

# Keywords Studios

Interim results

## Pillars of growth standing firm

Keywords saw strong revenue growth in H119 (17.5% like-for-like, l-f-l) and although investment and some one-off factors compressed margins, the company looks well placed to sustain double-digit EPS growth in the future. We upgrade our FY19 revenue estimates by 5.2% and FY20 by 4.3% and although H1 investment, together with a revision to the adjusted tax calculation, compresses FY19 earnings by 15.8%. FY20 EPS reduces by 2.5% as margins normalise on a higher sales figure. The FY20 P/E of 22.2x is in line with peers, before factoring in the potential for organic upside and further accretive acquisitions.

| Year end | Revenue (€m) | PBT* (€m) | EPS** (c) | DPS (p) | P/E (x) | Yield (%) |
|----------|--------------|-----------|-----------|---------|---------|-----------|
| 12/17    | 151.4        | 23.1      | 30.0      | 1.46    | 44.1    | 0.12      |
| 12/18    | 250.8        | 37.9      | 40.1      | 1.61    | 32.9    | 0.13      |
| 12/19e   | 315.2        | 40.0      | 45.8      | 1.77    | 28.9    | 0.15      |
| 12/20e   | 349.9        | 51.6      | 59.5      | 1.95    | 22.2    | 0.16      |

Note: \*PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. \*\* EPS has been revised in line with the company, to better reflect the tax impact of adjustments for FY18 and forecast years.

## Robust growth continues; investment to sustain this

Keywords saw strong revenue growth in H119 (17.5% l-f-l, 39% with acquisitions) to €153.2m, with accelerated investment in recruitment and training, together with the costs of early-stage investments and a one-off acquired project compressing operating margins to 12.6% from 15.5% last year. Adjusted PBT growth was 15% to €18.4m (H118: €16.0m). Net debt was €9m (vs €0.4m at end-2018), reflecting peak working capital commitments at the end of H1, higher capex for investment in new infrastructure (€5.1m vs €1.4m in H118) and €6.9m outflows on acquisitions (H118: €12.6m). The company's new €100m debt facility (extendable to €140m) gives it plenty of headroom to continue its consolidation strategy.

## Revenues upgraded; FY19 EPS pared back

H2 trading has started well and progress in H1 gives us confidence that Keywords remains well placed to sustain robust double-digit organic growth trajectory; with increased capacity in place, we expect margins to normalise. The business is well balanced across service lines, geographies and game formats and benefits from an accelerating trend towards outsourcing. We upgrade our FY19 revenue estimates by 5.2% and FY20 by 4.3%, and although H1's investment, together with a revision to the adjusted tax calculation, compresses FY19 earnings by 15.8%. FY20 EPS reduces by 2.5% as margins normalise on a higher sales figure.

## Valuation: In line with peers, with M&A upside

With its shares trading on a 2019e P/E of 28.9x that falls to 22.2x in 2020e, Keywords is trading in line with peers. However, we see scope for organic upside while further accretive acquisitions (such as the latest acquisition of TV Synchron in Berlin) should bring the 2020e P/E down, potentially to c 18–20x based on our assumptions. With strong underlying growth, we continue to believe sustained execution should drive robust returns for shareholders.

## Software & comp services

19 September 2019

**Price** 1,213p

**Market cap** £789m

€1.12/€

Net debt (€m) at end H119 9.0

Shares in issue 65.08m

Free float 89%

Code KWS

Primary exchange AIM

Secondary exchange N/A

## Share price performance



% 1m 3m 12m

Abs (18.8) (25.4) (36.0)

Rel (local) (21.4) (24.7) (35.7)

52-week high/low 1954p 900p

## Business description

Keywords Studios is the leading and most diverse supplier of outsourced services to the games industry. Through regular acquisitions, the company is building its scale, geographic footprint and delivery capability. Its ambition is to become the 'go to' supplier across the games industry.

## Next events

Year end trading statement January 2020

Final results April 2020

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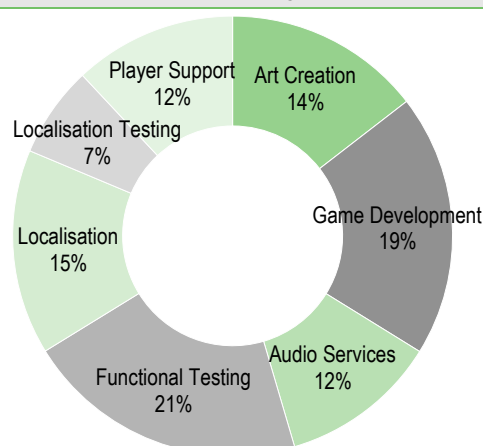
**Keywords Studios is a  
research client of Edison  
Investment Research Limited**

## Investment summary

### Company description: Clear market leader

Keywords is the largest supplier of outsourced services to the global video games industry. By consolidating a highly fragmented industry landscape, the group has built a unique portfolio of services that spans the breadth of the games development cycle, from original concept through to go-live and post-launch support (see 'Divisional overview'). Based on H119 revenues, the group now has a good balance across its seven service lines, with an investment bias towards higher-margin areas including Game Development and Art Creation.

**Exhibit 1: Balanced business mix (H119 revenues by division)**



Source: Keywords Studios, Edison Investment Research

Keywords has a presence in most of the major games development hubs globally and provides services to many of the major games companies (PC, console and mobile) worldwide.

The games industry's shift away from hit-or-miss product sales to a much more recurring, franchise-based subscription model lends itself to retained multi-service engagements and Keywords is progressively developing strategic, multi-service relationships with most major publishers.

**Exhibit 2: Clear market leader working with 23 of the 25 top games companies (by revenue)**



Source: Edison Investment Research, Keywords Studios

At its core, Keywords offers investors exposure to the growth of the video games market, without taking on the risk of the success or failure of individual game titles.

