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BY MARTEN & CO

INTERNATIONAL

Edinburgh Worldwide

Investment companies | Annual overview | 16 May 2023

"The output of innovation is alive and well"

At a time when interest rates have risen in response to rising inflation, Edinburgh Worldwide (EWI) – with its focus on small cap global growth stocks – has given up a significant portion of its previous outperformance. The trust finds itself in a somewhat unusual position in that it has moved to a significant discount, about a 20% discount versus a five-year average of 2.5%. This comes at a time when global small cap stocks are trading at a modest discount to global equities, rather than their usual significant premium, based on longer-term averages.

While acknowledging that there may be some volatility ahead, the current discount could offer an entry point for a longer-term investor who is prepared to look through the short-term market noise. Ultimately, EWI is backing companies that its managers believe are disrupting industries to become leaders in their fields, unlocking significant value in the process. Its managers expect these portfolio companies to prosper irrespective of where we are in the economic cycle, and its discussions with company management tell it that *"The output of innovation is alive and well"*.

Capital growth from entrepreneurial companies

EWI aims to achieve capital growth from a global portfolio of initially immature entrepreneurial companies, typically with a market capitalisation of less than $5bn at time of initial investment, which are believed to offer long-term (over at least five years) growth potential.

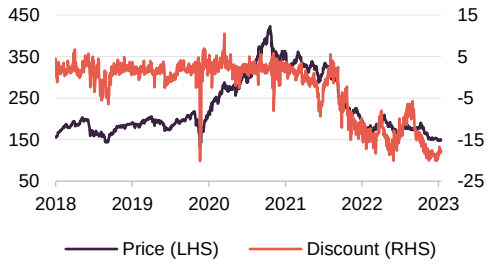
Year ended	Share price total return (%)	NAV total return (%)	S&P Global Small Cap TR (%)	MSCI AC World TR (%)
30/04/2019	22.0	23.8	4.9	11.0
30/04/2020	11.6	11.1	(12.2)	(1.8)
30/04/2021	67.7	69.2	49.7	32.8
30/04/2022	(45.1)	(37.6)	(3.1)	4.3
30/04/2023	(24.1)	(15.9)	(2.0)	1.9

Source: Morningstar, Marten & Co

Sector	Global smaller companies
Ticker	EWI LN
Base currency	GBP
Price	149.00p
NAV	181.45p
Premium/(discount)	(17.9%)
Yield	Nil

Share price and discount

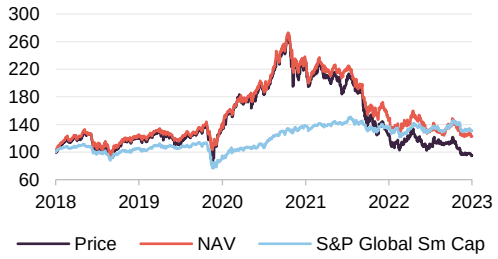
Time period 30/04/2018 to 12/05/2023



Source: Morningstar, Marten & Co

Performance over five years

Time period 30/04/2018 to 30/04/2023



Source: Morningstar, Marten & Co

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Contents

Domicile	Scotland
Inception date	10 July 1998
Manager	Douglas Brodie, Svetlana Viteva and Luke Ward
Market cap	580.2m
Shares outstanding (exc. treasury shares)	389.4m
Daily vol. (1-yr. avg.)	738.4k shares
Net gearing	12.4%

Click for our initiation note

Click for updated EWI factsheet

Click for EWI's peer group analysis

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Click to provide feedback to the company

Click if you are interested in meeting EWI's managers

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Fund profile

Long-term growth potential

EWI is an investment trust which invests globally in a portfolio of listed and private companies. It aims to profit from a global portfolio of initially immature entrepreneurial companies, typically with a market capitalisation of less than US$5bn at the time of initial investment, which its manager believes offer long-term growth potential.

Further information is available at the trust's website

The board chooses to compare the trust's performance to the S&P Global Small Cap Index (total return in sterling). However, the composition of the index has no bearing on the manager's choice of stocks or position sizes. As evidence of this, the active share at the end of March 2023 was about 98%.

To achieve a spread of risk, the manager considers that the portfolio should have between 75 and 125 holdings and have exposure to at least six countries and 15 industries. No more than 5% of the portfolio will be invested in a single security (at the time of acquisition).

The trust was launched in 1998 but did not adopt its current strategy until 31 January 2014.

EWI's AIFM is Baillie Gifford & Co Limited, a wholly-owned subsidiary of Baillie Gifford & Co.

Douglas Brodie is the lead manager on the trust and its open-ended equivalent Global Discovery. He is supported by two deputy managers – Svetlana Viteva and Luke Ward – and four further analysts. Collectively, they make up the global discovery team within Baillie Gifford. Some more biographical details are provided on page 31.

The wider firm had £235bn of AUM at 31 March 2023 and the global discovery team was managing £3.2bn of that.

Exposure to unlisted securities

Up to 25% of the portfolio may be invested in unlisted securities.

Up to 25% of the portfolio (at the time of investment) may be invested in unlisted securities (shareholders approved the increase from 15% to the current limit at the AGM in February 2022).

At the end of March 2023, 20.7% of EWI's portfolio was in unlisted securities, some of which are discussed from page 14 onwards. The board and the manager believe that for EWI to gain access to immature entrepreneurial companies, increasingly it must look to purchase private as well as listed companies. The reason being that technological advances have lowered the initial capital requirement needed to establish and scale many companies, in its view.

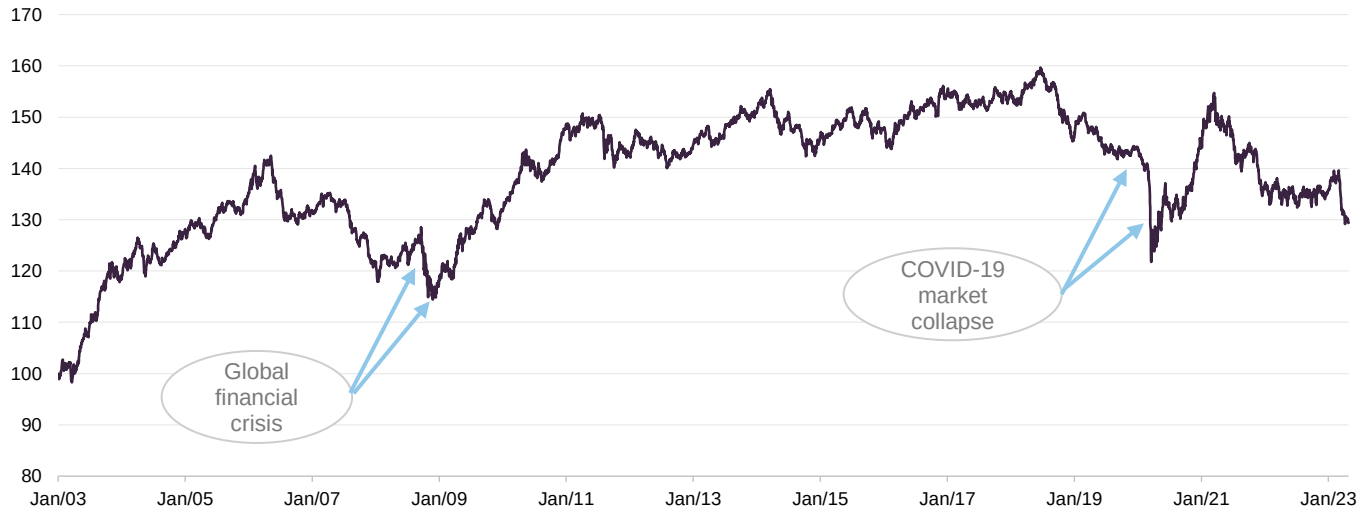
It comments that the quantum of funding available to promising private companies is considerable and that entrepreneurs may never need to turn to public markets for growth capital. Instead, they might choose to use an IPO as a means to provide liquidity for backers once the business is large and mature.

Why allocate to global smaller companies?

A key reason for making an allocation to smaller companies is that, while often perceived as being riskier and therefore more volatile, smaller companies tend to outperform larger companies over the longer term (this is sometimes referred to as the small company effect). This can be due to a variety of factors, but a key consideration is that it is intrinsically easier for a smaller company to grow, perhaps doubling or quadrupling in size in a relatively small space of time, than it would be for a comparable much larger company.

Often cited reasons include a tendency towards greater nimbleness (smaller companies tend to have less-complex structures that might otherwise prove a barrier to innovation) and a greater range of opportunities due to their size (larger companies are more likely to have to exclude a range of opportunities that are not sufficiently large to meaningfully impact their performance). It is also true that smaller companies are more likely to be in less mature industries where new products are naturally creating new demand, while larger companies are more likely to be in mature industries where growth can be harder if a significant portion of this has to come from taking market share.

Figure 1: MSCI World Small Cap / MSCI World – rebased to 100 over 20 years



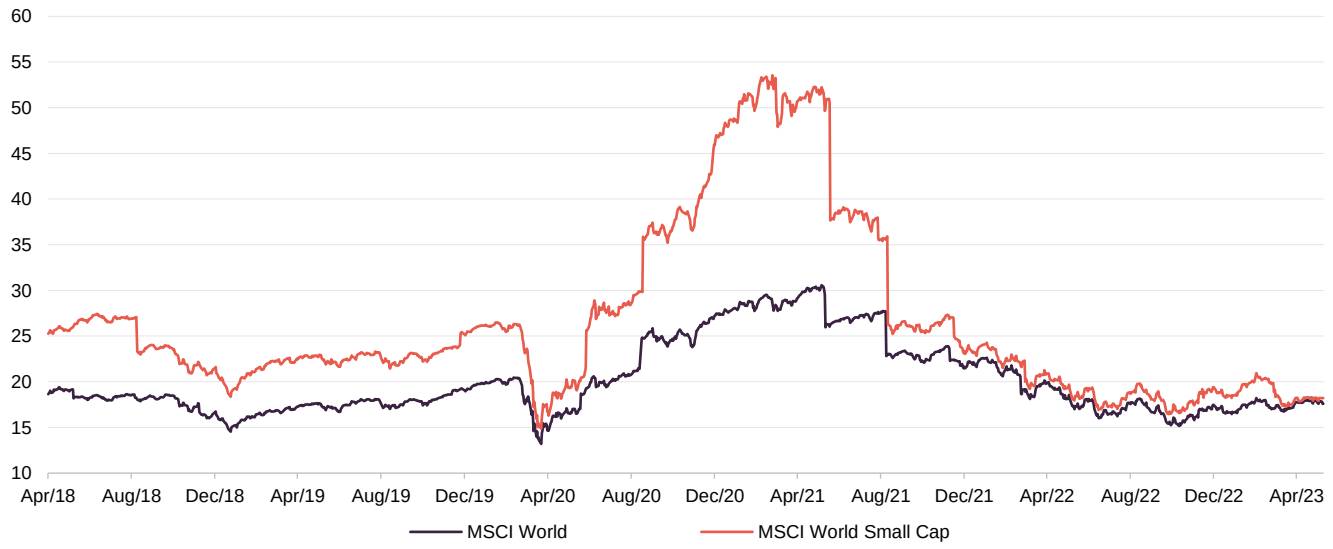
Source: Bloomberg, Marten & Co

Figure 1 illustrates the performance of global small caps versus global large caps over the last 20 years. It shows that, while there have been distinct periods where global small caps have been out of favour and have underperformed global large caps, giving back some of their previous outperformance in the process, (for example during the GFC and more recently during the COVID-related collapse of March 2020), such periods have tended to give way to a recovery, with small caps outperforming over the long term.

