

Games Workshop Group

Initiation of coverage

On a mission

Consumer goods

10 April 2019

Price **3,216p**
Market cap **£1bn**

Net cash (£m) as at 30 November 2018	25.3
Shares in issue	32.6m
Free float	95%
Code	GAW
Primary exchange	LSE
Secondary exchange	N/A

Share price performance



Business description

Games Workshop is a leading international specialist designer, manufacturer and multi-channel retailer of miniatures, scenery, artwork and fiction for tabletop miniature games set in its fantasy Warhammer worlds.

Next events

Pre-close update	June 2019
Full-year results	July 2019

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Games Workshop Group is a research client of Edison Investment Research Limited

Games Workshop (GAW) is the global leader for tabletop miniature gaming, a market it created and the fastest-growing segment of the \$12bn global non-digital games market. GAW drives international multichannel sales through a robust pipeline of innovative new product launches and extensive use of online and social media marketing to engage with customers. The company is highly cash generative and delivers outstanding returns on capital, supporting a healthy c 4% yield. Both our forecasts and valuation of 3,490p have upside potential.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
05/17	158.1	38.4	95.1	74	33.8	2.3
05/18	221.3**	74.3	184.3	126	17.4	3.9
05/19e	239.7	70.9	174.3	126	18.5	3.9
05/20e	250.0	74.0	182.1	132	17.7	4.1

Note: *PBT and EPS are normalised, excluding exceptional items. **Restated at H119 to reflect IFRS 15: Revenue from contracts with customers.

An unrivalled market position

GAW is a niche market, vertically integrated manufacturer with a longstanding reputation for producing high-quality miniatures for its iconic Warhammer worlds. GAW operates in the fastest growing segment of the non-digital games market and is differentiated by its scale, expertise and control over every aspect of its brand and products, from concept and design to manufacture and distribution. As a result, it is able to leverage its rich intellectual property (IP) to generate royalty income.

Global growth, innovation and customer engagement

GAW is executing on its strategy to seek out enthusiasts worldwide, such that 76% of revenue is now generated outside of the UK and the company is actively pursuing further significant opportunities for growth in North America, Germany and Asia. International expansion is supported by integrated multichannel distribution, a robust pipeline of new product launches, and extensive use of online and social media marketing to broaden the brand's appeal and engage with customers.

Undemanding sales and gross margin assumptions

GAW has beaten consensus FY EPS estimates for six of the past eight years and approximately doubled profits in each of the past two years. In light of macro uncertainties, tough sales comparatives and while the company executes on infrastructure projects that will aid gross margin recovery (H119: 520bp decline y-o-y to 66.9%) and support future expansion, we initiate with conservative assumptions driving a 5.4% reduction in FY19e EPS and 4.5% growth in FY20e.

Valuation: c 10% upside, attractive yield prospects

Our blended DCF and peer comparison values the shares at 3,490p. We forecast an average ROCE of 91%, cash conversion of 84% and a £24.3m increase in net cash to £52.9m over the two years to FY20e, underpinning a healthy yield of c 4% and scope for further distributions to shareholders, in line with company policy.

Investment thesis

- **Best-in-class vertically integrated manufacturer:** GAW uses advanced technology and a continuous improvement philosophy to produce high-quality miniatures for tabletop miniature gaming. It controls every aspect of the brand and products, from concept and design to manufacture and distribution and is run by a longstanding and experienced management team.
- **Unrivalled market position:** It is the only quoted company to provide exposure to the rapidly growing market for tabletop miniature gaming. The company's iconic Warhammer brand is the global leader in this segment, with a vast global following of dedicated enthusiasts.
- **Broad geographical diversification:** more than three-quarters of revenue is generated outside the UK and international expansion is continuing apace.
- **Undemanding assumptions:** against two years of tough sales comparatives and while projects are underway to expand the manufacturing facilities and upgrade IT systems and warehousing capacity, we initiate with conservative sales and gross margin assumptions.
- **Highly cash generative:** the dividend is underpinned by a strong balance sheet, outstanding ROCE and high cash conversion. Company policy is to return surplus cash to shareholders.

Recent share price performance and upcoming catalysts

The shares trade around c 3,000p, after paring back from a peak of c 4,000p in September 2018, following a placement of approximately £20m of shares owned by former chairman, Tom Kirby (current holding 4.8%), and a somewhat cautious outlook comment in the October trading update. In keeping with last year, the company may issue a brief trading update in April. Alternatively, the next catalysts will be the FY19 pre-close update in June and preliminary results in July.

Financials: Steady growth; excellent cash returns

We initiate with a modest 5.4% decline in FY19e EPS to 174.3p, followed by EPS growth of 4.5% to 182.1p in FY20e. Given macro uncertainties and against two years of tough comparatives, we conservatively factor in FY19e revenue growth of 8.3% (H119: 14.3%), driven by trade and retail, offsetting a small decline in online sales. In FY20e, we assume c 5% revenue growth across both trade and retail and broadly flat growth for online. We expect the FY19e gross margin to remain consistent with H119 at 67.0% (FY18: 71.0%), rising to 68.0% in FY20e. Although margin-dilutive trade sales will continue to represent a higher proportion of the sales mix, we see upside to our margin assumptions as the company reduces its reliance on more costly third-party warehousing.

We forecast an average ROCE of 91% and cash conversion of 84% over the next two years. Our net cash forecasts increase by £8.1m to £36.6m in FY19e and by £16.2m to £52.9m in FY20e, supporting dividends of 126p and 132p in each respective year, with scope for further distributions.

Sensitivities: Infrastructure, technology, global expansion

GAW is implementing a new ERP system and expanding its factory and warehouse capacity to support higher volumes. Each of these projects has the potential to cause near-term disruption. Over the longer term there is a small risk the existing technology for manufacturing plastic miniatures could be replaced by 3D printers. This, however, is a challenge for the far future as even the best 3D printers cannot replicate the quality and certainly not at the scale of production with which GAW manufactures its miniatures. Although non-UK exposure is, in our view, highly attractive, the majority of GAW's sales and purchases are transacted in sterling, US dollars and euros, and fluctuations in FX rates have the potential to affect sales and margins. Brexit issues could also prevent GAW from shipping goods to Continental Europe (c 25% of total sales) in the short term, while smaller trade accounts may cease buying over the medium term due to

onerous/expensive import requirements. GAW must ensure that its extensive range of products remains relevant to its customers' evolving needs.

Company description: A leading global specialist

GAW is a leading international specialist designer, manufacturer and seller of miniatures, scenery, fiction and artwork for tabletop miniature games set in its fantasy and science fiction worlds. The company's key brands are Warhammer Age of Sigmar (Age of Sigmar) and Warhammer 40,000 (Warhammer 40K or, often simply, 40K), alongside Horus Heresy, an offshoot of Warhammer 40K. It also holds the licence for The Lord of the Rings and The Hobbit tabletop battle game.

