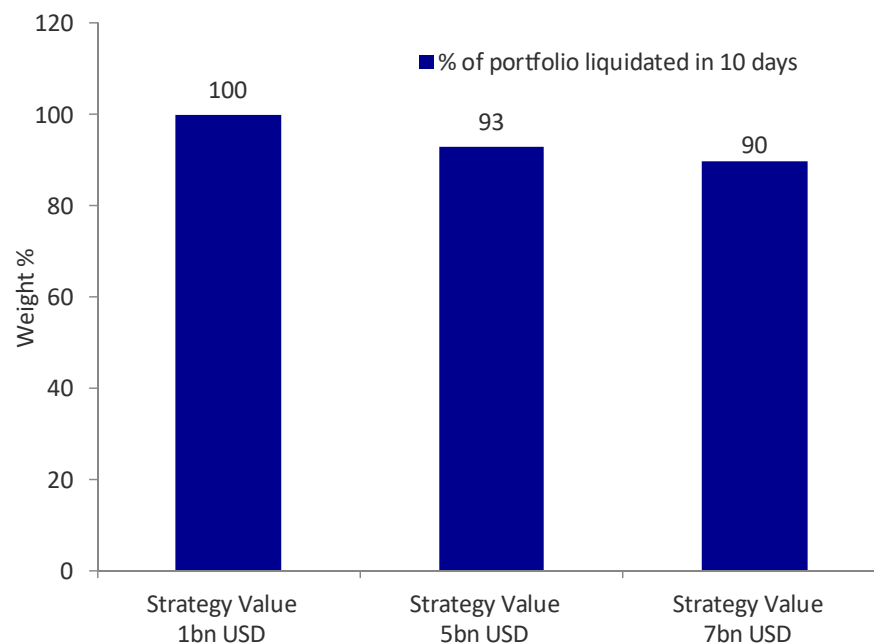
### GROWTH / QUALITY

3 Year Sales Growth (Historic) %	16.1	8.4
12M Sales Growth (Forward) %	9.4	5.6
3 Year EPS Growth (Historic) %	17.9	12.5
12M EPS Growth (Forward) %	11.7	8.2
ROE	19.0	18.0
ROIC	13.5	12.0
Net Debt/Equity %	18.9	46.5



## Liquidity profile (Overall strategy\*)

Trade to Cash/Strategy AUM



For instance with a 1bn AUM in the strategy, **100%** of the portfolio could be **liquidated within 10 days\***

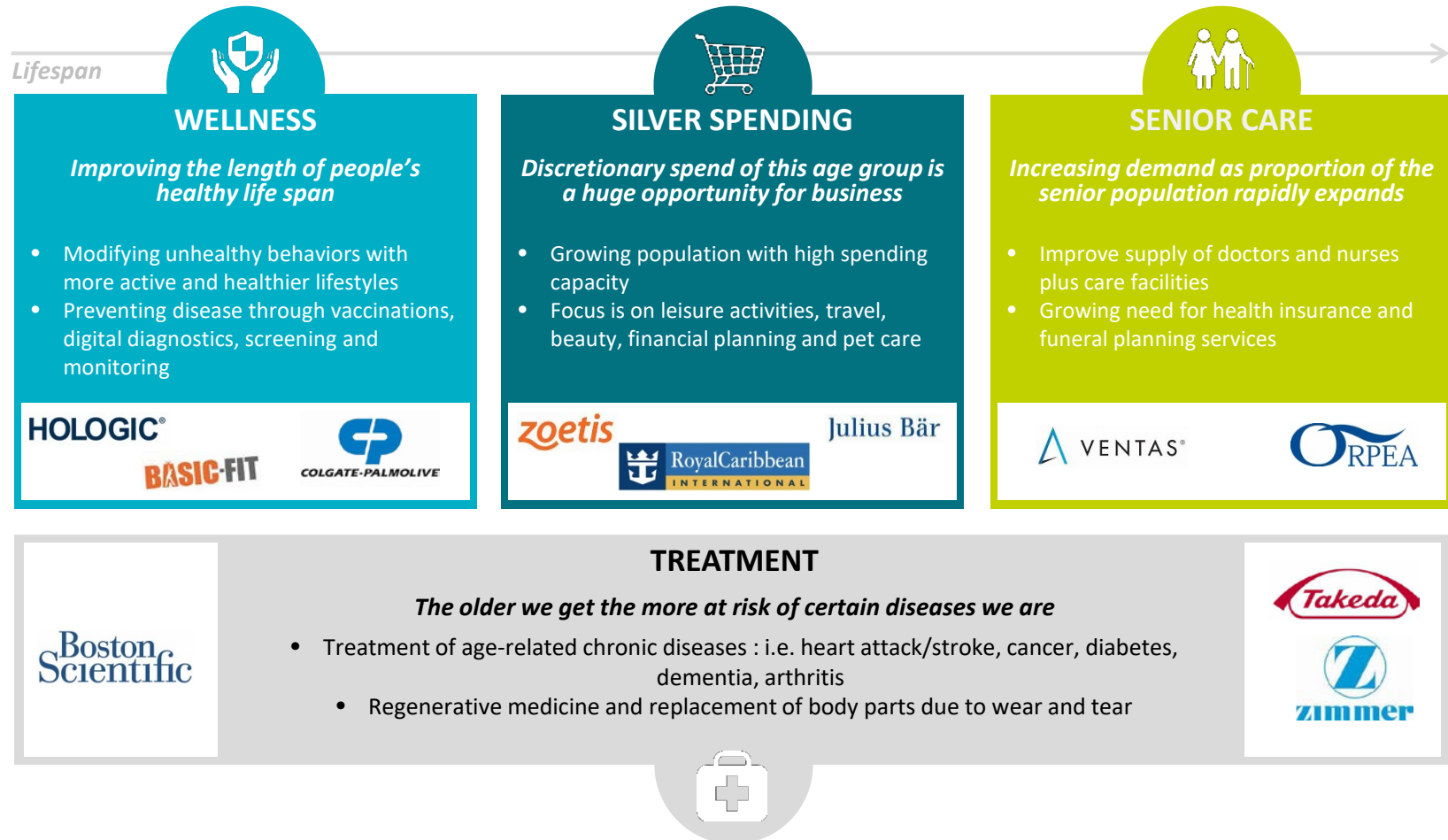
Source: Barra/FactSet/AXA IM as at 31/03/2019. Strategy unconstrained - MSCI All Country World used for comparative purposes. \*Predicted Tracking Error. CR10177/08-19



# Longevity Economy strategy

## Key sub-themes

The Longevity Economy: focus on whole of life, not just end of life



Source: AXA IM as at 31/03/2019. The securities examples are intended for purposes of discussion of the strategy and no representation is made that these examples are past or current recommendations, that they should be bought or sold, nor whether they were successful or not. CR10085/08-19

# Longevity Economy

## Model portfolio profile



### Risk metrics (vs. MSCI ACWI)

#### RISK DISTRIBUTION

Tracking Error *	5.2%
Predicted Beta	0.96
Active Share	95.6%

#### VALUE

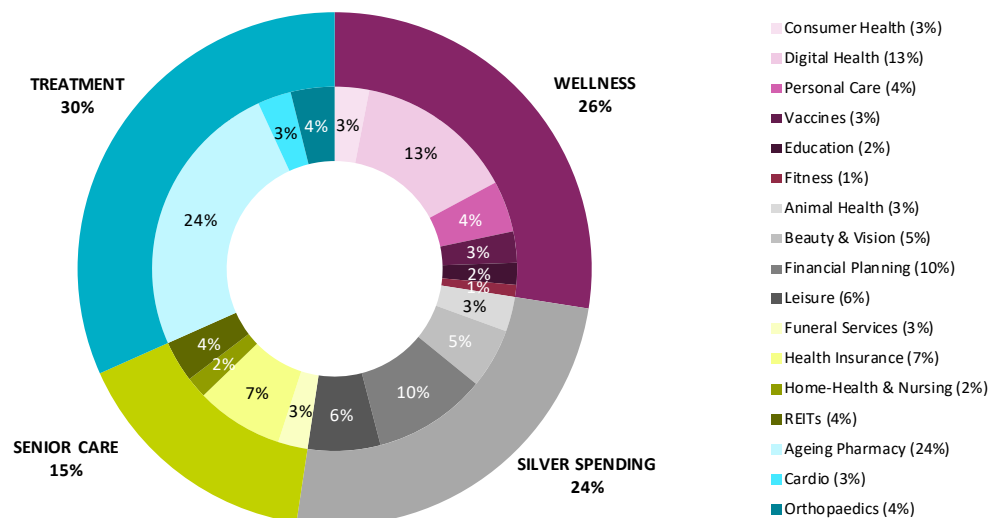
	Portfolio	Benchmark
Price to Book	2.9	2.2
Dividend Yield (12m Forward) %	2.0	2.7
Price to Earnings (12m Forward)	17.6	14.9
Price to Sales	2.3	1.7
Price to EBITDA	11.9	9.0
EV/EBITDA	13.9	10.9

#### GROWTH / QUALITY

3 Year Sales Growth (Historic) %	6.2	8.4
12M Sales Growth (Forward) %	6.7	5.6
3 Year EPS Growth (Historic) %	12.6	12.5
12M EPS Growth (Forward) %	8.1	8.2
ROE	11.4	18.0



### Sub-theme breakdown



Stocks	Investment Universe	c.900 listed companies
	Investable universe	c.300 core coverage listed companies (after qualitative and quantitative filtering)
	Portfolio	64
	Already owned within Framlington Equities	31

Source: Northfield/FactSet/AXA IM as at 31/03/2019. Strategy unconstrained - MSCI All Country World used for comparative purposes. For illustrative purposes only. Information regarding the model portfolio characteristics above is provided for reference only and does not represent the experience of the strategy nor is it intended as a representation or warranty by AXA IM or any other persons or entity as to the actual composition of or performance of any future investment. No assurance can be given that the strategy will be successful or achieve its objectives. The figures provided do not relate to actual portfolios in the strategy. Actual portfolios are subject to the risks of portfolio management and trading, including but not limited to trading costs, market impact and fill rates, and may not resemble the model portfolio information presented herein as a result. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns, and should not be considered a recommendation or solicitation to buy or sell any particular security. The strategy is not yet live and to the extent it becomes available for investment, an investor's actual experience may vary. \*Predicted Tracking Error.