As is illustrated in Figure 2, while global small caps have tended to trade at a marked premium to global equities as a whole (arguably reflecting their superior growth prospects) they are cheap versus their own history and are currently trading at a

small discount to global equities as a whole. When combined with EWI's own wide discount relative to history (see Figure 30 on page 28), this could potentially be an attractive entry point for the long-term investor.

Figure 2: Price earnings ratio over five years



Source: Bloomberg

EWI's focus is on small cap growth stocks, and while these have shown some recovery recently (as signs that inflation has been moderating have come through), these were at the sharp end of the rotation out of growth into value that began in late 2020 and accelerated as interest rates were hiked to choke off inflation.

Figure 3: MSCI Small Growth versus MSCI Small Value

Source: Morningstar, Marten & Co

The output of innovation is alive and well

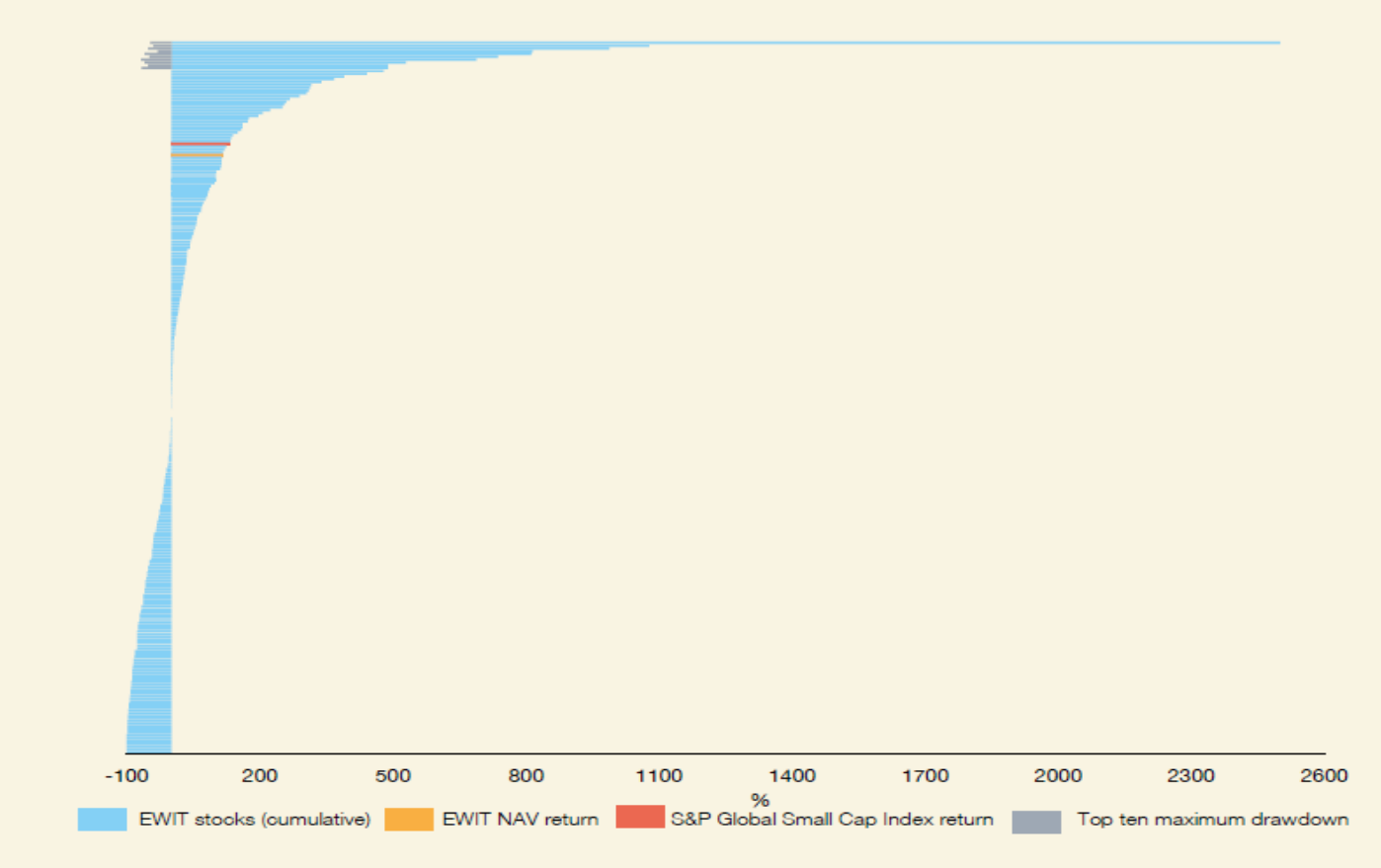
As discussed in the asset allocation section, changes were made to the portfolio to take advantage of the opportunities created as investors have rotated away from growth. EWI's managers have been out talking to companies and the message that they are receiving is that things are progressing as they should. The managers say that, despite the obvious macro headwinds, the output of innovation is alive and well but is yet (despite some recovery YTD, as signs emerge that the macro clouds may be beginning to clear) to shine through properly. The manager expects to see further volatility but feels that fundamentals will reassert themselves over the next 18 months or so.

Philosophy and process

Only a few stocks have the ability to become global leaders in their fields and sustain that position

The philosophy that drives the construction of EWI's portfolio is common to other Baillie Gifford trusts and is based on the manager's observation of the asymmetry of returns. The manager believes that only a few stocks have the ability to become global leaders in their fields and sustain that position. The rewards that accrue to these companies can be considerable.

Figure 4: EWI the asymmetry of returns (calculated from 31 January 2014 to 31 October 2022)



Source: StatPro, S&P, Edinburgh Worldwide

By contrast, the manager says that most companies will struggle to outperform and, as is especially the case with the younger, more immature companies that EWI focuses on, quite a few will fail. It is important that investors in EWI understand this.

The manager observes that tools and technology have levelled the playing field. Advances such as the internet, cloud computing and online payments are enabling even relatively small businesses to scale fast and address a global market. If the market is global, differences in country and regional macroeconomic and political environments are much less relevant, in its view.

A true stock-picking portfolio

EWI, therefore, represents a true stock-picking portfolio, constructed without reference to index weights or to reflect the views of an asset allocation committee. The portfolio has a bias to technology, but as the manager points out, technology is everywhere.

The manager is not compelled to sell good companies on market cap grounds

Potential investments should typically have a market cap of no more than $5bn at the time of initial investment. Nevertheless, the emphasis is on identifying the winners and running with them and EWI may end up with holdings in far larger companies. EWI can act as an incubator of companies that grow to become large enough to be included in Baillie Gifford's larger-cap strategies and identify up and coming disrupters. However, it can retain exposure to these; the manager is not compelled to sell good companies on market cap grounds.

The manager comments that this is not a venture portfolio – it tends not to consider companies less than $300m–$400m in size – but these are relatively immature companies on the frontiers of change. The manager thinks that the uncertain outlook for these businesses makes it hard for the market to value them properly. This is especially true for those companies that are expected to become significantly profitable some years in the future. The manager believes that most of these stocks are poorly understood and that creates the space for bottom-up research to add value. The universe is vast – perhaps 30,000 companies – but most of these will not have the characteristic traits that they are looking for and some entire sectors are not a fit.

The sector is full of companies that are small and will stay that way

The manager seeks to assess the potential of the business model and the risk that it does not succeed. Companies need to have a scalable business model and a clear competitive advantage. Credibility of management is very important as is an alignment between the interest of management and investors. The manager observes that only a very small number of stocks fit its criteria. It says that the sector is full of companies that are small and will stay that way.

EWI's evergreen structure is an advantage

To deliver transformational growth, a business needs to have a culture of innovation which allows it to identify and solve problems for their customers. It often helps if they are starting with a clean sheet of paper rather than simultaneously managing the decline of an incumbent business. EWI is often a provider of growth capital, sometimes just pre-revenue (as is the case with many of the trust's healthcare investments, for example). For the companies, EWI's evergreen structure can be an advantage. The manager can think long term without having to be bound to the normal 10-year cycle of private equity LP funds.

Generally, the manager is not keen on situations where a number of companies are competing in the same niche, unless they can demonstrate differentiated propositions, each with their own edge. The manager thinks this is true of the trust's oncology-focused stocks, for example.

EWI's board and manager take their stewardship role seriously. However, the company will not seek to influence the strategic direction of the companies that it invests in.

EWI may end up holding a significant stake in a business (Baillie Gifford has informal caps on the size of the stakes held across all funds), especially early in a business's life. However, the manager is mindful of the daily liquidity in listed stocks and factors that into position sizes. A typical new position will start life in the portfolio as a 0.5%–1.5% position. Where the risks associated with the business model are binary, the position size will be smaller.

Sales are triggered once the manager deems that the investment case is flawed. M&A activity is also a source of involuntary sales – often companies end up being taken over for less than the manager thinks they could be worth. In addition, positions will be re-evaluated and may be sold if the manager feels that the upside is limited.

ESG and stewardship principles

Baillie Gifford & Co is a signatory to the United Nations Principles for Responsible Investment and the Carbon Disclosure Project and is also a member of the Asian Corporate Governance Association and International Corporate Governance Network.

EWI's natural bias towards capital-light businesses contributes towards the portfolio's lower-than-market-average carbon intensity (88.1% lower than the S&P Global Small Cap Index).

We reproduce the company's stewardship principles (taken from its most recent annual report) below.

Prioritisation of long-term value creation

We encourage our holdings to be ambitious and focus their investments on long-term value creation. We understand that it is easy to be influenced by short-sighted demands for profit maximisation but believe these often lead to sub-optimal long-term outcomes. We regard it as our responsibility to steer holdings away from destructive financial engineering towards activities that create genuine economic and stakeholder value over the long run. We are happy that our value will often be in supporting management when others do not.

A constructive and purposeful board

We believe that boards play a key role in supporting corporate success and representing the interests of all capital providers. There is no fixed formula, but it is our expectation that boards have the resources, information, cognitive and experiential diversity they need to fulfil these responsibilities. We believe that good governance works best when there are diverse skillsets and perspectives, paired with an inclusive culture and strong independent representation able to assist, advise and constructively challenge the thinking of management.

Long-term focused remuneration with stretching targets

We look for remuneration policies that are simple, transparent and reward superior strategic and operational endeavour. We believe incentive schemes can be important in driving behaviour, and we encourage policies which create genuine long-term alignment with external capital providers. We are accepting of significant payouts to executives if these are commensurate with outstanding long-run value creation, but plans should not reward mediocre outcomes. We think that

performance hurdles should be skewed towards long-term results and that remuneration plans should be subject to shareholder approval.

