

**Kev risk** 

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested. Simulated and past performance is not a guide to the future.



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### **L&G** Thematic ETFs



Visit **lgim.com/uk-etf** for further information and latest updates.

### **Performance commentary**

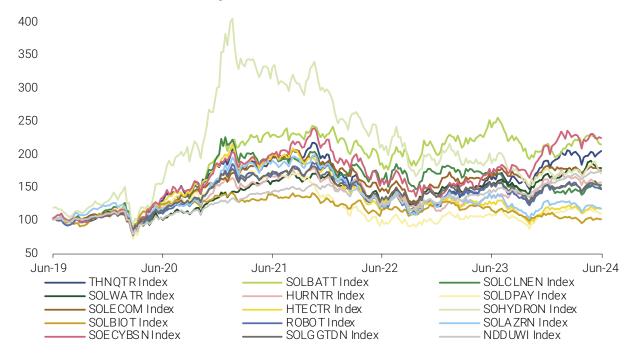
The second quarter of 2024 was volatile for most thematic strategies. Technology and Communication Services were the best-performing sectors, while Materials, Energy and Industrials underperformed.

Artificial Intelligence was the best-performing theme in the second quarter of 2024, followed by Pharma Breakthrough. Digital Payments, Optical Technology & Photonics, and Robotics and Automation were the worst-performing themes.

### Key risk

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested. Simulated and past performance is not a guide to the future. Capital at risk.

### Historical and simulated index performance\*



Source: Bloomberg, as of 28 June 2024, all values are based in USD.

<sup>\*</sup>The back-tested index data have been sourced from the index providers; they are based on what they perceive to be reasonable assumptions and objective data.



## **L&G Thematic ETFs**

### Rolling 12 month performance to 28/06/2024

Index ticker	ETF ticker	2019	2020	2021	2022	2023	2024
THNQTR Index	AIAI	18.0%	29.6%	48.3%	-38.0%	36.2%	26.5%
SOLBATT Index	BATT	-6.2%	12.9%	101.6%	-21.1%	37.3%	-14.4%
SOLCLNEN Index	RENW	8.4%	11.1%	76.8%	-18.5%	6.8%	-17.2%
SOLWATR Index	GLUG	11.8%	2.5%	53.6%	-18.3%	21.1%	12.8%
HURNTR Index	USPY	15.1%	20.2%	35.5%	-25.4%	11.7%	16.8%
SOLDPAY Index	DPAY	27.0%	19.9%	38.7%	-45.7%	18.0%	2.5%
SOLECOM Index	ECOM	-2.1%	13.2%	69.6%	-26.8%	18.0%	4.4%
HTECTR Index	DOCT	20.9%	24.9%	57.6%	-39.3%	4.6%	-8.9%
SOHYDRON Index	HTWO	-	39.3%	103.1%	-38.9%	-5.5%	-12.5%
SOLBIOT Index	BIOT	-0.3%	22.3%	11.3%	-16.8%	-0.9%	-8.9%
ROBOT Index	ROBO	0.2%	10.1%	51.2%	-30.4%	30.9%	-4.7%
SOLAZRN Index	LAZR	-2.2%	13.3%	61.9%	-36.1%	12.5%	-14.5%
SOECYBSN Index	ESPY	21.3%	33.5%	46.3%	-23.3%	16.2%	28.8%
SOLGGTDN Index	THMZ	-	-	50.1%	-24.9%	18.3%	-0.5%
NDDUWI Index	MSCI World	6.3%	2.8%	39.0%	-14.3%	18.5%	20.2%



Source: Bloomberg, all values are based in USD; as at 28 June 2024. Performance based on index levels gross of fees but net of dividend witholding taxes, where applicable. The effect of fees and charges would reduce the returns shown.

### **Key risk**

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## Macro update

### **Economy and policy**

The second quarter of 2024 was busy on the election front. The EU parliamentary elections provided a shift to the right, and in its largest-ever elections Mexico elected its first woman president with a landslide victory. UK parties published their manifestos for the July election, and the US presidential debates started.

The 2024 G7 meeting in Puglia, Italy, resulted in a \$50 billion Ukraine deal for new financing by bringing forward the interest earned on immobilised Russian sovereign assets held in the European Union and other jurisdictions.

On the monetary policy front, the European Central Bank (ECB) was the second major economy (after Canada) to cut interest rates following progress in tackling inflation. The ECB lowered rates for the first time in five years, cutting by 25bps to 3.75%. Meanwhile, the Bank of England and the Fed left rates unchanged.

Nvidia, Apple and Microsoft all hit the \$3 trillion market cap.

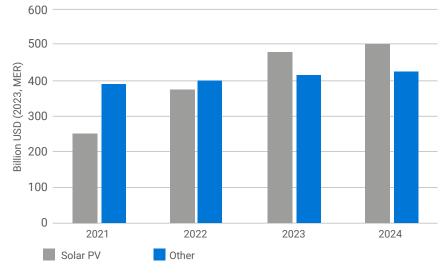
Source: LGIM, JEA, June 2024

#### **Climate news**

Global investment in clean energy has now almost doubled fossil fuels. Solar PV has surpassed all other generation technologies combined.

Source: IEA, June 2024

### Global annual investment in solar PV and other generation technologies, 2021-2024



Source: IEA, June 2024

For illustrative purposes only. The above information does not constitute a recommendation to buy or sell any security. There is no guarantee that any forecasts made will come to pass.



## Macro update

#### **Investment themes**

#### **Cyber security**

Longer sales cycles and increased IT budget scrutiny put pressure on cyber security providers in the second quarter of 2024. However, the investment case remains strong. McKinsey estimates a total addressable market of \$1.5-2 trillion, but 2023 spending of \$160-170 billion, indicating that the market still has a 10% penetration rate at most, and there is still a lot of room for growth.

Source: McKinsey, Nasdaq, April 2024

#### **Battery Value-Chain**

Prior to the coup at the end of June, the Bolivian president confirmed that Russia's Uranium One direct lithium extraction (DLE) operation would start in 2025 in the Bolivian salt flats. According to a report from Goldman Sachs, if ~20-40% of LatAm brine projects implemented DLE, the region's output could increase by ~35% from 2028+, and global raw supply by c.8%. Source: Goldman Sachs, April 2023; LGIM, June 2024

#### **Robotics & Automation**

According to VettaFi, Goldman Sach's forecast of a \$38 billion market for humanoid robots by 2035 appears modest, indicating that the market has huge room for expansion. Many experts believe that the global robot population could reach 1% of the global human population, suggesting an estimate over 50 times as high.

Source: Goldman Sachs, February 2024; VettaFi, June 2024.

Source: McKinsey, Nasdaq, April 2024; Goldman Sachs, April 2023; LGIM, June 2024; Goldman Sachs, February 2024; VettaFi, June 2024; LGIM Climate Impact Pledge 2024, June 2024.

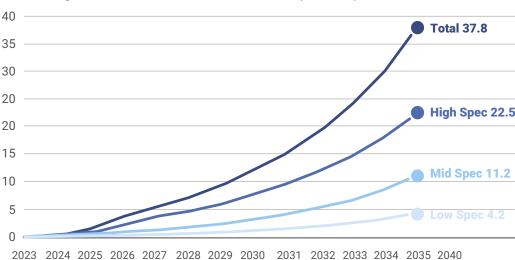


### Did you know?

LGIM published the results of its eighth Climate Impact Pledge. During the 2024 proxy season, our Investment Stewardship team engaged with over 2,800 companies seeking to address systemic risks linked to climate change across the global economy and markets, as well as clients' portfolios.

Source: LGIM Climate Impact Pledge 2024, June 2024

### Forecast global humanoid robot market size (\$ billion)



High, mid and low spec refer to robot sophistication, from basic functionality to state of the art. Source: Goldman Sachs, February 2024; VettaFi, June 2024

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### Thematic investment insights

Want to stay ahead of the latest developments shaping the future of technology, energy and resources, and demographics? Our regular blogs and podcasts cover a wide range of key thematic investment topics.



### **Clean Water podcast:**

Water scarcity: why it matters for investors

Listen here



### **Ecommerce logistics** blog:

How automation is transforming logistics

Read here



### **Cyber Security blog:**

How is cyber security changing, and what does this mean for investors?

Read here



### Clean water blog:

How could new technology tackle the age-old problem of water loss?

Read here



### Clean water blog:

How could desalination alleviate water scarcity?

Read here



### Clean water blog:

Why are we running out of fresh water?

Read here



### Thematic investing blog:

The geopolitical ripple effect

Read here



## Artificial Intelligence blog:

Identifying upstream enablers in the AI revolution

Read here



### **Cyber Security blog:**

Cyber security growth, Al and valuations: a story in three charts

Read here



### Investment strategy blog:

Threading the needle: finding balance in a concentrated investment world

Read here



## ETF overlaps

### Overlap across our themes

The following chart shows the overlap across our thematic range of investment strategies. When we design an investment strategy, we aim to provide pure exposure to the theme, which results in our thematic ETFs usually having little to no overlap, where possible. This allows investors to allocate according to their preferences and aim to reduce concentration risks in a portfolio.



	Artificial Intelligence	Battery Value- Chain	Clean Energy	Clean Water	Cyber Security	Digital Payments	Ecommerce Logistics	Emerging Cyber Security	Global Thematic	Healthcare Breakthrough	Hydrogen Economy	Pharma Breakthrough	Optical Technology & Photonics
Battery Value-Chain	2% (1)	Ondin						Coodiney					a i notomos
Clean Energy	2% (1)	8% (4)											
Clean Water	0% (0)	0% (0)	0% (0)										
Cyber Security	10% (6)	0% (0)	0% (0)	0% (0)									
Digital Payments	3% (2)	0% (0)	0% (0)	0% (0)	2% (2)								
eCommerce Logistics	4% (2)	0% (0)	0% (0)	0% (0)	0% (0)	3% (1)							
Emerging Cyber Security	16% (8)	0% (0)	0% (0)	0% (0)	41% (23)	5% (2)	0% (0)						
Global Thematic	12% (53)	14% (26)	12% (26)	9% (47)	8% (24)	1% (4)	11% (38)	13% (37)					
Healthcare Breakthrough	5% (4)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	17% (67)				
Hydrogen Economy	0% (0)	0% (0)	7% (2)	1% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1% (3)	0% (0)			
Pharma Breakthrough	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	17% (27)	8% (5)	0% (0)		
Photonics	2% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1% (10)	2% (1)	0% (0)	0% (0)	
Robotics and Automation	15% (10)	3% (2)	0% (0)	1% (1)	0% (0)	0% (0)	3% (2)	1% (1)	12% (65)	11% (8)	0% (0)	0% (0)	11% (8)

Source: LGIM, Bloomberg as at 28 June 2024. Figures represent % weight and number of stocks. Percentage overlap is calculated as the minimum of weight overlap between two portfolios.

For illustrative purposes only. The above information does not constitute a recommendation to buy or sell any security.





# **Artificial Intelligence**

### **Company spotlight**

Analog Devices

Analog Devices (ADI), founded in 1965 by two MIT graduates, recently surpassed \$100 billion in market cap for the first time. ADI is a leading company in analog, mixed signal and digital signal processing (DSP) technologies. It serves key sectors including industrial, automotive, communications, medical and consumer electronics, listed in order of revenue percentage. With over 125,000 customers worldwide and tens of thousands of products, ADI has a significant global presence.

In their latest earnings report, ADI reported revenue of \$2.16 billion, surpassing the midpoint of their outlook. The company generated \$4.3 billion in operating cash flow and \$3.1 billion in free cash flow over the past 12 months, while returning over \$675 million to shareholders through dividends and repurchases in the second quarter, indicating strong fundamentals. Furthermore, their book-to-bill ratios climbed back above one across all segments (a key industry metric indicating strong demand), signaling a positive trajectory for ADI and paving the way for a robust recovery and accelerated growth in the second half of 2024 and beyond.

ADI is not only incorporating AI into their own products and operations but is also well positioned to capitalise

on the larger opportunity in the inference stage of AI. ADI's products help bridge the gap between the physical and digital worlds, with signal processing and efficient power management being crucial components of our increasingly automated and electric future. This is evident in various applications, such as high-speed data converters for AI-driven data centres, sensors and processors for advanced driver assistance systems (ADAS), precision measurement systems for industrial automation, and RF technologies supporting 5G infrastructure.

