

Herald Investment Trust

Who wants to be a billionaire?

Herald, the small cap technology, communications and multimedia trust, recently passed a remarkable milestone. It has created more than £1bn for investors since it launched in 1994. Katie Potts, who has managed the fund over its entire life, points out that £98m was raised from investors (at launch and in subsequent issues). All of this and more has been returned via share buy-backs, yet Herald still has net assets of £952.3m (up from £791m at the start of 2017).

2017 has been good to Herald and to the sector in general; the trust's share price is up 35.4% year-to-date. Katie thinks that the UK stocks that form the core of the portfolio are still not excessively valued, especially given their potential for future profit growth. She says that it is this fact that distinguishes the current run of good performance from previous technology bull markets.

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 position in UK stocks.

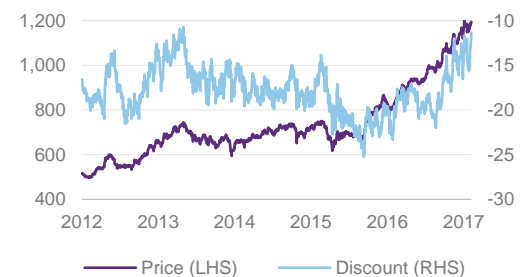
Year ended	Share price total return (%)	NAV total return (%)	Numis ex IC plus AIM (%)	B'berg World Tech TR (%)	MSCI World Index TR (%)
30/11/13	38.4	29.2	31.6	15.6	23.7
30/11/14	(3.5)	(0.7)	(2.5)	29.5	13.9
30/10/15	11.1	13.3	8.2	5.2	3.3
30/11/16	11.6	17.1	7.9	31.5	24.3
30/11/17	43.1	29.7	23.6	30.1	14.1

Source: Morningstar, Bloomberg, Marten & Co

Sector	Small cap TMT
Ticker	HRI LN
Base currency	GBP
Price	1195p
NAV	1348.5p
Premium/(discount)	(11.4%)
Yield	Nil

Share price and discount

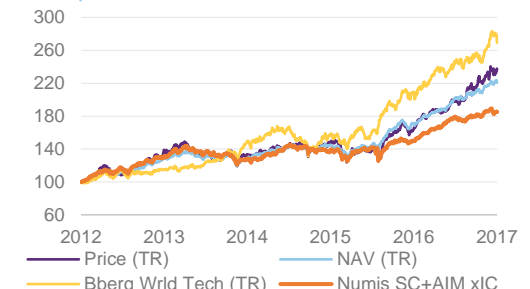
Time period 31/10/2012 to 05/12/2017



Source: Morningstar, Marten & Co

Performance over five years

Time period 30/11/2012 to 30/11/2017



Source: Morningstar, Bloomberg, Marten & Co

Domicile	United Kingdom
Inception date	21 February 1994
Manager	Katie Potts
Market cap	843.9m
Shares outstanding	70.622m
Daily vol. (1-yr. avg.)	96,866 shares
Net cash	9.4%

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Fund profile

A global, small-cap technology fund, unique in the listed investment company sector

Herald invests globally in small (typically sub \$2bn at the time of investment) 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.

Herald launched in 1994 with £65m, topped that up with a further £30m in 1996 and the proceeds of a warrant exercise in 2003. Today Herald has net assets of £952m. Investors at launch had made more than 13.5x their money at the end of October 2017 while, over the same period, the MSCI World Index returned just 4.4x.

New investments in the fund will typically have a market capitalisation of \$2bn or less, but are generally much smaller when the first investment is made (HIML tell us that the median market cap is currently £190m). 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. 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.

Fund manager in place since launch in 1994

Herald has had the same lead fund manager since launch, close to 24 years ago: 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 and a significant minority stake in the management company.

Previous research publications from Marten & Co have noted the important role that Herald plays as a provider of much needed capital to listed technology companies looking for expansion capital (see page 14 for details of our earlier notes).

The size of the fund and the expertise of the management team mean that Herald is an ideal subcontract for any investor looking to gain access to this part of the market and we believe that an investment in Herald complements an investment in one of the large-cap technology funds.

Management arrangements

You can access the fund's website at www.heralduk.com

Herald owns a 15.4% stake in its management company, Herald Investment Management Limited (HIML). HIML manages an OEIC, The Herald Worldwide Technology Fund, which has more exposure to large cap companies than the trust and had assets of c£27m at the end of June 2017, and two venture capital funds which have ceased to make new investments.

Seven-strong team with a presence in London and New York

Katie leads a team of six analysts, five of whom are based in London and one in New York. US companies do not come to the UK as much as they used to, and Herald feels it necessary to have a US presence to enable frequent contact with companies. The HIML team can also draw on the knowledge of three consultants. We have included some biographical details on the team at the end of this note. Research responsibilities are organised along sector lines but Katie has also delegated responsibility for managing the Asian portfolio to Fraser Elms (the deputy manager) and Hao Luo, and the continental European portfolio to Taymour Ezzat and Peter Jenkin.