GAW's Warhammer hobby concept (the Hobby) is centred on customers collecting, building and painting miniatures that can ultimately be used in games played against fellow enthusiasts, either privately or at organised events. The company has delivered outstanding growth in revenue and profit over the past two years through better product ranges, and extensive use of online and social media marketing to engage with its customers and make the Warhammer Hobby more accessible to a wider audience through its multichannel distribution network of stores, websites and third-party sellers.

All products are designed in-house and manufactured at the company's manufacturing, distribution and head office facilities in Lenton, Nottingham. This supplies two distribution hubs in Memphis, US, and Sydney, Australia.

Strategy: World domination in miniature form

GAW has a refreshingly straightforward and clear long-term objective: to make the best fantasy miniatures in the world, to engage and inspire its customers, and to sell its products globally at a profit. That it achieved a three-year revenue and EPS CAGR of 23% and 69% respectively between FY15 and FY18 and now generates 76% of revenue outside of the UK is testament to the success of the strategy, which has five key pillars:

- 1. Product quality:** GAW products are differentiated by the craftsmanship, skill and cutting-edge technology used in the design and manufacturing process and this is reflected in pricing. The company offers a broad range of price points depending on the materials, size and intricacy of the item. It produces more than 30 million miniatures per year.
- 2. IP ownership:** innovation and IP ownership are at the heart of the business. The company employs c 200 people in its Lenton design studios to develop the Warhammer worlds and all miniatures, artwork, games and publications that it sells. As part of a continuous improvement philosophy, the company invested £8.9m in its studios and £3.1m on tooling for new plastic miniatures in FY18. It also leverages its IP by seeking long-term licensing partners, for example to create computer games. Over the past four years royalty income has risen by c 540% to £9.6m.
- 3. Customer engagement:** GAW uses its online news and content site warhammer-community.com and social media extensively to communicate with existing and new customers. Offline, GAW has worked closely with, and provided support to, community groups and event organisers to provide more opportunities for enthusiasts to participate in Warhammer activities (collect, build, paint, play) more often. It has also created a Warhammer World Visitors Centre at its site in Lenton, as well as a Warhammer Café in Dallas, for enthusiasts to shop and participate in events.
- 4. Global expansion:** the Warhammer Hobby is not a mainstream interest and GAW therefore seeks out and tries to attract new enthusiasts internationally. Management believes there are further significant growth opportunities in core overseas markets, including North America,

Germany and Asia. It aims to build international sales profitably through each of its three distribution channels: trade, retail and online.

5. Delivering good cash returns: GAW delivers outstanding returns on capital and achieves a high cash conversion ratio. Growth continues to be entirely funded from operations and surplus cash is regularly distributed to shareholders.

History: A long-established tabletop gaming specialist

GAW started out in the 1970s as three games fanatics selling handmade classic wooden games from their homes in London and, later, a chain of general games shops. In 1981 the company provided funding to help establish Citadel Miniatures, a manufacturer of metal miniatures based in Nottinghamshire, which was later fully integrated into GAW.

In 1991 Tom Kirby, who remained chairman of GAW until 2017, led a management buy-out from the remaining founder, Bryan Ansell, ahead of the company's IPO in 1994. In 2015 Kevin Rountree, who had been CFO in 2008 and COO in 2011, took over as CEO. Kevin and his close team's focus on customer engagement, greater product innovation and openness to fully exploring the IP's potential as a licensed property, welcomed in a new era of success and rapid growth for GAW. All UK operations have been based in Lenton, Nottingham, since 1997.

The brand and products

Warhammer: An unrivalled global phenomenon

One of GAW's greatest strengths is its control over every aspect of its brand and products, from concept and design to manufacture and distribution. The company creates miniatures, scenery, fiction, artwork and the overarching framework of rules for games to be played in its two Warhammer settings: Warhammer 40K and Warhammer Age of Sigmar.

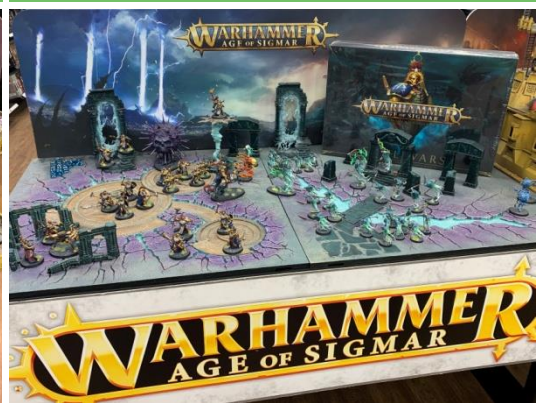
The Warhammer brand has been in existence for more than 30 years and is the undisputed leader for fantasy and science fiction tabletop miniature games, with a global following of dedicated enthusiasts.

Exhibit 1: Warhammer 40K setting



Source: Warhammer store, Tottenham Court Road

Exhibit 2: Warhammer Age of Sigmar setting

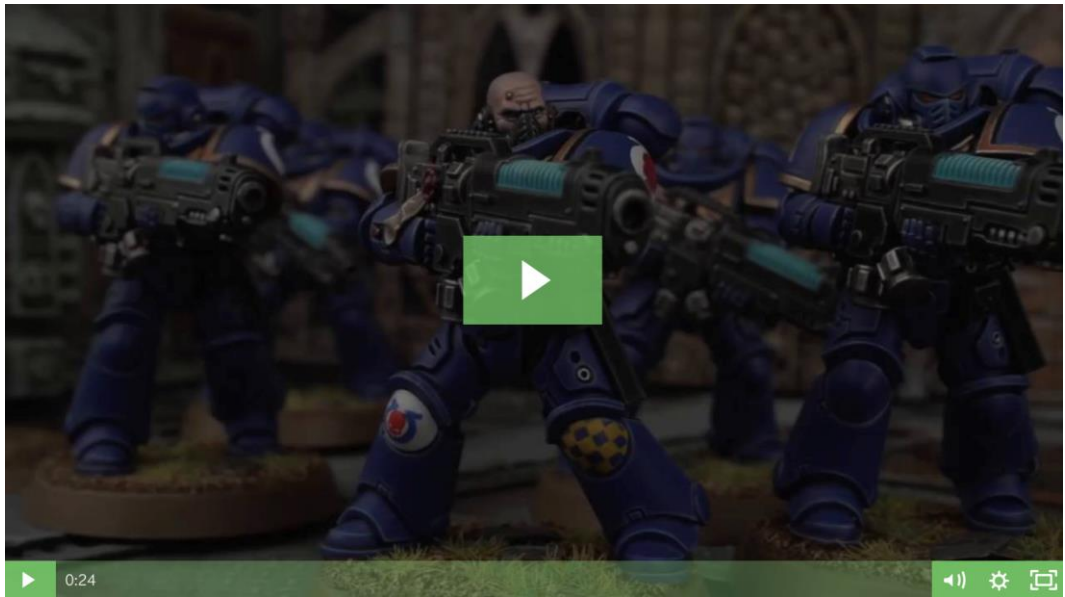


Source: Warhammer store, Tottenham Court Road

Warhammer 40K: It is one of the most popular and long-established IPs in the world and accounts for the majority of group revenue. The setting is a mixture of futuristic science fiction and fantasy, with battles taking place on a post-apocalyptic war-scape in the 41st Millennium. Mankind fights for survival, aided by the super-human Space Marines as they fend off alien monsters and other horrors. A first edition of the Warhammer 40K tabletop miniature game was released by GAW in 1987 and, on its 30th anniversary, the eighth edition, Warhammer 40K: Dark Imperium, was

released in June 2017. With each edition, GAW has added new rules for playing games, refined existing ones, and expanded the IP of the universe in which the game is set.