### Last quarter performance commentary

The ROBO Global Artificial Intelligence Index returned +2.6% over the quarter.

'Text-to-app' capabilities that utilise large language models (LLMs) for contextual understanding, coding and debugging are emerging. Microsoft-backed OpenAl faces stiff competition from other index members such as Alibaba's QWEN2 and Alphabet's Gemma 2.

'Human-first' regulations are reshaping Al implementation across industries. Our Artificial Intelligence index may potentially offer a more balanced approach to Al exposure than individual tech giants facing increasing technical and regulatory risks.

Six of the 11 subsectors were positive, led by performances in semiconductor, network & security, consumer and cloud providers. Offsetting performance came from declines in big data / analytics, ecommerce, business process and healthcare. High expectations led to some declines among companies that had overall solid earnings numbers and forecasts.

In the network and security subsector, Darktrace was acquired by private equity fund Thoma Bravo. Pure Storage and Arista Networks continue to climb together as enablers of AI storage and data centre networking. Cybersecurity leaders Crowdstrike and Palo Alto Networks continue to show value in protecting the increasingly digitally automated and reliant landscape with new AI offerings. On the other hand, the market questioned Snowflake's future as its revenue growth slowed slightly and their forward guidance was conservative.

The business process subsector saw some presummer cooling off, with some pressure on both B2B and B2C fronts, with Salesforce and Samsara in the red, while Fair Isaac Corporation and Adobe saw gains. Costar acquired Matterport, a 3D visualisation technology company that has captured over 38 billion square feet of property data globally, further cementing its dominance in digital real estate technology.

Source: LGIM, Bloomberg, VettaFi, as at 28 June 2024.



# **Artificial Intelligence**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	2.61%	26.54%	6.76%	105.19%
Annualized Return			2.21%	15.45%
Volatility	18.16%	19.87%	28.43%	28.86%
Sharpe Ratio	59.95%	134.07%	7.77%	53.55%
Max Drawdown	-9.55%	-15.99%	-50.09%	-50.09%

### Index total return contribution (QtD)

Top 5		Bottom 5	
Nvidia Corp	▲ 0.99%	Ginkgo Bioworks	<b>▼</b> -1.37%
Darktrace Plc	▲ 0.60%	Nice Ltd -Sp Adr	<b>▼</b> -0.51%
Teradyne Inc	• 0.56%	Veeva Systems-A	<b>▼</b> -0.41%
Alphabet Inc-A	▲ 0.48%	Costar Group Inc	<b>▼</b> -0.38%
Pure Storage-A	<b>▲</b> 0.45%	Illumina Inc	<b>▼</b> -0.37%

### **Portfolio composition**

Latest additions	Latest deletions
Nutanix	Darktrace
CyberArk Software	Etsy
Elastic NV	Accenture
	Nice Ltd

#### **Fund information**

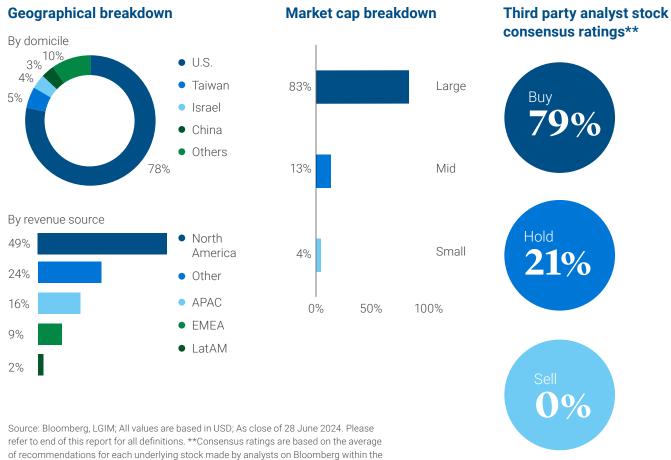
Ticker	AIAI LN	ISIN	IE00BK5BCD43
TER	0.49%	Inception date	02/07/2019
Currency	USD	Index inception date	14-Dec-18
Securities lending	No	Replication method	Physical

#### Key risk



# **Artificial Intelligence**

Characteristics



### **Key ratios**

	1 _	
	Current	Q2 2023
EPS	1.40	0.94
Price/Sales	9.45	8.04
BPS	14.64	15.06
P/E Positive	51.76	47.85
ROE	10.86	8.12
Price/Book	9.30	7.60
P/E (1y fwd)	84.28	67.74
P/E (3y fwd)	51.88	48.70
Sales (1y fwd)	23,124	20,069
Sales (3y fwd)	31,831	28,153

### **Constituents overlap**

S&P 500	15.0%
MSCI World	13.3%
Nasdaq 100	22.6%
Total stocks = 57	

last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

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# **Battery Value-Chain**

### **Company spotlight**

Wartsila

Headquartered in Finland, Wartsila is a leader in smart technologies and complete lifecycle solutions for the marine and energy markets. Its energy business offers internal combustion engine-based power plants, hybrid solar power plants, and energy storage solutions and optimisation. The company's marine business serves cruise ships, ferries and offshore wind.

As a battery energy storage integrator, the company's Energy Storage & Optimisation division has deployed over 125 storage systems globally, equating to over 12.5 GWh of awarded global storage fleet. The division's flagship technology is GridSolv Quantum, a fully integrated energy storage solution. The solution supports the integration of storage into electricity grids and the increased use of renewables, ensuring the lowest lifecycle costs and the smallest system footprint. Additionally, the company's mature GEMS Digital Energy Platform is a smart software platform that monitors, controls and optimises energy assets on both site and portfolio levels.

In February 2024, the company announced that it will deliver one of Scotland's largest energy storage systems (source). The company will supply a 300-megawatt / 600-megawatt hour energy storage system to Zenobe, an electric vehicle fleet and battery storage specialist in

Kilmarnock, Scotland. This will be the first facility built with Wartsila's Quantum High Energy (QuantumHE), a next-generation energy storage system.

To further strengthen its offerings within energy storage, Wartsila launched Quantum2 in March 2024 (source), a fully integrated high-capacity battery energy storage system designed and optimised for global large-scale deployment. Quantum2 enables project developers to meet capacity requirements more efficiently and effectively with improved transportation and deployment speed.

### Last quarter performance commentary

The Solactive Battery Value-Chain Index returned -4.3% over the quarter.

To avoid relying on imports, to be competitive and in an effort to meet its climate objectives, the EU is now aiming to source no more than 65% of any given strategic raw material from any single non-EU country by 2030, as established by the Critical Raw Materials Act that came into force this quarter. According to the European Commission, EU demand for lithium is expected to increase twelvefold by 2030 and by 21 times by 2050.

Similarly, to protect the local market, the US imposed tariffs on electric vehicle (EV) imports from China, although the country accounted for less than 1% of Chinese EV exports in 2023.

The main contributors to performance were HD Hyundai Electric (returned +68.7%) on the back of record high quarterly orders and profitability; Wartsila Oyj (+26.8%) on better-than-expected orders and positive Q1 results; and TDK Corp (+24.1%), following solid-state battery breakthroughs. Overall, providers of renewable energy storage solutions are well positioned to enjoy the tailwinds of new demand from clean energy, new investment and replacement of old power facilities in the US, and greater equipment demand from the Middle East.

The main detractors were SolarEdge Technologies (-64.4%), Sigma Lithium (-7.2%) and Samsung SDI (-26.6%). SolarEdge proposed a private offering of convertible notes and had a customer file for bankruptcy. Elevated inventory levels and weak demand are weighing on the company's ability to generate cash and Q2 guidance was below forecasts.

Sigma Lithium is aiming to increase sales while low lithium prices continue to hurt. Samsung SDI was hurt by softer EV sales.

Source: LGIM, Bloomberg, FastMarkets, Benchmark Mineral Intelligence, as at 28 June 2024.



# **Battery Value-Chain**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-4.25%	-14.38%	-7.26%	111.08%
Annualized Return			-2.48%	16.11%
Volatility	16.98%	17.24%	19.37%	21.35%
Sharpe Ratio	-94.21%	-83.64%	-12.82%	75.46%
Max Drawdown	-7.85%	-26.53%	-29.07%	-37.30%

### Index total return contribution (QtD)

Top 5		Bottom 5	
Hd Hyundai Elect	<b>3.68%</b>	Solaredge Techno	<b>▼</b> -2.27%
Wartsila Oyj Abp	▲ 0.99%	Sigma Lithium Co	<b>▼</b> -1.35%
Tdk Corp	<b>0.83%</b>	Samsung Sdi Co	<b>▼</b> -0.93%
Abb Ltd-Reg	• 0.76%	Arcadium Lithium	<b>▼</b> -0.77%
Delta Elec	<b>▲</b> 0.49%	Lg Energy Soluti	<b>▼</b> -0.64%

### **Portfolio composition**

Latest additions	Latest deletions
BASF Canadian Solar	EOS Energy
Lithium Americas	
Sayona Mining	
Sigma Lithium	

### **Fund information**

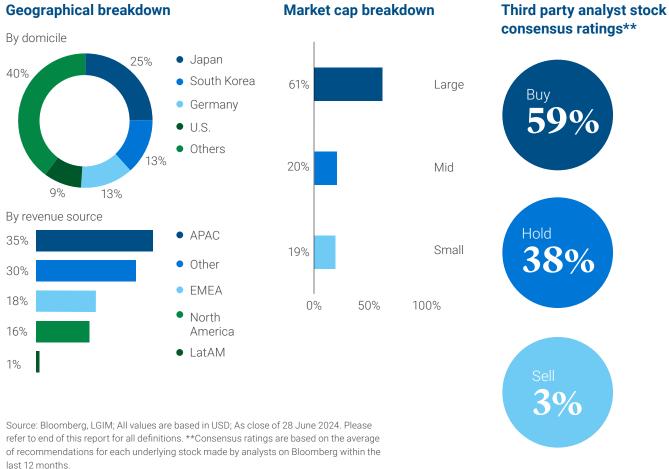
Ticker	BATT LN	ISIN	IE00BF0M2Z96
TER	0.49%	Inception date	23/01/2018
Currency	USD	Index inception date	03-Jan-18
Securities lending	No	Replication method	Physical

#### Key risk



# **Battery Value-Chain**

Characteristics



### ty analyst stock Key ratios

	Current	Q2 2023
EPS	1.46	1.57
Price/Sales	1.05	0.96
BPS	17.38	17.57
P/E Positive	13.53	15.26
ROE	9.35	8.74
Price/Book	1.00	2.04
P/E (1y fwd)	23.15	18.16
P/E (3y fwd)	18.81	25.62
Sales (1y fwd)	45,740	46,523
Sales (3y fwd)	44,870	44,677

### **Constituents overlap**

S&P 500	1.2%
MSCI World	1.4%
Nasdaq 100	2.5%
Total stocks = 34	

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

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## **Clean Energy**

### **Company spotlight**

Negen

France-based Neoen is one of the world's biggest pure players in renewable energy, focusing on the production of solar and wind energy, as well as the development of cutting-edge energy storage solutions. The company is present in 16 countries and has 8 GW of total capacity in operation/under construction, with the aim to reach 10 GW by 2025.

A key differentiator of the company is its 'develop-to-own' business model, under which it develops its projects with the intention to continue to own and operate the assets post-construction (targeting 100% ownership where possible). Neoen develops projects from the ground up, closely supervising their construction and ensuring their efficient operation and management.

Neoen has a track record of landmark projects: France's largest solar power plant in Cestas (300 MWp); Australia's largest solar power plant in the Western Downs region (460 MWC); Finland's largest onshore wind farm in Mutkalampi (404 MW); the world's first big battery (150 MW / 193,5 MWh) in Hornsdale, Australia; and one of the world's most competitive solar power plant at El Llano. Mexico, 375 MWp.

In May 2024, investment firm Brookfield Partners announced that it has entered into exclusive talks to buy a majority stake in Neoen, valuing the company at c. \$6.6bn, representing a 27% price premium (source). The deal will mark one of the biggest private deals in Europe in 2024 and provides the opportunity to scale Neoen's portfolio of diverse high-quality assets in a context of accelerating clean power demand.

### Last quarter performance commentary

The Solactive Clean Energy Index NTR returned -2.8% over the quarter.

Energy, finance and climate leaders met in London to discuss how the public and private sector can better support a rapid increase in clean energy investment globally, which would need to double to more than \$4 trillion annually by 2030 to reach net zero emissions by 2050.