# Digital Economy strategy

# Key sub-themes

## Digital Economy value chain



Source: AXA IM as at 31/03/2019. For illustrative purposes only. AXA IM, Inc. reserves the right to modify any of the procedures, process and controls described herein at its discretion. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns. These examples do not represent all of the securities purchased, sold or recommended for the client's accounts. No representation is made that these examples are past or current recommendations, that they should be bought or sold, nor whether they were successful or not. \*Estimates based on the overall portfolio given for indicative purpose only. CR10049/08-19

# Digital Economy strategy\*

## Risk analysis & sub-theme breakdown



### Risk metrics

#### RISK DISTRIBUTION

Tracking Error	8.6% **
Active Share	88%

#### VALUE

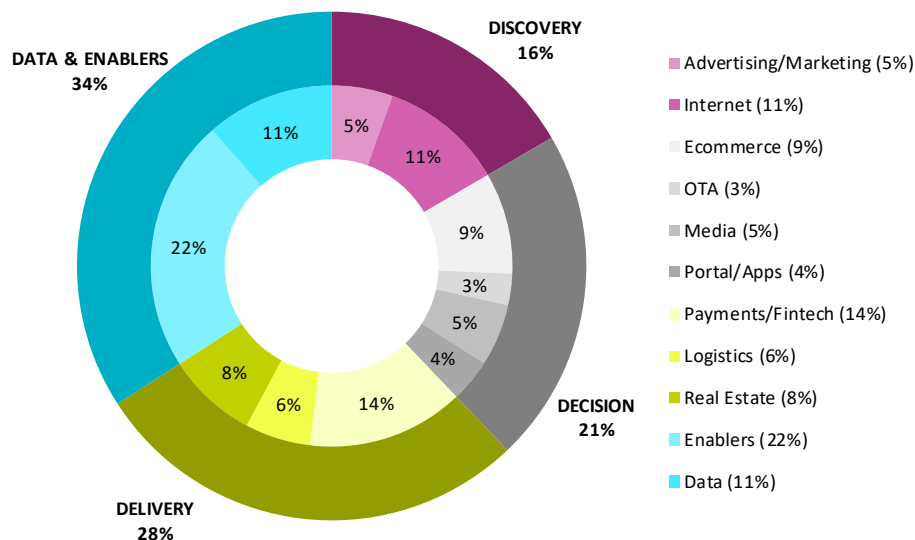
	Portfolio	Benchmark
Price to Book	5.9	2.2
Dividend Yield (12m Forward) %	0.6	2.7
Price to Earnings (12m Forward)	29.7	14.9
Price to Sales	4.6	1.7
Price to EBITDA	19.3	9.0
EV/EBITDA	19.9	10.9

#### GROWTH / QUALITY

3 Year Sales Growth (Historic) %	22.9	8.4
12M Sales Growth (Forward) %	15.6	5.6
3 Year EPS Growth (Historic) %	17.7	12.5
12M EPS Growth (Forward) %	14.5	8.2
ROE	14.3	18.0
ROIC	8.1	12.0
Net Debt/Equity % ***	-16.1	46.5



### Sub-theme breakdown



Stocks	Investment Universe	c.700 listed companies
	Investable universe	c.200 core coverage listed companies (after qualitative and quantitative filtering)
	Portfolio	53
	Already owned within Framlington Equities	44

Source: Northfield/FactSet/AXA IM as at 31/03/2019. \*AXA WF Framlington Digital Economy is the representative account of the strategy. Strategy unconstrained - MSCI All Country World used for comparative purposes. The representative account shown has been selected because it utilizes an investment setup that is typical for accounts in the relevant strategy and/or on the basis that it has adequate assets under management to effectuate a fair comparison. The results portrayed relate only to such accounts and are not indicative of the future performance of such accounts, and an investor's actual experience may vary. Please refer to the appendix for additional information about representative accounts, and the impact of fees on investor returns. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns. These examples do not represent all of the securities purchased, sold or recommended for the client's accounts. No representation is made that these examples are past or current recommendations, that they should be bought or sold, nor whether they were successful or not. \*\*Predicted Tracking Error. \*\*\*Net Debt/Equity % is negative if companies have more cash than debt. Calculated as (Debt-Cash)/Equity. CR08543/02-19

# FinTech Strategy

# Capturing value across the Value Chain: key Sub Themes within our strategy



## Cashless Society

(25% to 55% of portfolio\*)

- Online shopping continues to take market shares from offline, ultimately increasing the volume of digital payments.
- The payment industry is moving to more integrated and complex platforms able to process high volume of omni-channel and cross-border transactions



## Innovative Leaders

(25% to 55% of portfolio\*)

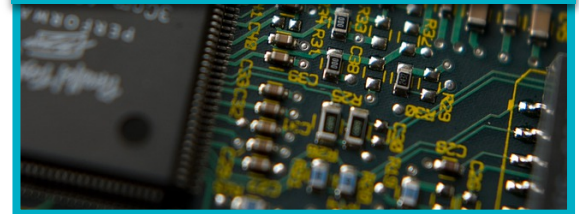
- FinTech is revolutionizing the financial sector
- Established institutions still have a strong hand to play in banking, insurance and wealth management through wide ranging mobile and digital innovations



## Technology Enablers

(10% to 30% of portfolio\*)

- Enablers provide the crucial technology support to develop FinTech companies' digital presence via various channels and devices
- Helping traditional businesses that are "digital migrants" as well as those that are "digital natives"



**We remain cautious on Blockchain, crypto, crowdfunding, P2P lending platforms and a number of emerging business models**

Source: AXA IM as at 31/03/2019. \*Estimates based on the overall strategy given for indicative purpose only. CR10052/08-19



# FinTech strategy

## Risk analysis & market cap breakdown



### Risk metrics

#### RISK DISTRIBUTION

Tracking Error	5.7%
Active Share	95.4%

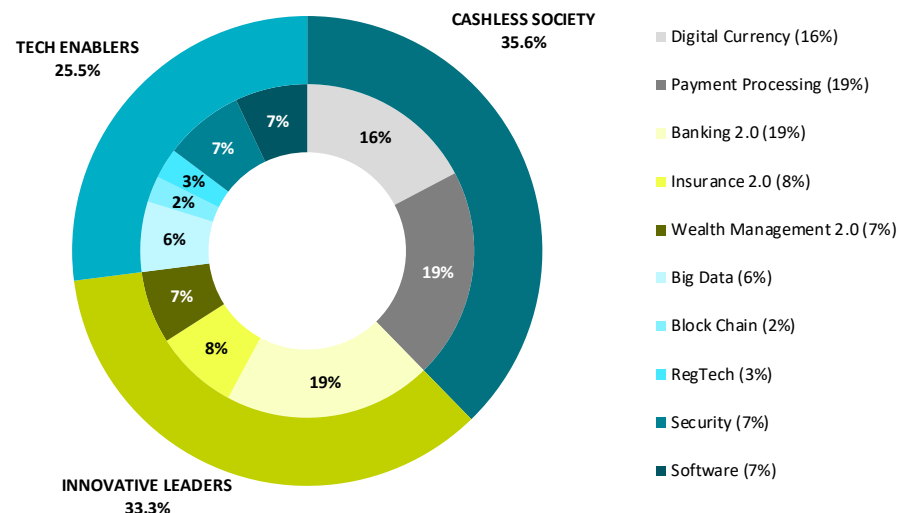
#### VALUE

	Portfolio	MSCI AC World
Price to Book	3.4	2.2
Dividend Yield (12m Forward) %	1.6	2.7
Price to Earnings (12m Forward)	19.7	14.9
Price to Sales	3.8	1.7
Price to EBITDA	19.8	9.0
EV/EBITDA	19.7	10.9

#### GROWTH / QUALITY

3 Year Sales Growth (Historic) %	16.0	8.4
12M Sales Growth (Forward) %	12.4	5.6
3 Year EPS Growth (Historic) %	9.7	12.5
12M EPS Growth (Forward) %	15.1	8.2
ROE	11.4	18.0
ROIC	6.3	12.0
Net Debt/Equity %	30.0	46.5

### Sub-theme breakdown



Stocks	Investable universe	c.400 core coverage listed companies (after qualitative and quantitative filtering)
	Portfolio	42
	Already owned within Framlington Equities	42

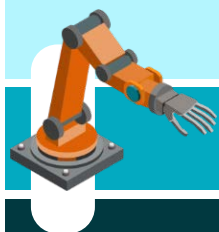
Source: Barrad/FactSet/AXA IM as at 31/03/2019. Strategy unconstrained - MSCI All Country World used for comparative purposes. For illustrative purposes only. Information regarding the model portfolio characteristics above is provided for reference only and does not represent the experience of the strategy nor is it intended as a representation or warranty by AXA IM or any other persons or entity as to the actual composition of or performance of any future investment. No assurance can be given that the strategy will be successful or achieve its objectives. The figures provided do not relate to actual portfolios in the strategy. Actual portfolios are subject to the risks of portfolio management and trading, including but not limited to trading costs, market impact and fill rates, and may not resemble the model portfolio information presented herein as a result. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns, and should not be considered a recommendation or solicitation to buy or sell any particular security. The strategy is not yet live and to the extent it becomes available for investment, an investor's actual experience may vary. \*Predicted Tracking Error.

# Robotech strategy

# Key themes within our strategy\*

## INDUSTRIAL

(c. 35%\*\* of the portfolio)



**Robotics**

**Logistics**

**Industrial Automation Equipment**

- Increased precision & flexibility create new opportunities in industries outside of automotive
- Wage inflation and demographics in EM causing manufacturers to rethink existing processes

## TRANSPORTATION

(c. 15%\*\* of the portfolio)



**Autonomous vehicles**

- Huge focus on vehicle safety, prompted by increased regulation and consumer demand
- Pathway towards Autonomous Vehicles

## HEALTHCARE

(c. 15%\*\* of the portfolio)

**Robotic Surgery**



**Digital Healthcare**

- Robotic surgery & Remote Healthcare seeing new applications
- Aging society drives need for cheaper ways of administering care

## TECHNOLOGY ENABLERS

(c. 35%\*\* of the portfolio)

**Software**

**Semiconductors**



**Component & Vision Systems**

- The intelligence that powers and controls robotics -the sensors, connectivity & intelligence used to gather and analyse information

Source: AXA IM as at 31/03/2019. \*AXA IM Global Robot Technology Equity Mother Fund (dedicated mandate) & AXA WF Framlington Robotech are the representative accounts of the overall strategy.

