

Allianz Technology Trust PLC

Annual Financial Report
31 December 2023

Key Information

Investment objective

Allianz Technology Trust PLC ('the Company') invests principally in the equity securities of quoted technology companies on a worldwide basis with the aim of achieving long-term capital growth in excess of the Dow Jones World Technology Index (sterling adjusted, total return) (the 'benchmark').

Investment policy

The investment policy of the Company is to invest in a diversified portfolio of companies that use technology in an innovative way to gain competitive advantage. Particular emphasis is placed on companies that are addressing major growth trends with innovation that replaces existing technology or radically changes products and services or the way in which they are supplied to customers.

What constitutes a technology stock

Technology has become a vast and diverse sector. It encompasses those companies that sell technology solutions – from cloud storage to component manufacturers to software developers – but also those for whom technology is an intrinsic part of their business – the car makers or ecommerce groups using technology to gain a competitive advantage. In this way, technology stocks may sit across multiple sectors, including healthcare, industrials or financial services.

As technology becomes ever more pervasive, the lines between technology companies and significant adopters are increasingly blurred. Even where companies aren't selling technology, technology may be intrinsic to their success as a company. More companies are becoming technology companies all the time as disruptive innovation brings change and displaces incumbent market leaders. The challenge is to understand not only current technologies, but also future trends and the likely effects.

Asset allocation

The Investment Manager does not target specific country or regional weightings and aims to invest in the most attractive technology shares on a global basis. The lead portfolio manager aims to identify the leading companies in emerging technology growth sub-sectors. The majority of the portfolio will comprise mid and large cap technology shares.

Risk diversification

The Company aims to diversify risk and no holding in the portfolio will comprise more than 15% of the Company's assets at the time of acquisition. The Company aims to diversify the portfolio across a range of technology sub-sectors.

Gearing

In normal market conditions gearing will not exceed 10% of net assets but may increase to 20%. The Company's Articles of Association limit borrowing to one quarter of its called up share capital and reserves. As at 31 December 2023 there was no borrowing facility in place.

Liquidity

In normal market conditions the liquidity of the portfolio, that is the proportion of the Company's net assets held in cash or cash equivalents, will not exceed 15% of net assets but may be increased to a maximum of 30% of net assets.

Derivatives

The Company may use derivatives for investment purposes within guidelines set down by the Board.

Foreign currency

The Company's current policy is not to hedge foreign currency.

Benchmark

One of the ways in which the Company measures its performance is in relation to its benchmark, which is an index made up of some of the world's leading technology shares. The benchmark used is the Dow Jones World Technology Index (sterling adjusted, total return). The Company's strategy is to have a concentrated portfolio which is benchmark aware rather than benchmark driven. The Company has tended to have a significantly higher than benchmark allocation to high growth, mid cap companies which are considered to be the emerging leaders in the technology sector. The Investment Manager believes that the successful identification of these companies relatively early on in their growth stages, offers the best opportunity for outperformance over the long-term.

Financial Highlights



Financial Highlights

As at 31 December 2023

Net asset value ('NAV') per Ordinary share

+46.4%

2023 338.2p

2022 231.0p

Ordinary share price

+44.5%

2023 303.5

2022 210.0p

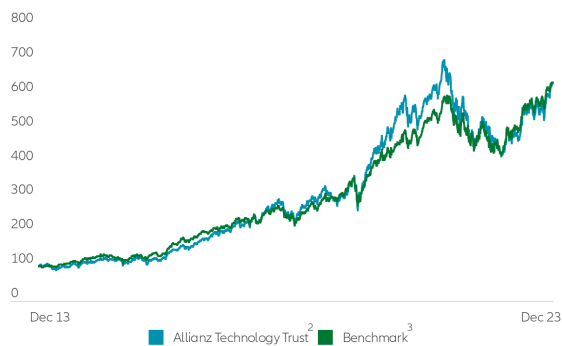
Benchmark

+48.2%

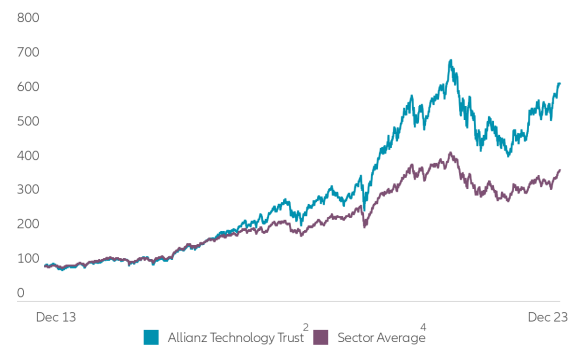
2023 2,715.0

2022 1,832.2

Performance against benchmark¹



Performance against sector¹



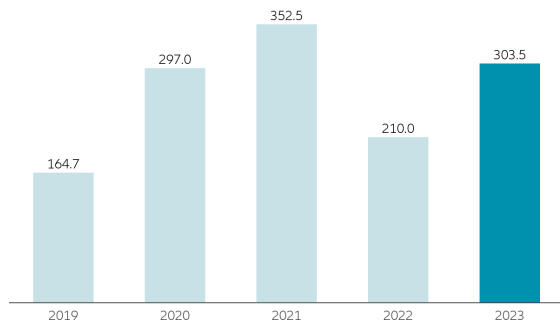
Comparative figures for 2018, 2019 and 2020 have been restated following the sub-division of 25p ordinary shares into ten ordinary shares of 2.5p each on 4 May 2021.

¹ 10 years to 31 December 2023. Rebased to 100 at 1 December 2013. ² Allianz Technology Trust – Net Asset Value – undiluted. ³ Dow Jones World Technology Index (sterling adjusted, total return). ⁴ Peer group of Morningstar Global Technology Sector Equity. Source: AllianzGI/Datastream. The Alternative Performance Measures ('APMs') can be found [here](#).

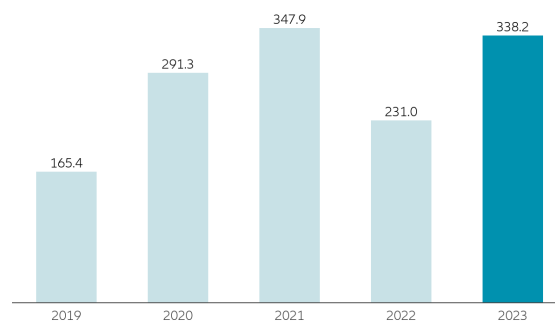
Financial Highlights (continued)

As at 31 December 2023

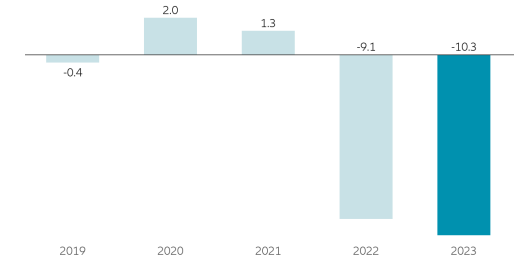
Ordinary share price (p)



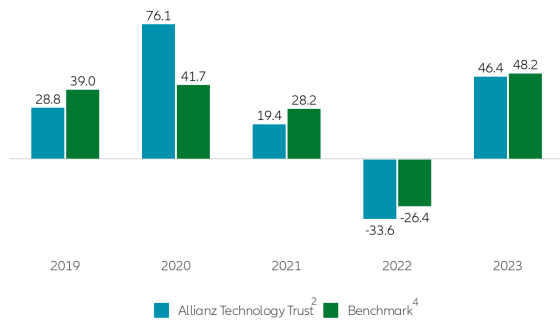
NAV per Ordinary share (p)



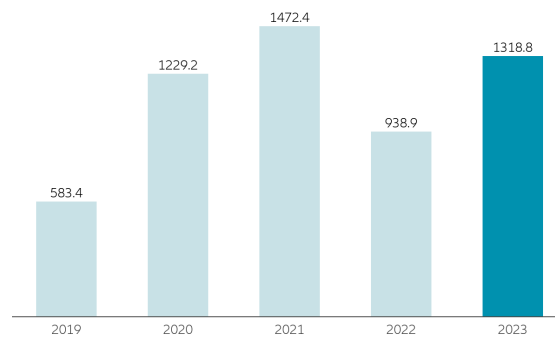
Premium (discount) of Ordinary share price to net asset value per share (%)



NAV versus benchmark



Shareholders' funds (£m)



Comparative figures for 2018, 2019 and 2020 have been restated following the sub-division of 25p Ordinary shares into ten Ordinary shares of 2.5p each on 4 May 2021.
¹ 10 years to 31 December 2023. Rebased to 100 at 1 December 2013. ² Allianz Technology Trust – Net Asset Value – undiluted. ³ Dow Jones World Technology Index (sterling adjusted, total return). ⁴ Peer group of Morningstar Global Technology Sector Equity. Source: AllianzGI/Datastream. 2018 figures are over a 13 month period. The Alternative Performance Measures ('APMs') can be found [here](#).

Financial Summary

	As at 31 December 2023	As at 31 December 2022	% change
Net Asset Value per Ordinary Share	338.2p	231.0p	+46.4
Ordinary Share Price	303.5p	210.0p	+44.5
Discount on Ordinary Share Price to Net Asset Value	10.3%	9.1%	
Dow Jones World Technology Index (sterling adjusted, total return)	2,715.0	1,832.2	+48.2
Shareholders' Funds	£1,318.8m	£938.9m	+40.5

	For the year ended 31 December 2023	For the year ended 31 December 2022
Net Revenue Return per Ordinary Share	(0.88p)	(0.45p)
Ongoing charges*	0.70%	0.70%

* As defined in the APMs [here](#).

Five Year Performance Summary

	31 December 2023	31 December 2022	31 December 2021	31 December 2020	31 December 2019
Shareholders' Funds	£1,318.8m	£938.9m	£1,472.4m	£1,229.2m	£583.4m
Net Asset Value per Ordinary Share	338.2p	231.0p	347.9p	291.3p	165.4p
Ordinary Share Price	303.5p	210.0p	352.5p	297.0p	164.7p
Dow Jones World Technology Index (sterling adjusted, total return)	2,715.0	1,832.2	2,489.3	1,941.1	1,369.9
(Discount) premium of Ordinary Share Price to Net Asset Value	(10.3%)	(9.1%)	1.3%	2.0%	(0.4%)

Comparative figures have been restated following the sub-division of 25p Ordinary shares into ten Ordinary shares of 2.5p each on 4 May 2021.

Chairman's Statement





2023 Chairman's Review

with Tim Scholefield



Tim Scholefield

Welcome

Welcome to this report on Allianz Technology Trust PLC for the financial year ending 31 December 2023. 2023 was certainly another tumultuous year in terms of the geopolitical and economic backdrop. I am pleased to report that the Company once again won the Investment Week Investment Company of the Year Award in the 'Specialist' category, having previously done so from 2017 to 2021 inclusive. The award is based around our performance over 3 years, as well as other qualitative factors.

Performance

Technology stocks performed strongly in 2023 buoyed by a combination of optimism over the sector's growth potential together with an increasing confidence that the peak in interest rates had finally been reached. Against this backdrop, it is a pleasure to also be able to report a strong absolute Net Asset Value ('NAV') Total Return of 46.4% for Allianz Technology Trust PLC and a share price return of 44.5%. The NAV return was slightly behind the 48.2% return of our benchmark, the Dow Jones World Technology Index (sterling



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adjusted, total return). This modest underperformance reflected our relatively smaller exposure to the very largest group of companies, the so-called 'mega-caps'. Our portfolio manager focuses on the mid- and large-cap segments reflecting our belief that companies at an earlier stage of their development provide better opportunities for long-term earnings growth.

No dividend is proposed in the year ended 31 December 2023 (2022: nil). Given the nature of the Company's investments and its stated objective to

achieve long-term capital growth, the Board continues to consider it unlikely that any dividend will be declared in the near future.

Backdrop

The direction of global stock markets continued to be determined primarily by the course of inflation. Central banks have navigated a difficult path since inflation took off from historic lows, balancing the taming of rising prices with the desire to avoid recession and it wasn't until toward the end of the year that definitive signs that inflation had peaked



US-listed companies continue to dominate tech, a reflection of the depth of US intellectual and financial capital, together with a supportive listed market structure.

became apparent. Those signs were received well though and markets demonstrated renewed optimism in anticipation of easing of interest rates.

There was little economic growth to speak about around the world. Indeed, China which finally emerged from Covid restrictions achieved a lacklustre recovery. Geopolitics continued to astound and confound humanity. In February Ukraine passed its first anniversary of the Russian invasion and subsequent war and in October the Middle East was thrust

into the limelight when Hamas terrorists launched a sudden attack in Israel with shocking civilian loss of life. Israel responded and an intense conflict has since raged throughout Gaza with a further terrible loss of life. As I write, in the Red Sea Houthi rebels are attacking commercial shipping. The disruption from this latest episode will have an impact on costs of shipped goods and is therefore a potential threat to inflation remaining on course to meet central bank targets. US/China and China/Taiwan tensions also remained present and of concern in 2023.

Despite the backdrop noted above, technology continued to excite and inspire. An obvious connected theme to the geopolitical storm is cybersecurity. As nation states, terrorist organisations and criminals have stepped up digital attacks, cybersecurity has become more and more important to maintaining the smooth functioning of companies, infrastructure and society. Of course, artificial intelligence ('AI') was the story of the year, raising appetites for technology once more, sending many technology stocks higher, notably Nvidia, a so-called 'picks-and-shovels' company as it provides the chips necessary to power cutting-edge AI applications.

Our portfolio manager is occasionally questioned as to whether the portfolio may be too US centric. The US weighting is certainly high at around 87% as at the end of December. The reality is that the US

listed companies continue to dominate tech, a reflection of the depth of US intellectual and financial capital, together with a supportive listed market structure, although it should be kept in mind that many of our portfolio companies generate revenues all around the globe and just happen to be listed in the US.

Whilst China has been a source of tech growth in past years the path has not been smooth. Our portfolio manager was an early investor in the China tech story, however he also exited relatively early and for some years now has preferred not to invest there, being primarily concerned about the possibility of state interference in the activity of listed companies.

Discount

The Company traded at an average discount of 12.1% over the period (low of 8.7% and high of 15.7%) despite the



AI is a rapidly moving frontier in many ways and will necessarily bring risk as well as opportunity as it develops and is implemented.

positive absolute performance noted. In my view this reflects the interest rate uncertainty apparent for much of the year together with sentiment towards investment trusts in general. That latter point is evidenced by the average discount for investment trusts reaching levels not seen since the global financial crisis in 2008.

Our policy in respect of buying back shares remains unchanged. Currently we would consider buying back shares during periods where the discount is consistently over 7% and it is felt appropriate to do so given the prevailing market backdrop. In the financial year we bought back an aggregate 16,530,708 shares at an average discount of 12.1% and total cost of £40.2m. Since the end of the financial year, up to 12 March 2024 we have repurchased a further 3,271,401 shares at an average discount of 11.9% and total cost of £10.6m. All shares repurchased have

been held in treasury rather than cancelled as this makes them readily available to be reissued if sufficient demand occurs in the future.

At the forthcoming AGM, the Board proposes both a renewal of the usual 10% authority to issue new shares and also a renewal of the authority to issue an additional 10% in order to avoid the cost of a further General Meeting should the 10% authority be exhausted as has happened previously when demand was high. The Board will also once again seek authority to buy back up to 14.99% of the shares in issue. The Board recommends that shareholders vote in favour of these resolutions.

Any new shares will only be issued at a premium to NAV and if the Board is satisfied that the issuance is in the best interests of existing shareholders. Similarly, any buy back of shares will only take place where we believe it to

be beneficial to shareholders.

AI (and the debates stemming from it)

advances in generative AI in 2023 pushed it further into our consciousness than ever before. Whilst the main effect of this was to generate excitement – the same excitement that aided the performance of technology indices generally and a few companies specifically – it also raised some fear and trepidation.

AI is a rapidly moving frontier in many ways and will necessarily bring risk as well as opportunity as it develops and is implemented. On the one hand AI should have significant benefits to society, removing menial tasks from many roles and advancing the pace of new medical developments to name but two. On the flip side, there are concerns it might negatively affect humanity, for example via its

impact on low-skill labour markets, particularly for certain sectors where AI, robotics and automation can readily replace human labour. It is also potentially subject to misuse and utilisation for negative and even criminal activity.

The Board is cognisant of such potential issues. We are keeping a watching brief and remain focused on the potential risk to the Company's portfolio and operations. For example, we dedicated part of our 2023 strategy meeting to a discussion around AI-related risks and opportunities. Amongst other aspects, we discussed types of risk, how governments and authorities might respond, the trajectory of AI algorithm development and how we should best identify risks and opportunities as a Company going forward.

ESG

As you will be aware, the portfolio

manager considers ESG as part of the stock analysis and investment management process. The Board remains cognisant of investors' concerns and desire to understand better the broader impact of the investment choices that they make. The Board engages closely with Voya as the Investment Manager and AllianzGI UK as the AIFM on ESG policies and processes and further information can be found [here](#) and [here](#).

Portfolio management

I am pleased to report that Erik Swords has been appointed as Portfolio Manager alongside Mike Seidenberg, who will remain Lead Portfolio Manager, with effect from 1 March 2024. Erik is a managing director and Head of Global Technology at Voya and has 23 years of investment industry expertise. He already works closely with Mike in the San Francisco office.

The costs of running your Company

Your Board has maintained its close attention to the costs of running the Company. The Company's Ongoing Charges Figure ('OCF'), which is calculated by dividing ongoing operating expenses by the average NAV, has remained the same as 2022 at 0.70%.

The OCF excludes any performance fee due to the Investment Manager. No performance fee has been earned in 2023. It should be noted that the underperformance recorded over the past three years will have to be made back, and the NAV will need to exceed the figure as at the end of 2020 (which set a new high watermark) before any future performance fee can be accrued.

Board matters

Although I reported to shareholders as Chairman in the 2023 interim

report, this is my first Annual Financial Report in this role. I would therefore like to reiterate my thanks to my predecessor, Robert Jeens, for his leadership of the Company over his tenure and for his help and support as I took on the role of Chairman. I hope that this next period in the Company's history can prove as positive in respect of growth as the past one.

At the conclusion of the 2024 AGM, Humphrey Van der Klugt will step down from the Board, having served since 2015. We thank Humphrey for his significant contribution to the Company's development over the past nine years and his part in its significant growth over that time.

Elisabeth Scott has served on the Board for nine years as at 1 February 2024 and to allow for orderly succession planning she will retire at the AGM in 2025.

As previously announced, with effect from 29 November 2023 Neeta Patel was appointed as Chairman of the Management Engagement Committee replacing me. Neeta will also become Senior Independent Director when Humphrey steps down. Katya Thomson will be appointed as Chairman of the Remuneration Committee at the conclusion of the 2024 AGM.

Although just outside of the reporting period, as previously announced, Simon (Sam) Davis was appointed a non-executive Director on 1 January 2024 and has also joined the Audit and Risk, Management Engagement, Remuneration and Nomination Committees. Sam is a non-executive director of The Baillie Gifford Japan Trust PLC. Sam brings a wealth of investment experience across global markets, and we are therefore delighted that he is joining the Board and we look forward to working with

him.

Annual General Meeting ('AGM') arrangements

This year's AGM will be held on 24 April 2024 at 2.30pm. The full Notice of Meeting can be found on [here](#). Full details of the special business to be considered at the AGM can be found [here](#).

As with 2023, the AGM will be a hybrid meeting, meaning shareholders can either attend physically or online. We will not be providing online voting for the 2024 meeting. This is due to the relatively high cost to enable the service not having been matched by shareholder take up of the service over the past two years. Should there be reasonable demand emerging from shareholders in the future for online voting then we will look at a possible reintroduction. For this reason, we strongly encourage all shareholders

to submit their votes using the proxy voting process by the deadline of 22 April 2024 as detailed in the Notice of Meeting [here](#). Those shareholders attending virtually will be able to view the AGM and submit questions electronically.

The Board encourages shareholders to attend the AGM if possible. A presentation by the portfolio manager will be made at the start of the meeting. For those unable to attend either physically or virtually, a recording of the AGM will be posted to the Company's website as soon as practicable after the event.