### Attractive dynamics in a growth market

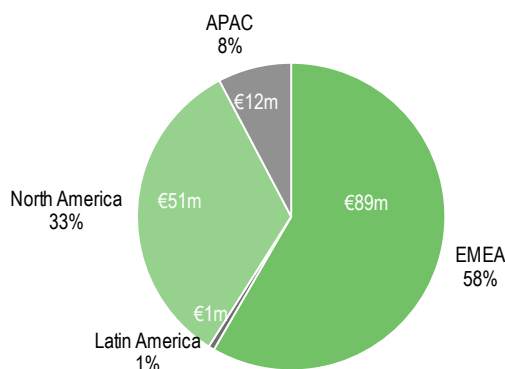
Gaming has established itself as a mass-market media format, estimated to be worth more than \$152bn globally and continuing to grow at c 9% overall to 2022 (source: Newzoo).

As game complexity increases, there is a continuing trend towards outsourcing to manage the risk and cost of the large team sizes required to create market-leading titles. This complexity is only likely to increase as we head towards the next console cycle. Consequently, we expect the market for outsourcing (estimated by Keywords to be worth c \$6bn+) to grow more rapidly than the overall games market (we estimate c 11%) as developers increasingly outsource to focus on their core operations and improve flexibility.

A number of drivers underpin the growth of the games sector. Keywords continues to benefit from the trend towards games-as-a-service (GaaS), which necessitates ongoing content creation to expand the core game release and drive continuing player engagement. As streaming services are rolled out (eg Google's Stadia), support for a growing list of back-catalogue titles is likely to offer new opportunities for Keywords. Another driver is the growing maturity of e-sports, requiring the production of marketing content, customer support materials and 'live translation' of event content.

Keywords also enjoys a strong position in the fast-growing mobile games segment of the market, offering continuous localisation work in as many as 50 languages. Mobile games continues to be the fastest-growing games segment (Newzoo forecasts double-digit growth to 2022), with Asia the driver of much of this growth, where Keywords continues to expand its presence.

**Exhibit 3: Keywords' global profile (H119 revenues by region)**



Source: Keywords Studios, Edison Investment Research

## Compelling business model

The key attraction of Keywords' investment case is that, as the 'go to' global games services platform, in our view the company can continue to generate double-digit organic earnings growth, supplemented by an active M&A agenda in a highly-fragmented market, without expanding beyond its core games industry customer base. Despite potential concerns behind the share price consolidation seen in September, this proven and consistent strategy has delivered a five-year EPS CAGR of 53% and a free cash flow CAGR of 64% FY13–18.

## Financials: Consolidating a fragmented space

End H119 net debt of €9.0m (FY18: €0.4m) and a new revolving credit facility of up to €140m over five years leaves ample firepower for future acquisitions. Management reports a healthy M&A pipeline that is not factored into our base forecasts, which should further support growth and earnings accretion.

The company's M&A strategy is supported by the very fragmented competitive landscape for service providers to the games industry. This has enabled Keywords to acquire studios at attractive multiples and achieve synergies through cross-selling and/or cost efficiencies (see 'Consolidating a fragmented industry' below).

Management has highlighted Art Creation (including Marketing), Audio Services and Game Development as service lines that are likely to see M&A activity over FY19 and into FY20 as Keywords continues to move up the value chain, offering higher value-added services. In addition to the latest acquisition of TV Synchron, a Berlin based dubbing and voice over studio in the German language with a long history in the film industry, Keywords invested €6.9m of cash in four acquisitions in the first half of 2019: Art Creation (Sunny Side Up), Game Development (GetSocial, Wizcorp) and Audio Services (Descriptive Video Works).

Keywords' acquisition pipeline remains healthy and management continues to review opportunities that could add critical mass, capacity and extend the service offering or geographical reach.

## Outlook: Strong H219 anticipated

We expect a strong H219 performance from Keywords, benefiting from a number of factors:

1. H219 margins will recover from the accelerated investment in H119, with the remainder of the 1,459 new seats under preparation becoming available in H219;
2. an accelerating trend towards outsourcing;
3. following its acquisition in 2017, VMC has contributed to the growth of Functional Testing in H119, with normalising margins in H219 and beyond;
4. the company should continue to benefit from increasing investment in streaming services, as well as increasing spend for next-generation console development in the run-up to launch in Q420; and
5. Keywords continues to see a healthy acquisition pipeline, with management expecting to complete deals in FY19 and FY20, with an emphasis on game development and marketing services.

## Sensitivities: Sustained execution should drive robust returns

With its shares trading on a 2019e P/E of 28.9x, falling to 22.2x in 2020e, Keywords is trading in line with its peers however, as with prior years, as it executes its strategy, we expect the company to trade at a premium to better reflect its market leadership, international reach, track record and superior growth potential.

Although our base case estimates do not reflect any material contribution from M&A, our sensitivity analysis in Exhibits 4 and 5 suggests that if management retains historical price discipline (ie paying 7–11x PBT for acquisitions) and deploys at least €40m in cash (plus equity), then FY20 P/E multiples could potentially fall to c 18–20x, based on our assumptions.