\*\*Estimates based on the overall strategy given for indicative purpose only. CR08507/02-19

# Robotech Strategy\*

## Risk analysis & liquidity profile



Risk **metrics** (vs. MSCI ACWI)

### RISK DISTRIBUTION

Tracking Error	6.7%	**
Active Share	90.6%	

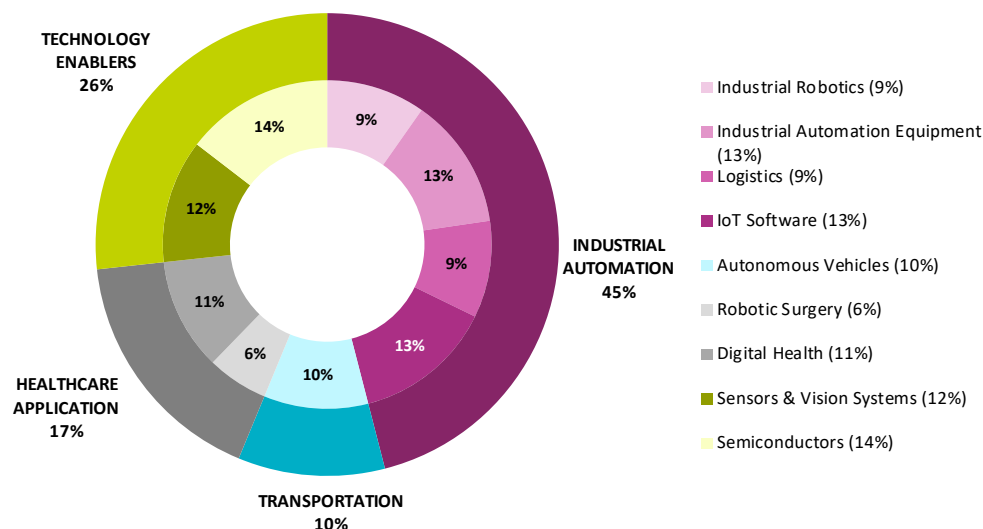
### VALUE

	Portfolio	Benchmark
Price to Book	4.2	2.2
Dividend Yield (12m Forward) %	1.1	2.7
Price to Earnings (12m Forward)	22.2	14.9
Price to Sales	3.2	1.7
Price to EBITDA	15.1	9.0
EV/EBITDA	14.0	10.9

### GROWTH / QUALITY

3 Year Sales Growth (Historic) %	9.9	8.4
12M Sales Growth (Forward) %	7.1	5.6
3 Year EPS Growth (Historic) %	11.1	12.5
12M EPS Growth (Forward) %	7.5	8.2
ROE	17.3	18.0
ROIC	13.2	*** 12.0
Net Debt/Equity %***	-2.2	46.5

## Sub-theme breakdown




Stocks	Investment Universe	c.350 listed companies
	Investable universe	c.150 core coverage listed companies (after qualitative and quantitative filtering)
	Portfolio	58
	Already owned within Framlington Equities	39

Source: Northfield/FactSet/AXA IM as at 31/03/2019. \*AXA WF Framlington Robotech is the representative account of the strategy. Strategy unconstrained - MSCI All Country World used for comparative purposes. For illustrative purposes only. Past performance is not a guide to future performance. The representative account shown has been selected because it utilizes an investment setup that is typical for accounts in the relevant strategy and/or on the basis that it has adequate assets under management to effectuate a fair comparison. The results portrayed relate only to such accounts and are not indicative of the future performance of such accounts, and an investor's actual experience may vary. Please refer to the appendix for additional information about representative accounts, and the impact of fees on investor returns. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns. These examples do not represent all of the securities purchased, sold or recommended for the client's accounts. No representation is made that these examples are past or current recommendations, that they should be bought or sold, nor whether they were successful or not. \*\*Predicted Tracking Error. \*\*\*Net Debt/Equity % is negative if companies have more cash than debt. Calculated as (Debt-Cash)/Equity. CR08543/02-19

# **Clean Economy Strategy**

# Key sub-themes aligned with primary UN SDGs



## Clean Economy strategy




### Sustainable Transport

(c. 25%\* of the portfolio)

- **Electric Vehicle (EV)** : strong support for EV adoption driven by social and political pressure
- **Batteries** : significant advances in battery technology and the collapsing cost of battery storage have cleared the pathway towards mass market EVs
- **Enablers** : semiconductors , connectors, emission reduction systems are key in every transport solution making sure the energy consumption is efficient as possible




Panasonic – BYD – Infineon




### Smart Energy

(c. 25%\* of the portfolio)

- **Renewables** : falling renewable production cost is allowing corporates and countries to power their economic development on wind, solar & hydro
- **Greener Homes/Buildings** : digitalised electricity network using advanced metering and storage solutions to manage the distribution of electricity and meet the varying demands of businesses, public services and households
- **Efficient Factories** : reducing energy consumption for heating, cooling, data storage, connected devices, manufacturing process, lighting, etc.




Kingspan – NextEra Energy – Schneider Electric



### Responsible Nutrition

(c. 25%\* of the portfolio)

- **Food & Agriculture** : feeding a growing population while preserving resources and encouraging healthier habits including precision farming, reducing demand for excessive animal products, bioscience innovation, organic food, etc.
- **Water** : growing recognition of the scarcity of clean water will benefit companies whose technology improve drinking water quality, reduces water usage and increases water re-use

John Deere – Itron – Chr Hansen





### Recycling and Waste Reductions

(c. 25%\* of the portfolio)

Businesses which mitigate environmental damage – by **reducing waste, facilitating recycling, monitoring and resolving pollution** – will yield large net gains to the global economy

Umicore – Everbright Water – DS Smith




Source: AXA IM as at 31/03/2019. For illustrative purposes only. \*Estimates based on the overall strategy given for indicative purpose only. Information regarding the portfolio characteristics above is provided for reference only and does not represent the experience of the strategy nor is it intended as a representation or warranty by AXA IM or any other persons or entity as to the actual composition of or performance of any future investment. No assurance can be given that the strategy will be successful or achieve its objectives. The figures provided do not relate to actual portfolios in the strategy. Actual portfolios are subject to the risks of portfolio management and trading, including but not limited to trading costs, market impact and fill rates, and may not resemble the model portfolio information presented herein as a result. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns, and should not be considered a recommendation or solicitation to buy or sell any particular security. The strategy is not yet live and to the extent it becomes available for investment, an investor's actual experience may vary. AXA IM reserves the right to modify any of the procedures, process and controls described herein at its discretion. CR11235/05-19

# Clean Economy Strategy

## Risk analysis & sub-theme breakdown



### Risk metrics

#### RISK DISTRIBUTION

Tracking Error	4.2%
Active Share	97%

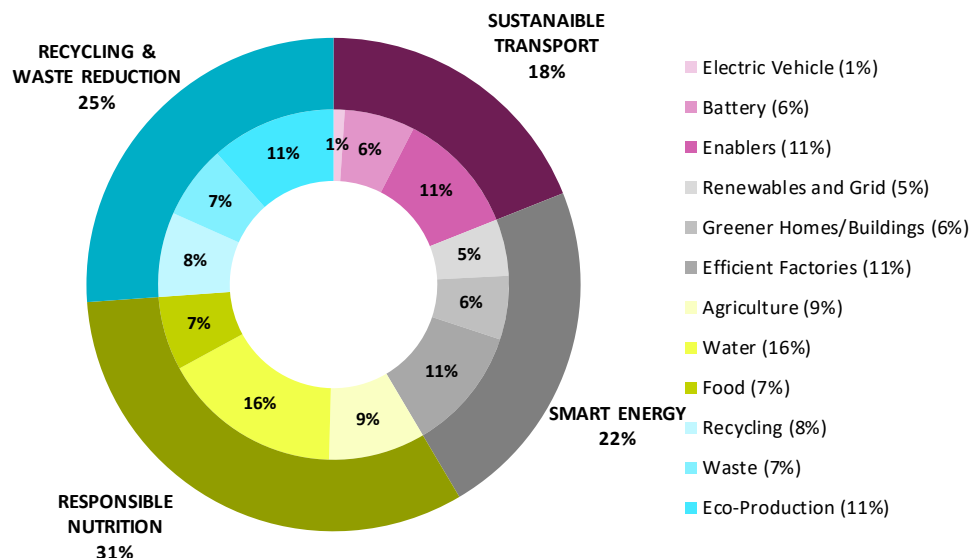
#### VALUE

	Portfolio	Benchmark
Price to Book	2.7	2.2
Dividend Yield (12m Forward) %	2.2	2.7
Price to Earnings (12m Forward)	16.7	14.9
Price to Sales	1.3	1.7
Price to EBITDA	9.3	9.0
EV/EBITDA	10.8	10.9

#### GROWTH / QUALITY

3 Year Sales Growth (Historic) %	10.7	8.4
12M Sales Growth (Forward) %	6.7	5.6
3 Year EPS Growth (Historic) %	16.5	12.5
12M EPS Growth (Forward) %	8.8	8.2
Net Debt/Equity %	59.9	46.5

### Sub-theme breakdown



Stocks	Investment Universe	c.600 listed companies
	Investable universe	c.200 core coverage listed companies (after qualitative and quantitative filtering)
	Portfolio	44
	Already owned within Framlington Equities	24

Source: Barra/FactSet/AXA IM as at 31/03/2019. Strategy unconstrained - MSCI All Country World used for comparative purposes. For illustrative purposes only. Information regarding the model portfolio characteristics above is provided for reference only and does not represent the experience of the strategy nor is it intended as a representation or warranty by AXA IM or any other persons or entity as to the actual composition of or performance of any future investment. No assurance can be given that the strategy will be successful or achieve its objectives. The figures provided do not relate to actual portfolios in the strategy. Actual portfolios are subject to the risks of portfolio management and trading, including but not limited to trading costs, market impact and fill rates, and may not resemble the model portfolio information presented herein as a result. The examples provided above are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns, and should not be considered a recommendation or solicitation to buy or sell any particular security. The strategy is not yet live and to the extent it becomes available for investment, an investor's actual experience may vary. \*Predicted Tracking Error. CR04104/05-17