The Board looks forward to welcoming shareholders to this year's event.

Outlook

It is relatively difficult to make predictions for the year ahead in such an uncertain world. However, most



Technology will continue to dominate our lives and re-shape the future. Such a 'new frontier' remains an extremely exciting place to invest, though of course also brings risks for investors.

indicators are suggesting a pivot in interest rates could well be on the cards which would certainly be positive for growth stocks, including many technology stocks. Even if this does not provide a tailwind, it should at least remove a headwind as the discount rate used to value future cashflows of companies reduces. With valuations of many technology companies having come back to more reasonable levels since the end of 2020, this could allow some further recovery in the sector.

Geopolitics remain a source of uncertainty. Whilst the fortunes of individual companies are often insulated from the direct impacts of world events, heightened uncertainty will impact on sentiment in general and affect factors such as consumer confidence. Certain companies could find themselves more directly affected by geopolitics depending on their location, but this is something our

portfolio manager monitors closely as part of the portfolio management process. It will certainly be an interesting year in terms of the political arena, with elections in the US and almost certainly the UK.

We are not out of the woods in terms of fears around falling into recession, however the hope is that central banks have done their job well enough and we will instead see a 'soft-landing' – that is, a decline in inflation without a significant set back in economic growth.

What is in no doubt is that technology will continue to dominate our lives and re-shape the future. Such a 'new frontier' remains an extremely exciting place to invest, though of course also brings risks for investors. On your behalf, the Board in conjunction with the Investment Manager will remain focussed on providing a portfolio that we believe

will capture the exciting growth available from investing in technology.

Tim Scholefield
Chairman
12 March 2024

Why invest in technology?



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Allianz
Technology
Trust PLC

A person wearing VR goggles is sitting at a desk in a dimly lit room. The person is wearing a white, textured short-sleeved shirt and is looking towards the right. On the desk in front of them is a laptop, a brown mug, and some papers. The background is softly blurred, showing a window and some indoor plants.

With every year, the reach and influence of technology grows.

[photo credit]

It disrupts new industries and moves into different parts of our lives. Technology is present in the way we drive, the way we shop, in our workplaces, in our homes. It helps us communicate effectively and manage our lives more efficiently. The companies that create that technology are in a powerful position to grow even in stagnant economic conditions. Technology is embedding itself into new industries: twenty years ago, car companies relied on mechanics to stay competitive. Today, they rely on their technology departments. The greatest innovation in the motor industry is coming from technology companies such as Google, rather than VW or Ford. As we look to the future, the key determinant of the success or otherwise of a motor company is likely to be the extent to which it can harness technology to build safer, comfortable and more energy efficient cars.





We see a similar phenomenon in payment systems. Cash is increasingly obsolete, while mobile apps and digital currencies are likely to overtake credit and debit cards as the most popular e-commerce payment methods worldwide. Nimble fintechs are challenging the existing banking

networks, which are encumbered by legacy systems and, too often, surprised by the speed with which people are willing to switch.

This pattern is replicated across multiple industries. No sector is immune – those that believe their

business is untouchable are likely to experience the most dramatic change when it arrives. Companies must embrace technology and innovate, or face extinction. In the process, the addressable market for technology companies grows.

However, technology is not only about taking staid old industries and ‘disrupting’ them, technology also has an important role in allowing businesses to be more efficient. This is at the heart of corporate digital transformation. Those businesses that are not embracing a digital strategy find themselves marginalised and uncompetitive. Companies that rethink their existing business models and processes through the use of technology are becoming more efficient.

Increasingly, companies see the potential in Artificial Intelligence (‘AI’). In a healthcare company, it may be the reading of scans, or the administration of drugs. For insurance companies, it may be in the interpretation of claims. The data sets used to power AI would not be accessible if it was not for the cloud. Also, the cloud enables businesses to build sufficient scale to cope with the



demands of data-intensive services. This is driving wider adoption of cloud-based systems.

It is also saving companies money: moving to software as a service and cloud computing lets companies circumvent a costly upgrade cycle. Rather than having to support expensive in-house technology capability, they can pick and mix their technology requirements to suit their business requirements. They can move data storage to the cloud and buy their software on a subscription basis.

These trends have helped make technology a successful investment over the long term. That said, just because technology is pervasive and high growth, it does not guarantee good returns. This was particularly evident in 2022 when rising interest rates led to a devaluing of some technology stocks irrespective of

revenue growth.

Technology investment forces an investor to look to the future. This is the direct opposite of investing in a benchmark that rewards yesterday's winning companies. Technology investment demands that investors uncover the trends of the future, looking to see where industries are going, and who is likely to win or lose from those developments. In this way, it forces investors to keep pace with changing markets. At each stage, therefore, the technology investor should be aligned with the winners from change, rather than those at the wrong end of it. We continue to see new industries being created, while old industries die or are forever altered and technology sits at the heart of this global innovation.

It is also worth noting that technology is far less cyclical today than it has ever been. The days of the upgrade

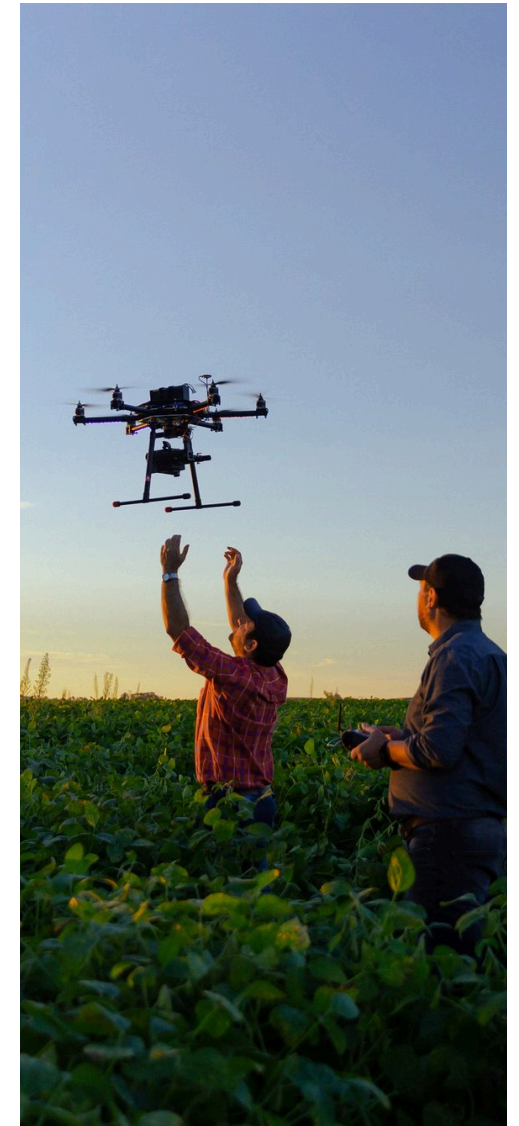
cycle, where companies replaced expensive technology equipment when they were flush with cash, have largely disappeared. Enterprise software allows companies to avoid these capex-heavy cycles, paying for what they need when they need it.

As it stands, technology incorporates a vast range of different options. There are the traditional technology companies – fast-growing, disruptive companies such as Amazon or Square, where revenue growth might be 50% per year. However, the sector has alternatives: Microsoft and Apple, for example, could be considered more stable, annuity-like options. Less highly-valued, they pay growing dividends and deliver steady earnings. There are also turnaround ideas, or special situations. This means it is possible to build a portfolio that can perform in a range of market environments.

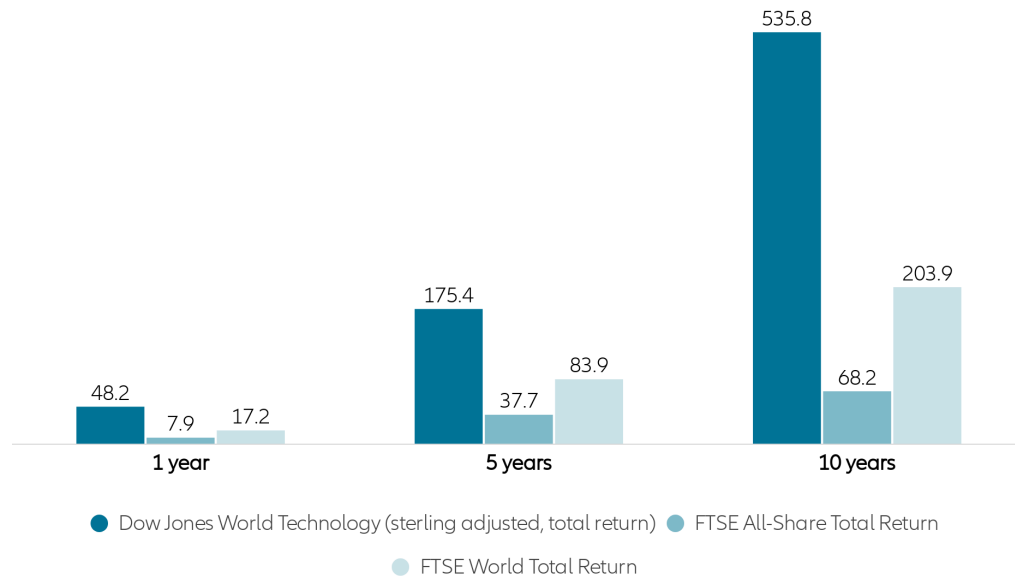
The diversity of technology companies is often over-looked.

The growth of technology has been seen in its increasing dominance of stock market indices. As technology's influence grows, we see it forming a greater part of stock market indices as it pervades more and more industries.

Most investors have long-term goals for their savings: they may be saving for retirement, or for their children's university fees. It makes sense, therefore, to future-proof an investment portfolio by aligning it with enduring structural trends. An investment in technology helps keep a portfolio focused firmly on the future.

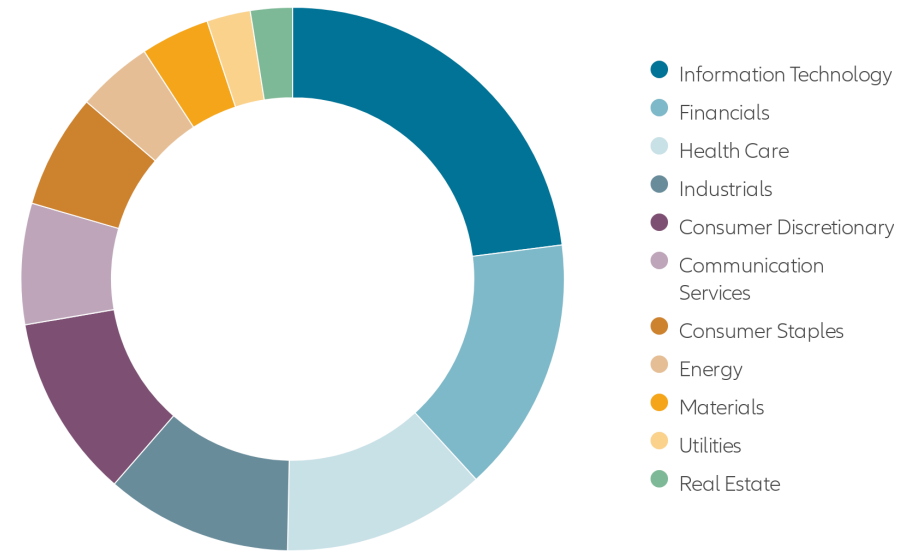


Total return – how technology has performed against UK and global equities



Source: Thomson DataStream, total return % in GBP, to 31 December 2023.

How technology contributes to the MSCI World index



Source: Source IDS/Wilshire Atlas 31/12/23. The weightings for each sector of the index are rounded to the nearest tenth of a percent; therefore, the aggregate weights for the index may not equal 100%.

Allianz Technology Trust PLC

Allianz 
Global Investors

**Allianz
Technology
Trust PLC**

Allianz Technology Trust offers access to the investment potential of the technology sector from the heart of the industry.

Allianz Technology Trust is managed by the highly experienced Global Technology team* based in San Francisco. The team benefits from its close proximity to Silicon Valley where many of the world's key technology companies are headquartered.

The Company is a UK listed closed-ended fund which aims to achieve long-term capital growth by investing principally in technology companies globally. The team looks to identify major trends ahead of the crowd and invest in stocks that have the potential to be tomorrow's Apple, Google or Microsoft.

The Company invests in mid to large technology companies. Our aim is to hold companies we expect to benefit from the continued growth in particular sub-sectors of technology, especially in companies that provide solutions to save money or enable companies to improve their relationships with customers and deliver revenue growth. The Company also seeks to hold companies that will create shareholder value with the introduction of a new product or new technology. Over the past 20 years, this would have included PC manufacturers, software, internet applications or consumer devices.

*From 25 July 2022, discretionary portfolio management services formerly provided to Allianz Technology Trust PLC (the 'Company') by Allianz Global Investors ('AllianzGI') have been delegated to Voya Investment Management Co. LLC ('Voya IM'). All members of the former AllianzGI Global Technology Team transferred to Voya IM and continue to manage the Company's portfolio. There has been no change to the investment process. AllianzGI remains the Company's Alternative Investment Fund Manager ('AIFM'), providing company secretarial, administration and sales and marketing services.

First-hand knowledge

Allianz Technology Trust's top twenty holdings

- | | | | |
|----|-------------------|----|---------------------|
| 1 | Microsoft | 11 | MongoDB |
| 2 | NVIDIA | 12 | Zscaler |
| 3 | Apple | 13 | Adobe |
| 4 | Alphabet | 14 | Samsung Electronics |
| 5 | Meta Platforms | 15 | ServiceNow |
| 6 | Broadcom | 16 | Advanced Micro |
| 7 | Amazon.com | 17 | Datadog |
| 8 | Lam Research | 18 | CrowdStrike |
| 9 | Monolithic Power | 19 | Shopify |
| 10 | Micron Technology | 20 | Mercadolibre |

- within 50 miles
- within 2 hours
- elsewhere in the USA
- outside of the USA

Allianz 
Global Investors
San Francisco

- 
- 2
 - 3
 - 4
 - 5
 - 6
 - 8
 - 12
 - 13
 - 15
 - 16

Meet the Managers



Mike Seidenberg

Lead Portfolio Manager

Michael Seidenberg is a senior portfolio manager for the global technology strategies and an equity analyst on the fundamental thematic team at Voya Investment Management. He joined the firm following Voya's integration of certain assets and teams comprising the substantial majority of Allianz Global Investors U.S. business, where he was a portfolio manager, analyst and director on the U.S. global technology team. Prior to that, he worked at a number of hedge funds, including Pequot Capital, Andor Capital and Citadel Investment Group. He also worked in the software industry and at Oracle Corporation. Michael earned a BS in business administration from the University of Colorado and an MBA with concentrations in finance and accounting from Columbia Business School.



Erik Swords

Portfolio Manager and Managing Director, Head of Global Technology

Erik Swords is a head of global technology strategies on the fundamental thematic team at Voya Investment Management. He joined the firm following Voya's integration of certain assets and teams comprising the substantial majority of Allianz Global Investors U.S. business, where he was a lead portfolio manager, managing director and led the U.S. global technology team. Prior to that, he worked at Newton Investment Management for 16 years, leading one of BNY Mellon's largest technology strategies, along with several other thematic portfolios focused on technology and related sectors. Previously, he worked as a research analyst covering the software sector at Pilgrim Baxter Associates, Exis Capital Management and Credit Suisse First Boston Technology Group. Erik earned a BS in finance from Lehigh University.



Danny Su

Portfolio Manager/Analyst

Danny Su is a senior equity analyst on the fundamental thematic team at Voya Investment Management. He joined the firm following Voya's integration of certain assets and teams comprising the substantial majority of Allianz Global Investors U.S. business, where he was a portfolio manager, analyst and director with global responsibilities for the hardware, semiconductor, semiconductor capital equipment and contract-manufacturer sectors. Prior to that, Danny was an associate analyst at ABN Amro, covering the internet-infrastructure software and marketing research sectors. Previously, he was a business analyst with McKinsey & Company in Hong Kong. Danny earned a dual BS in electrical engineering and economics from MIT and a master's degree in management from the Kellogg Graduate School of Management at Northwestern University.



Justin Sumner, CFA

Portfolio Manager/Analyst

Justin Sumner is a senior portfolio manager on the global technology strategies and an equity analyst on the fundamental thematic team at Voya Investment Management. He joined the firm following Voya's integration of certain assets and teams comprising the substantial majority of Allianz Global Investors U.S. business, where he was a senior portfolio manager and director on the U.S. global technology team. Prior to that, Justin worked at Newton Investment Management for 15 years, developing, launching and managing thematic investments focused on technology. Previously, he worked as an equity analyst covering technology and related sectors at several asset management shops, including Sentinel, AmSouth and American Century. Justin earned a BS in economics from the University of Kansas. He is a CFA® Charterholder.



John J. Coyle, Jr.

Portfolio Manager/Analyst

John Coyle is a portfolio manager and an equity analyst on the fundamental thematic team at Voya Investment Management. He joined the firm following Voya's integration of certain assets and teams comprising the substantial majority of Allianz Global Investors U.S. business, where he was a portfolio manager and director with research responsibilities for the U.S. small-mid cap and global space team covering a wide array of companies across technology, consumer, and cyclical sectors. Prior to that, John was a vice president and research associate at Barclays and Lehman Brothers covering the U.S. building products and homebuilding sectors. John earned a BBA in finance, cum laude from Louisiana State University.

The hype cycle



The hype cycle

Even the most compelling technological innovation is subject to the highs and lows of elevated expectations and disappointment. The 'hype cycle' is a tool designed to show how a technology or application will evolve over time, and to systemise these highs and lows. It can be useful in evaluating whether a great idea will make a great investment, and to take the temperature of investor expectations.

Gartner published its first 'hype cycle' in 1995. It created an arc to demonstrate how new technologies or applications progress over time, suggesting that technologies have a relatively predictable evolution of innovation, expectations, disillusionment, enlightenment and productivity. It is an imperfect tool, but can be a useful prism to



view new technologies, such as artificial intelligence ('AI').

The hype cycle is published every year, mapping evolving technologies onto the standard pathway. While some technologies will not get off the ground, and there is some hindsight bias in companies that follow the pattern, it can provide both investors and business leaders with some clues as to where to invest. Should investors commit to a certain company, or is its valuation inflated? Should a CEO pour company capital into AI on the basis that it will bring about competitive advantage? Or will this prove to be a waste of money?