Significant 'skin in the game'

Katie owns a substantial stake in Herald (404,877 shares as at 31 December 2016) and a significant minority stake in HIML.

An overview of the technology sector

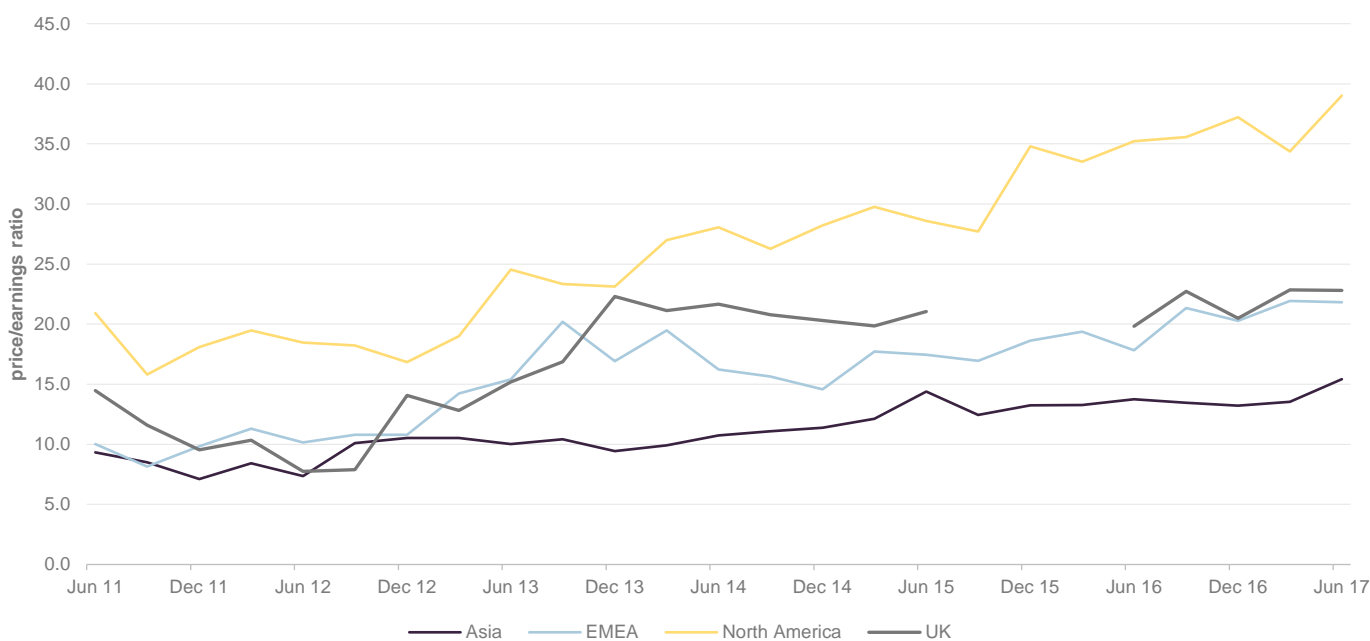
The technology sector has been having a good run. Katie thinks that, for a large part, this is because investors are attracted to the growth potential of the underlying stocks. In other words, performance is being driven from bottom-up fundamental value considerations rather than a top-down rush to embrace the sector. There was a rush of takeovers in Q4 2016 but this did not carry over into 2017. Katie feels that, in retrospect, the market was too cheap at the end of last year and this situation has now been rectified. Along the way, some of the more attractive, cash generative companies were snapped up. In addition, major corporations are being more cautious and potential buyers may be waiting to see how Brexit pans out. As mentioned in the last report, US companies appear to be poaching staff rather than buying whole companies.

Katie was concerned that, as the UK lost its largest IT companies to bids, this might impact our ability to train the next generation of business leaders. However, the US giants have been investing in the UK. The likes of Amazon and Google are nurturing talent here.

Katie believes that big data and cloud based computing are powering a new growth phase for the sector. Amazon has been driving down the cost of its servers (even going as far as to bypass the server manufacturers and buying components to build their own). This is driving down the barriers to entry for technology start-ups. The availability of cheap data storage and much faster processing speeds is also fuelling the growth of artificial intelligence (AI).

Firms such as Google and Microsoft have been making some of their AI technology open source, to encourage developers to write apps for their platforms (to entice people into their universe). The growth of AI is allowing the emergence of new opportunities such as apps that can interpret images and improvements in speech recognition.

Figure 1: Herald portfolio historic price/earnings ratio by region



Source: Herald Investment Management

After such a good run for the sector, it might be reasonable to ask how close we are to the peak in markets. Especially as Katie has already warned of a bubble forming in the

IT venture capital world. Katie notes, however, that valuation multiples in the portfolio have not expanded much in the UK portfolio where the average p/e is now around 22x. This is not excessive as gross margins are high and so revenue growth can have a big impact on the bottom line.