In 2023, each dollar invested in wind and solar PV yielded 2.5 times more energy output than a dollar spent on the same technologies a decade prior, according to <u>IEA's World Energy Investment 2024</u> report. The same report notes that in 2015, the ratio of clean power to unabated fossil fuel power investments

was roughly 2:1; in 2024, this ratio is set to reach 10:1. Complementary investments in flexibility and storage capacity will be needed to support the rapid scale up of solar and wind deployment.

The main contributors to performance were Siemens Energy (returned +41.9%), on the back of strong orders and guidance especially from the grid technologies division; Neoen (+43.2%); and First Solar (+33.6%), due to strong market pricing and due to solar demand driven by Al data centre operators known as hyperscalers.

The main detractors were Alfen NV (-65.7%), following a weak quarter especially for the energy storage systems division and an outlook cut; SolarEdge Technologies (-64.4%); and SMA Solar (-50.6%), also on the back of a disappointing reporting season. SolarEdge proposed a private offering of convertible notes and had a customer file for bankruptcy. Elevated inventory levels and weak demand are weighing on the company's ability to generate cash and 2Q guidance was below forecasts.

Source: LGIM, Bloomberg, IEA, as at 28 June 2024.



# **Clean Energy**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### **Index performance\***

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-2.81%	-17.17%	-27.91%	41.58%
Annualized Return			-10.35%	7.20%
Volatility	19.09%	20.28%	21.37%	23.47%
Sharpe Ratio	-56.60%	-84.95%	-48.42%	30.67%
Max Drawdown	-9.17%	-28.18%	-39.86%	-44.82%

### Index total return contribution (QtD)

Top 5		Bottom 5	
Siemens Energy A	<b>1</b> .24%	Alfen N.V.	<b>▼</b> -1.65%
Neoen Sa	<b>1.13%</b>	Solaredge Techno	<b>▼</b> -1.64%
First Solar Inc	• 0.83%	Sma Solar Techno	<b>▼</b> -1.08%
Ameresco Inc-A	• 0.55%	Array Technologi	▼ -0.80%
Grenergy Renovab	• 0.53%	Renova Inc	<b>▼</b> -0.64%

### **Portfolio composition**

Latest additions	Latest deletions
no rebalance in Q2	no rebalance in Q2

### **Fund information**

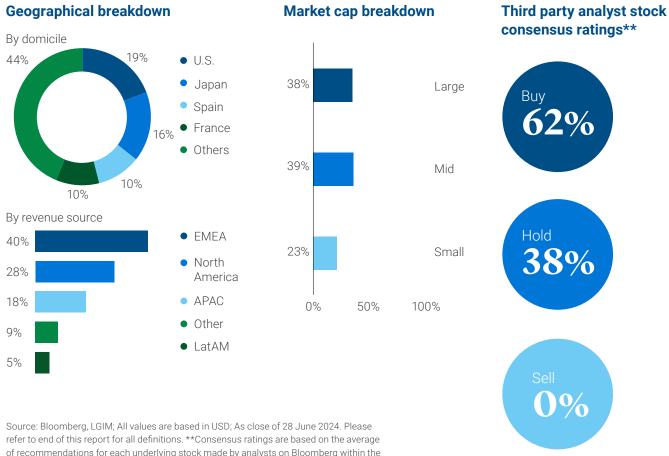
Ticker	RENW LN	ISIN	IE00BK5BCH80
TER	0.49%	Inception date	11/11/2020
Currency	USD	Index inception date	26-Jun-20
Securities lending	No	Replication method	Physical

#### Key risk



# **Clean Energy**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	1.22	1.25
Price/Sales	1.14	1.76
BPS	13.69	13.59
P/E Positive	15.78	20.21
ROE	11.29	9.44
Price/Book	1.85	1.95
P/E (1y fwd)	28.64	32.86
P/E (3y fwd)	18.10	33.68
Sales (1y fwd)	16,321	16,507
Sales (3y fwd)	17,287	15,667

### **Constituents overlap**

S&P 500     1.6%       MSCI World     1.6%       Nasdag 100     2.5%	Total stocks = 40	
110.0	Nasdag 100	2.5%
S&P 500 1.6%	MSCI World	1.6%
	S&P 500	1.6%

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested.





### **Clean Water**

### **Company spotlight**

Kemira Oyi

Kemira Oyj is a global leader in sustainable chemical solutions for water-intensive industries. Its business focus is on pulp and paper and water treatment.

Kemira provides products and services to improve product quality, process efficiency and resource utilisation. Its chemistry expertise supports cleaner and more efficient paper production. Kemira also serves various water-intensive sectors, including municipal and industrial water treatment. Its solutions help make clean, safe water available to everyone. Each year, 20 billion cubic meters of water are treated using Kemira's chemistry, equivalent to the annual water consumption of over 370 million people (Source: Kemira Website).

Kemira has been actively embracing digitalisation to enhance its sustainable water treatment solutions. To achieve smart process management, Kemira offers a suite of optimisation service applications called KemConnect™. These solutions enable data-driven chemistry management in key areas of water treatment, including real-time monitoring, advanced process control, optimisation and predictive analytics. By combining chemistry with a digital platform, Kemira aims to improve energy efficiency, compliance and overall sustainability in water treatment.

In early 2024, Kemira divested its oil and gas-related portfolio to focus on water treatment and digital services. With IFF, Kemira is jointly advancing the Designed Enzymatic Biomaterial (DEB) platform, a cutting-edge biotechnology process. They're constructing a new production facility to be integrated into an existing biorefinery in Finland, set to be operational later 2024. Their exclusive partnership aims to introduce renewable products to Kemira's strategic markets in pulp, paper, packaging and water treatment.

### Last quarter performance commentary

The Solactive Clean Water Index NTR returned -1.9% over the quarter.

Singapore hosted the biennial International Water Week, of which Xylem is a founding sponsor. The event covered how digital water and technology can help solve urban water challenges such as coastal protection and flood resilience and advanced water treatment. A drive for digital water is opex reduction and better process efficiency. To stay competitive and benefit from this demand, equipment providers are embedding leak detection equipment and sensors, and ion exchange providers are monitoring influent streams and resin performance.

Reverse Osmosis (RO) membranes and systems topped the list of patent applications in 2023, according to Global Water Intelligence (GWI).

On the M&A front, Kadant acquired Dynamic Sealing Technologies; Core & Main acquired NW Geosynthetics and Geothermal Supply, a leading supplier of pipes serving the geothermal water and sewer industries; Ecolab acquired a minority stake in Fingermark to improve automation features; and Lindsay Corp announced the acquisition of a minority stake in Pessl Instruments, whose IoT and software tools will inform Lindsay's remote irrigation management platform.

The main contributors to performance were Beijing Enterprises Water Group (returned +43.2%), on the back of a positive post-2023 outlook due to rising profit contribution from high-margin urban services; Kemira Oyj (+29.0%), following a strong start to the year and earnings beats, and expectations of a recovery in demand for water treatment solutions through 2024; and Sulzer (+17.4%), on the back of organic order growth.

The main detractors were Nomura Micro Science (-31.6%), despite strong order guidance, SABESP (-19.0%) and Idex (-17.3%), as guidance missed analysts' estimates.

Source: LGIM, Bloomberg, Global Water Intelligence, as at 28 June 2024.



### **Clean Water**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-1.91%	12.76%	11.61%	75.80%
Annualized Return			3.74%	11.94%
Volatility	13.13%	13.66%	16.30%	20.01%
Sharpe Ratio	-56.68%	93.77%	22.93%	59.66%
Max Drawdown	-6.94%	-14.26%	-29.87%	-36.00%

### Index total return contribution (QtD)

Top 5		Bottom 5	
Bj Ent Water	• 0.79%	Nomura Micro Sci	<b>▼</b> -0.76%
Kemira Oyj	• 0.62%	Sabesp-Adr	▼ -0.38%
Sulzer Ag-Reg	• 0.35%	Idex Corp	▼ -0.35%
Badger Meter Inc	• 0.33%	Core & Main In-A	▼ -0.34%
Halma Plc	<b>△</b> 0.29%	Energy Recovery	▼ -0.32%

### **Portfolio composition**

Latest Additions	Latest Deletions
no rebalance in Q2	no rebalance in Q2

### **Fund information**

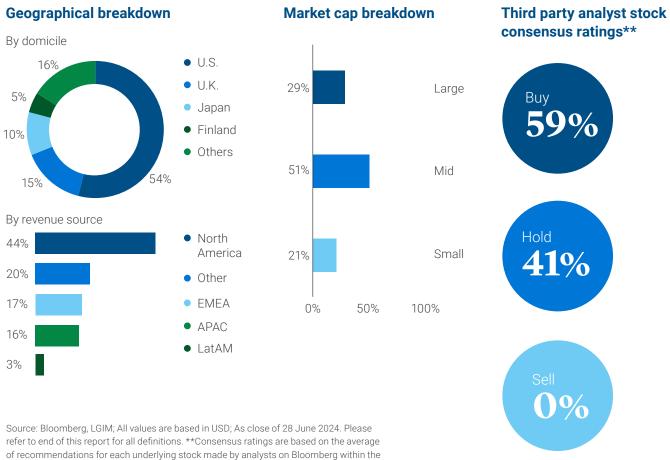
Ticker	GLUG LN	ISIN	IE00BK5BC891
TER	0.49%	Inception date	02/07/2019
Currency	USD	Index inception date	07-Jun-19
Securities lending	No	Replication method	Physical

#### Key risk



### **Clean Water**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	1.95	1.36
Price/Sales	2.77	2.99
BPS	15.30	14.36
P/E Positive	22.68	27.58
ROE	12.77	11.83
Price/Book	3.16	2.95
P/E (1y fwd)	32.67	33.39
P/E (3y fwd)	26.21	26.04
Sales (1y fwd)	2,558	2,652
Sales (3y fwd)	2,875	2,291

### **Constituents overlap**

S&P 500	0.6%
MSCI World	0.5%
Nasdaq 100	0.4%
Total stocks = 54	

last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested.



# **Cyber Security**

### **Company spotlight**

OneSpan

OneSpan provides security, identity, electronic signature and digital workflow solutions through its Digital Agreements and Security Solutions business lines.

Digital Agreements offers cloud-based solutions including e-signature and identity verification. Security Solutions offers a broad portfolio of software and multi-factor authentication and transaction signing devices, such as Identity Verification, a tool that analyses ID documents and facial biometric data in real-time.

The company has provided data security solutions since 1991. It is going through a three-year strategic transformation programme that aims to enable more efficient capital deployment and improve profitability, following recent macroeconomic uncertainties that resulted in longer sales cycles and greater price sensitivity by customers. This plan includes driving efficient growth in digital agreements and managing security solutions for modest growth and cash flow.

OneSpan serves enterprise clients in finance, healthcare and the public sector. More than 60% of the world's largest banks use OneSpan because of its leading authentication and transaction signing technologies, which it brought onboard with the acquisition of Silanis Technology in 2015.

OneSpan generates revenues from subscriptions, such as its cloud-based subscription model, with maintenance, support and professional services, and product and licence, for example through its Digipass hardware products, provided on a perpetual or term basis subscription model.

OneSpan was named leader for Digital Transaction Management by Aragon Research Globe in 2023, leader in the IDC MarketScape Worldwide eSignature Software 2023 Vendor Assessment, Representative Vendor in the 2023 Gartner Market Guide for User Authentication and top 5 best mobile security solution provider in 2022 by SC Magazine.

### Last quarter performance commentary

The ISE Cyber Security UCITS NTR Index returned -2.6% over the quarter.

A new International Monetary Fund (IMF) report stated that the increasing frequency and sophistication of cyberattacks is a threat to global financial stability.

Cisco, official partner for the Paris 2024 Olympics, expects eight times more attacks than in the previous Olympics in Tokyo, where 450 million cyberattacks were counted

Recent attacks and breaches affected the United Nations Development Programme (UNDP), as well as companies such as AT&T, Omni Hotels & Resorts, and Northern Minerals, which reported data theft.

Darktrace launched a new service called Darktrace Managed Detection & Response; CrowdStrike announced innovations in CrowdStrike Falcon Next-Gen SIEM to unify all Security Operations Centre (SOC) operations onto a single platform; and Palo Alto added its Precision AI technology to new systems to help enterprises with AI-first cybersecurity solutions.