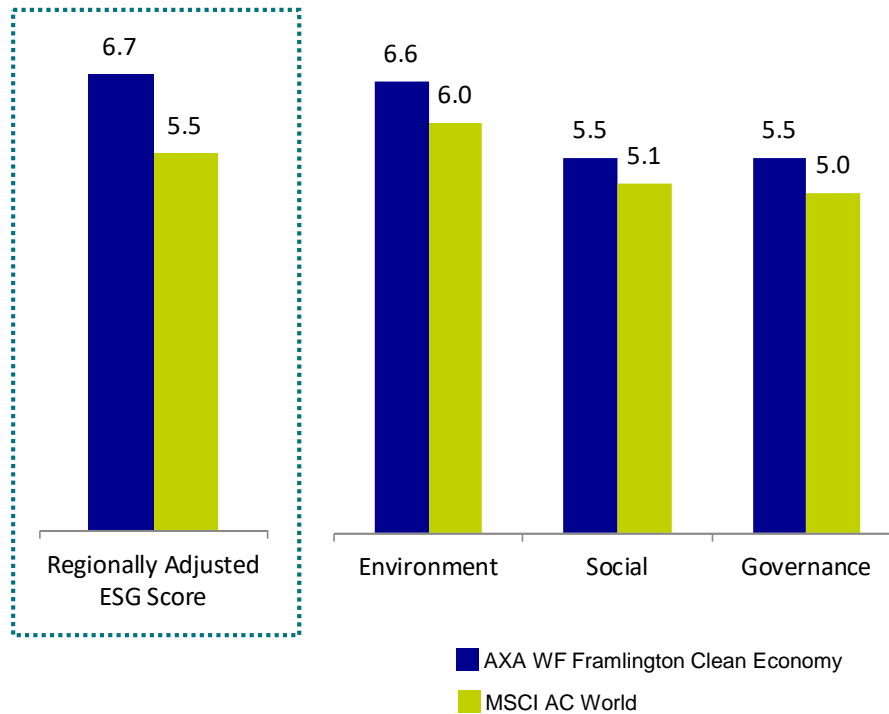
# AXA WF Framlington Clean Economy

## ESG & Controversy exposure

Exclusion of coal or oil sands; defense and tobacco sectors

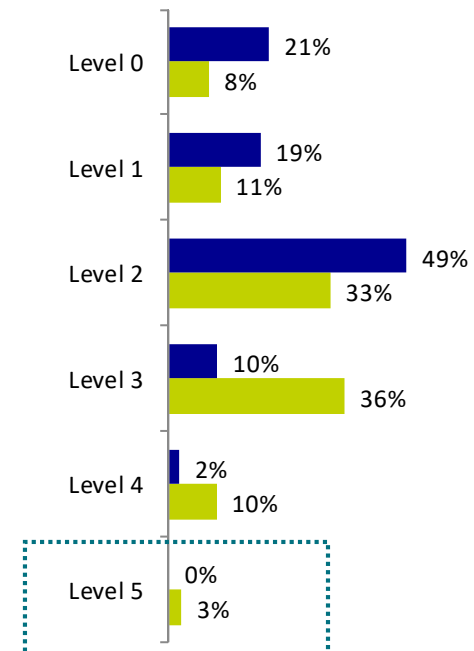
### ESG Scores

- Exclusion of ESG scores <2



### Controversy Exposure

- No Level 5 controversy



Source: Barra/FactSet/AXA IM as at 31/03/2019. CR11235/05-19



# Appendix

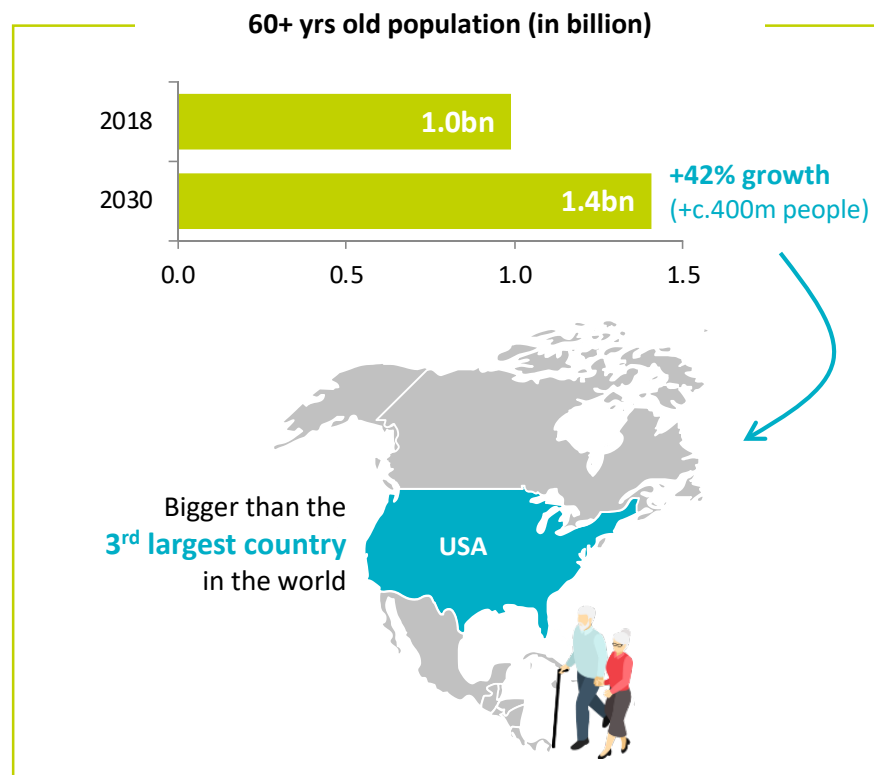
# Ageing & Lifestyle

Expanding life expectancy and related lifestyle transformation



The global share of older people (60+) will increase by 42% from 2018 to 2030  
(5x faster than the under-60 population)

- Young and older generations recognise the need for healthier living and are increasing their **focus on prevention** (healthier lifestyles, diagnostics and digital screening/monitoring solutions).
- While the over 60s will account for 16% of the population by 2030, they are likely to account for **55% of the consumption growth**, spending primarily in the health sector but also across **multiple industries** (leisure, financial planning, beauty, tourism).
- The older we get the more at risk for certain **chronic diseases** (cancer, diabetes) we are. An expanding, elderly population also means significant need for care facilities, nursing, infrastructure, health insurance coverage and funeral services.



Source: AXA IM, UN. Right chart: United Nations, Department of Economic and Social Affairs, Population Division (2017). Past performance is not a guide to future performance. The examples provided above are for illustrative purposes only. CR09360/05-19

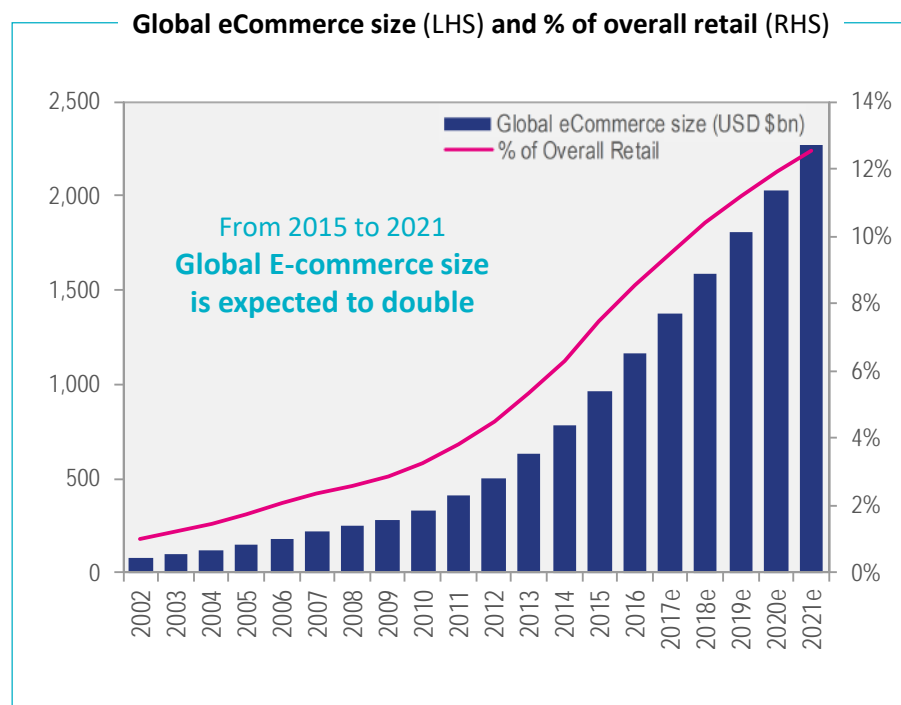
## Connected Consumer

Online and mobile commerce growth supported by improved shopping experience



The digital era is still in its infancy when you consider that only 9% of global retail sales are transacted online

- Online commerce continues to gain market share vs traditional offline thanks to **improved overall shopping experience**, growth of mobile commerce and increased comfort in digital payments.
- **Millennials**, defined as those under 35y, have grown up with the Internet and the option to shop online always being there. They have been very good teachers to the older generation and are now just **entering their peak spending years**.
- The global E-commerce **penetration level remains low**. In leading countries (China, US, UK), while online transaction volumes keeps rising, there is also an important **growth potential in lagging countries** (India, Southern Europe).



Source: AXA IM, BofA Merrill Lynch Global Research estimates, Internet World Stats, US Census. For illustrative purposes only. Past performance is not a guide to future performance. \* Citi GPS: Technology at Work v. 3.0 – August 2017. Chart: Euromonitor International, Citibank “Technology at work v3.0”, August 2017. No guarantee or representation is made that investment objectives stated will be achieved. Each specific client or investor's experience may vary. CR09360/05-19

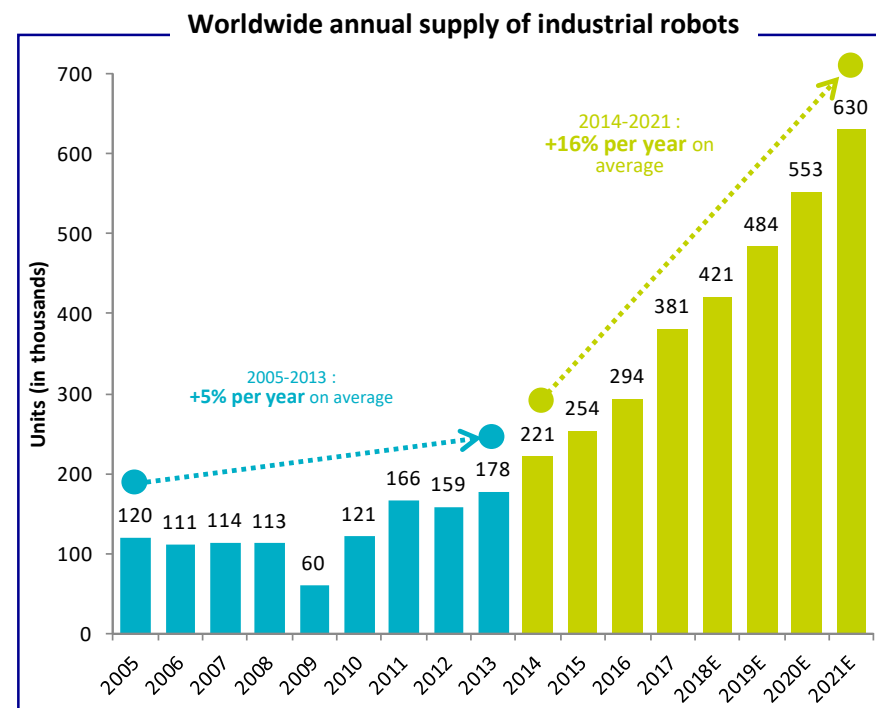
# Automation

Technology advancement, rising labour costs and decreasing working population



The use of robotics in society will increase efficiency, precision and safety. We estimate that the global robotics market is expected to grow by 10-15% a year until 2025

- Robots are becoming **more affordable** while labour cost is increasing and the working population is shrinking in many countries (China).
- Advances in technology have made robots capable of performing highly sophisticated and delicate work as well as **working alongside humans to drive productivity and efficiency**.
- Technological innovation creates **opportunities in new industries**: digital factories, autonomous vehicles, robotics assisted surgery, patient monitoring, food processing, electronic manufacturing, agriculture etc.