Investment process

Extensive fundamental research

Bottom-up stock selection based on fundamental analysis. Herald's universe is vast with over 5,000 listed companies

HIML's investment process is driven by bottom-up stock selection, based on extensive fundamental research of the universe of smaller companies that make up the telecommunications, multimedia, and technology sectors. The listed universe within this space includes more than 5,000 quoted companies but, in their respective markets, these companies also compete against many more unquoted companies and the HIML team believes it important to get to know as many of these as possible. This is not just because unquoted companies may eventually list, but because the information the HIML team gleans from competitors, customers and suppliers can be a useful source of ideas; valuable in evaluating how sustainable a company's competitive position is; assessing the risks within a business; as well as providing a useful means of cross-referencing the information provided by another company's management.

Idea generation

In terms of idea generation, HIML benefits from being a major player in the UK and companies will routinely make the effort to present to the team. The US is a very important market however, and as small-cap US technology companies are visiting London less frequently, HIML established a satellite office in New York. In addition, Katie visits the US for around five weeks a year to meet companies and the wider HIML team also travels extensively.

Searching for companies with sustainable advantages

The team is looking for stocks that can achieve high returns on capital and/or will trade on single digit P/E's within an acceptable timeframe

At heart, the members of HIML's team are value investors. Rather than just looking to identify companies with the capacity to grow, they are looking for companies that are capable of making decent returns on capital or those with earnings growth which will propel them to a single digit P/E within a reasonable period of time. This requires an analysis of a company's products, markets and competitive position. In this regard, the HIML team is looking for companies where it can see clear markets for its products and where it has advantages over the competition that mean it is more likely to succeed. These come in a range of forms but could include superior technology, network effects or barriers to entry such as specific intellectual property, patents and the like.

Reflecting the benefits that can be accrued from making early-stage investments in technology companies, loss-making companies are considered for the portfolio. However, the team needs to be able to see both a significant market opportunity and a clear path to profitability. The team tends to avoid companies that are trading on large multiples of sales and prefers not to own stocks trading on what it describes as 'concept valuations'.

HIML says that it does not attempt to model companies' cash flows in any great detail and that, for the types of companies in which it is investing, there is usually far too much uncertainty to make this a useful exercise. However, it does spend considerable time

analysing companies' accounts to gain an understanding of how a business works and the robustness or otherwise of its earnings.

A high degree of stock-specific risk necessitates that Herald's portfolio is diversified

The importance of diversification

The nature of smaller technology, multimedia and telecommunications (TMT) companies is that they are often dependent on a single product or service and, while success can propel share prices many times higher, failure can mean bankruptcy. New technologies can create value very quickly but they can also severely disrupt existing business models and product life cycles can be quite short. The high degree of stock-specific risk that this entails is countered by having a high degree of diversification within the portfolio.

Liquidity considerations also play a part. In general, Herald holds less than 5% of the share capital of the companies in its UK portfolio. These small-cap positions tend to be less liquid and, from a risk management perspective, this inherently places a limit on the amount of a company that the team will wish to hold, as larger positions are harder to buy and sell and are more likely to move the market. The handful of companies Herald holds with a larger percentage of ownership are often those that needed to raise cash but found insufficient other large investors willing or able to invest. Stocks that are held in large size by other investors can make HIML nervous, in case these shareholders ever become forced sellers.

At the end of October 2017, Herald had 264 holdings. The HIML team is conscious that, in some investors' eyes, this is a large number of positions to follow but it counters that the small companies in which it is investing have far simpler business models than most large-cap companies, and that this makes them much easier to follow in detail. An alternative strategy could be to move up the market-cap scale to find greater liquidity, which would allow the team to increase the average position size and, in the manager's view, necessitate a migration to a much heavier US weighting. However, the team believes that it is crucial that Herald maintains exposure to micro caps. Katie says that this is where Herald's best returns have originated, with many stocks rising by more than 10 times, and Katie also believes that smaller cap stocks are generally better value as these companies are not well covered by analysts. The advent of MiFID II is likely to restrict research coverage further.

Portfolio construction is driven by stock selection

Portfolio construction

HIML's investment process is driven entirely by stock selection and without reference to any benchmark index. The portfolio has long had a bias to the UK. This reflects Katie's belief that the UK technology sector is more vibrant than Europe's; UK stocks are, generally, more reasonably valued than US ones; and Asian stocks generally have inferior business models (frequently they are providing outsourced manufacturing services to larger tech companies and often have little pricing power).

Liquidity is an important driver of position size

Higher conviction ideas form the core of the portfolio (the top 10 holdings were 19.1% of the fund at the end of October 2017). Herald's larger positions usually started off life as much smaller positions and then grew as they outperformed their brethren.

Herald has some minor exposure to unquoted companies, including its stake in HIML. This is not an area that the trust is focused on and no more unquoted investments are planned currently. The HIML team believes that it is useful that Herald retains the flexibility to hold unquoted investments, however, as this gives it the opportunity to retain attractive companies that choose to delist.