### Exhibit 4: Sensitivity analysis – estimated 2020 EPS (c) assuming €40m in cash spend on acquisitions in FY20

|                              | Acquisition adjusted<br>2020 EPS (59.5p) | Average EV/PBT paid for acquisitions in FY20 |      |      |       |       |
|------------------------------|--|--|------|------|-------|-------|
|                              |  | 7.0x   | 8.0x | 9.0x | 10.0x | 11.0x |
| Organic<br>revenue<br>growth | 10.0%                                    | 69.4   | 68.2 | 67.2 | 66.4  | 65.8  |
|                              | 12.5%                                    | 70.8   | 69.6 | 68.6 | 67.9  | 67.3  |
|                              | 15.0%                                    | 72.3   | 71.0 | 70.1 | 69.3  | 68.7  |

Source: Edison Investment Research

### Exhibit 5: Sensitivity analysis – estimated 2020 P/E assuming €40m in cash spend on acquisitions in FY20

|                              | Acquisition adjusted<br>2020P/E multiple (x) | Average EV/PBT paid for acquisitions in FY20 |      |      |       |       |
|------------------------------|--|--|------|------|-------|-------|
|                              |  | 7.0x   | 8.0x | 9.0x | 10.0x | 11.0x |
| Organic<br>revenue<br>growth | 10.0%  | 19.1   | 19.4 | 19.7 | 19.9  | 20.1  |
|                              | 12.5%  | 18.7   | 19.0 | 19.3 | 19.5  | 19.7  |
|                              | 15.0%  | 18.3   | 18.6 | 18.9 | 19.1  | 19.3  |

Source: Edison Investment Research

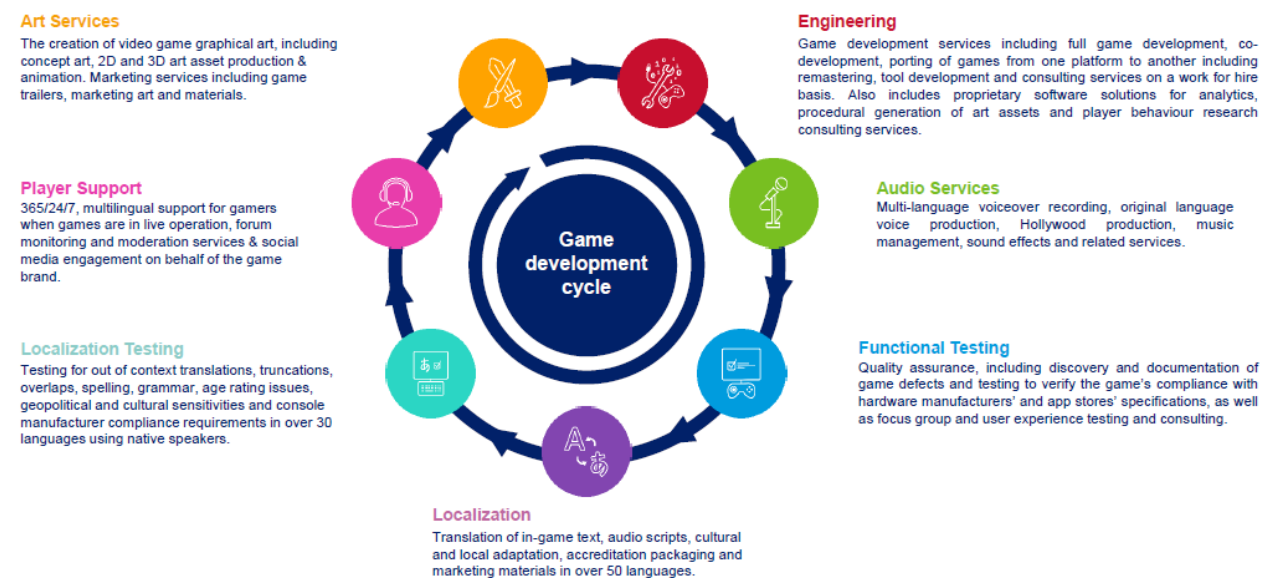
Other than the availability of M&A targets at attractive multiples, other key sensitivities that might have an impact on Keywords include the growth of the global games industry, a continuing industry trend towards outsourcing, the retention of key management, Keywords' equity remaining an attractive acquisition currency, foreign exchange rates to the euro and the continuation of a benign interest rate environment.

## A leading global specialist in the games industry

### Comprehensive coverage of the game development cycle

Keywords is the largest and most diverse supplier of outsourced services to the games industry by some margin. Through consolidation of a fragmented industry landscape, the company has built a breadth of service offering covering most of the games development cycle, from the original conceptual phase through to customer support, managed through seven service lines (Exhibit 6).

**Exhibit 6: Comprehensive solution for the game development cycle**



Source: Keywords Studios

### Building out its global platform – by accretive acquisition

Keywords is building a global footprint (50 studios in 21 countries across four continents) to ensure its service hubs are located close to the end client.

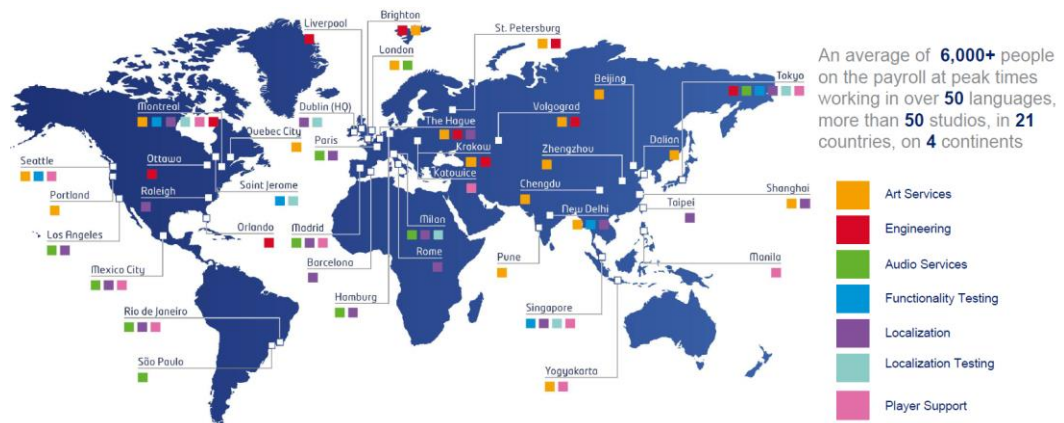
The company started its build-out strategy by acquiring positions in domains such as localisation, localisation testing, functional testing and audio services, all of which are vital ancillary functions in the game development cycle. The company continues to strengthen its position in these services through acquiring companies with complementary skill sets, customers or geographical presence.