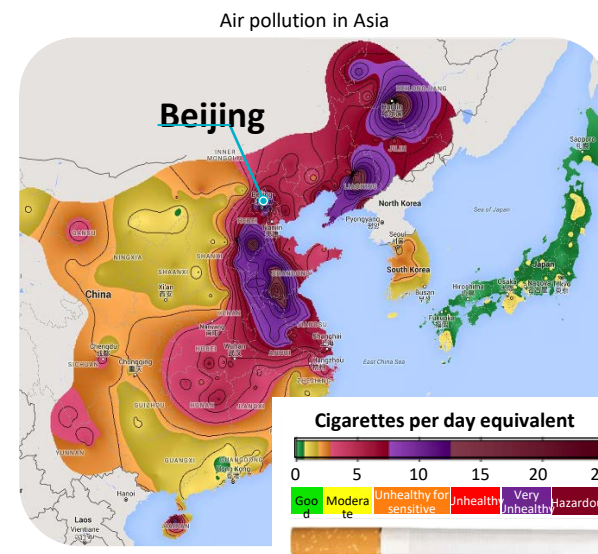
Source: AXA IM. Right chart: IFR World Robotics 2018. For illustrative purposes only. Past performance is not a guide to future performance. No guarantee or representation is made that investment objectives stated will be achieved. Each specific client or investor's experience may vary. CR09360/05-19



Growing social awareness of the pressure on scarce natural resources and gas emission reduction is influencing state policies and investments, ultimately encouraging corporates to act rapidly

- **Pollution and climate change** already threaten human health and impact economic activity. Population growth and rising wealth will continue to increase demand for scarce resources.
- Social pressure, demographic changes and international agreements (eg Paris Climate Accord) are driving policy support for **improved environmental stewardship** and **responsible, efficient production of consumption**.
- Those **businesses which can adapt and support** the energy transition, reduce water intensity and limit waste have a **multi-decade growth opportunity**.

## Realising the urgency



The 4th warmest year on earth happened over the last 4 years



Source: Graphic <http://berkeleyearth.org/air-pollution-and-cigarette-equivalence/>. For illustrative purposes only. Past performance is not a guide to future performance. No guarantee or representation is made that investment objectives stated will be achieved. Each specific client or investor's experience may vary. CR09360/05-19

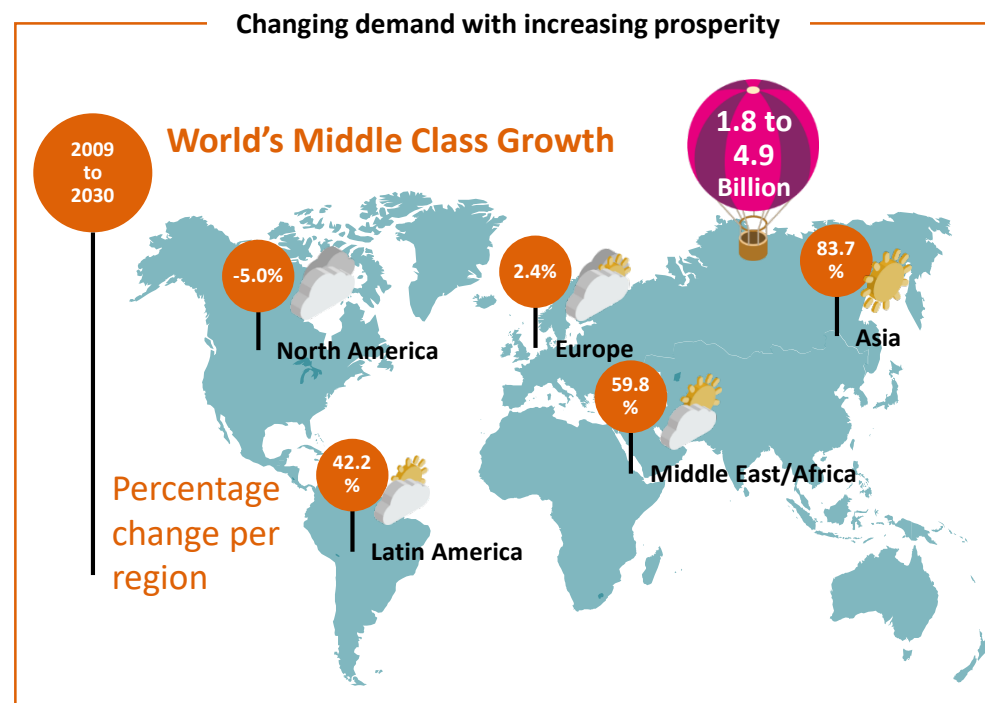
# Transitioning Societies

Economic inclusion and changing consumption patterns in both developed and emerging markets



Major wealth shift is occurring over the next decade as 3bn people move from poverty into the “middle class”

- **Growing wealth** and financial inclusion are enabling **demand for goods and services** which fulfill basic needs.
- **Urbanisation** requires new infrastructure and the accompanying **change in lifestyle** is creating new opportunities.
- **Disruptors** are **democratising consumption** models and challenging incumbents.



Source: AXA IM / OECD. For illustrative purposes only. Past performance is not a guide to future performance. No guarantee or representation is made that investment objectives stated will be achieved. Each specific client or investor's experience may vary. CR09360/05-19

# AXA Framlington Global Technology Composite

## Disclosures

### Compliance Statement

AXA IM claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. AXA IM has been independently verified for the period 31 Dec 1999 – 31 Dec 2016. The verification report is available upon request. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any composite presentation.

### Presentation of the Firm

AXA Investment Managers is a firm comprising two "sub-firms" for GIPS® purposes, each of which is defined as shown below: - AXA IM: AXA IM groups together all the fee-paying portfolios managed in a discretionary manner according to the global investment processes (active judgmental management and index management) instituted during the last quarter of 1999 following a global reorganisation of AXA IM. The management centres included in this perimeter as of 31.12.2016 are AXA Investment Managers Paris, UK, Luxembourg, Germany, Italy, Switzerland, Hong Kong, Tokyo, Australia, AXA IM Inc and all Fund of Hedge Funds. Following the October 2003 acquisition of the Advantus US Investment Grade team by AXA IM, AXA IM North America and the acquired team were combined within one legal entity, AXA IM Inc. AXA IM Inc is a registered investment adviser with the Securities and Exchange Commission and has been included in the definition of AXA IM since October 1, 2003. AXA Framlington (London portfolios excluding Private Clients) is an equity manager with offices in the UK and has been verified for each of the years from 2001 to 2009 by PriceWaterhouseCoopers London. It has been included in the definition of AXA IM since January 1, 2010. Discretionary management includes all investment management agreements for which AXA IM assumes full and entire responsibility for the performance or performance spreads. AXA Rosenberg Investment Management: AXA Rosenberg is an equity manager with offices in the US, UK, Japan, Singapore and Hong Kong. This composite presentation is made by AXA IM. A complete list and description of all composites is available on request.

### GIPS Disclosures

#### Portfolio valuation

Portfolios are valued according to the market closing prices each day, except for certain portfolios valued in Germany, which use the closing price of the previous day, and the UK, where the price used is the 2pm price of the same day. In order to apply this valuation policy, the NAV of the day following the valuation date is used for certain portfolios. Dividends paid on securities in the portfolio are accounted for using ex-dividend date and are net of any withholding taxes. Buy and sell transactions are taken into account using trade-date valuation after confirmation for the trade by the counterparty. Accrued interest on debt securities is recorded each time the portfolio is valued. All proceeds, including realised and unrealised gains or losses in the portfolio are included in the value of assets. There are minor exceptions to these general rules for specific types of portfolios.

#### Policy on derivatives

For Segregated Accounts, derivatives are only used with the client's authorisation. Futures and options are used, mainly for hedging purposes. Except for specifically designated funds such as Futures Funds, no portfolio is to be overexposed to the market, translating as a strict "no leveraging" policy. There are no futures funds in this composite.

#### Benchmark disclaimer

The composite benchmark is generally determined by the benchmark of the dominant portfolio in the composite. Where portfolios are managed according to peer group asset allocations (notably in the UK), the composite benchmark is constructed by assigning a market index to published asset allocation weightings, which are periodically rebalanced. The extent to which any given composite invests in countries or regions not included in the benchmark depends on the limits (if any) specified in the investment management contracts of the individual portfolios in the composite. In general, such investment is marginal and is typically less than 10% for any given portfolio.

#### Benchmark Definition

From 31/12/2000 100.00% MSCI World / Information Technology Gross Return USD

#### Minimum asset level

We have defined upper and lower thresholds and a grace period to avoid excessive volatility in the composite construction.

For US Fixed Income composites, the lower threshold is defined at 20,000,000 USD, where the upper threshold is not applicable, with a 3-month grace period.

For AXA Framlington LatAm composite, the upper threshold is defined at 10,000,000 USD the lower threshold at 8,000,000 USD, with a 3-month grace period.

For Framlington UK composites the upper threshold is defined at 1,000,000 GBP the lower threshold at 900,000 GBP, with a 3-month grace period except for the AXA Framlington Managed Balanced Composites, the upper threshold is defined 850,000 GBP and lower threshold is 816,000 GBP.

For the composite International Equity, Global Entrepreneur, the upper threshold is defined at 500,000 EUR, where the lower threshold is not applicable, with a 3-month grace period.

For GBP LDI composites, the upper threshold is defined at 5,000,000 GBP and lower threshold is 4,000,000 GBP, with a 6-month grace period.

For all other composites, the upper threshold is defined at 10,000,000 EUR the lower threshold at 8,000,000 EUR, with a 6-month grace period.

While a portfolio AUM is less than the upper threshold, it is excluded from the performance calculation for the composite to which it belongs. Once a portfolio AUM equals to exceeds the upper threshold, the performance of the portfolio is included in the performance calculation of the composite for the following month, starting from the last valuation day of the month during which the UM first equalised or exceeded the upper threshold.

# AXA Framlington Global Technology Composite

## Disclosures

The AUM for each portfolio will be measured on the last valuation day of each month, for the purpose of determining whether or not a portfolio will contribute to the performance calculation of a composite in the following month.

“Buffer” Rule: Once a portfolio has been included in the performance calculation of the composite, it continues to be included unless either:

- The AUM falls below the lower threshold, or
- the AUM has remained less than the upper threshold for the grace period.