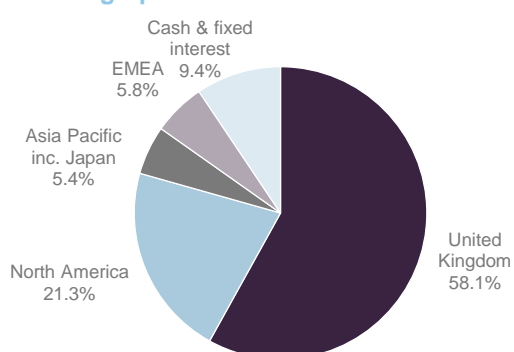
Sell discipline is driven by valuation and the viability/maturity of the business model

Sell discipline

Stocks are sold when valuations no longer reflect the growth prospects of the company, their margins start to normalise relative to the wider market (an indication that the company's intellectual property is no longer capable of supporting superior returns) or when there is a clear deterioration in the business model. Companies that have grown larger are typically top-sliced to fund new investments and provide further capital to the earlier stage smaller companies.

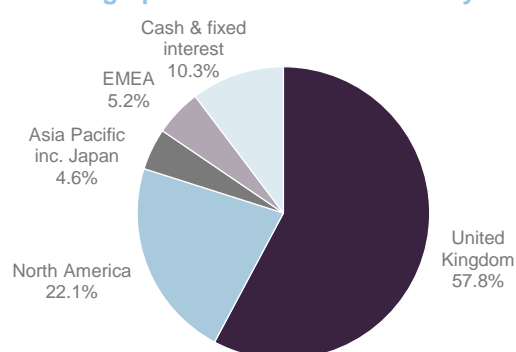
Asset allocation

Figure 2: Geographic allocation as at 31 October 2017*



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

Figure 3: Geographic allocation as at 31 May 2017*



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

The changes to Herald's asset allocation have been minor since we last published. The exposure to North America has slipped a little, reflecting Katie's caution over US valuations.

Figure 4: Top 10 holdings as at 31 October 2017

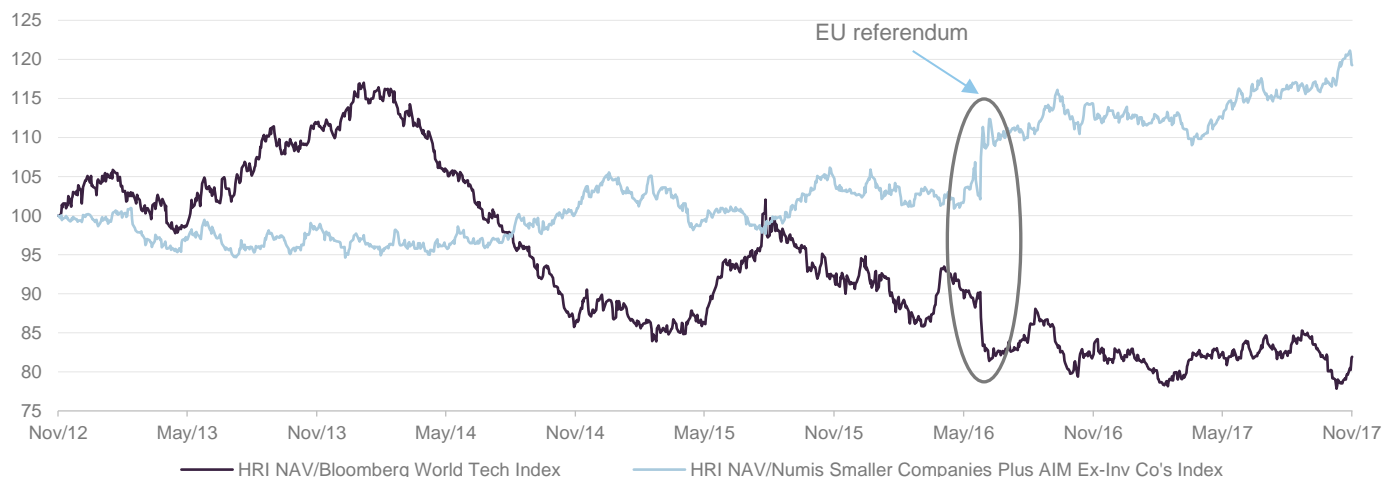
Holding	Sector	Geography	Allocation 31 Oct 2017 (%)	Allocation 31 May 2017 (%)	Percentage point change
IQE	Technology hardware & equip.	UK	3.1	2.2	0.8
GB Group	Software & computer services	UK	2.7	2.9	(0.2)
Diploma	Support services	UK	2.0	2.8	(0.8)
Idox	Software & computer services	UK	1.9	2.5	(0.6)
BE Semiconductor Industries	Technology hardware & equip.	Netherlands	1.8	1.5	0.3
Bango	Software & computer services	UK	1.8	1.1	0.7
Next Fifteen Communications	Media	UK	1.7	1.8	(0.1)
Silicon Motion Technology	Semiconductors	US	1.4	1.7	(0.3)
Pegasystems	Software & computer services	US	1.4	1.6	(0.2)
M&C Saatchi	Media	UK	1.3	1.5	(0.2)
Total top 10 holdings			19.1	18.6	

Source: Herald Investment Management, Marten & Co.