Fair treatment of stakeholders

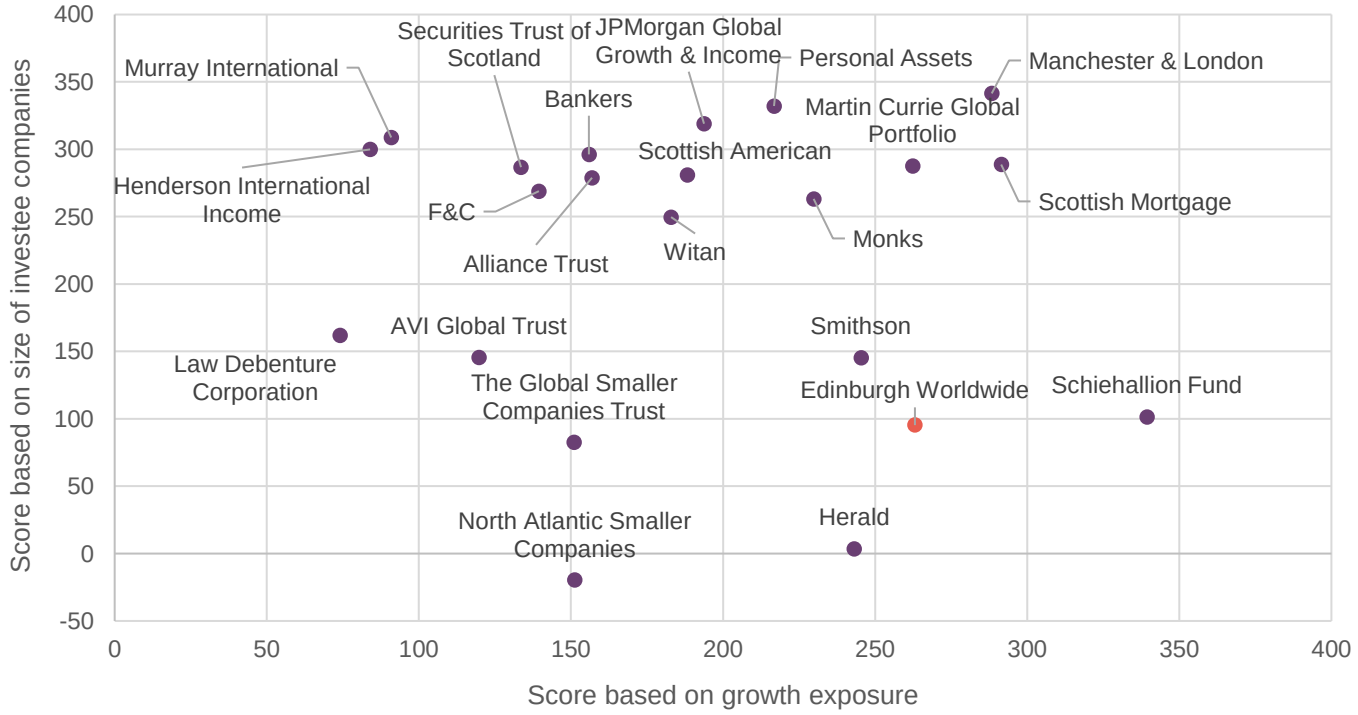
We believe it is in the long-term interests of all enterprises to maintain strong relationships with all stakeholders – employees, customers, suppliers, regulators and the communities they exist within. We do not believe in one-size-fits-all policies and recognise that operating policies, governance and ownership structures may need to vary according to circumstance. Nonetheless, we believe the principles of fairness, transparency and respect should be prioritised at all times.

Sustainable business practices

We believe an entity's long-term success is dependent on maintaining its social licence to operate and look for holdings to work within the spirit and not just the letter of the laws and regulations that govern them. We expect all holdings to consider how their actions impact society, both directly and indirectly, and encourage the development of thoughtful environmental practices and 'net-zero' aligned climate strategies as a matter of priority. Climate change, environmental impact, social inclusion, tax and fair treatment of employees should be addressed at board level, with appropriately stretching policies and targets focused on the relevant material dimensions. Boards and senior management should understand, regularly review and disclose information relevant to such targets publicly, alongside plans for ongoing improvement.

A differentiated investment proposition

Figure: 5 Holdings-based style map[1]



Source: Morningstar, Marten & Co. Note: 1) Scores use information retrieved on 23 April 2023.

The map in Figure 5 provides a graphical representation of EWI's investment style versus both its global smaller companies peers (Herald, North Atlantic Smaller Companies, Smithson and The Global Smaller Companies Trust) as well as other popular global trusts.

The Y-axis (or vertical axis) is a size score – the larger the score, the larger the underlying investments in the portfolio, while the X-axis (or horizontal axis) is a measure of the growth and value factors (the larger the score, the more growth orientated the trust's portfolio).

Looking at Figure 5, it is clear that EWI and its peers have portfolios that are tilted distinctly towards smaller companies when compared to the other global trusts included. It is also apparent that the global smaller companies' peers offer different propositions, in terms of their value-growth tilt although, overall, EWI is distinguished by having the most-growth orientated portfolio (the growth factor for EWI even surpasses that of Herald and Smithson, which are also generally recognised for having a growth bias).

The Schiehallion Fund, another Baillie Gifford Fund, sits to the right of EWI in terms of the growth factor. Schiehallion sits in the growth capital sector and traditionally backs earlier stage and higher growth companies that are unlisted. The chart suggests that EWI might be useful to investors looking to capture long-term growth but who favour a tilt towards listed market investments.

The opportunity set

As an illustration of the opportunity set available to EWI, the manager has identified a wide range of themes that the fund is backing currently. The manager comments that, within each category, the fund is targeting unique businesses with strategic value.

Figure 6: Examples of EWI's opportunity set

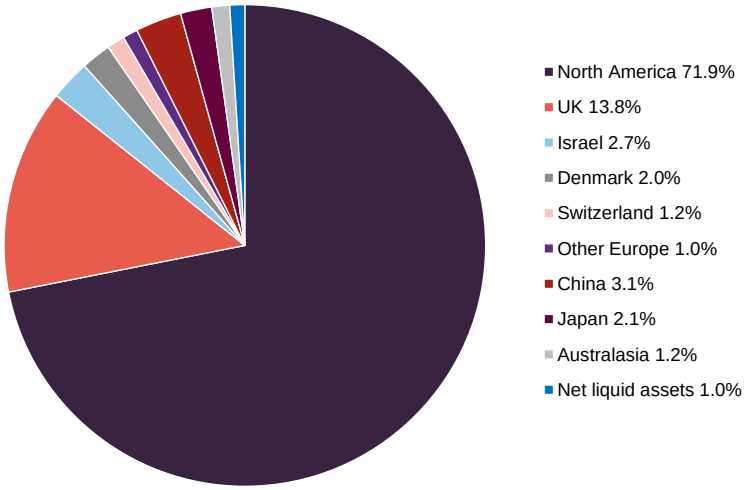
Healthcare innovation	Enterprise efficiency	Digital disruption
Improving drug discovery (AbCellera) PureTech Health	**Physical automation** (Ocado) (AeroVironment)	**Transforming the knowledge economy** (Upwork) (Fiverr)
Advancing diagnostics (Exact Sciences) (Oxford Nanopore)	**Enterprise Software** (JFrog) (Appian)	**Digital platforms** (Zillow) (MarketAxess)
Next generation treatments (Novocure) (Alnylam) (STAAR Surgical)		

Source: Edinburgh Worldwide

Asset allocation

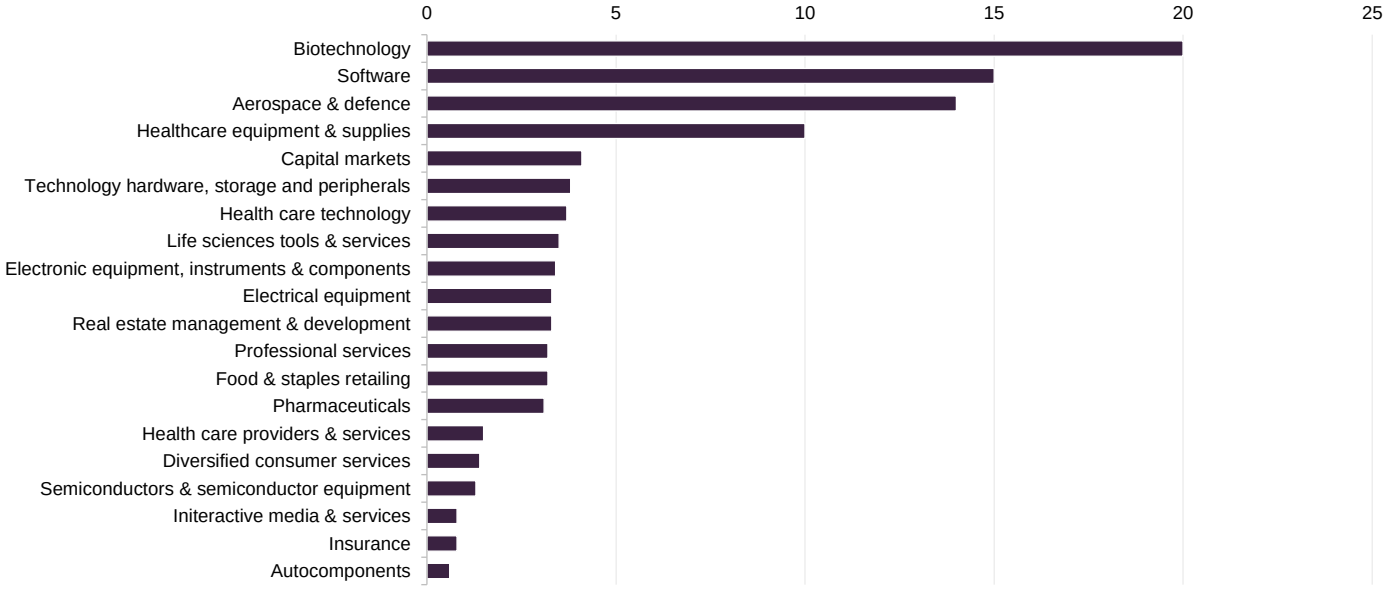
As we have discussed previously, EWI's asset allocation is driven by the manager's stock selection decisions and reflecting this, it has a high active share (98% relative to the S&P Global Small Cap Index). As is illustrated in Figure 7, the portfolio is global, but has a heavy bias towards North America, which tends to account for about two-thirds of the fund's assets. Relative to its comparative index, EWI's portfolio is overweight both North America and the UK and tends to be underweight other geographical regions.

Figure 7: EWI geographic asset allocation as at 31 March 2023



Source: Edinburgh Worldwide

Figure 8: Sectoral allocation as at 31 March 2023



Source: Edinburgh Worldwide

On an industry basis, the portfolio has a significant exposure to sectors such as software and biotechnology and an underweight exposure to sectors such as financials, materials and consumer goods and services. To try and mitigate risk, the portfolio holds between 75 and 125 companies and is required to have exposure to a minimum of six countries and at least 15 industries. As at 31 March 2023, 20.7% of EWI's total assets were invested in private companies (see further discussion below).

One of the most significant developments during the last year has been the sale of EWI's long-held position in Tesla on valuation grounds. The proceeds of the sale have been recycled into other opportunities in areas that the manager liked previously but which it says are now more attractive having fallen significantly from their valuation highs.

Top 10 holdings

Figure 9: Top 10 holdings as at 31 March 2023

Holding	Sector	Business	Allocation 31 March 2023 (%)[1]	Allocation 31 March 2022 (%)[1]	Percentage point change
Space Exploration Technologies[2]	Technology	Spacecraft manufacture and satellite comms.	7.7	4.3	3.4
Alnylam Pharmaceuticals	Healthcare	Drug developer focused on gene silencing technology	7.0	4.6	2.4
MarketAxess	Technology	Electronic bond trading platform	4.0	2.7	1.3
PsiQuantum[2]	Technology	Developer of commercial quantum computing	3.5	3.3	0.2
Exact Sciences	Healthcare	Molecular diagnostics for early cancer detection	3.4	1.3[3]	2.1
STAAR Surgical	Healthcare	Ophthalmic implants for vision correction	3.1	2.8	0.3
Zillow	Communications	US real estate portal	2.9	2.3	0.6
Axon Enterprise	Industrials	Law enforcement equipment and software provider	2.9	1.3[3]	1.6
Ocado	Consumer staples	Online grocery retailer and tech provider	2.8	2.8	-
Novocure	Healthcare	Medical devices for cancer treatment	2.5	2.6	(0.1)
Total of top 5			25.6	17.8[4]	7.8
Total of top 10			39.7	29.9[5]	9.8

Source: Edinburgh Worldwide, Marten & Co. 1) Some holdings are aggregated positions. This occurs where EWI holds more than one line in a company. This is more likely to be the case for private investments where EWI may have invested in more than one series. 2) Private company. 3) Company was not in EWI's top 10 holdings at the end of March 2022. 4) Denotes the total of top five holdings at the end of March 2022 (does not include the companies marked with 3). 4) Denotes the total of top 10 holdings at the end of March 2022 (does not include the companies marked with 3).