More recently, the company has intensified its acquisition activity in domains that are closer to the core games creation process – building out its engineering and co-development offering and strengthening its position in the Asian markets.

As well as consolidating its current service offering (particularly in Game Development, Audio Services and Art Creation – including Marketing) and infill acquisitions (Asia and the Americas), we would expect Keywords to position itself to benefit from future trends including e-sports, GaaS and streaming, as well as investing in developing analytics and AI capabilities. However, the timing of any future acquisitions is likely to remain opportunistic.



**Exhibit 7: Geographical presence by service line**



Source: Keywords Studios

## Opportunity in a fragmenting industry

H119 has seen a slew of announcements, both in terms of new technologies and investment, which look set to support the growth of the industry for the foreseeable future. These investments have included a number of new initiatives by the tech majors targeting the games market (eg Google's Stadia streaming service and Apple's Arcade subscription service for premium mobile games). In April, initial news around Sony's next-generation console emerged (launch anticipated Thanksgiving 2020) and in May, Sony and Microsoft announced a collaboration to develop future cloud solutions for streaming services. At E3 in June, Microsoft confirmed the launch date for its next-generation console, Project Scarlett, as 'Holiday 2020', as well as details of its streaming services (Project xCloud). Ubisoft, another major games publisher, announced its own streaming platform, uPlay.

The following quotes help underline that the games industry is at a nexus, where it operates at a global scale, but is fragmenting with multiple channels into diverse markets:

- 'I would go as far as to say [gaming] is the single most important thing happening right now in our culture', Herman Narula, CEO, Improbable Worlds.
- 'What we are seeing with the evolution of this technology [Stadia] is gaming is getting more and more fragmented', Andy Kleinman, founder of Wonder.
- 'Just as the arrival of Netflix, Apple and Amazon has driven up the price of Hollywood's top talent, in the near term games developers are likely to see a windfall as tech companies vie for content. But developers should remember that after buying up Hollywood's archives, Netflix turned itself into the studios' biggest competitor. Content makers love the idea of a "Netflix for games" and a new way of getting paid, I worry a lot of them are not realising the deal with the devil they are doing', Nicholas Lovell, Electric Square.

This fragmentation is likely to bring about a polarisation of winners and losers, with top-rated teams, potentially financed by money from outside the industry, able to spend increasing amounts on development of global titles, be that on PC, console or mobile – or increasingly, cross-platform.

Keywords is likely to benefit from this trend, given its global presence and the fact that it provides services to most of the main games companies worldwide. It enjoys a strong position in the fast-growing mobile games segment of the market, offering localisation solutions in as many as 50 languages. The mobile games sector continues to be the fastest-growing games segment (Newzoo: double-digit growth forecast to 2022), with Asia a driver of much of this growth, where Keywords continues to consolidate its presence through its 'One China' initiative, integrating its five production studios and implementing a single operating system.

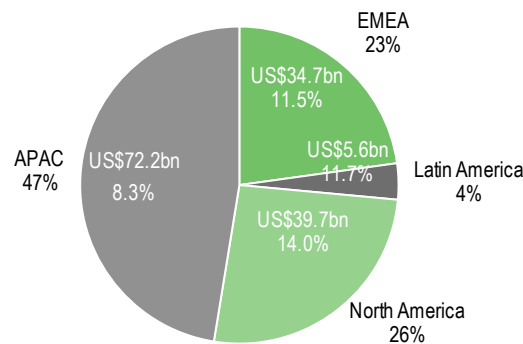
## Supportive industry dynamics

### Games: A global industry offering double-digit growth

Market analyst Newzoo estimates that more than 2.2 billion gamers will generate c \$152bn of revenues in 2019, with Western markets representing c 49% of global revenues and 45% of total revenues on mobile devices. Overall revenues are forecast to grow at c 9% (2018–22), building to a total market size of over \$196bn by 2022. Mobile offers double-digit revenue CAGR, whereas PC and console offer single-digit growth (Newzoo).

To put this into context, the games market is already more than three times the value of global box office movie receipts, estimated to be \$42bn (source: Statista), and seven times the size of the recorded music industry at \$19bn (source: IFPI), but remains some way behind the Pay TV market, which ABI Research forecasts will reach \$295bn by 2022, making the likes of Netflix increasingly nervous of the challenge from games for users' screen time.

**Exhibit 8: \$152bn global market, split by region (with year-on-year growth rates)**



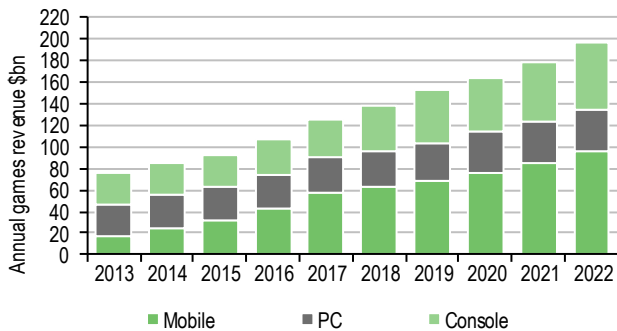
Source: Newzoo, Edison Investment Research

### Drivers of Keywords' future growth

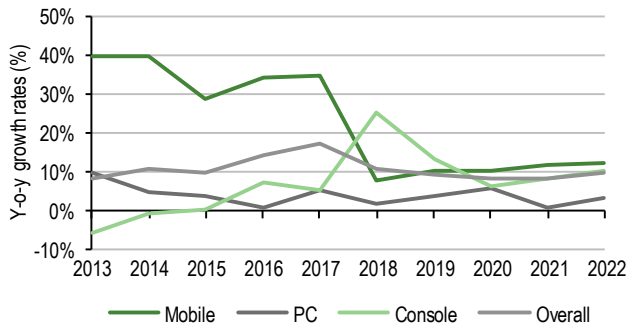
On top of the games industry's growth of c 9%, we believe the market for outsourced services could grow at a premium, driven by increased use of outsourcing (see 'Will games follow the TV and film outsourcing model?' below). Given these dynamics, Keywords remains well placed to consolidate its market position, both organically – as business is attracted to the market leader, with a footprint matching its international clients – and through further acquisitions, as the company consolidates an over-fragmented landscape.