Bango has entered the top 10 holdings at the expense of Telit Communications. Otherwise the make-up of this list is unchanged since we last published. These are discussed in the next section.

Performance

Figure 5: Herald's NAV relative to Bloomberg World Tech Index and Numis Smaller Companies Plus AIM ex Investment Companies Index over five years to 30 November 2017



Source: Bloomberg, Morningstar, Marten & Co

Up-to-date information on Herald is available on the QuotedData website

Figure 5 demonstrates that, relative to UK small caps, as represented by the Numis Smaller Companies plus Aim ex investment companies index, Herald's run of outperformance, which began in the summer of 2014, continues.

Relative to large cap technology stocks, as represented by the Bloomberg World Technology Index, Herald has faced two main challenges: investors' preference for mega cap stocks and the weakness of sterling. The latter point is particularly evident in the performance of the fund following the EU referendum. A drop in sterling flattered the fund's performance relative to the Numis index but hit comparisons with global indices. More recently, Herald has been holding its own against the Bloomberg World Technology index, as is evident in the one year numbers in Figure 6.

Figure 6: Cumulative total return performance to 30 November 2017

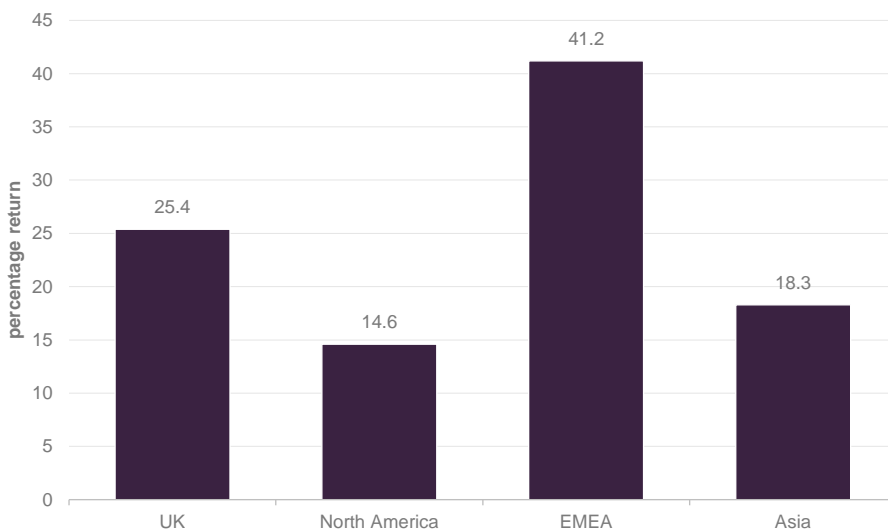
	1 month (%)	3 months (%)	6 months (%)	1 year (%)	3 years (%)	5 years (%)
Herald NAV	0.6	4.6	9.6	29.7	19.8	17.2
Herald share price	0.7	10.0	19.4	43.1	21.0	18.8
Numis Smaller Cos. plus AIM ex IC Index	(1.5)	1.9	3.3	23.6	13.0	13.1
Bloomberg World Tech	(1.5)	4.7	10.4	30.1	21.6	21.9
MSCI World	0.2	1.3	4.5	14.1	13.6	15.6

Source: Morningstar, Bloomberg, Marten & Co

Figure 7 shows the geographic breakdown of returns, as estimated by HIML, for the first nine months of 2017. October and November were also strong months for the sector and the trust. Katie thinks 2017 has been one of the best years for the trust this century. Share prices have risen but earnings have been coming through as well. However, for a sterling-based investor, currency weakness has flattered returns from overseas markets to the detriment of a fund like Herald which has a large domestic bias.

Herald's relatively large cash weighting has acted as a drag on returns over the past year. The manager was perhaps too cautious about reinvesting the money that flooded in from the takeovers at the end of last year. In retrospect, Katie wishes she had geared up the fund at the start of the year.

Figure 7: Geographic split of returns at 30 September 2017 year-to-date



Source: Herald Investment Trust

Major drivers of performance

Over the long term, HIML has identified 20 stocks that collectively have contributed £370m of the close to £1bn of value created by Herald since launch. Topping this list are Imagination Technologies, IQE, Diploma, GB Group and Telecom Plus which, between them, accounted for £137m of the total. The latter four are all significant positions in the fund (Telecom Plus falls outside the top 10 holdings).