Thoma Bravo announced the acquisition of Darktrace at a 44% premium; Akamai announced the acquisition of Noname Security, an application programming interface (API) protection provider; Fortinet announced the acquisition of Lacework, a late-stage security startup.

The main contributors to performance were Darktrace (returned +32.2%), following its acquisition; Broadcom (+21.6%), driven by strong results across its growing Al portfolio and legacy VMware businesses; and Palo Alto (+19.3%), following a strong earnings season.

The main detractors were Fastly (-43.2%), Trend Micro (-21.5%) and Akamai (-17.2%), on the back of a disappointing earnings season.

Source: LGIM, Bloomberg, Nasdaq, as at 28 June 2024



# **Cyber Security**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-2.63%	16.78%	-2.67%	58.52%
Annualized Return			-0.90%	9.65%
Volatility	15.83%	19.03%	24.54%	24.82%
Sharpe Ratio	-63.99%	88.48%	-3.67%	38.87%
Max Drawdown	-8.58%	-14.27%	-38.67%	-38.67%

### **Index total return contribution (QtD)**

Top 5		Bottom 5	
Darktrace Plc	<b>1.71%</b>	Fastly Inc -CI A	<b>▼</b> -1.61%
Broadcom Inc	<b>1.09%</b>	Trend Micro Inc	<b>▼</b> -1.11%
Palo Alto Networ	<b>1.07%</b>	Akamai Technolog	<b>▼</b> -0.87%
Crowdstrike Ho-A	• 0.96%	Cloudflare Inc-A	▼ -0.83%
Gen Digital Inc	<b>▲</b> 0.67%	Qualys Inc	▼ -0.73%

### **Portfolio composition**

Latest additions	Latest deletions
no additions in Q2	Juniper Networks

### **Fund information**

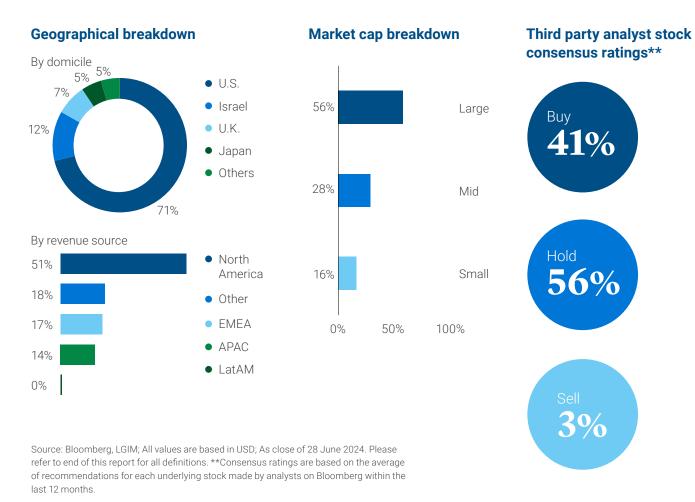
Ticker	USPY LN	ISIN	IE00BYPLS672
TER	0.69%	Inception date	28/09/2015
Currency	USD	Index inception date	31-Aug-15
Securities lending	No	Replication method	Physical

#### Key risk



# **Cyber Security**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	0.29	0.64
Price/Sales	3.64	4.00
BPS	7.22	7.25
P/E Positive	32.71	26.19
ROE	3.30	2.65
Price/Book	3.98	4.79
P/E (1y fwd)	32.57	29.54
P/E (3y fwd)	31.25	28.76
Sales (1y fwd)	3,798	4,120
Sales (3y fwd)	4,059	3,794

### **Constituents overlap**

S&P 500	2.5%
MSCI World	2.0%
Nasdaq 100	8.1%
Total stocks = 39	

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested.





# **Digital Payments**

### **Company spotlight**

02

Founded in 2005, Q2 provides cloud-based solutions to financial institutions, alternative finance and leasing companies, and financial technology companies. The company started providing retail banking solutions to RCFIs (regional and community financial institutions), and over the past several years has widened its platform's capabilities, now including digital banking, lending, profitability, onboarding, and security across retail, commercial and small business segments.

Q2 has more than 1,400 financial institutions using at least one solution, which includes  $\sim$ 40% of the top 100 US banks by total assets. 64% of its customers are Tier 1 and Tier 2 financial institutions (>\$1bn and <\$50bn in assets), while  $\sim$ 61% of total customers are banks and  $\sim$ 26% are credit unions.

The company provides solutions under four primary categories: 1) Q2 Digital banking platform – digital banking services across digital channels spanning onboarding, banking, and integration with third party providers; 2) Q2 Innovation Studio – API-based SDK to deploy customised offerings on its platform; 3) Lending solutions – that automate the traditional loan and underwriting process; and 4) Helix – its banking as a service platform.

To accelerate growth and market position, a key focus of the company has been strategic partnerships with financial institutions. In February 2024, Firstrust Bank selected Q2's ClickSWITCH, a patent-protected digital account switching SaaS solution, to help grow deposits and provide customers with a modernised digital account onboarding experience (source). In March 2024, Fidelity Bank partnered with Q2 to launch a new digital bank ('ANDI') powered by Q2's Helix solution (source). ANDI will provide debit accounts, savings accounts, credit cards and personal unsecured loans.

### Last quarter performance commentary

The Solactive Digital Payments Index NTR returned -7.9% over the guarter.

Worldpay reported that digital payments are now growing at more than double the rate than POS payments, at a 9% CAGR through to 2027 for e-commerce, compared with 4% for POS payments. Payments Cards & Mobile identified a consumer shift towards mobile point of sale (mPOS) solutions. Digital wallets remain the fastest-growing payment method, however. In 2023 they accounted for 50% of global ecommerce spend, and are set to account for 61% by 2027, growing at a 15% CAGR. At POS, they overtook

credit cards, with 30% v. 27% of transaction value, and the gap is set to increase, with digital wallets representing 46% and cards representing only 22% of transaction value by 2027. Digital wallets CAGR expectation is 15% for ecommerce and 16% at POS. They are projected to become the leading POS payment method in LATAM and MEA by 2027 (source).

The main contributors to performance were ACI Worldwide (returned +19.2%); Fair Isaac (+19.1%), whose market-leading Applied Intelligence Platform has found positive momentum in customers such as Wells Fargo, Lloyds Bank and Volvo; and Q2 Holdings (+14.8%), which had an impressive earnings season.

The main detractors were Adyen (-29.5%); Remitly (-41.6%), due to disappointing earnings reports; and DLocal (-45.0%), following a major customer renegotiating its take rate, the rate it charges for each transaction. Adyen reported a drop in their take rate following volume growth.

Source: LGIM, Bloomberg, Payments Cards & Mobile, Worldpay, as at 28 June 2024.



# **Digital Payments**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-7.92%	2.47%	-34.28%	9.32%
Annualized Return			-13.07%	1.80%
Volatility	14.74%	18.88%	25.66%	27.10%
Sharpe Ratio	-191.42%	13.10%	-50.95%	6.63%
Max Drawdown	-9.74%	-25.25%	-49.89%	-53.56%

### Index total return contribution (QtD)

Top 5			Bottom 5		
Aci Worldwide In	•	0.48%	Adyen Nv	•	-0.96%
Fair Isaac Corp		0.48%	Remit Global Inc	•	-0.89%
Q2 Holdings Inc	•	0.44%	Dlocal Ltd	•	-0.80%
Global-E Online	•	0.33%	Flywire Corp-Vot	•	-0.79%
Onespan Inc	•	0.27%	Block Inc	•	-0.76%

### Portfolio composition

Latest additions	Latest deletions
Global-e Online	Shopify
Coinbase	Yeahka
International Money Express	
Cab Payments Holdings	

### **Fund information**

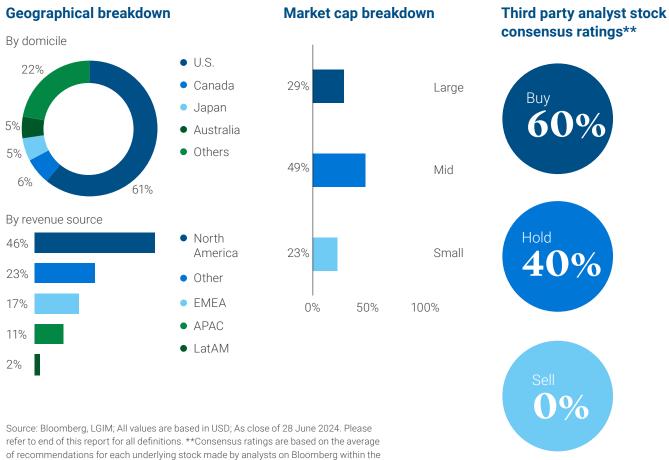
Ticker	DPAY LN	ISIN	IE00BF92J153
TER	0.49%	Inception date	27/05/2021
Currency	USD	Index inception date	26-Jan-21
Securities lending	No	Replication method	Physical

#### Key risk



# **Digital Payments**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	0.39	0.66
Price/Sales	2.72	2.87
BPS	7.99	7.54
P/E Positive	28.01	30.83
ROE	5.92	3.04
Price/Book	2.94	3.02
P/E (1y fwd)	35.28	21.43
P/E (3y fwd)	19.55	18.24
Sales (1y fwd)	4,989	5,005
Sales (3y fwd)	5,303	4,889

### **Constituents overlap**

S&P 500	2.4%
MSCI World	1.9%
Nasdaq 100	0.4%
Total stocks = 42	

last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

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## **Ecommerce Logistics**

### **Company spotlight**

PDD Holdings

PDD Holdings is a multinational commerce group that operates the domestic Pinduoduo platform in China and cross-border ecommerce business Temu in 60+countries, with price competitiveness and user experience as its key value propositions.

Founded in 2022, Temu is a new initiative at an early stage of development, aiming to become a global online platform dedicated to providing quality products to consumers at attractive prices. The company offers a broad range of items in a wide variety of categories, including women's and men's clothing, beauty and health, home and kitchen, sports and outdoors, and pet supplies, among others. Temu works in partnership with a global network of logistics vendors and fulfillment partners, including UPS, FedEx and USPS.

The company's differentiating factor is its 'Next-Gen Manufacturing' online shopping model, which it has pioneered, where consumers initiate the demand that is then matched by manufacturers. The model enables merchandise partners to adjust their product development and manufacturing processes according to market insights channeled through Temu. This approach results in lower costs for both consumers

and merchandise partners due to economies of scale from better product fit, increased revenue and less waste from mismatched production.

### Last quarter performance commentary

The Solactive eCommerce Logistics Index returned -2.3% over the quarter.

In warehouses, there is a surge in autonomous mobile robots (AMRs) that handle hauling tasks and collaborative robots (cobots) that assist with picking and packing. Robots help address labour shortages by freeing space for more value-add tasks. Predictive picking is a new trend in which a system identifies and pre-picks the items that are most likely to be ordered next.

Other modular and scalable solutions that make automation more accessible for warehouses are also gaining traction. IoT sensors on shelves, robots and inventory can provide real time data and optimisation of spaces, resources and labour, and sensors can predict equipment failures before they happen. Meanwhile, cloud-based warehouse management systems are providing better visibility across the entire operations.

Some portfolio examples are Amazon and Walmart. Amazon Robotics uses a network of robots equipped with Al and vision systems to navigate fulfilment centres; Amazon is working on an Al chatbot to compete with ChatGPT; Walmart uses cameras and Al-powered systems to track inventory movement and worker activity and suggest optimised picking routes.

The main contributors to performance were AP Moller-Maersk (returned +38.5%), which is set to benefit from higher freight rates especially if sustained; and PDD Holdings (+14.4%) and Walmart (+12.9%), following a strong earnings season and positive guidance.

The main detractors were Ocado Group (-36.4%), Vipshop (-21.3%) and Zalando (-18.0%). One of Ocado's Canadian partners halted the planned opening of an automated warehouse, the last of a series of setbacks that included a slower-than-expected roll-out of warehouses than expected by its customers. Vipshop found more intense competition and Zalando fell on the back of competitive and macro challenges.

Source: LGIM, Bloomberg, Transport Intelligence Logistics, as at 28 June 2024.



