London Stock Exchange

Where there's green, there's growth

Green Economy Report 2021

An LSEG Business

Contents

Foreword

As companies make the transition to a greener, net-zero future, they need support – from their customers and employees, from government, regulators and wider stakeholders. Equally importantly, they need support from investors and capital markets, which themselves have sustainability at their core. A convening venue, stock exchanges play a pivotal role in mobilising this support.

As one of the world's largest capital markets and sitting at the heart of the global financial system, London Stock Exchange enables long-term investment and capital raising to support the rapidly growing green economy and the greening of the overall economy.

Since joining London Stock Exchange this year, I have been deeply struck by the commitment across the organisation to support the transition to a greener, more sustainable economy – and by the way LSEG (London Stock Exchange Group) uses its convening power to bring together investors, issuers, policy makers and regulators to drive action on climate change. It is crucial that the capital markets are oriented towards long-term sustainable development.

The pace of change and innovation in sustainable finance in London has been remarkable over the last few years. Our Sustainable Bond Market has recently reached an important milestone of 300 active bonds listed, which have helped companies and institutions to raise \$100bn+ in sustainable financing.

Having been the first exchange in the world to launch a dedicated Green Bond Segment, in 2021 we became the first exchange to launch a Transition Bond Segment, designed to support companies to raise debt finance to support transition projects.

The Green Economy Mark is an important example of the support that London Stock Exchange provides to companies on their green journey. It was launched to increase the visibility of listed companies and funds on London's markets that are contributing to achieving positive environmental objectives, such as climate change mitigation and adaptation, waste and pollution prevention, and the transition to a circular economy.

I'm delighted to welcome this second Green Economy Report, which introduces the 101 companies and funds now accredited with the Mark. They are tangibly and measurably playing a vital role in accelerating the transition to a low-carbon or net-zero carbon economy, and we should applaud – and continue to support – their achievements.

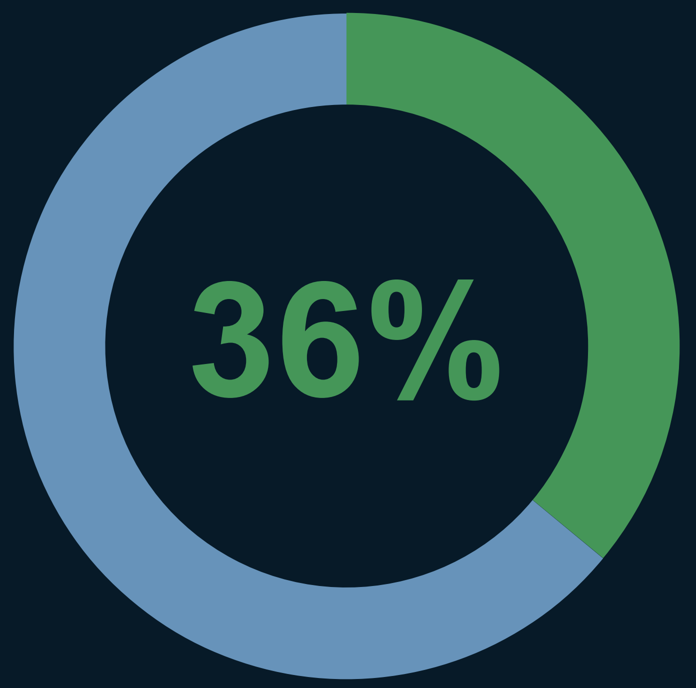
Julia Hoggett
CEO of London Stock Exchange plc

Green Economy Mark 2021: highlights

101

equity issuers

now hold the
Green Economy Mark



increase since its launch
in October 2019

71

corporates

30

closed-end funds

Year-to-date, five issuers qualified for the Mark at IPO:

- AMTE Power
- Aquila Energy Efficiency Trust
- Foresight Group Holdings
- musicMagpie
- VH Global Sustainable Energy Opportunities

£148.5bn

combined market capitalisation

This represents a 120% increase from the combined amount in 2020.

53

listed on Main Market

48

quoted on AIM

Green Economy Mark issuers account for:

9%

of total capital raised in 2021 year-to-date

5%

of the total number of equity issuers

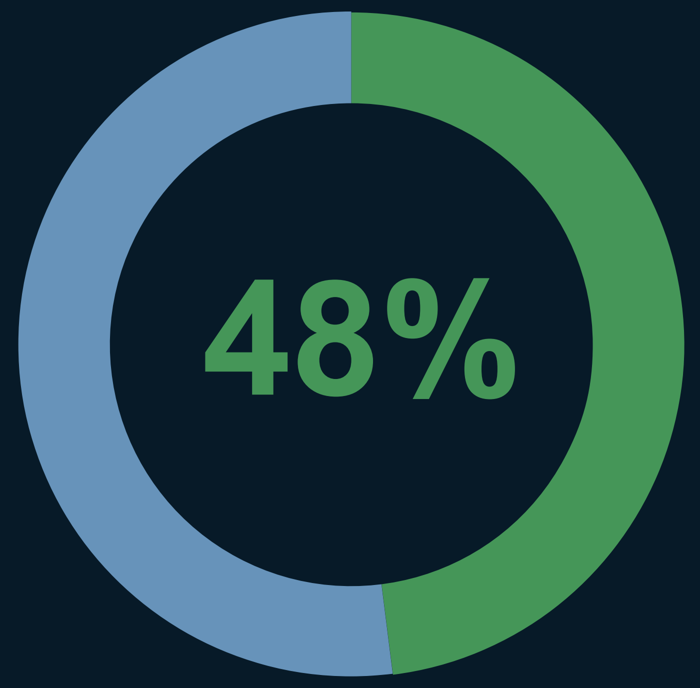
27 issuers with the Mark have raised a combined £2.6bn

in 2021 year-to-date

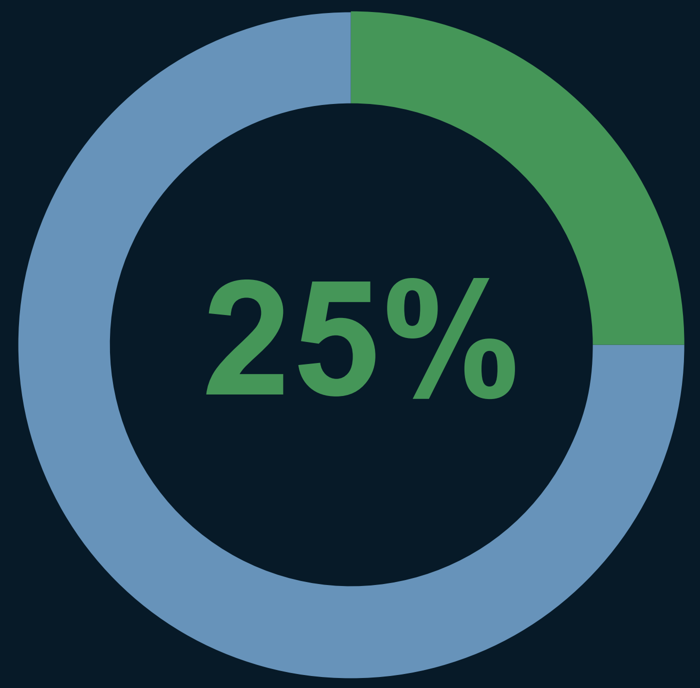
+16%

the year-to-date share price performance[2]

Representing a 5% outperformance of the FTSE All-Share Index.



of UK issuers with the Mark generate international revenues



of issuers with the Mark are international

£8.86bn

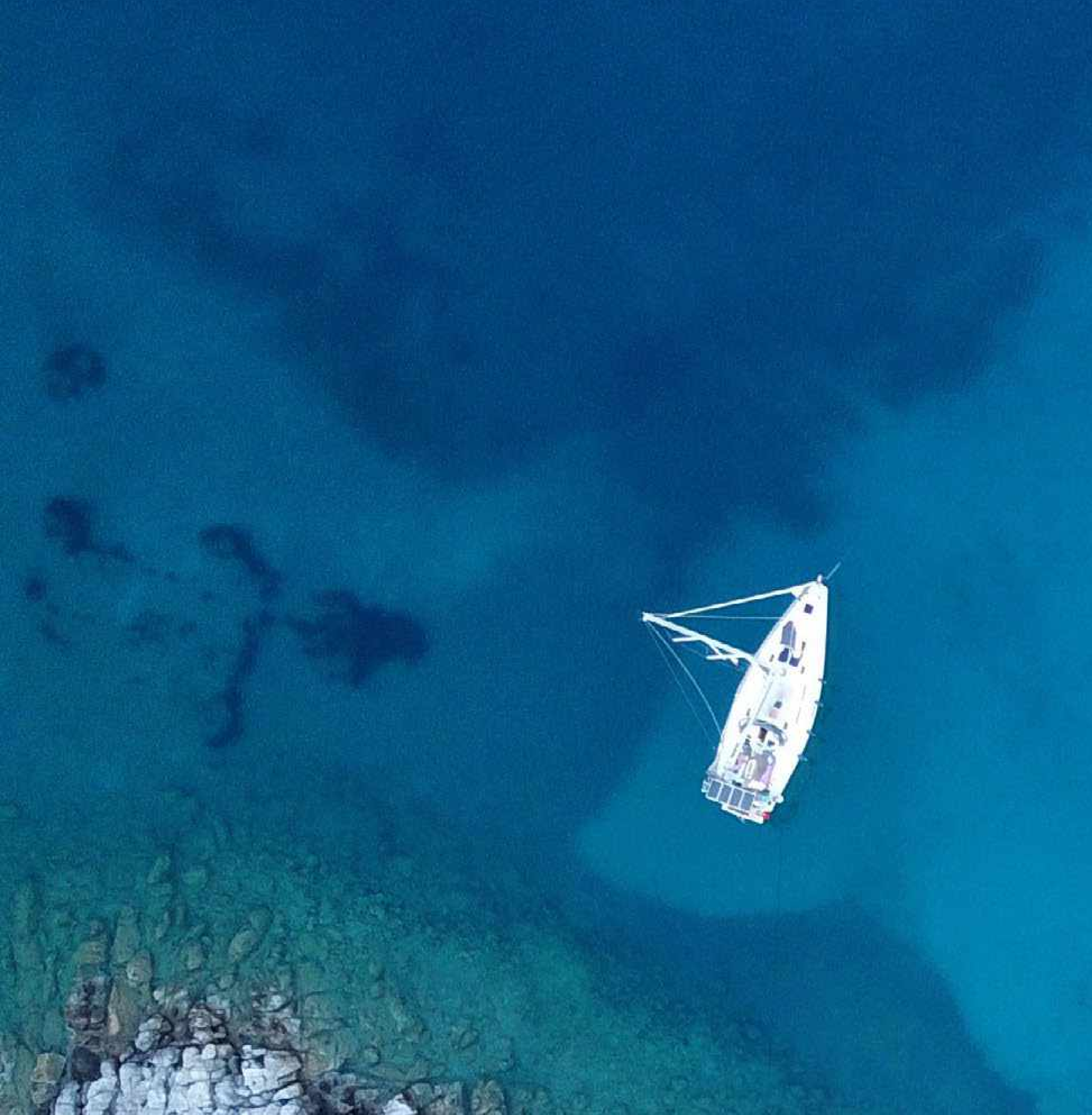
raised by Green Economy Mark issuers

in the last 24 months[1] to fund further innovations, R&D and to build capacity in growing green markets.

4th[3]

largest sector on equity markets

[1] 1 April 2019 to 31 March 2021
[2] Weighted average
[3] When grouped together as a sector, by issuance (both primary and follow-on) since 1st January 2020



Introduction

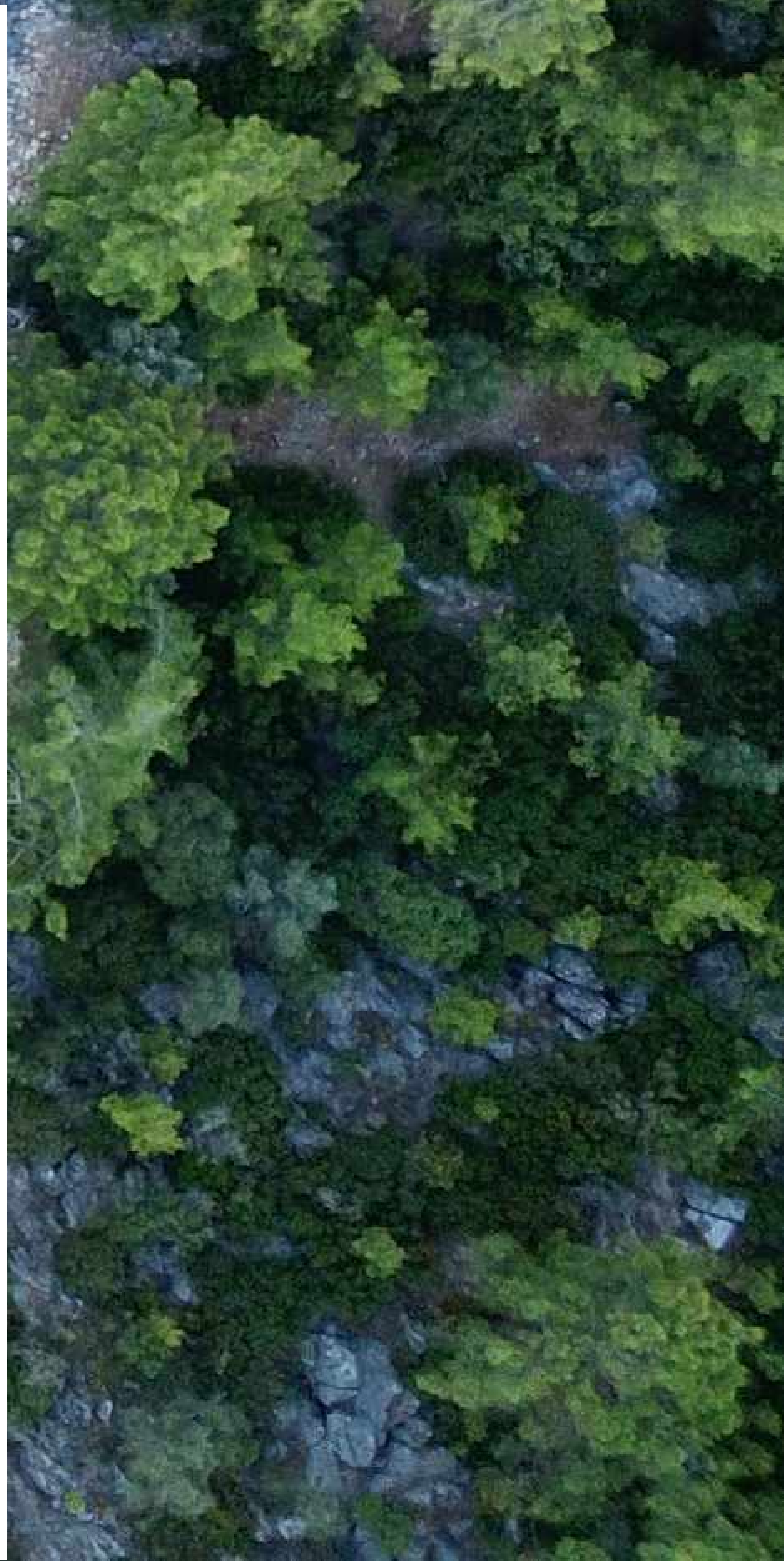
The enormous scale of the environmental challenge facing our planet confronts us all. Politically, economically, socially, financially and technologically, the global landscape is taking on a greener hue. There is a deeper and more urgent understanding of the risks and repercussions of climate change to ecosystems, societies, markets and to companies.