As we have highlighted, we see Keywords' future growth coming from three principal sources:

- the underlying growth of the games sector (c 9% to 2022, Newzoo);
- augmented by an increasing industry trend towards outsourcing; and
- overlaid by inorganic growth from M&A at attractive multiples.

**Exhibit 9: Global games market value**


Source: Newzoo, Edison Investment Research

**Exhibit 10: Growth forecasts by segment**


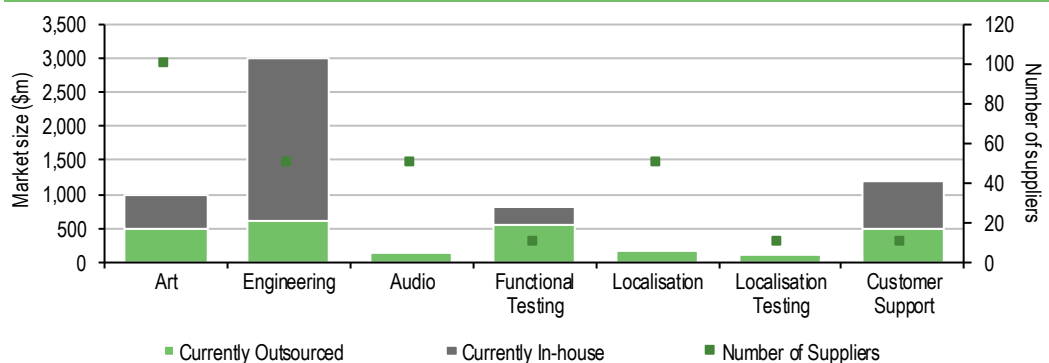
Source: Newzoo, Edison Investment Research

### Strong underlying growth

As an entertainment form, the games industry is now truly mainstream, spanning all geographies and most demographics. Supported by the rise of mobile gaming, 45% of US gamers are now female (Entertainment Software Association), with the balance in mobile games c 50/50. The average age of a US gamer is 34 (and ageing) and 64% of households are home to at least one person who plays video games.

### Outsourced services should continue to outgrow the games sector

Sizing the market for outsourced services is difficult, but Keywords' management estimates that total spend on the services it offers is conservatively c \$6bn pa, of which 30–50% is outsourced. The degree to which outsourcing has been adopted varies across service lines, but management estimates that, on a blended basis, this percentage will trend upwards towards 70% over the next five years (a comparable figure for the film industry might be close to 90%). This would imply an outsourcing CAGR of 10%+ over the next five years on top of industry growth, or conservatively, 15–20%.

**Exhibit 11: Estimated market size by service line**


Source: Keywords Studios estimates, Edison Investment Research

The trend towards outsourcing is likely to be supported by a number of specific factors:

- **Shift to a service revenue model:** the industry is rapidly adopting more recurring revenue models (ie GaaS). Downloadable content (DLC) is fundamental to the drive to maximise and prolong game lifetime and lifetime value (LTV), driving demand for specialist outsourced services for post-launch DLC and support.
- **Increasing richness and complexity:** similarly, games are getting bigger and production values are going up – and likely to increase further as next-generation game development



starts in earnest. Known and unknown initiatives by the tech majors looking to carve a foothold in the games industry are only likely to increase investment further.

- **Supply chain disaggregation/adoption of leaner structures:** vertically integrated industries typically disaggregate over time (ie the Hollywood model), stratifying into a supply chain of businesses with specialist marketing, production and creative/technical skills.

### Keywords consolidating the outsourced services market

Industry newsflow in 2019 highlights the rapid evolution of the games industry and the disruption taking place, but we believe Keywords remains well placed to benefit from this disruption. As seen in H119, strong demand for services led to constant currency like-for-like revenue growth of 17%, up from €124.8m in H118 to €146.4m in H119. As the 'go to' global games services platform, Keywords expects to lead the consolidation of a highly fragmented market, benefiting from the accelerating trend towards outsourced services in the video games market.

Looking ahead, even before factoring in future M&A activity, we believe Keywords should continue to capture market share from its smaller competitors through its ability to offer:

- **Scale:** proven ability to take on large multi-disciplinary projects, handle peaks in demand and deliver projects professionally across geographies and time zones, matching clients' international footprints.
- **End-to-end solutions:** the capability to become a developer's retained outsourcing partner, working with the developer at different stages of the development cycle across titles, genres, platforms and disciplines.
- **Innovation:** increased ability to invest, with excellent visibility over future industry innovations.
- **Lower risk:** through scale, diversity, professionalism and financial solidity.

In addition, given the disruption and rapid evolution of the various markets in which it operates, we would expect a continuing supply of acquisition opportunities at attractive prices from which Keywords can benefit.

### Will games follow the TV and film outsourcing model?

Leading voices in the games industry continue to question the viability of the current model of developing AAA games – as mentioned by Amy Hennig (ex-creative director at Naughty Dog) in a recent interview: 'In my career, I've gone from a two-person team to 15 or something, then 30, then 70, and up to now... it's amplified by having a 300-person team versus a 10-person team... What doesn't change is the challenge of trying to do a creative endeavour with a group of human beings, and that only gets more complicated as the teams have gotten bigger and bigger.'

