QuotedData

Update | Investment companies

20 December 2016

Herald Investment Trust

Tech bids demonstrate value

Herald Investment Trust's (HRI's) manager believes recent portfolio activity (bids for Avesco and Mentor Graphics) shows that HRI's NAV does not reflect the true valuations of the underlying companies, particularly when a trade buyer is looking to gain control. The UK is seeing considerable expansion from the major technology players (such as Amazon, Apple and Google). HRI's manager thinks that this development is expanding the skillset of the sector and boosts the ecosystem that supports these tech giants. Small-cap technology, particularly in the UK, has been suffering from a marked lack of liquidity and HRI has seen an expansion in its already significant discount to NAV this year. However, HRI's UK portfolio has a predominantly global customer base and its manager believes it will likely benefit from an improved competitive position following sterling's depreciation.

Small-cap technology, communications and multi-media

Herald seeks to achieve capital appreciation through investments in smaller quoted companies, in the areas of technology, communications and multimedia. Investments will be made globally, although the portfolio has a strong weighting to the UK.

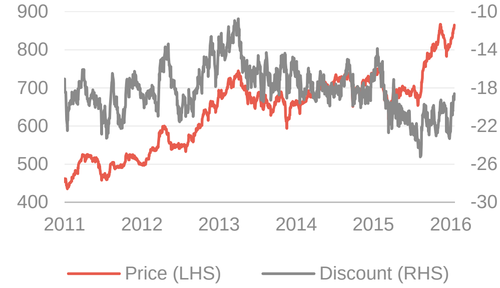
Year ended	Share price total return (%)	NAV total return (%)	B'berg World Tech. TR. (%)	B'berg Sil. Val. Hi Tech. TR. (%)	Numis ex IC plus AIM TR (%)
30/11/12	8.4	11.0	10.8	16.5	19.8
30/11/13	38.4	29.2	15.6	31.6	32.2
30/11/14	(3.5)	(0.7)	29.5	2.5	(0.9)
30/11/15	11.1	13.3	5.2	8.2	12.8
30/11/16	10.1	17.8	33.1	7.9	1.4

Source: Bloomberg, Morningstar, Marten & Co

Sector	Small media, comms and IT
Ticker	HRI LN
Base currency	GBP
Price	865.0p
NAV	1,062.16p
Premium/(discount)	(18.6%)
Yield	Nil

Share price and discount

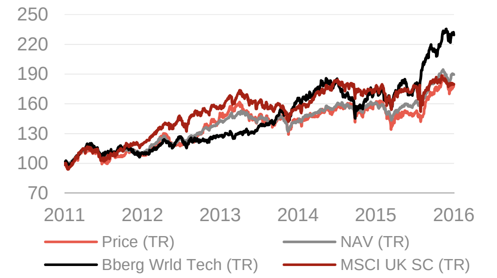
Time period 30/11/11 to 16/12/16



Source: Morningstar, Marten & Co

Performance over five years

Time period 30/11/11 to 30/11/16



Source: Morningstar, Marten & Co

Domicile	UK
Inception date	21 February 1994
Manager	Katie Potts
Market cap	632.5m
Shares outstanding	73.1m
Daily vol. (1-yr. avg.)	78k shares
Net cash	7.2%

Click here for our initiation note

Overview

- London is currently seeing a wave of investment and reinvestment by large US technology companies. HRI's manager believes that this could serve to provide training and career enhancement to the attractive skill set these companies see in London.
- Despite staging a recovery, sterling has been weak since the result of the EU referendum. This could lead to an increase in interest from overseas investors looking to acquire UK businesses. There has been some evidence of this in HRI's portfolio in recent weeks.
- HRI is trading at a marked discount to NAV. While the NAV and discount arguably reflect the limited liquidity in the underlying portfolio, the manager believes that these valuations do not reflect the frequently large premiums that can be achieved when holdings are sold to a trade purchaser.
- HRI has now closed its interest rate swap. This was opened in 2008 and has acted as a drag on performance (see page 10).
- The small-cap technology sector and its investor base have been shrinking in both the US and the UK, but the change in the UK has been considerably more marked.
- Institutional investors are focusing on larger-cap stocks and this is, amongst other factors, appears to be constraining liquidity in small caps. Reduced liquidity makes it harder for managers to add value through market timing. While investment ideas may take longer to come to fruition, for those with the resources and expertise to analyse the space, there is also an increased likelihood of being able to find a mispriced security, and therefore create greater alpha.
- Markets have been moving up since the election of Donald Trump. Trump is considered to be strongly pro-business and small-cap stocks appear to be benefiting.
- Trump has been speaking positively, regarding the UK, and has indicated that he is keen to put in place a free-trade agreement. Although there are no specifics about any possible deal, it is possible that this could be beneficial for business overall.

Fund profile

More information can be found at the trust's website: www.heralduk.com

Readers may also be interested in QuotedData's initiation note of August 2016. Please click here to view.

The glossary on the QuotedData website has explanations for many of the technical terms used in this note.

Established in 1994, Herald Investment Trust (HRI) invests globally in small technology, communications and multimedia companies with the aim of achieving capital growth. It is the only listed fund of its type. The Trust invests globally, but has a strong bias towards the UK, which further distinguishes it from other global technology funds, that tend to be biased towards the US.

New investments in the fund will typically have a market capitalisation of $2bn or less, but are generally much smaller when first investment is made. If successful, these can grow to be a multiple of their original valuation. This type of investing is inherently longer term in nature and so the Trust tends to have relatively low turnover. HRI's manager says that, reflecting the risks inherent in this type of investing, the Trust maintains a highly diverse portfolio of investments (typically in excess of 250) to help mitigate this risk.

Well established and aligned investment manager

HRI has had the same lead fund manager since launch: Katie Potts (the manager or Katie). She was a highly regarded technology analyst at Warburg (later UBS) prior to launching the fund. Katie owns a substantial stake in the company (384,164 shares, increased from 330,448 shares on 31 December 2015) and a significant minority stake in the management company. All things being equal, this should help align the manager's interest with shareholders and motivate her towards making the fund perform well.

Katie is still excited about the ability of the sector to outperform the wider market. In her view, successful technology companies have the ability to extract very high margins by exploiting the intellectual property they create while, at the same, time, putting pressure on the margins of companies in other sectors, as they disrupt old-fashioned business models.