Exhibit 3: Introduction to Warhammer 40K: Dark Imperium



Source: Games Workshop, Warhammer TV

Warhammer Age of Sigmar: GAW developed this unique fantasy IP to replace its Warhammer Fantasy Battle setting as its core fantasy universe. Launched in 2015, Warhammer Age of Sigmar is set in the Mortal Realms, a series of eight magical realms interconnected by Realmgates. These are the focus of fierce battles between mighty heroes, vengeful gods and fantastical creatures. With its unique IP and dynamic, engaging game, Warhammer Age of Sigmar has proved itself to be more popular than Warhammer Fantasy Battle ever was, and its appeal shows no sign of slowing.

Exhibit 4: How to play Warhammer Age of Sigmar



Source: Games Workshop, Warhammer TV

Horus Heresy: Retelling the fictional history of the Warhammer 40K universe, this setting has been developed into both a tabletop miniature game and ongoing series of Black Library (GAW's publishing imprint) books. Centred around a galaxy-spanning civil war taking place 10,000 years before Warhammer 40K, it puts one of GAW's core properties, the Space Marine, front and centre. The Horus Heresy is also sometimes referred to by enthusiasts as 'Warhammer 30K'.

Middle-earth: for the past 18 years GAW has held a licensing agreement with Warner Bros, which gives GAW exclusive, worldwide, all-language rights to produce tabletop games and miniatures

based on the IP for The Lord of the Rings and The Hobbit. This licensed brand accounts for less than 2% of group revenue.

Product ranges expanded to attract new hobbyists

Citadel: the majority of GAW's products are made from plastic and carry the Citadel logo. All Citadel miniatures are designed by the Warhammer Design Studio and mostly need to be assembled and painted, with varying levels of skill required. Price points also vary widely, depending on the size and detail of the products. Miniatures start from £5 and can range up to c £200 for a full squad.

In order to make Warhammer more accessible, the Warhammer Studio has developed a series of starter box sets for Warhammer Age of Sigmar and Warhammer 40K. These are priced from £25 for a set of 15 miniatures plus an 80-page introductory guide to £95 for a set of 52 miniatures plus a c 300-page complete rule book. In addition, a range of 'Easy to Build' squads, which do not require glue to assemble, has been introduced, priced from £6.

Exhibit 5: Easy to build Steelheart's Champions, £15



Source: Games Workshop website

Exhibit 6: Temple Nest, £165



Source: Games Workshop website

Forge World is the division of GAW that produces resin models aimed at more experienced Warhammer hobbyists. The models are typically larger than Citadel miniatures and require more time and skill to prepare, assemble and paint. As such, the pieces command a premium price compared with the Citadel range. An individual figure might cost anywhere between £40 and £400, whereas a top-of-the-range Warlord Titan (a hulking war machine) weighing 10kg and measuring more than half a metre tall, costs almost £1,300. These models often take pride of place in an enthusiast's display and are very powerful when used in games. Forge World products are predominantly sold online via GAW's Forgeworld.com website and from its Lenton-based Forge World store (one of the features of GAW's Warhammer World visitor centre). Forge World represent less than 5% of group revenue.

Exhibit 7: Forge World Stormbird, £775



Source: Forge World website

Exhibit 8: Forge World Vorgaroth the Scarred and Skalok the Skull host of Khorne, £375



Source: Forge World website

Other products: the company produces a range of Citadel paints (ranging in price from £2.55 for a small pot to £11.75 for a small spray can), paint brushes and other modelling accessories. A starter set of paints and tools costs from £25.

The Black Library studio produces an extensive collection of fiction novels, novellas and short stories in book and audio format in the Warhammer settings. While the cost of paperback and hardback titles is broadly comparable with that of the high-street retailers, Black Library also produces a range of high-value (c £40) collectors and limited editions. Smaller footprint games, supplied with high-quality card playing surfaces, are also becoming an increasingly prominent aspect of GAW's product offering, many of which have been developed as offshoots of Warhammer 40K. Examples include Warhammer 40,000: Kill Team, Necromunda and Blood Bowl, the latter being a fantasy football game.

An active re-sale market

GAW's pricing is supported by an active after market for its products. Used goods for sale on eBay range from 'as new' unassembled items to large collections of fully assembled and painted models, commanding asking prices ranging from a few hundred to a few thousand pounds. Limited edition or 'vintage' miniatures and models are particularly sought after by enthusiasts.

Revenue growth driven by constant innovation

GAW's concept and design studios work on a continuous pipeline of new initiatives and improvements to existing product lines to expand the Warhammer worlds and cater to the evolving requirements of customers. The lead time for a new product, from concept to launch, is typically 18 months whereas the launch of a new edition of one of the core Warhammer games takes place every three to four years. On average, the company launches 400 new product lines every year.

So far in FY19, significant launches have included a second edition of Warhammer Age of Sigmar and two new tabletop miniature games, Adeptus Titanicus: The Horus Heresy and Warhammer Underworlds. The company has also been working on several initiatives to introduce new customers to Warhammer, including a range of Space Marine Hero collectibles which have a low price point and, with only a few pieces that push together without glue, are very straightforward to assemble.

Exhibit 9: The robust pipeline of new product releases continued throughout 2018

Source: Games Workshop, Warhammer TV

Manufacturing and warehousing

R&D and production capacity expanded to support growth

GAW continues to invest in its R&D and manufacturing facilities to ensure it remains at the forefront of miniatures technology, pioneering injection moulding and other techniques necessary to produce the very best quality miniatures.

During FY18, the company purchased two acres of land adjacent to its Lenton HQ for £1.7m and has completed the first phase of the development to provide additional capacity for the manufacture of its products. Phase two is scheduled to complete this summer and will provide additional facilities for making injection mould tooling.

The total cost of the development, including land, is expected to be c £14m, of which £3.3m was invested during FY18 with the balance spread over FY19 and FY20. Once fully functional, the combined Nottingham manufacturing and R&D facilities are expected to support sales of c £350m.