Figure 9 shows EWI's top 10 holdings as at 31 March 2023, and how these have changed over the previous year. Reflecting its long-term low turnover approach,

eight of EWI's top 10 holdings as at 31 March 2023 were also constituents of its top 10 at the end of March 2022, although some of the relative positions have changed. The two new entrants to the top are Exact Sciences and Axon Enterprise, while Codexis and Tesla have moved out.

We discuss some of the more interesting developments in the next few pages. However, readers interested in more detail on these top 10 holdings, or other names in EWI's portfolio, might wish to read our initiation note. Otherwise, Codexis, Space Exploration Technologies, Alnylam Pharmaceuticals and Zillow are discussed in the performance section on pages 18 to 24.

Novocure

Novocure (www.novocure.com) has developed a medical device for arresting cancer cell division (mitosis), which ultimately leads to cell death. The electrical field created by Novocure's devices also disrupts the cancer cell's ability to migrate within the body and activates the body's immune system.

EWI's manager say that Novocure's technology should synthesise well with modern drugs that work with enhancing the immune system, for example, checkpoint, blockers/inhibitors. They note that a lot of these drugs are coming off patent from 2028 onwards and their manufacturers are looking for something to combine with these checkpoint inhibitors to extend their commercial lives. EWI's manager notes that while checkpoint inhibitors are now the standard of care in oncology, they are only effective in one third of patients. The manager thinks that, if used in combination with Novocure's technology, there are potentially more patients that can be treated. This could be game changing for oncology in its view.

Figure 10: Exact Sciences share price (US$)

Source: Bloomberg

Exact Sciences

Exact Sciences (www.exactsciences.com) is a molecular diagnostics company that specialises in the detection of early-stage cancers. Its initial focus was on the early detection and prevention of colorectal cancer and, in 2014, it launched Cologuard, the first stool DNA test for colorectal cancer. EWI's manager observes that Guardant Health has been trying to break into the colorectal cancer testing market, which it thinks created an overhang in Exact Sciences' stock, depressing the share price. However, EWI's manager comments that data from the results of Guardant Health's 'Guardant Reveal' blood test were not as good as the market had hoped and were on a par with existing modalities. It believes that this this helped to trigger a rebound in Exact Sciences stock.

Figure 11: Tesla share price (US$)

Source: Bloomberg

Tesla – EWI position sold in its entirety

Tesla (www.tesla.com) is a multinational automotive and clean energy company that designs and manufactures electric vehicles, battery energy storage from home to grid-scale, solar panels and solar roof tiles. It also offers related products and services. Famously, EWI's manager has been a long-term investor in the company, which has been held across a number of its portfolios – EWI's included – since 2013. At that time, Tesla stock was trading at around US$6 per share, and while it is off its 2021 highs (where it briefly surpassed US$400 per share), it has still been one of EWI's most successful investments (anecdotally, Tesla's share price has come down significantly further since EWI exited its position).

EWI's manager says that, while it remains a fan of Tesla, and the adoption of electric vehicles, it was concerned about how much growth, market share gains and superior margin potential were already reflected in the Tesla share price. The capital was recycled into other opportunities within the portfolio, which are earlier in their lifecycles, where the manager saw greater upside potential.

Unlisted positions

Figure 12: EWI's unlisted holdings as at 28 February 2023

Stock	Allocation 28 February 2023 (%)[1]	Business focus
Space Exploration Technologies	7.6	Designs manufactures and launches advanced rockets and spacecraft
PsiQuantum	3.5	Developer of commercial quantum computing
SHINE Technologies	1.4	Medical radioisotope production
Astranis Space Technologies	1.1	Communication satellite manufacturing and operation
Reaction Engines	0.9	Advanced heat exchange company
Relativity Space	0.9	3D printing and aerospace launch company
Epic Games	0.9	Gaming platform
Echodyne	0.8	Metamaterial radar sensors and software
Snyk	0.8	Security software
Lightning Labs	0.6	Lightning software that enables money transmission
DNA Script	0.6	Synthetic DNA fabricator
Graphcore	0.5	Specialised processor chips for machine learning applications
BillionToOne	0.5	Pre-natal diagnostics
KSQ Therapeutics	0.4	Biotechnology target identification company
Total unlisted holdings	20.3	

Source: Edinburgh Worldwide Note: 1) Some holdings are aggregated positions. This occurs where EWI holds more than one line in a company, for example where EWI has invested in more than one series.

At the end of February 2023, EWI held 14 unlisted investments, which accounted for 20.3% of the portfolio (up from 12 unlisted investments which accounted for 10.8% a year prior). Three new private company investments were added during the last financial year: Echodyne, DNA Script and BillionToOne; all of which are discussed below (it is worth noting that initial position sizes tend to be determined by a company's funding requirements). Akili Interactive Labs listed on Nasdaq in August 2022 following its merger with Social Capital Suvretta Holdings Corp. EWI retained a position in the combined company as at 31 October 2022.

It should be noted that a single unlisted investment may be represented by multiple holdings in different share classes. An obvious way in which this can occur is where the manager continues to back its winners, making investments in more than one funding round.

Looking at the most recent additions to EWI's unlisted holdings:

Echodyne – metamaterial radar sensors

Echodyne (www.echodyne.com) describes itself as a radar platform company. It designs and builds high performance, compact, solid-state radar systems for intelligent systems and autonomous machines. Its electronically scanned array radars are used by defence and government agencies, autonomous developers, and security integrators for a range of applications. These include counter-unmanned aircraft systems, border and perimeter security, critical infrastructure protection, unmanned aerial vehicles, and autonomous vehicles.

Echodyne uses metamaterial technology to produce high-performance radar systems at affordable price points. EWI's manager says that Echodyne has developed a laptop sized array that gives the user 3D awareness (aircraft-style visibility) at a much lower price than traditional systems. The applications for both military and civilian use are considerable in its view (it cites self-driving cars as an obvious application) and could be highly disruptive as its technology makes it practical to employ more advanced capabilities in a range of existing applications.

The manager says that the company is focusing on high-margin applications first, which gives them the funds to develop other applications. For the manager, the biggest question is how quickly can Echodyne scale? EWI participated in the Echodyne's US$135m series C funding round which completed in June 2022.

DNA Script – synthetic biology

DNA Script (www.dnascript.com) is a synthetic biology company specialising in the design and manufacture of synthetic DNA and oligonucleotides (or oligos) – short single strands of synthetic DNA or RNA, which are a starting point for many molecular biological and synthetic biological applications.

Formed in 2014, the company has focused on the process of creating DNA using enzymes and its R&D efforts have produced innovations in enzyme engineering, surface and nucleotide chemistries, and instrumentation. The company has pulled the innovations together to produce SYNTAX, the world's first benchtop DNA printer powered by enzymatic technology.

The company believes that, with continued advancement and innovation, its enzymatic DNA synthesis technology is poised to become a major engine of genomics research and personalised medicine. EWI participated in the company's US$200m series C preferred financing round, which closed in January 2022.

BillionToOne – precision molecular diagnostics

BillionToOne (billiontoone.com) is a precision molecular diagnostics company. There are three billion letters (or three billion nucleotides) that make up the human genome and BillionToOne's proprietary molecular counting technology has the ability to detect and quantify disease at single base-pair level. The company claims that its technology "increases the resolution of disease detection using cell-free DNA by over 1000-fold" and that its flagship product, UNITY Screen™, is the only non-invasive prenatal test (NIPT) that can assess foetal risk for common recessive conditions and aneuploidies (chromosomal deficiencies) from one maternal blood sample.

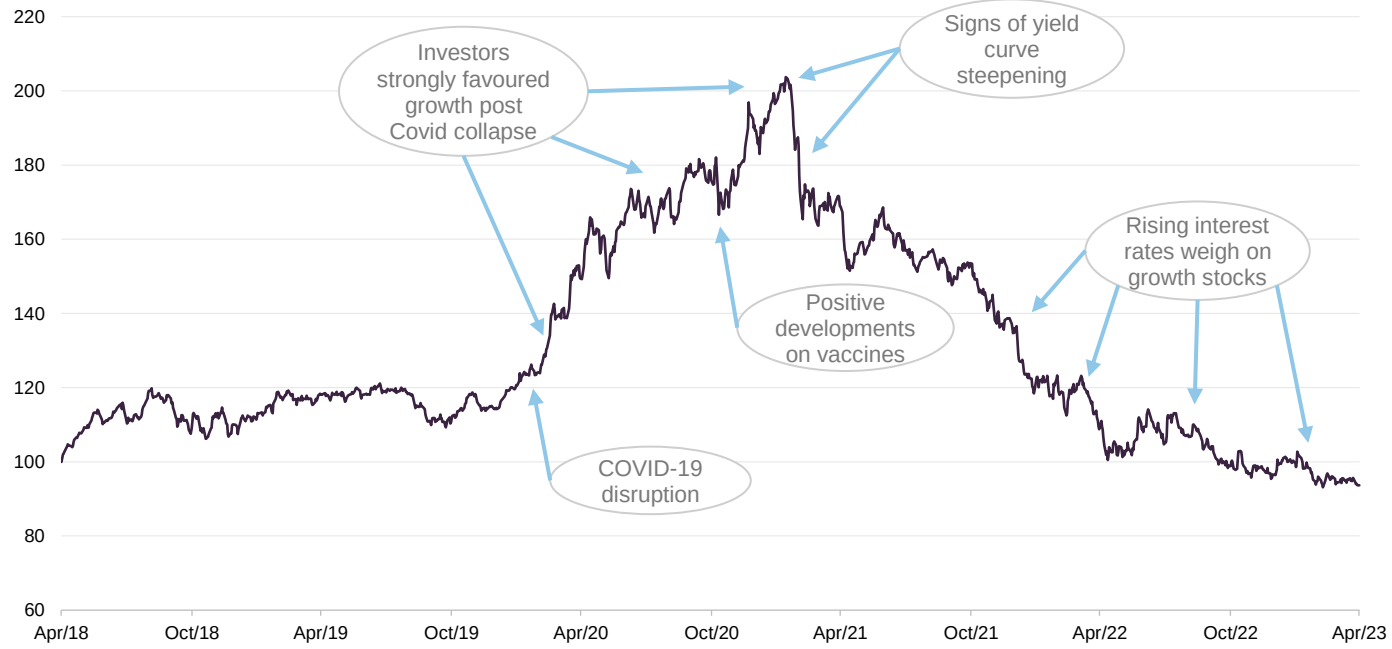
BillionToOne has been growing very quickly with test volumes increasing more than 300% in 2022 versus the prior year. BillionToOne is applying this same molecular

counting technology to what it describes as a "groundbreaking liquid biopsy test that combines treatment selection with monitoring". It believes the ability to quantify tiny genetic variations will open the door to exponential improvements in prenatal screening, liquid biopsy, and more. EWI participated in the company's US$125m series C preferred financing round, which closed in January 2022.

Performance

As is illustrated in Figure 13, EWI appears to have benefited heavily from the rotation into growth following the onset of the pandemic and the accompanying sharp dislocation in markets in the first quarter of 2020. While there was a noticeable wobble during November 2020 in response to positive news on vaccine development, the marked trend of outperformance continued until early 2021 when signs of a steepening yield curve started to emerge, which was associated with higher inflation and an expectation of higher interest rates.

Figure 13: EWI NAV total return performance relative to comparative index to 30 April 2023



Source: Morningstar, Marten & Co

Figure 14: Cumulative total return performance over periods ending 30 April 2023

	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)	Strategy launch (%)[1]
Edinburgh Worldwide NAV	(3.0)	(11.8)	(7.2)	(15.9)	(11.2)	22.2	111.1
Edinburgh Worldwide share price	(3.9)	(15.9)	(13.6)	(24.1)	(30.1)	(4.8)	85.1
S&P Global Small Cap Index	(0.2)	(0.5)	3.2	1.9	41.2	53.9	160.1
MSCI AC World Index	(1.9)	(6.9)	(1.7)	(2.0)	42.2	31.0	120.8

Source: Morningstar, Marten & Co. Note: 1) EWI's current strategy was adopted with effect from 31 January 2014.