Manager's view

Readers interested in more detail on the current state of the technology sector should see QuotedData's initiation note of August 2016. However, the following summarises the key trends the manager believes are driving the technology sector:

- PC use is declining and mobile phone technology is maturing
- Social media is maturing although digital shopping remains a growth area
- Data centres and 'software as a service' (SAAS) are growing very quickly. A combination of the internet and data centres are reducing the capital requirements for technology start-ups
- Regulation, security, etc. are driving demand for technology solutions
- Emerging markets technology companies tend to supply components for larger OEMs
- Technology sector salary inflation is being driven by RSU (restricted stock units) issuance and similar
- There is currently a lot of cash marooned offshore for big technology companies but this could change, if aided by Trump's tax policies
- There is a burgeoning supply of entrepreneurs and start-up activity.

Technology giants embracing London

Amazon, Apple and Google are all investing heavily in London.

Amazon, Apple and Google are all reportedly experiencing strong growth in London. Amazon has taken a new Shoreditch office and reportedly has 900 vacancies in London, many of which are for software developers. Similarly, Apple has signed a lease for 40% of the Battersea Power Station development, which is to be its new UK HQ. Google's new building at King's Cross houses some 800 software engineers and another 2,000 are expected to follow.

Katie thinks that this growing interest is likely to be good for the UK technology sector. In her view, the large players' presence is likely to stimulate sector expertise, which should increase entrepreneurial activity in what she sees as a vibrant sector.

Limits to sterling depreciation

The UK technology sector has a global customer base and, in HRI's manager's view, should benefit from sterling weakness. UK tech should be relatively insensitive to changes in outlook for the UK consumer.

Katie observes that there is a tendency for HRI to underperform its technology focused fund peers during periods of sterling weakness, while outperforming UK small-cap focused funds. HRI's technology peers tend to have a much higher weighting to the US and benefit, in sterling terms, when the US dollar is appreciating relative to sterling.

There have recently been concerns about the impact of sterling depreciation on the UK consumer and the impact this might have on UK-facing companies. However, Katie thinks that sterling depreciation has probably reached its limit and that the market's reaction is mistaken for most UK technology companies. The UK consumer tends not to be a direct customer of the UK technology sector, whose client base tends to be global. In her view, the falling pound is actually likely to benefit UK technology companies. These tend to have a significant proportion of their costs denominated in sterling but revenues in other currencies and so their pricing should also be more competitive internationally. Katie believes that the effect of this will not be seen immediately but should come through in future results.

Trump and markets

Trump's pro-business policies should benefit the technology sector.

A key development, since QuotedData published its initiation note in August, has been the election of Donald Trump as the next US president. Markets suffered initially in the wake of the result, and the small-cap technology sector, both in the UK and US was not immune. However, as markets began to assess and digest the news, they quickly rallied and the US dollar strengthened. It appears that investors may be less risk averse and this is translating into NAV gains for HRI. The primary explanation for this is that Trump is viewed as being pro-business. Trump has also used a much more conciliatory tone since becoming president elect, than he used on the campaign trail, leading observers to hope that he may forge a less confrontational path once his administration is established.

The technology sector does not rely on consumer finance and so should be relatively insensitive to rising interest rates.

Market short-term interest rates have also experienced a marked increase. This reflects a broad view that the new administration will fund many of his proposals by printing money. If this comes to pass, aggregate demand would likely be stimulated and inflation could rise. Katie thinks that the technology sector is largely insulated from moves in interest rates. Unlike, say, auto manufacturers and housebuilders, its output does not tend to be financed by consumer borrowing. Rising interest rates tend to be negative for equities and fixed rate bonds. However, Katie thinks that, in a rising interest-rate environment, technology should prove resilient and will be one of the better sectors in which to be invested.

Katie thinks that the new administration should be good for business and for the technology sector. If enacted, Trump's proposals to reduce the level of corporation tax will not only be beneficial to business, but should also help facilitate the repatriation of the large cash piles that a number of large US corporations are sitting on. These could be made available to shareholders, which could also stimulate further investment. Katie also strongly believes that excess regulation in public markets, over regulation of the sector, employment law and various non-financial tariffs have been damaging the real economy. She believes that cutting this back will stimulate innovation and ultimately growth.

Limited liquidity in the small-cap technology sector

The manager continues to report shrinking liquidity in small-cap technology stocks. Whilst this can increase the likelihood of finding a mispriced security, the wide spreads can be difficult to realise such holdings, and extract full value in the market, and also make it harder to add value through market timing. The manager believes that a push from the regulator to move to electronic trading will only serve to reduce liquidity further and exacerbate the problem. This is discussed further on page 9.

Portfolio themes

Katie likes the quality of HRI's portfolio and believes it has very strong growth potential in a world that is struggling to find growth. The following is a list of themes that the portfolio currently provides exposure to:

- 'Internet of things' (architecture and platforms)
- Wireless charging
- Digital media
- Advanced networking
- Self-driving cars (focused on components)
- 3D memory and 3D logic
- Machine learning and robot process automation
- Adaptive security architecture
- Mesh App and service architecture
- Adaptable user programmable software
- Wearable medical devices
- Cloud computing
- Advanced cyber defence
- Solid-state drives
- Falling cost of storage
- Big data
- Telehealth
- Energy storage
- Advanced materials

Asset allocation

HRI's manager used the liquidity provided by the third-quarter rally to trim its largest holdings.

At 30 November 2016, HRI had 257 holdings (unchanged from the end of June figure). Arguably, reflecting the long-term nature of the strategy, changes to the portfolio have been modest, since QuotedData published its initiation note on HRI, in August 2016. The manager used the liquidity offered by the third-quarter rally to take profits in most of HRI's largest holdings (see Figure 1) and she says that this is the primary reason why Wilmington has moved out of the top 10 holdings, whilst IQE moved up due to its own strong performance.

HRI's portfolio continues to benefit from takeover activity

The portfolio has benefited from a number of takeovers since QuotedData last wrote (Avesco Group, Mentor Graphics and Alternative Networks) and these are discussed in greater detail below. The manager believes that there are other takeover candidates in the portfolio and that the Trust's NAV does not reflect the value that can be achieved from sales to trade buyers (see below for further discussion). This could be pertinent for the UK portfolio if current sterling weakness attracts overseas buyers for UK assets.