## **Ecommerce Logistics**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	Qtd	1 year	3 years	5 years
Cumulative Return	-2.29%	4.43%	-9.87%	72.98%
Annualized Return			-3.41%	11.58%
Volatility	11.52%	13.19%	17.04%	17.36%
Sharpe Ratio	-76.93%	33.72%	-20.01%	66.68%
Max Drawdown	-6.22%	-16.67%	-39.20%	-39.20%

### **Index total return contribution (QtD)**

Top 5		Bottom 5	
Ap Moller-B	▲ 0.84%	Ocado Group Plc	▼ -0.87%
Pdd Holdings Inc	• 0.41%	Vipshop Hold-Adr	<b>▼</b> -0.53%
Walmart Inc	• 0.30%	Zalando Se	<b>▼</b> -0.47%
Oracle Corp	• 0.26%	Shopify Inc - A	<b>▼</b> -0.47%
Global-E Online	• 0.23%	Prologis Inc	<b>▼</b> -0.45%

### **Portfolio composition**

Latest additions	Latest deletions
Coupang PDD Holdings Etsy Global-e Online ID Logistics Group Dimerco Express	bpost

#### **Fund information**

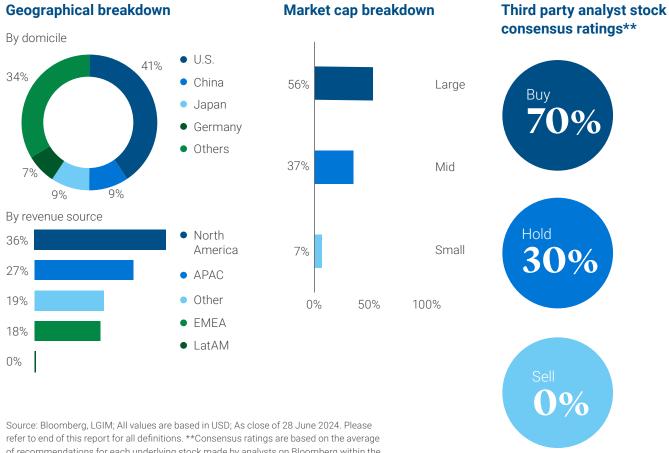
Ticker	ECOM LN	ISIN	IE00BF0M6N54
TER	0.49%	Inception date	23/01/2018
Currency	USD	Index inception date	03-Jan-18
Securities lending	No	Replication method	Physical

#### Key risk



## **Ecommerce Logistics**

Characteristics



### **Key ratios**

Current	Q2 2023
2.42	2.58
0.85	1.08
15.56	14.57
21.24	16.57
10.94	10.27
2.63	2.78
32.79	34.20
14.33	21.54
45,535	40,786
50,503	47,670
	2.42 0.85 15.56 21.24 10.94 2.63 32.79 14.33 45,535

### **Constituents overlap**

S&P 500	4.4%
MSCI World	4.6%
Nasdaq 100	3.2%
Total stocks = 43	

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### Key risk

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested.





## **Emerging Cyber Security**

### **Company spotlight**

**GB** Group

Founded in 1989, GB Group (GBG) provides digital identity verification, location and fraud-detection services, using cloud-native technology to help businesses onboard and manage their customers, comply with legislation and reduce the risk of fraud.

The group has agreements for the supply of data from over 300 third parties, including credit bureaus, electoral rolls, passport and national identity registers and social media, but does not hold the data itself. GBG triangulates data from these suppliers such as consumer labels (name, DOB, address, ID number) with physical documents (passport, ID cards etc), biometrics and behavioural identifiers, to help match and verify identities/locations for its clients in a seamless manner.

GBG serves over 21,000 customers in 70+ countries across a broad range of sectors, the largest of which is financial services, and processes large volumes of verifications/transactions daily. GBG sells to these clients directly and through channel partners, such as IBM and Oracle

Acquisitions have been a key growth strategy for the company. GBG has acquired 17 companies over the last decade, to expand into new geographies and add

products, technology and customers. The company's largest acquisition to date has been the US-based identity verification and KYC/AML compliance provider Acuant for \$736m in November 2021 (source). The acquisition creates a leader in the strategically important North American market and accelerates the rollout of GBG's identity and fraud solutions globally. The acquisition also brings Acuant's innovative 'Trusted Identity Platform', enabling the seamless combination of data, documents, biometrics and analytics for consumption across the entire customer lifecycle.

### Last quarter performance commentary

The Solactive Emerging Cyber Security Index NTR returned -0.7% over the quarter.

According to Thales's 2024 Coud Security Study, cloud remains a top security priority as it is strategically vital to many organisations. SaaS applications, Cloud Storage and Cloud Management Infrastructure are the main categories of attack (source).

M&A activity was strong in the index as companies aim to improve and solidify their solutions. Fortinet announced the acquisition of Lacework, a data-driven cloud security company with patented Al and ML technology that will reinforce Fortinet's Security Fabric

cloud protection. Tenable announced the acquisition of Eureka Security to boost visibility, control and automation to navigate the dynamic cloud landscape. Cloudflare acquired BastionZero to add native Zero Trust access management to its IT infrastructure. CyberArk acquired Machine Identity management leader Venafi to leverage its certificate lifecycle management, private Public Key Infrastructure and IoT identity management and cryptographics code signing solutions. It is estimated that Venafi offers complementary solutions that expand CyberArk's total addressable market (TAM) by nearly \$10 billion to approximately \$60 billion.

The main contributors to performance were Darktrace (returned +32.2%), following Thoma Bravo's pending acquisition at a 35% premium; Dell Technologies (+21.3%), earning momentum on AI server enterprise infrastructure; and GB Group (+26.4%), on the back of strong growth of its Identity segment. The main detractors were lonQ (-29.6%), Fastly (-43.%) and Mitek Systems (-20.7%). Deeper scrutiny of contract pricing and IT budget cuts put pressure on profitability for these companies, whose reports disappointed investors.

Source: LGIM, Bloomberg, Thales, as at 28 June 2024.



# **Emerging Cyber Security**

Performance

### Historical and simulated performance (1y)



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-0.69%	28.82%	14.85%	124.41%
Annualized Return			4.73%	17.54%
Volatility	17.41%	19.68%	26.93%	27.97%
Sharpe Ratio	-15.69%	147.03%	17.57%	62.70%
Max Drawdown	-9.75%	-13.90%	-46.08%	-46.08%

### Index total return contribution (QtD)

Top 5		Bottom 5	
Darktrace Plc	<b>1.12%</b>	long Inc	<b>▼</b> -0.74%
Dell Techn-C	• 0.72%	Fastly Inc -CI A	<b>▼</b> -0.73%
Gb Group Plc	<b>0.69%</b>	Mitek Systems	▼ -0.60%
Broadcom Inc	• 0.62%	Trend Micro Inc	<b>▼</b> -0.52%
Arista Networks	• 0.61%	Cloudflare Inc-A	▼ -0.48%

### **Portfolio composition**

Latest additions	Latest deletions
no rebalance in Q2	no rebalance in Q2

#### **Fund information**

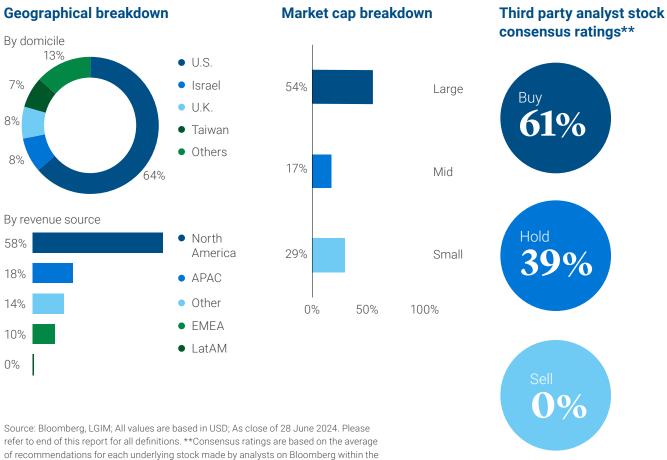
ESPY LN	ISIN	IE000ST40PX8
0.49%	Inception date	07/09/2022
USD	Index inception date	20-Jul-22
No	Replication method	Physical
	0.49% USD	0.49% Inception date USD Index inception date

#### Key risk



# **Emerging Cyber Security**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	0.42	0.41
Price/Sales	5.59	4.82
BPS	7.06	6.18
P/E Positive	39.28	25.32
ROE	6.36	4.03
Price/Book	4.75	4.70
P/E (1y fwd)	43.76	33.38
P/E (3y fwd)	27.74	26.80
Sales (1y fwd)	5,559	5,752
Sales (3y fwd)	6,670	5,775

### **Constituents overlap**

S&P 500	3.1%
MSCI World	2.5%
Nasdaq 100	7.9%
Total stocks = 38	

last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any se

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

The value of an investment and any income taken from it is not guaranteed and can go down as well as up; You may not get back the amount you originally invested.





### **Global Thematic**

### Last quarter performance commentary

The Solactive L&G Global Thematic Index NTR returned -1.1% over the quarter. The Index returned -4.5% in April, +4.2% in May and -0.6% in June.

April was a volatile month for global equity markets. The US CPI print signalled higher for longer interest rates, and geopolitical tensions added further volatility. The US dollar and US 10-year yield climbed along with the VIX Index, and most sectors delivered negative returns during the month.

The sole contributor to performance in April was Battery Value-Chain. The electrical equipment manufacturer and energy solutions provider HD Hyundai Electric continued to lead performance, driven by its strong Q1 2024 earnings beating market expectations, and reporting net profit of \$67.8m, up 224.3% from a year earlier.

The main detractors from performance were Emerging Cyber Security and Pharma Breakthrough. Within the Emerging Cyber Security theme, the cyber, cloud and enterprise security solutions provider Telos Corporation led underperformance following research brokers downgrading their 2024 revenue forecasts of the company. Within the Pharma Breakthrough theme, Swiss-based biopharmaceutical company Idorsia led underperformance after its Q1 2024 report showcased operating income had remained negative and the

possibility of delays surrounding the planned launch of its hypertension drug in the second half of the year.

In May, sticky inflation in the US did not allow the Federal Reserve to start cutting interest rates. Gold prices hit an all-time high of \$2,425; however, the market saw a rebound following the negative returns in April, and the VIX Index fell to its lowest level since 2019.

Positive contributors to performance were Clean Energy and Clean Water. In the Clean Energy theme, cleantech integrator and renewable energy company Ameresco led performance, driven by its strong Q1 2024 Revenue and EBITDA beating market expectations. In the Clean Water theme, water and environment service provider Beijing Enterprises Water Group led performance, which reflected the market's positive sentiment on the company following the launch of its new Light Asset Technology Platform, focused on cultivating and developing new technologies across water recycling. The only detractors from performance were Artificial Intelligence and Robotics and Automation. In the Artificial Intelligence theme, developer data platform MongoDB led underperformance after cutting its FY2025 forecast driven by slower than expected growth in Q1 2024. In the Robotics and Automation theme, digital healthcare company iRhythm Technologies led underperformance following the market's reaction to a report published by The Capitol Forum relating to Zio AT Device real-time issues and despite a strong Q1 revenue beat.

In June, The European Central Bank (ECB) lowered rates for the first time in five years. Technology and Communication Services companies kept performing well, while Utilities, Materials and Energy companies underperformed.

Artificial Intelligence kept leading performance, while Clean Energy and Battery Value-Chain detracted most from performance. CrowdStrike was the top contributor in the Artificial Intelligence theme, following a positive earnings season and news about inclusion in the S&P 500 Index.

Within Clean Energy, Alfen, SMA Solar and SolarEdge Technologies impacted returns. Within the Battery Value-Chain themes, the battery-grade lithium producers Arcadium Lithium, Mineral Resources and Sigma Lithium weighed on performance, on the back of low lithium prices, along with companies involved in solar energy such as SolarEdge and Canadian Solar.

The themes that contributed the most to performance over the quarter were Pharma Breakthrough (returned +0.1%), and Artificial Intelligence (+2.6%). The main detractors were Robotics and Automation (-5.6%), Emerging Cyber Security (-0.7%) and Battery Value-Chain (-4.3%).

On a stock-level basis, the main contributors to performance were HD Hyundai Electric (returned +68.7%), Alnylam Pharmaceuticals (+62.6%) and United Therapeutics (+38.7%). The main detractors were SolarEdge Technologies (-64.4%), Alfen NV (-65.7%) and SMA Solar (-50.6%).

Source: LGIM, Bloomberg, as at 28 June 2024.