The issue identified is the size of games teams and the difficulty of scaling resource up and down over the game development lifecycle. Managing this resource internally within a developer is a significant issue that has led to studio closures (Capcom Vancouver, Telltale Games) as well as recent lay-offs, for example by Electronic Arts, Activision Blizzard, Starbreeze and Take-Two.

The solution proposed is a decentralised model, with a smaller core team and many of the traditional elements outsourced. The games industry is looking to the TV and film industries as a model that makes sense, relying less on in-house production and more on external contractors.

'Obviously that would require a big sea change in the industry... but you would have a lot more external partners or freelance developers as part of a team, do more things as distributed development rather than have everything in-house,' Hennig says. 'It would allow for a lot more flexibility rather than feeling that constant pressure, that churn of salaries.'

## Consolidating a fragmented industry

### Headroom to continue building a global platform

Keywords has been the main driver of consolidation within the games service provider industry (Exhibit 12), and typically aims to make one or two large strategic acquisitions each year, supplemented by a number of smaller bolt-ons.

**Exhibit 12: Acquisition history by service line**

| Year | Art Creation                          | Game Development  | Audio Services                         | Functional Testing        | Localisation  | Localisation Testing | Player Support | Total cost* (€m) |
|------|---------------------------------------|---|--|---------------------------|---|----------------------|----------------|------------------|
| 2014 | Lakshya Digital                       |   | Liquid Violet<br>Binari Sonori         | Babel Media               | Babel Media<br>Binari Sonori  | Babel Media          |                | 19.0             |
| 2015 | Liquid Dev                            |   | Reverb<br>Kite Team                    |                           |   |                      | Alchemic Dream | 10.9             |
| 2016 | Mindwalk<br>Volta                     |   | Synthesis<br>Sonox                     | Enzyme<br>Player Research | Synthesis<br>Sonox  | Synthesis<br>Enzyme  | Ankama         | 32.6             |
| 2017 | SPOV<br>RedHot                        | GameSim<br>d3t<br>Sperasoft                             | La Marque Rose<br>Dune Sound<br>AsRec  | VMC                       | VMC<br>XLOC<br>La Marque Rose<br>Around the Word<br>Dune Sound<br>AsRec<br>LOLA | VMC                  | VMC            | 101.4            |
| 2018 | Fire Without<br>Smoke<br>Trailer Farm | Snowed In<br>Studio Gobo<br>Electric Square<br>Yokozuna | Maximal<br>Cord<br>Laced<br>Blindlight |                           |   |                      |                | 60.4             |
| 2019 | Sunny Side Up                         | GetSocial<br>Wizcorp                                    | Descriptive Video<br>Works             |                           |   |                      |                | 6.9              |

Source: Keywords Studios. Note: \*Includes all cash, deferred and equity consideration.

The markets in which Keywords operates are highly fragmented and remain ripe for consolidation. Most service providers are sub-scale, with revenues dependent on a small number of customers and limited exit options. A survey by the External Development Summit (XDS) of 150 developers found that 72% of service providers said they were open to being acquired.

Across Keywords' service offering, we believe there is scope to continue building its platform and for the buy-and-build strategy to deliver sustained returns. Although recent acquisitions have put Keywords in a leadership position in some service lines – such as audio services, localisation and localisation testing in certain markets – the addition of service lines such as Art Creation, Game Development and Player Support open up substantially larger markets.

End H119 net debt of €9.0m (FY18: €0.4m) and a new revolving credit facility of up to €140m over five years leave ample firepower for future acquisitions. Management reports a healthy M&A pipeline that is not factored into our base forecasts, which should further support growth and earnings accretion.

### An attractive acquirer in a receptive market

We believe Keywords has developed a culture and methodology that have given the business a reputation as an attractive acquirer. Keywords identifies cultural fit as the most important screening criterion and teams are kept together, while benefiting from the group's scale, market penetration, improved career prospects, better processes/systems and financial stability. Management reports continuing inbound interest from companies from around the world interested in joining the Keywords family, but it will remain disciplined to ensure it does not overpay and that acquisitions are fully bedded down and integrated into the group.

## Limited competition for deals at present

We are watchful for any signs of increased competition for key acquisition targets, but believe that Keywords' attributes as the market leader will not be easy to replicate. We have seen sporadic acquisition activity from Keywords' competitors, eg Pole To Win (latest announced acquisition, Side (2015), a UK-based voice and motion capture specialist) and Virtuos Games (\$15m fund-raise in March 2018 and the acquisition of Black Shamrock (2017), an Irish role-playing game and strategy specialist), but we have yet to see evidence of a more expansive acquisition strategy.

Sumo Digital, a UK-based provider of outsourced creative and development services to the video games industry, which listed on AIM in December 2017, acquired Atomhawk, a UK-based art studio, in July 2017 for an estimated £2.3m; The Chinese Room, an IP-owning game development studio for £2.2m in cash and shares in August 2018; and Red Kite, a work-for-hire studio focusing on engineering and code support services in February 2019. Whereas Catalis, a private equity-backed Europe-based publisher (Curve Digital) and testing business (Testronic), received a better price from private equity (2.2x FY18 sales, 18x FY18 P/E) than a long-rumoured IPO, when it sold to North Edge for £89.8m in August 2019.

It is possible that outsourcers from outside the gaming industry may look to expand into this vertical through acquisitions (eg Lionbridge), but we have yet to see any significant activity in this direction, and replicating Keywords' successful formula may be challenging for outside parties.