In addition to the various companies discussed below, readers interested in HRI's significant holdings should see QuotedData's initiation note of August 2016.

Cash levels at historic highs

HRI has benefited from holding cash in US dollars.

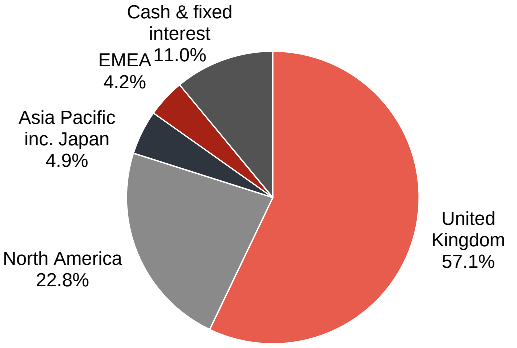
Prior to a spate of takeovers, Katie had been consciously increasing the level of cash in the portfolio, reflecting increasing uncertainty this year, and she has not rushed to reinvest cash received from takeovers (primarily in the US). This cash has been held as US dollars, which has served HRI well, as the value of this has increased in its domestic currency as sterling has depreciated. The manager chose to repatriate some US$15m to sterling prior to the US election, which has also served the Trust well. When looking at Figures 2 and 3 below, it is worth remembering that these are presented as a proportion of gross asset and that HRI has been fully drawn on its £25m borrowing facility. As such HRI's net cash (i.e. after deducting borrowings) is lower.

Figure 1: Top 10 holdings as at 30 November 2016

Holding	Sector	Geography	Allocation 30 November 2016 (%)	Allocation 30 June 2016 (%)	Percentage point change
Diploma	Industrial suppliers	UK	2.7	2.7	0.0
Imagination Technologies	Semiconductors	UK	2.3	2.7	(0.4)
Idox	Computer services	UK	2.2	2.5	(0.3)
GB Group	Computer services	UK	2.0	2.6	(0.6)
Silicon Motion Technology	Semiconductors	US	1.8	2.5	(0.7)
Avesco Group	Media services	UK	1.9	0.7	1.2
SQS Software Systems	Software	UK	1.7	1.1	0.6
Next Fifteen Communications	Media agencies	UK	1.6	1.8	(0.2)
M&C Saatchi	Media agencies	UK	1.5	1.6	(0.1)
IQE	Technology Hardware	UK	1.4	0.8	0.6
Total top 10 holdings			19.3	20.3	(1.0)
Total number of holdings			257	257	

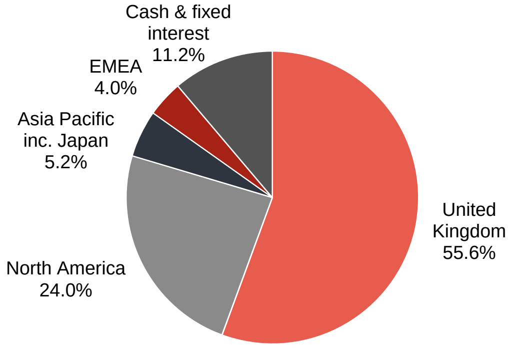
Source: Herald Investment Management, Marten & Co.

Figure 2: Geographic allocation as at 30 November 2016*



Source: Herald Investment Management *Note: as a proportion of gross assets

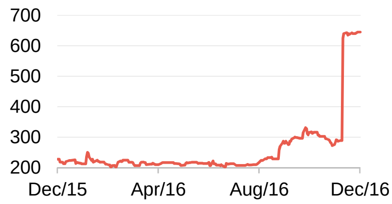
Figure 3: Geographic allocation as at 30 June 2016*



Source: Herald Investment Management *Note: as a proportion of gross assets

Avesco Group

Figure 4: Avesco Group share price over one year (GBp)



Source: Bloomberg, Marten & Co.

On 17 November 2016, UK-based media services company, Avesco Group (www.avesco.co.uk) announced that it had agreed terms, with NEP Group (www.nepinc.com), in relation to a recommended acquisition of Avesco Group at a price of 650p per share.

Avesco Group provides audiovisual equipment, lighting equipment and services to the live events, broadcast and entertainment industries. The company operates through three main brands: Creative Technologies, mclcreate and fountain studios. The purchaser, NEP Group, is a US-based and privately owned production company that provides outsourced teleproduction services for major events throughout the world.

HRI is a long-term investor in Avesco. It initiated a position in April 2008, which was built upon through to 2012 with the manager adding to the position when she considered the share price to be good value and could find the necessary liquidity, and reducing the position when she felt the share price had got ahead of itself. The weighted average buying price is 40.66p per share and, including the disposal of the current holding at 650p per share, this suggests an average selling price of 440.7p as well as an IRR of circa 58% over the lifetime of the holding.

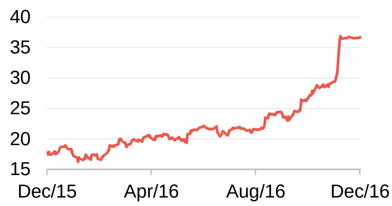
HRI is a long-term investor in Avesco Group. Data on HRI's purchase and sale of Avesco shares suggests an IRR of approximately 58% over the lifetime of the holding.

As at 30 September 2016, HRI had 2,382,013 shares in Avesco or 12.63% of Avesco's issued share capital. HRI's investment policy limits positions in underlying companies to a maximum of a 10% shareholding at the time of purchase. However, share repurchases by Avesco pushed HRI's shareholding above this threshold and a combination of low liquidity and a price that did not reflect Katie's estimation of the value of the company, meant that she did not trim the position.

The closing price for Avesco on 16 November 2016 was 290p per share and so the offer price of 650p is a 124.1% premium to the closing price immediately before the offer was announced. However, HRI's manager says that there had been some speculation over the summer that the company could be a bid candidate and the price drifted up during August and September prior to the announcement of the bid. Prior to this, during the previous eight months, Avesco had tended to trade in the low 200s. Taking the closing price of 209p at the end of July 2016 (before the bid speculation reportedly started), the bid price of 650p represents a premium of 211%. The bid price values HRI's stake at £15.5m.