Stages in the cycle

The cycle identifies five key stages for every technology. The first is the 'technology trigger', where a new and innovative technology breakthrough appears. Its early 'proof-of-concept' stories gather publicity, even if no usable products exist and its commercial viability is unproven. This builds to a 'peak of inflated expectations', where a number of success stories make headlines (failures may be overlooked). Some forward-thinking

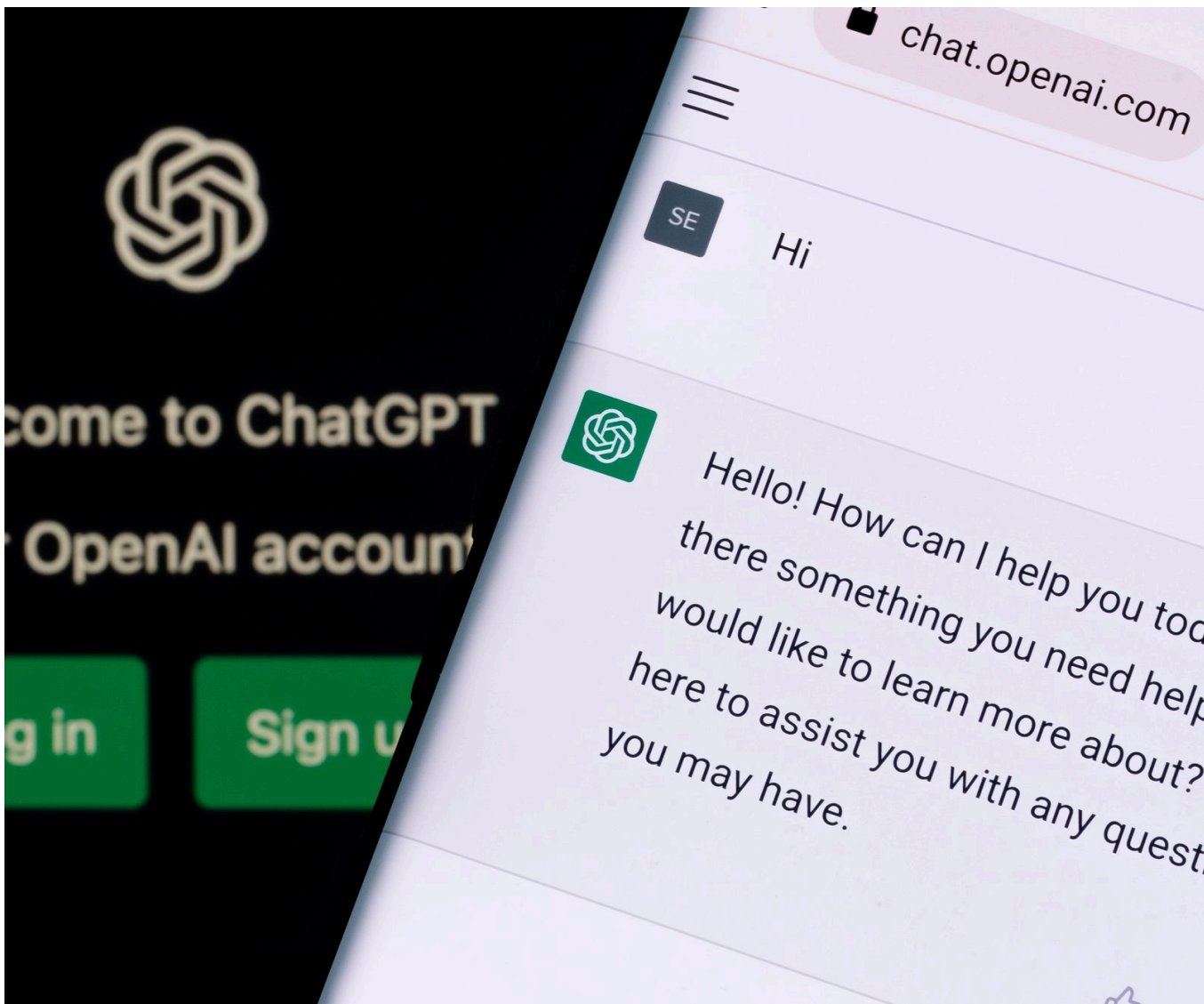
companies may adopt the new technology, but most do not.

The next step is the 'trough of disillusionment', where interest wanes and early implementations do not deliver the hoped-for productivity gains. The market starts to shake out, with producers going bust or merging. Surviving providers need to improve. Next is the 'slope of enlightenment', where real-world, effective applications of the

technology emerge as it is refined. More enterprises adopt the technology. Finally, there is the 'plateau of productivity', where mainstream adoption starts to take off and the technology achieves some of its early promise.

This is only a loose framework. Nevertheless, investors will recognise this trajectory from, for example, internet adoption. In the late 1990s, there was significant hype around the potential for





the internet, a raft of speculative companies IPOed, only to disappoint as revenues failed to materialise. The resulting stock market slump was painful, but ultimately there were companies that delivered on the promise of the internet, particularly after the advent of the iPhone in 2007.

There are now other incarnations of the hype cycle. For example, some data analytics companies will look at media attention to predict technology trends, applying machine learning to plot the arc of rising expectations and excitement, disillusionment and reality. A recent study by CB Insights looked at the adoption of wearables, finding that while general adoption of variables had plateaued, disease-specific and clinical wearables had increased.

What can this tell us about AI?

This year's hype cycle puts generative AI at the 'Peak of Inflated Expectations', which means its next phase may be the 'Trough of Disillusionment' if it follows normal patterns. There are certainly signs of exuberance in AI. Big tech has spent heavily on AI, with Microsoft, Google and Amazon doing a number of blockbuster deals with AI start-

ups in 2023. This accounted for two-thirds of the \$27bn raised by fledgling AI companies in 2023, according to private market researchers PitchBook. Overall spending on AI groups is nearly three times as much as the previous record of \$11bn set two years ago.

Of these, Microsoft's multi billion dollar investment in ChatGPT maker Open AI has garnered the most attention. The tie-up is designed to accelerate AI breakthroughs. Microsoft has been among the first companies to market with mainstream AI products as it launched Copilot in its Windows applications.

Nevertheless, it was only generative AI and 'augmented AI' (where AI technologies help humans make better decisions rather than replacing them) that are at this stage in the cycle. This fits with the pattern seen in stock markets, where those on the front line of AI – chip providers, cloud computing groups, AI developers – have seen substantial share price rises in 2023, amid significant excitement about what AI could achieve.

Other types of AI technology are at a far earlier point on the adoption curve: causal AI, for

example, is only just starting to be explored. This new class of machine intelligence can use reason in a similar way to humans, looking at cause and effect. Neuro-symbolic AI, which combines machine learning methods and symbolic systems to create more robust AI models, is also at an early stage. The cycle also highlights AI simulation and generative security AI as early stage technologies.

The 'trough of disillusionment'

The easy conclusion from the hype cycle would be that generative AI is likely to be hit by a dose of reality in year ahead. Certainly, this has been seen in other 'hype' technologies, such as crypto. The value of deals struck by US venture funds halved between the first and fourth quarters of 2022, from \$81bn to \$41bn, according to PitchBook. Crypto deals plunged further, down more than 80% over the same period.

AI disillusionment may emerge as companies understand the level of investment needed to monetise AI, and that its advantages may only be open to a select few players with deep pockets. It is also possible that investors reassess the elevated valuations for AI companies if practical

applications do not emerge as quickly as hoped.

However, while 2024 is certainly likely to be a pivotal year for AI and market leadership may shift, we don't see an end to AI growth. It is important not to put AI in the same bucket as early internet companies with no revenues. This is a technology that could be transformative for company productivity and economic growth. We are only in the foothills of that development.

There will always be setbacks and periods where the technology appears to be moving backwards. As people begin using AI-related applications, the prevalence of errors will grow. There will undoubtedly be some difficult headlines where AI is employed in sensitive sectors such as health and defence. Equally, a fundamentally disruptive application could still be some way off.

Generative AI will be constrained by data and analytics governance, regulatory, and data security considerations, and will require human supervision. Policymakers have learned their lessons on social media and will want to ensure that AI does not come with similarly unintended consequences.

However, as the hype cycle shows, this is a necessary process for AI to become productive. A lot of the most valuable AI companies will be fundamentally new. Gartner says: “Generative AI techniques applied to data management are still in their infancy. Vendors are still in the very early stages of using this technology to power their data management tools. But with the vast investments in the area, we expect a rapid progression of product availability.”

The hype cycle would suggest there is a lot more to go for in AI, but the gains will come from different places. The next wave is likely to focus on the applications of AI and in particular, the search for a ‘killer app’, rather than the creators of the AI itself. It is a necessary evolution. It took time to see where the most productive uses of the Internet would be, and AI is no different.


Technologies do not evolve in a straight line. It takes time for the use cases to emerge and for the technology itself to be refined. AI is an exciting innovation, but many of the exciting investment opportunities from it are yet to emerge.

AI and ethics

“These complex, opaque systems may do more societal harm than economic good. With virtually no US government oversight, private companies use AI software to make determinations about health and medicine, employment, creditworthiness, and even criminal justice without having to answer for how they’re ensuring that programs aren’t encoded, consciously or unconsciously, with structural biases.” This was the bleak verdict on AI from the Harvard Gazette unless governments take action to regulate its use.

AI providers are increasingly facing a legal and regulatory backlash. 2023 saw EU policymakers pass a major new law regulating AI. It focused on areas of significant risk, such as the use of AI by governments and companies, and for critical infrastructure such as energy. It forces new transparency requirements on cyber companies, while limiting the use of facial recognition and deepfakes. President Biden passed an executive order on AI, forcing tech companies to share test results and setting new standards for biological synthesis screening.

ChatGPT owner Open AI is currently embroiled in a major lawsuit with the New York Times, which accuses it of using its copywritten content to power its AI engine. This may force AI companies to build partnerships with content creators and ensure more careful use of data. Overall, there is a sense that policymakers were too slow to regulate social media, allowing harms to flourish. They are unlikely to make the same mistake with AI.

The background of the slide is a close-up, artistic photograph of a semiconductor circuit board. The board is primarily blue with intricate gold-colored traces and components. Overlaid on this is a world map where the continents are rendered in a glowing, golden-yellow color, making them stand out against the blue background of the circuit board. The lighting is dramatic, with some areas in shadow and others brightly lit, creating a sense of depth and technological sophistication.

The semiconductor landscape

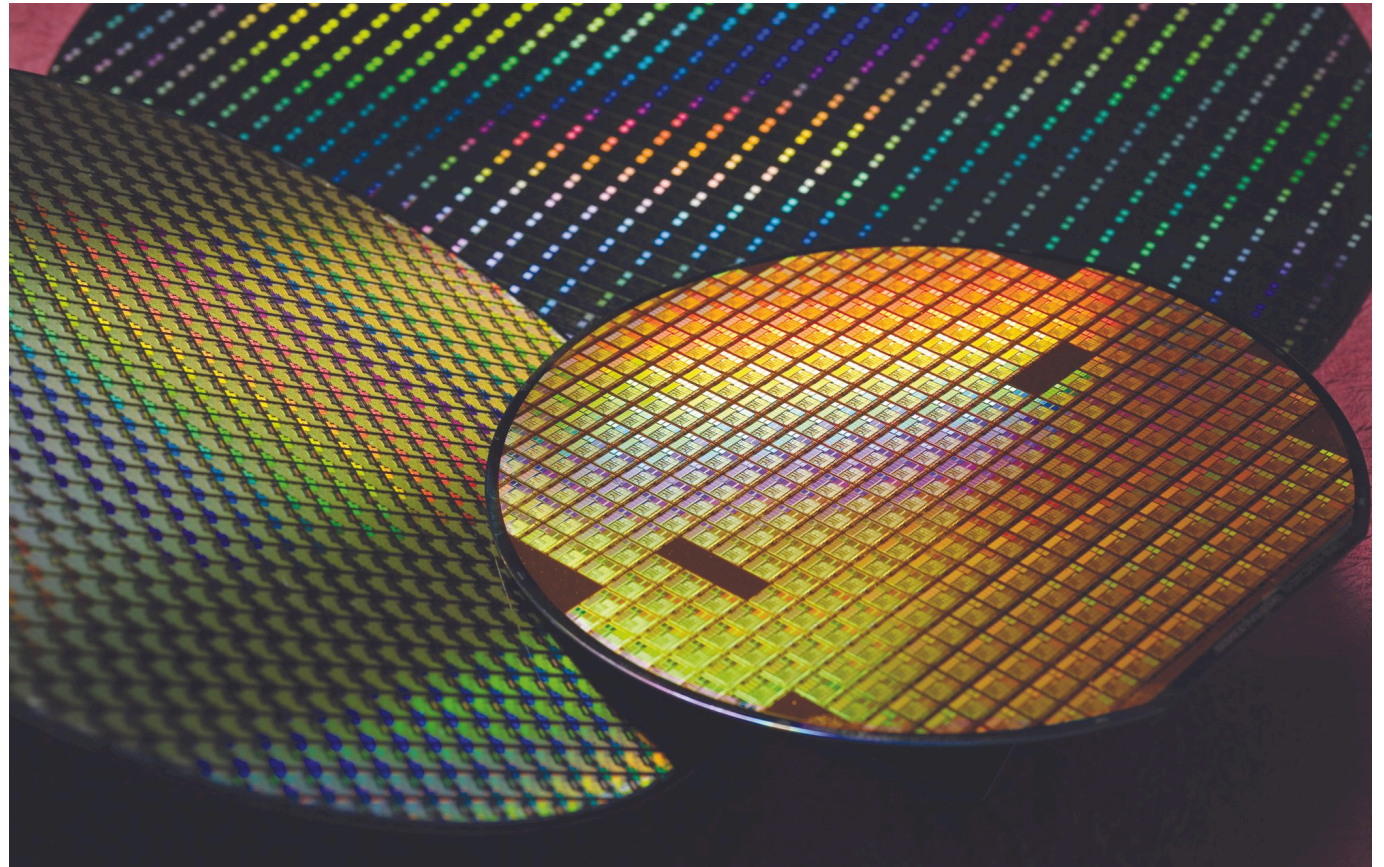
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The semiconductor landscape

Romantics may argue that love makes the world go round; realists would suggest that it is semiconductors. Semiconductors are an essential component of every electronic device, from computers, to cars, to electronics. Developments in semiconductor power and functionality have enabled advances in almost every major technology, including artificial intelligence, electric cars, clean energy and transportation.

In particular, improvements in semiconductor technology during the past 50 years have made electronic devices smaller, faster, and more reliable. Developed in 1965, Moore's Law suggested that the number of transistors on a microchip would double every two years, allowing processing power to increase. This has proved a robust theory for almost 60 years, with microchip development a powerful force in driving technology innovation.



The Semiconductor Industry Association points out that a single semiconductor chip now has as many transistors as all of the stones in the Great Pyramid in Giza. There are now more than 100 billion integrated circuits in daily use around the world. Semiconductor demand is increasing all the time as areas such as car manufacturing or artificial intelligence ('AI') demand more chips, and chips with increasing complexity. McKinsey forecasts that it will be a trillion dollar industry by 2030.

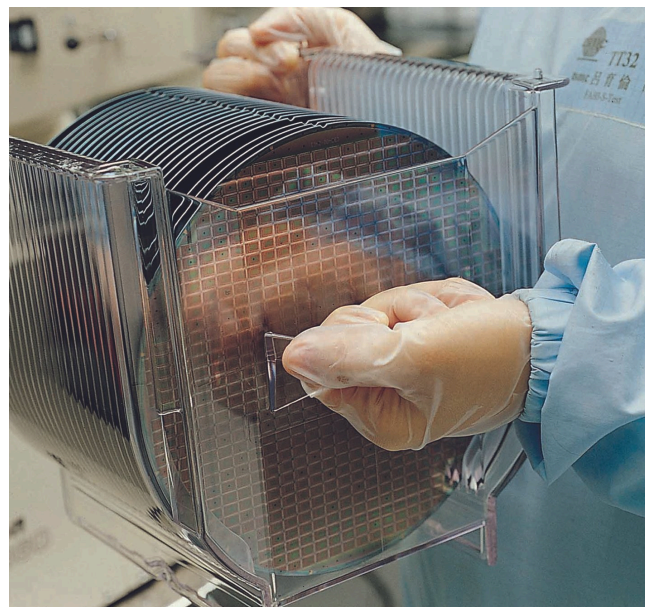
The semiconductor supply chain

The semiconductor supply chain is increasingly complex and inter-dependent. While individual companies used to design, build and manufacture semiconductors, increasingly these activities are undertaken by different companies with great levels of specialisation. This is a measure of the rising complexity of each area.

At the start of the chain are the 'fabless' firms. These design and develop new chips, but do not make them. They will outsource the manufacturing of chips to a specialist foundry. Examples of fabless firms are Qualcomm, Broadcom, or Nvidia. These companies will operate with various

degrees of specialty. Nvidia, for example, has become well-known for its expertise in AI-focused chips, having built its business manufacturing semiconductors for gaming.

Companies that focus only on manufacturing are known as 'foundries', or 'fabs'. The largest and most important is the Taiwan Semiconductor Manufacturing Company ('TSMC'), which was started in 1987. TSMC produces the majority of Taiwan's semiconductors, which are 60% of the



world's supply and 90% of its most sophisticated chips. Until recently, TSMC only made its most advanced chips in Taiwan, but increasingly it is being incentivised to develop manufacturing plants in other countries, notably the United States ('US'). United Microelectronics Corporation is the other major Taiwanese chip manufacturer.

Other notable manufacturers of semiconductors include Samsung in South Korea, and US-domiciled GlobalFoundries, which was a spin-off from Advanced Micro Devices. Semiconductor Manufacturing International Corporation is mainland China's most advanced and largest foundry.

Beyond fabs and fabless

There are still companies that design and manufacture chips, usually known as integrated device manufacturers. These include familiar names such as Intel, IBM, Analog Devices, Micron and Texas Instruments. These tend to focus on more generic chips, rather than the sophisticated chips designed by Nvidia and manufactured by TSMC.

There are also important suppliers to semiconductor designers and manufacturers. Of these, Netherlands-listed ASML is a good example. It designs and builds the systems and software used in the production of semiconductor chips. It is the only company in the world that currently manufactures extreme ultraviolet ('EUV') lithography machines, which enables the production of smaller, faster, more powerful microchips through the use of a shorter wavelength of light. There are others involved in the supply chain, such as semiconductor testing groups and specialist distribution.

The investment case

Semiconductors have historically been considered a cyclical industry. There has tended to be greater demand during buoyant economic conditions when companies and individuals bought more technology equipment. Today, however, technology is so embedded in the way people work and live that this cyclicity is less apparent. Electric cars, for example, have far greater semiconductor content than internal combustion engines cars - up to \$1,500 for a high-end EV compared to only \$500 in a petrol car

Equally, semiconductors are now more sophisticated. They are not merely a 'widget', but are increasingly specialist rather than commoditised. In 2021, Tesla announced plans to manufacture its own semiconductors, saying that its needs had become too specialist and it wanted to avoid supply chain disruption. Semiconductors are necessary for the growth of AI, allowing the data storage and analysis that trains machines to complete tasks normally requiring human intelligence.



The semiconductor arms race

Mounting geopolitical tensions across the world have highlighted the need for semiconductor independence. Companies and governments around the world are aware of the fragility of having the majority of chip manufacturing concentrated in Taiwan, a disputed territory claimed by China. This has left governments scrambling to build semiconductor manufacturing capabilities and know-how.

The US Chips and Science Act, for example, sought to incentivise domestic production of chips, and knock China out of its supply chain. The investment in semiconductor and clean tech investments is almost double the commitments made in the same sectors in the whole of 2021, and nearly 20 times the amount in 2019, according to data compiled by the Financial Times.

Intel started building two new foundries in Chandler, Arizona in 2021, a \$20 billion investment, and has more recently created an advanced packaging facility in New Mexico. Micron has invested £15bn in foundries. Perhaps most importantly, TSMC started building a chip

plant in Arizona in 2020 and has recently sent over more workers to speed up construction.

The European Parliament recently approved the Chips Act, which aims to double the region's semiconductor market share by 2030. It puts similar protections in place. The Netherlands, conscious of ASML's integral place in the semiconductor supply chain, recently enacted new regulations around the export of advanced semiconductor production equipment, under which companies would need to apply for an export license as of 1 September 2023.

Changing semiconductors

In 2005, Gordon Moore (of Moore's Law) admitted there may be physical limits to his long-held law: "the fact that materials are made of atoms is the fundamental limitation and it's not that far away...We're pushing up against some fairly fundamental limits so one of these days we're going to have to stop making things smaller".

Another problem is that semiconductors as they exist today are energy-hungry. There are now a vast number of devices, from cloud computing to

Internet of Things devices, and this is going up all the time. At a time of greater scrutiny on how we source and use energy, this may also prompt changes in the semiconductor sector, leading companies to seek out more sustainable options.

Against this backdrop, it is possible that semiconductors might start to look a little different. Companies are starting to look for alternatives to silicon, for example. Alternative materials such as graphene, carbon nanotubes, or other novel semiconductor materials may replace or supplement silicon, offering better performance, lower power consumption, and increased functionality. In January 2024, the New Scientist reported that the first working graphene semiconductor had been created. This could pave the way for a new type of computer with greater speed and efficiency.

It may also be possible to improve existing semiconductors by changing the packaging around the semiconductor wafers. This packaging connects semiconductors to their environment and protects them from contamination and damage. McKinsey says this part of the chip has been

undervalued: "This may change with the introduction of advanced packaging, which uses sophisticated technology and aggregates components from various wafers, creating a single electronic device with superior performance. Introduced around 2000, advanced packaging is now gaining significant momentum as the next breakthrough in semiconductor technology."