Figure 8: Imagination Technologies share price



Source: Bloomberg, Marten & Co

Imagination Technologies is a stock that we discussed in our last note. It is worth focusing on as it illustrates neatly the rationale for top slicing positions in the portfolio and maintaining portfolio diversification. In April 2017, Imagination’s share price tumbled from around 270p to around 100p, when Apple abruptly removed its processors from future versions of the iPhone. It had been one of Herald’s largest holdings but, crucially, Katie had been taking profits on a regular basis as it soared in value over the years. Over the time that she held it, even with that share price fall, it made £33m for the fund. So many other stocks in the portfolio were doing well at the time that Herald’s net asset value actually rose during April. In November, Herald received cash for the remainder of its holding following a bid.

Katie has published a list of stocks that have at least doubled in 2017 and it is remarkably long. At the end of September 2017 this included:

Figure 9: Stocks that have doubled in first nine months of 2017

Adesto	Bango	BE Semiconductor
BitAuto	BluePrism	Cloudcall
Eg Solutions	Frontier Development	Gfinity
Hydrogenics	IQE	LoopUp
Microgen	RingCentral	Sophos
Spectra Systems	Taptica	Wandisco
Zoo Digital		

Source: Herald Investment Trust

We have talked about a number of Herald’s key holdings in previous notes but a few of these might be worth highlighting:

Figure 10: IQE share price



Source: Bloomberg, Marten & Co

Figure 11: Blue Prism share price



Source: Bloomberg, Marten & Co

Figure 12: Zoo Digital share price



Source: Bloomberg, Marten & Co

IQE

IQE develops, manufactures and sells advanced semiconductor materials worldwide. Herald has been an investor in the company since it was a microcap stock. Its shares have more than doubled since we published our last note on Herald in July, having already more than quadrupled over the previous twelve months. Katie was keen that the company take advantage of investors' enthusiasm for the stock with a fundraise. IQE raised £95m on 10 November and intends to use the money to expand its production capability and its ability to meet demand for its VCSEL wafers (used in 3D sensing) in particular. Katie had top sliced the position ahead of this but Herald participated fully in the placing.

Blue Prism

Blue Prism provides software to support robotic process automation. It IPO'd in March 2016 at around 78p (this is when Herald acquired the shares) and its shares are £12.17 today having touched £16.83 on 27 November. It is seeing significant customer growth and is attracting attention from investors. A recent trading update reported that "The board is encouraged by the level of monthly recurring revenue at the year end and as such, now expects revenue for the current financial year to be above the upper end of the current analyst range".

Sophos

Sophos is an IT security and data protection business based in the UK. Its shares have more than doubled this year although they have been a little weak of late as the private equity backers of the business have just placed £315m worth of stock.

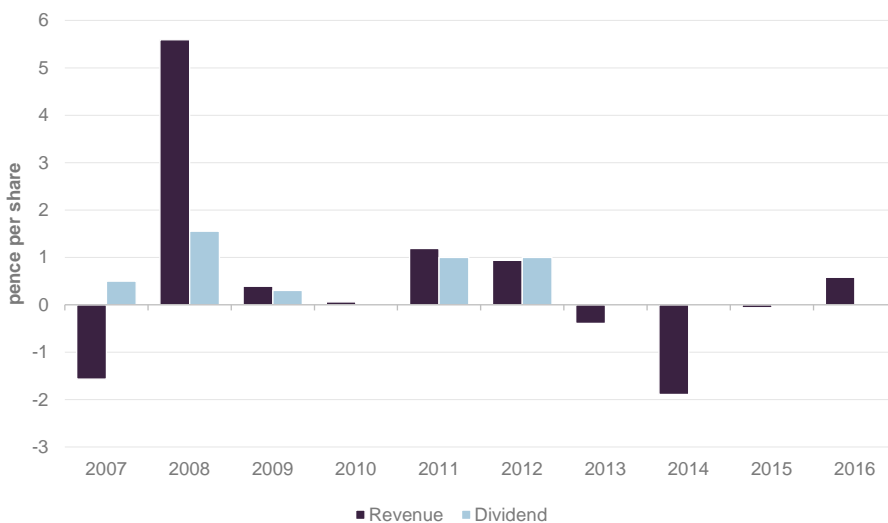
Zoo Digital

Zoo Digital's shares have come off a little post the publication of its interim results on 13 November but its shares are still 3.3x the level that they were when we published our last note. Zoo Digital provides cloud-based localisation (subtitling and dubbing, for example) and digital distribution services to the global entertainment industry. It has a presence in London and Los Angeles but its operations are in Sheffield. Revenues have been rising fast on the back of new contact wins but this is still a small company. A fundraise in April 2017 raised £2.6m, Herald had lent the company money historically and converted its loan into equity at this time. Katie says that Zoo is a good example of the transformation that can take place in a company's fortunes when it moves from being loss-making to profitability. To avoid significant portfolio risk, such companies will start life as small positions in the portfolio.