## **Global Thematic**

Performance

### **Historical and simulated performance (1y)**



### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-1.07%	-0.49%	-11.58%	54.27%
Annualized Return			-4.03%	9.05%
Volatility	12.26%	14.08%	17.58%	17.90%
Sharpe Ratio	-34.52%	-3.49%	-22.91%	50.60%
Max Drawdown	-7.35%	-20.01%	-32.55%	-32.55%

### Index total return contribution (QtD)

Top 5			Bottom 5		
Hd Hyundai Elect	•	0.79%	Solaredge Techno	•	-0.37%
Alnylam Pharmace	•	0.33%	Alfen N.V.	•	-0.29%
United Therapeut	•	0.24%	Sma Solar Techno	•	-0.16%
Siemens Energy A	•	0.23%	Hitachi Zosen	•	-0.16%
Neoen Sa	_	0.18%	Bristol-Myer Sqb	•	-0.15%

### **Portfolio composition**

Latest additions	Latest deletions
full list available upon request	full list available upon request

### **Fund information**

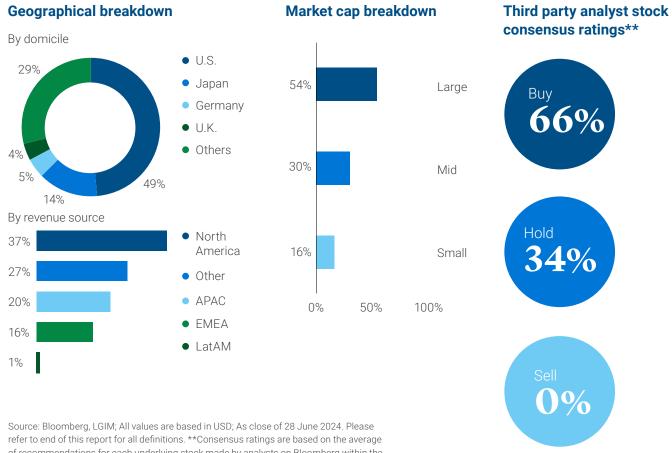
Ticker	THMZ LN	ISIN	IE000VTOHNZ0
TER	0.6%	Inception date	07/09/2022
Currency	USD	Index inception date	30-May-22
Securities lending	No	Replication method	Physical

#### (ey risk



## **Global Thematic**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	1.53	1.33
Price/Sales	3.20	3.51
BPS	15.03	14.73
P/E Positive	26.38	26.21
ROE	9.89	10.22
Price/Book	3.08	3.36
P/E (1y fwd)	35.29	34.73
P/E (3y fwd)	23.58	26.42
Sales (1y fwd)	14,362	13,958
Sales (3y fwd)	16,603	15,548

### **Constituents overlap**

S&P 500	11.5%
MSCI World	13.0%
Nasdaq 100	10.4%
Total stocks = 360	

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### **Key risk**

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# Healthcare Technology

### **Company spotlight**

Guardant Health

Guardant Health (GH), founded in California in 2012, is a pioneering genomics company and market leader in liquid biopsy testing. Liquid biopsy is a non-invasive method that detects cancer by analysing traces of tumor DNA in a patient's blood sample, offering a less intrusive alternative to traditional tissue biopsies. Initially recognised for Guardant360, the first FDAapproved comprehensive liquid biopsy test for late-stage cancer therapy across 50 different cancer types, GH has since expanded its testing applications to maintain its technological leadership. In 2021, they launched Guardant Reveal, the first blood-only test for detecting residual disease after surgery or recurrence in colorectal cancer patients. In 2024, the FDA Medical Devices Advisory Committee strongly recommended the approval of Shield, a primary non-invasive bloodbased test for colorectal cancer screening, keeping it on track to be the first FDA-approved blood test that meets performance requirements for Medicare coverage. GH's global impact was further acknowledged by its inclusion in TIME's list of 100 most influential companies. Recently it also surpassed 500 peer-reviewed publications, showcasing their innovative products and scientific credibility.

Starting 2024 with strong momentum, Guardant Health reported impressive Q1 results. Total revenue grew 31% Source: LGIM. Bloomberg. VettaFi. as at 28 June 2024.

year-on-year, driven by robust precision oncology revenue. Clinical test volume increased 20% year-on-year. The primary driver of this growth was Guardant360.

Furthermore, GH raised their gross margin forecast (excluding screening) to 61%-63%, up from the prior range of 60-62%. They also reduced expected operational expenditures, leading to a lower projected cash burn. The company generated positive free cash flow in its Therapy Selection business, supported by ongoing improvements in Guardant360 average selling prices (ASPs).

### Last quarter performance commentary

The ROBO Global Healthcare Technology and Innovation Index returned -3.7% over the quarter.

Biotech funding rose to approximately \$23 billion in Q1 2024, the fourth highest quarter on record. As supply chain, credit and worker shortages ease, new legislation might introduce additional pressures. The impact of the BIOSECURE Act remains uncertain, but it is expected to provide a tailwind for US manufacturing by bolstering biomanufacturing capabilities. Changes to Medicare Advantage are putting pressure on payers, though there is no clear indication of systemic effects on healthcare yet.

Genomics and precision medicine showed strong performance, but gains were offset by headwinds in medical instruments and process automation.

Within genomics, following legal challenges in both the US and Europe, Illumina's acquisition of Grail culminated in Grail being spun off and added to the index as a standalone company. This move allows Illumina to resume its leadership in DNA sequencing, while Grail joins the thriving liquid biopsy field. The subsegment continued its strong momentum with notable performances from Twist Bioscience, CareDX, Natera and Guardant Health.

Alnylam Pharmaceuticals led the way in precision medicine after announcing the success of its Amvuttra drug in treating ATTR-CM, a serious heart disease. Other highlights included United Therapeutics, which announced the first-ever transplant of a Xenothymokidney (a genetically modified pig kidney into a living human recipient).

On the downside, process automation and medical instruments underperformed. The market responded unfavourably to Ginkgo Bioworks' business model restructuring. Eurofins faced a short report alleging accounting anomalies.

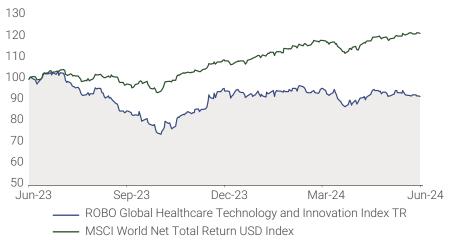
Diagnostics lagged but saw the resolution of Royal Philips' class action suit. Exact Sciences presented data showing that earlier and more personalised treatment interventions lead to better outcomes for cancer patients, supporting the importance of early and regular cancer screening.



# **Healthcare Technology**

Performance

### Historical and simulated performance (1y)



#### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

#### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-3.74%	-8.89%	-42.17%	13.78%
Annualized Return			-16.71%	2.61%
Volatility	16.11%	18.57%	24.79%	25.37%
Sharpe Ratio	-88.13%	-48.04%	-67.42%	10.30%
Max Drawdown	-8.92%	-28.50%	-55.45%	-56.67%

#### Index total return contribution (QtD)

Top 5		Bottom 5	
Guardant Health	<b>0.74%</b>	Ginkgo Bioworks	▼ -0.94%
Twist Bioscience	<b>0.56%</b>	Exact Sciences	<b>▼</b> -0.65%
Alnylam Pharmace	<b>▲</b> 0.54%	Quidelortho Corp	<b>▼</b> -0.46%
Caredx Inc	<b>▲</b> 0.54%	Charles River La	▼ -0.44%
Koninklijke Phil	▲ 0.53%	Align Technology	▼ -0.42%

#### **Portfolio composition**

Latest additions	Latest deletions
PeptiDream GRAIL Inc (spin off)	Privia Health Group

#### **Fund information**

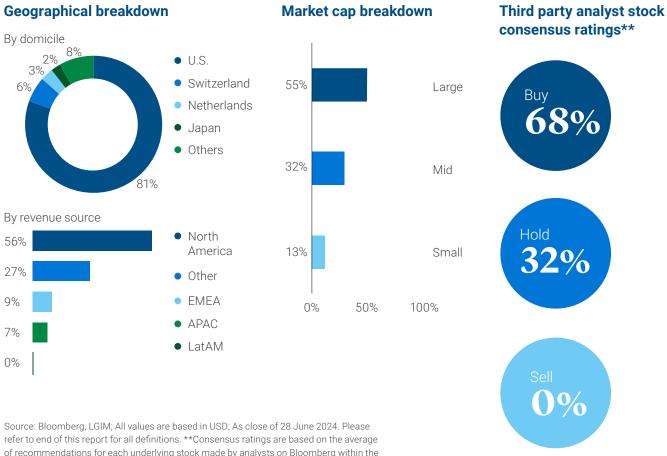
Ticker	DOCT LN	ISIN	IE00BK5BC677
TER	0.49%	Inception date	02/07/2019
Currency	USD	Index inception date	01-May-19
Securities lending	No	Replication method	Physical

#### (ey risk



# **Healthcare Technology**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	1.61	1.92
Price/Sales	4.52	4.88
BPS	21.49	20.23
P/E Positive	32.92	32.30
ROE	6.20	8.41
Price/Book	3.44	3.50
P/E (1y fwd)	33.82	38.27
P/E (3y fwd)	24.10	24.66
Sales (1y fwd)	6,250	5,562
Sales (3y fwd)	7,921	7,335

### **Constituents overlap**

S&P 500	3.7%
MSCI World	3.2%
Nasdaq 100	3.6%
Total stocks = 69	

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

#### Key risk





# **Hydrogen Economy**

#### **Company spotlight**

Ceres Power

Ceres Power is a developer of clean energy technology, electrolysis for the production of green hydrogen, and fuel cells for power generation. Its solid oxide platform technology supports electrification of its energy systems and produces green hydrogen as a route to decarbonise emissions-intensive industries, such as steelmaking, cement and future fuels.

Operating in two segments, Ceres develops solid oxide fuel cell (SOFC) technology. These fuel cells efficiently convert hydrogen or other fuels into electricity, with applications in stationary power generation, distributed energy systems, and transportation. Ceres power also focuses on solid oxide electrolysis cells (SOECs). These cells enable the production of green hydrogen by splitting water into hydrogen and oxygen using electricity. Ceres earns revenue by licensing its technology to new partners, through engineering services, technology hardware to support these partners develop factories for mass production, and royalties. For every kW sold to the end market, Ceres receives a royalty payment, which provides highmargin revenue.

In January 2024, Ceres converted Delta Electronics as its first licence partner since 2020, across both SOFC and SOEC technologies, validating Ceres tech development in SOEC. A growing pipeline of new partners is set to join the Ceres platform, especially for electrolysis technology (SOEC), which could support its revenue growth expectation and drive EBITDA breakeven. Through collaboration with Ceres, its partners are developing applications aimed at several market sectors, including data center power supply market and the commercial environment with a combined heat and power unit, and maritime and motive power.

#### Last quarter performance commentary

The Solactive Hydrogen Economy Index NTR returned -4.1% over the guarter.

The green hydrogen market is set to grow at a 61% CAGR from 2023 to 2030 according to a MarketsandMarkets recent report (source).

While 80 countries have now published a hydrogen strategy, the US is set to be a leader in global production. The US is now offering over \$170 billion via tax credits, grants and research funding to the clean

hydrogen sector, and is forecasted to account for  $\sim$ 37% of global supply by 2030 according to (BNEF, May 2024)

A group of companies signed a preliminary deal to create a 3,300km hydrogen pipeline between Italy, Austria and Germany, worth €4 billion and known as SoutH2. This is a milestone in Europe's plan to secure green hydrogen supplies and transport it from Mediterranean areas to Northern Europe.

De Nora started building Italy's largest electrolyser and a strategic plant both for Italy and the EU, with a 2GW capacity, for which it has already received orders.

Japan announced the launch of a \$19.1 billion supply side incentive programme, under which offtakers will be able to secure clean molecules at the same price as fossil fuels for hydrogen supply.

The main contributors to performance were Siemens Energy (returned +41.9%) and Hyundai Motor (+23.6%) on the back of positive results, and Cavendish Hydrogen (+13.0%), Nel's Fueling division spin-off.

The main detractors were FuelCell Energy (-46.3%), on the back of results miss; Plug Power (-32.3%), due to margin pressures despite the Inflation Reduction Act (IRA) tax credit benefits; and Ballard Power (-19.1%) due to mixed guidance.

Source: LGIM, Bloomberg, BNEF, MarketsandMarkets, as at 28 June 2024.