Further investment in warehousing required

Third-party warehousing is currently being used by the company to accommodate higher sales volumes. As a result, FY18 total warehousing costs rose by £4.2m to £6.7m, or by 40bp to 3.0% as a percentage of sales.

Presently, work is underway to extend the existing Memphis warehouse facility and this is expected to complete in the summer of 2019. A group logistics manager has been hired to develop and implement the plans for additional warehousing.

Distribution: An integrated multi-channel proposition

GAW has an integrated multi-channel approach to selling its products internationally via three channels: trade, retail and online.

Exhibit 10: Revenue and EBIT by channel					
£m	FY15	FY16	FY17	FY18	H119
Revenue					
Trade	44.5	44.5	61.3	94.4	61.4
Retail	49.1	48.4	64.8	82.0	42.5
Online	25.6	25.1	32.0	45.0	21.2
Total	119.1	118.1	158.1	221.3	125.2
Revenue growth y-o-y					
Trade		0.1%	37.6%	54.1%	28%
Retail		(1.3%)	33.9%	26.4%	7%
Online		(1.8%)	27.4%	40.4%	-3%
Total		(0.9%)	33.9%	40.0%	14%
EBIT					
Trade	11.5	10.6	18.0	32.9	22.5
Retail	(1.5)	(3.9)	0.5	7.2	4.8
Online	14.4	13.7	18.8	27.9	13.1
Product and supply	8.6	8.0	16.3	23.9	9.6
Royalties (net of costs)	1.1	5.3	6.9	8.8	5.0
Other costs	(17.5)	(16.9)	(22.1)	(26.4)	(14.1)
Total	16.6	16.9	38.3	74.3	40.8
EBIT Margin					
Trade	25.9%	23.9%	29.3%	34.8%	36.6%
Retail	N/A	N/A	0.7%	8.8%	11.3%
Online	56.4%	54.7%	58.7%	62.0%	61.5%
Group	13.9%	14.3%	24.2%	33.6%	32.6%

Source: Company data

Trade (43% of sales; 29% three-year sales CAGR)

Trade is the fastest-growing component of GAW's sales mix, having achieved a revenue CAGR of 29% between FY15 and FY18. Robust trade sales growth over the past two financial years and again in H119 reflects a strong pipeline of new product releases and the addition of between 200 and 300 net new accounts in each respective period. At the end of H119, the company was selling via c 4,400 independent retailers across 66 countries, many of which also have their own international multichannel offering. Although this channel is dilutive to the group gross margin, it is less capital intensive and achieves an EBIT margin of c 35%.

Trade is a key part of GAW's global expansion strategy, particularly in countries where the company does not have a store presence. The majority of account sales are made via telesales teams based in Nottingham and Memphis, which the company has been investing in alongside its online service tools to enhance customer service and support. At present, the US and Canada are the fastest growing regions.

Retail (37% of sales; 19% three-year sales CAGR)

As with trade and online, the retail channel has benefitted from new product releases over the past two financial years, in addition to new store openings. For example, in FY17 new product releases contributed c 18% to total retail sales growth of 33.9%. Stripping this out, underlying growth of c 16% was aided by 11 new stores and 28% sales growth from the newly expanded and re-launched Warhammer World visitor centre. A further 27 stores were opened in FY18 and 18 stores in H119 taking the portfolio total to 507 stores, the majority of which in the UK, Continental Europe and North America. Around 80% of all stores are run by a single store manager, although the

profitability of multi-man stores is closely monitored and the retail EBIT margin has improved significantly, to 11.3% at H119.

GAW recruits most new customers through its stores, which only stock company products. As 'destination' stores, these are typically located away from prime retail thoroughfares. However, in FY16 several new stores in high footfall locations, such as Tottenham Court Road, were trialled and have been performing well. The stores are a valuable means of engaging with new and existing customers and emphasis is placed on recruiting genuine enthusiasts to sell the products and run a variety of workshops and gaming events in-store.

In FY19e and over the medium-term, management is targeting c 25 net new store openings per annum, predominantly in North America and Germany. Approximately 40% of existing stores and all new stores have been rebranded as 'Warhammer'.

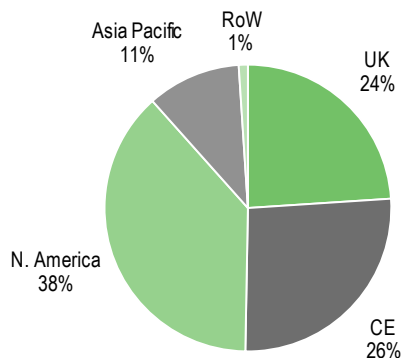
Online (20% of sales; 21% three-year sales CAGR)

This channel achieves a high gross margin and EBIT margin exceeding 60% (FY18: 62%), significantly ahead of the other channels. The company runs three websites: gamesworkshop.com for Citadel products plus separate sites for Forge World and Black Library. The main website was re-launched in April 2014, followed by the migration of forgeworld.com to the same platform in the summer of 2015 at a cost of £1.1m. GAW continues to invest in the online shopping experience and develop its sites in other languages and currencies. Every GAW retail store has a web terminal for customers to access the full range of more than 1,000 products, compared with c 700 items available in-store.

Targeting a global audience through all channels

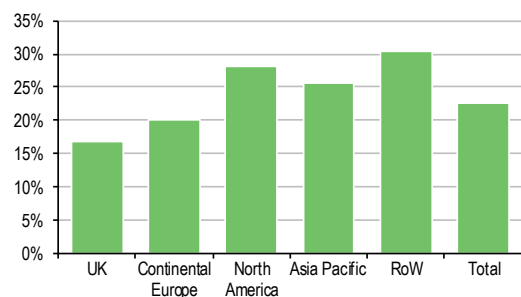
GAW has been extremely successful in its strategy to seek out enthusiasts across the globe, such that international now accounts for more than three-quarters of total sales. Although its own stores are in 23 countries, it sells into many more countries through the additional reach of its websites and trade accounts, many of which have their own international multi-channel offering.

Exhibit 11: Sales mix by geography (FY18)



Source: Company data

Exhibit 12: Sales three-year CAGR (FY15–FY18)



Source: Company data

The company delivered impressive growth across all key markets between FY16 and FY18, with North America an increasingly dominant component of the sales mix. Management believes there are significant further opportunities for growth in North America, Germany and Asia. In both North America and Germany, GAW is driving growth via new store openings, investment in its trade sales teams and multi-language and currency websites, alongside extensive use of social media marketing to promote the brand and new product launches. Management acknowledges that Asia is likely to be a more challenging market and is still developing its strategy to accelerate growth in the region.