The June 2021 G7 Summit was unequivocal in calling for an acceleration in investment towards climate change mitigation and adaptation. “Huge leaps in innovation are required to reach our net-zero goals, and infrastructure investment to reduce emissions and mitigate climate impacts still lags far behind,” they said, citing the OECD estimate that $7trn needs to be invested annually until 2030[4].

The G7 countries are moving towards making climate disclosures mandatory across their respective economies. This year, G7 finance ministers committed for the first time to embed climate change and biodiversity loss considerations into economic and financial decision making. They described it as “a major step towards ensuring the global financial system plays its part in the transition to net-zero, as investors better understand how firms are managing climate risks and can allocate finance accordingly[5].”

Green taxonomies are now being put into place, against which investors and, in some cases, companies, must report. Importantly, taxonomies enable investors to identify environmentally sustainable economic activities[6].

Central banks such as the Bank of England and the European Central Bank are attempting to future-proof their operations by running new stress tests of the banks’ exposure to the effects of climate change[7].



Investors

Investors increasingly recognise the threat posed by climate change, to both the global economy and to their ability to meet the needs of their clients over the coming decades. But they also see the enormous opportunity for economic growth and investment returns presented by the transition to net-zero, and are acting accordingly.

The 87 global asset managers who are signatories to the Net Zero Asset Managers Initiative and are committed to net-zero emissions by 2050 or sooner, are responsible for $37trn-worth of assets under management.

The number of signatories to the United Nations-supported Principles for Responsible Investment (UN PRI) climbed 29% in the space of a year, rising to more than 3,000, with collective assets under management amounting to $103trn, according to PRI's 2020 Annual Report[8].

Investors plan to double their allocations to sustainable products over the next five years, according to BlackRock's Global Client Sustainable Investing Survey. One in five said that COVID-19 would accelerate their sustainable investing allocations and nearly 9 in 10 (88%) have placed climate-related risks at the top of their portfolio concerns[9]. With this sharpening focus on climate, investors are asking ever more searching questions about companies' green credentials and climate transition strategies before they make their investment decisions.

ESG fund flows

The disruption caused by the pandemic has led individual and institutional investors alike to look for more sustainable and resilient business operations, practices and products, as well as tools to future-proof portfolios against climate risk. This has led to accelerating demand for environmental, social and governance (ESG) funds – a demand that has also been driven by the performance of these funds, which have outperformed their non-ESG peers in seven out of the last ten years[10].

Sustainable funds attracted all-time high inflows of €120bn in the first quarter of 2021, representing more than half of overall European fund flows. Sustainable fund assets reached a record high of €1.3trn[11].

This trend is also reflected in the rapid growth of exchange-traded funds (ETFs), which have accounted for one-third of new ETF listings in London in 2021 to date. Trading in ESG ETFs has risen from minimal levels in 2019 and currently account for 4.8% of all trading on London's markets, and they are set to be one of the London market's fastest growing financial instruments[12].

[4] https://www.g7uk.org/wp-content/uploads/2021/06/G7-Economic-Resilience-Panel-Key-Policy-Recommendations.pdf
[5] https://www.g7uk.org/g7-finance-ministers-agree-historic-global-tax-agreement/
[6] EU taxonomy for sustainable activities | European Commission (europa.eu)
[7] https://www.ft.com/content/f229c6fa-2a9c-4156-a52b-59a709d4ef21
[8] https://www.unpri.org/annual-report-2020/foreword
[9] https://www.blackrock.com/corporate/newsroom/press-releases/article/corporate-one/press-releases/blackrock-survey-shows-acceleration-of-sustainable-investing
[10] Refinitiv Lipper data, cited by Reuters https://www.reuters.com/business/sustainable-business/sustainable-fund-inflows-hit-record-high-q1-morningstar-2021-04-30/
[11] https://www.morningstar.co.uk/uk/news/211923/sustainable-fund-flows-hit-new-record.aspx
[12] https://www.londonstockexchange.com/discover/news-and-insights/global-exposure-best-execution-why-london-centre-global-securities-trading

COP26: a moment – and momentum

The global focus on the threat of climate risk to ecosystems, societies, markets and to companies will be at its sharpest at COP26, which is set to take place in Glasgow in November 2021. It is the most significant climate summit since the 2015 Paris Agreement.

It is an important moment and one in which LSEG, as an organisation that is committed to playing a leading role in supporting the growing drive to a net-zero carbon economy, will participate.

But beyond the moment is the momentum, as investors and issuers commit to accelerating the reduction of their carbon emissions in their own operations or in their portfolios. Here, LSEG will help to enable the transition to net-zero by bringing together the expertise and market participants around data and disclosure, growing the green economy, enabling economy-wide transition, and convening the markets.

LSEG: supporting the global sustainable finance ecosystem

We use our data, forward-thinking technologies and expertise to facilitate engagement between issuers and investors, and to help our customers to make sustainable investment and business decisions.

There are three key areas in which LSEG is driving action.

Growing the green economy

The Green Economy Mark, by recognising London-listed companies with 50% or more of their revenues derived from products and services that contribute to the global green economy, plays a central role in enabling the growth and development of green industries and investment.

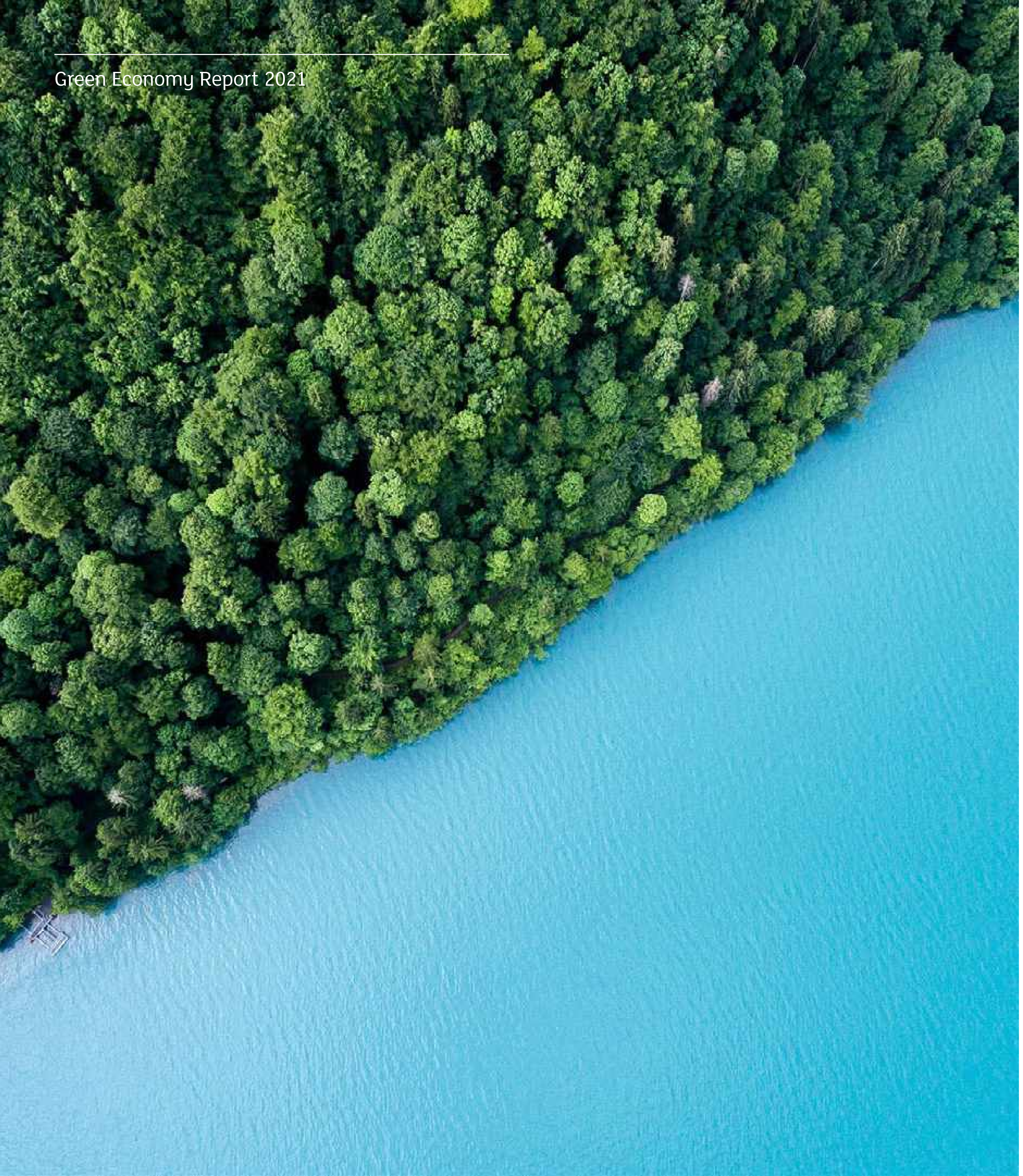
Driving ESG data and disclosure

With data and disclosure, we are encouraging issuers to produce consistent, comparable and reliable global climate data. LSEG co-chaired the UN Sustainable Stock Exchange's advisory group developing Model Climate Disclosure Guidance, which launched in June 2021. Its aim is to help exchanges support issuers in publishing decision-useful climate disclosures and create climate-resilient markets. The working group was formed following a call for a global coalition of stock exchanges from David Schwimmer and Mark Carney.

We offer one of the richest ESG databases in the industry and have been delivering ESG data and solutions for over 15 years through our heritage Refinitiv business. This now includes Lipper fund and portfolio ESG scores, sustainable financing deals, carbon pricing data and research from Point Carbon, and renewable energy projects through Infrastructure 360.

Supporting the low-carbon transition

We are supporting investment and capital flows to achieve the low-carbon transition across all sectors. LSEG's Data & Analytics division helps investors calibrate their requirements to achieve climate and other environmental, social and governance goals. The FTSE TPI Climate Transition Index was the first global index to enable investors to align a broad equity portfolio with climate transition and the goals of the Paris Agreement. London's world-first Transition Bond Segment, an extension of its Sustainable Bond Market, enables issuers to raise the capital needed to transition to low-carbon business models.



LSEG and net-zero: leading by example as a listed business

LSEG's own environmental ambitions are underpinned by science-based targets, aligning with the Paris Agreement trajectory to achieve net-zero emissions. We have become the first global exchange group to commit to net-zero through the Business Ambition for 1.5°C and are members of the United Nations Climate Change 'Race to Zero'.

We not only encourage issuers to report against Task Force for Climate-related Financial Disclosures (TCFD) through our reporting guidance, but aim to embed these standards into our own financial reporting - LSEG has been a supporter of the TCFD since its launch in 2017.

What is the green economy?

The greening of the global economy presents significant growth opportunities for companies and investors. However, to mobilise investment at scale, green business activities must be identified, categorised and measured in a systematic way, across diverse supply chains and asset classes.

Amid growing concerns in the financial industry over ‘greenwashing’, it is integral that we set the bar high, and have a robust framework to determine green products and services that are recognised through the Green Economy Mark accreditation. It is also important to distinguish between businesses with good sustainability practices, social impact and governance, and those businesses that are contributing to the low-carbon transition by meeting environmental objectives. The Mark focuses specifically on the environmental element of ESG. It uses FTSE Russell’s Green Revenues 2.0 Data Model to identify companies providing green products and services, and classifies revenues based on the Green Revenues Classification System (see methodology).

Globally there is a push by regulators, policymakers and standard-setters to ensure that investors can determine and identify investments that are genuinely sustainable. Policymakers are keen that capital is directed towards funds and companies that are reducing carbon emissions in line with the Paris Agreement.

The EU Taxonomy for Sustainable Activities is the most notable initiative to date, to which the Green Economy Mark methodology is aligned. In March 2021, the EU introduced the Sustainable Finance Disclosure Regulations (SFDR), requiring investment products to be categorised as dark green, light green or non-sustainable, designed to prevent greenwashing[13].

In the UK, the Government has appointed a Green Technical Advisory Group, in which LSEG takes a leadership position as a member, alongside other leading experts in green finance. The purpose of the group is to provide independent advice on developing and implementing a Green Taxonomy.