## Price discipline, process and synergies generate strong ROI

Keywords targets a 15–30% ROI from acquisitions within two to three years. This starts with maintaining good price discipline, supported by the attributes described above and a fragmented competitive landscape. Valuations have averaged c 1.5–2.0x sales, whereas the average EV/PBT multiple was 7–10x for FY15–17. Keywords paid higher multiples for VMC and Sperasoft as larger strategic acquisitions, but the integration with Keywords has progressed well and both should fall within this range as margins rise to the group's 15%+ level by 2020.

When acquiring, management's key focus is on achieving margin expansion via insertion into Keywords' ecosystem, resetting margin expectations to group levels. Most acquisitions are expected to achieve group-level margins (c 15%) within two years. In the longer term, a number of studios have successfully leveraged Keywords' platform to significantly increase scale through cross-selling, international expansion and customer acquisition.

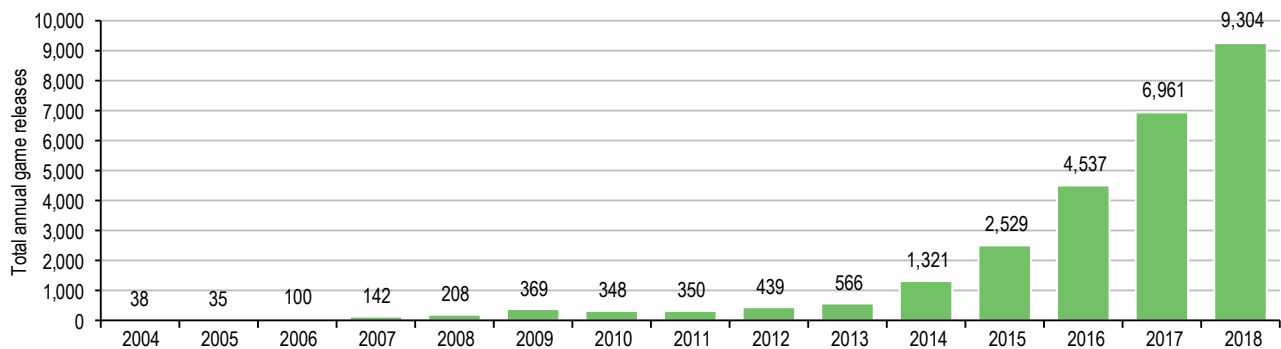
In H119, Keywords made good progress with expanding its client relationships and cross-selling services, with a 14% increase in clients buying three or more services to 113 (FY18: 99).

## Drivers of growth in the games industry

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As mentioned above, the games industry continues to enjoy strong secular growth, both in revenues and player numbers. Historically, this growth can be seen in terms of the number of titles submitted to Steam, the leading PC distribution platform:

**Exhibit 13: Number of games released on Steam (PC-only games distribution platform)**



Source: Edison Investment Research, SteamSpy data

In 2019, Western markets represent c 49% of global games revenues estimated at \$152bn, with 45% of total revenues on mobile devices. Overall revenues are forecast to grow at c 9%+ (2018–22), with double-digit mobile CAGR, whereas PC and console offer single-digit growth (Newzoo).

As we consider the underlying drivers of growth, there are a number of themes we would highlight that are likely to drive continuing growth over the short to medium term.

## Eight drivers identified

**Driver 1: digitalisation continues to transform business models:** digitalisation has reduced the financial resources and capital intensity required to launch new titles, supporting business model diversity, more flexibility and better profitability for developers and IP owners.

**Driver 2: prevalence of GaaS:** GaaS involves managing a game's community post-launch and has helped transform the economics of game creation, reducing development risk, increasing player stickiness and longevity and improving profitability. The GaaS business model offers substantial outsourcing opportunities, with the creation of DLC and live game support over an extended lifecycle post-release considered non-core by most developers.

**Driver 3: streaming leads to subscription?** Significant investment is going into developing effective video game streaming models and the associated technologies by both publishers and technology companies, leading to a broadening of the player base and increasing subscriptions. The need for knowledgeable support and expertise across multiple service lines will only grow with these initiatives if, as expected, the tech majors invest further in the games industry. The porting and optimisation of existing titles to streaming technologies is the sort of service that developers would willingly outsource to a third party.

**Driver 4: eSports to drive growth:** e-sports is another evolution of the games industry that will have a significant impact on future growth, providing another way to build a community around successful titles, streamed live to a global audience over Twitch and YouTube. E-sports requires the production of marketing content, customer support materials and 'live translation' of event content, all non-core to games companies. Trusted outsourcing partners may even be invited to host tournaments and events on behalf of existing clients.

**Driver 5: mobile capturing the casual audience:** mobile offers the potential for huge scale and penetration, but remains a casual medium where tastes, fads and fashions move quickly. Sustainable revenues are hard to achieve, but emerging new business models may change this. Apple Arcade, a subscription service (\$4.99 per month) offering exclusive premium mobile content that was announced in March 2019, may help underpin a more sustainable premium revenue model in this fast-moving market. This initiative (with the associated influx of new investment) is likely to offer new opportunities for Keywords.

**Driver 6: Asian/Chinese Eldorado:** the size of the Chinese market is hard to ignore – China is forecast to constitute \$36.5bn of the \$72.2bn Asian market in 2019, together representing c 47% of global games revenues (Newzoo). The complexity of this market means many games developers would prefer to partner and/or outsource development to a trusted partner rather than committing in-house resource to an important but non-core market they do not fully understand. Keywords is targeting this opportunity with its 'One China' initiative.

**Driver 7: IP/content is king:** with the prospect of a proliferation of channels to market in the coming years (eg streaming, digital distribution, next-generation consoles), this should represent a great opportunity for IP owners to maximise returns from their IP and expertise.