Mentor Graphics

Figure 5: Mentor Graphics share price over one year (US$)



Source: Bloomberg, Marten & Co.

On 14 November 2016, Mentor Graphics (www.mentor.com) and Siemens (www.siemens.com) announced that they had entered into an agreement whereby Siemens would acquire Mentor Graphics for a price of US$37.25 per share. The deal, which represents an enterprise value of US$4.5bn, is subject to shareholder approval but Mentor's largest shareholder, activist investor Elliott Management, has committed to support the transaction.

Headquartered in the US, with operations in the UK and Netherlands, Mentor Graphics operates in the field of electronic design automation (EDA), providing software and hardware for the computer-aided design of electronics for the semiconductor, automotive and transportation industries. The acquisition, the largest by Siemens since its purchase of US oilfield equipment maker, Dresser-Rand Group in 2014 for US$7.6bn, reflects its move away from consumer orientated products towards industrial applications, under its vision 2020 concept. The acquisition allows Siemens to extend its digital enterprise software portfolio by adding Mentor's capabilities in electronics integrated circuits and systems design, simulation and monitoring. The companies say that these are essential for smart connected products such as autonomous vehicles.

HRI is a long-term investor in Mentor Graphics. Using data from . Data on HRI's purchase and sale of Mentor graphics shares suggests an IRR of 17% in sterling terms.

HRI is a long-term investor in Mentor Graphics. It first made an investment in 2003 and then expanded the holding significantly in 2007 and 2008. The offer price of US$37.52 per share is a premium of 205.1% over HRI's weighted average purchase price of US$ 10.72 per share and values HRI's stake at US$9.38m. Data on HRI's purchase and sale of Mentor graphics shares suggests an IRR on the holding of 12.7% in US dollar terms and 17.0% in sterling terms.

The offer price also represents a premium of 21% over the closing price of Mentor Graphics immediately prior to the announcement of the offer. As illustrated in Figure 5, Mentor Graphics' share price has been on a rising trend over the previous 12 months having fallen sharply (over 30%) in November 2015 on the announcement of its third-quarter 2015 results, which also included negative guidance for the fourth quarter. The offer price of US$37.52 per share represents a 124% premium over its one-year low of US$16.75.

It should be noted, however, that Andrews & Springer LLC, which describes itself as, '*a boutique securities class action law firm focused on representing shareholders nationwide that are victims of securities fraud, breaches of fiduciary duty, and other corporate misconduct*', has made a statement that it is investigating '*potential breach of fiduciary duty claims against the Board of Directors of Mentor Graphics Corporation*' relating to the sale of Mentor to Siemens. It also says that its investigations so far have '*…discovered that the process leading up to the announcement of the merger appears to have significant conflicts of interest, thus making the process and consideration unfair*'. Andrews & Springer's investigation centres on whether Mentor Graphics' directors are breaching their fiduciary duties by failing to adequately market the company and maximise shareholder value. Andrews & Springer also says that it is investigating the company's financial advisor, Bank of America Merrill Lynch, and whether Bank of America Merrill Lynch conducted a fair sales process.

Alternative Networks

Figure 6: Alternative Networks' share price over one year (GBp)

Source: Bloomberg, Marten & Co.

On 21 November 2016, Alternative Networks (www.alternativenetworks.com) and Daisy Intermediate Holdings, part of Daisy Group (www.daisygroup.com) announced that terms had been agreed for a recommended cash offer for Daisy to acquire Alternative Networks for 335p per share. The scheme requires at least 75% of eligible shares to be voted in its favour but, as at the time of the announcement, Daisy said it had received irrevocable undertakings or letters of intent to vote in favour of the scheme equal to approximately 57.1% of Alternative Networks' share capital.

Alternative Networks is a top 20 holding for HRI. As at 31 December 2015, HRI held 1,806,520 shares or 3.6% of the company. The offer of 335p values HRI's shareholding at £6.1m and values Alternative Networks at £165m. Daisy is reportedly taking on £20m of debt as part of the transaction.

The bid for Alternative Networks comes from its closest rival, Daisy Group.

Established in 1994, Alternative Networks provides IT and telecoms managed services to UK businesses including cloud computing, virtualisation, managed hosting, fixed line voice, mobile, systems, IP networks and complex billing software solutions. Both Alternative Networks and Daisy Group have acted as consolidators in the UK telecoms space, buying up smaller operations in recent years. The two companies have been rivals, frequently competing against one another in bidding processes. Alternative Networks employs approximately 600 people across five UK sites, whilst Daisy Group is the largest independent provider in the UK, employing approximately 3,700 people in 28 locations.

Alternative Networks has suffered following the introduction of rules on EU roaming charges.

Alternative Networks has suffered heavily during the last 12 months as its revenues have fallen following the introduction of rules on EU roaming charges. As a consequence, the company has issued three profits warnings and its share price, prior to the announcement of the deal, had fallen by 43.7% from its January 2016 high (from 507.0p to 285.25p).

HRI has been a long-term investor in Alternative Networks. It first invested in 2006, about a year after Alternative Networks had its IPO on the London Stock Exchange in February 2005. At the time of the IPO, HRI's managers liked the business, but felt that the IPO price was unduly full and so chose not to invest. However, once the initial excitement had passed, they were happy to build a position at better valuations in the secondary market. The company has paid a steady dividend.

With regard to the offer price of 335p, HRI's manager says that, whilst this is a 17.4% premium to the closing price immediately prior to the announcement, she would like to have seen the business achieve a higher multiple. However, it was a stock that had been difficult to sell in the market and so the takeover is not entirely unwelcome.

Portfolio's long-term latent value is not reflected in its NAV

HRI's manager says that the portfolio's NAV does not reflect the healthy premiums that trade buyers will frequently pay to take control of a company. Many successful investments will exit the portfolio through a trade sale and, prior to the announcement of a bid, the NAV does not reflect this hidden additional value.