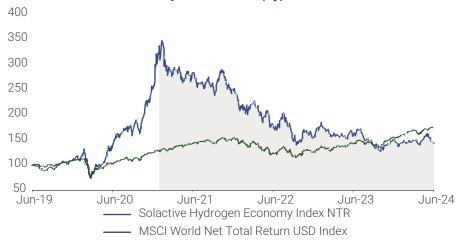
# **Hydrogen Economy**

Performance

### Historical and simulated performance (1y)



#### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

#### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-4.13%	-12.51%	-49.55%	42.77%
Annualized Return			-20.42%	7.38%
Volatility	20.39%	20.56%	24.73%	29.46%
Sharpe Ratio	-76.45%	-61.06%	-82.59%	25.04%
Max Drawdown	-11.94%	-26.54%	-56.27%	-63.62%

#### **Index total return contribution (QtD)**

Top 5		Bottom 5	
Siemens Energy A	<b>3.95%</b>	Fuelcell Energy	<b>▼</b> -2.36%
Hyundai Motor	<b>1.17%</b>	Plug Power Inc	<b>▼</b> -1.99%
Cavendish Hydrog	• 0.50%	Ballard Power	<b>▼</b> -1.09%
Bloom Energy C-A	• 0.36%	Toyota Motor	<b>▼</b> -1.04%
Nel Asa	• 0.21%	Kyocera Corp	▼ -0.64%

#### **Portfolio composition**

Latest additions	Latest deletions
Cavendish Hydrogen (spin off)	PowerCell Sweden

#### **Fund information**

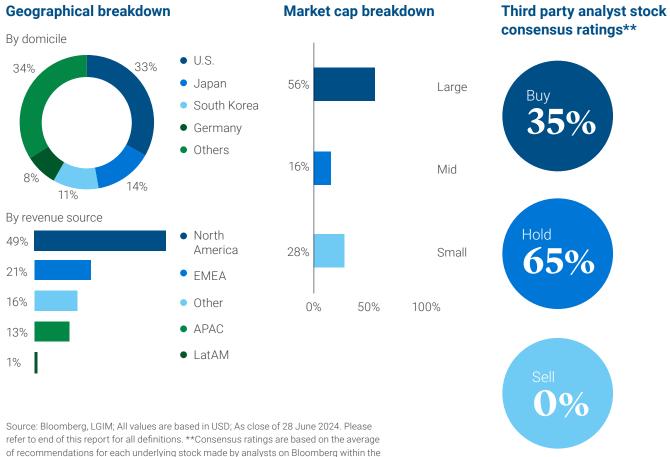
Ticker	HTWO LN	ISIN	IE00BMYDM794
TER	0.49%	Inception date	10/02/2021
Currency	USD	Index inception date	26-Jan-21
Securities lending	No	Replication method	Physical

#### (ey risk



# **Hydrogen Economy**

Characteristics



### party analyst stock Key ratios

	Current	Q2 2023
EPS	0.23	0.56
Price/Sales	1.77	2.48
BPS	6.01	8.23
P/E Positive	24.21	17.40
ROE	0.93	8.21
Price/Book	1.78	1.71
P/E (1y fwd)	23.76	16.62
P/E (3y fwd)	18.56	23.57
Sales (1y fwd)	26,684	27,807
Sales (3y fwd)	24,809	23,868

### **Constituents overlap**

S&P 500	0.7%
MSCI World	1.0%
Nasdaq 100	1.4%
Total stocks = 26	

last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security.

The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

#### **Key risk**





# **Optical Technology & Photonics**

#### **Company spotlight**

**Everlight Electronics** 

Founded in 1983, Everlight Electronics is a Taiwanese manufacturer of optoelectronic components. The company offers a diverse product portfolio consisting of surface mount devices LEDs, super bright LED lamps, special purpose LEDs, dot matrix displays, photo transistors, and infrared LEDs. LED products account for c. 90% of the company's revenues, with the remainder split across general lighting and LCD products.

Everlight is currently the largest LED professional packaging company in Taiwan, and the fifth largest player worldwide with a global market share of c. 12.3% (source).

The company has consistently been a leader in the next generation of optical technologies, with a current focus on the field of invisible light. During the pandemic, demand for intelligent production increased due to a shortage of manpower, and products such as robots, industrial control servos, and photovoltaic inverters have become the market mainstream, leading to a significant increase in the demand for high-end optocoupler products. Everlight already has a solid foundation in the

invisible LED market and is focused on further strengthening its mid-to-high class of optocouplers and sensor products to capture the growing markets.

Optoelectronic components for automotives have been another key growth area for the company. To address the increased demand for these products, Everlight's R&D is focused on high-end headlight designs, mid- to high-power logo lights, continuous daytime running lights and matrix Mini LED products to increase market share.

#### Last quarter performance commentary

The Solactive EPIC Optical Technology & Photonics Index NTR returned -6.3% over the guarter.

Index companies announced a few positive developments in photonics applications over the quarter. EOS, a leader in additive manufacturing, announced a collaboration with nLight, which will see nLight's beam shaping lasers available in metal AM systems, allowing the laser technologies to optimise 3D printing applications. NLight's lasers can print three times faster for steel and aluminium compared to a standard laser. ZEISS announced a new strategic

business unit, ZEISS Photonics & Optics, effective from October. Ams-OSRAM announced plans to expand chip production in Austria from 2030, in line with the European Chips Act, but had to make changes to its microLED strategy after Apple cancelled some orders. Stratasys and Ricoh are assessing the efficacy of their bespoke 3D printed models for orthopaedic oncology on the first enrolled patient. Finally, Jenoptik concluded a positive fiscal year 2023 with strength from its Advanced Photonics Solutions division.

On the M&A front, Hamamatsu announced a stock buyback and acquired NKT Photonics to strengthen its laser and fibre business; Hexagon acquired Itus Digital, Voyansi and Xwatch Safety Solutions to enhance its 3D and digital twins solutions; and Nikon completed the acquisitions of RED Digital Cinema and Red.com.

The main contributors to performance were Everlight Electronics (returned +40.5%), Fabrinet (+29.5%) and Corning (+18.8%), on the back of positive results. Corning had a good Optical spending cycle driven by GenAl related demand.

The main detractors were Carl Zeiss Meditec (-43.7%), Lightwave Logic (-36.1%) and Horiba (-23.3%), due to weaker outlooks.

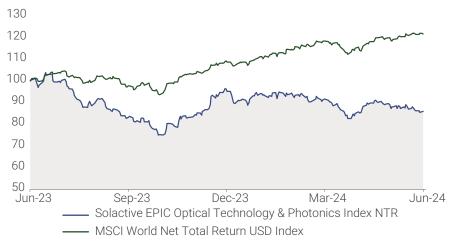
Source: LGIM, Bloomberg, European Photonics Industry Consortium (EPIC), as at 28 June 2024.



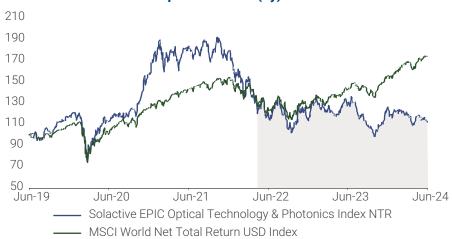
# **Optical Technology & Photonics**

Performance

#### Historical and simulated performance (1y)



#### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

#### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-6.26%	-14.48%	-38.50%	12.74%
Annualized Return			-14.98%	2.43%
Volatility	14.35%	17.74%	22.01%	22.97%
Sharpe Ratio	-159.16%	-81.85%	-68.07%	10.56%
Max Drawdown	-9.89%	-27.81%	-48.94%	-48.94%

#### Index total return contribution (QtD)

Top 5		Bottom 5	
Everlight Elec	<b>1</b> .32%	Carl Zeiss Me-Br	<b>▼</b> -1.50%
Fabrinet	<b>0.76%</b>	Lightwave Logic	<b>▼</b> -1.16%
Corning Inc	▲ 0.59%	Horiba Ltd	▼ -0.89%
Sunny Optical	• 0.54%	Stratasys Ltd	<b>▼</b> -0.73%
Cognex Corp	• 0.37%	Faro Tech	▼ -0.73%

#### **Portfolio composition**

Latest additions	Latest deletions
no rebalance in Q2	no rebalance in Q2

#### **Fund information**

Ticker	LAZR LN	ISIN	IE000QNJA0X1
TER	0.49%	Inception date	07/09/2022
Currency	USD	Index inception date	09-May-22
Securities lending	No	Replication method	Physical

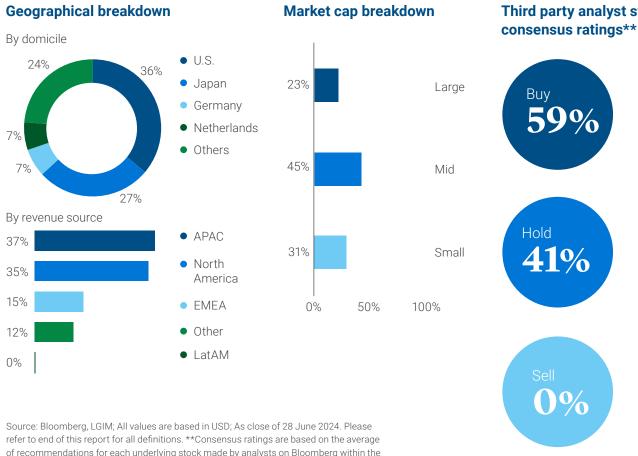
#### (ey risk

**Key ratios** 



# **Optical Technology & Photonics**

Characteristics



### Third party analyst stock



#### **Constituents overlap**

S&P 500	0.1%
MSCI World	1.0%
Nasdaq 100	0.0%
Total stocks = 34	

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

#### Key risk





## Pharma Breakthrough

#### **Company spotlight**

BioCryst Pharmaceuticals

Founded in 1986 out of the labs of the University of Alabama at Birmingham, BioCryst Pharmaceuticals is a biotechnology company that focuses on small-molecule drugs for rare diseases. Its research primarily centers around oral and intravenous therapies targeting enzymes involved in various diseases, including hereditary angioedema (HAE), influenza and other viral infections.

On August 31, 2022, BioCryst Pharmaceuticals received orphan drug designation from the U.S. Food and Drug Administration (FDA) for its investigational drug BCX9250. This drug is intended to treat fibrodysplasia ossificans progressiva (FOP), an ultra-rare genetic disorder characterized by irregular bone formation outside the normal skeleton. BCX9250 also received Fast Track designation from the FDA and PRIME designation from the European Medicines Agency (EMA). BioCryst currently has two approved products: Rapivab (flu) and Orladeyo (HAE), and pipeline products: BCX9930 in complement-mediated diseases (PNH) and BCX9250 in Fibrodysplasia Ossificans Progressiva (FOP).

In February 2024, BioCryst reported a significant increase in revenue, primarily driven by its flagship

product, Orladeyo. Its commercial team operated with improved efficiencies resulting in patients moving from free drug to paid drug at a faster rate than in prior years. Additionally, demand for Orladeyo was strong with the past two quarters, having the highest US new patient starts since the first two quarter of launch. Orladeyo's global reach also expanded with approvals in Argentina, Spain and Austria, as well as final reimbursement in Italy in Q1 2024. BioCryst anticipates operating profit in 2024, with positive earnings per share (EPS) and cash flow in the second half of 2025, and full-year profitability in 2026.

#### Last quarter performance commentary

The Solactive Pharma Breakthrough Value Index returned +0.1% over the quarter.

For the past five years, over 50% of FDA approvals were orphan, and in 2023 at least 60%, due to the incentives represented by high prices, small trials and well-defined populations (source: Evaluate Pharma).

An area of growth involves radiopharmaceuticals, which deliver targeted radiation to cancer cells. Novartis' Lutathera cuts the risk of progression or death by almost 80% with advanced neuroendocrine tumours relative to standard treatment and next generation treatments are increasing the power of these radiations to completely cut through the DNA.

Such success is powering acquisitions, IPOs and VC investments, including AstraZeneca's purchase of Fusion Pharmaceuticals at 89% premium. Another acquisition worth noting is Vertex's acquisition of Alpine Immune Sciences at a 71% premium.