Brand awareness and the social network

Warhammer World visitor centre

Warhammer World visitor centre, located at GAW's Lenton HQ, has become a place of pilgrimage for enthusiasts of the Warhammer hobby. In 2015 the Warhammer World visitor centre was expanded and revamped and now accommodates three retail sections (Warhammer World, Black Library and Forge World), ticketed entry exhibition areas for Citadel and Forge World, a Warhammer World-themed bar and a dedicated events and activities arena.

Exhibit 13: Welcome to Warhammer World



Source: Games Workshop

Online and social media marketing

Given the niche nature of the Hobby, GAW engages in only targeted, above-the-line advertising. It does this with a dedicated in-house team which creates all of the marketing content. This allows for greater quality and better cost efficiencies. GAW recently created three dedicated filming studios from which it records and streams Warhammer TV, a channel which has attracted more than 250,000 YouTube subscribers since its launch in 2016. The company now releases more than one video per day on average, viewed by more than 100,000 people per day, including tutorials on how to build and paint miniatures and how to play the various games.

Beyond this, there is a wealth of content available online, which has been created by enthusiasts. The company has continued to develop its own warhammer-community.com content site, which attracted more than 70 million page views from c 5 million users globally in FY18. It also streams events live on the interactive gaming site, Twitch.

Exhibit 14: How to paint – Lord of Contagion



Source: Games Workshop, Warhammer TV

The School Alliance - engaging with younger customers

GAW has created the School Alliance, an association of officially supported Warhammer after school clubs. These clubs give students the opportunity to develop a variety of skills, such as model-making, leadership and strategic thinking, and share the Warhammer Hobby with other enthusiasts. They also provide an excellent opportunity for GAW to engage with existing and potential younger customers and introduce them to the brand. Schools that are interested in running these clubs can contact GAW to receive a free pack including models, paints, tools and lesson plans for teachers.

To date, the alliance has been very successful in the UK, where 1,300 schools are now members and can participate in regional competitions with other schools. In North America, which launched last summer, 450 schools have already joined, Australia has 140 schools and there are a small number in Asia. Presently, GAW has just launched a similar scheme to support the Scouts in the UK, and it is developing plans to extend the offer further.

The market

The genesis of fantasy tabletop games stretches back to the phenomenal success of the role-playing game Dungeons and Dragons in the 1970s, but it was not until GAW entered the market that the popularity of tabletop miniature games really took off. Once considered a pastime for 'geeks', tabletop games based on strategy and luck, where players control miniatures, have been growing in popularity and appealing to a wider demographic. As the market leader for tabletop miniature games, this is in part attributable to GAW's recent initiatives to improve its product ranges and engage with customers, and also reflects the desire of many consumers to find new ways in which to fill their leisure time and interact with friends in a social, and often 'analogue', setting.

In large towns and cities a variety of community groups have emerged (such as the London Wargaming Guild) and bars, cafes and specialist venues are increasingly hosting 'games nights' and similar meet-ups. As noted above, strategic tabletop games are also being included in the timetable for after school clubs.

Tabletop miniature games lead the non-digital games market

The global market for non-digital games (including tabletop, card and dice, collectible card, miniature and role-playing games) is expected to grow at a CAGR of 9% between 2017 and 2023 and reach a value of more than \$12bn (source: Research and Markets).

By type and theme, tabletop and strategic miniature games have dominated the largest shares of the non-digital games market since 2017. Both areas are expected to grow at a CAGR exceeding 10% over the forecast period. These games have been extremely popular among Western cultures, with a large number of specialist venues opening in North America and Europe, and in the Asia Pacific region. North America accounted for around one-third of the global non-digital games market in 2017 and is expected to grow at the fastest rate of all regions over the forecast period.

Limited competition; high barriers to entry

GAW does not have a direct competitor. It is a niche market player with a longstanding reputation for producing the world's best miniatures for its globally successful Warhammer IPs. Although a number of smaller privately-owned businesses, often set up by enthusiasts, have emerged with their own brands of tabletop miniature games and board games, GAW's scale, expertise and rich IP is unrivalled. Furthermore, many of its loyal customers invest significant time and money in their personal collections, thus reducing the likelihood of switching to a different brand.

Exhibit 15: Competitors

Company	Key games	Country	Ownership	Founded
Tabletop miniature games				
Privateer Press	Warmachine, Hordes	USA	Private	2000
Fantasy Flight Games	Legend of Five Rings, Android, Runebound. Licences for Star Wars, The Lord of the Rings, A Song of Ice and Fire	USA	Asmodee	1995
Corvus Belli	Infinity	Spain	Private	2001
Wyrd Miniatures	Malifaux	USA	Private	2005
Megacon Games	MERCS, Myth, Emergence Event	USA	Private	
Board games				
Z-Man Games	Pandemic	USA	Asmodee	1999
Stonemaier Games	Scythe	USA	Private	Released 2016

Source: Edison Investment Research

The large listed manufacturers including Mattel, Tomy and Hasbro are primarily focused on board games and other mainstream toys, puzzles and games. They do not compete for the same target customers as GAW.

Management

GAW has an impressive track record of long employee service across the organisation and its senior management team is no exception. Few companies can boast a wall of employee photos who have worked for the company for more than 10 years, as GAW proudly displays in its staff canteen.

Chairman: Nick Donaldson

Nick Donaldson was appointed as non-executive Chairman in 2017, following the retirement of longstanding chair, Tom Kirby. Nick has been a member of the GAW board since 2002 and has a wealth of investment banking experience with institutions including Arbuthnot, Baird and Credit Lyonnais in addition to holding non-executive roles with DP Poland and Fulham Shore.

CEO: Kevin Rountree

Kevin Rountree heads the executive management team. He has significant experience within the business, having joined as assistant group accountant in 1998. He became group finance director in 2008 before assuming responsibility for the company's global service centres as COO in 2011 and being appointed as CEO in 2015. Kevin trained as a chartered management accountant with Price Waterhouse.

Group finance director and company secretary: Rachel Tongue

Rachel Tongue joined as group tax manager in 1996. She worked in a variety of finance roles within the company before being appointed as company secretary in 2008 and group finance director in 2015. Rachel trained as a chartered accountant and chartered tax accountant with Arthur Andersen.

Sensitivities

Brexit: although non-UK exposure is, in our view, highly attractive, a key risk for GAW is its ability to ship products to Continental Europe, which represents more than a quarter of total sales. While it would be possible to stockpile some goods within the EU ahead of the Brexit date to ease short-term disruption to company-owned stores, smaller trade accounts may cease buying from GAW over the medium term due to onerous/expensive import requirements and, as a result, revenue could be negatively affected.

Exchange rates: the majority of GAW's sales and purchases are transacted in sterling, US dollars and euros and fluctuations in exchange rates have the potential to affect headline sales and margins. The company does not hedge its exposure to foreign exchange risk.