When either of these two conditions is met at the end of a given month, the portfolio is excluded from the performance calculation for the following month.

### Performance result / fees

Performance results are presented gross of fees. Portfolios net returns are computed from Net Asset Values (dividend reinvested if specified) and each portfolio has an on-going charge assigned. Portfolios gross returns are computed from Net Asset Values adding back technical fee rate – which may be ongoing charges or Total Expenses Ratio – this calculated monthly and compounded up for relevant periods. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates.

### Compliance with local laws

This performance presentation does not conflict with any relevant local laws in any of the AXA M management centres included in the Firm perimeter as at 31/12/2016.

### Calculation methodology

Composite performance is calculated on a monthly basis as follows:

- The portfolios entering the performance calculation are determined according to the Minimum Asset Level and Buffer Rule described above.
- Each portfolio brings its own specific start and end dates to the calculation, depending on the particular valuation dates of the portfolio.
- The performance of each portfolio is calculated using the start and end dates relevant to the period in question, and using daily-either cashflows
- The performance of a composite is calculated as a weighted average (using each portfolio's assets under management as at each portfolio's specific start date for the period in question) of the performance of the portfolios.
- Quarterly, annual, cumulative and since-inception returns are calculated by linking the composite monthly returns through compounded multiplication.

The benchmark return is calculated using monthly cashflows and do not include potential transaction costs or management fees.

- The Annualised Performance is shown on a 365 days basis.

Additional information regarding policies for calculating and reporting returns in compliance with the GIPS Standards is available upon request.

### Dispersion

Since 31/12/2012, a methodology change on dispersion has occurred: dispersion is defined as the standard deviation of portfolios returns for the period in question, taking into account the portfolio beginning relative weight (asset weighted dispersion measure). It is only displayed if there are at least five portfolios that remain for the entire period in the composite.

### Disclaimer

This document is for informational purposes only and does not constitute, on AXA Investment Managers' part, an offer to buy or sell or a solicitation of investment advice. Due to its simplification, this document is partial and the information can be subjective. AXA Investment Managers may but shall not be obligated to update or otherwise revise this document without any prior notice. All information in this document is established on the accounting information or on market data basis. AXA Investment Managers disclaims any and all liability relating to a decision based on or for reliance on this document. The most recent prospectus is available to all investors and must be read prior subscription and the decision whether to invest or not must be based on the information contained in the prospectus.



# AXA Framlington Global Technology Composite

## GIPS Compliant Performance Presentation

### General Information

Reporting Date	28/02/2019	Composite / Benchmark Currency	GBP
Uninterrupted Performance Since	01/01/2001	Reporting Currency	USD
Composite Creation Date	01/01/2001		

### Composite Investment

The objective of the Global Technology Composite is to provide long term capital growth by investing primarily in equity securities of companies engaged in all areas of technology, internet, and intranet related businesses globally.

### Composite Benchmark

100.00% MSCI World / Information Technology Gross Return USD Since 31/12/2000

Cumulative (%)	1 M.	3 M.	6 M.	YTD
Composite	8.06	11.54	-2.56	18.83
Benchmark	6.44	5.41	-6.01	14.65
Excess Return	1.62	6.13	3.44	4.17
Equal Weighted	8.06	11.54	-2.56	18.83
Median	8.06	11.54	-2.56	18.83

	2018 Q1	2018 Q2	2018 Q3	2018 Q4
Quarterly (%)				
Composite	4.54	9.56	6.09	-16.37
Benchmark	3.41	5.82	8.14	-17.70
Excess Return	1.13	3.74	-2.06	1.33
Equal Weighted	4.54	9.56	6.09	-16.37
Median	4.54	9.56	6.09	-16.37

Cumulative (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/01/2001
Composite	10.57	55.61	107.30	91.55	115.99	182.74	179.50	186.33	313.36	658.86	219.89
Benchmark	4.10	41.02	85.24	72.69	105.21	162.82	167.13	183.43	243.47	459.10	150.18
Excess Return	6.47	14.58	22.07	18.86	10.78	19.92	12.37	2.90	69.89	199.75	69.71
Equal Weighted	10.57	55.61	107.30	91.55	115.99	182.74	179.50	186.33	313.36	643.48	197.34
Median	10.57	55.61	107.30	91.55	115.99	182.74	179.50				

Source: AXA IM/GIPS as at 28/02/2019 in USD. Past performance of Global Technology GIPS composite is not an indicator of AXA IM Framlington Robotech's future performance.

# AXA Framlington Global Technology Composite

## GIPS Compliant Performance Presentation

### Performance Analysis

Annualised (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/01/2001
Composite	10.57	24.74	27.51	17.64	16.65	18.91	15.82	14.05	17.08	22.47	6.61
Benchmark	4.10	18.75	22.81	14.63	15.46	17.47	15.07	13.91	14.69	18.78	5.18
Excess Return	6.47	5.99	4.69	3.01	1.19	1.44	0.75	0.15	2.38	3.68	1.43
Equal Weighted	10.57	24.74	27.51	17.64	16.65	18.91	15.82	14.05	17.08	22.22	6.18
Median	10.57	24.74	27.51	17.64	16.65	18.91	15.82				

Calendar Year (%)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Composite	1.62	43.32	8.64	7.87	15.26	25.62	10.17	-3.93	28.78	85.04	-46.59
Benchmark	-2.60	38.23	11.45	4.76	16.06	28.72	13.77	-2.17	10.81	52.86	-43.70
Excess Return	4.22	5.09	-2.82	3.11	-0.80	-3.10	-3.60	-1.75	17.97	32.17	-2.88
Equal Weighted	1.62	43.32	8.64	7.87	15.26	25.62	10.17	-3.93	29.13	78.57	-45.96
Median	1.62	43.32	8.64	7.87	15.26	25.62	10.17		28.82	78.58	-46.01

### Assets Analysis

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Accounts in Composite *	1	1	1	1	1	1	1	1	1	2	2
Composites Assets (M USD) **	679	585	426	418	365	361	317	276	236	130	60
Firm Discr. Assets (M USD)	#N/A	223 150	177 183	182 303	215 895	225 582	196 490	171 700	198 813	192 120	167 815
Composite Weight (%)		0.22	0.23	0.21	0.14	0.12	0.12	0.12	0.09	0.05	0.03
Total Firm Assets (M USD) ***	#N/A	650 149	555 036	558 651	668 139	686 214	658 109	570 885	589 813	591 198	506 151

\* Accounts contributing to the composite performance over the last month of the period. \*\* AUM of Accounts in Composite over the last month of the period. \*\*\* Sum accounts assets falling within the definition of the firm.

Source: AXA IM/GIPS as at 28/02/2019 in USD. Past performance of Global Technology GIPS composite is not an indicator of AXA IM Framlington Robotech's future performance.

# AXA Framlington Global Core Equity Composite

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#### Benchmark Definition

From 01/07/2010 100% MSCI AC World Total Return Net

#### Minimum asset level

We have defined upper and lower thresholds and a grace period to avoid excessive volatility in the composite construction.

For US Fixed Income composites, the lower threshold is defined at 20,000,000 USD, where the upper threshold is not applicable, with a 3-month grace period.

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For GBP LDI composites, the upper threshold is defined at 5,000,000 GBP and lower threshold is 4,000,000 GBP, with a 6-month grace period.

For all other composites, the upper threshold is defined at 10,000,000 EUR the lower threshold at 8,000,000 EUR, with a 6-month grace period.

While a portfolio AUM is less than the upper threshold, it is excluded from the performance calculation for the composite to which it belongs. Once a portfolio AUM equals to exceeds the upper threshold, the performance of the portfolio is included in the performance calculation of the composite for the following month, starting from the last valuation day of the month during which the UM first equalised or exceeded the upper threshold.

# AXA Framlington Global Core Equity Composite

## Disclosures

The AUM for each portfolio will be measured on the last valuation day of each month, for the purpose of determining whether or not a portfolio will contribute to the performance calculation of a composite in the following month.

“Buffer” Rule: Once a portfolio has been included in the performance calculation of the composite, it continues to be included unless either:

- The AUM falls below the lower threshold, or
- the AUM has remained less than the upper threshold for the grace period.

When either of these two conditions is met at the end of a given month, the portfolio is excluded from the performance calculation for the following month.

### Performance result / fees

Performance results are presented gross of fees. Portfolios net returns are computed from Net Asset Values (dividend reinvested if specified) and each portfolio has an on-going charge assigned. Portfolios gross returns are computed from Net Asset Values adding back technical fee rate – which may be ongoing charges or Total Expenses Ratio – this calculated monthly and compounded up for relevant periods. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates.

### Compliance with local laws

This performance presentation does not conflict with any relevant local laws in any of the AXA IM management centres included in the Firm perimeter as at 31/12/2016.

### Calculation methodology

Composite performance is calculated on a monthly basis as follows:

- The portfolios entering the performance calculation are determined according to the Minimum Asset Level and Buffer Rule described above.
- Each portfolio brings its own specific start and end dates to the calculation, depending on the particular valuation dates of the portfolio.
- The performance of each portfolio is calculated using the start and end dates relevant to the period in question, and using daily-either cashflows
- The performance of a composite is calculated as a weighted average (using each portfolio's assets under management as at each portfolio's specific start date for the period in question) of the performance of the portfolios.
- Quarterly, annual, cumulative and since-inception returns are calculated by linking the composite monthly returns through compounded multiplication.

The benchmark return is calculated using monthly cashflows and do not include potential transaction costs or management fees.

- The Annualised Performance is shown on a 365 days basis.

Additional information regarding policies for calculating and reporting returns in compliance with the GIPS Standards is available upon request.

### Dispersion

Since 31/12/2012, a methodology change on dispersion has occurred: dispersion is defined as the standard deviation of portfolios returns for the period in question, taking into account the portfolio beginning relative weight (asset weighted dispersion measure). It is only displayed if there are at least five portfolios that remain for the entire period in the composite.

### Disclaimer

This document is for informational purposes only and does not constitute, on AXA Investment Managers' part, an offer to buy or sell or a solicitation of investment advice. Due to its simplification, this document is partial and the information can be subjective. AXA Investment Managers may but shall not be obligated to update or otherwise revise this document without any prior notice. All information in this document is established on the accounting information or on market data basis. AXA Investment Managers disclaims any and all liability relating to a decision based on or for reliance on this document. The most recent prospectus is available to all investors and must be read prior subscription and the decision whether to invest or not must be based on the information contained in the prospectus.

# AXA Framlington Global Core Equity Composite

## GIPS Compliant Performance Presentation

### General Information

Reporting Date	31/12/2018	Composite / Benchmark Currency	USD
Uninterrupted Performance Since	01/08/2010	Reporting Currency	USD
Composite Creation Date	01/07/2010		

### Composite Investment

The objective of this composite is to achieve long-term capital growth by investing in global equity markets.