The semiconductor industry is vital for almost every technological development happening in the world today. It has had to adapt to new demands, and will have to adapt again, but the technological world could not turn without it.

Geopolitics and the technology sector



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Geopolitics and the technology sector

The past year has been marked by mounting geopolitical tensions. From hostilities in the Middle East, to the ongoing war in Ukraine, plus the continued friction between the United States ('US') and China, the global world order is reshaping and bringing significant disruption. This has implications for businesses trying to trade and manage supply chains – and particularly for the technology sector.

Technology is increasingly a pawn in tensions across the globe, as governments recognise the strategic advantage it confers. While other military conflicts may bring disruption, it is the stand-off between the world's superpowers, China and the US, that has had the greatest impact on the technology sector today.

US trade and investment flows to China have declined sharply as the



US government has grown increasingly nervous about Chinese influence in its strategic industries. In November, a meeting between Presidents Biden and Xi suggested some thawing of relations, but there are still key areas of contention between the two countries: Xi pressed Biden to lift export controls and support stronger trade links, while Biden sought to curb the import of fentanyl ingredients. There are also key flashpoints, such as Taiwan.

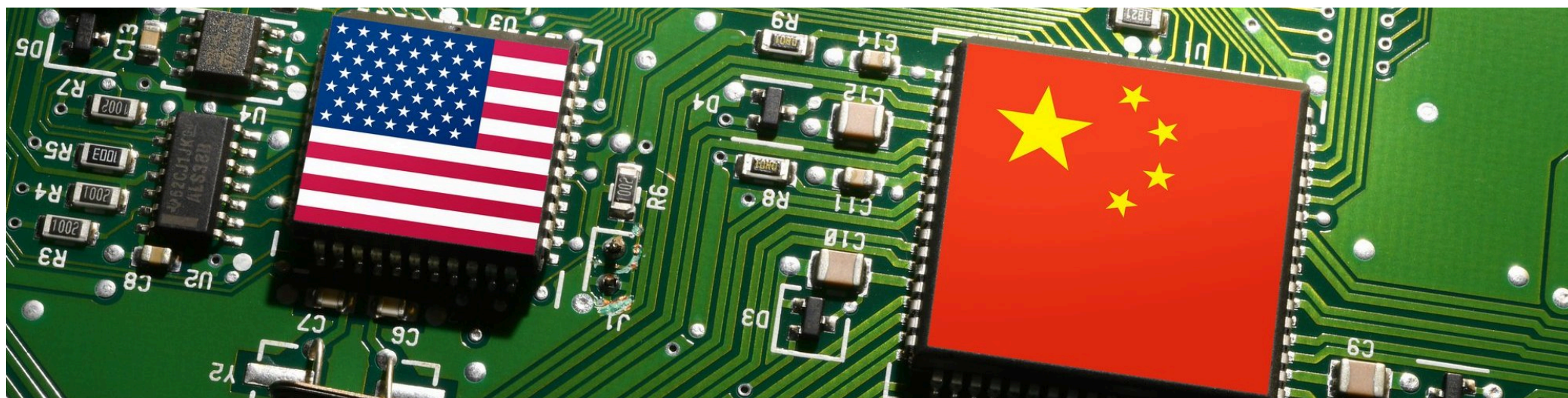
Inevitably, these tensions put up barriers to trade, force technology companies to make adjustments to their supply chains, but also to spend more time navigating and monitoring risks. Countries across the world are taking sides, based on their economic and strategic interests. Nevertheless, it also represents an opportunity for many technology companies, with global governments keen to build domestic strength in areas such as semiconductors and artificial

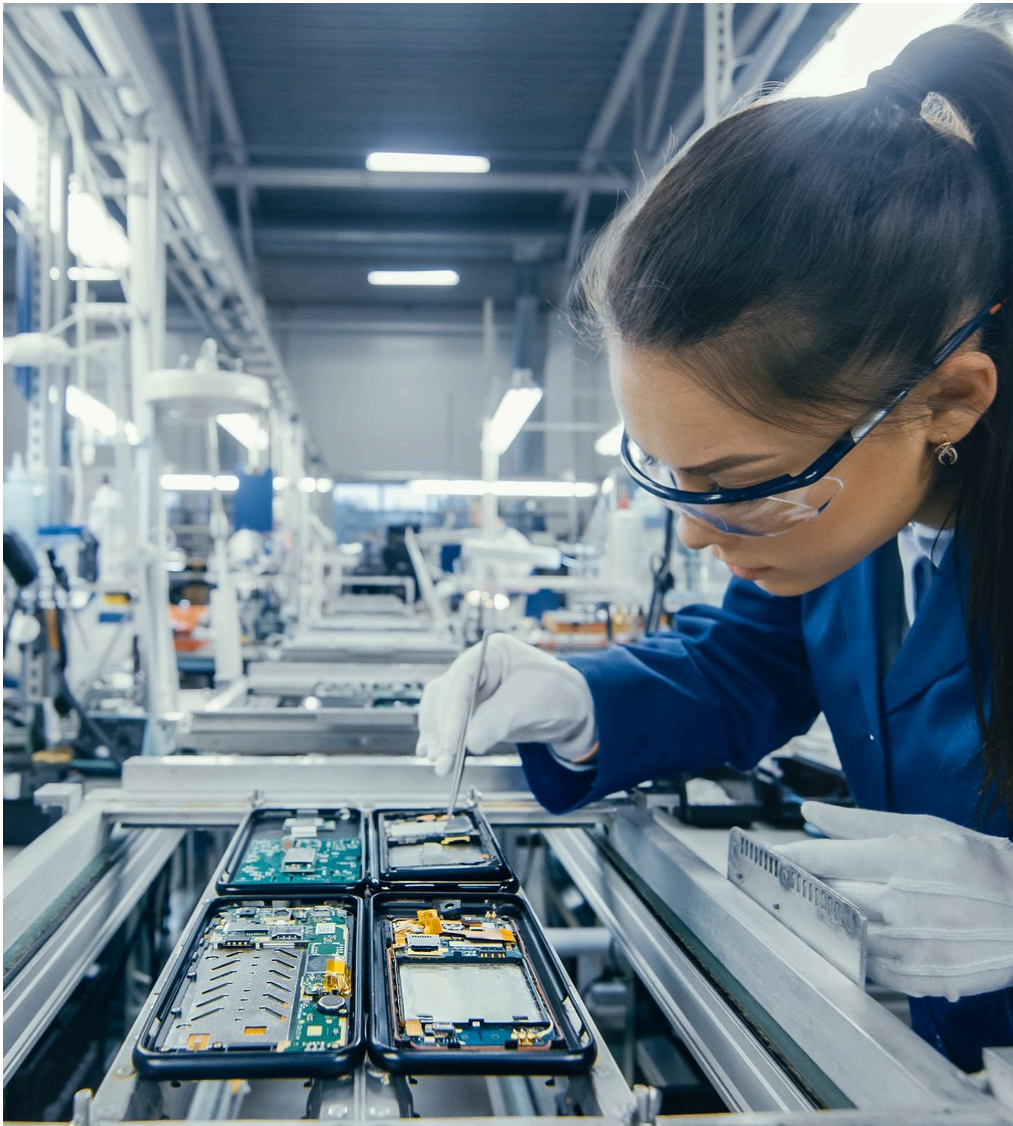
intelligence ('AI'), while protecting themselves from cybersecurity threats.

Protectionism

After years in which technology was exchanged freely between China and the US, the US is increasingly determined that China should no longer be allowed unfettered access to its intellectual property. The past two years have seen a series of protectionist measures put in place to

limit China's access. For example, the US has imposed export controls on the high-performance Graphics Processing Unit ('GPU') chips required to develop cutting-edge AI systems. Nvidia has responded by launching a slower version of its gaming chip in the Chinese market. China has responded with export restrictions on gallium and germanium which are used to produce chips, solar panels and fiber optics.





This protectionism increasingly forces other countries to pick a side. Germany's high-tech manufacturing economy has seen plenty of investment from China, including involvement in industrial giants, such as Daimler. This has raised concerns for the German government, which has called for an EU-wide review body. France has also restricted investments. ASML, the Netherlands-based creator of high tech chip-making equipment has halted exports to China. This is thought to be in response to a request from the US government. However, more fragile EU economies worry that cutting China out of the supply chain could hurt their growth.

For companies, this may restrict access to China's vast market, but many recognise that maintaining friendly relationships with Washington is more important.

Supply chain disruption

Geopolitical tensions and the legacy of the pandemic have prompted companies to create greater certainty in their supply chains. Many technology companies found themselves exposed as lockdowns disrupted supply of crucial elements and have sought to diversify manufacturing or shift it away from politically sensitive countries such as China.

This is easier said than done. Apple, for example, has significant production in China. Its key manufacturer Foxconn has around 200,000 workers on its iPhone City campus in central China. It is difficult to find alternative suppliers that can match this level of skilled labour and scale in the short-term. Nevertheless, Apple's dependence on China is reducing. The group has made its iPhone 15 in India and says it wants to make one in four iPhones there

within the next two to three years. The USA has signed a series of investment agreements with Vietnam on AI and semiconductor investment.

There is already a clear shift to manufacturing in markets such as Vietnam, Thailand, Mexico or Malaysia, alongside a drive to bring production closer to home. This process is likely to continue over the next decade and will create new opportunities. This has implications for the technology companies themselves. They will have to shift the focus of their investment, manage risks, and look more closely at the areas of demand. This may see their cost base change.

AI dominance

AI is a clear geopolitical battleground. Its potential impact on economic growth, and its military applications make AI dominance a crucial factor in geopolitical tensions.

White House National Security Advisor Jake Sullivan said in a recent speech: "Preserving our edge in science and technology is not a 'domestic issue' or 'national security' issue. It's both."

Nevertheless, it is clear that both sides already see the military potential for AI. Goldman Sachs says: "The intelligence community and US Department of Defense are leveraging advancements in this field for real-time surveillance and threat detection, and AI stands to play a central role as increasingly autonomous systems transform defense technology."

A focus on AI has implications across the supply chain. Semiconductors enable AI, and AI progress is impossible without the sophisticated analysis of data. Countries across the world are seeking to build up their domestic resilience in key areas. In the US, this

has been seen through the Chips and Science Act. The EU passed its own Chips Act in 2023, which also seeks to drive investment into semiconductors.

China has 'Made in China 2025', a state-led industrial policy that looks to make China dominant in global high tech manufacturing. The programme brings together state

subsidies, strategically-important companies and intellectual property to build domestic expertise in key areas, including electric cars, next-generation information technology and telecommunications, plus advanced robotics and AI.

China is looking to achieve 70% self-sufficiency in high-tech industries by



2025. It has some way to go – it accounts for around 60% of global demand for semiconductors, but only produces 13%. However, it can point to considerable success in electric cars. BYD has already overtaken Tesla in electric car sales.

Cybersecurity

Inevitably, a lot of modern warfare is conducted online. State-sponsored cyber criminals are proving increasingly disruptive, particularly as countries digitise their critical national infrastructure. The war in Ukraine has seen a stream of cyber-attacks, which have disrupted public services. Russian hacking groups claimed responsibility for an attack on the European Parliament website, while the Pentagon has also come under attack and a Chinese espionage attack infiltrated the US government.

S&P Global adds: "The digitization of critical national infrastructure means

that many essential services, including power grids, water supply networks and transportation systems, are increasingly vulnerable to cyberattacks. A successful cyberattack on any of these systems can have severe consequences, including loss of life and economic damage...Government networks, private sector networks and infrastructure are all susceptible to hacking and espionage."

This creates ongoing demand for cybersecurity solutions. McKinsey estimates that the damage from cyberattacks will be to about \$10.5 trillion annually by 2025 – a 300% increase from 2015 levels. It believes that the addressable opportunity may be worth between \$1.5 and \$2 trillion in the longer-term. Growth is also likely to be supported by rising regulation, with national governments increasingly levying fines for companies that fail to protect

their customers.

While geopolitical shifts introduce volatility and uncertainty, they also open up new avenues for technology companies. They may force companies to look at their revenue lines, their supply chains and outsourcing partners. However, it also creates greater government focus on AI and cybersecurity, which should be supportive for companies with the right solutions.

Portfolio Managers' Report



Portfolio Managers' Report



Mike Seidenberg CFA

2023 started on a cautious note. Although inflation had started to fall, it was not yet beaten. The impact of rising interest rates was beginning to be felt in the real economy, and there were concerns about how high rates may need to rise. A winter energy crisis had been averted, but a 'hard landing' still appeared a plausible scenario for the world economy.

There were glimmers of hope. Some of the supply chain bottlenecks that had contributed to inflationary

pressures were starting to unwind. Freight prices had started to drop and the pandemic-related backlogs started to ease. There was also the prospect of a stronger performance from China as the country relaxed its strict quarantine restrictions.

However, the fragility of the economic environment was exposed by the collapse of Silicon Valley Bank in March. Its weakness was attributed to losses on its bond portfolio. It had significant exposure to startups and



Technology will continue to dominate our lives and reshape the future. Such a 'new frontier' remains an extremely exciting place to invest, though of course also brings risks for investors.

venture-backed firms, but the US regulator stepped in swiftly to protect deposit holders. The crisis threatened to destabilise the world's banking system, with Europe's Credit Suisse also proving vulnerable. A forced merger with UBS appeared to put an end to the crisis, but it left investors wary of other bear-traps in the financial system.

In the meantime, attention continued to be minutely focused on inflation and when the Federal Reserve's rate

rising cycle might draw to a close. Rate rises continued in the first half of the year, albeit at a slower pace. The problem for policymakers was that while headline rates of inflation decelerated sharply over the year, core inflation proved stickier.

Ultimately, however, the US Federal Reserve paused its tightening cycle in July, even though it continued to talk tough on inflation. US Federal Reserve chair Jerome Powell insisted they would stay the course until the

inflation battle had been won. At his Jackson Hole speech in August, he said: "We are prepared to raise rates further if appropriate, and intend to hold policy at a restrictive level until we are confident that inflation is moving sustainably down toward our objective."

Towards the end of the year, speculation mounted that US interest rates may soon be lowered as inflation continued to drop, and by December, the US Federal Reserve had pivoted to forecasting 0.75% points of interest rate cuts in 2024. Fears of a US recession appeared to be overblown and hopes grew of a Goldilocks outcome for the US economy (with growth neither too hot nor too cold). US GDP growth continued to be strong, rising 5.2% in the third quarter fuelled by a strong consumer.

Elsewhere, growth was mixed.

Economic activity in Europe remained anaemic at best. However, the European Central Bank and Bank of England continued to insist that the battle against inflation was far from over. Their hawkishness versus the US Federal Reserve saw the euro and British pound strengthen against the US dollar. The Japanese yen weakened against all three currencies, in spite of a revival of economic growth and inflation in Japan as the country's central bank continued its loose monetary policy. China's economic rebound from pandemic restrictions disappointed, with the health of its property sector a major concern.

Fears of inflation briefly revived in the summer, after oil prices rallied in response to oil-producing countries agreeing to cut output. Nevertheless, Brent crude closed the year slightly lower at just under US\$80 a barrel. Overall oil prices fell around 10% over

2023, marking the first annual decline since 2020. 2023 ended with inflation pressures easing, with interest rate cuts on the horizon and with economic growth holding up. It proved a far better outcome than many had anticipated at the start of the year.

Stock markets

Global stock markets made progress in 2023, with the MSCI World Index up 17.2% over the period. However, it was a rocky ride and for much of the year, market leadership was held by a narrow range of artificial intelligence-related companies. These 'Magnificent Seven' – Amazon, Alphabet, Apple, Meta Platforms, Microsoft, NVIDIA and Tesla – benefited from growing excitement in the potential for AI and its applications, following the launch of generative AI programme Chat GPT.

These stocks drove global indices

higher, but many areas did not participate in the rally. While companies in the information technology, communication services, consumer discretionary and industrials sectors turned in a creditable performance, defensive stocks in the consumer staples, utilities and health care sectors barely rose, while energy stocks were held back by weakening oil and gas prices. With economic growth uncertain, investors retreated to those companies with reliable earnings, even if they had to pay a little more for them.

Stock market performance was still highly dependent on interest rate expectations. There were two notable setbacks over the year: the first was prompted by March's banking crisis, but this was swiftly resolved after regulatory intervention; the second came in October after higher oil prices prompted a brief spike in inflation, driving fears that rates

would need to stay higher for longer.

This narrow market leadership widened out in the final months of the year, as investors started to anticipate rate cuts in the year ahead. November and December saw a significant, broad-based rally. November was the strongest month for markets in three years and supportive statements from the US Federal Reserve ensured the rally continued to the end of the year. Overall, the MSCI World Index recorded its strongest year since 2019.

Key themes

Interest rates and inflation

Just as they did in 2022, 2023 was a year when investors watched the US Federal Reserve. Once again, the fortunes of individual companies appeared to matter less than the latest comments from central banks as investors tried to judge whether central banks would be able to tame

inflation without collapsing the economy.

Ultimately, however, markets are now reassured that the US Federal Reserve has managed to engineer a 'soft landing'. The much-anticipated US recession remains a possibility in the year ahead, but most market participants now believe it is likely to be short-lived and shallow if it materialises at all. Rates cuts could come as early as March in the US and would be welcomed by markets.

Geopolitics

The fragile geopolitical landscape continued in 2023. The war in Ukraine was ongoing, with little progress on either side. World powers continued to pick sides, which saw some redrawing of trading relationships. Those countries that could remain neutral, such as Vietnam or parts of Latin America, saw their economies benefit.

There was new fragility in the Middle East after the unprecedented terrorist attacks by Hamas on Israel on 7 October, and Israel's subsequent military response which has seen ongoing conflict in Gaza with huge loss of life.

There was some easing of US/China relations, with Presidents Xi and Biden meeting in November. Nevertheless, a return to the unfettered trading relationship of recent history appeared improbable.

Artificial Intelligence

The launch of Chat GPT and its rapid adoption showed the potential for artificial intelligence – and some of its risks. It holds the potential to drive productivity gains for companies at a time when productivity has stagnated in many Western economies. In a report in April, Goldman Sachs said generative AI could raise global GDP by 7% - equivalent to almost \$7 trillion.

Forward-thinking corporations are already looking at how AI could improve their business and 2024 may be when these plans start to come to fruition. Companies are investing significant amounts in AI. Microsoft, Google and Amazon have done a number of blockbuster deals with AI start-ups in 2023. This accounted for two-thirds of the US\$27bn raised by fledgling AI companies in 2023, according to data from private market researchers PitchBook.

Performance

The Company's net assets rose 46.4% for the year to 31 December 2023. This was marginally behind its benchmark, the Dow Jones World Technology Index (sterling adjusted, total return), which rose 48.2%. The strength of the 'Magnificent Seven' and their dominance in the index made it difficult to beat. We continued to hold below index weights in these stocks to avoid

concentration risk in the portfolio.

The broad-based rally at the end of the year was more favourable for the Company, with market attention returning to some of our higher growth, mid cap companies. This has tended to be a more fertile spot to find opportunities, where a focus on bottom-up fundamentals and industry expertise can provide an edge versus the market. The third quarter earnings season had confirmed the strength of earnings momentum in a number of our holdings, particularly those focused on cloud computing. We took bolder positions in these areas, which helped us participate in the rally in full.

Weakness tended to come in idiosyncratic areas, rather than from any major themes. For example, **Pay.com** was a notable detractor, hit by concerns over the outlook for the jobs market and some operational

issues that saw it miss on earnings. **Okta** was also weak, impacted by execution challenges.

It was a mixed year for the semiconductor sector. It was important to differentiate between 'leading and lagging' semiconductor groups. While **Nvidia** soared on the back of demand for its AI-focused chips, it was a tougher year for generic semiconductors and those exposed to auto-related sectors. The Company moved away from auto-related semiconductors in the first half of the year, and benefited from not holding generic semiconductor groups such as Texas Instruments. Nvidia was a major holding from February onwards.