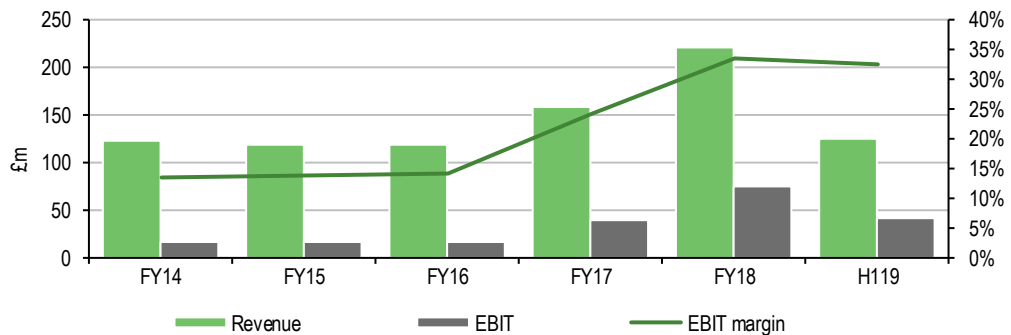
Technology: GAW has invested heavily in its manufacturing facilities and equipment to produce plastic miniatures. Although there is a small risk that the existing processes are eventually replaced by 3D printers, this is a challenge for the far future as even the best 3D printers cannot replicate the quality and certainly not at the scale of production with which GAW manufactures its miniatures. As an expert in its field, GAW remains at the forefront of this, and all other, miniatures technology.

Infrastructure: GAW is in the process of implementing an ERP system in the UK and Continental Europe, with work due to finish in 2020. Given the complexity of the project there is a risk of disruption to business, which is being minimised using an internal project team and specialist ERP software consultants. It is also expanding its factory and warehouse capacity. More generally, the concentration of operations in Lenton accentuates the risk of disruption from fire or other disasters, although the new production and R&D facility is housed in a completely separate building.

Product ranges: GAW has an extensive range of existing and new products, which it must ensure remain relevant to its customers' evolving needs. Failure to curtail production of less popular items may lead to too much stock.

Financials

Exhibit 16: Revenue and EBIT trajectory (FY14–H119)



Source: Company data

FY18 results: Profits doubled for a second consecutive year

GAW delivered a second year of exceptionally strong revenue growth across all channels and geographies, with total sales increasing by 40% to £221.3m. This performance was driven by the strong pipeline of new product launches, including the release of the eighth edition of its iconic global brand, Warhammer 40k, in June 2017 and a variety of box sets and other items designed to appeal to a wider audience. In addition, the company opened 27 net new stores and added 200 net new trade accounts. It also used social media marketing extensively to promote its products and engage with new and existing enthusiasts internationally.

A 140bp reduction in the gross margin reflected the use of third-party warehousing to accommodate higher volumes, a continued shift in the channel mix towards trade (43% of total sales vs 39% in FY17) and a higher proportion of new products, including bulkier items such as box sets, in the sales mix. Higher sales were not matched by a proportional rise in operating costs and, as a result, the ratio of operating costs to sales improved by 1120bp to 41.7% year-on-year. Income from royalties rose by 28% to £9.6m.

Given the high level of operational gearing in the business, the strong sales performance combined with tight cost control helped to drive a sharp improvement in the EBIT margin to 33.6% (FY17: 24.2%). PBT approximately doubled, for the second consecutive year, to £74.3m.

Cash generation from operating activities remained robust, despite a £4.4m working capital outflow, and net cash increased by £10.8m to £28.5m. In keeping with the company's policy to distribute surplus cash it declared dividends of 126p per share (FY17: 74p); representing a c 70% pay-out ratio and 1.5x cover.

H119 results: Top-line growth tempered by margin pressure

Sales performance in the H119 continued to be strong. Total sales grew by 14.3% to £125.2m, whereas underlying PBT increased by 7.1% to £40.8m.

The main points to highlight were, firstly, a 3.3% decline in online sales, predominantly driven by Forge World and Black Library (which represent 22% of web sales) whereas Citadel online shop sales remained broadly flat year-on-year. Although slightly disappointing, this performance follows two exceptional years of 27.4% growth in FY17 and 40.4% growth in FY18. Both trade and retail sales growth remained robust at 28.0% and 7.4%, respectively.

Secondly, there was a 410bp gross margin reduction to 66.9%, for similar reasons to those outlined for the FY18 results above and, thirdly, a further £2.2m increase in inventory to £22.4m (FY18: £7.7m increase to £20.2m). Over the medium term, both the gross margin and higher stock levels are expected to benefit from the completion of major investment projects, including the new factory in Lenton, implementation of the new ERP system and upgrade of warehousing capacity.

Forecasting a return to earnings growth in FY20e

We initiate with a modest 5.4% decline in FY19e underlying EPS to 174.3p, followed by EPS growth of 4.5% to 182.1p in FY20e. Against tough prior year comparatives and in light of current macroeconomic uncertainties, we factor in conservative assumptions for total revenue growth of 8.3% to £239.7m in FY19e and 4.3% to £250.0m in FY20e. We expect trade to deliver the strongest performance in FY19e, followed by a comparable performance to that of retail at c 5% growth in the following year. We have cautiously assumed a marginal 0.5% annual increase in online sales after an anticipated c 2% decline across FY19e.

We assume a modest improvement in the gross margin, from 67.0% in FY19e to 68.0% in FY20e, although we see potential upside to our assumptions as the company executes on plans to upgrade warehouse capacity and completes other key projects. We expect operating costs to scale in proportion to sales and the ratio of operating costs to sales to therefore remain broadly flat (FY18: 41.7%) over the forecast horizon. We factor in royalty income of £10.1m in FY19e, broadly consistent with FY18, and a further £8.1m of income in FY20e.

Accelerated investment in infrastructure to support growth

FY18 capex of £21.6m was almost twice that of the prior three financial years (c £12–13m per year). Although expenditure on intangibles and product development of £6.9m remained broadly in line with prior years, investment in property, plant and equipment (PPE) almost tripled to £14.7m. This reflected spending of £3.3m on the Lenton factory and £8.8m (FY17: £3.3m) on production equipment and tooling.

We factor in FY19e total capex of £21.0m (H119: £10.9m), broadly in line with FY18, followed by £16.5m in FY20e. Higher levels of investment over the forecast period mainly reflect spending on phase two of the Lenton factory development (expected total cost £9m), the ERP system and additional warehouse capacity. Management expects annual capex to exceed depreciation and amortisation over the next few years as it accelerates investment.

Strong balance sheet; forecast net cash of £36.6m

GAW has a strong balance sheet with FY19e forecast net cash of £36.6m (FY18: £28.5m), rising to £52.9m in FY20e. The increase in net cash balances in each of the two forecast years is equivalent to 25p and 50p per share, respectively. Company policy is to return surplus cash to shareholders and further cash distributions, above our forecast dividends of 126p and 132p in each year, therefore seem likely.