### Composite Benchmark

100% MSCI AC World Total Return Net Since 01/07/2010

Quarterly (%)	2018 Q1	2018 Q2	2018 Q3	2018 Q4	Cumulative (%)	1 M.	3 M.	6 M.	YTD
Composite	1.98	1.17	5.23	-15.63	Composite	-7.21	-15.63	-11.22	-8.41
Benchmark	-0.96	0.53	4.28	-12.75	Benchmark	-7.04	-12.75	-9.02	-9.42
Excess Return	2.94	0.63	0.95	-2.88	Excess Return	-0.17	-2.88	-2.20	1.01
Equal Weighted	2.41	0.90	5.29	-15.59	Equal Weighted	-7.30	-15.59	-11.13	-8.17
Median	2.41	0.90	5.29	-15.60	Median	-7.30	-15.60	-11.13	-8.18

Cumulative (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/08/2010
Composite	-8.41	17.09	20.71	18.60	28.93	58.62	86.75	68.40			96.09
Benchmark	-9.42	12.30	21.13	18.27	23.19	51.28	74.35	62.01			85.71
Excess Return	1.01	4.79	-0.42	0.33	5.74	7.35	12.40	6.38			10.38
Equal Weighted	-8.17	17.42	20.84	19.01	29.30	59.08	87.29	68.88			96.65
Median	-8.18	17.41	20.79	18.73	29.31	60.73	89.24	70.64			98.70

Source: AXA IM/GIPS as at 28/02/2019 in USD. **Past performance is not an indicator of future performance.**

# AXA Framlington Global Core Equity Composite

## GIPS Compliant Performance Presentation

### Performance Analysis

Annualised (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/08/2010
Composite	-8.41	8.21	6.47	4.36	5.21	7.99	9.33	6.73			8.33
Benchmark	-9.42	5.97	6.60	4.28	4.26	7.14	8.26	6.22			7.63
Excess Return	1.01	2.23	-0.12	0.07	0.95	0.85	1.07	0.51			0.70
Equal Weighted	-8.17	8.36	6.51	4.45	5.27	8.04	9.38	6.77			8.37
Median	-8.18	8.35	6.50	4.38	5.27	8.23	9.54	6.91			8.50

Calendar Year (%)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Composite	-8.41	27.84	3.09	-1.75	8.71	23.03	17.73	-9.83			
Benchmark	-9.42	23.97	7.86	-2.36	4.16	22.80	15.25	-7.07			
Excess Return	1.01	3.86	-4.77	0.62	4.55	0.23	2.48	-2.76			
Equal Weighted	-8.17	27.87	2.91	-1.51	8.64	23.03	17.73	-9.83			
Median	-8.18	27.86	2.88	-1.71	8.45	23.03	17.73	-9.83			

### Assets Analysis

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Accounts in Composite *	2	2	2	2	3	1	1	1	1		
Composites Assets (M USD) **	152	119	118	129	151	52	38	32	33		
Firm Discr. Assets (M USD)	#N/A	223 150	177 183	182 303	215 895	225 582	196 490	171 700	198 813	192 120	167 815
Composite Weight (%)		0.04	0.06	0.06	0.06	0.02	0.01	0.01	0.01		
Total Firm Assets (M USD) ***	#N/A	650 149	555 036	558 651	668 139	686 214	658 109	570 885	589 813	591 198	506 151

\* Accounts contributing to the composite performance over the last month of the period. \*\* AUM of Accounts in Composite over the last month of the period. \*\*\* Sum accounts assets falling within the definition of the firm.

Source: AXA IM/GIPS as at 31/12/2018 in USD. **Past performance is not an indicator of future performance.**

# AXA Framlington Global Robotech Composite

## Disclosures

### Compliance Statement

AXA IM claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. AXA IM has been independently verified for the period 31 Dec 1999 – 31 Dec 2016. The verification report is available upon request. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any composite presentation.

### Presentation of the Firm

AXA Investment Managers is a firm comprising two "sub-firms" for GIPS® purposes, each of which is defined as shown below: - AXA IM: AXA IM groups together all the fee-paying portfolios managed in a discretionary manner according to the global investment processes (active judgmental management and index management) instituted during the last quarter of 1999 following a global reorganisation of AXA IM. The management centres included in this perimeter as of 31.12.2016 are AXA Investment Managers Paris, UK, Luxembourg, Germany, Italy, Switzerland, Hong Kong, Tokyo, Australia, AXA IM Inc and all Fund of Hedge Funds. Following the October 2003 acquisition of the Advantus US Investment Grade team by AXA IM, AXA IM North America and the acquired team were combined within one legal entity, AXA IM Inc. AXA IM Inc is a registered investment adviser with the Securities and Exchange Commission and has been included in the definition of AXA IM since October 1, 2003. AXA Framlington (London portfolios excluding Private Clients) is an equity manager with offices in the UK and has been verified for each of the years from 2001 to 2009 by PriceWaterhouseCoopers London. It has been included in the definition of AXA IM since January 1, 2010. Discretionary management includes all investment management agreements for which AXA IM assumes full and entire responsibility for the performance or performance spreads. AXA Rosenberg Investment Management: AXA Rosenberg is an equity manager with offices in the US, UK, Japan, Singapore and Hong Kong. This composite presentation is made by AXA IM. A complete list and description of all composites is available on request.

### GIPS Disclosures

#### Portfolio valuation

Portfolios are valued according to the market closing prices each day, except for certain portfolios valued in Germany, which use the closing price of the previous day, and the UK, where the price used is the 2pm price of the same day. In order to apply this valuation policy, the NAV of the day following the valuation date is used for certain portfolios. Dividends paid on securities in the portfolio are accounted for using ex-dividend date and are net of any withholding taxes. Buy and sell transactions are taken into account using trade-date valuation after confirmation for the trade by the counterparty. Accrued interest on debt securities is recorded each time the portfolio is valued. All proceeds, including realised and unrealised gains or losses in the portfolio are included in the value of assets. There are minor exceptions to these general rules for specific types of portfolios.

#### Policy on derivatives

For Segregated Accounts, derivatives are only used with the client's authorisation. Futures and options are used, mainly for hedging purposes. Except for specifically designated funds such as Futures Funds, no portfolio is to be overexposed to the market, translating as a strict "no leveraging" policy. There are no futures funds in this composite.

#### Benchmark disclaimer

The composite benchmark is generally determined by the benchmark of the dominant portfolio in the composite. Where portfolios are managed according to peer group asset allocations (notably in the UK), the composite benchmark is constructed by assigning a market index to published asset allocation weightings, which are periodically rebalanced. The extent to which any given composite invests in countries or regions not included in the benchmark depends on the limits (if any) specified in the investment management contracts of the individual portfolios in the composite. In general, such investment is marginal and is typically less than 10% for any given portfolio.

#### Benchmark Definition

From 31/01/2016 100% MSCI AC World Total Return Net

#### Minimum asset level

We have defined upper and lower thresholds and a grace period to avoid excessive volatility in the composite construction.

For US Fixed Income composites, the lower threshold is defined at 20,000,000 USD, where the upper threshold is not applicable, with a 3-month grace period.

For AXA Framlington LatAm composite, the upper threshold is defined at 10,000,000 USD the lower threshold at 8,000,000 USD, with a 3-month grace period.

For Framlington UK composites the upper threshold is defined at 1,000,000 GBP the lower threshold at 900,000 GBP, with a 3-month grace period except for the AXA Framlington Managed Balanced Composites, the upper threshold is defined 850,000 GBP and lower threshold is 816,000 GBP.

For the composite International Equity, Global Entrepreneur, the upper threshold is defined at 500,000 EUR, where the lower threshold is not applicable, with a 3-month grace period.

For GBP LDI composites, the upper threshold is defined at 5,000,000 GBP and lower threshold is 4,000,000 GBP, with a 6-month grace period.

For all other composites, the upper threshold is defined at 10,000,000 EUR the lower threshold at 8,000,000 EUR, with a 6-month grace period.

While a portfolio AUM is less than the upper threshold, it is excluded from the performance calculation for the composite to which it belongs. Once a portfolio AUM equals to exceeds the upper threshold, the performance of the portfolio is included in the performance calculation of the composite for the following month, starting from the last valuation day of the month during which the UM first equalised or exceeded the upper threshold.



# AXA Framlington Global Robotech Composite

## Disclosures

The AUM for each portfolio will be measured on the last valuation day of each month, for the purpose of determining whether or not a portfolio will contribute to the performance calculation of a composite in the following month.

“Buffer” Rule: Once a portfolio has been included in the performance calculation of the composite, it continues to be included unless either:

- The AUM falls below the lower threshold, or
- the AUM has remained less than the upper threshold for the grace period.

When either of these two conditions is met at the end of a given month, the portfolio is excluded from the performance calculation for the following month.

### Performance result / fees

Performance results are presented gross of fees. Portfolios net returns are computed from Net Asset Values (dividend reinvested if specified) and each portfolio has an on-going charge assigned. Portfolios gross returns are computed from Net Asset Values adding back technical fee rate – which may be ongoing charges or Total Expenses Ratio – this calculated monthly and compounded up for relevant periods. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates.

### Compliance with local laws

This performance presentation does not conflict with any relevant local laws in any of the AXA IM management centres included in the Firm perimeter as at 31/12/2016.

### Calculation methodology

Composite performance is calculated on a monthly basis as follows:

- The portfolios entering the performance calculation are determined according to the Minimum Asset Level and Buffer Rule described above.
- Each portfolio brings its own specific start and end dates to the calculation, depending on the particular valuation dates of the portfolio.
- The performance of each portfolio is calculated using the start and end dates relevant to the period in question, and using daily-either cashflows
- The performance of a composite is calculated as a weighted average (using each portfolio's assets under management as at each portfolio's specific start date for the period in question) of the performance of the portfolios.
- Quarterly, annual, cumulative and since-inception returns are calculated by linking the composite monthly returns through compounded multiplication.

The benchmark return is calculated using monthly cashflows and do not include potential transaction costs or management fees.

- The Annualised Performance is shown on a 365 days basis.

Additional information regarding policies for calculating and reporting returns in compliance with the GIPS Standards is available upon request.

### Dispersion

Since 31/12/2012, a methodology change on dispersion has occurred: dispersion is defined as the standard deviation of portfolios returns for the period in question, taking into account the portfolio beginning relative weight (asset weighted dispersion measure). It is only displayed if there are at least five portfolios that remain for the entire period in the composite.