HRI's manager says that holdings such as Avesco and Mentor Graphics provide a very good illustration of the latent value hidden in HRI's portfolio. Katie acknowledges that, given the limited liquidity in stocks such as Avesco and Mentor Graphics, which have very wide spreads, it can be difficult to realise such holdings and extract their full value in the market. However, she says that this presents a challenge as, in the absence of a bid, market prices do not generally reflect the significant premiums that trade buyers will pay to take control of a company. Katie says that HRI is a long-term investor that is able to wait and, at times, follow its money when necessary, to help an investment achieve its full potential. Inevitably there are situations where, as a minority shareholder, Katie has to take a price that she feels perhaps undervalues a company because the majority of other shareholders are prepared to accept it but, for the most part, she considers that is able to wait for good exit opportunities.

Performance

HRI's significant allocation to the UK, at the expense of the US, has seen it underperform global technology indices in recent years.

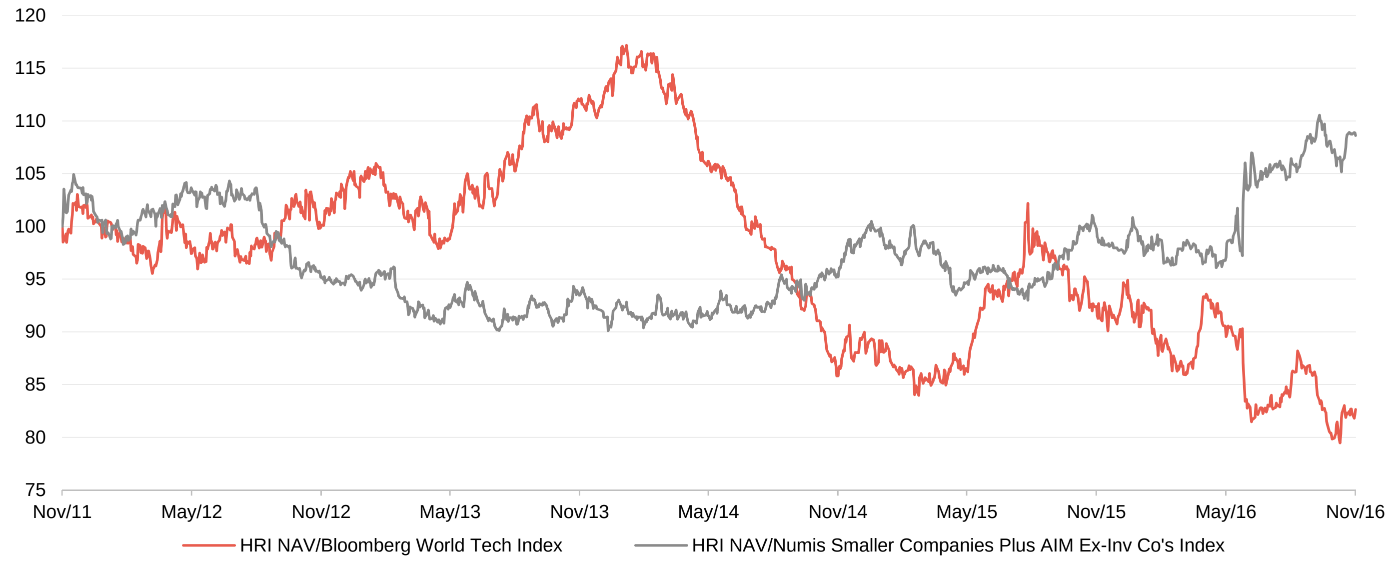
Readers interested in further discussion of HRI's longer-term performance record, particularly its performance by region, should see QuotedData's initiation note of August 2016. However, as illustrated in Figure 7 overleaf, HRI has tended to underperform the global technology market, overall, in recent years, reflecting its underweight exposure to the US, which has performed strongly. Katie believes that US companies are much more fully valued relative to international peers, particularly those in the UK. The impact has been significant, HRI's most recent factsheet showed that, at end November 2016, year-to-date US technology had returned 44.8% as compared to a 4.7% return for the Numis Small Cap Index.

Looking at HRI's performance year to date, its US holdings have been the largest contributor overall although whilst the UK underperformed markedly pre and post-Brexit, it has recovered strongly in the third quarter recovering much of the lost ground.

US dollars received from recent transactions were not repatriated until just before the US election. This benefited the fund as sterling fell in the wake of the EU referendum whilst locking in gains ahead of stronger sterling post Trump's election.

Katie believes that there are many companies in HRI's portfolio that will be big beneficiaries of sterling weakness, but this will only be apparent in future results.

Figure 7: HRI's NAV relative to Bloomberg World Tech Index and Numis Smaller Companies Plus AIM Ex Investment Companies Index over five years to 30 November 2016



Source: Bloomberg, Morningstar, Marten & Co

When looking at HRI's performance, it should be noted that HRI's bias to the UK and towards small caps means that there is no ideal index comparator, which is why a number of indices have been included here. As illustrated in Figure 8, HRI's NAV total return has beaten that of the Numis Smaller Companies Plus AIM Ex Investment Companies Index over all the time periods provided. In contrast, the trend has been one of underperformance relative to the Bloomberg World Tech and Bloomberg Silicon Valley Hi Tech Indices. In the case of both indices, this arguably reflects the stronger performance of the US technology sector in recent years, a market to which HRI has been underweight reflecting its strong allocation to the UK, and in the case of the Bloomberg World Tech, the performance of the big technology names (Apple, Google and the like) in which HRI, with its small-cap focus, will not participate.

Figure 8: Cumulative total return performance to 30 November 2016

	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)
HRI NAV	2.0	4.3	18.5	17.8	32.6	90.1
HRI share price	(1.3)	2.6	17.2	10.1	18.0	77.2
Bloomberg World Tech	(0.3)	8.5	29.7	33.1	81.4	132.3
Bloomberg Silicon Valley Hi Tech	(1.5)	7.6	29.0	26.2	91.0	155.8
Numis Smaller Cos. plus AIM ex IC Index	0.5	1.9	5.6	7.9	13.8	74.5
Bloomberg World	(0.3)	6.1	21.8	23.9	45.8	93.1

Source: Bloomberg, Morningstar, Marten & Co

Closure of interest rate swap removes drag on performance

There has been a long-term drag on performance from HRI's interest-rate swap (see the capital structure section of QuotedData's August 2016 initiation note for more information). The 30-year swap was taken out in 2008 to protect against potential interest-rate rises but has recently been closed. In the intervening period, LIBOR has declined markedly and has remained low with the consequence that the swap has imposed a cost on the trust. The total capital cost of the swap, during its period of operation was £22.5m, with £34.2m in interest. This is equivalent to 48.2p of net assets per share (using today's number of shares in issue) or, put another way, the NAV per share would be 4.5% higher than it now is (using HRI's NAV of 1,063.21p as at 15 December 2016).