Eisai and Biogen launched LEQEMBI, a Alzheimer's disease treatment, in China. Eisai also collaborated with a major local insurance firm to partially cover the cost of the drug, promoting early detection. Roche's Vabysmo (for vision and dry retina issues) and PiaSky (for paroxysmal nocturnal haemoglobinuria (PNH)) were recommended by a number of medical agencies, PharmaMar had positive results for its Small Cell Lung Cancer treatment, Merck obtained approval for its lung disease drug Winrevair, and Sarepta obtained a label extension for its Duchenne muscular dystrophy (DMD) drug Elevidys.

The main contributors to performance were Alnylam Pharmaceuticals (returned +62.6%), whose share priced jumped by +59% in 10 days due to late-stage success of a serious heart disease drug; United Therapeutics (+38.7%), and Halozyme Therapeutics (+28.7%), on the back of positive outlooks.

The main detractors were Idorsia (-28.1%), Apellis Pharmaceuticals (-34.7%) and JCR Pharmaceuticals (-33.5%).

Source: LGIM, Bloomberg, Evaluate Pharma, as at 28 June 2024.



# Pharma Breakthrough

Performance

#### Historical and simulated performance (1y)



#### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

#### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	0.06%	-8.92%	-24.92%	2.18%
Annualized Return			-9.13%	0.43%
Volatility	13.86%	14.25%	16.25%	18.84%
Sharpe Ratio	1.85%	-62.82%	-56.15%	2.29%
Max Drawdown	-8.00%	-19.31%	-33.00%	-33.29%

#### Index total return contribution (QtD)

Top 5		Bottom 5	
Alnylam Pharmace	<b>1.50%</b>	Idorsia Ltd	<b>▼</b> -0.94%
United Therapeut	• 0.93%	Apellis Pharmace	<b>▼</b> -0.79%
Halozyme Therape	<b>0.68%</b>	Jcr Pharmaceutic	<b>▼</b> -0.77%
Sarepta Therapeu	<b>△</b> 0.57%	Nippon Shinyaku	<b>▼</b> -0.70%
Sciclone Pharmac	<b>△</b> 0.49%	Bluebird Bio Inc	<b>▼</b> -0.47%

#### **Portfolio composition**

Latest additions	Latest deletions
no rebalance in Q2	no rebalance in Q2

#### **Fund information**

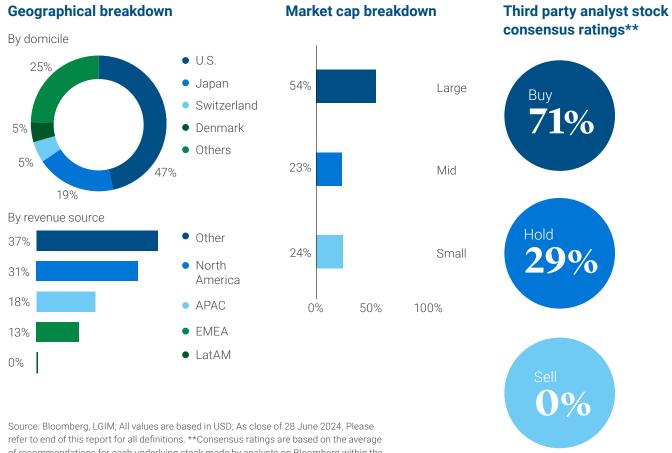
Ticker	BIOT LN	ISIN	IE00BF0H7608
TER	0.49%	Inception date	23/01/2018
Currency	USD	Index inception date	03-Jan-18
Securities lending	No	Replication method	Physical

#### Key risk



## Pharma Breakthrough

Characteristics



#### **Key ratios**

	Current	Q2 2023
EPS	0.93	0.98
Price/Sales	4.77	5.08
BPS	10.42	10.75
P/E Positive	24.94	25.40
ROE	8.73	7.79
Price/Book	2.61	3.11
P/E (1y fwd)	22.31	24.66
P/E (3y fwd)	18.93	21.28
Sales (1y fwd)	7,772	7,273
Sales (3y fwd)	8,927	8,430

#### **Constituents overlap**

S&P 500	1.8%
MSCI World	1.8%
Nasdaq 100	1.3%
Total stocks = 42	

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

#### **Key risk**





### **Robotics & Automation**

#### **Company spotlight**

Teradyne

Teradyne, founded in 1960 and based in Massachusetts, has evolved from a pioneering semiconductor test equipment manufacturer to a diversified technology leader. The company provides automated testing solutions for semiconductors and wireless technologies while also expanding into industrial automation. This latter segment includes Universal Robots, which produces collaborative robots (cobots), and Mobile Industrial Robots (MiR), specialising in autonomous mobile robots for industrial applications. Teradyne serves various markets, including the mobile, aerospace, consumer, and computer sectors.

Teradyne's exposure to semiconductor markets and traditional robotics is multifaceted. Their semiconductor testing division, the company's largest segment, ensures complex integrated circuits meet performance and quality standards before integration into devices such as smartphones, including iPhones. This division is experiencing Al-application driven demand for memory and networking products, catering to both cloud and edge Al end-markets.

Teradyne's recent financial results show promising signs. In Q1 2024, the company reported \$600 million in revenue against an estimated \$566 million and

raised their Q2 guidance to \$665-\$725 million, significantly above the prior consensus of \$636.5 million. Earnings per share beat estimates by 54%, with operating margins 4.1% above consensus. Notably, the company's gross margin remained strong at 56.6%, driven by a favorable product mix, increased volume and operational efficiencies.

Teradyne's dual exposure to AI and robotics end markets positions the company to capture value across multiple growth sectors in the short, medium and longer term. The increasing complexity of AI applications is driving demand for advanced memory products, while the industrial automation segment, though still in early stages of market penetration, shows promising growth potential.

#### Last quarter performance commentary

The ROBO Global Robotics and Automation UCITS Index returned -5.6% over the quarter.

In the latest earnings season the robotics sector saw year-on-year declines in EPS and sales. This was unsurprising due to 14 months of negative global PMI and slower growth in China. Despite mixed performance, with 91% of reporting companies profitable, earnings commentary analysis shows signs of a recovery during the second half of the year. In the logistics subsector (-12.72%) GXO Logistics announced

an industry-first multi-year commercial collaboration with Agility Robotics (private) Digit humanoid robot. Cargotec spun out as part of a well-received demerger into two separate operating entities, Kaimler and Hiab, which operate in marine cargo handling and on-road load handling, respectively. To those wondering how the explosion of interest in AI is impacting the robotics space, some robotics companies such as Teradyne, which offers chip-inspection technologies, are involved in manufacturing/inspecting semiconductor components needed for AI systems.

Additionally, many companies support the energy scale-out required by the energy transition, electrification and growing data centre demands, such as Delta Electronics, which provides advanced power electronics and automation solutions. Recent O2 rebalance additions, such as Nvent Electric and Celestica, further emphasise this trend. Much of the energy transition requires increased robotic-enabled manufacturing capacity, key to the manufacturing and industrial automation subsector, with companies such as Emerson Electric, Yokogawa Electric, Yaskawa Electric and companies in the integration subsector such as Schneider Electric and Mitsubishi Electric. The index, on an index aggregate basis, saw its forward P/E decline from ~42.6x at the beginning of the year to 38.2X, below the five-year 43x average. Blue chip robotics companies are trading at a discount, which we believe presents an opportunity as we approach a major mass-adoption cycle.

Source: LGIM, Bloomberg, VettaFi, as at 28 June 2024.



## **Robotics & Automation**

Performance

#### Historical and simulated performance (1y)



#### Historical and simulated performance (5y)



\*Source: Bloomberg as at 28 June 2024, all values are based in USD. The backtested index data has been sourced from the index provider and is based on what they perceive to be reasonable assumptions and objective data; The index data is gross of fees/costs but is net of witholding taxes. The effect of fees and charges would reduce the returns shown. Shaded area indicates live period of the index.

#### Index performance\*

Index performance*	QtD	1 year	3 years	5 years
Cumulative Return	-5.64%	-4.75%	-13.26%	44.44%
Annualized Return			-4.64%	7.63%
Volatility	13.05%	15.19%	19.65%	20.90%
Sharpe Ratio	-159.36%	-31.35%	-23.60%	36.50%
Max Drawdown	-9.25%	-23.54%	-42.65%	-42.65%

#### Index total return contribution (QtD)

Top 5		Bottom 5	
Nvidia Corp	0.58%	Autostore Holdin	-0.61%
Teradyne Inc	0.56%	Koh Young Techno	-0.50%
Globus Medical I	0.28%	Hiwin Tech	-0.41%
Abb Ltd-Reg	0.27%	Ocado Group Plc	-0.35%
Qualcomm Inc	0.24%	Stratasys Ltd	-0.35%

#### **Portfolio composition**

Latest additions	Latest deletions
Celestica	iRhythm Technologies
Doosan Robotics	Global Unichip
nVent Electric	Ocado Group
	Optex Group

#### **Fund information**

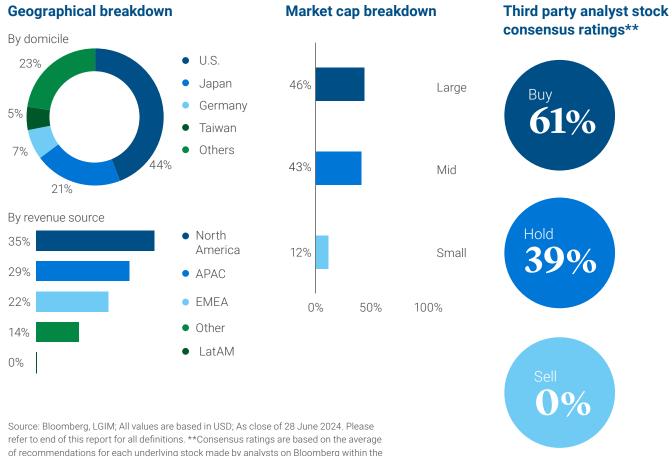
Ticker	ROBO LN	ISIN	IE00BMW3QX54
TER	0.8%	Inception date	27/10/2014
Currency	USD	Index inception date	17-Jun-14
Securities lending	No	Replication method	Physical

#### (ey risk



### **Robotics & Automation**

Characteristics



### **Key ratios**

	Current	Q2 2023
EPS	1.72	1.57
Price/Sales	3.57	3.42
BPS	16.64	16.10
P/E Positive	27.50	27.54
ROE	11.17	11.37
Price/Book	3.09	3.49
P/E (1y fwd)	42.27	34.21
P/E (3y fwd)	28.74	28.92
Sales (1y fwd)	6,384	6,771
Sales (3y fwd)	7,484	6,974

### **Constituents overlap**

S&P 500	3.8%
MSCI World	4.1%
Nasdaq 100	5.1%
Total stocks = 77	

of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months.

Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

#### **Key risk**



# Glossary

### Calculation methodology for performance statistics:

**Cumulative return:** Total return of the index net of withholding taxes over the given period.

**Annualized return:** Annualized total return of the index net of withholding taxes over the given period.

**Volatility:** Annualized standard deviation of daily returns over the given period.

**Max drawdown:** Maximum % loss from the peak to the trough in the given period.

**Large cap:** Companies whose market cap is larger than \$5bn.

**Mid cap:** Companies whose market cap is comprised between \$2bn and \$5bn.

**Sharpe ratio:** Annualised excess return divided by annualised volatility.

**Small cap:** Companies whose market cap is lower than \$2bn.

#### Third party analyst stock consensus ratings:

Average of recommendations for each underlying stock made by analysts on Bloomberg within the last 12 months. Consensus ratings do not constitute a recommendation to buy or sell any security. The consensus ratings presented in this chart are not in relation to the L&G Thematic ETFs.

### Calculation methodology for key ratios statistics:

**EPS:** Median of last 12 months earnings per share for each index component.

**Price/sales:** Median of stock prices divided by sales per share of all index components.

**BPS:** Median of total equity divided by the number of shares of all index components.

**P/E positive:** Median of stock price divided by positive earnings per share for each index components.

**ROE:** Median of net income divided by the average total common equity for each index component.

**Price/book:** Median of stock prices divided by the total equity per share for each index component.

**P/E (1y fwd):** Median of stock price divided by index estimated earnings next year for each index component.

**P/E(3y fwd):** Median of stock price divided by index estimated earning in three years for each index component.

**Sales (1y fwd):** Average of estimated sales next year for each index component.

**Sales (3y fwd):** Average of estimated sales in three years for each index component.

### Contact us:

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# ETF Investment Strategies

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#### **Key risks**

The value of investments and the income from them can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance.

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