"By clearly defining which economic activities count as environmentally sustainable, the UK Green Taxonomy will clamp down on greenwashing – unsubstantiated or exaggerated claims that an investment is environmentally friendly – and make it easier to understand how a firm is impacting the environment."[14]

[13] https://www.ft.com/content/74888921-368d-42e1-91cd-c3c8ce64a05e
[14] https://www.gov.uk/government/publications/independent-expert-group-appointed-to-advise-government-on-standards-for-green-investment

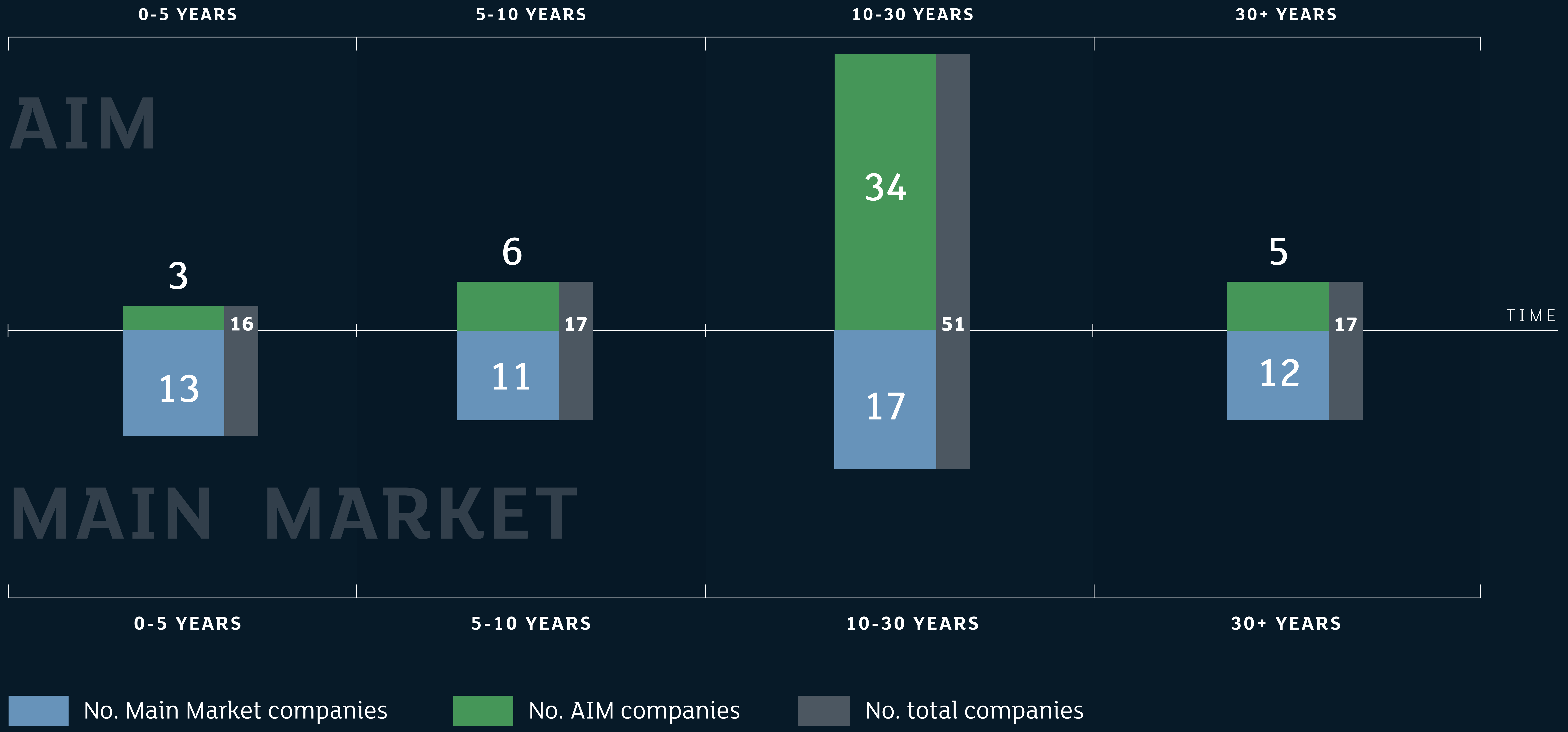
Green Economy Mark: key themes and trends

With a threshold of 50% or more green revenues, it is a significant achievement to be included in the Green Economy Mark cohort. At present, just 5% of issuers listed on London Stock Exchange have qualified for the Green Economy Mark, while an increasing number generate some degree of green revenues and remain committed to transitioning their businesses. This year, there are 101 issuers with the Mark – 27 more than when the classification launched in 2019.

It is a group of companies and funds with remarkable breadth. By taking a view of its constituents, it provides insights into the transition to a low-carbon economy as it is happening, with mature businesses investing and adapting to build up their mix of green revenues and younger companies choosing to list in London and gaining investor support for innovative new technologies.

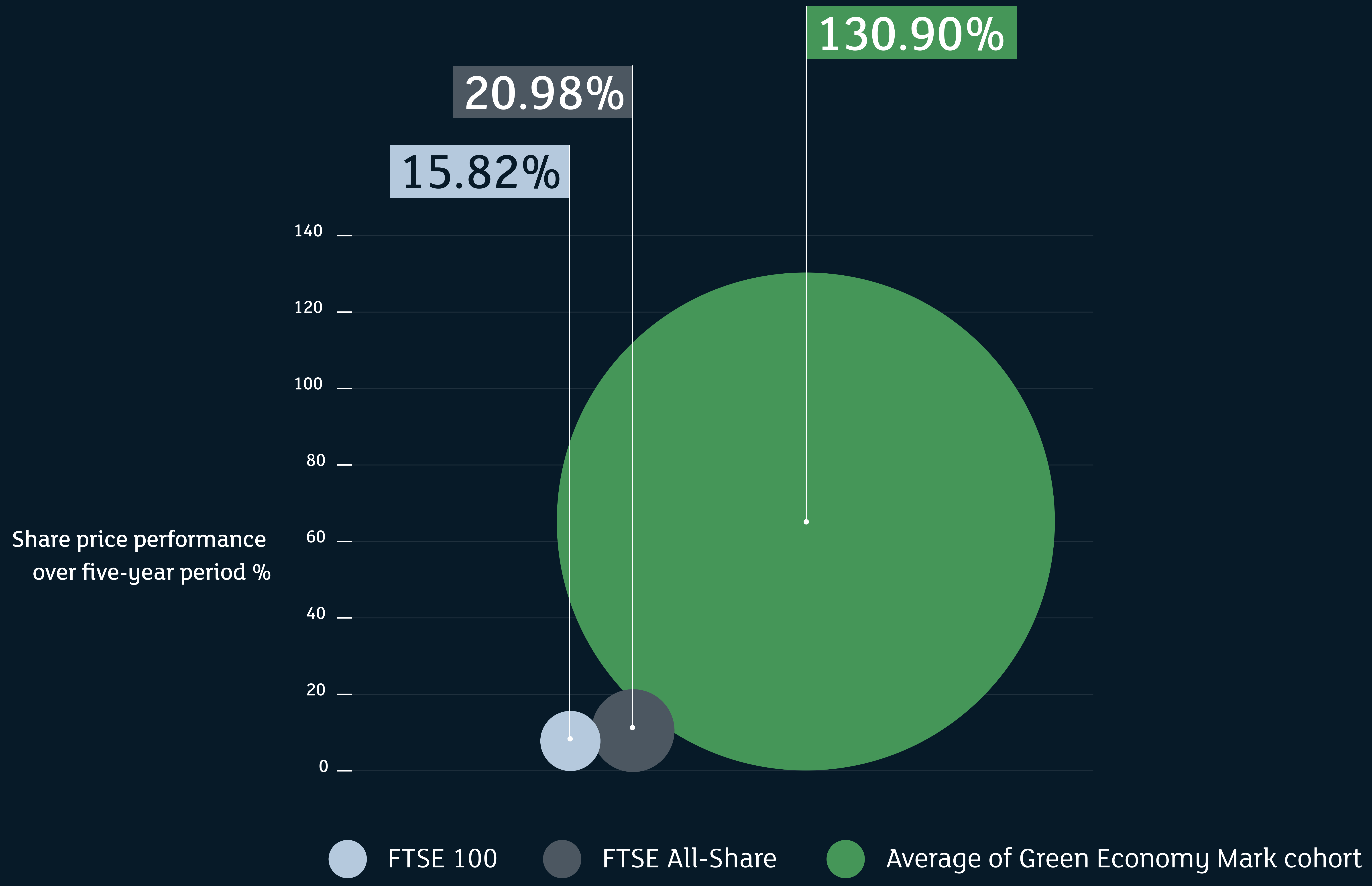
One in six are less than five years old, with a proportion that are pre-revenue businesses. At the other end of the scale, 17% are mature enterprises, more than 30 years old, which have seemingly adapted their businesses for the low-carbon economy.

As can be seen in our case studies, their range of activities demonstrates the breadth of the green economy. It is being addressed by companies and investment vehicles of all sizes, in all geographies and across all industries. These 101 companies are in the vanguard of the green economy – from the cutting edge of hydrogen, graphene and battery technologies to promoting the circular economy in cardboard boxes and mobile phones.



Outperforming global market benchmarks

In terms of share price performance, Green Economy Mark issuers have demonstrated exceptional outperformance of global benchmarks. Over a five-year period, the average increase in share price of the cohort has been nearly 131%, outstripping indices such as the S&P500 (109%) and the STOXX Europe 600 (42%).

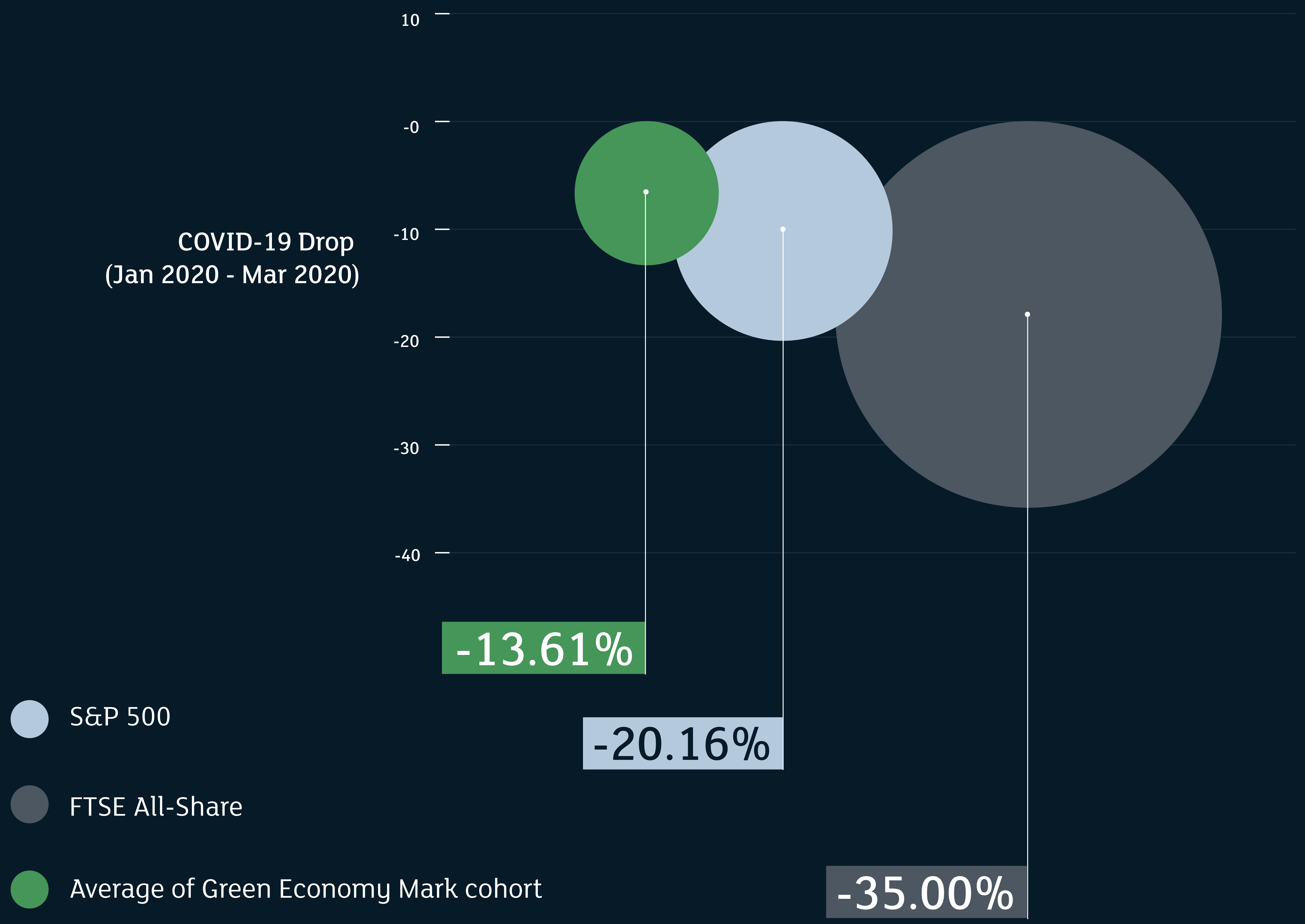


[15] Weighted average

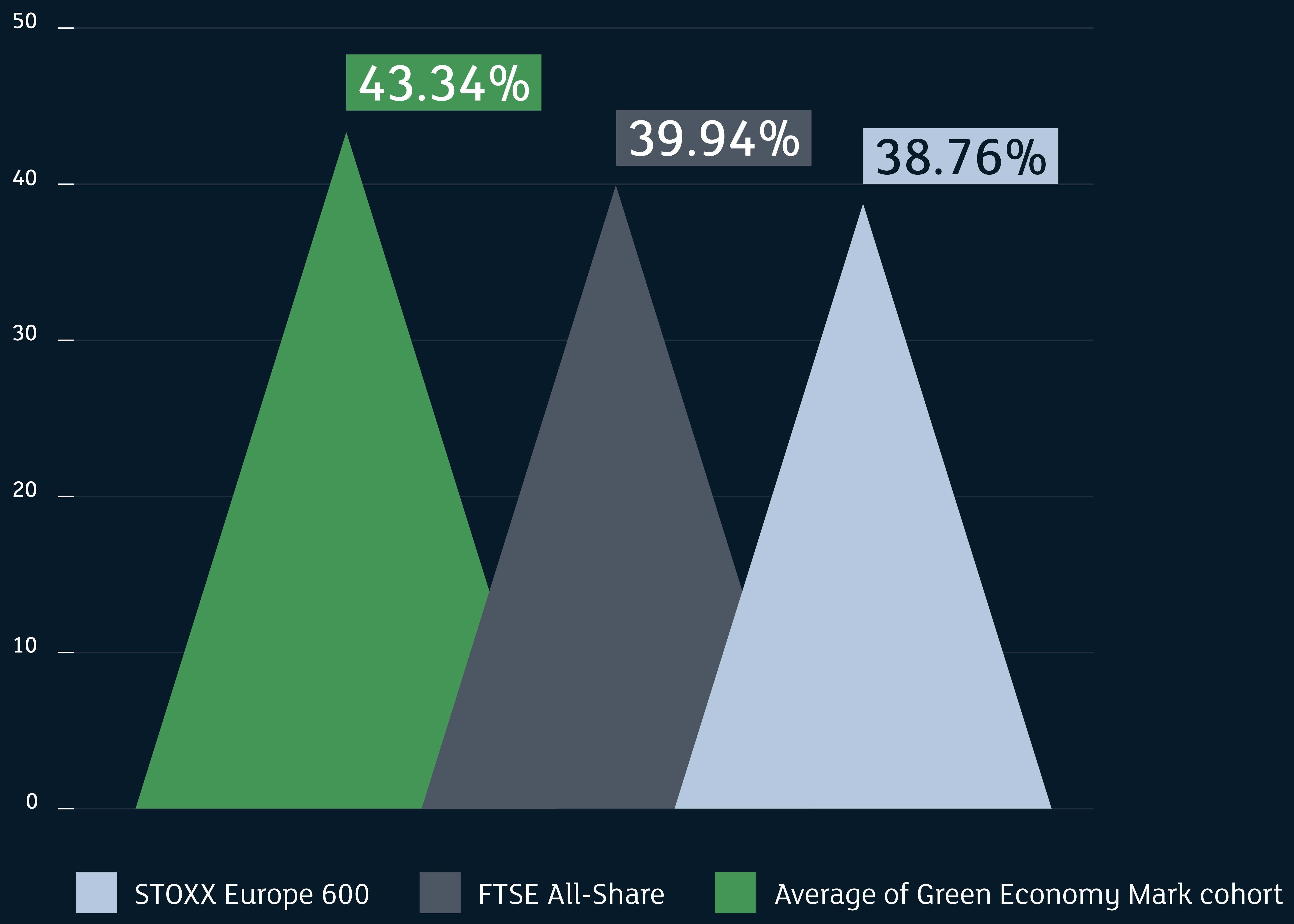
The COVID-19 bounce back

We have also witnessed the Green Economy Mark constituents' resilience in the face of the COVID-19 pandemic.