Smaller growth companies suffer disproportionately when long-term interest rates rise.

As we discussed in our initiation note, EWI's portfolio is focused on smaller growth companies, and these tend to suffer disproportionately when long-term interest rates rise. The traditional rationale is that this occurs because, when compared to more mature businesses, a relatively high proportion of their value is in future cash flows that are discounted back into present-day values. Quite simply, when rates rise, the value of these future cash flows is worth less today as a result. It also seems quite likely that there was some profit taking after the particularly strong outperformance of many of these stocks in 2020, with a rotation into more cyclical stocks that were perceived as likely to benefit as COVID restrictions were eased.

Moving through 2021, there was volatility in markets and EWI's performance relative to its benchmark, which appears to have occurred as sentiment ebbed and flowed between growth and value. However, the general trend was one of a gradual re-opening of the global economy, which broadly appears to have favoured value stocks at the expense of growth and particularly small cap growth. This trend accelerated in 2022 as sharply rising inflation, in part a reaction to the considerable monetary and fiscal stimulus that central banks and governments around the world had previously poured into their economies, led to interest rate rises across the developed world.

Although there have been signs of inflation moderating, bringing with it the hope that the pace of interest rate rises will ease, negative sentiment continues to weigh on growth stocks generally. As is illustrated in Figure 14, EWI's underperformance during the last couple of years has seen it give back all of its previous outperformance post the COVID-market collapse of March 2020 and some of its performance of earlier years, eating into its longer-term record in the process.

Focus on long-term performance

It is reasonable to expect that a long-term strategy such as EWI's could encounter periods where it is not in favour and is might underperform in the short-term. Its manager's and board's views echo this sentiment. They suggest that investors should be focusing on longer-term horizons, as the manager's investment horizon is five-years plus. The board has reiterated its commitment to this approach.

This arguably limits the risk that a change of strategy could be imposed, which could force the manager to rejig the portfolio, potentially selling positions when they might be close to or at long-term lows.

Portfolio turnover implies an investment horizon much longer than five years.

Reflecting this long-term approach, portfolio turnover is inherently low – just 10.8% for the year ended 31 October 2022 and 7.1% for the prior year – which actually suggests a much longer investment horizon. As we have previously noted, if the manager's investment thesis is correct, the superior growth achieved by the winners within the portfolio is what drives long-term returns.

Key performance contributors for the last financial year

Figure 15: Top ten positive relative contributors to return for the year ended 31 October 2022

Stock	Business	Region	Average Fund weight (%)	Average Index weight (%)	Contribution (%)
Alnylam Pharmaceuticals	Drug development using gene silencing technology	US	5.7	-	3.3
Space Exploration Technologies	Advanced rockets and spacecraft	US	5.3	-	2.8
ShockWave Medical	Medical devices manufacturer	US	1.4	0.1	1.0
Aerovironment	Small unmanned aircraft and tactical missile systems	US	1.6	-	0.5
SHINE Technologies	Medical radioisotope production	US	1.0	-	0.4
AbCellera Biologics	Antibody design and development	Canada	0.6	-	0.4
Epic Games	Video game platform and software development	US	1.0	-	0.3
Genmab	Antibody based drug development	Denmark	1.6	-	0.3
Progyny	Fertility benefits management	US	0.6	-	0.2
CyberArk Software	Cyber security solutions	Israel	1.4	-	0.2

Source: StatPro, S&P, Edinburgh Worldwide

The strongest positive relative contributions came from the following companies.

Alnylam Pharmaceuticals

This long-standing EWI holding, which focuses on gene-silencing technology, benefited from a successful readout on its phase three clinical trial in transthyretin-mediated cardiomyopathy. EWI's manager says that, while the approval being sought is similar to the company's existing approval for polyneuropathy, the trial was relatively high profile given the scale of the opportunity it presents (the manager says that it could be significantly larger due to the greater population of cardiac patients that are more seriously ill).

The company posted a c 23% increase in gross profit for its last financial year. EWI's manager says that the company's healthcare platform is highly scalable, it has proven its technology and, unlike antibody-based therapies, RNAI technology has the potential to generate interactions both inside and outside a cell. The manager also sees scope for future growth from Alnylam's deep and varied pipeline addressing conditions previously difficult to treat.

Figure 16: Alnylam Pharmaceuticals share price (US$)

Source: Bloomberg

Space Exploration Technologies (SpaceX)

EWI's manager highlights that this private holding has been pivotal in keeping Ukraine's population online this last year and it recently launched the most powerful rocket in history. The manager says that SpaceX's strong operational performance has pushed it up EWI's portfolio rankings. It comments that the company's rockets and satellites are continually evolving, and it is displacing more sleepy government operations around the globe.

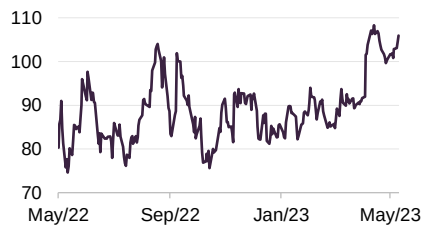
The manager thinks that with Starlink, its low-latency broadband system which is enabled by a constellation of low orbit satellites, it could become the first truly global utility (it currently offers internet coverage across 53 countries and is aiming to provide a mobile phone service from 2023). The manager notes that the cost of connecting to the system is minimal (there is no need to dig up roads as is frequently the case with conventional utilities) and it has over 200 vehicles that can launch equipment into space. EWI's manager anticipates that, when Starlink has its mesh network operating properly, it will be quicker to use their network to send data between London and New York than using traditional infrastructure.

ShockWave Medical

EWI's manager comments that the company has benefited from very strong adoption of its calcium cracking technology in the field of arterial plaque removal. It says that ShockWave's miniature sonicator breaks arterial plaques in a more controlled way than the traditional approach which tends to scar the plaques. Reflecting this, it believes that Shockwave's treatment is becoming the fundamental technology for treating cardiovascular plaques. The company moved significantly into profitability during its last financial year and is growing strongly (revenue growth of 107% for the 2022 financial year).

Aerovironment

Figure 17: Aerovironment share price (US$)



Source: Bloomberg

This company produces small, unmanned aircraft and tactical missile systems. It appears to have benefited from a trend of increasing interest and demand for defence related products in the aftermath of Russia's invasion of Ukraine. EWI's manager says that the company's Switchblade loitering missile system is an effective solution for reducing collateral damage and lowering the risk for those on the ground.

The company made a small loss in its last financial year (it was reportedly hampered by both supply chain constraints and a tight labour market) and, while its last set of quarterly results saw it post a small loss of US$0.7m, it also posted year-on-year revenue growth of 49%.

SHINE Technologies

Formerly SHINE Medical Technologies, this private holding is focused on medical radioisotope production. It uses a miniature particle accelerator to create mildly radioactive compounds for use in medical tests and procedures. EWI's manager says that the company's approach is cheaper, easier to manage than the existing supply chain and can be provided locally (the traditional method is to collect these from nuclear reactors where they are created as by-products, but the compounds must then be transported quickly).

Although the company is focused primarily on producing radioisotopes for tests, its local production could potentially open up opportunities to move beyond diagnostics into therapeutics. The company also has an alternative version of radiotherapy, which EWI's manager says is markedly better at targeting tumours than traditional methods. The result is that there is considerably less damage to surrounding tissue, leading to better patient outcomes. The process can also treat later-stage tumours that have metastasised.

EWI's manager thinks that there are also opportunities for the company in the development of fusion reactors as well as to transmute existing nuclear waste into less harmful alternatives (it believes that the latter opportunity could be colossal and observes that the company is using its existing markets to develop and de-risk its technologies further). The manager says that the position has benefited from growing interest in radiopharmaceuticals and nuclear power, which has increased the relevance of its manufacturing solutions.

AbCellera Biologics

Figure 18: AbCellera Biologics share price (US$)

Source: Bloomberg

This contract drug development company benefited from strong sales growth during the first half of 2022 and, while its operating loss increased on the back of higher administration and R&D costs, the share price rose on the back of both the commencement of new drug development trials and new drug development deals.

The company's share price has come under pressure since October following news that an experimental drug developed by Merck has been shown to cut the risk of COVID-19-related hospitalisation and death by around half. However, the manager's interest in AbCellera is broader than COVID, centring on the business's proven expertise in identifying valuable antibodies.

Epic Games

This video game platform and software developer and publisher is one of EWI's private company holdings (it is also 40% owned by Tencent). The company owns game developers Chair Entertainment, Psyonix, Mediatonic, and Harmonix, as well as cloud-based software developer Cloudgine. It has been known primarily for three franchises: Unreal, Gears of War and Fortnite. Tencent's investment in 2012 was part of an agreement to move the company towards a games-as-a-service model. Epic owns the technology that underpins its games, which is known as the Unreal Engine. It is one of the most widely used tools in the game making industry and Epic continues to release and license new versions of the software.

The company continues to provide strong revenue growth (US$6.3bn in 2022, up from US$5.8bn for 2021 – according to Statista).

Genmab

Figure 19: Genmab share price (DKK)

Source: Bloomberg

This biotechnology company focuses on developing differentiated antibody therapeutics to fight against cancer and other serious diseases. It then partners with big pharma companies, who manufacture and distribute its therapeutics, from which Genmab then receives royalties.

Its primary source of income is royalties in relation to DARZALEX® by Janssen (also known as Daratumumab) for the treatment of multiple myeloma, where it is migrating towards becoming the standard of care.

Royalty revenue in 2022 was DKK 11.7bn, a 67% increase on the prior year (driven by both a 32% increase in DARZALEX® sales and an appreciating US dollar), while operating profit increased 111% to DKK 6.4bn.

Progyny

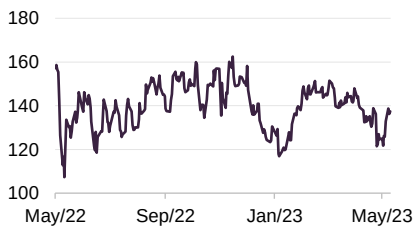
This company provides fertility benefits management services to employers. It negotiates contracts for fertility treatments, then bundles these services into plans

that it offers to large, self-insured companies. Its members have access to a full suite of fertility treatment options (for example, IVF and egg freezing) as well as options including surrogacy and adoption. Plan members have access to services from a network of over 600 fertility specialists nationwide.

Progyny continued to experience strong top line growth during 2022 with full year revenue increasing by 57% to US$786.9m, primarily due to an increased number of members covered. While gross profit was 49% higher at US$167.3m, net income was 46% lower at US$30.4m primarily to the increase in non-cash stock-based compensation expense and a lower benefit for income taxes.

CyberArk Software

Figure 20: CyberArk Software share price (US$)



Source: Bloomberg

This is an Israel-based provider of IT security solutions that protects organisations from cyber-attacks. Its software is focused on the management of digital identities (both individual and machine) across enterprise IT environments. It offers comprehensive solutions to store, manage, and share passwords as well as right-sizing permissions.

While the company is loss making, total revenue was up 18% for 2022 to US$592m and, more importantly, recurring revenue increased by 45% to US$570m. Demand for cyber security has increased dramatically in recent years. Many industries saw a significant acceleration in their digital transformation and this, coupled with a significant increase in remote working, increased the risk of being subject to a cyber-attack.