Positive contributions from IQE, Imagination Technologies, Next 15, Silicon Motion and BE Semiconductor

Looking at individual holdings, HRI has benefited from a strong performance from IQE (design and manufacture of advanced semiconductor wafer products), so far this year. IQE's share price has risen 100%, reflecting strong growth in the underlying business.

Another strong contributor has been Imagination Technologies (focused on semiconductor and related intellectual property), which designed six graphics cores used in the A10 chip used in the iPhone 7 and 7 Plus. Despite its share price of 243p on 19 December 2016 being some 9.8% below its October high of 269.5p, its share price has risen 82.0% year-to-date.

Next 15's share price is up 29.5% year to date (as at 19 December 2016). Next 15 reported strong growth in its US business.

HRI's European portfolio has generally performed well, according to the manager, with BE Semiconductor being a notable contributor. This stock has more than doubled since the beginning of the year.

Silicon Motion has been the largest contributor from the US portfolio. At 19 December 2016, the company's share price traded at US$43.97. This is some 21.3% below its September high of US$ 55.85 but the stock is still up 40.2% year to date.

HRI has also benefitted from bids for Alternative Networks, Mentor Graphics and Avesco Group (discussed on pages 7 to 9).

Redcentric avoided

HRI's manager could not get comfortable with Redcentric and chose not to invest.

The portfolio has also benefited from not holding certain underperforming stocks such as Redcentric, which announced on 7 November that an internal review had discovered misstated accounting balances in the Group's balance sheet for its recent interims. The company's board has now commenced a forensic review and says that it believes that the audited accounts for previous years will likely need to be restated, resulting in some writing down of historic profits. The board believes that the cumulative effect will be to reduce the company's net assets by at least £10m and it has put its CFO on 'gardening leave'. Redcentric's share price fell 57.8% on the day of the announcement (from 150p to 63.25p). It was trading at 85p on 19 December 2016. HRI's management say that they had previously met the company's representatives but had chosen not to invest.

NCC Group

Katie felt that NCC Group overpaid to acquire Fox-IT. HRI did not participate in the fund-raising to support the transaction and instead the holding was sold down aggressively, thereby avoiding much of the share price fall following the recent results announcement.

NCC Group's share price fell 37.4% on 20 October, to 223.8p, following its trading statement for the four months to 30 September 2016. The stock has since continued to move lower and was trading at 172.75p on 19 December 2016. In HRI's manager's view, NCC Group made a poor acquisition, overpaying for the Dutch business, Fox-IT, which has eroded profitability.

Whilst this detracted from HRI's performance, as the Trust had a position of 2.1m shares when NCC missed on its results, the impact could have been much greater. HRI's position had been sold down aggressively, earlier during the year, when liquidity was available and they were able to obtain sufficient volume. Katie did not like the terms of the transaction to acquire Fox-IT and chose not to take part in NCC's fundraising to finance the acquisition. Instead she sold down HRI's holding from a 7.2m share position at the peak.

GB Group

GB Group suffered when it failed to meet the markets' growth expectations.

GB Group, which specialises in the provision of identity data intelligence services, saw its share price fall some 18.7% on 20 October as it released its pre-close trading statement and announced the appointment of a new CEO. The company had been reportedly expected to show strong earnings growth, which did not materialise, and the company reported a delay in implementing a "gov.uk" contract, which disappointed markets. The stock has since recovered from a low of 215p, on 8 November 2016, to trade at 280.25p on 19 December 2016. However, despite these recent developments, Katie says that GB Group continues to be one of the most profitable stocks that HRI has ever held (the Trust has been invested in GB Group since 2000). The average purchase price is 59.7p per share and, over the lifetime of the holding, HRI has made a book profit of £20.0m. The manager had been top slicing the holding as she felt the valuation had got ahead of itself but still likes the business and sees strong growth potential.

Alternative Networks and SQS

Katie has maintained HRI's holdings in both Alternative Networks and SQS despite difficulties this year. Alternative Networks has since received a bid. The SQS holding was added to at close to the market low and has now fully recovered its price fall.

Alternative Networks, which has since received a bid from rival Daisy Group, suffered heavily following the cut in European roaming charges and repeatedly warned on profits (prior to the announcement of the deal, Alternative Network's share price had fallen by 43.7% from its January high).

SQS Group (Software Quality & Testing Services) has also had a challenging year with its share price falling 32.6% during the first half. However, the company has recovered strongly and is now trading above its opening price at the beginning of the year.

Katie modestly added to both Alternative Networks and SQS Group on weakness this year.

Peer group comparison

[Please click here to visit QuotedData.com for up to date data for HRI's Small Media, Communications and IT Companies peer group.]

[Please click here to visit QuotedData.com for up to date data on the technology, media and telecommunications sector.]

Herald is the only member of AIC's 'Small Media, Communications and IT Companies' sector. Previously this sector, and its large-cap focused equivalent (the AIC's Tech, Media and Telecommunications sector) had more constituents, but the ranks of both sectors thinned following the bursting of the dotcom bubble in 2000 and there has been an absence of new technology funds coming to market since.

Whilst the lack of immediate peers highlights the uniqueness of HRI's investment proposition, it makes the construction of relevant peer group comparisons more challenging. However, to counteract the problem of having a limited number of peers, the grouping included in Figures 9 through 12, comprises both open-and closed-end TMT-focused funds and those that are focused on both large-and small-cap stocks. Although they all offer a different proposition to HRI, the funds listed are arguably all credible alternatives to one another, and so offer a reasonable basis of comparison. However, given the range of structures, sizes and styles, care should be taken when making broad-brush comparisons across the group.