During the most volatile market period from 1 January 2020 to 23 March 2020, when awareness of the scale of the pandemic swept the world and the FTSE All-Share fell by 35% and the S&P500 by 20%, the average share price of the cohort fell by just 13%.



As global stock markets recovered, the resurgence of the Green Economy Mark cohort was stronger than UK and European benchmark indices. In the 12-month period between 23 March 2020 to 23 March 2021, the STOXX Europe 600 increased by 38.8% and the FTSE All-Share by 39.9% – but the average share price of the Green Economy Mark cohort increased by more than 43%.



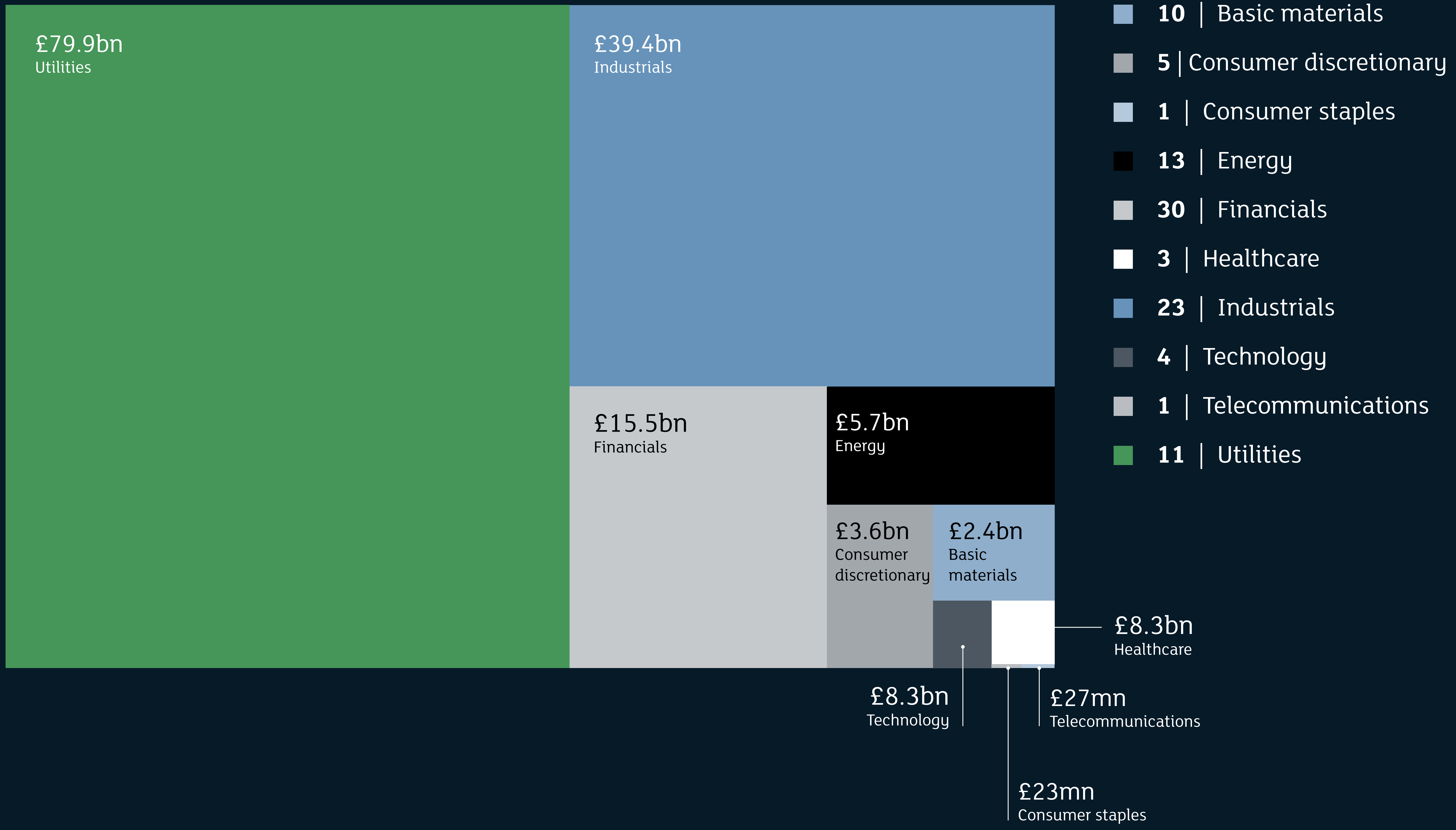
Industry composition

By composition, the sectors with the greatest number of Green Economy Mark issuers are financials (made up predominantly by closed-end funds) and industrials; these two sectors account for 53% of all Green Economy Mark issuers.

Despite this strong representation in the cohort, these issuers only represent a small fraction of their overall sector – just 8% of all closed-end funds and 8% of those in industrials. Companies in these sectors that are recognised with the Mark, such as Smurfit Kappa, are leading the way in their respective industries to contribute to a greener, more sustainable economy.

By market capitalisation, the utilities sector is the largest; its 11 companies account for more than half (53%) of the total market capitalisation of the cohort. Nearly one-third (31%) of all utility companies listed on London Stock Exchange's markets now qualify for the accreditation, which is indicative of a wider trend towards renewable sources of energy.

The number of issuers in the basic materials sector that have received the Mark has doubled since 2019, reflecting the development of innovative chemicals and materials that can reduce or substitute the use of carbon.



The growth of green funds

London is a global hub for ‘green funds’ – investment funds that provide exposure to technologies and projects across wind, solar, energy storage and efficiency, and other renewable infrastructure assets. Green funds are now the biggest constituent sector for the Green Economy Mark and their number continues to grow and evolve in scale and in scope.

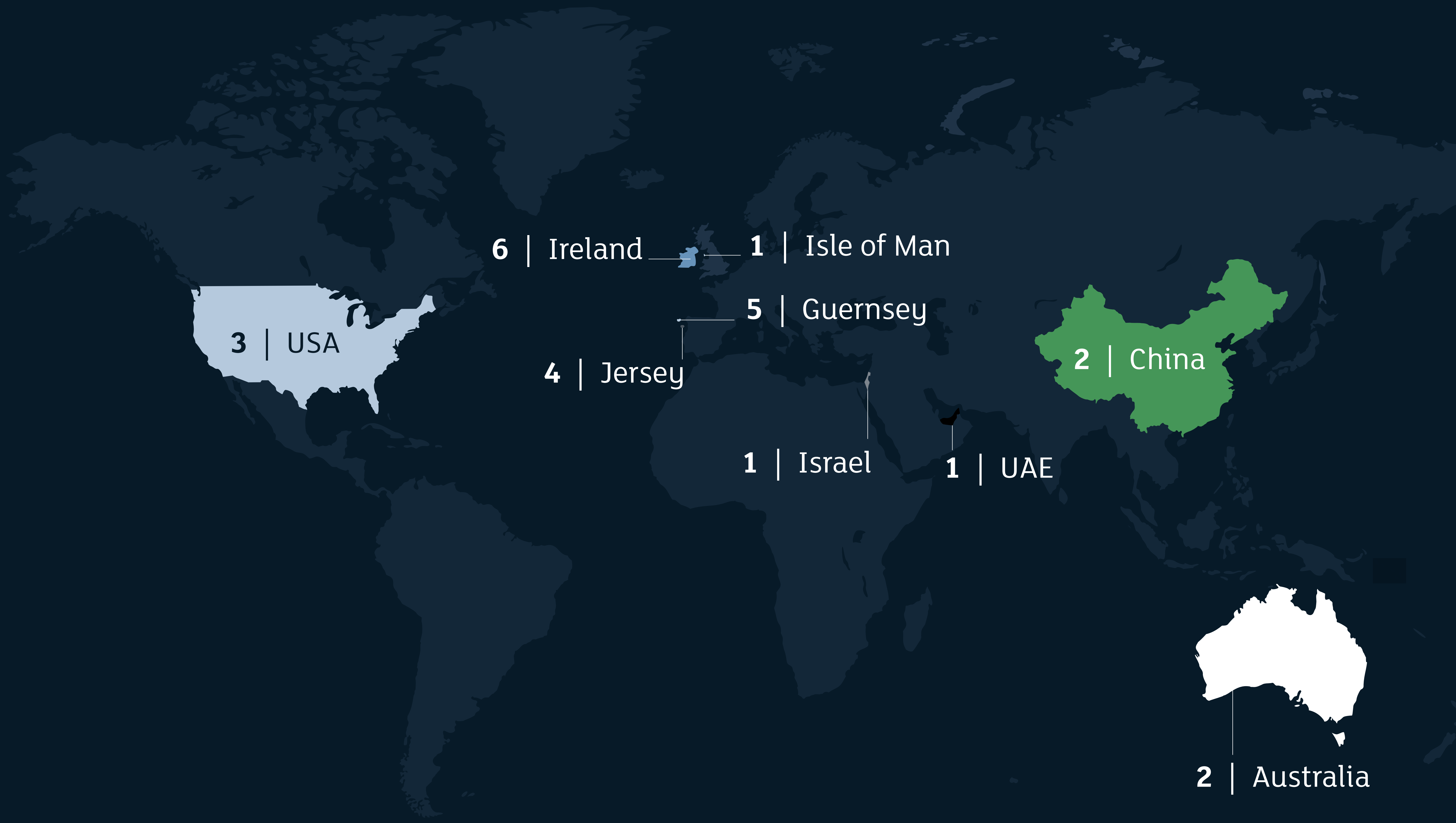
There has been strong investor demand for these funds: almost £8bn has been raised in further capital since their listing and they have seen a 250% increase in their market capitalisation over the past five years. As asset managers seek financial instruments with environmental themes, we expect to see the proliferation of funds with green mandates continue in line with this trend.

As an indication of investors’ appetite for follow-on investment into green funds, Greencoat Wind completed a milestone transaction of £400mn in September last year, which became the largest ever capital raise in London-listed green funds history.

Growing international and regional representation

International

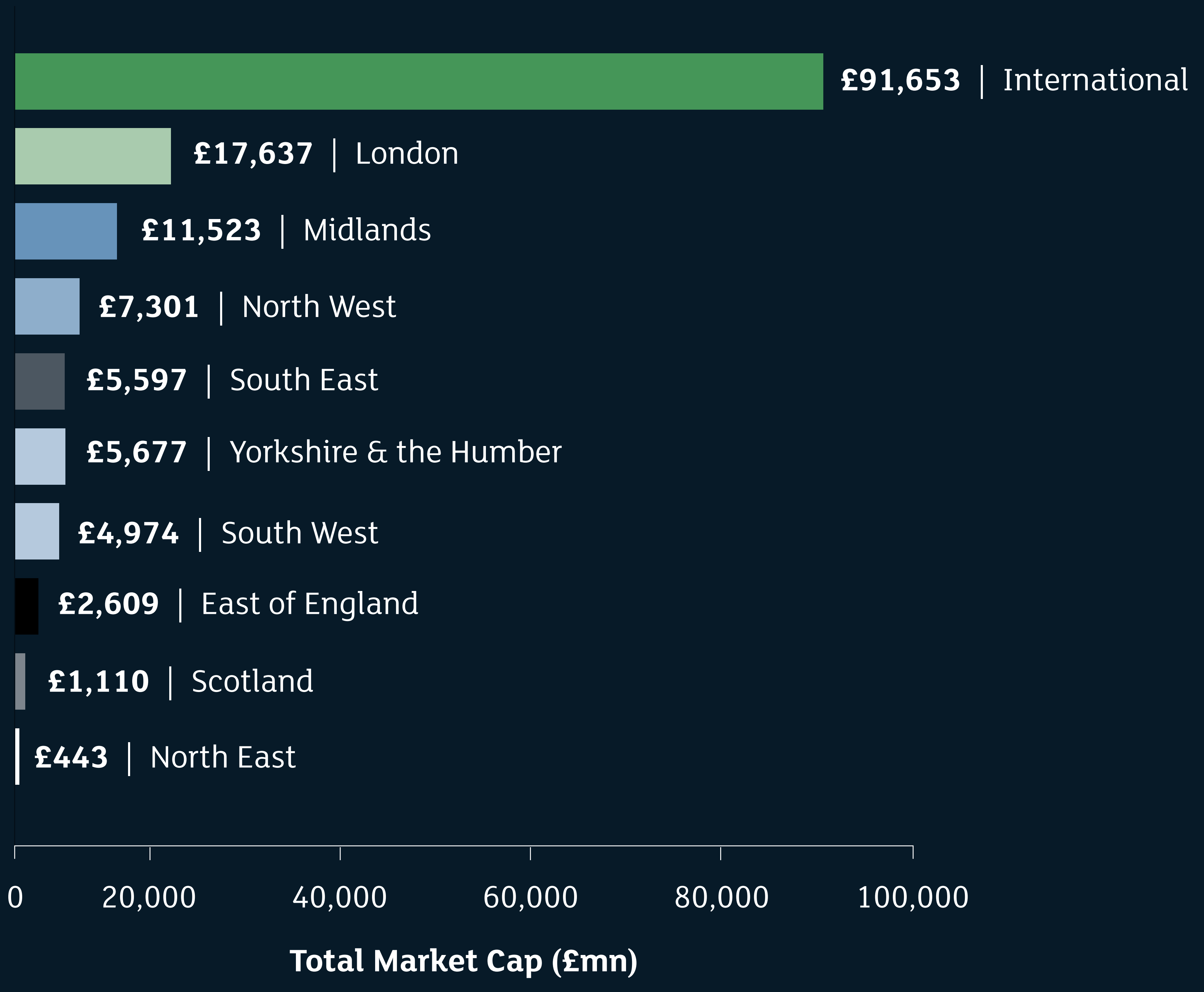
London's global appeal as a hub for sustainable finance is evidenced by the steady growth in the international composition of the cohort, which now includes issuers from the US, China, Australia, Israel, the UAE and Ireland. Almost half (48%) of Green Economy Mark companies and funds generate international revenues, including 25 for whom international revenues represent more than 90%.