Key performance detractors for the last financial year

Figure 21: Top ten negative relative contributors to return for the year ended 31 October 2022

Stock	Business	Region	Average Fund weight (%)	Average Index weight (%)	Contribution (%)
Ocado	Online grocery retailer and technology provider	UK	3.4	-	(4.1)
Codexis	Industrial and pharmaceutical enzyme development	US	1.9	-	(2.8)
Upwork	Online freelancing and recruitment services platform	US	2.4	-	(2.3)
Zillow Group	US online real estate portal	US	2.1	-	(2.2)
Teladoc	Telemedicine services provider	US	1.3	-	(2.1)
Ceres Power	Fuel cell development	UK	1.3	-	(1.6)
Oxford Nanopore Technologies	Novel DNA sequencing technology	UK	2.2	-	(1.5)
ITM Power	Hydrogen energy solutions	UK	1.0	-	(1.4)
Cardlytics	Digital advertising platform	US	0.7	-	(1.2)
Wayfair	Online furniture and homeware retail	US	0.7	-	(1.2)

Source: StatPro, S&P, Edinburgh Worldwide

A key theme within EWI's largest detractors is that they are loss making. As we have discussed elsewhere in this note, smaller unprofitable companies have suffered disproportionately as interest rates have risen.

The strongest negative relative contributions came from:

Ocado

Figure 22: Ocado share price (GBp)

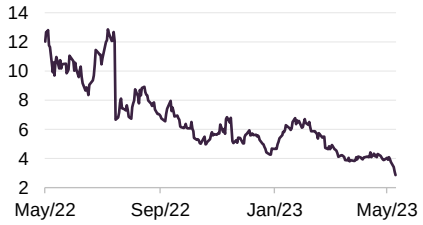
Source: Bloomberg

Ocado suffered from falling retail sales during its last financial year. This has been in part a consequence of an unwinding of the benefits the company received, as consumers shifted their grocery purchases online during the pandemic. However, this has also appears to have been exacerbated by the cost-of-living crisis, which has seen a tendency for consumers to shift towards discount retailers in search for cheaper options.

EWI's manager says that it sees the long-term opportunity as undiminished for Ocado and that it is content with how the company has navigated the more challenging environment. It sees long-term growth being underpinned by the company's technology and how this applied in new markets. The manager notes that in November last year, Ocado signed a sizeable deal with Lotte, the leading grocery chain in South Korea. It thinks that this suggests that forward-thinking grocers are still looking to a more automated future. The company made a loss during its 2022 financial year and, while it expects losses in the first half of the current financial year, it expects to be marginally profitable for 2023.

Codexis

Figure 23: Codexis share price (US$)



Source: Bloomberg

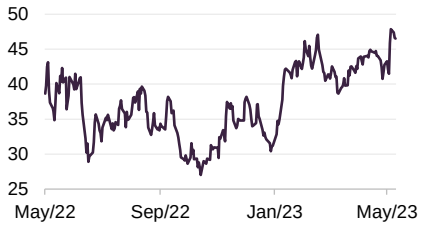
This protein engineering company, which is a market leader in the production of high-performance enzymes for bioprocesses, life science tools and biopharma applications, is loss-making and appears to have suffered heavily on the back of rising interest rates set against concerns that it might need to raise additional funds. EWI's manager remains confident of its long-term prospects.

Upwork

This online freelance and recruitment services platform is loss-making and suffered heavily during 2022 both as interest rates rose and as the prospects of a recession appeared to increase. It also suffered following the announcement that it was suspending doing business in both Russia and Belarus and that it was withdrawing its guidance for the 2022 year. Like Ocado and Codexis above, EWI's manager sees the company's long-term prospects as undimmed.

Zillow Group

Figure 24: Zillow Group share price (US$)



Source: Bloomberg

This US property portal suffered heavily during 2021, despite record high prices, as its home buying division, Offers, got into significant difficulties (its aim was to use algorithms to buy attractive properties, make minor renovations and then quickly flip them on for a profit, but it appears that it overpaid and also got hampered by labour shortages to make the renovations). Offers' troubles ultimately led to the division being shut down, with around 2,000 people being laid off and losses estimated to be in the region of US$300m. The effects of this dragged into 2022 but, with the problematic division closed and the company focusing on its core business, EWI's managers see some of the distortions in the business washing through.

Teladoc

This telemedicine services provider suffered heavily in April 2022 when it announced its first quarter results (its share price has not seen a meaningful recovery since, so that it continues to trade around five-year lows). The loss-making company missed analyst expectations and reduced its guidance for 2022, citing challenges in both the D2C mental health market (it identified higher advertising costs and a lower-than-expected yield on marketing spend as being drivers) and the chronic condition market (extended sales cycle as employers and health plans evaluate their long-term strategies was highlighted as a cause).

Figure 25: Ceres Power share price (GBp)

Source: Bloomberg

Ceres Power

This developer of clean energy technology solutions partners with manufacturing partners, Bosch and Doosan, which supply stacks to systems partners, with Ceres earning royalties on both the stacks and systems sold. Its technology includes fuel cells for power generation and electrolysers for green hydrogen production. EWI's manager believes that the company, which is loss-making, should benefit from the green energy transition and the growth in renewables. The company suffered in 2022 from delays in agreeing a Chinese joint-venture (a major new fuel cell manufacturing facility in Shandong), and negotiations are still ongoing.

Oxford Nanopore Technologies

This loss-making Novel DNA sequencing technology company struggled during 2022 and YTD, weighed down by concerns that a significant amount of its revenue uptick relates to COVID-testing which is rapidly receding.

Figure 26: ITM Power share price (US$)

Source: Bloomberg

ITM Power

This company manufactures polymer electrolyte membrane electrolysers that support the manufacture of green hydrogen, thereby enabling its customers to decarbonise their operations. The loss-making company suffered during 2022 as it reportedly struggled with the challenges of scaling up its operations. EWI's manager spoke with ITM Power's chairman last year who commented that the company was at a stage where it would benefit from leadership with direct manufacturing experience. Subsequently, Dennis Schulz was appointed CEO, joining from Linde Engineering in Germany.

Cardlytics

This digital advertising platform company is another loss-making company that has struggled in the face of rising interest rates. However, it has also been weighed down by difficult results, the loss of a significant customer last year and a slowdown in purchases last year (Cardlytics partners with financial firms to track consumer spending and offers them advertising opportunities – it gets paid when consumers make purchases, which it splits with its partners for providing the data).

Wayfair

This online furniture and homeware retailer reported its first profitable year in 2020, heavily boosted by lockdown-related purchases as consumers focused on upgrading their homes. However, while it slipped back into a loss for 2021 (US$131m) and its share price dropped back in anticipation of this, its results for

2022 appear to have been a much greater surprise to the market which had been expecting an improvement in profitability. Instead, it chalked-up losses of US$1.3bn for 2022, despite revenues only falling back by around 11% year-on-year and the company operating with an inventory-light business model (it receives customer orders and cash upfront in advance of it paying its suppliers).

Peer group

Please click here for an up-to-date peer group comparison of EWI versus its global smaller companies peers.

EWI is a constituent of the AIC's global smaller companies sector, which comprises five members, all of which are illustrated in Figures 27 to 29. All of these were members of the peer group when we last wrote about EWI (although BMO Global Smaller Companies has changed its name to The Global Smaller Companies Trust in the intervening period). Members of the global smaller companies sector will typically:

- have over 80% invested in quoted global smaller company shares;
- less than 80% in any single geographic area;
- an investment objective/policy to invest in medium to smaller cap stocks;
- a majority of investments in medium to micro-cap companies; and
- a global smaller companies benchmark.

It should be noted that the peer group as a whole does not provide an ideal comparison for EWI. Herald is arguably its closest comparator as it too has a strong bias to growth and technology and operates with a long-term time horizon. However, Herald is predominantly focused on the TMT space and, while EWI is predominantly focused on the US, with a smaller amount in the UK, Herald's portfolio is the reverse. Herald also invests in much smaller and earlier stage companies. Reflecting this, it has a much longer tail of investments (342 in total as at 31 March 2023 – EWI had 105 in comparison).

Figure 27: Peer group cumulative NAV total return performance to 30 April 2023

	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)	10 years (%)
Edinburgh Worldwide	(3.0)	(11.8)	(7.2)	(15.9)	(11.2)	22.2	159.9
Global Smaller Companies Trust	(0.8)	(3.8)	3.6	(3.0)	43.5	28.1	144.6
Herald	(2.9)	(8.0)	(3.1)	(11.8)	27.6	42.7	200.6
North Atlantic Smaller Companies	0.0	(4.0)	3.6	(7.0)	32.4	44.4	197.6
Smithson	2.7	3.6	14.1	2.7	22.8	N/A	N/A
EWI rank	5/5	5/5	5/5	5/5	5/5	4/4	3/4
Sector arithmetic avg.	(1.7)	(6.9)	(0.8)	(9.4)	23.1	34.4	175.7
Sector arithmetic avg. exc. EWI	(0.2)	(3.0)	4.5	(4.8)	31.6	38.4	180.9

Source: Morningstar, Marten & Co

As its name suggests, The Global Smaller Companies Trust (GSCT – formerly BMO Global Smaller Companies) invests more broadly in global smaller companies. It

does not have the specific growth/technology bias of either EWI or Herald and so its sectoral exposure is much broader. GSCT operates with close to 40% in the US and around 25% in the UK.

North Atlantic Smaller Companies targets companies that the manager believes are trading at a discount to their intrinsic value and may then engage with management with the aim of unlocking that value. Consequently, its portfolio is an eclectic mix of investments, which can be hard to categorise. It has a bias to smaller UK companies but invests in the US periodically. It also makes investments in some unquoted companies, including investments in limited partnership funds advised by the management company, and has stakes in two investment companies: Oryx International Growth and Odyssean Investment Trust.

Smithson operates with a bias towards quality growth stocks (typically companies with high returns on capital, defensible business models, attractive free cash flow yields and low levels of debt funding), which tends to help it in periods where investors are nervous about economic growth.

As a consequence, while all of EWI's peers invest globally in smaller companies, all the portfolios are markedly different to EWI's.

Figure 28: Peer group cumulative share price total return performance to 30 April 2023

	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)	10 years (%)
Edinburgh Worldwide	(3.9)	(15.9)	(13.6)	(24.1)	(30.1)	(4.8)	135.5
Global Smaller Companies Trust	1.7	(6.8)	5.2	(6.2)	35.3	11.8	110.8
Herald	(1.9)	(8.4)	(0.2)	(4.0)	25.5	39.3	212.7
North Atlantic Smaller Companies	3.7	(10.1)	10.5	(10.5)	25.7	35.6	157.6
Smithson	4.6	2.4	13.8	(0.3)	9.6	N/A	N/A
EWI rank	5/5	5/5	5/5	5/5	5/5	4/4	3/4
Sector arithmetic avg.	(0.1)	(10.3)	0.5	(11.2)	14.1	20.4	154.2
Sector arithmetic avg. exc. EWI	2.0	(5.8)	7.3	(5.3)	24.0	28.9	160.4

Source: Morningstar, Marten & Co

> Growth sell-off has eaten into EWI's longer-term performance record.

Looking at Figure 27, EWI appears to have found itself at the sharper end of the sell-off in growth stocks during the last 12 months and this has eaten into its longer-term performance record (something which has also affected its peers but to a much lesser extent). However, this might give EWI strong recovery potential in the event that inflation recedes, allowing central banks to reduce interest rates and the market to see some degree of rotation back towards growth. It is worth remembering that the manager is focused on long-term returns, reflecting the long-term nature of its strategy.

Herald, despite its more specialist focus, has held up relatively well, which helped its longer-term numbers – it ranks in third place over three years, second over five years and first over 10 years in NAV total return terms. It is noteworthy that, while Herald suffered heavily from the growth sell-off during 2022, it benefited from a rebound in the final quarter of 2022 and for much of the first quarter of this year (its

US portfolio was particularly resilient although this market had a better outlook than most and its UK portfolio, the largest allocation, outperformed its local benchmark).