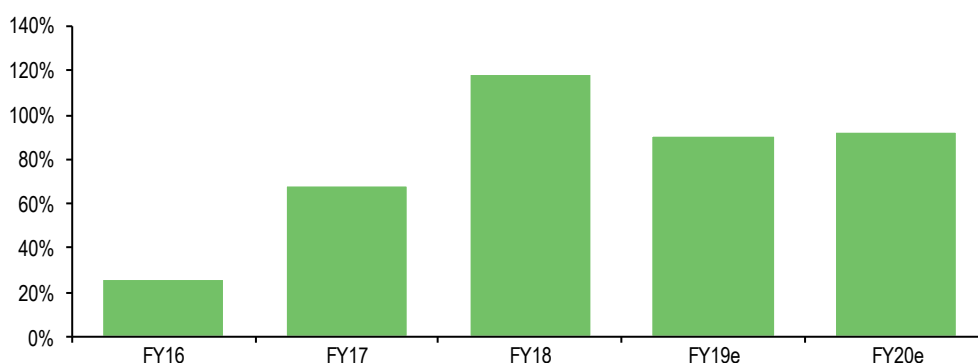
As a manufacturer, the largest item on the balance sheet at the end of FY18 was £30.1m of PPE, mainly relating to the company's freehold land and buildings in Lenton and production tools and machinery. Computer software and development costs accounted for a further £14.2m of intangible assets. We forecast a gradual increase in the PPE balance to reflect accelerated investment, as noted above.

At the end of FY18 inventory had increased by £7.7m to £20.2m and, subsequently, £22.4m at the end of H119. Whilst this partly reflects higher sales volumes, management acknowledges that stock levels are too high. We forecast a gradual improvement in stock turn, from 3.2x in FY18, as the new factory and ERP projects complete.

Return on capital employed expected to exceed 90%

GAW has an impressive track record of growing returns on capital employed. Having reached a peak of 118% in FY18, we forecast an ROCE (EBIT excluding royalty income / average fixed assets + working capital) averaging 91% over the next two years.

Exhibit 17: Using capital effectively to deliver outstanding returns



Source: Company data, Edison forecasts

On a simple basis (EBIT excluding royalty income / average total assets less current liabilities) average ROCE over the two year forecast period reduces to 69%, although still remains significantly ahead of peers such as Hasbro and Tomy which delivered a last reported ROCE of c 7%. To emphasise the profitability of GAW's business model, we summarise below the last reported EBIT and EBITDA margins achieved by the peer group.

Exhibit 18: GAW delivers best in class margins, significantly ahead of peers

Company	Last reported EBITDA margin	Last reported EBIT margin
Hasbro	10.9%	7.2%
Mattel	3.2%	n/a
Tomy	12.8%	7.4%
GAME Digital	1.3%	n/a
Character Group	12.7%	11.0%
Focusrite	20.2%	15.5%
Future	14.1%	7.8%
Portmeirion Group	13.2%	11.1%
Average	11.1%	10.0%
Games Workshop	39.1%	33.6%

Source: Reuters Eikon, company data

IFRS 16: Operating lease accounting changes

From 2019, in common with all other companies, GAW will change how it accounts for its operating leases (effective from FY20). It will be required to recognise a lease liability and corresponding right-of-use asset on the balance sheet for operating lease commitments (FY18: £24.7m). The asset will be depreciated on a straight-line basis over the term of the lease and an interest charge will be recognised on the lease liability that will be higher in the earlier years of the lease term. Although the total P&L expense over the life of the lease will be unchanged, IFRS 16 will result in the timing of operating lease expense recognition being front-end loaded. GAW is assessing the impact of IFRS 16 and is likely to provide further guidance with its FY19 results in July.

Valuation

Our 3,490p valuation for GAW is a blended average of the DCF and peer group comparison.

DCF valuation

Our 10-year DCF forecast assumes revenue growth beyond our two-year forecast horizon fades gradually down to our terminal growth rate of 2% whereas our EBITDA margin improves slightly from 35.7% to 37.0%, aided by gross margin recovery and tight cost control, and capex returns to a lower rate of 5% of sales. We factor in a 7.7% equity only cost of capital (risk premium 6%, company beta 1.1).

Our DCF returns a value of 3,692p per share. Below we set out implications for the share price of differing terminal growth rate and cost of capital assumptions.

Exhibit 19: DCF scenarios (p)

Terminal growth		Cost of capital				
		5.7%	6.7%	7.7%	8.7%	9.7%
	0%	4,244	3,578	3,087	2,712	2,415
	1%	4,833	3,956	3,344	2,894	2,548
	2%	5,743	4,497	3,692	3,130	2,716
	3%	7,338	5,333	4,189	3,450	2,933
	4%	10,854	6,798	4,958	3,908	3,228

Source: Edison Investment Research

Peer comparison

GAW does not have a direct quoted peer. In terms of products and market, the closest comparators are mainly small unquoted companies, as listed above in the Market section of the report. We therefore compare it with a range of companies that broadly fall into two categories: 1) multinational 'mainstream' toy and game designers, manufacturers and distributors and 2) specialist interest companies. Although far from an exact comparison, it does provide some context to the valuation compared with adjacent sectors.

Exhibit 20: Mainly valued at a discount to the peer group

Company	Market cap £m	Year end	Currency	Div yield (%) CY19	P/E (x) CY19	P/E (x) CY20	EV/EBITDA (x) CY19	EV/EBITDA (x) CY20
Hasbro	8,347	31/12/2018	USD	3.1	20.1	17.6	12.3	11.0
Mattel	3,578	31/12/2018	USD	0.0	n/a	n/a	18.1	13.1
Tomy	758	31/03/2018	JPY	1.3	12.3	12.3	n/a	n/a
GAME Digital	46	31/07/2018	GBP	0.0	n/a	n/a	n/a	n/a
Character Group	114	31/08/2018	GBP	4.5	11.2	10.7	5.9	5.6
Focusrite	278	31/08/2018	GBP	0.8	26.6	26.0	15.8	15.2
Future	651	30/09/2018	GBP	0.1	22.4	19.8	15.4	13.6
Portmeirion Group	127	31/12/2018	GBP	3.3	15.2	14.4	10.0	9.5
Average				1.6	17.9	16.8	12.9	11.3
Games Workshop	1,037	31/05/2018	GBP	4.0	18.0	17.2	11.6	11.1
Premium/(discount) to peers					0.2%	2.1%	(10.2%)	(2.1%)

Source: Reuters Eikon, Edison Investment Research

In comparison to the peer group, GAW trades at a slight premium on a CY19 and CY20 P/E basis but trades at a discount to both the CY19 and CY20 peer group EV/EBITDA multiples. Notably, within this group, GAW trades on similar multiples to Hasbro, the world's largest toy and game manufacturer by market capitalisation. GAW's CY19 dividend yield is significantly above average and the second highest in the group, after that of Character Group. The peer group average P/E and EV/EBITDA multiples for CY19 and CY20 would imply values an average valuation of 3,288p for GAW.