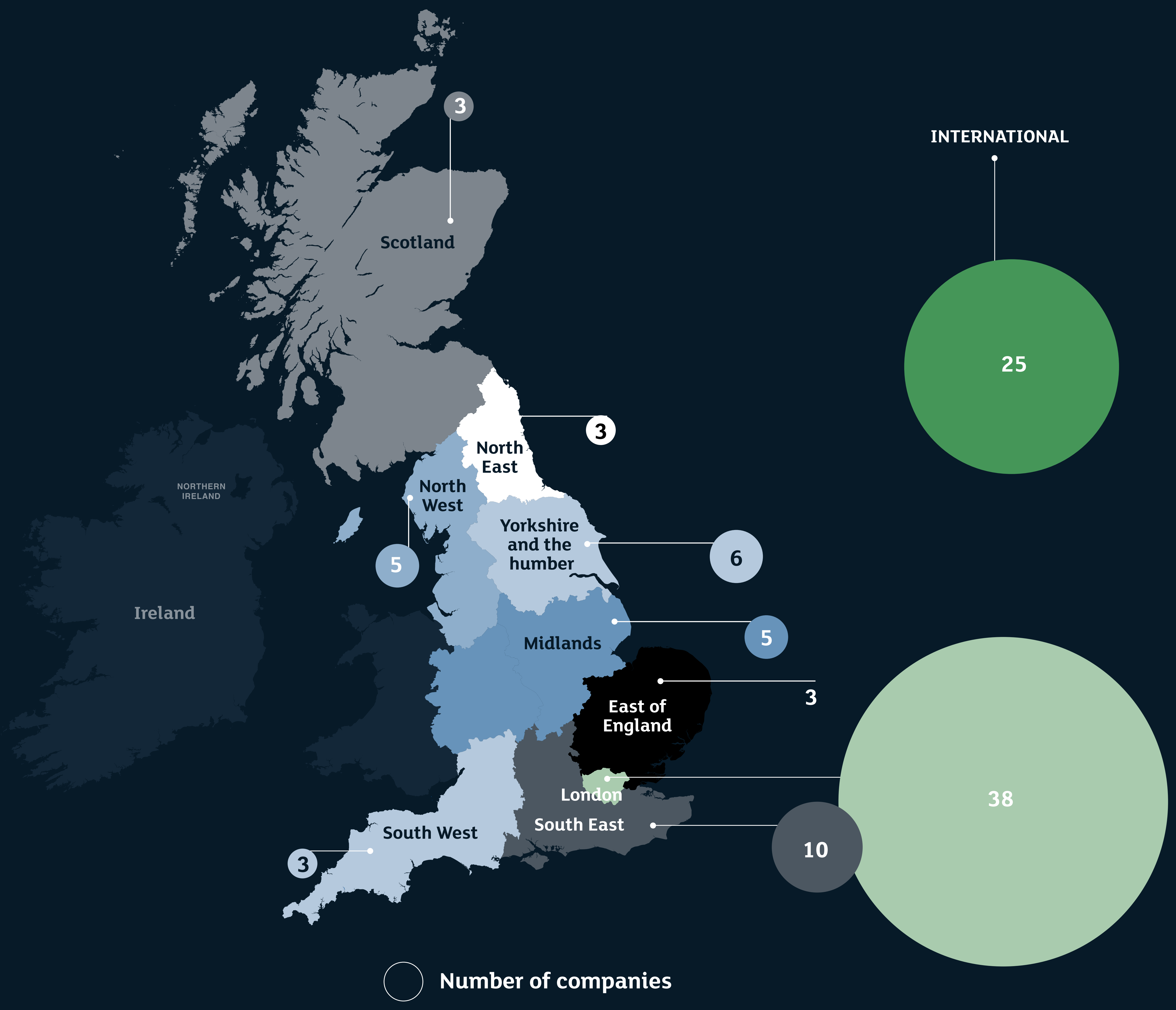


The number indicates number of companies at each location

Regional

More than half of companies (excluding investment funds) with the Mark are based outside of London. When ranked by market capitalisation, the leading three regions are London, the Midlands and the North-West.



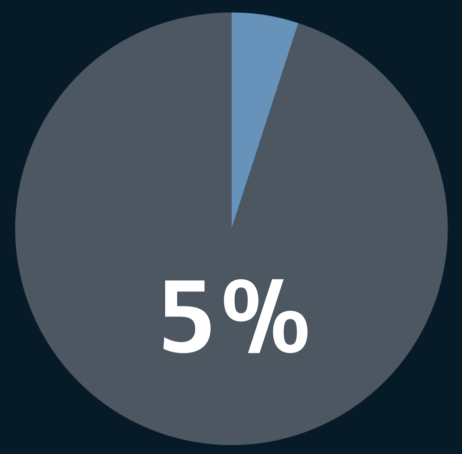


Capital raising

While representing only 5% of the overall population of listed companies and funds, Green Economy Mark issuers have raised significant amounts of capital in the past 24 months.

In 2021 year-to-date

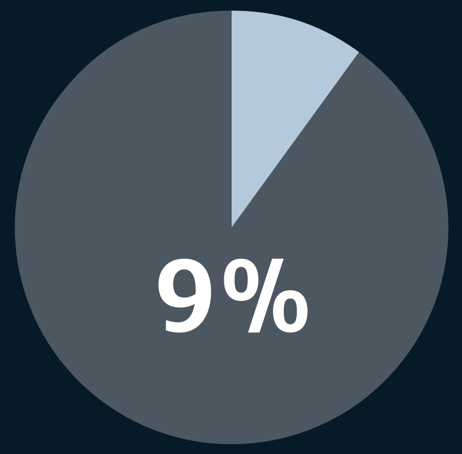
% of all London Stock Exchange equity issuers



Total capital raised by Green Economy Mark issuers

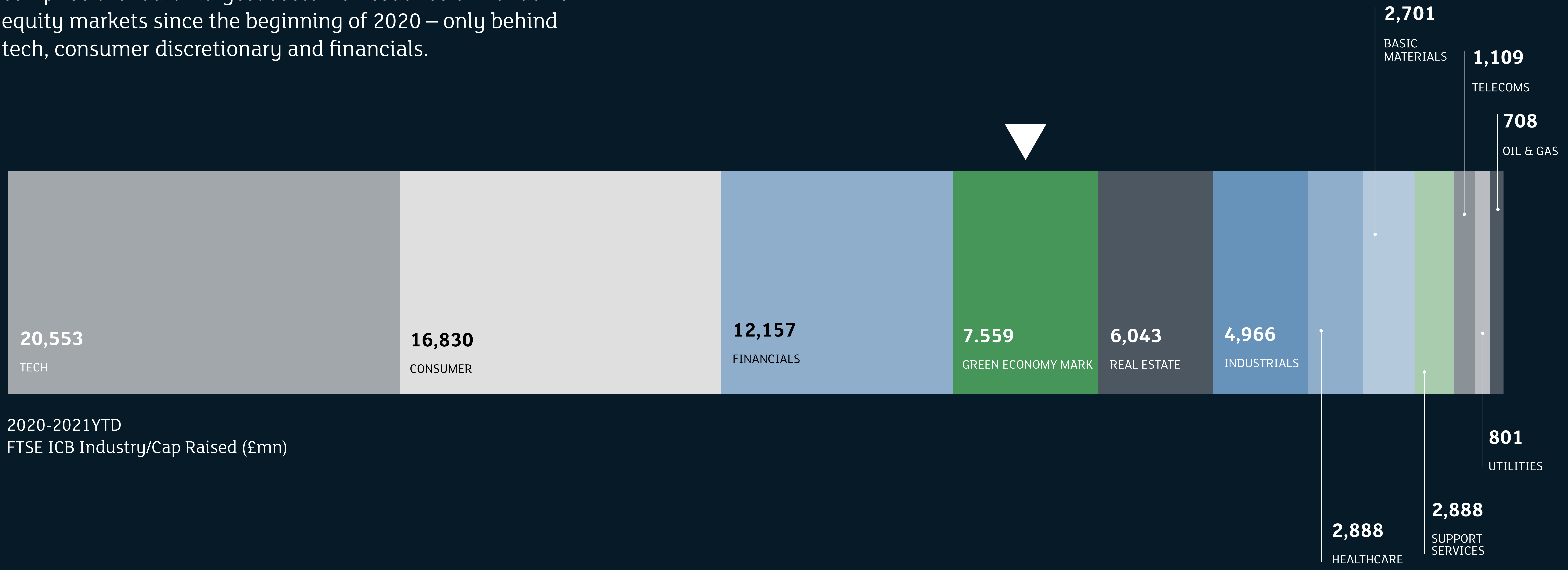
£2.5bn

% of all capital raised on London Stock Exchange



Capital raising

If grouped together as their own sector, they would comprise the fourth largest sector for issuance on London's equity markets since the beginning of 2020 – only behind tech, consumer discretionary and financials.



2020-2021YTD
FTSE ICB Industry/Cap Raised (£mn)

Green Economy Mark list

Company name	ICB industry	ICB sub-sector name	London Stock Exchange market
Accsys Technologies	Industrials	Building materials: Other	AIM
Active Energy Group	Energy	Alternative fuels	AIM
AFC Energy	Energy	Alternative duels	AIM
Agronomics Limited	Healthcare	Biotechnology	AIM
Amiad Water Systems	Utilities	Water	AIM
AMTE Power Plc	Industrials	Electrical components	AIM
Applied Graphene Materials	Basic materials	Specialty chemicals	AIM
Aquila Energy Efficiency Trust Plc	Financials	Closed-end investments	MAIN MARKET
Aquila European Renewables Income Fund Plc	Financials	Closed-end investments	MAIN MARKET
Armadale Capital	Basic materials	General mining	AIM
Augean	Utilities	Waste and disposal services	AIM
Benchmark Holdings	Healthcare	Biotechnology	AIM
Biffa	Utilities	Waste and disposal services	MAIN MARKET
Biome Technologies	Basic materials	Specialty chemicals	AIM
Blancco Technology Group	Technology	Software	AIM
Bluefield Solar Income Fund	Financials	Closed-end investments	MAIN MARKET
Cairn Homes	Consumer discretionary	Home construction	MAIN MARKET
Cambium Global Timberland Limited	Basic materials	Forestry	AIM
Cap-XX	Industrials	Electrical components	AIM
Ceres Power Holdings	Energy	Alternative fuels	AIM
China Yangtze Power Co., Ltd	Utilities	Alternative electricity	MAIN MARKET
Cloudcall Group	Technology	Software	AIM
Cyanconnode Holdings Plc	Telecommunications	Telecommunications equipment	AIM
Dialight Plc	Industrials	Electronic equipment: Other	MAIN MARKET
Downing Renewables & Infrastructure Trust	Financials	Closed-end investments	MAIN MARKET
Eco Animal Health Group	Healthcare	Pharmaceuticals	AIM
Ecofin U.S. Renweables Infrastructure Trust Plc	Financials	Closed-end investments	MAIN MARKET
Eden Research Plc	Basic materials	Specialty chemicals	AIM
eEnergy Group Plc	Industrials	Industrial cuppliers	AIM
EQTEC	Energy	Alternative fuels	AIM
Foresight Group Holdings Limitedzz	Financials	Asset managers and custodians	MAIN MARKET
Foresight Solar & Technology VCT Plc	Financials	Closed-end investments	MAIN MARKET
Foresight Solar Fund	Financials	Closed-end investments	MAIN MARKET
GCP Infrastructure Investments Limited	Financials	Closed-end investments	MAIN MARKET
Genuit Group	Industrials	Building, roofing/wallboard and plumbing	MAIN MARKET
Glenveagh Properties Plc	Consumer discretionary	Home construction	MAIN MARKET
Go-Ahead Group	Consumer discretionary	Travel and tourism	MAIN MARKET
Goldplat	Basic materials	Gold mining	AIM
Good Energy Group	Utilities	Alternative electricity	AIM
Gore Street Energy Storage Fund Plc	Financials	Closed-end investments	MAIN MARKET
Greencoat Renewables Plc	Utilities	Alternative electricity	AIM
Greencoat UK Wind	Financials	Closed-end investments	MAIN MARKET
Gresham House Energy Storage Fund Plc	Financials	Closed-end investments	MAIN MARKET - SFS
Gresham House Plc	Financials	Closed-end investments	AIM
Gresham House Renewable Energy VCT 1 Plc	Financials	Closed-end investments	MAIN MARKET
Gresham House Renewable Energy VCT 2 Plc	Financials	Closed-end investments	MAIN MARKET
Harvest Minerals Limited	Basic materials	General mining	AIM
Ilika	Industrials	Electrical components	AIM
IMI	Industrials	Electronic equipment: Control and filter	MAIN MARKET
Impax Asset Management Group	Financials	Asset managers and custodians	AIM