Figure 9: Peer group NAV total return performance to 30 November 2016 (annualised for periods over one year)

	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)	10 years (%)
Herald Inv. Trust	1.4	3.6	17.8	17.2	9.6	13.5	10.2
Allianz Technology	(2.8)	5.0	25.2	23.4	17.2	19.3	13.9
Axa Fram. Glbl. Tech.*	(2.4)	7.5	29.1	29.1	21.8	17.9	14.0
Henderson Glbl. Tech.*	(4.4)	4.4	23.6	23.9	16.7	16.3	13.6
Herald Worldwide*	(1.6)	7.4	29.8	26.5	16.2	14.3	
Polar Capital Tech.	(4.0)	4.1	27.7	29.7	20.6	18.7	13.3
HRI rank	1	6	6	6	6	6	5
Sector arithmetic avg.	(2.3)	5.3	25.5	25.0	17.0	16.7	13.0

Source: Morningstar, Marten & Co. *Note: Axa Framlington Global Technology, Henderson Global Technology Fund and Herald Worldwide Fund are all open-ended funds are so are priced at NAV.

Figure 10: Peer group share price total return performance to 30 November 2016 (annualised for periods over one year)

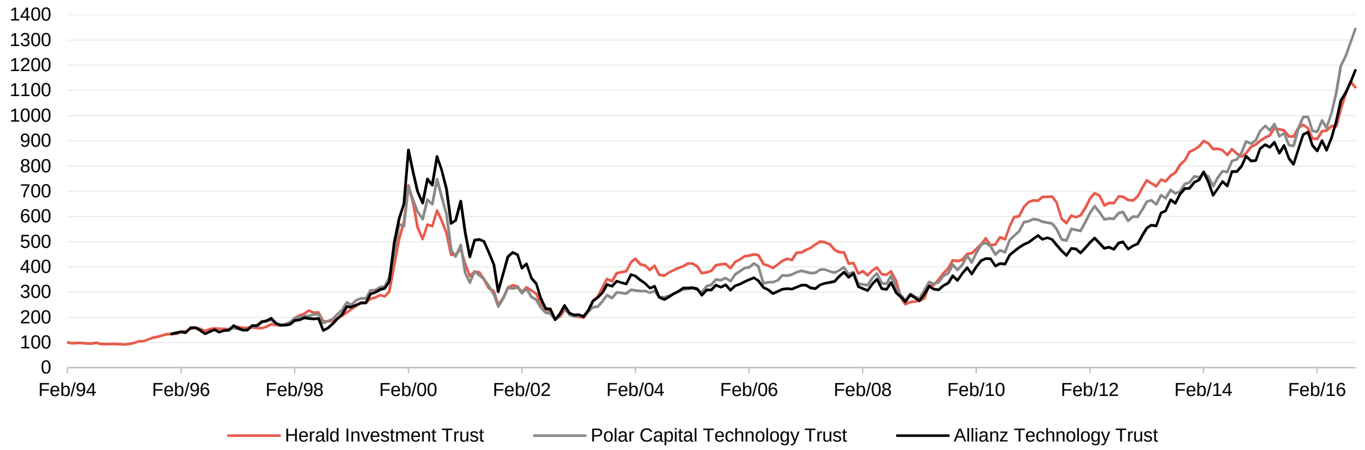
	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)	10 years (%)
Herald Inv. Trust	0.0	4.0	18.8	11.6	6.2	12.4	8.8
Allianz Technology	(1.1)	6.9	33.6	26.4	15.6	20.8	14.2
Axa Fram. Glbl. Tech.	(2.4)	7.5	29.1	29.1	21.8	17.9	14.0
Henderson Glbl. Tech.	(4.4)	4.4	23.6	23.9	16.7	16.3	13.6
Herald Worldwide	(1.6)	7.4	29.8	26.5	16.2	14.3	
Polar Capital Tech.	4.0	13.1	39.1	30.9	20.4	20.2	13.7
HRI rank	2	6	6	6	6	6	5
Sector arithmetic avg.	(0.9)	7.2	29.0	24.7	16.1	17.0	10.7

Source: Morningstar, Marten & Co. *Note: Axa Framlington Global Technology, Henderson Global Technology Fund and Herald Worldwide Fund are all open-ended funds are so are priced at NAV.

Looking at the performance comparisons in Figures 9 and 10, which show the peer group's performance for a range of periods up to ten years in length, it can be seen that both HRI's NAV total return performance and its share price total return performance are below the peer group averages over all of the time horizons provided except one month. This is arguably a reflection of HRI's investment style and how this has performed in recent years. HRI is heavily biased towards the UK whereas the rest of its peers, including its sister fund Herald Worldwide, are heavily biased towards the US.

HRI is also biased towards small caps whereas the other funds have a large-cap bias. The trend in recent years has been one of the outperformance of US technology stocks over UK technology stocks and the outperformance of large-cap over small-cap technology stocks. However, readers may be interested to note that, as illustrated in Figure 11, HRI has been ahead of its other closed ended peers since their respective launches, for most of the time between 2004 and early 2016. It has fallen behind this year, which arguably reflects the impact of sterling depreciation, which has given the performance of the more US focused funds NAVs a boost in sterling terms.

Figure 11: NAV Total return of HRI versus peers since launch



Source: Herald Investment Management, Thomson Reuters

HRI has reasonable liquidity in its shares.

As illustrated in Figure11, HRI is second only to Polar Capital Technology in terms of size and is markedly above the sector average. There is reasonable liquidity in HRI's shares although it could take larger institutional investors some time to build a position of size.

HRI's ongoing charges are the lowest in the peer group.

HRI's size partly explains why its ongoing charges are the smallest in its peer group; at 1.08% they are lower than Polar Capital Technology's, a trust that is some 42% larger. It should also be noted that HRI does not pay a performance fee, unlike its other closed-ended peers.

HRI has the widest discount of the closed-end funds.

Of the three closed-end funds in the peer group, HRI has the widest discount by a significant margin, which may reflect the stronger performance of these funds, in recent years, for the possible reasons discussed above. In terms of gearing, HRI's exposure, at both the gross and net level, is comparable to that of the peer group averages.