Dividend

Herald is focused primarily on generating capital growth and dividend income makes up only a small part of returns. The consequence of this is that Herald only declares a dividend where this is necessary to retain investment trust status and, in practice, no dividend has been declared since 2012.

Figure 13: Revenue earnings and dividends (pence per share) over 10 years



Source: Herald Investment Trust. Note: the 2008 dividend excludes a special dividend of 3.45p per ordinary share which was paid in relation to the recovery of VAT on management fees.

Discount

As Figure 14 shows, Herald’s discount has been on a narrowing trend since the summer of 2016. A combination of strong performance, share repurchases and an increased emphasis on shareholder communication appears to be having a positive effect. Over the past year the discount has moved within a range of 25.2% to 10.7% with an average of 17.8%.

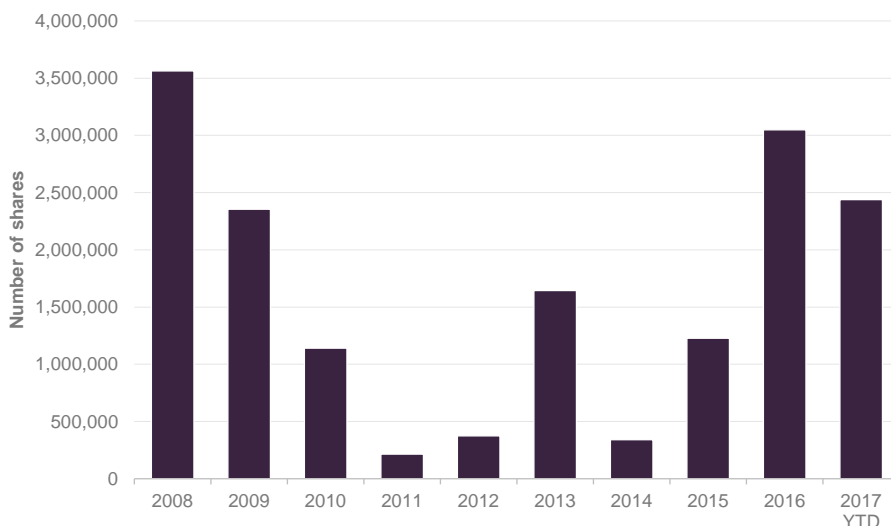
Figure 14: Herald share price discount to net asset value in percentage terms over five years to end November 2017



Source: Morningstar, Marten & Co

Herald's board has not set a formal discount target but it has authorised the use of share buy backs with the aim of helping to provide some liquidity. The board takes powers each year to repurchase up to 14.99% of the then issued share capital and, as is clear from Figure 15 it is prepared to use them. Any shares repurchased are cancelled.

Figure 15: Herald share repurchases over the past 10 calendar years



Source: Herald Investment Trust

Fees and costs

1% annual management fee,
no performance fee

HIML's management fee is 1% of net assets (levied at a rate of 0.08333% per month) where the NAV is calculated on mid-market prices. This is somewhat unusual in the investment trust space, where NAVs are usually calculated at bid prices, but, given the nature of Herald's underlying holdings, whose small-cap nature suggests their spreads will be wider than the market average, we think this is sensible given the specialist services that HIML provides. There is no performance fee. The management fee also covers the cost of company secretarial services, which HIML has delegated to Law Debenture Corporate Services.

In the year to the end of December 2016, Herald's ongoing charges ratio was 1.09%, marginally up on the figure for the year before which was 1.08%. The asset management contract is subject to 12 months' notice.

Capital structure and life

Herald has 70,621,882 ordinary shares in issue and no other classes of share capital.

The company has a sterling loan facility of £25m (maturing 31 December 2017) and a £25m multi-currency revolving advance loan facility maturing 31 December 2019.

Herald does not have a fixed life but a continuation vote was held at the AGM in April 2016. Another is scheduled for the AGM in 2019 and every third year thereafter.

The company's year end is 31 December and AGMs are normally held in April.

Board

Herald's compact board helps to keep its ongoing charges low.

Herald's board comprises four non-executive independent directors. This is a relatively compact board, for a company of its size, helping to keep the ongoing charges ratio down. Total fees for the directors are capped at £125,000. Figure 22 shows the composition of the board and provides some information on members' length of service and shareholdings in the company. It is board policy that all serving directors retire and offer themselves for re-election annually.

As illustrated in Figure 22, all of the directors have made significant personal investments in Herald's ordinary shares.

The chairman, Julian Cazalet, was managing director – corporate finance at JPMorgan Cazenove until his retirement in December 2007. He is also chairman of Lindsell Train Investment Trust. Tom Black is chairman and co-founder of Digital Barriers and was previously chief executive of Detica. Karl Sternberg was a founding partner of Oxford Investment Partners. He was CIO Europe & Asia Pacific at Deutsche Asset Management. He is a non-executive director of a number of other investment companies. James Will was, until 2014, chairman and senior corporate finance partner of Shepherd & Wedderburn LLP. He is also a non-executive director of Scottish Investment Trust.