Continued

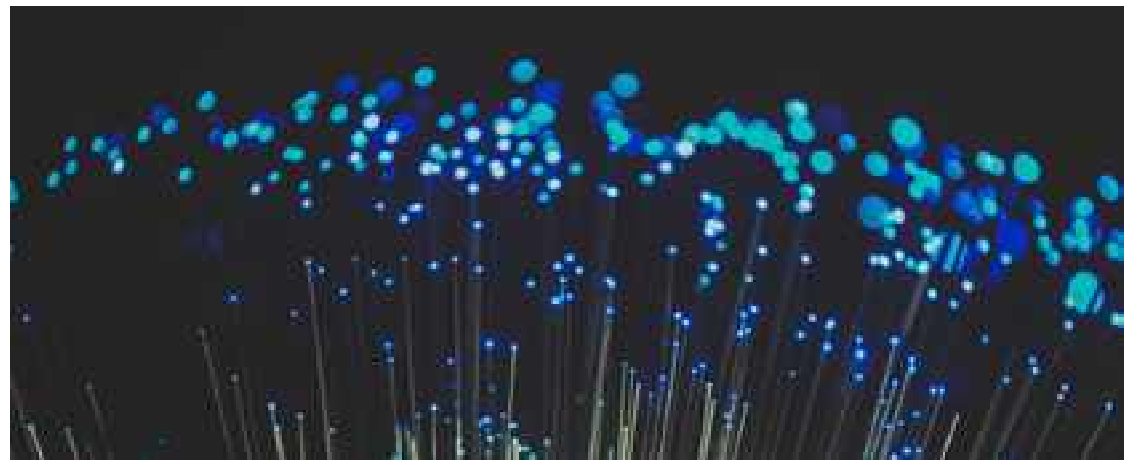
Company name	ICB industry	ICB sub-sector name	London Stock Exchange market
Impax Environmental Markets	Financials	Closed-end investments	MAIN MARKET
Inspired Energy Plc	Energy	Alternative fuels	AIM
Invinity Energy Systems	Industrials	Electrical components	AIM
Itaconix Plc	Industrials	Plastics	AIM
ITM Power	Energy	Renewable energy equipment	AIM
JLEN Environmental Assets Group	Financials	Closed-end investments	MAIN MARKET
Jupiter Green Investment Trust Plc	Financials	Closed-end investments	MAIN MARKET
Kingspan Group	Industrials	Building materials: Other	MAIN MARKET
KKV Secured Loan Fund Limited	Financials	Closed-end investmentss	MAIN MARKET
Lamprell	Energy	Oil equipment and services	MAIN MARKET
musicMagpie Plc	Consumer discretionary	Specialty retailers	AIM
Nanoco Group	Technology	Semiconductors	MAIN MARKET
NextEnergy Solar Fund	Financials	Closed-end investments	MAIN MARKET
Octopus Renewables Infrastructure Trust Plc	Financials	Closed-end investments	MAIN MARKET
Pennon Group	Utilities	Water	MAIN MARKET
Plant Health Care	Basic materials	Fertilisers	AIM
Plexus Holdings Plc	Energy	Oil equipment and services	AIM
Premier Miton Global Renewables Trust Plc	Financials	Closed-end investments	MAIN MARKET
Proton Motor Power Systems Plc	Energy	Alternative fuels	AIM
REA Holdings	Consumer staples	Farming, fishing, ranching and plantations	MAIN MARKET
Renew Holdings	Industrials	Engineering and contracting services	AIM
Renewables Infrastructure Group	Financials	Closed-end investments	MAIN MARKET
Renewi	Utilities	Waste and disposal services	MAIN MARKET
RPS Group	Industrials	Professional business support services	MAIN MARKET
Sabien Technology Group	Industrials	Electronic equipment: Gauges and meters	AIM
SDCL Energy Efficiency Income Trust Plc	Financials	Closed-end investments	MAIN MARKET
SDIC Power Holdings Co., Ltd	Utilities	Conventional electricity	MAIN MARKET
Severn Trent	Utilities	Water	MAIN MARKET
SIG	Industrials	Building materials: Other	MAIN MARKET
Simec Atlantis Energy	Energy	Renewable energy equipment	AIM
Smart Metering Systems	Industrials	Professional business support services	AIM
Smith (Ds)	Industrials	Containers and packaging	MAIN MARKET
Smurfit Kappa Group	Industrials	Containers and packaging	MAIN MARKET
Symphony Environmental Tech.	Industrials	Containers and packaging	AIM
Synthomer	Basic materials	Chemicals: Diversified	MAIN MARKET
Tekmar Group	Energy	Pipelines	AIM
Thorpe (Fw)	Technology	Electronic components	AIM
TI Fluid Systems	Consumer discretionary	Auto parts	MAIN MARKET
Tirupati Graphite Plc	Basic materials	General mining	MAIN MARKET
TP Group	Industrials	Defense	AIM
Triple Point Energy Efficiency Infrastructure Company Plc	Financials	Closed-end investments	MAIN MARKET - SFS
United Utilities Group	Utilities	Water	MAIN MARKET
US Solar Fund Plc	Financials	Closed-end investments	MAIN MARKET
Velocys	Energy	Renewable energy equipment	AIM
Ventus 2 VCT Plc	Financials	Closed-end investments	MAIN MARKET
Ventus VCT Plc	Financials	Closed-end investments	MAIN MARKET
Verditek Plc	Energy	Renewable energy equipment	AIM
VH Global Sustainable Energy Opportunities Plc	Financials	Closed-end investments	MAIN MARKET
Volution Group Plc	Industrials	Building materials: Other	MAIN MARKET
Water Intelligence	Industrials	Professional business support services	AIM
Xeros Technology Group	Industrials	Machinery: Specialty	AIM
Blackbird Plc	Technology	Software	AIM*
Saietta Group Plc	Consumer Discretionary	Auto Parts	AIM*

*These companies qualified for the Green Economy Mark in the interim period between data analysis and publication.

New entrants

Agronomics
Investor in cellular agriculture with a focus on cultivated meat and alternative proteins.

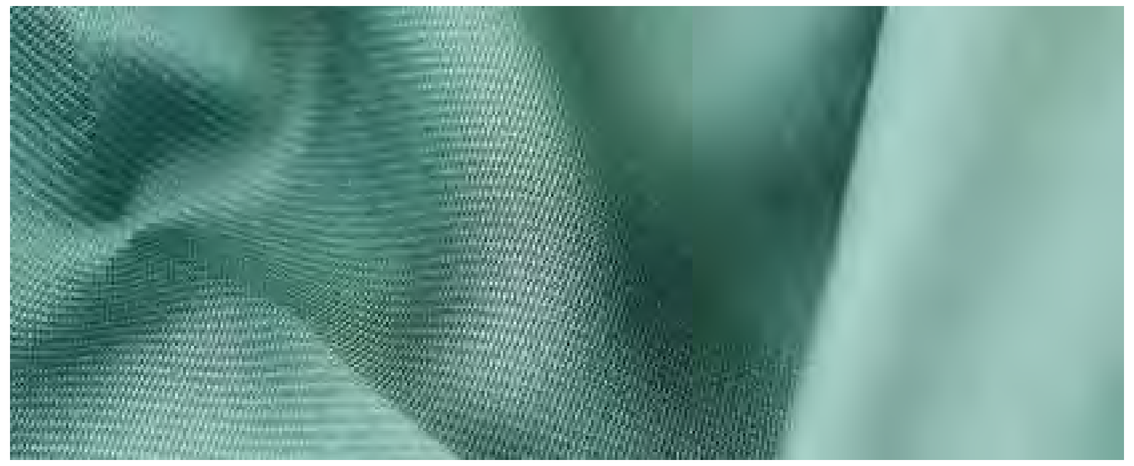
CyanConnode
A leader in narrowband radio frequency smart mesh networks, a technology that is enabling the global deployment of smart metring and smart lighting solutions.



IMI
Precision fluid engineering company that designs, manufactures and services valves, actuators and control systems.

Lamprell
Provides fabrication, engineering and contracting services to the renewables industry, and a range of digital proprietary technologies for industrial applications.

Plexus Holdings
Oil and gas engineering services business whose proprietary friction grip method of wellhead engineering prevents leaks, and ensures that exploration and production is conducted in line with the highest possible standards to safeguard the environment from harmful emissions.



Synthomer
One of the world's foremost suppliers of aqueous polymers, which help to create new products and enhance the performance of existing products in industries such as coatings, construction, textiles, paper and synthetic latex gloves.

Methodology

The Green Economy Mark draws upon FTSE Russell's Green Revenues 2.0 Data Model, which identifies companies providing green products and services which achieve environmental objectives. Revenues are classified based on the Green Revenues Classification System (GRCS).

The latest iteration of the classification system was launched in 2020 and takes a broad, bottom up view of the green economy.

The GRCS captures environmental products and services across the whole equity value chain, covering **10 green sectors, 64 sub-sectors and 133 micro-sectors**. Using this data, a precise percentage of green revenues is derived at the sector, sub-sector and micro-sector level for each company.

Each business activity defined by the GCRS is evaluated against seven environmental objectives:

- **Climate change mitigation**
- **Climate change adaptation**
- **Pollution prevention and control**
- **Protection of healthy ecosystems**
- **Sustainable use and protection of water and marine resources**
- **Transition to a circular economy, waste prevention and recycling**
- **Sustainable and efficient agriculture**

This work is then turned into an overall strength of 'greenness', or net environmental impact, of companies' activities and revenues into three tiers:

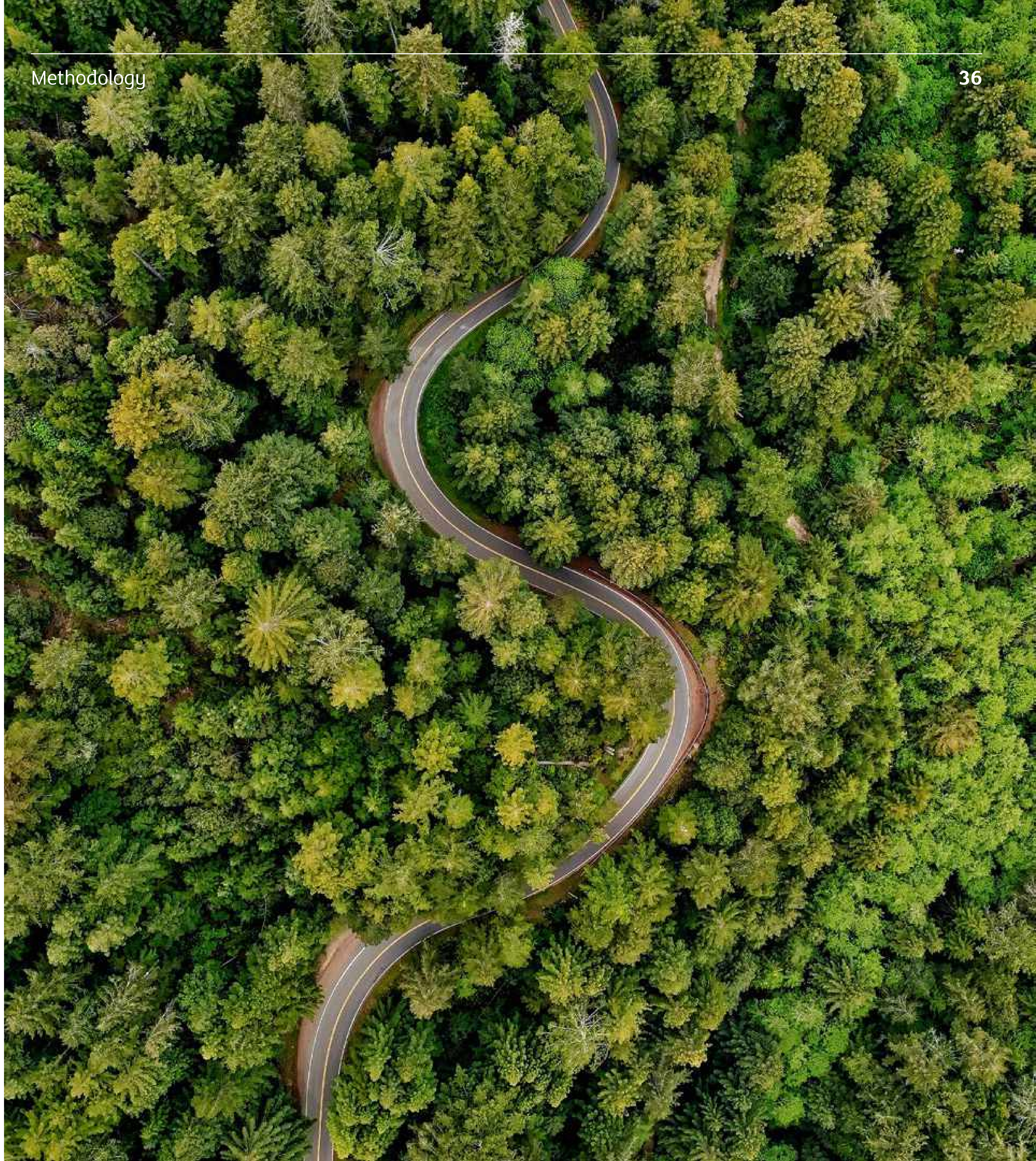
Tier 1 – Clear and significant environmental benefits
Tier 2 – Limited but net positive environmental benefits
Tier 3 – Some environmental benefits but are overall net neutral or negative

This new tiering system means that companies with Tier 1 and 2 revenues can be accredited with the Green Economy Mark to reflect products and services with positive environmental benefits.

The Mark identifies London-listed companies and funds on all segments of the Main Market and AIM that generate between 50% and 100% of their total annual revenues from products and services that contribute to the global green economy, as defined by the above methodology. To ensure that all issuers are able to qualify, the Mark is also given to issuers included within the FTSE Russell Environmental Opportunities AIM index.

Did you know

Any issuer may apply to have its green revenues considered for the Mark via the Sustainable Finance team at London Stock Exchange. Companies and funds may also apply to pre-qualify ahead of IPO; issuers have commented on the benefits of being able to talk about this on their investor roadshows. "It was nice to put in the investor presentations that we had pre-qualified for the Green Economy Mark," says Steve Oliver, CEO of musicMagpie, "as it strongly reinforced our ESG credentials and sustainability being at the heart of our business proposition." (See the musicMagpie case study).



Case studies

Case study: musicMagpie

Founded in a converted garage in Stockport in 2007, musicMagpie has grown into a leader in ‘re-commerce’, providing UK and US consumers with a smart, sustainable and trusted way to buy, rent and sell refurbished consumer technology and books. “We are the UK’s biggest recycler of mobile phones,” says CEO and co-founder Steve Oliver,

“Sustainability is at the heart of our business model, with 98% of our turnover coming from giving products a second life.”

When selling to musicMagpie, customers are offered a fixed valuation via its website or app, provided with free logistics to ship the products and (subject to it being ‘as described’) receive payment for their product on the day of arrival at the warehouse.

After the products have been refurbished, all consumer tech items are re-sold to customers with a free 12-month warranty.

Their biggest competitor, says Oliver, is apathy; old items are left in drawers and thrown away later. At present, he says that only 1% of the world’s smartphones are recycled. In 2019, the world generated 53.6 metric tonnes of e-waste, an average of 7.3kg per capita[17]. Yet consumer technology contains valuable materials such as gold, silver and platinum as well as toxic ones such as lead and mercury.

“It is estimated that up to 70% of toxic waste in landfills comes from electronic waste.”

> **“It was nice to put in the investor presentations that we had pre-qualified for the Green Economy Mark, as it reinforced our ESG credentials and sustainability being at the heart of our business proposition.”**

The trend towards buying ‘pre-owned’ consumer technology products is accelerating, driven in part by growing consumer acceptance of the circular economy and by the rising prices for new, high-specification products.

“Buying second-hand used to be seen as ‘niche’ and something you did when you couldn’t perhaps afford new.” he says.

With almost all its growing revenues qualifying as green revenues, musicMagpie was awarded the Green Economy Mark upon its IPO in 2021. The offer was over-subscribed. The IPO has enabled musicMagpie to finance two major initiatives: a smartphone monthly subscription/ rental service; and the rollout of SMARTdrop kiosks in ASDA supermarkets, through which shoppers can get cash for their old phone in as little as four minutes. “It has been received fantastically well,” says Oliver. “It makes it very convenient for consumers – nearly half of those who have sold to us via our kiosks would not otherwise have done so – so it also creates a new way for us to acquire products.” In addition, the company plans to start offering brands ‘Magpie Circular’, a technology recycling service for businesses.