Figure 12: Peer group comparison – structure, size and value of average daily volume as at 16 December 2016

	Corporate structure	Fund size (£m)	Value of avg. daily volume* (£000s)
Herald Inv. Trust	UK listed investment trust (closed-ended fund)	776.5	685.7
Allianz Technology	UK listed investment trust (closed-ended fund)	219.6	317.0
Axa Fram. Glbl. Tech.	UK domiciled unit trust (open-ended fund)	339.2	N/A
Henderson Glbl. Tech.	UK domiciled unit trust (open-ended fund)	163.4	N/A
Herald Worldwide	Dublin listed OEIC (open-ended fund)	23.3	N/A
Polar Capital Tech.	UK listed investment trust (closed-ended fund)	1,105.6	1,774.3
HRI rank		2	2
Sector arithmetic avg.		437.9	925.7

Source: Bloomberg, Morningstar, Marten & Co. * Note: value of average daily volume is calculated using the average daily number of shares traded to 11 November 2016 and closing prices as at 11 November 2016. All in sterling equivalent terms.

Figure 13: Peer group comparison –fees, discount, yield and gearing as at 16 December 2016

	Ongoing charges (%)	Perf. fee	Discount (%)	Dividend yield (%)	Gross gearing	Net gearing
Herald Inv. Trust	1.08	No	(18.6)	0.0	103	93
Allianz Technology	1.10	Yes	(6.3)	0.0	100	100
Axa Fram. Glbl. Tech.	1.59	No	N/A	0.0	100	98
Henderson Glbl. Tech.	1.75	No	N/A	0.0	100	94
Herald Worldwide	1.40	Yes	N/A	0.0	100	94
Polar Capital Tech.	1.10	Yes	(0.2)	0.0	104	98
HRI rank	2		3	1	1	6
Sector arithmetic avg.	1.0		(8.4)	0.0	101.2	96.2

Source: Individual fund reports, Morningstar, Marten & Co.

Discount

HRI's discount has seen a marked widening during the last year.

As illustrated in Figure 14, HRI's discount has tended to trade within a range during the last five years; its three and five-year averages are 18.1% and 18.2% respectively. The discount was on a widening trend during the first part of the year but, as illustrated in Figure 14, has been narrowing again more recently, so that HRI is now trading at a discount modestly wider than its three and five-year averages. The discount initially widened during the market sell-off in January and February, which was in common with the broader investment trust sector. The sector then saw some reversion of this trend, although discounts subsequently saw some widening again in the run-up to the EU referendum, HRI being no exception. However, as was discussed in QuotedData's initiation note of August 2016, HRI's move would seem to have been wider than most and, as illustrated in Figure 14, it appears that there has been a step increase in the range in which HRI's discount has been trading.

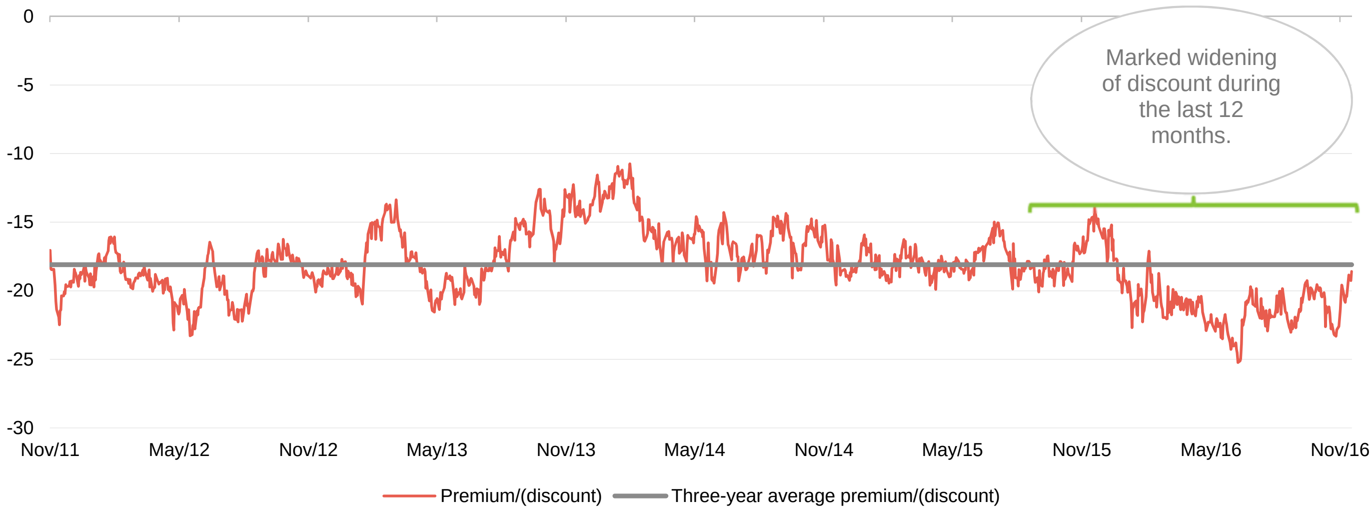
In QuotedData's last note some commentary was provided regarding some of the potential causes including whether HRI's focus on small-cap earlier stage companies made investors relatively more nervous about its prospects (in advance of both the UK referendum and the US election) and whether its UK bias was a drag as investors grew nervous ahead of the referendum.

Increased market certainty could drive a narrowing in HRI's discount.

It would appear that the results of both have not offered markets the certainty that they may have hoped for, which may be a factor in HRI trading at wider discounts but, given the UK's recent post-Brexit recovery and the US markets recovery, post Trump's election, it would appear that much of this is now factored into prices. If this is the case, it would seem reasonable that greater clarity on the outlook for HRI's underlying companies is achieved that HRI could also see a reversion in its discount.

HRI has a significant allocation to the UK (some 56.4%, see Figure 2 on page 6). A significant proportion of these companies' costs are denominated in sterling, which has depreciated in the wake of the vote to leave the EU, but Katie says that their customer base is global and many of these companies are now more competitive. Katie expects this to come through in future results. If HRI experiences an improvement in performance as a result, this could increase demand for HRI's shares and could in turn lead to a narrowing of the discount. During the last 12 months, HRI has repurchased 2,994,818 shares, which is equivalent to 3.9% of its issued share capital.

Figure 14: Premium/(discount) over five years



Source: Morningstar, Marten & Co

Previous research publications

Readers interested in further information about HRI, such as investment process, fees, capital structure, trust life and the board, may wish to read QuotedData's initiation note *Investing in the future,* published on 11 August 2016. The contents pages have been reproduced below. You can read the notes by clicking on the contents pages or by visiting www.quoteddata.com.

Investing in the future – 11 August 2016

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IMPORTANT INFORMATION