Geopolitical tensions continued to support demand for cybersecurity companies during the year, particularly at the end of 2023 when software and IT services

outperformed other areas. Artificial intelligence also drove demand, with more data requiring greater protection. Cyber attacks continued with a major Chinese espionage campaign infiltrating the US government. A new SEC ruling requiring disclosure of events within four days also impacted demand for cybersecurity solutions. Overall spending on cybersecurity continues to grow faster than other major technology segments.

The Company also benefited from the areas it didn't hold. For example, for most of the year it did not hold anything in China. The weakness of Chinese markets was a dominant feature of the year and this helped performance.

Stock highlights

The performance of the Magnificent Seven was the key highlight for equity markets overall. Five of the

Magnificent Seven (**Apple, Alphabet, Meta Platforms, Microsoft** and **Nvidia**) are held in both the Company and in the benchmark, generally at a lower concentration than the Company's benchmark index. The exception was **Meta**, where the Company held a near-double benchmark weight (at 6.3%). This provided the strongest contribution to returns over the year. Having previously exited our historic position, we bought back the stock at the end of 2022 on the back of expectations that its cost-cutting initiatives, lower valuation level and secular growth would drive shares higher. Over the year, an improving competitive position and new product development helped push it higher. The Company also held **Amazon.com** and **Tesla**, the two remaining Magnificent Seven stocks, which are not part of the benchmark and were additive to performance.

MongoDB was another notable performer over the year. The database software company posted consecutive quarters of strong earnings, ahead of market expectations. Earnings were fuelled by a faster recovery in consumption trends for the business, driven by the growth of generative AI.

China was a particular weak spot over the year, as international investors withdrew from the market. We have been wary of the Chinese market for some time, believing government interference threatens shareholder returns. Not holding Tencent Holdings and to a lesser extent Alibaba contributed to overall performance versus the benchmark during the year.

The one Chinese stock we owned was **JD.com**, holding it briefly between January and February. It is an online direct sales company offering a wide

range of products through its website and mobile applications. We thought it may be a beneficiary of China's reopening trade. As it was, the Chinese consumer failed to revive and we sold it quickly. Although it detracted from overall performance, it proved a prudent sale, with the share price tumbling after we exited.

Identity management group **Okta** was a weak spot. It had a number of operational problems: it had overhired, leaving sales territories cut too small for sales reps to meet their numbers. The company also struggled from increased competition, while a large number of cyber attacks weighed on its credibility. **Paycom Software** was also a performance detractor, having suffered a series of disappointing earnings reports. As a designer and developer of software solutions to manage the employment life cycle, it was hit by concerns about the jobs outlook and a moderation in

economic growth.

The Company's cash weighting was lower than last year – at around 2% on average. This detracted from returns given the strength of markets, particularly at the start of the year. Nevertheless, it allowed us to retain optionality in the portfolio during periods of uncertainty.

Looking forward

At the start of 2023, valuations were compelling. After a significant market improvement - along with higher earnings – technology companies appear to be trading at around fair value today. That said, there are some tailwinds for the year ahead and we believe the equity market recovery over the past few months can extend into 2024.

At the December 2023 Federal Open Market Committee meeting, the US Federal Reserve signalled multiple

rate cuts could come in 2024. Inflation continues to weaken and, while the jobs market remains buoyant, growth is moderating. With interest rate cuts on the horizon and an economic soft landing expected, investors are likely to be confident enough to look beyond the mega-caps into other parts of the market. Broader earnings growth may accelerate this trend.

There are going to be bumps along the way and the market might be due for a short-term pause after its recent strength, but there are reasons to be optimistic about the long-term secular growth prospects for technology. These include artificial intelligence and machine learning, the Internet of Things, cyber security, digital assets and mobility. The macroeconomic challenges of the past few years are likely to ease, which should give investors greater confidence.

The challenges of the past few years have forced companies to look at their cost structures, re-engineer their businesses and cut unprofitable lines. The result is that the survivors are far stronger, with better competitive positions and stronger earnings. We continue to believe the technology sector can provide some of the best absolute and relative return opportunities in the equity markets.

Mike Seidenberg

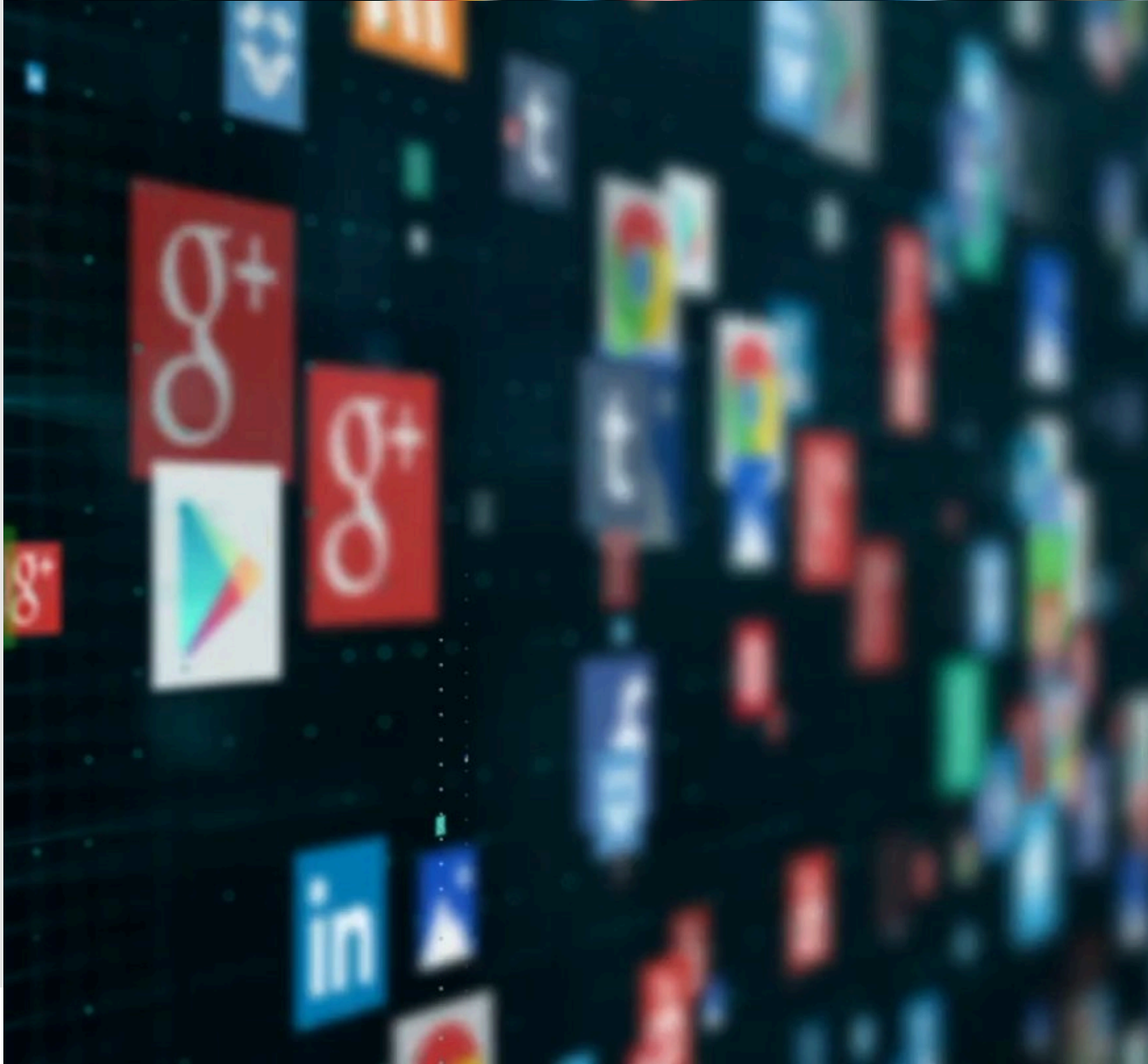
Lead Portfolio Manager

Voya Investment Management Co

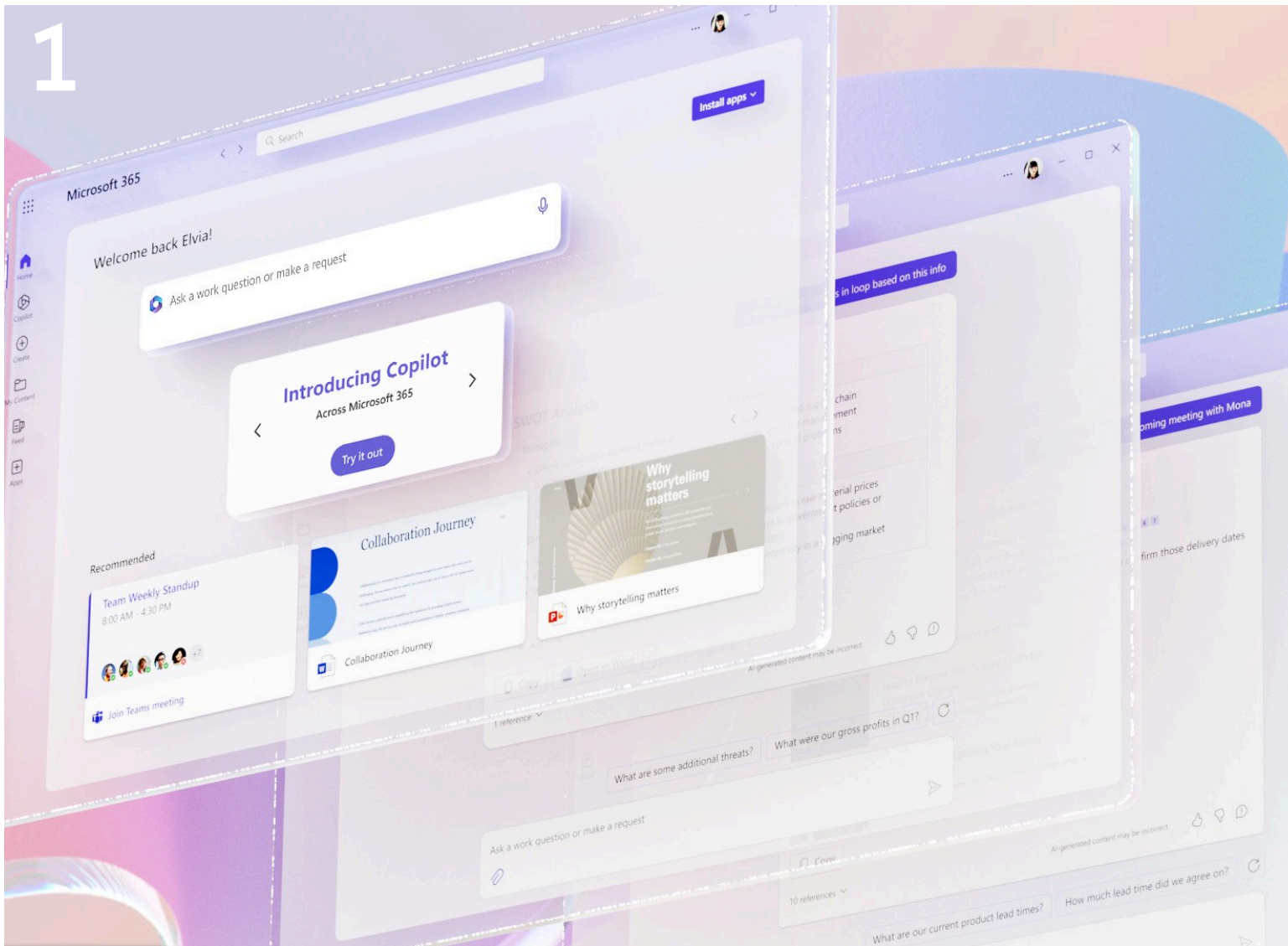
LLC

12 March 2024

Investment Portfolio



1



Top Twenty Holdings



1 Microsoft

Sector: Software

Country: United States

Value of holding: £109,646,000

% of portfolio: 8.5

Microsoft has emerged as one of the dominant forces in artificial intelligence (AI) in 2023, forging a tie-up with Chat GPT group Open AI, and developing AI-based service Copilot. Its cloud computing business has also gone from strength to strength. Its deal to buy gaming group Activision Blizzard finally completed in 2023, having also bought fibre optic cable maker Lumenity in late 2022.

2



Top Twenty Holdings



2 NVIDIA

Sector: Semiconductors & Semiconductor Equipment

Country: United States

Value of holding: £92,982,000

% of portfolio: 7.2

Nvidia designs graphics processing units ('GPU's). It built its name in the gaming industry, but its real strength is now in AI. Generative AI requires vast processing power that is now largely provided by Nvidia's sophisticated GPUs. As yet, it has few rivals and has a head start on innovation in this part of the market. Its GPUs are also used in a variety of other industries, including architecture, engineering and scientific research.

3



Top Twenty Holdings



3 Apple

Sector: Technology Hardware, Storage & Peripherals

Country: United States

Value of holding: £81,921,000

% of portfolio: 6.4

2023 was a tougher year for the smartphone group, but it remained the only major handset maker to deliver annual unit growth during the year, and it finally surpassed Samsung to be the world's top smartphone maker by volume. It remains the most valuable company in the world even if it has not been able to match the \$3 trillion valuation it hit in 2022. Its higher margin services business, which includes its iCloud and Apple Music segments, has continued to be strong.

4



Top Twenty Holdings



4 Alphabet

Sector: Interactive Media & Services

Country: United States

Value of holding: £63,727,000

% of portfolio: 5.0

Alphabet is best-known as the parent company of Google, the world's leading search engine. However, it also owns YouTube, AI research lab Deep Mind, travel app Waze, ad management group DoubleClick, smart home devices group Nest and fitness tracker group Fitbit. The group is also a major provider of cloud services, though remains behind Amazon and Microsoft. It is making significant investments in AI that should help its search engine and YouTube business segments.

5



Top Twenty Holdings



5 Meta Platforms

Sector: Interactive Media & Services

Country: United States

Value of holding: £53,809,000

% of portfolio: 4.2

Having rebranded Facebook as Meta Platforms in 2021, signalling its ambitions in the metaverse, more recently the group has been using its deep pockets to develop its AI proposition. It told investors AI would take up a significant portion of its \$94 billion to \$99 billion annual expenditure in the year ahead. Investors have greeted this more warmly than its foray into the metaverse. The group also owns powerful brands, such as Facebook, Instagram and WhatsApp.

6



Top Twenty Holdings



6 Broadcom

Sector: Semiconductors & Semiconductor Equipment

Country: United States

Value of holding: £46,208,000

% of portfolio: 3.6

Broadcom designs and develops a wide range of semiconductor and infrastructure software products. Its chips are used in a wide variety of markets, including data centres, networking, software, broadband, wireless, and storage and industrial markets. Its \$61 billion takeover bid for cloud-computing company VMware finally completed in November 2023.

7



Top Twenty Holdings



7 Amazon.com

Sector: Broadline Retail

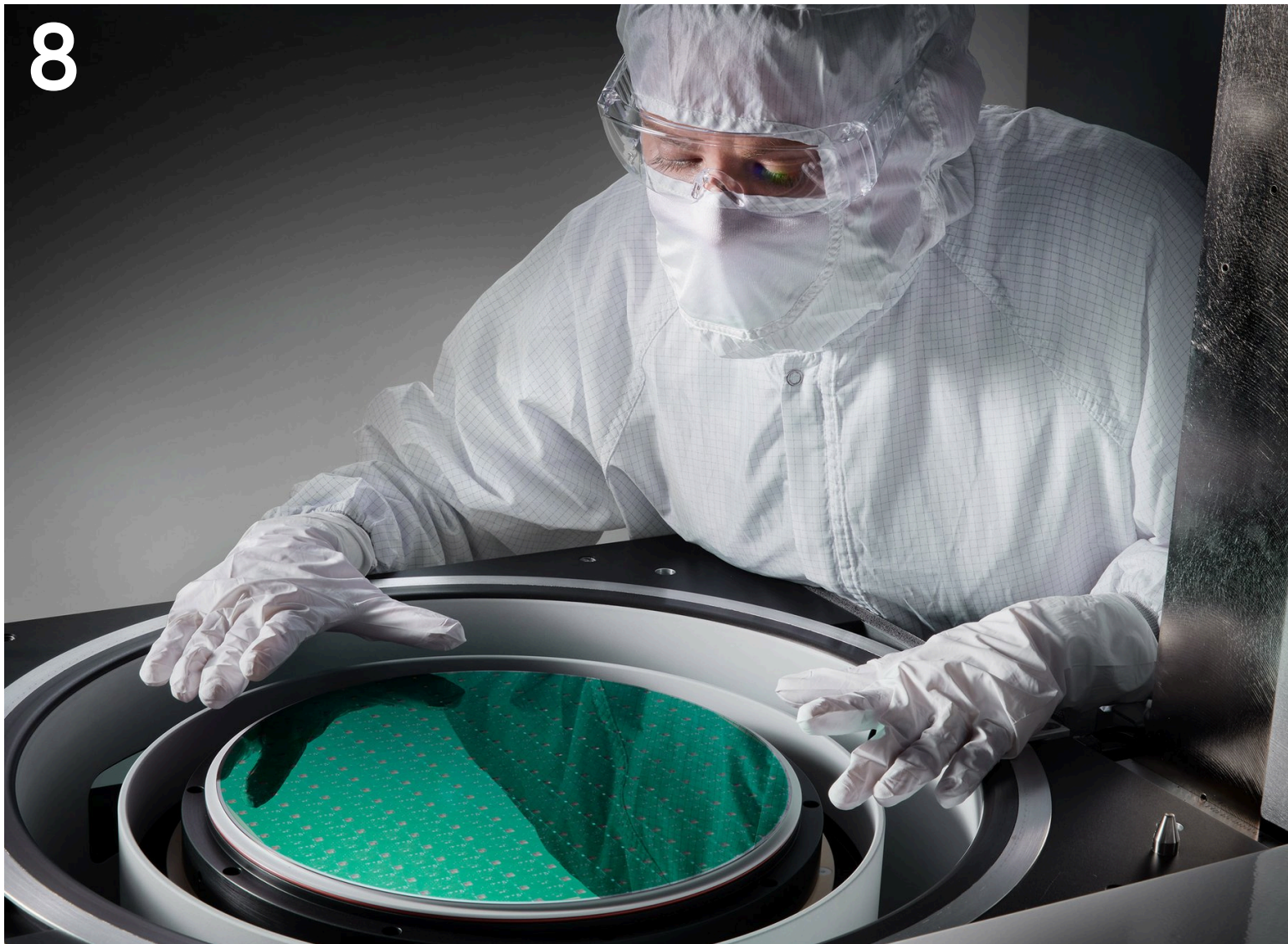
Country: United States

Value of holding: £45,310,000

% of portfolio: 3.5

Amazon.com has created a retail revolution since its launch in Jeff Bezos's garage in 1994, but in 2023 the focus was on the growth in its cloud computing division, Amazon Web Services. This gives it a foothold in the nascent AI market, likely to be important in the years ahead. The group had over-invested during the pandemic, but now appears to have regulated itself and growth returned to its ecommerce division in 2023. It remains the leading ecommerce site across the globe, in spite of a number of challengers.