From a garage to a £150m turnover business on London Stock Exchange’s AIM, the past 14 years have been quite a ride for Steve Oliver. But, he says, this is just the start. “I have never been as excited about the future for musicMagpie, now that the power of the circular economy is increasingly widely understood.”

“Today’s young consumers see buying second-hand as being both financially savvy and being a smart choice for the planet.”

For the recent G7 Summit in Cornwall, musicMapgpie created Mount Recyclemore – a giant sculpture of the G7 leaders’ heads made entirely of discarded electronics – in a cove close to Carbis Bay. Its purpose was to highlight the growing threat of e-waste to the environment.

musicmagpie.co.uk/mountrecyclemore

“Sustainability is at the heart of our business model, with over

of our turnover coming from giving products a second life.”

Case study: Severn Trent

As a water business, Severn Trent has always been deeply connected to the environment. “It is our supply chain,” says Severn Trent’s Head of Strategy, Transformation and Sustainability, Richard Eadie.

Historically, he says, the company had been “a bit modest” when talking about its environmental activities, but in the past four years its focus on sustainability has changed the dialogue – with consumers, regulators, investors and wider stakeholders. “People are keen to know how the company is having a positive impact,” he says.

In 2018, Severn Trent set out its Triple Carbon Pledge: by 2030 it would achieve net-zero emissions, 100% energy from renewable sources, and a 100% electric fleet. “We wanted to lead, not be a follower,” says Eadie.

As Severn Trent has talked about sustainability more openly, he says, “it has created a stronger link between what people want to see and the type of business that we are.” says Eadie.

“Through regulators, customers, government, and investors, we have been given permission to be more ambitious and try new things.”

That ambition can be seen in a variety of ways. The company’s Great Big Nature Boost aims to enhance the biodiversity of 5,000 hectares of land by 2027, plant 1.3 million trees by 2030, and improve the water quality of the region’s rivers. “Not only is biodiversity vitally important but it also makes strong business sense,” says Eadie.

"Nature-based solutions – such as restoring peatland or slowing water flow – are cheaper and better ways to maintain healthy rivers."

Severn Trent's Green Recovery Scheme will invest £565mn over the next four years to help the environment and improve infrastructure across the Midlands, as well as creating 2,500 new jobs in a range of projects, from the removal of old lead pipes from up to 26,000 homes, to creating bathing-quality stretches in the rivers Leam and Teme, and trials of flood alleviation solutions in Mansfield.

Severn Trent has published its second stand-alone Sustainability Report, including disclosures against the recommendations of the TCFD.

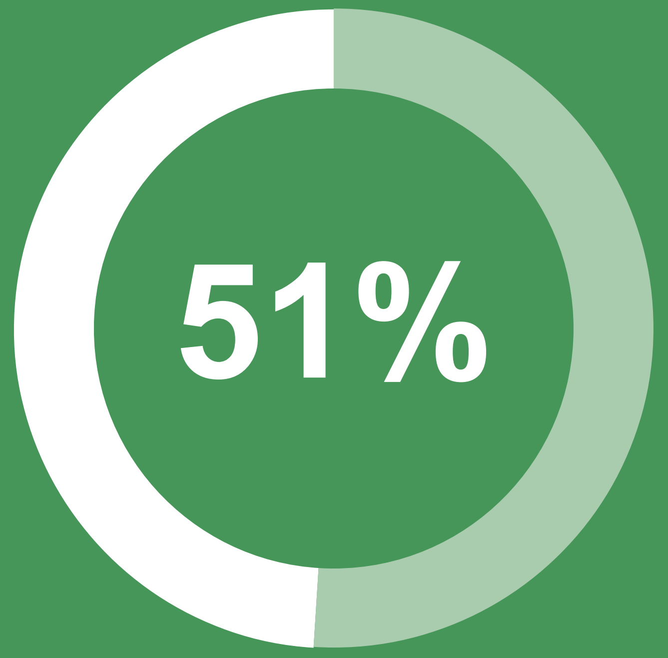
From an equity perspective, Severn Trent's investors have been very supportive, Eadie says, with more thematic and ESG-focused funds coming onto the shareholder register. The company has also completed three debt issues under its Sustainable Finance Framework. "Our approach has got a thumbs up from our financing base," he says. And that financing base has also gained confidence from Severn Trent's accreditation with the Green Economy Mark. "It's a credible Mark that gives people confidence," says Eadie, "and when we talk about it on our investor roadshows it puts another brick in the wall – that our sustainability commitment is underpinned by delivery."

Its green power business produces over

150GWh

of renewable energy annually, principally from food waste, using anaerobic digestion.

The company self-generates the equivalent of



of its own energy needs.

“TCFD will have a very positive impact on businesses and how they think about climate change in the future – and investors gain a deeper understanding of the seriousness with which climate change is being taken by a business.”

Case study: Smurfit Kappa

With over 350 facilities in 36 countries serving 65,000 customers, Dublin-headquartered Smurfit Kappa is a global leader in the paper-based packaging industry.

It has also been a clear leader in its environmental reporting, as it has published a Sustainable Development Report for 14 years, and which has been independently assured using the Global Reporting Initiative (GRI) for over 10 years. And, says Head of Investor Relations, Garrett Quinn, “we continue to deliver year-on-year improvements.”

The 2020 report is the company’s first which is in line with both the recommendations of the TCFD and the Sustainable Accounting Standards Board criteria. In 2020, Smurfit Kappa was the first FTSE 100 company to be awarded five stars by “Support the Goals,” reflecting the Company’s work towards the UN Sustainable Development Goals.

The company operates a circular business model, with 75% of its raw material coming from old corrugated cases and recovered paper. Their product (corrugated packaging) is 100% recyclable, renewable and biodegradable. “Our commitment to, and expertise in, sustainability does lead to gaining customers who are on a journey to become more sustainable themselves, and who want to partner with a clear leader in sustainability. Offering best-in-class sustainability credentials is therefore a competitive advantage,” says Quinn. It is recognised in the business that Green Economy Mark accreditation goes some way toward demonstrating these credentials.

Changing attitudes towards packaging and its potential environmental impact, and the massive growth of e-commerce, are combining to drive innovation at Smurfit Kappa, as it develops products that resonate with consumers and enhance the sustainability credentials of its customers.

TopClip, a patented paper-based alternative for the plastic wraps used for drinks can multipacks, is being rolled out by brewers Grolsch (part of the Asahi Group) in the Netherlands. By replacing all the shrink wrap with the sustainable TopClip product in the Netherlands alone, Grolsch will remove 100,000kg of plastic annually, which is equivalent to more than 4 million plastic bags.

Glass vehicle windscreens for Scania are now packed in fully recyclable, paper-only packaging. “The level of work that we are conducting with our customers on alternatives to plastic has never been so intense,” says Quinn.

On biodiversity, the company has a partnership with the World Wildlife Foundation (WWF) in Colombia, working together to restore, expand and protect forests and ecosystems that are the habitat of several species of flora and fauna.

This level of innovation requires investment. The company’s financing is aligned with its sustainability ambitions and targets; at the end of 2020 these were embedded via key performance indicators into its existing €1.35bn revolving credit facility (RCF), creating a sustainability-linked RCF.

Smurfit Kappa turned to London for an **equity capital raise** in November 2020, when it raised

€660mn

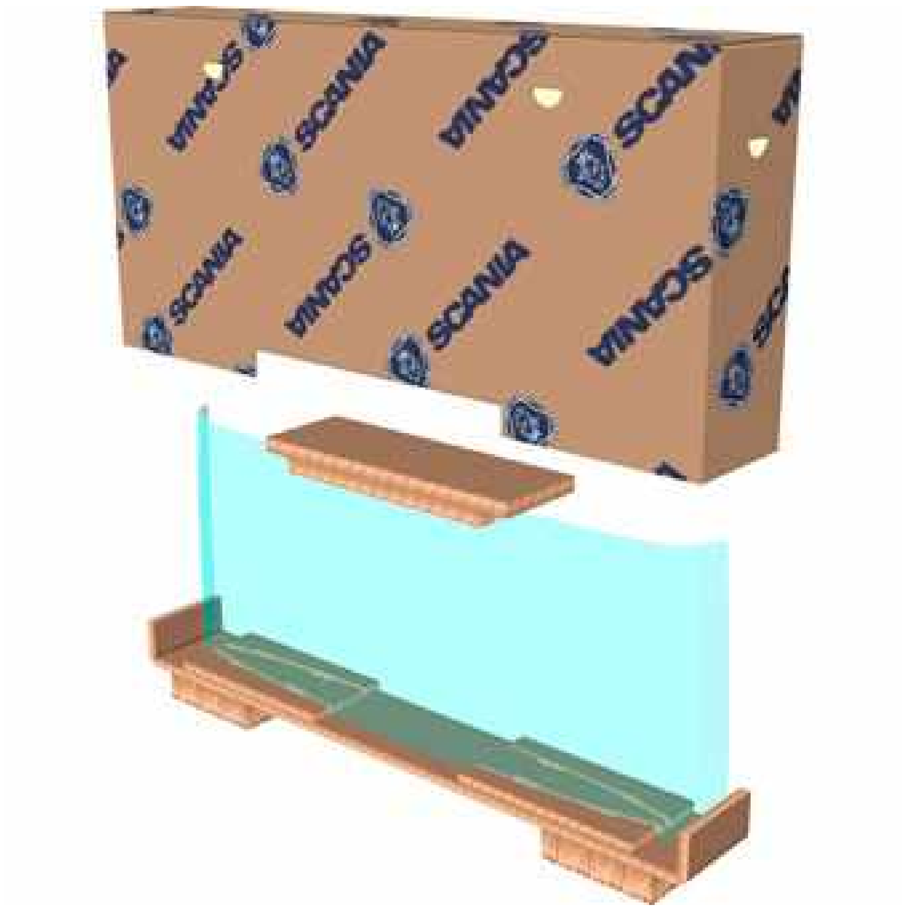
to support a **€1.2-1.4bn** strategic spending commitment over the next three years

€150-200mn

is earmarked to directly focus on sustainability projects.

“The value that these projects deliver is measured through a non-financial returns lens and is directly related to achieving our sustainability goals.”

Garrett Quinn,
Head of Investor Relations



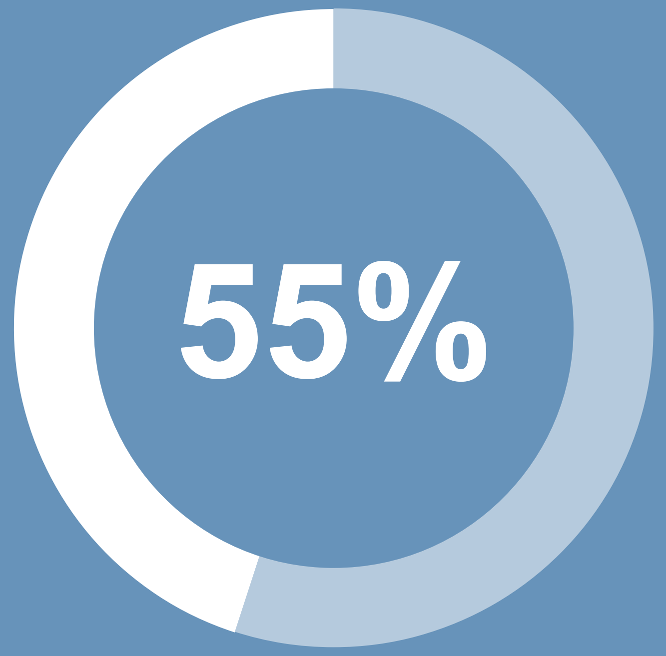
Smurfit Kappa has had sustainability-focused, progressive ESG investors on its shareholder register for more than five years, says Quinn, and they have been very supportive to the company in its ambition to become ever more sustainable.

Today, says Quinn, it is not just the ESG specialists that are asking questions on the company’s sustainability strategy. “Generalist investors are increasingly engaged and supportive to what we are doing across areas such as CO2 emissions, waste to landfill, raw material sourcing, water use, and our supply chains. This has been a notable change in the past couple of years,” he says. In this context, accreditation with the Green Economy Mark makes a difference.

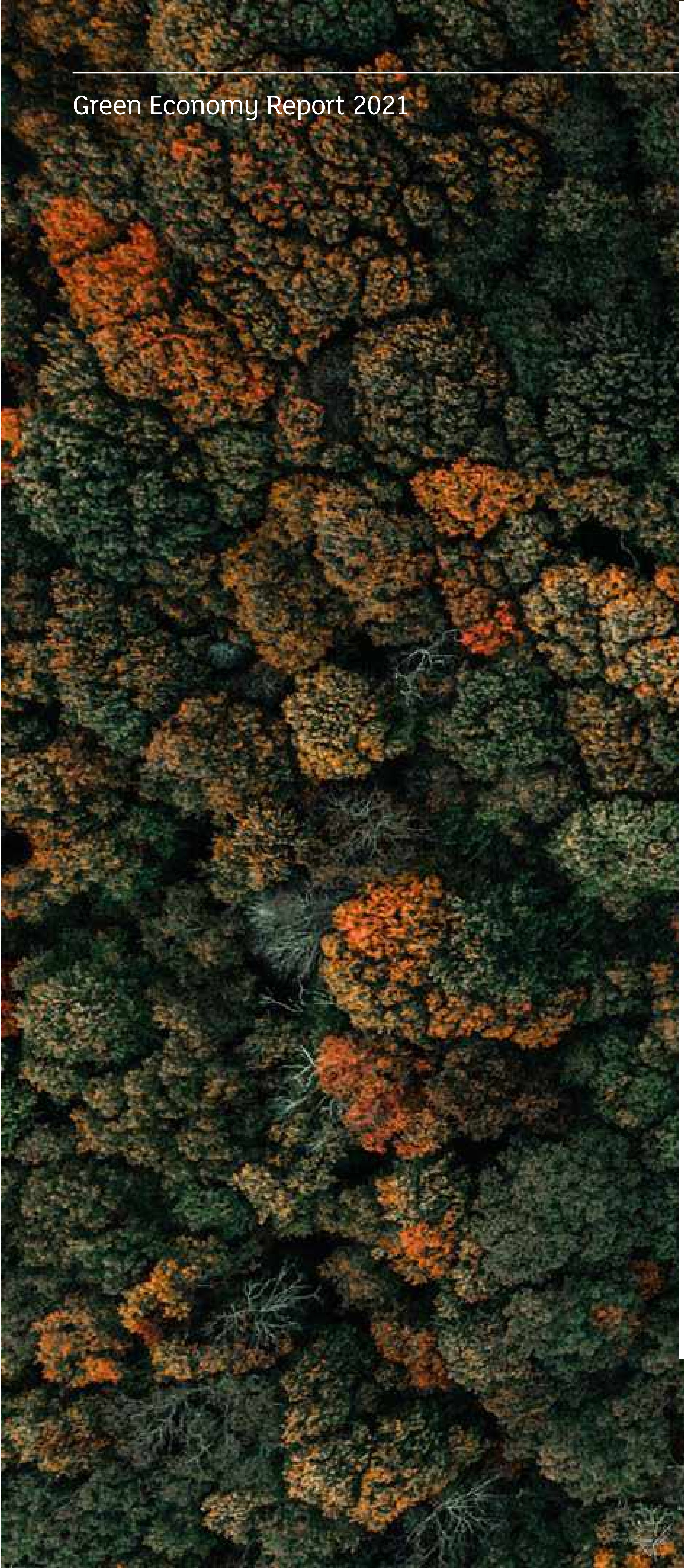
In 2021, it committed to have its CO2 reduction target validated by SBTi as being in line with the Paris Agreement 2050 objectives. Smurfit Kappa’s carbon emissions in 2020 were 7% lower than in 2019 - an acceleration compared with the previous year.