The Global Smaller Companies Trust, while still growth focused, has less of a growth bias than either EWI or Herald and so it is perhaps not surprising that it has been one of the best performers during the last year, particularly given its strong bias to the US. North Atlantic Smaller Companies is arguably the most value-focused but has been held back by its strong allocation to the UK.

Smithson is perhaps the surprise as its focus on quality did not appear to have translated into higher relative returns in markets that have been more challenging for growth, until very recently. However, it also has a decent allocation to the US, which has been a better performing market.

Figure 29: Peer group comparison – size, fees, discount, yield and gearing as at 12 May 2023

	Market cap (£m)	St. dev. of daily NAV over 5 years	Ongoing charges (%)[1]	Perf. fee	Premium/ (discount) (%)	Dividend yield (%)	Gross gearing (%)[4]	Net gearing (%)[4]
Edinburgh Worldwide	580.2	26.03	0.63	No	(17.9)	Nil	13.6	12.4
Global Smaller Companies Trust	746.7	15.05	0.75	No	(13.4)	1.3	4.8	3.7
Herald	1,039.3	14.09	1.05	No	(15.0)	Nil	Nil	(4.7)
North Atlantic Smaller Companies	486.0	14.89	1.00/1.00[2]	Yes[2]	(28.5)	0.6	Nil	(17.4)
Smithson	2,391.9	19.52	0.90	No	(10.2)	Nil	Nil	(0.4)
EWI rank	4/5	5/5	1/5		2/5	3/5	5/5	5/5
Sector arithmetic average	1,048.8	17.91	0.87/0.87[3]		(17.0)	0.4	3.7	(1.3)
Sector arithmetic avg. exc EWI	1,166.0	15.89	0.93/0.93[3]		(16.8)	0.5	1.2	(4.7)

Source: The AIC, Morningstar, Marten & Co 1) Unless otherwise noted, ongoing charges are quoted excluding performance fees. 2) On top of its base management fee, North Atlantic Smaller Companies pays a performance fee of 10% of the outperformance of its investment portfolio over the sterling adjusted S&P500 Composite Index. This fee is limited to 0.5% of NAV in any one year. 3) The average ongoing charges ratio for the sector is 0.87% both including and excluding performance fees (North Atlantic Smaller Companies did not pay a performance fee in relation to its most recent financial year), while the average ongoing charges ratio for the sector excluding EWI is 0.93%, both including and excluding performance fees. 4) Gross and net gearing figures as at 30 April 2023, with the exceptions of North Atlantic Smaller Companies (where we have used the most recently publicly available figure is as at 31 December 2022). 5) Market cap and dividend yield are ranked in increasing size order (the larger the market cap or dividend yield, the higher the ranking). All other rankings are in decreasing size order (the lower the standard deviation of returns, the lower the ongoing charges ratio, the lower the value of the premium/(discount), the lower the gross and net gearing, all correspond to a higher ranking).

Looking at Figure 29, it can be seen that, while all of the funds are a very respectable size, there are significant differences between them and, to a certain extent, the peer group is distorted by the behemoth that is Smithson. The distortion is such that even the next-largest fund, Herald, is still below the peer group average. If Smithson is excluded, the average market cap is £713m and whilst EWI is still around £130m below this, it is reasonably close to the average.

EWI is the most efficient with the lowest ongoing charges ratio in the peer group.

Interestingly, Smithson does not have a similarly distorting effect on the average ongoing charges ratio for the peer group as, despite its colossal size, its ongoing charges ratio is close to the sector average. In this regard, EWI is the most efficient with the lowest ongoing charges ratio in the peer group, despite only being the fourth largest fund. The Global Smaller Companies comes in a reasonably close second. It is perhaps unsurprising that Herald has an ongoing charges ratio a bit over the sector average as its more specialist approach combined with a very high number of portfolio companies is likely to be more expensive to manage. It is worth noting that North Atlantic Smaller Companies is the only fund with a performance fee and, while it did not incur a performance fee in relation to its last financial year, its ongoing charges ratio inclusive of performance fees could, in a good year, cost up to an additional 50bp in round figures.

The volatility of EWI's NAV returns is the highest in the peer group by a significant margin.

Reflecting their focus on smaller companies, which are more likely to be in a growth phase and reinvesting their earnings in their businesses, EWI and its peers are all managed with a focus on capital growth and not income. It is not surprising that three of the peer group, including EWI, have not paid a dividend during the last 12 months.

EWI's discount is fractionally above the sector average, although this is distorted by the very high discount of North Atlantic Smaller Companies (its manager, Christopher Mills, who is also a director, owns around 28% of the trust making it difficult for an external shareholder to put pressure on the trust to close its abnormally wide discount). If North Atlantic Smaller Companies is excluded, the average discount is 14.0%, making EWI look cheaper versus its peers.

Dividend

EWI's focus on capital growth tends to mean that there is insufficient net revenue to fund dividends. Reflecting this, the company has not declared a dividend since 2014, the year that the new strategy was adopted.

For the accounting year ended 31 October 2022, EWI's net revenue per share was -0.49p, up from -0.62p for the prior year. The revenue reserve is negative (a net revenue loss of £6.1m) and this would have to be eliminated before EWI declared a dividend. If circumstances change, board policy is that the trust would pay the minimum permissible dividend to allow it to retain its investment trust status.

Premium/(discount)

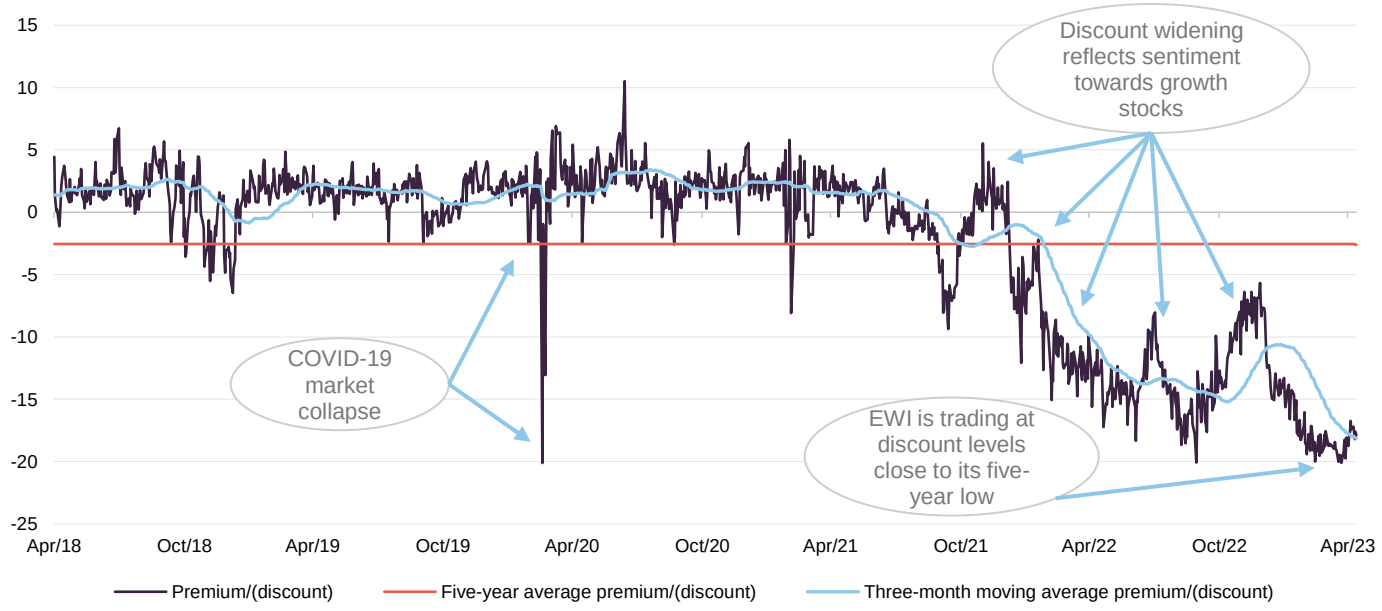
As is illustrated in Figure 30, EWI has seen a dramatic widening of its discount since the beginning of 2022. As discussed earlier in this note, this is a period where rising inflation and interest rates appear to have weighed heavily on the performance of growth stocks and, as is illustrated in Figure 13 in the performance section, a period in which EWI has also had a prolonged period of underperformance versus wider markets, its comparative index and peers.

Over the last 12 months, EWI has traded at discounts between 5.7% and 20.1%, with an average of 14.4%. As at 12 May 2023, EWI was trading at a discount of 17.9%, which is also significantly wider than its longer-term three and five-year discount averages of 4.8% and 2.3% respectively. The discount is also at a level which is close to its five-year high and is therefore comparable to levels seen during the depths of the COVID-related market collapse of March 2020.

Rare discount opportunity?

If EWI's managers are correct in their stock selection decisions, the superior growth achieved by the winners within the portfolio will drive long-term outperformance of EWI's NAV and this could lead to a narrowing of its discount. While acknowledging that interest rates having been weighing heavily on both growth and small cap stocks and that this has eaten heavily into EWI's long-term performance (which also has contributed to a significant widening of the discount), it seems reasonable that the current discount might offer an unusual opportunity to gain access to this strategy, which could potentially see a significant reversal of its recent fortunes if the current headwinds subside or even reverse. One potential trigger is a sustained reduction in inflation which could allow for a deceleration in interest rate rises, even if rates remain above their pre-pandemic levels.

Figure 30: EWI discount over five years



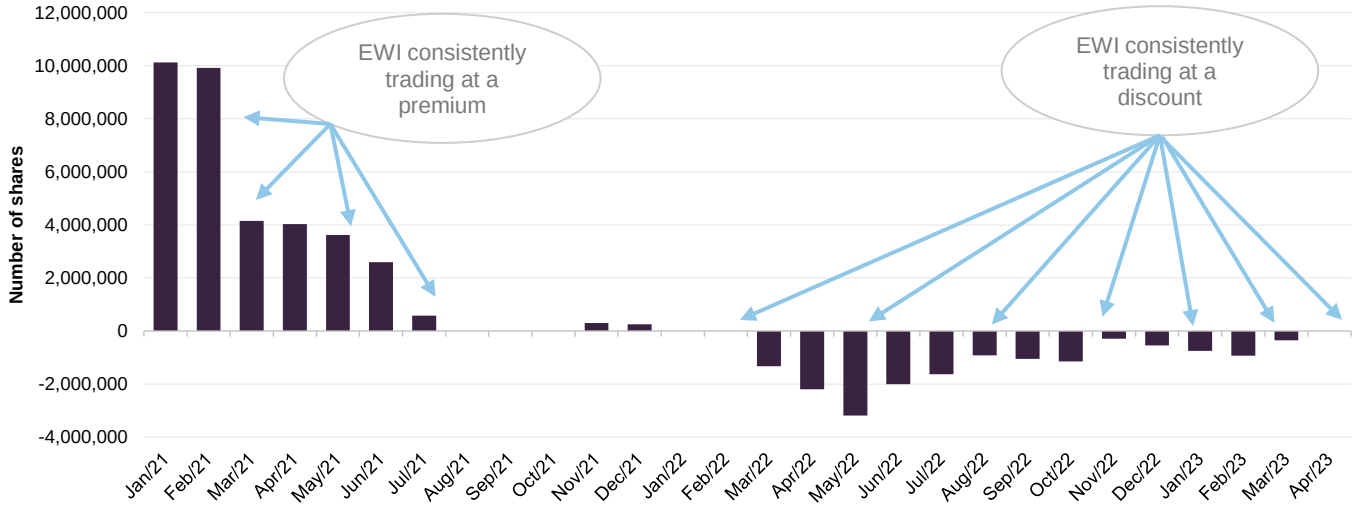
Source: Morningstar, Marten & Co

Board taking action on the discount with NAV accretive purchases

Each year, the board asks shareholders for permission to buy back up to 14.99% and issue up to 10% of EWI's issued capital. Repurchased shares may be held in treasury and reissued when demand returns. Shares will only be issued or reissued at a premium to asset value, thereby enhancing the NAV for existing shareholders.