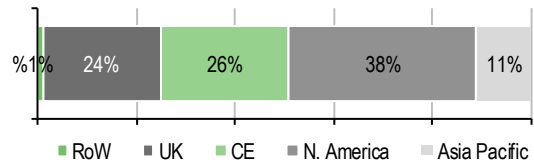
Exhibit 21: Financial summary

Accounts: IFRS, year-end: May, £000s	2015	2016	2017	2018	2019e	2020e
INCOME STATEMENT						
Total revenues	119,132	118,069	158,114	221,304*	239,734	250,049
Cost of sales	(36,988)	(37,438)	(43,691)	(64,219)	(79,157)	(80,062)
Gross profit	82,144	80,631	114,423	157,085	160,578	169,987
Gross profit margin	69.0%	68.3%	72.4%	71.0%	67.0%	68.0%
SG&A (expenses)	(67,207)	(69,710)	(83,591)	(92,383)	(99,920)	(104,216)
Other income/(expense)	1,498	5,939	7,491	9,617	10,098	8,078
Exceptionals and adjustments	42	0	0	0	0	0
Reported EBIT	16,477	16,860	38,323	74,319	70,755	73,850
Report EBIT margin	13.8%	14.3%	24.2%	33.6%	29.5%	29.5%
Finance income/(expense)	108	88	80	(49)	137	200
Reported PBT	16,585	16,948	38,403	74,270	70,892	74,050
Income tax expense (includes exceptionals)	(4,328)	(3,452)	(7,856)	(14,815)	(14,141)	(14,771)
Reported net income	12,257	13,496	30,547	59,455	56,751	59,279
Basic average number of shares, m	31,975	32,093	32,126	32,258	32,553	32,553
Basic EPS (p)	38.3	42.1	95.1	184.3	174.3	182.1
Adjusted EBITDA	27,516	27,250	48,547	86,482	84,371	89,298
Adjusted EBIT	16,435	16,860	38,323	74,319	70,755	73,850
Adjusted PBT	16,543	16,948	38,403	74,270	70,892	74,050
Adjusted EPS (p)	38	42	95	184	174	182
Adjusted diluted EPS (p)	38	42	94	182	173	181
BALANCE SHEET						
Property, plant and equipment	22,719	22,621	22,132	30,072	35,554	37,021
Goodwill	1,433	1,433	1,433	1,433	1,433	1,433
Intangible assets	8,262	10,501	12,917	14,195	16,097	15,682
Other non-current assets	4,816	4,148	6,480	7,113	7,113	7,113
Total non-current assets	37,230	38,703	42,962	52,813	60,197	61,249
Cash and equivalents	12,561	11,775	17,910	28,545	36,635	52,851
Inventories	7,625	8,540	12,421	20,159	23,987	22,875
Trade and other receivables	9,425	10,120	12,976	16,169	17,516	18,269
Other current assets	600	725	596	457	457	457
Total current assets	30,211	31,160	43,903	65,330	78,594	94,452
Other non-current liabilities	822	1,109	989	1,204	1,204	1,204
Total non-current liabilities	822	1,109	989	1,204	1,204	1,204
Trade and other payables	13,131	12,844	16,515	20,298	25,019	25,306
Other current liabilities	1,963	2,747	6,529	8,519	8,519	8,519
Total current liabilities	15,094	15,591	23,044	28,817	33,538	33,825
Equity attributable to company	51,525	53,163	62,832	88,122	104,049	120,672
CASH FLOW STATEMENT						
EBIT	16,477	16,860	38,323	74,319	70,755	73,850
Depreciation and amortisation	11,114	10,457	11,016	12,155	13,616	15,448
Share based payments	232	193	160	204	300	300
Other adjustments	33	28	111	40	0	0
Movements in working capital	(2,277)	(756)	(240)	(4,386)	(453)	645
Interest paid / received	114	83	83	(39)	137	200
Income taxes paid	(2,305)	(2,552)	(5,482)	(12,227)	(14,141)	(14,771)
Cash from operations (CFO)	23,388	24,313	43,971	70,066	70,214	75,671
Capex	(12,348)	(12,663)	(12,844)	(21,580)	(21,000)	(16,500)
FCF	11,040	11,650	31,127	48,486	49,214	59,171
Cash used in investing activities (CFIA)	(12,348)	(12,663)	(12,844)	(21,580)	(21,000)	(16,500)
Net proceeds from issue of shares	738	304	81	982	0	0
Dividends paid	(16,601)	(12,837)	(23,801)	(38,701)	(41,124)	(42,956)
Other financing activities	0	0	(1,901)	0	0	0
Cash from financing activities (CFF)	(15,863)	(12,533)	(25,621)	(37,719)	(41,124)	(42,956)
Increase/(decrease) in cash and equivalents	(4,823)	(883)	5,506	10,767	8,090	16,216
Cash and equivalents at end of period	12,561	11,775	17,910	28,545	36,635	52,851
Net (debt) cash	12,561	11,775	17,910	28,545	36,635	52,851
Movement in net (debt) cash over period	(4,823)	(786)	6,135	10,635	8,090	16,216

Source: Company data, Edison Investment Research. Note: *Restated at H119 to reflect IFRS 15: Revenue from contracts with customers.

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Revenue by geography

Management team
Chairman: Nick Donaldson

Nick was appointed non-executive chairman in 2017, following the retirement of longstanding chair, Tom Kirby. Nick has been a member of the GAW board since 2002 and has a wealth of investment banking experience in addition to holding non-executive roles with DP Poland and Fulham Shore.

CEO: Kevin Rountree

Kevin heads the executive management team. He has significant experience within the business having joined as assistant group accountant in 1998. He went on to become CFO in 2008 before assuming responsibility for the company's global service centres as COO in 2011 and then being appointed as CEO in 2015. Kevin trained as a chartered accountant with Price Waterhouse.

CFO: Rachel Tongue

Rachel joined GAW as group tax manager in 1996. She worked in a variety of finance roles within the company before being appointed as company secretary in 2008 and CFO in 2015. Rachel trained as a chartered accountant and chartered tax accountant with Arthur Anderson.

Principal shareholders

	(%)
JP Morgan Chase & Co	12.6
Schroders	6.1
Standard Life Aberdeen	5.2
Investec	5.1
Sun Life Financial	5.0
Thomas Kirby	4.8
Vanguard Group	4.5

Companies named in this report

Habro (HAS), Mattel (MAT), Tomy Co (7867), Game Digital (GMD), Character Group (CCT), Focusrite (TUNE), Future (FUTR), Portmeirion (PMGR)

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