8



Top Twenty Holdings



8 Lam Research

Sector: Semiconductors & Semiconductor Equipment

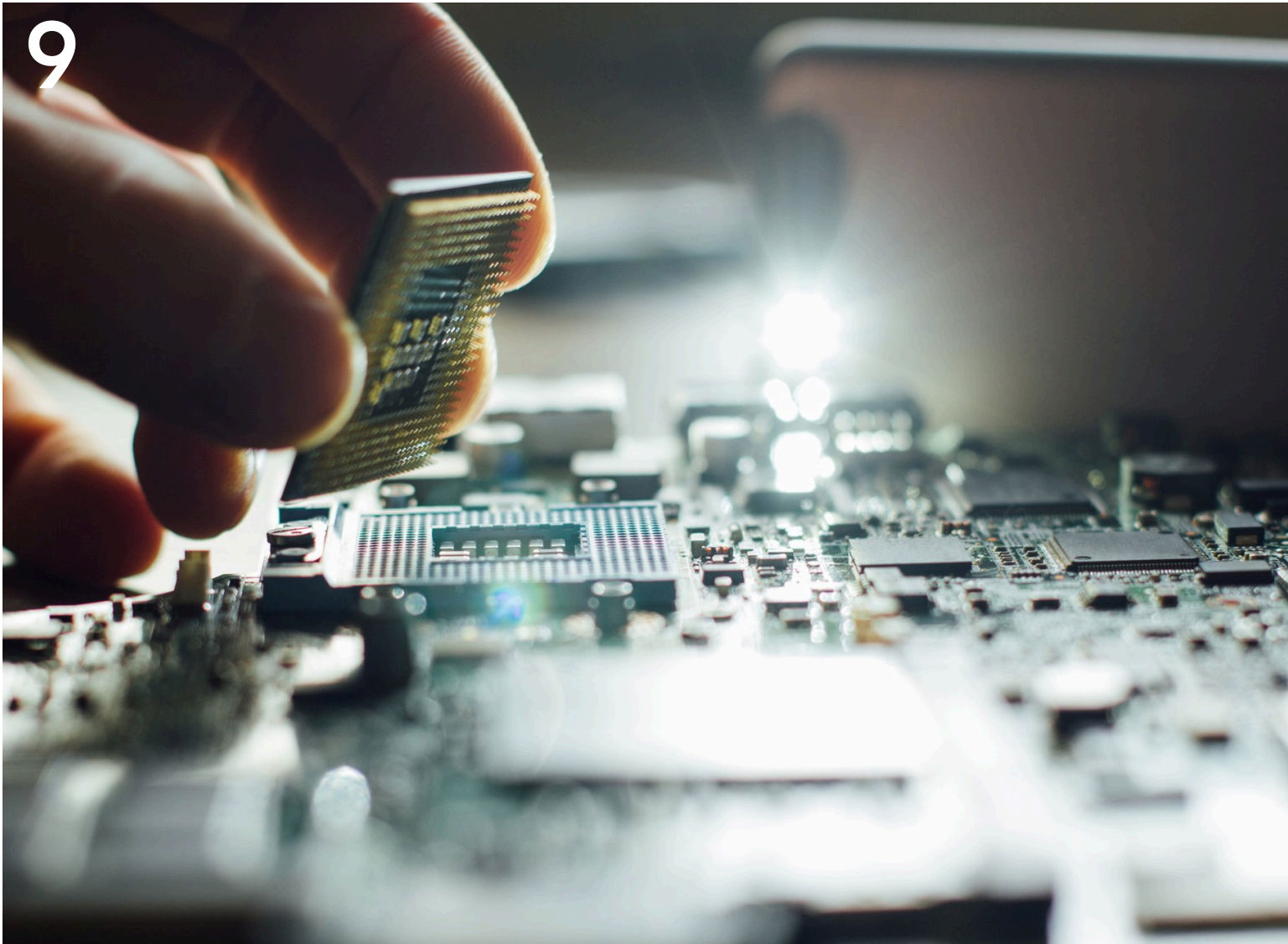
Country: United States

Value of holding: £40,721,000

% of portfolio: 3.2

Lam Research Corporation is an American supplier of wafer-fabrication equipment and related services to the semiconductor industry. It remains an important part of semiconductor supply chain, with its products used primarily in front-end wafer processing. Its products provide the link between design and manufacturing for the latest electronic devices.

9



Top Twenty Holdings



9 Monolithic Power Systems

Sector: Semiconductors &
Semiconductor Equipment

Country: United States

Value of holding: £39,131,000

% of portfolio: 3.0

Monolithic Power Systems creates small, semiconductor-based power solutions for systems found in industrial applications. Its specialist semiconductors are designed to be energy efficient, cost-effective and environmentally responsible. This is becoming increasingly important at a time when there are concerns about the energy use associated with technology developments such as AI. The group was founded in 1997 by current CEO Michael Hsing.

10



Top Twenty Holdings



10 Micron Technology

Sector: Semiconductors & Semiconductor Equipment

Country: United States

Value of holding: £34,757,000

% of portfolio: 2.7

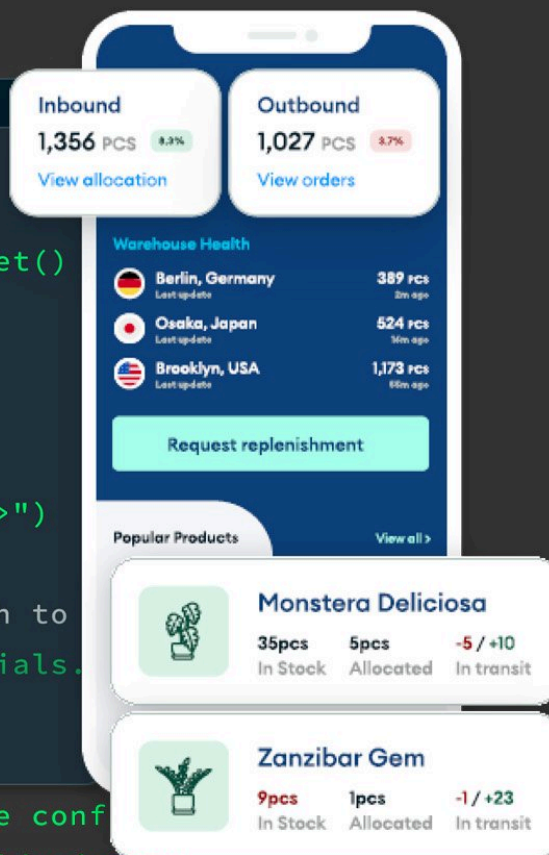
Idaho-based Micron is the largest US maker of memory semiconductors. It produces a range of semiconductor devices, including dynamic random access memory, flash memory, and solid-state drives. Its consumer products are marketed under the brands Crucial Technology and Lexar. Increasingly, data centre demand is compensating for weakness in its personal computer and smartphones business.

11

```
class Plant : RealmObject {  
    @PrimaryKey  
    var _id: ObjectId = ObjectId.get()  
    var name: String = ""  
    var age: Int = 0  
}
```

```
val app = App.create("<your-app-id>")  
  
// Device Sync offers built-in Auth to  
val user: User = app.login(Credentials,
```

```
// Data can be Synced with a simple conf  
val config = SyncConfiguration.Builder(user)
```



Top Twenty Holdings



11 MongoDB

Sector: IT Services

Country: United States

Value of holding: £34,468,000

% of portfolio: 2.7

MongoDB is a database software company founded in 2009 as 10gen. It listed on Nasdaq in 2017. It allows companies to interrogate data at a more granular level. It posted earnings ahead of expectations in 2023, fuelled by demand from the growth of generative AI. The company still isn't profitable, but it continues to generate revenue growth of 30-40% per year.

12



Top Twenty Holdings



12 Zscaler

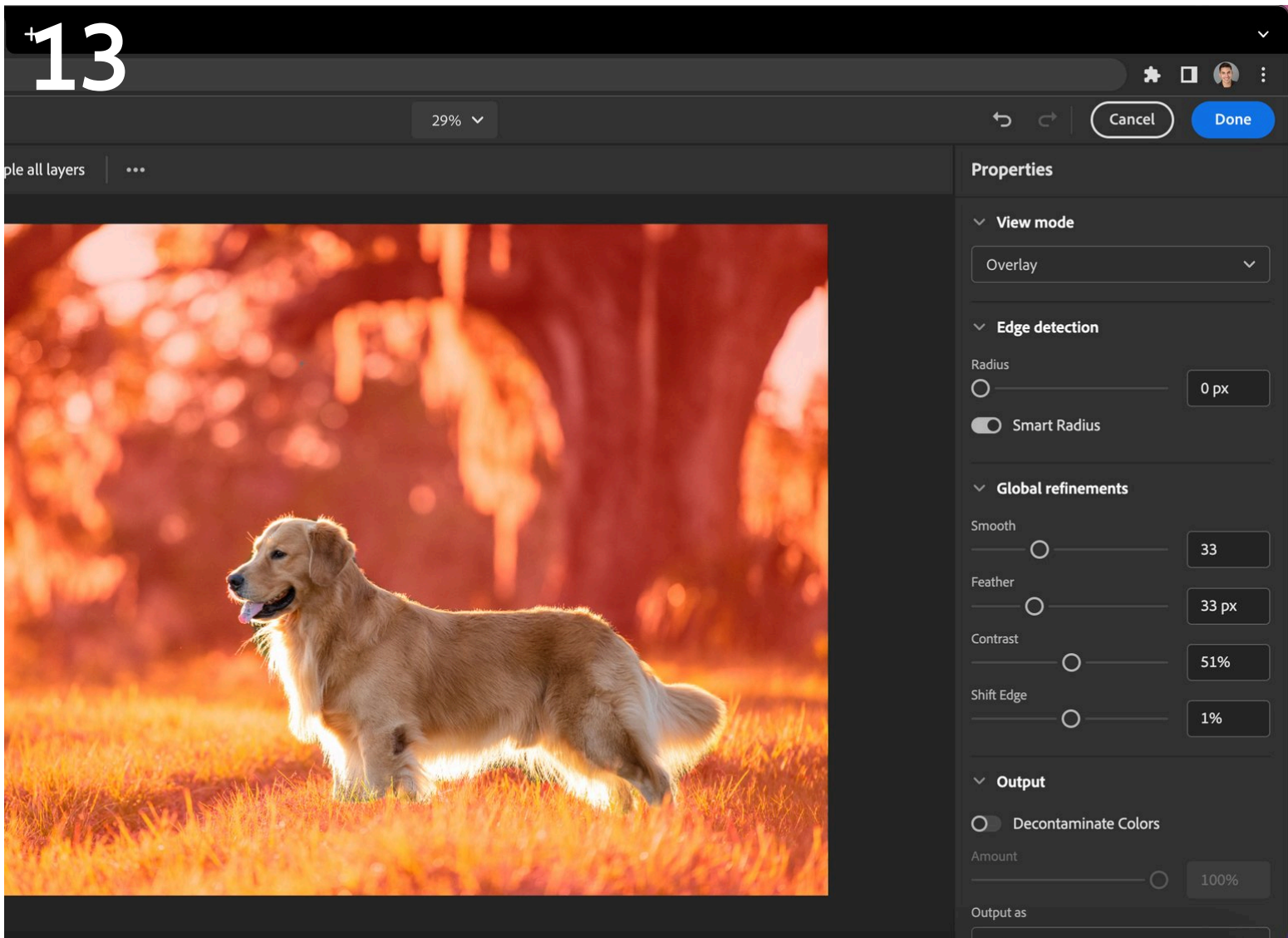
Sector: Software

Country: United States

Value of holding: £32,664,000

% of portfolio: 2.5

Zscaler is a global cloud-based information security company, founded in 2008 by serial entrepreneur Jay Chaudhry. It provides a cloud-based information security platform and has the world's largest security cloud. It also provides next generation firewalls, sandboxing, SSL inspection, antivirus and vulnerability management and is geared into growth sectors such as cloud computing, mobile and Internet of Things environments.



Top Twenty Holdings



13 Adobe

Sector: Software
Country: United States
Value of holding: £31,918,000
% of portfolio: 2.5

Computer software and document management group Adobe creates software for the creation and publication of various types of content, including graphics, photography, and print. Alongside its flagship products Adobe Photoshop and Adobe Acrobat, it has also expanded into customer relationship management software. Having tried to buy software design start-up Figma, the two firms announced they were abandoning the merger in December 2023. Nevertheless, the group has been growing its AI offering.

14



Top Twenty Holdings



14 Samsung Electronics

Sector: Technology Hardware, Storage & Peripherals

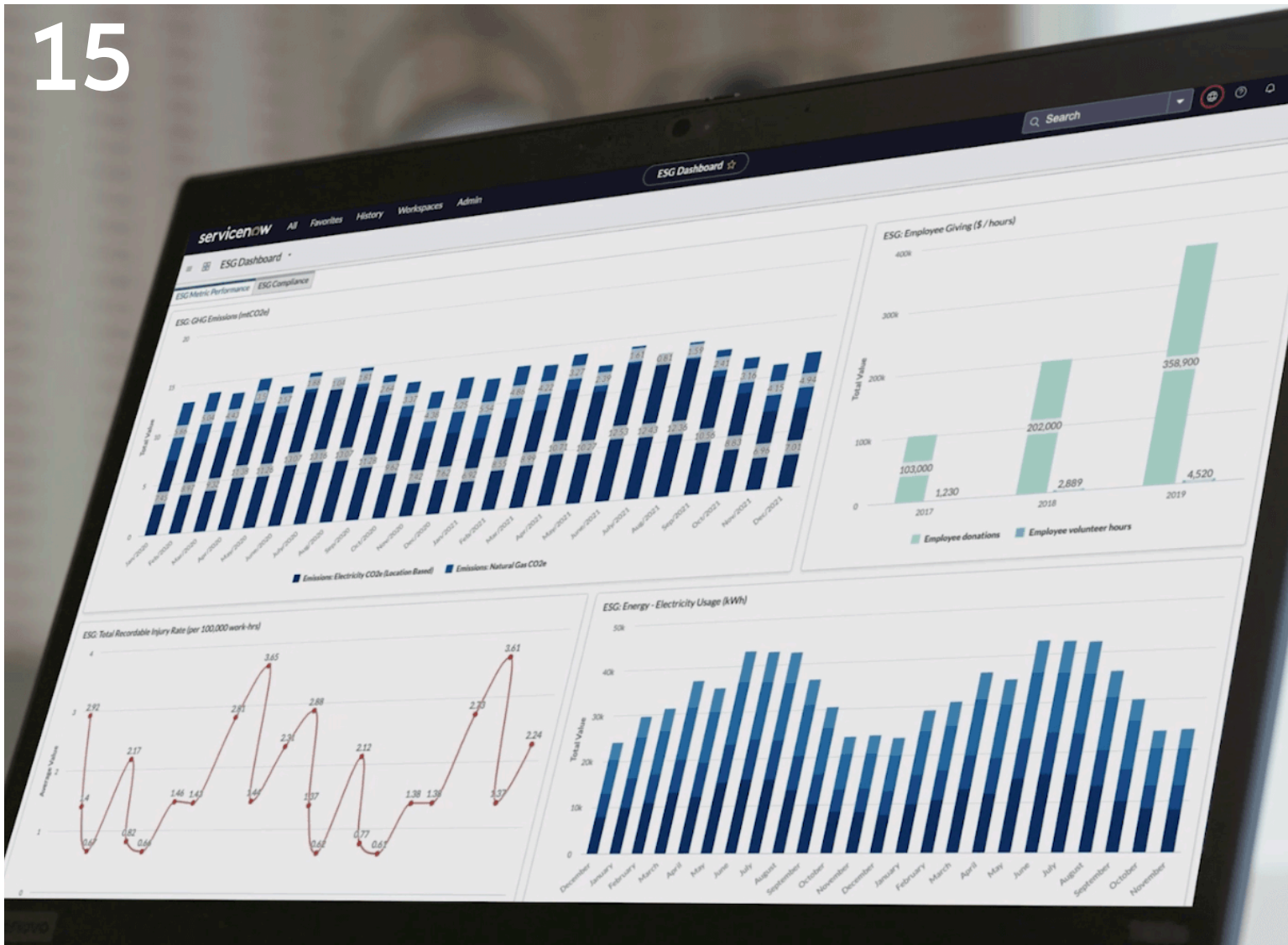
Country: South Korea

Value of holding: £31,855,000

% of portfolio: 2.5

Until the end of 2023, South Korea-based Samsung Electronics had been the world's largest manufacturer of mobile phones and smartphones since 2011, known for its popular Samsung Galaxy brand. It has now been overtaken by Apple, but has a number of other business lines, including lithium-ion batteries and semiconductors. It is also the world's largest memory semiconductor manufacturer.

15



Top Twenty Holdings



15 ServiceNow

Sector: Software

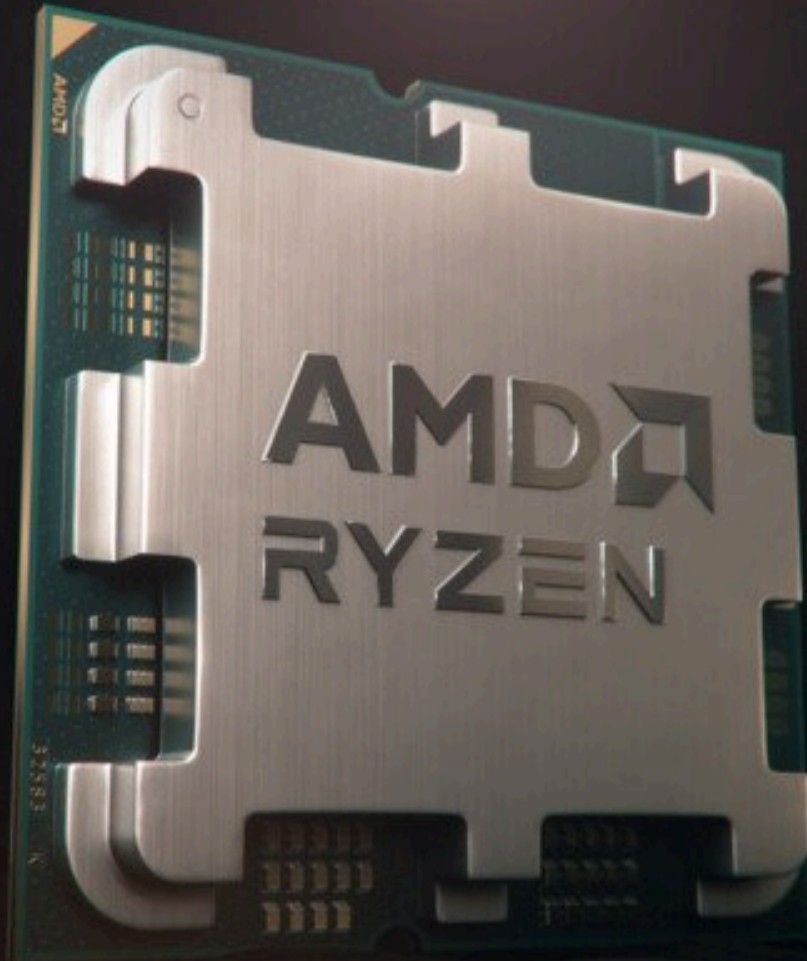
Country: United States

Value of holding: £31,697,000

% of portfolio: 2.5

Founded in 2003 by Fred Luddy, ServiceNow has a cloud computing platform to help companies manage digital workflows. It announced a tie-up with Nvidia in May 2023 to bring AI services to major corporations. ServiceNow is a platform-as-a-service, offering the infrastructure for enterprise and technical management support systems, such as IT service management and help desks.