“We have a target and a line of sight, and we are acting on it now.”

The group is well on its way to reach its intermediate 2030 target of



reduction in emissions, in line with the EU Green Deal objectives, and to be “at least” net-zero by 2050.



“We have received many accolades and we don’t include them all in our Sustainability Development Report, but the Green Economy Mark is one of the core prestige badges that we do include. It is important for investors, but also for our customers and wider stakeholders. Ultimately, it’s a Mark that reflects the efforts of everyone in Smurfit Kappa; we make a sustainable product, in a sustainable way.”

Case study: Gore Street Energy Storage Fund

The wind doesn't blow all the time. The sun doesn't shine all the time. Energy that is produced from renewable sources needs to be stored and then discharged when it is needed.

Energy storage technology was just beginning to mature when Gore Street Energy Storage Fund held its IPO in May 2018. "We gave individual and institutional investors a chance to play a part in energy transition," says Head of Impact Anna Wang. "We could have gone down the private route, but we went public to raise awareness and boost the decarbonisation movement."

It is London's first listed pure-play energy storage fund; targeting a 7% yield, it aims to provide institutional and retail investors with the opportunity to invest in a diversified portfolio of utility-scale energy storage projects.

In the fund's first three years, its portfolio, which is primarily based in Great Britain and Ireland, has grown from 6MW to 520MW. The fund's energy storage portfolio is supporting ever larger amounts of renewable energy for hundreds of thousands of UK homes.

Assets under management have grown by more than five times. The initial small number of cornerstone investors has swelled into a range of partners, including Ireland's Sovereign Wealth Fund, which has given the fund a mandate to invest £25mn into energy storage projects in Ireland.

“A £135mn fundraising conducted in April 2021 almost doubled its market capitalisation and the appetite among investors is growing.”

While the current portfolio and much of the pipeline of identified investments use lithium-ion batteries, “the fund is generally technology agnostic,” says Gore Street Capital analyst, Rutwij Hoshing. Its radar is constantly sweeping and evaluating options, as well as new ways to optimise battery use and the development of efficient methods of recycling storage systems once they have reached the end of useful life.

The accreditation of the Green Economy Mark has been of great advantage, says Wang.

“The Green Economy Mark focuses on the exact sector in which we operate, which is critical. For the Energy Storage Fund to hold the Mark is an important first indicator to investors. For institutions, it is a stamp of approval that helps to support the decision making of their investment committees. For retail investors, it provides a mark of excellence and verification that they can rely on.”

“We want to remain the best in class and to continue to promote the field,” says Wang. “Wherever there is talk of renewables, the next item on the agenda should be about storage.”

Case study: Invinity

INVINITY
ENERGY SYSTEMS

Record-breaking amounts of renewable energy are being generated every year, but this growth is increasingly constrained, as grid operators face the challenge of adapting to the intermittency of wind and solar generation. The ability to store renewable energy – and then to make it available on demand – can mitigate this constraint, accelerating progress towards net-zero.

While lithium-ion batteries are good for short duration, high-power applications in mobile phones and electric vehicles, they are not optimal for absorbing a full day's worth of solar or wind energy to make it 'dispatchable' or available 'on-demand'.

Clearly, technologically mature alternatives to lithium batteries are vital to delivering net-zero. Step forward Invinity.

Created through a transatlantic merger in early 2020, Invinity is one of the global leaders in Vanadium Flow Batteries(VBFs). Capable of running continually with no degradation, charging and discharging for over 25 years, "for large-scale renewable energy projects, VFBs are a safer, more sustainable and more economical alternative to lithium-based battery systems," says Director of Communications, Joe Worthington.

There has been an inflection point in the market, he says. Not only is there now widespread acceptance of the critical nature of energy storage for renewable energy-based economies, but there is also an emerging appreciation of how VFB systems can go beyond the capabilities of lithium-ion technology.

For companies with onsite renewable installations, for example, rooftop solar, VFBs can maximise the site's use of low-cost, clean, self-generated electricity, lowering costs while significantly reducing carbon footprint.

For renewable project developers and investors, the technology can make intermittent renewables dispatchable, meaning it can be deployed to the grid when it is most valuable, at any time of day or night.

Invinity's batteries are currently being deployed at numerous large-scale installations, including Oxford's ambitious Energy Superhub and at a huge solar plant in South Australia. In the Orkneys, its flow battery technology is being used with tidal power to produce continuous green hydrogen.

> **"In 2019, we were still explaining the basic technology to people. Today, people understand the limitations of lithium-ion batteries much better and want to discuss with us how to specify VFBs into their projects. There is a level of acceptance that was not previously there."**

A partnership with Siemens Gamesa, one of the world's largest wind turbine manufacturers, will enable Invinity to develop a new product line of very large grid-scale batteries. "It is an agreement that takes us to the next level," says Worthington.

Invinity – which is on AIM and has offices globally in the UK, Canada, USA, China and South Africa – was one of the initial companies to be accredited with the Green Economy Mark.

"We were very proud to get such validation from one of the world's leading exchanges. For a small-cap company, it's a powerful endorsement and extremely helpful for us to be recognised in this way. It has led to interest in the company from energy-transition and ESG specialist funds – as well as from a broad range of cleantech and energy analysts."

It has been a period of transformation: 2020 not only saw the merger that created Invinity, but also the launch of a major new product and a capital raising which meant that it closed its last financial year debt-free with

£22mn

of cash to fund operational expansion.

“The core activity of our business is related to accelerating the global, low-carbon energy transition. But we need to walk the walk and scale responsibly. We have signed up to the UN Race to Zero, committing to reducing our emissions as we grow our business further.”

Guest article: Leading the green energy revolution with Green Economy Mark company ITM Power

For the past twenty years, ITM Power has been designing and manufacturing electrolyser systems that generate hydrogen based on proton exchange membrane (PEM) technology. Our electrolysers run on renewable electricity and water, with oxygen as the only byproduct. We are a globally recognised expert in green hydrogen, which provides a means of heating homes without producing carbon dioxide, decarbonises industrial processes, and provides a zero emissions fuel for mass transit systems.

We were the first hydrogen company to join AIM back in 2004, and we are a proud recipient of the London Stock Exchange's Green Economy Mark.

There's hydrogen – and there's green hydrogen

Hydrogen is a storable, lightweight, energy-dense fuel source with no direct greenhouse gas emissions. It has a host of industrial and chemical applications and can also be released directly into the gas grid or used as a fuel for transport. **Approximately 70 million tonnes of hydrogen are produced worldwide each year.**

But the vast majority (96%) of the hydrogen currently produced globally is generated from fossil fuels. This gives hydrogen production a large carbon footprint: approximately 830 million tonnes of CO2 each year, roughly equivalent to the carbon footprints of UK and Indonesia combined.

We design and manufacture electrolysers which generate hydrogen gas, based on PEM technology. Our electrolysers are designed to be powered effectively by renewable electricity and water to generate hydrogen gas on-site.

Green hydrogen can be used to store excess renewable energy at the point where it is generated, so it can be used when it is needed. It can also be used as clean fuel for transport and as clean feedstock for industrial processes.

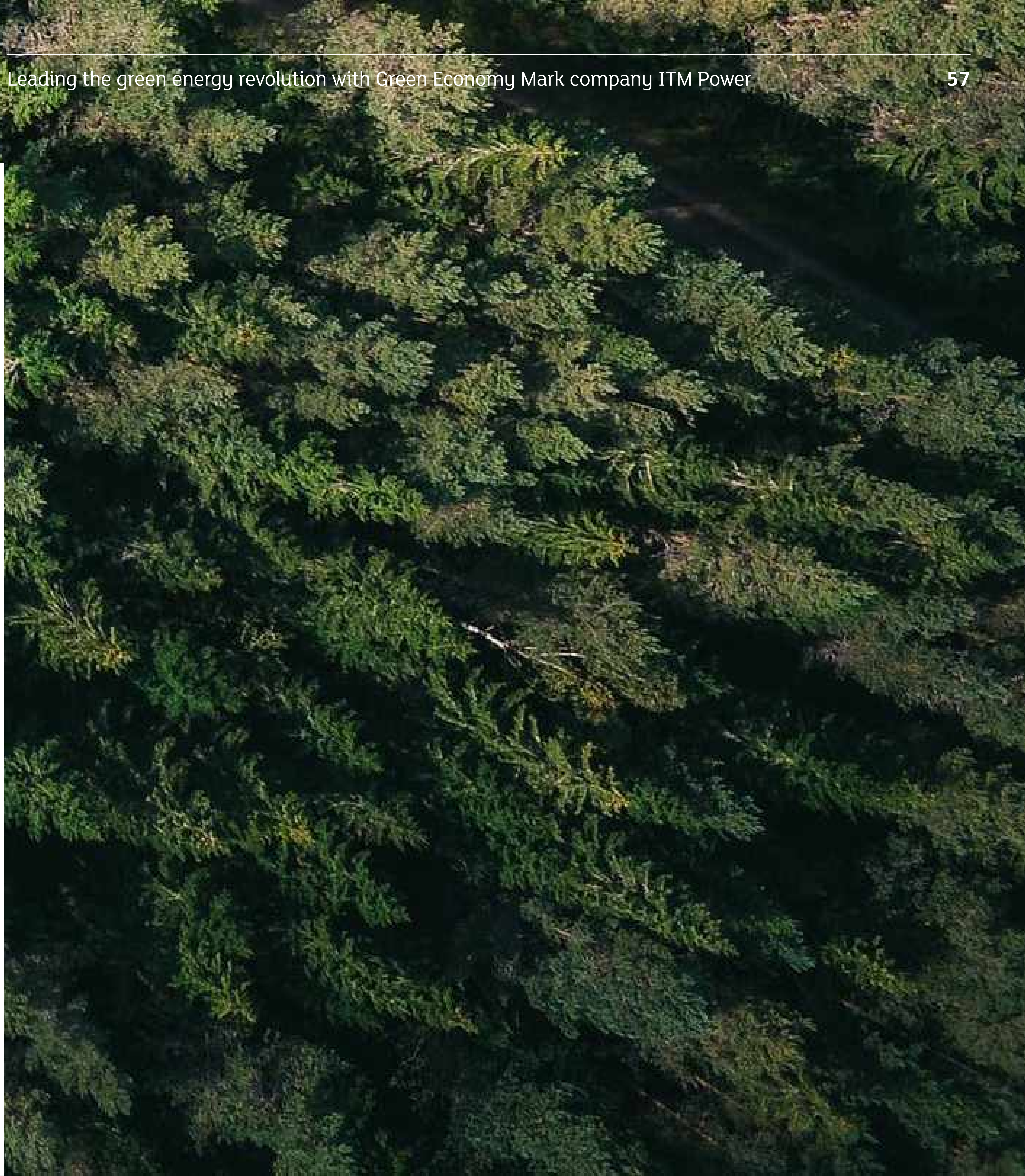
Growing demand for hydrogen energy

In recent years, we've seen worldwide interest in green hydrogen increase rapidly. To meet this demand and help accelerate global progress towards net-zero, green hydrogen production has scaled up at speed. In January 2021 we opened our new Gigafactory in Bessemer Park, Sheffield: the world's largest electrolyser production factory. This represents a step change in our ambition and capacity as a business, enabling us to cut the cost of electrolysers by almost 40% in the next three years, due to increased automation and economies of scale.

Today, we manufacture integrated hydrogen energy solutions which offer rapid response and high-pressure delivery designed to meet requirements for grid balancing, energy storage services, and for the production of clean fuel for transport, renewable heat and chemicals.

Green hydrogen – unlocking green growth

The annual production of electrolysers from our new factory in Sheffield, if all powered entirely on renewable energy and the resulting green hydrogen is used to displace existing grey hydrogen use, **could save up to two million tonnes of carbon dioxide from being emitted each year. That's equivalent to the carbon emissions of charging 255 billion smart phones, or the carbon sequestered in one year by 2.6 million acres of forest.**



Conclusion

The companies and funds that hold the Green Economy Mark are increasing in scope and scale; their numbers have risen 36% since the Mark's inauguration in 2019.

As a group, they are resilient and growing. In terms of share price performance, Green Economy Mark issuers have demonstrated exceptional outperformance of global benchmarks, even in periods of market volatility.

As leaders in the transition to a greener economy, Green Economy Mark issuers exemplify the global economic shift towards low-carbon business models, be it new technologies or mature businesses making the transition. It is encouraging to see their progress and London Stock Exchange looks forward to continuing to work with them as they develop.

The international composition of Green Economy Mark issuers continues to grow, underlining London's global appeal as a hub for sustainable finance. At home, many of the regions across the UK are represented.

The transition to a greener, more sustainable and net-zero economy is a global collective undertaking – and one in which LSEG is playing an active part.

With data and disclosure, we are encouraging issuers to produce consistent, comparable and reliable global climate data. We are convening the markets and are supporting investment and capital flows to achieve a low-carbon transition across the economy. Issuers of all sizes and from all geographies can access a unique range of green finance to aid new innovations and sustainability strategies.

We launched the Green Economy Mark to turn the spotlight onto issuers, highlighting a cohort of inspiring companies which are driving the green economy forward. Our customers span sovereign nations, global corporations, and pre-revenue companies – and London Stock Exchange will support each one of them as they make their commitments to help tackle the challenge of climate change.

To find out more about London Stock Exchange's sustainable finance offering, visit
www2.lseg.com/sustainablefinance

or get in touch with the team at
sustainablefinanceenquiries@lseg.com

London
Stock Exchange