Figure 31 shows the pattern of net share issuance since the beginning of 2021. It illustrates how the change in pattern of issuance has changed as sentiment towards growth stocks has deteriorated and EWI has moved from trading at a premium to a discount. However, EWI shareholders might draw some comfort from the fact that the board has not rested on its laurels and has been prepared to provide liquidity in both in terms of issuance and repurchases.

Figure 31: EWI net recent share issuance/(repurchases) since January 2021



Source: Edinburgh Worldwide, Marten & Co

Fees and costs

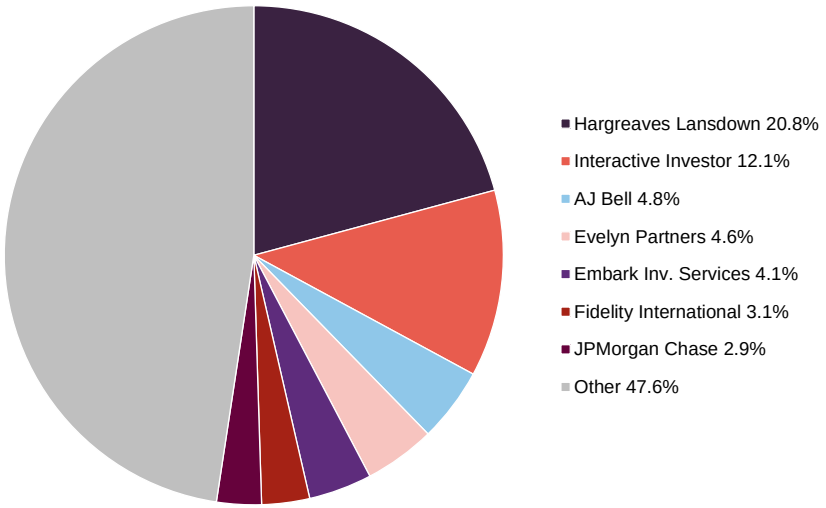
The annual management fee is 0.75% on the first £50m of net assets, 0.65% on the next £200m and 0.55% on any remaining net assets. The management fee is calculated and payable quarterly. The management agreement can be terminated on three months' notice.

The ongoing charges ratio for the accounting year ended 31 October 2022 was 0.63%, down from 0.66% for the prior year and 0.72% for the year ended 31 October 2020.

Capital structure

EWI has a simple capital structure with one class of ordinary share in issue. EWI's ordinary shares have a premium main market listing on the LSE and, as at 12 May 2023, there were 389,419,641 of these with voting rights in issue with 16,334,054 held in treasury.

Figure 32: Major shareholders as at 12 May 2023



Source: Bloomberg, Marten & Co

Gearing and derivatives

The company recognises the advantages of long-term gearing, and the investment policy allows gearing up to 30% of net assets. In practice, however, gearing has tended to be in single digits in recent years. Gearing levels are discussed at each board meeting.

EWI has a £100m five-year multicurrency revolving credit facility which is provided by The Royal Bank of Scotland International Limited and expires on 9 June 2026. In addition, there is a £26m multicurrency revolving credit facility provided by National Australia Bank Limited and an expiry date of 29 June 2023 and a £36m multicurrency revolving facility provided by National Australia Bank Limited with expiry on 30 September 2024. The main covenants relating to both loan facilities with National Australia Bank Limited and the facility with The Royal Bank of Scotland International Limited are that total borrowings shall not exceed 35% of EWI's adjusted gross assets and the minimum adjusted gross assets shall be £260m.

At the end of October 2022, EWI's gearing was in the form of drawings in euros, dollars and sterling. As at 30 April 2023, EWI had gross and net gearing of 13.6% and 12.4% respectively.

Derivatives can be used either as a hedge or to exploit an investment opportunity. In practice, they are not normally used.

Financial calendar

EWI's year-end is 31 October. The annual results are now usually released in January (interims in June) and its AGMs are now usually held in March of each year.

EWI does not have a fixed life and does not hold regular continuation votes.

Management team

Douglas Brodie (portfolio manager)

Douglas joined Baillie Gifford in 2001 and is head of the Global Discovery Team. He became a partner in 2015 and is a CFA Charterholder. Douglas graduated with a BSc in Molecular Biology & Biochemistry from the University of Durham in 1997 and attained a DPhil in Molecular Immunology from the University of Oxford in 2001.

Svetlana Viteva (deputy portfolio manager)

Svetlana joined Baillie Gifford in 2012 and is an investment manager in the Global Discovery Team. She is a CFA Charterholder. Svetlana graduated with a BA in Economics and a BA in Business Administration from the American University in Bulgaria in 2008, MSc in Investment Analysis in 2009 and PhD in Accounting and Finance in 2012, both from the University of Stirling.

Luke Ward (deputy portfolio manager)

Luke joined Baillie Gifford in 2012 and is an investment manager in the Global Discovery Team. He graduated with an MEng (Hons) in Mechanical Engineering from the University of Edinburgh in 2012.

Board

EWI's board is comprised of seven directors, all of whom are non-executive and considered to be independent of the investment manager. It is board policy that all directors will retire and offer themselves for re-election each year. Other than EWI's board, its directors do not have any other shared directorships.

As is illustrated in Figure 33, Henry Strutt and Helen James have both served for more than 10 years. However, the board considers that length of service will not necessarily compromise the independence or contribution of directors of an investment trust company and says that continuity and experience can be a benefit to the board. The board has therefore concluded that there should not be a set maximum time limit for a director or chairman to serve on the board.

Board rotation

Donald Cameron, formerly the chairman of the audit committee, did not stand for re-election at the 2023 AGM. Caroline Roxburgh, who has been a EWI director for just over three years, has taken over as chairman of the audit committee.

As part of its succession planning and for the purpose of refreshing the board, Jane McCracken was appointed as a director on 1 November 2022 and Mary Gunn joined the board on 1 March 2023 (biographies for both, along with those for other board members, are provided below). Beyond the changes noted already, no other changes are expected in board composition over the coming year, although given the length of service of both Henry Strutt and Helen James, it seems reasonable that further succession planning will be required in the coming years.

Directors' fees

Total directors' fees are capped at £250,000 per year (shareholders approved an increase in the cap from £200,000 at the 2022 AGM to allow the board to hire an additional director in advance of Donald Cameron's retirement) and any further change to the cap will require shareholder approval.

Figure 33: Board member – length of service and shareholdings

Director	Position	Date of appointment	Length of service (years)	Annual fee (£)[1]	Share-holding [2]	Years of fee invested[3]
Henry Strutt	Chairman	1 November 2011	11.5	42,000	358,000	12.7
Caroline Roxburgh	Chairman of the audit committee	1 February 2020	3.3	34,000	28,812	1.3
Helen James	Senior independent director	2 December 2010	12.5	29,000	46,936	2.4
Mary Gunn	Director	1 March 2023	0.2	28,000	Nil	Nil
Jane McCracken	Director	1 November 2022	0.5	28,000	Nil	Nil
Jonathan Simpson-Dent	Director	1 February 2020	3.3	28,000	77,966	4.1
Mungo Wilson	Director	8 December 2016	6.4	28,000	99,949	5.3
Average (service length, annual fee, shareholding, years of fee invested)			5.4	31,000	87,380	3.7

Source: Edinburgh Worldwide, Marten & Co Notes: 1) For EWI's financial year ended 31 October 2023. 2) Shareholdings as per most recent company announcements as at 12 May 2023. 3) Years of fee invested based on EWI's ordinary share price of 149.00p as at 12 May 2023.

Recent share purchase and disposal activity by directors

Three directors have purchased EWI shares during the last 12 months: Jonathan Simpson-Dent purchased 10,000 shares at a price of 216.1p per share on 7 April 2022, 7,000 shares at 197.85p per share 9 August 2022 and 5,000 shares at 157.9p on 10 March 2023; Helen James purchased 11,872 shares at 168p per share on 30 September 2022; and Caroline Roxburgh purchased 8,324 shares 179.18p on 24 January 2023. None of the directors have disposed of any shares during the last year.

Board aligned with external shareholders

With the exception of Mary Gunn and Jane McCracken, who are the most recent additions to EWI's board, all of the directors have personal investments in the trust. This is generally considered to be favourable as it helps align directors' interests with those of shareholders. It is noteworthy that while the chairman's tenure as a director is over 10 years, Henry Strutt has a particularly high shareholding which should mean that he is well aligned with external investors. It does, however, distort the average level of years of fee invested for the board as a whole but, even excluding the chairman, the average level of fees invested is still 2.2 years.

Henry Strutt (chairman)

Henry was appointed chairman on 24 January 2017. He qualified as a chartered accountant in 1979, following which he spent over 20 years with the Robert Fleming Group, 17 of which were in the Far East. Henry is a non-executive director of New Waves Solutions Limited.

Caroline Roxburgh (chairman of the audit committee)

Caroline is a qualified Chartered Accountant and was a partner at PricewaterhouseCoopers LLP until 2016. She is a non-executive director and chair of the audit committee of Montanaro European Smaller Companies Trust Plc, a non-executive director and chair of the audit and risk committee of Edinburgh International Festival Society, a non-executive director of the Royal Conservatoire of Scotland and a publicly appointed member of the board of directors and chair of the audit and risk committee of VisitScotland. Caroline was appointed as chairman of EWI's audit and management engagement committee at the AGM on 2 February 2022.

Helen James (senior independent director)

Helen is the former CEO of Investis, a leading digital corporate communications company. She was also previously head of pan-European equity sales at Paribas. Helen is the group chief operating officer of Brunswick Group.

Mary Gunn (director)

Mary is a scientist, lawyer and C-level executive in life science companies, including previously at Pfizer, Crucell, ICON Plc, and Health Decisions. She also served on the boards and advisories of Brown University, Modelis, Lumiio, and SpotArt Foundation. She is currently an Independent Director of Welwaze Medical and the President of RemRem LLC, a value creation advisory for investors, banks, and entrepreneurs in clinical research and life science.

Jane McCracken (director)

Jane has spent her career working with high growth technology businesses based in the USA and UK as an entrepreneur, equity investor, board member and advisor. Her experience covers a variety of areas including enterprise software, e-commerce, fintech, digital health and clinical research. Most recently, she served as a Research Faculty member and Entrepreneur-in-Residence at the Georgia Institute of Technology in Atlanta, Georgia, USA and currently is the Chief Growth Officer for Corps Team LLC. She is also a non-executive director of Radyus Research LLC.

Jonathan Simpson-Dent (director)

Jonathan has spent the majority of his career running entrepreneurial private equity and listed mid-cap international growth businesses across multiple sectors, being a former CEO of Evander Group, Cardpoint and WLT (EMEA), CCO of Cardtronics Inc and CFO of HomeServe Plc and General Healthcare Group. He has also previously worked at PricewaterhouseCoopers LLP, McKinsey & Company and PepsiCo. Jonathan is the chair of Bromford Housing Group Ltd and a Fellow of the Institute of Chartered Accountants.

Mungo Wilson (director)

Mungo is a former solicitor and is associate professor of finance at Saïd Business School, University of Oxford. He is also an associate member of the Oxford Man Institute of Quantitative Finance.

Previous publications

Readers interested in further information about EWI may wish to read our initiation note *Tomorrow's winners*, published on 25 January 2022. You can read the note by clicking on the link or by visiting our website.

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