16



Top Twenty Holdings



16 Advanced Micro Devices

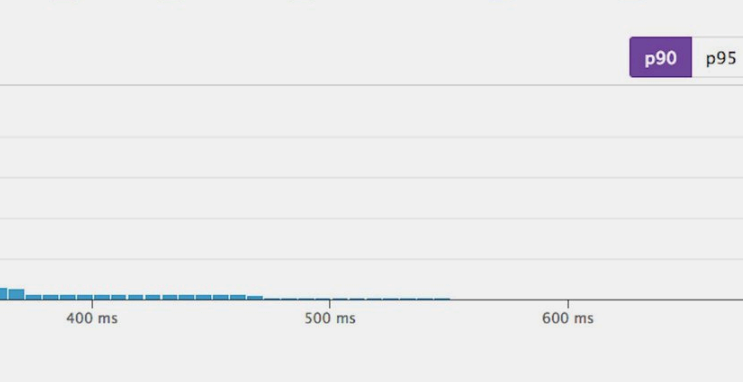
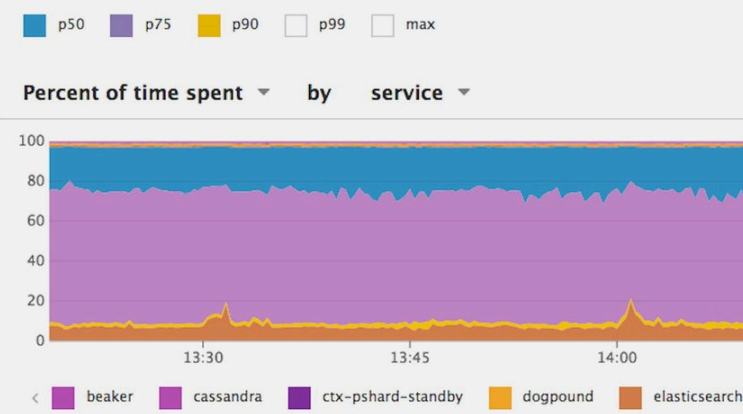
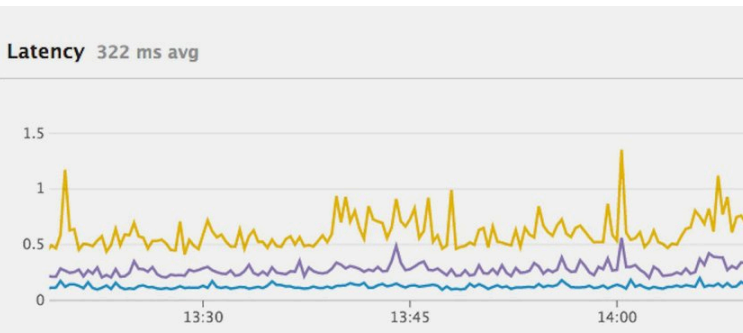
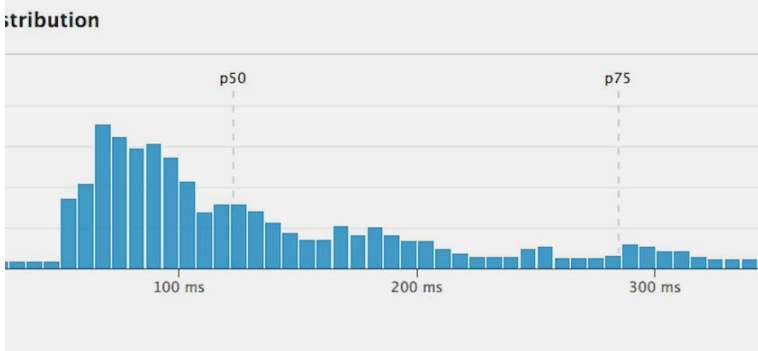
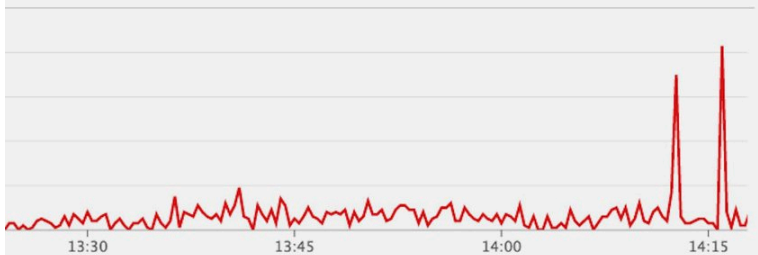
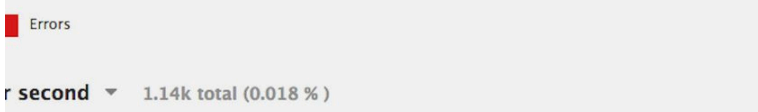
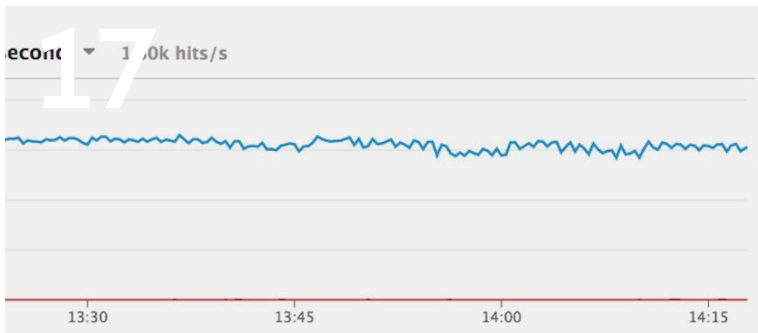
Sector: Semiconductors & Semiconductor Equipment

Country: United States

Value of holding: £31,409,000

% of portfolio: 2.4

Advanced Micro Devices is an American semiconductor manufacturer based in Santa Clara, California. It develops chips for a range of business and consumer markets. In 2023, it launched a chip that it says could break Nvidia's dominance of the AI market, with chief executive Lisa Su saying the group's chips could be faster than those of its rivals. Her claim will be tested in 2024 as MI300 chips hit the market.



Top Twenty Holdings



17 Datadog

Sector: Software
Country: United States
Value of holding: £30,956,000
% of portfolio: 2.4

Datadog is a cloud software group, providing monitoring of servers, databases, tools and services through its data analytics platform. The group was founded in 2010 by Olivier Pomel and Alexis Lê-Quôc, ultimately floating on the Nasdaq in 2019. The group has benefited from broader adoption of cloud computing and its products are now compatible with all the major web services providers – Amazon, Microsoft, Google and others.

18



Top Twenty Holdings



18 CrowdStrike

Sector: Software

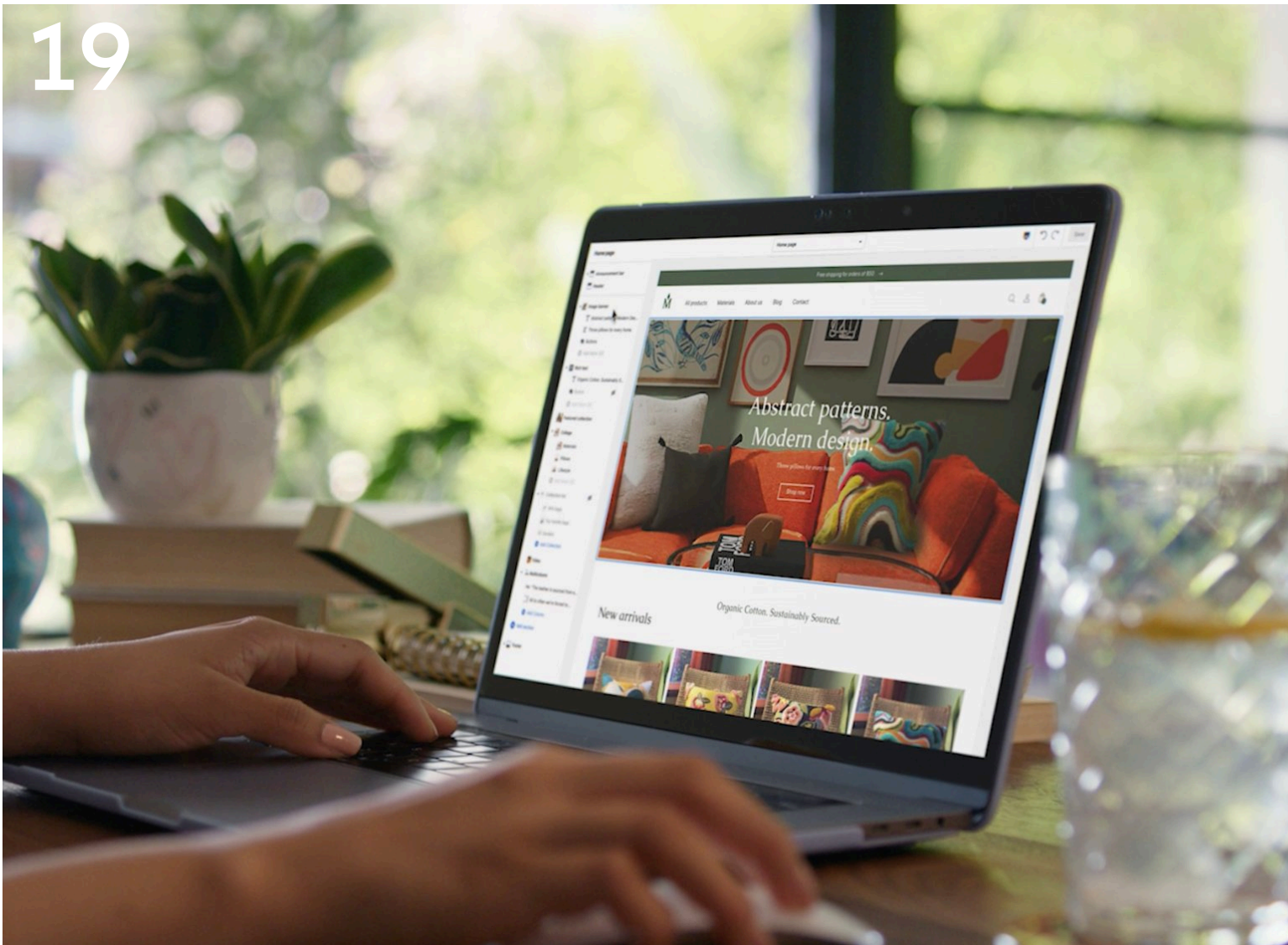
Country: United States

Value of holding: £30,103,000

% of portfolio: 2.3

Security group CrowdStrike uses artificial intelligence (AI) to give real-time protection and visibility for companies, preventing attacks. The group draws data from across the globe, giving it one of the most advanced data platforms for security. This should help identify and prevent breaches before they occur.

19



Top Twenty Holdings



19 Shopify

Sector: IT Services

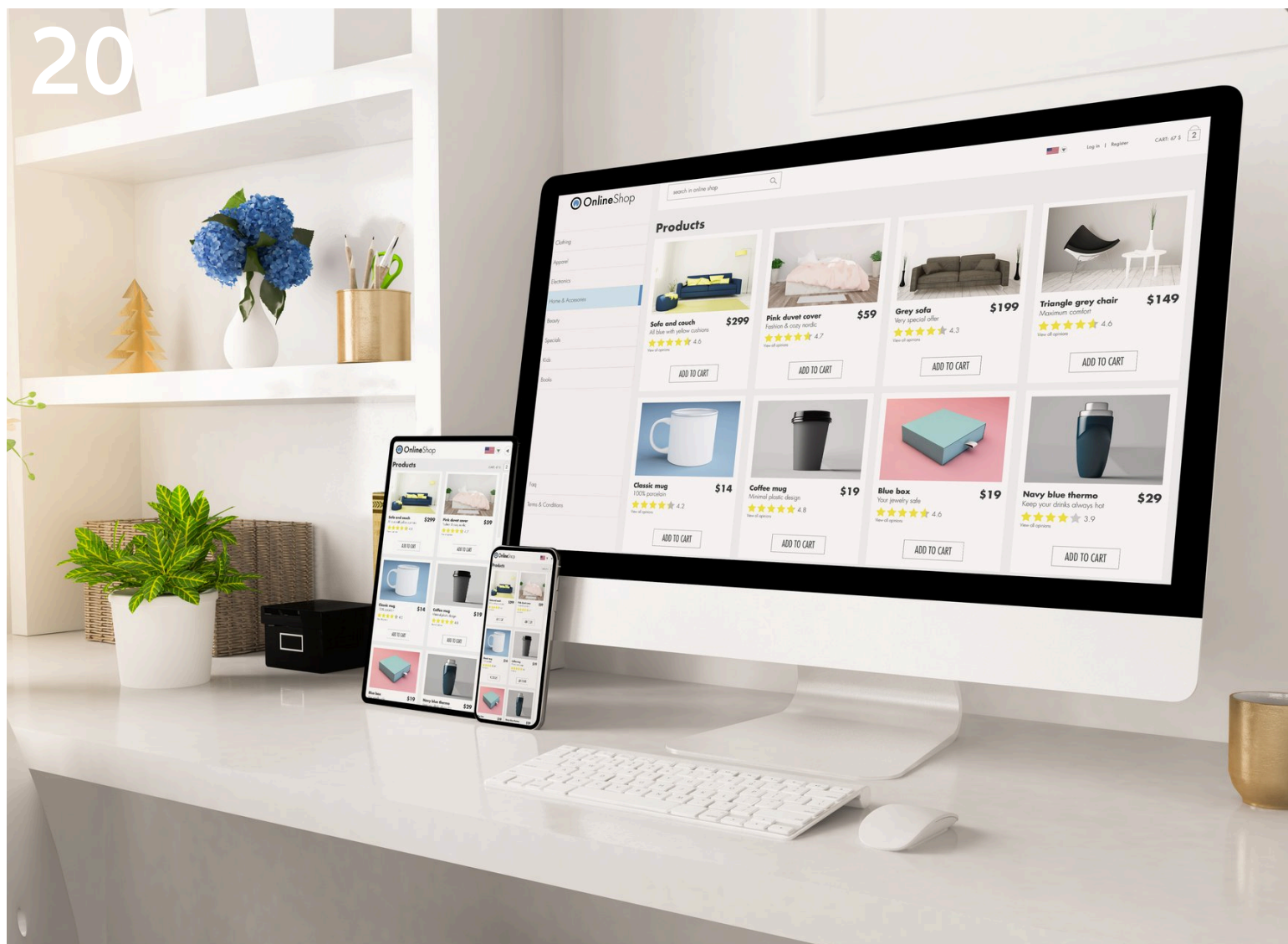
Country: United States

Value of holding: £26,944,000

% of portfolio: 2.1

Shopify is a Canadian multinational e-commerce company headquartered in Ottawa. Its proprietary ecommerce platform allows merchants to launch online stores. The platform will handle marketing and payments, plus secure transactions and shipping. It now has 1.75m merchants using its platform. The platform is cloud-based and hosted, which means merchants don't need to maintain servers or worry about upgrades.

20



Top Twenty Holdings



20 Mercadolibre

Sector: Broadline Retail

Country: United States

Value of holding: £26,109,000

% of portfolio: 2.0

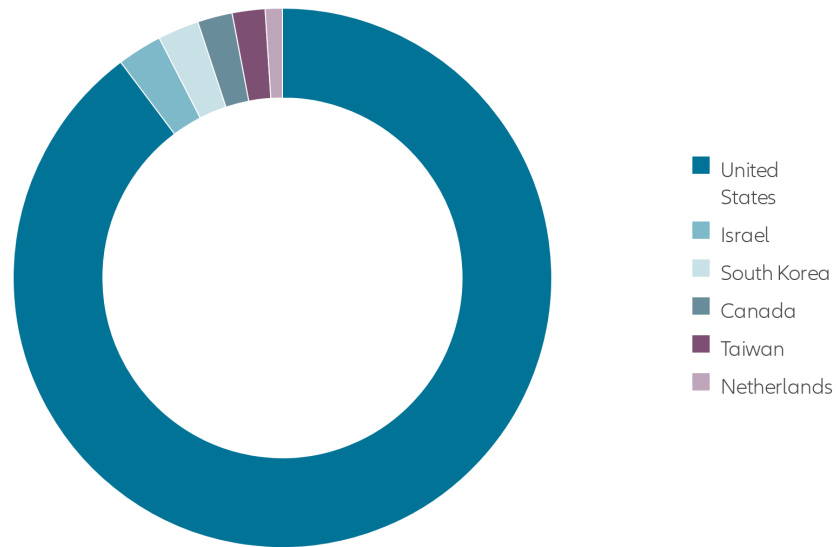
Argentine ecommerce company

Mercadolibre operates online marketplaces for e-commerce and online auctions. The company has operations across all the major markets in South America, including Brazil, Chile, Colombia, Costa Rica, Mexico, Peru, Uruguay and Venezuela. Time Magazine listed Mercadolibre as one of its 100 most influential companies in the world for 2023.

Portfolio Analysis

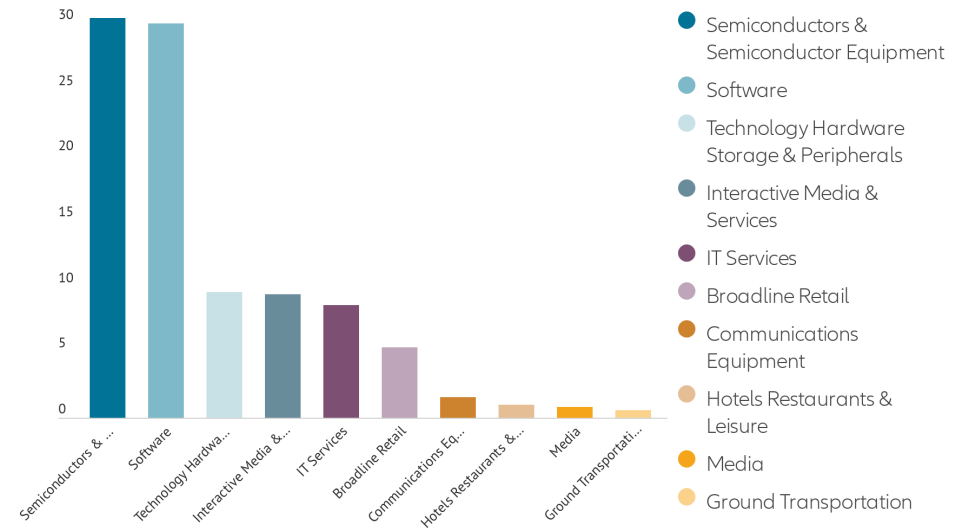
at 31 December 2023

Geographical breakdown



As cash is excluded and the weightings for each country are rounded to the nearest tenth of a percent, the aggregate weights may not equal 100%.

Sector breakdown



As cash is excluded and the weightings for each sector are rounded to the nearest tenth of a percent, the aggregate weights may not equal 100%.