Figure 16: Board member - length of service and shareholdings

Director	Position	Appointed	Length of service (years)	Annual director's fee (GBP)	Shareholding*
Julian Cazalet	Chairman	18/01/08	9.9	31,500	150,000
Tom Black	Senior Independent Director	01/05/13	4.6	23,000	6,900
Karl Sternberg	Director	21/04/15	2.6	21,000	5,578
James Will	Director	21/04/15	2.6	21,000	6,000

Source: Herald Investment Trust, Bloomberg, Marten & Co. Julian Cazalet's holding of 150,000 shares comprises 100,000 shares held beneficially and 50,000 shares held non-beneficially.

Management team

Katie is supported in managing the funds by a team of six other investment professionals and three consultants.

Katie Potts is the managing director and also the lead fund manager for HIML. She established HIML in December 1993 to manage Herald, which was launched in February 1994. Katie read Engineering Science on a GKN Group scholarship at Lady Margaret Hall, University of Oxford. She worked for five years in investment management at Baring Investment Management Limited, before joining S.G. Warburg Securities' UK electronics research team in 1988. The team was consistently voted top team in the Extel survey of analysts in the sector, and she was voted top analyst by finance directors of electronics companies canvassed by *The Treasurer* magazine. In addition, Katie had responsibility within S.G. Warburg's UK research department for commenting on accounting issues.

Fraser Elms joined HIML in May 2000. He is the deputy manager of Herald and has lead responsibility for managing HIML's Asian portfolios. Prior to joining HIML, Fraser was a technology analyst with Dresdner Kleinwort Benson, where he covered the European technology sector. Before this he worked at Prudential for three years as

member of a team of three UK unit trust fund managers that managed £5bn in equities, with Fraser having lead responsibility for three funds collectively worth £400m. He graduated from Lancaster University with a degree in Economics and initially joined Prudential as a product manager for their unit trusts, before completing an MSc in Investment Analysis at the University of Stirling and re-joining Prudential in an investment role. Fraser covers the semiconductor sector.

Taymour Ezzat joined HIML in November 2004. He is a portfolio manager on the venture funds, sitting on the venture committee, and taking lead responsibility for a number of the investments in the venture portfolios. He also has analytical responsibility for the media sector across all HIML's quoted and unquoted portfolios. Previously he spent a year appraising a number of venture capital opportunities for E.D. Capital Partners. Prior to that, Taymour spent six years at Northcliffe Newspapers, the regional newspapers division of Daily Mail and General Trust (DMGT), latterly as finance director of its electronics publishing arm. Beforehand, Taymour worked for Reuters in London and Eastern Europe for four years. He qualified as an accountant with Price Waterhouse, and studied Economic History at the London School of Economics and Political Science.

Hao Luo joined HIML in 2004 and works with Fraser Elms on managing the Far East portfolios. He also has analytical responsibility for the manufacturing sector globally. Hao obtained a BA in Economics from Hunan University in China and a Masters degree in Finance from Manchester University. He worked for J&A Securities in Shanghai from 2000-2002. Hao is a CFA charterholder.

Peter Jenkin joined HIML as an analyst in 2015. Peter covers the software sector and contributes to the overall investment selection. Before joining HIML he studied Construction Engineering Management at Loughborough University.

Bob Johnston was recruited to establish a US office. He has more than 20 years' experience in the technology sector on the sell-side, and he has worked with the HIML team for roughly 15 years. Most recently, Bob was with the technology specialist Pacific Crest. He previously also worked for Hambrecht & Quist and SoundView Technology Group. Bob has taken responsibility for telecommunications, networking and security analysis.

Danny Malach joined HIML in June 2016. At Newcastle University Danny obtained First Class Honours in his undergraduate degree in Accounting and a Merit in (MSc) International Economics and Finance.

Previous research publications

Readers may wish to read our initiation note [Invest in the future](#), published on 16 August 2016, and our update notes, [Tech bids demonstrate value](#), published on 20 December 2016, and [Backing growing businesses](#), published on 11 July 2017. You can read the notes by clicking on them in Figure 12 or by visiting our website, www.martenandco.com.

Figure 17: Marten & Co. previously published research on Herald

Title	Note type	Date
Invest in the future	Initiation	16 August 2016
Tech bids demonstrate value	Update	20 December 2016
Backing growing businesses	Update	11 July 2017

Source: Marten & Co.

Authorised and regulated by the Financial Conduct Authority
123a Kings Road, London SW3 4PL
0203 691 9430

www.martenandco.com

Registered in England & Wales number 07981621,
2nd Floor Heathmans House
19 Heathmans Road, London SW6 4TJ

Investment company sales:

Edward Marten
(em@martenandco.com)

Alistair Harkness
(ah@martenandco.com)

Investment company research:

James Carthew
(jc@martenandco.com)

Matthew Read
(mr@martenandco.com)

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