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# AXA Framlington Global Robotech Composite

## GIPS Compliant Performance Presentation

### General Information

Reporting Date	28/02/2019	Composite / Benchmark Currency	JPY
Uninterrupted Performance Since	01/01/2016	Reporting Currency	USD
Composite Creation Date	01/10/2016		

### Composite Investment

The objective of the Global Robotech composite is to provide long-term capital growth by investing in listed equity and equity related securities mainly focusing on technology, industrials, healthcare and consumer sectors.

### Composite Benchmark

100.00% MSCI AC World Total Return Net Since Inception

Quarterly (%)	2018 Q1	2018 Q2	2018 Q3	2018 Q4
Composite	0.72	-2.21	5.42	-17.48
Benchmark	-0.96	0.53	4.28	-12.75
Excess Return	1.68	-2.74	1.14	-4.72
Equal Weighted	0.78	-2.03	4.83	-17.66
Median	0.76	-2.14	4.56	-17.75

Cumulative (%)	1 M.	3 M.	6 M.	YTD
Composite	5.89	5.44	-5.79	15.52
Benchmark	2.67	2.98	-2.92	10.78
Excess Return	3.22	2.46	-2.87	4.74
Equal Weighted	5.92	5.34	-5.94	15.88
Median	5.95	5.45	-5.85	16.03

Cumulative (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/01/2016
Composite	-5.07	29.37	75.95								60.01
Benchmark	-0.84	17.79	43.79								34.19
Excess Return	-4.23	11.58	32.16								25.81
Equal Weighted	-5.08	29.06	74.90								59.05
Median	-5.26	29.67	76.19								60.22

Source: AXA IM/GIPS as at 28/02/2019 in USD. **Past performance is not an indicator of future performance.**

# AXA Framlington Global Robotech Composite

## GIPS Compliant Performance Presentation

### Performance Analysis

Annualised (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/01/2016
Composite	0.04	12.75	18.41								16.19
Benchmark	2.60	8.55	10.67								9.89
Excess Return	-2.56	4.20	7.74								6.30
Equal Weighted	-0.38	12.41	18.13								15.93
Median	-0.07	12.87	18.42								16.20

Calendar Year (%)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Composite	-14.32	45.13	11.38								
Benchmark	-9.41	23.97	7.86								
Excess Return	-4.90	21.16	3.51								
Equal Weighted	-14.78	44.61	11.38								
Median	-14.67	44.78	11.38								

### Assets Analysis

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Accounts in Composite *	3	3	1	0							
Composites Assets (M USD) **	4 033	4 034	909								
Firm Discr. Assets (M USD)	#N/A	223 150	177 183	182 303	215 895	225 582	196 490	171 700	198 813	192 120	167 815
Composite Weight (%)		1.51	0.49								
Total Firm Assets (M USD) ***	#N/A	650 149	555 036	558 651	668 139	686 214	658 109	570 885	589 813	591 198	506 151

\* Accounts contributing to the composite performance over the last month of the period. \*\* AUM of Accounts in Composite over the last month of the period. \*\*\* Sum accounts assets falling within the definition of the firm.

Source: AXA IM/GIPS as at 31/03/2019 in USD.

# AXA Framlington Digital Technology Composite

## Disclosures

### Compliance Statement

AXA IM claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. AXA IM has been independently verified for the period 31 Dec 1999 – 31 Dec 2016. The verification report is available upon request. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any composite presentation.

### Presentation of the Firm

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### GIPS Disclosures

#### Portfolio valuation

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#### Policy on derivatives

For Segregated Accounts, derivatives are only used with the client's authorisation. Futures and options are used, mainly for hedging purposes. Except for specifically designated funds such as Futures Funds, no portfolio is to be overexposed to the market, translating as a strict "no leveraging" policy. There are no futures funds in this composite.

#### Benchmark disclaimer

The composite benchmark is generally determined by the benchmark of the dominant portfolio in the composite. Where portfolios are managed according to peer group asset allocations (notably in the UK), the composite benchmark is constructed by assigning a market index to published asset allocation weightings, which are periodically rebalanced. The extent to which any given composite invests in countries or regions not included in the benchmark depends on the limits (if any) specified in the investment management contracts of the individual portfolios in the composite. In general, such investment is marginal and is typically less than 10% for any given portfolio.

#### Benchmark Definition

100% MSCI AC World TR Net.

#### Minimum asset level

We have defined upper and lower thresholds and a grace period to avoid excessive volatility in the composite construction.

For US Fixed Income composites, the lower threshold is defined at 20,000,000 USD, where the upper threshold is not applicable, with a 3-month grace period.

For AXA Framlington LatAm composite, the upper threshold is defined at 10,000,000 USD the lower threshold at 8,000,000 USD, with a 3-month grace period.

For Framlington UK composites the upper threshold is defined at 1,000,000 GBP the lower threshold at 900,000 GBP, with a 3-month grace period except for the AXA Framlington Managed Balanced Composites, the upper threshold is defined 850,000 GBP and lower threshold is 816,000 GBP.

For the composite International Equity, Global Entrepreneur, the upper threshold is defined at 500,000 EUR, where the lower threshold is not applicable, with a 3-month grace period.

For GBP LDI composites, the upper threshold is defined at 5,000,000 GBP and lower threshold is 4,000,000 GBP, with a 6-month grace period.

For all other composites, the upper threshold is defined at 10,000,000 EUR the lower threshold at 8,000,000 EUR, with a 6-month grace period.

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# AXA Framlington Digital Technology Composite

## Disclosures

The AUM for each portfolio will be measured on the last valuation day of each month, for the purpose of determining whether or not a portfolio will contribute to the performance calculation of a composite in the following month.

“Buffer” Rule: Once a portfolio has been included in the performance calculation of the composite, it continues to be included unless either:

- The AUM falls below the lower threshold, or
- the AUM has remained less than the upper threshold for the grace period.

When either of these two conditions is met at the end of a given month, the portfolio is excluded from the performance calculation for the following month.

### Performance result / fees

Performance results are presented gross of fees. Portfolios net returns are computed from Net Asset Values (dividend reinvested if specified) and each portfolio has an on-going charge assigned. Portfolios gross returns are computed from Net Asset Values adding back technical fee rate – which may be ongoing charges or Total Expenses Ratio – this calculated monthly and compounded up for relevant periods. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates. The range of the Technical Fee Rate for this composite is shown above. The rates shown do not imply any limit (either maximum or minimum) on the fees application to new mandates.

### Compliance with local laws

This performance presentation does not conflict with any relevant local laws in any of the AXA IM management centres included in the Firm perimeter as at 31/12/2016.

### Calculation methodology

Composite performance is calculated on a monthly basis as follows:

- The portfolios entering the performance calculation are determined according to the Minimum Asset Level and Buffer Rule described above.
- Each portfolio brings its own specific start and end dates to the calculation, depending on the particular valuation dates of the portfolio.
- The performance of each portfolio is calculated using the start and end dates relevant to the period in question, and using daily-either cashflows
- The performance of a composite is calculated as a weighted average (using each portfolio's assets under management as at each portfolio's specific start date for the period in question) of the performance of the portfolios.
- Quarterly, annual, cumulative and since-inception returns are calculated by linking the composite monthly returns through compounded multiplication.

The benchmark return is calculated using monthly cashflows and do not include potential transaction costs or management fees.

- The Annualised Performance is shown on a 365 days basis.

Additional information regarding policies for calculating and reporting returns in compliance with the GIPS Standards is available upon request.

### Dispersion

Since 31/12/2012, a methodology change on dispersion has occurred: dispersion is defined as the standard deviation of portfolios returns for the period in question, taking into account the portfolio beginning relative weight (asset weighted dispersion measure). It is only displayed if there are at least five portfolios that remain for the entire period in the composite.

### Disclaimer

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# AXA Framlington Digital Economy Composite

## GIPS Compliant Performance Presentation

### General Information

Reporting Date	31/03/2019	Composite / Benchmark Currency	USD
Uninterrupted Performance Since	01/11/2017	Reporting Currency	USD
Composite Creation Date	19/12/2017		

### Composite Investment

The strategy invests in equities of companies anywhere in the world that operate within the digital economy sector. Specifically, at all times the Sub-Fund invests at least two thirds of its net assets in equities and equity-related securities of companies active in the overall value chain of the digital economy, from the customers' initial discovery of products and services, to the buying decision and then the final payment and delivery, and also in the technology enablers providing support and data analysis to develop companies' digital presence. Investments may include companies of any market capitalisation.

### Composite Benchmark

100% MSCI AC World Total Return Net

Cumulative (%)	1 M.	3 M.	6 M.	YTD
Composite	3.01	21.44	0.32	21.44
Benchmark	1.26	12.18	-2.13	12.18
Excess Return	1.75	9.27	2.45	9.27
Equal Weighted	3.01	21.44	0.32	21.44
Median	3.01	21.44	0.32	21.44

	2018 Q2	2018 Q3	2018 Q4	2019 Q1
<b>Quarterly (%)</b>				
Composite	8.57	6.25	-17.39	21.44
Benchmark	0.53	4.28	-12.75	12.18
Excess Return	8.04	1.97	-4.64	9.27
Equal Weighted	8.57	6.25	-17.39	21.44
Median	8.57	6.25	-17.39	21.44

Cumulative (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/11/2017
Composite	15.73										30.14
Benchmark	2.60										5.25
Excess Return	13.13										24.89
Equal Weighted	15.73										30.14
Median	15.73										30.14

Source: AXA IM/GIPS as at 31/03/2019 in USD. Past performance is not a guide to future performance.

# AXA Framlington Digital Economy Composite

## GIPS Compliant Performance Presentation

### Performance Analysis

Annualised (%)	1 Y.	2 Y.	3 Y.	4 Y.	5 Y.	6 Y.	7 Y.	8 Y.	9 Y.	10 Y.	Since 01/11/2017
Composite	15.73										20.44
Benchmark	2.60										3.68
Excess Return	13.13										16.76
Equal Weighted	15.73										20.44
Median	15.73										20.44

Calendar Year (%)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Composite	5.57										
Benchmark	-9.41										
Excess Return	14.99										
Equal Weighted	5.57										
Median	5.57										

### Assets Analysis

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Accounts in Composite *	1	1									
Composites Assets (M USD) **	271	19									
Firm Discr. Assets (M USD)	#N/A	223 150	177 183	182 303	215 895	225 582	196 490	171 700	198 813	192 120	167 815
Composite Weight (%)		0.01									
Total Firm Assets (M USD) ***	#N/A	650 149	555 036	558 651	668 139	686 214	658 109	570 885	589 813	591 198	506 151

\* Accounts contributing to the composite performance over the last month of the period. \*\* AUM of Accounts in Composite over the last month of the period. \*\*\* Sum accounts assets falling within the definition of the firm.

Source: AXA IM/GIPS as at 31/03/2019 in USD. Past performance is not a guide to future performance.

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