Investment Portfolio

at 31 December 2023

Investment Portfolio

at 31 December 2023

Full portfolio list

Investment	Sector*	Sub Sector*	Country	Valuation €000	% of Portfolio
Microsoft	Software	Systems Software	United States	109,646	8.5
NVIDIA	Semiconductors & Semiconductor Equipment	Semiconductors	United States	92,982	7.2
Apple	Technology Hardware, Storage & Peripherals	Technology Hardware, Storage & Peripherals	United States	81,921	6.4
Alphabet	Interactive Media & Services	Interactive Media & Services	United States	63,727	5.0
Meta Platforms	Interactive Media & Services	Interactive Media & Services	United States	53,809	4.2
Broadcom	Semiconductors & Semiconductor Equipment	Semiconductors	United States	46,208	3.6
Amazon.com	Broadline Retail	Broadline Retail	United States	45,310	3.5
Lam Research	Semiconductors & Semiconductor Equipment	Semiconductor Equipment	United States	40,721	3.2
Monolithic Power Systems	Semiconductors & Semiconductor Equipment	Semiconductors	United States	39,131	3.0
Micron Technology	Semiconductors & Semiconductor Equipment	Semiconductors	United States	34,757	2.7
Top ten investments				408,212	47.3
MongoDB	IT Services	Internet Services & Infrastructure	United States	34,468	2.7
Zscaler	Software	Systems Software	United States	32,664	2.5
Adobe	Software	Application Software	United States	31,918	2.5
Samsung Electronics	Technology Hardware, Storage & Peripherals	Technology Hardware, Storage & Peripherals	South Korea	31,855	2.5
ServiceNow	Software	Systems Software	United States	31,697	2.5
Advanced Micro Devices	Semiconductors & Semiconductor Equipment	Semiconductors	United States	31,409	2.4
Datadog	Software	Application Software	United States	30,956	2.4
CrowdStrike	Software	Systems Software	United States	30,103	2.3
Shopify	IT Services	Internet Services & Infrastructure	Canada	26,944	2.1
Meradollbre	Broadline Retail	Broadline Retail	United States	26,109	2.0
Top twenty investments				916,335	71.2

Investment	Sector*	Sub Sector*	Country	Valuation €000	% of Portfolio
Taiwan Semiconductor	Semiconductors & Semiconductor Equipment	Semiconductors	Taiwan	25,290	2.0
HubSpot	Software	Application Software	United States	23,754	1.9
Snowflake	IT Services	Internet Services & Infrastructure	United States	23,456	1.8
Applied Materials	Semiconductors & Semiconductor Equipment	Semiconductor Equipment	United States	22,554	1.8
Cyberark Software	Software	Systems Software	Israel	22,470	1.7
Arista Networks	Communications Equipment	Communications Equipment	United States	21,493	1.7
Palo Alto Networks	Software	Systems Software	United States	21,465	1.7
Cloudflare	IT Services	Internet Services & Infrastructure	United States	20,828	1.6
KLA	Semiconductors & Semiconductor Equipment	Semiconductor Equipment	United States	19,206	1.5
Cadence Design	Software	Application Software	United States	18,270	1.4

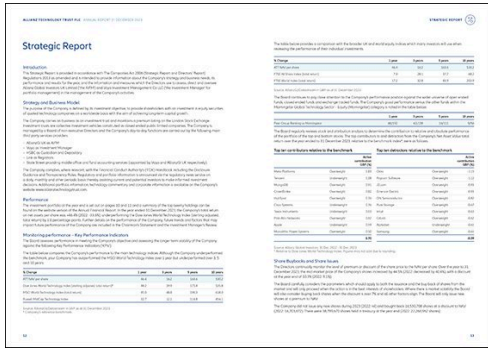
Top thirty investments				1,135,121	88.3
Marvell Technology	Semiconductors & Semiconductor Equipment	Semiconductors	United States	15,933	1.2
Western Digital	Technology Hardware, Storage & Peripherals	Technology Hardware, Storage & Peripherals	United States	13,678	1.1
NXPI Semiconductors	Semiconductors & Semiconductor Equipment	Semiconductors	Netherlands	13,166	1.0
Expedia	Internet & Direct Marketing Retail	Internet & Direct Marketing Retail	United States	13,034	1.0
Basic NV	Software	Application Software	Netherlands	12,212	1.0
QY Semiconductor	Semiconductors & Semiconductor Equipment	Semiconductors	United States	12,116	0.9
Monday.com	Software	Systems Software	Israel	12,110	0.9
Synopsys	Software	Application Software	United States	12,085	0.9
Trade Desk	Media	Advertising	United States	9,945	0.8
Intel	Semiconductors & Semiconductor Equipment	Semiconductors	United States	8,033	0.6

Top forty investments				1,252,233	97.7
Okta	IT Services	Internet Services & Infrastructure	United States	7,811	0.6
Uber Technologies	Ground Transportation	Passenger Ground Transportation	United States	7,539	0.6
IFing	Software	Systems Software	Israel	7,441	0.6
Pinterest	Interactive Media & Services	Interactive Media & Services	United States	6,762	0.5
Total investments				1,286,786	100.0

*GICS industry classifications

Strategic Report





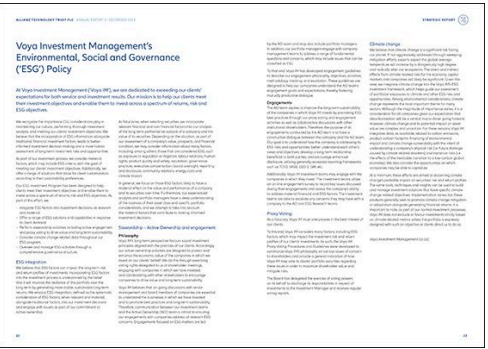
Strategic Report



Section 172 Report: Engagement with Key Stakeholders



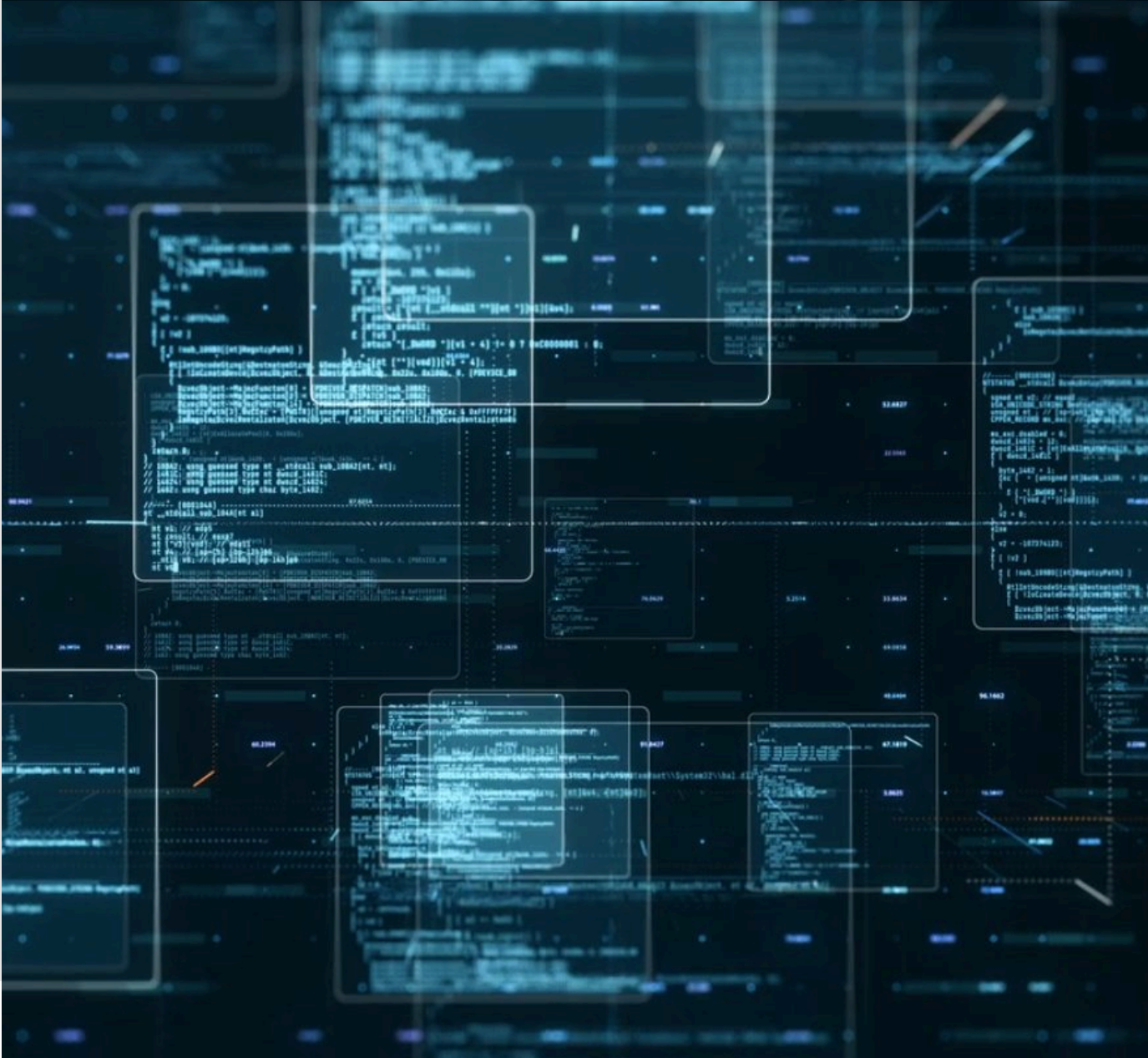
Environmental, Social, Governance (ESG) and Stewardship – the Company's Report

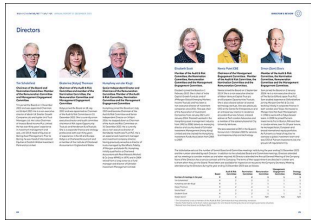


Voya Investment Management's Environmental, Social and Governance (ESG) Policy

This information has been extracted from the audited Annual Financial Report for the year ended 31 December 2023, a full copy of which can be found [here](#).

Directors' Review





Directors



Directors' Report



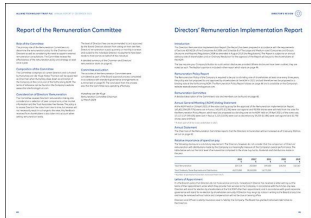
Corporate Governance Statement



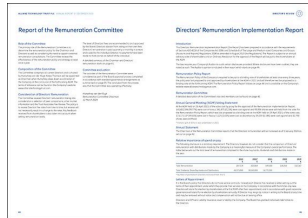
Report of the Management Engagement Committee



Report of the Nomination Committee



Report of the Remuneration Committee



Directors' Remuneration Implementation Report



Directors' Remuneration Policy Report



Statement of Directors' Responsibilities



Audit & Risk Committee Report

This information has been extracted from the audited Annual Financial Report for the year ended 31 December 2023, a full copy of which can be found [here](#).

Financial Statements



FINANCIAL STATEMENTS

Independent Auditor's Report to the Members of Allianz Technology Trust PLC

For the year ended 31 December 2023

Opinion

We have audited the financial statements of Allianz Technology Trust PLC (the Company) for the year ended 31 December 2023 which comprise the Income Statement, the Balance Sheet, the Statement of Changes in Equity and Notes to the financial statements, including related accounting policy information.

The financial reporting framework that has been applied in the preparation of this financial statement is the Financial Reporting Framework (FRF) set out in the Financial Reporting Framework (FRF) for the year ended 31 December 2023 and the Financial Reporting Framework (FRF) for the year ended 31 December 2023.

In our opinion, the financial statements:

give a true and fair view of the state of the Company's affairs as at 31 December 2023 and of the profit for the year there ended.

have been prepared in accordance with the Companies Act 2006.

Scope of our opinion

Our opinion is based on the work we have performed in accordance with the audit standards applicable in the United Kingdom. Our opinion is not a guarantee of the accuracy or completeness of the financial statements. It is the responsibility of the directors to ensure that the financial statements are prepared in accordance with the Companies Act 2006 and to keep adequate accounting records.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the year ended 31 December 2023. Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the year ended 31 December 2023. Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the year ended 31 December 2023.

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FINANCIAL STATEMENTS

Income Statement

For the year ended 31 December 2023

	2023	2022	2021	2020	2019
	£'000	£'000	£'000	£'000	£'000
Revenue	1,000	1,000	1,000	1,000	1,000
Cost of sales	(500)	(500)	(500)	(500)	(500)
Profit before taxation	500	500	500	500	500
Taxation	(100)	(100)	(100)	(100)	(100)
Profit after taxation	400	400	400	400	400
Dividends paid	(400)	(400)	(400)	(400)	(400)
Retained profit	0	0	0	0	0

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FINANCIAL STATEMENTS

Balance Sheet

at 31 December 2023

	2023	2022
	£'000	£'000
Called up share capital	1,000	1,000
Reserves	0	0
Total equity	1,000	1,000
Fixed assets	1,000	1,000
Current assets	0	0
Total assets	1,000	1,000

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FINANCIAL STATEMENTS

Statement of Changes in Equity

For the year ended 31 December 2023

	Called up Share Capital	Share Premium	Reserves	Total
	£'000	£'000	£'000	£'000
At 1 January 2023	1,000	0	0	1,000
Profit after taxation	0	0	400	400
Dividends paid	0	0	(400)	(400)
At 31 December 2023	1,000	0	0	1,000

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FINANCIAL STATEMENTS

Notes to the Financial Statements

For the year ended 31 December 2023

Summary of Accounting Policies

1. **The financial statements** have been prepared on the basis of the accounting policies set out below. The financial reporting framework has been applied in accordance with the Companies Act 2006, FRF (2023) and with the Statement of Recommended Practice Financial Reporting Framework (FRF) for the year ended 31 December 2023.

2. **Investment management fees and administrative expenses** – The investment management fees included in the Balance Sheet are for the year ended 31 December 2023. The investment management fees are for the year ended 31 December 2023. The investment management fees are for the year ended 31 December 2023.

3. **Reserves** – The reserves are shown in the Balance Sheet. The reserves are shown in the Balance Sheet. The reserves are shown in the Balance Sheet.

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Independent Auditor's Report to the Members of Allianz Technology Trust PLC

Income Statement

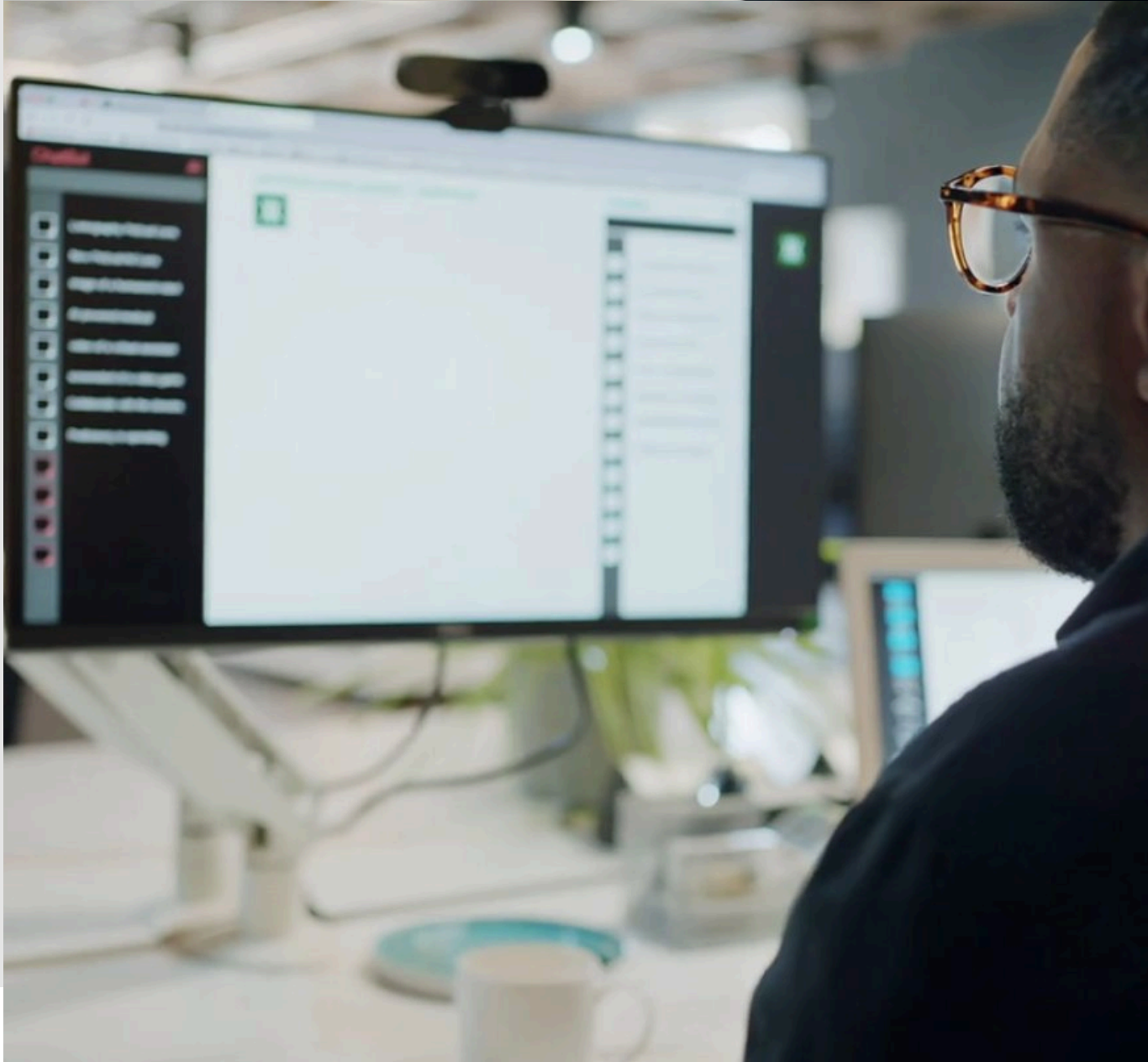
Balance Sheet

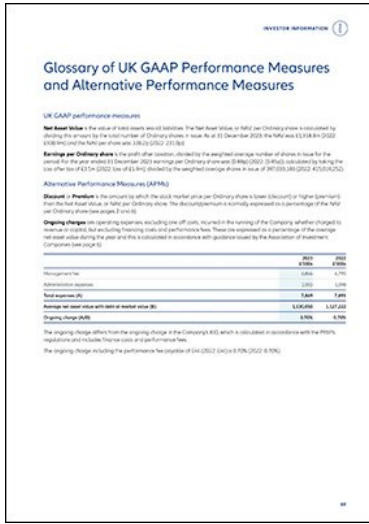
Statement of Changes in Equity

Notes to the Financial Statements

These Financial Statements have been extracted from the audited Annual Financial Report for the year ended 31 December 2023, a full copy of which can be found [here](#).

Investor Information





Glossary of UK GAAP Performance Measures and Alternative Performance Measures



Glossary of Terms



Investor Information

This information has been extracted from the audited Annual Financial Report for the year ended 31 December 2023, a full copy of which can be found [here](#).

Notice of Meeting



Notice of Meeting

THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in any doubt as to what action to take, you should contact your stockbroker, bank manager, solicitor, accountant or other appropriate independent professional advice taker immediately under the Financial Services and Markets Act 2000 (referred to in this notice as the "Financial Services Act").

PLEASE FORWARD THIS DOCUMENT AND THE ACCOMPANYING FORM OF PROXY TO YOUR STOCKBROKER OR INVESTMENT TRUST FUND, PRIOR TO THE MEETING AND THE ACCOMPANYING FORM OF PROXY TO THE COMPANY OR THE COMPANY SECRETARY.

Notice is hereby given that the Annual General Meeting (AGM) of AkzoNobel Technology Trust PLC (the Company) will be held at Century Hall, Prince Street, London, EC2R 8LL on Wednesday 24 April 2025 at 2.00pm for the following purposes:

The AGM will be held in person and voting will be conducted on a poll. Members who wish to be able to vote on the agenda items by electronic means should contact their stockbroker or investment trustee prior to the meeting and provide the necessary authority. Those attending virtually will not be able to vote by the process of the business transacted at the AGM and are therefore encouraged to vote ahead of the meeting, via electronic means to the meeting secretary at secretary@akzonobel.com (page 79).

AGM Voting
Shareholders are encouraged to vote by using Detail of Vote to vote either electronically by any form or through eSCT in Prosperity (see below on pages 77 to 79).

The results of the AGM will be announced on the London Stock Exchange and posted on the Company's website as soon as practicable after the completion of the AGM.

Ordinary Business
Resolution 10 (1) through 19, to give the following resolutions as Ordinary Resolutions:

- To receive and adopt the Company's Annual Report and Financial Statements for the financial year ended 31 December 2023, together with the Reports of the Directors and the Independent Auditor's Report thereon;
- To elect or re-elect all or some of the Directors;
- To elect AkzoNobel as a Director of the Company;
- To elect AkzoNobel as a Director of the Company;
- To elect AkzoNobel as a Director of the Company;
- To elect AkzoNobel as a Director of the Company;
- To appoint AkzoNobel as the Independent Auditor of the Company to hold office until the conclusion of the next Annual General Meeting of the Company at which the Financial Statements are laid before the Company.

- To authorize the Directors to determine the remuneration of the Independent Auditor of the Company;
- To approve the Directors' Remuneration Policy Report;
- To receive and approve the Directors' Remuneration Implementation Report for the financial year ended 31 December 2023;

Special Business
To consider and if thought fit, pass the following resolutions of which 12, 13 and 14 will be proposed as Ordinary Resolutions and 15, 16, 17 and 18 will be proposed as Special Resolutions:

Resolution 10 – Approval of Resolutions
That the votes of members entitled to the meeting be counted by the process of the business transacted at the AGM and are therefore encouraged to vote ahead of the meeting, via electronic means to the meeting secretary at secretary@akzonobel.com (page 79).

Resolution 11 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 12 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 13 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 14 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 15 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 16 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 17 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 18 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Resolution 19 – Approval of Resolutions
That a resolution for any ordinary business for which provision is to be made by any resolution shall be validly made if the resolution is passed by a majority of the votes of the members of the Company who are present at the meeting and are entitled to vote thereon.

Notice of Meeting

This information has been extracted from the audited Annual Financial Report for the year ended 31 December 2023, a full copy of which can be found [here](#).

Stay in Touch

Allianz Technology Trust PLC

199 Bishopsgate

London

EC2M 3TY

+44 (0)203 246 7000

www.allianztechnologytrust.com