**Driver 8: tax reliefs level the playing field:** tax reliefs for the games and broader creative industries are now either in place or under consideration across much of Europe. These are critical to levelling the playing field and sustaining a creative industry in high-cost jurisdictions. Keywords already benefits from the multi-media tax credit (MMTC) in Canada as well as video games tax relief (VGTR) in the UK.

## Interim results

### Sustained growth set to continue

Keywords saw strong revenue growth in H119 (17.5% I-f-I), with revenues rising 39% including acquisitions to €153.2m. Accelerated investment in recruitment and training, together with the costs of early-stage investments and the one-off costs of an acquired project led to a compression of operating margins to 12.6% from 15.5% in FY18. Adjusted PBT was €18.4m (H118: €16.0m), an increase of 15%.

Net debt rose to €9m (vs €0.4m at end-2018), reflecting peak working capital commitment at the end of H119, higher capex for investment in new infrastructure (€5.1m vs €1.4m in H118) and €6.9m of net cash outflows on acquisitions (H118: €12.6m). Keywords secured a new revolving credit facility, provided by Barclays Bank plc, Citibank N.A., HSBC and Silicon Valley Bank, for an initial €100m over a three-year term, with the option to extend the facility up to €140m and by a further two years. This replaces the existing €105m facility and will be used to fund acquisitions and general working capital requirements, providing plenty of headroom to continue to support the company's consolidation strategy.

**Exhibit 14: Interim results table**

| €m   | 2018  |       |        | 2019   |        |        | 2020   |
|--|-------|-------|--------|--------|--------|--------|--------|
|  | H1    | H2    | FY     | H1     | H2e    | FYe    | FYe    |
| Revenue                                      | 110.0 | 140.9 | 250.8  | 153.2  | 162.0  | 315.2  | 349.9  |
| Cost of Sales                                | -72.5 | -94.7 | -167.2 | -104.9 | -107.0 | -211.8 | -232.1 |
| Gross Profit (incl multimedia tax credits)   | 37.5  | 46.1  | 83.6   | 48.3   | 55.0   | 103.4  | 117.7  |
| Gross Margin                                 | 37.4% | 38.8% | 38.2%  | 36.1%  | 38.5%  | 37.3%  | 37.7%  |
| EBITDA                                       | 19.0  | 25.3  | 44.2   | 22.5   | 26.0   | 48.5   | 59.8   |
| Operating Profit (before amort. and except.) | 16.5  | 22.4  | 38.9   | 19.3   | 22.7   | 42.0   | 52.6   |
| Operating Margin                             | 15.0% | 15.9% | 15.5%  | 12.6%  | 14.0%  | 13.3%  | 15.0%  |
| PBT (norm)                                   | 16.1  | 21.8  | 37.9   | 18.4   | 21.6   | 40.0   | 51.6   |
| EPS (norm) (c)                               | 18.3  | 23.5  | 41.8   | 18.4   | 27.6   | 45.8   | 59.5   |
| Dividend per share (p)                       | 0.53  | 1.08  | 1.61   | 0.58   | 1.19   | 1.77   | 1.95   |

Source: Keywords, Edison Investment Research

## Financials

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### Sustained growth set to continue

The key attraction of Keywords' investment case is that, as the 'go to' global games services platform, in our view the company can continue to generate double-digit organic earnings growth, supplemented by an active M&A agenda in a highly fragmented market, without expanding beyond its core games industry customer base. Despite potential concerns behind the share price consolidation seen in September, this proven and consistent strategy has delivered a five-year EPS CAGR of 53% and a free cash flow CAGR of 64% FY13–18.

### Acquisition pipeline supports growth

Keywords' strategy of using earnings-enhancing acquisitions while consolidating a fragmented games outsourcing market is intrinsic to the investment case. Management has stated the acquisition pipeline remains healthy and the company continues to receive inbound interest from around the world. With a new revolving credit facility of up to €140m over five years, the company retains ample firepower for future acquisitions. Management reports a healthy M&A pipeline that is not factored into our base forecasts, which should further support growth and earnings accretion.

In addition to the latest acquisition of TV Synchron, a Berlin based dubbing and voice over studio in the German language with a long history in the film industry, Keywords invested €6.9m of cash in four acquisitions in the first half of 2019: Art Creation (Sunny Side Up), Game Development (GetSocial, Wizcorp) and Audio Services (Descriptive Video Works). Management continues to review a healthy acquisition pipeline and expects to complete further acquisitions in H219 and FY20, with an emphasis on game development and marketing services as Keywords continues to move up the value chain, offering higher value-added services. However, the timing of future acquisitions is likely to remain opportunistic.

### Strong H219 anticipated

We expect a strong H219 performance from Keywords, benefiting from a number of factors:

1. H219 margins will recover from the accelerated investment in H119, with the remainder of the 1,459 new seats under preparation becoming available in H219;
2. an accelerating trend towards outsourcing;
3. following its acquisition in 2017, VMC has contributed to the growth of Functional Testing in H119, with normalising margins in H219 and beyond;
4. the company should continue to benefit from increasing investment in streaming services, as well as increasing spend for next-generation console development in the run-up to launch in Q420; and
5. Keywords continues to see a healthy acquisition pipeline, with management expecting to complete deals in FY19 and FY20, with an emphasis on game development and marketing services.

### Key assumptions underpinning revised forecasts

As we indicated in [our note on 31 July 2019](#) after Keywords' trading update, we have now revised our forecasts to reflect the strong revenue growth, but lower margins seen in H119.

**Revenues:** with H219 trading starting well, and given the revenue momentum of the business, we have raised our like-for-like revenue growth (using pro forma revenues for acquisitions made during the year) to 17.0% in H219 (H119: 17.3%), before it falls back to 11.0% for FY20, which is



conservative by historical standards and towards the lower end of management's 10–15% guidance.

**Operating margins:** management expects margins to normalise in H219, benefiting from the investment made in H119. Given this, we have forecast operating margins of 14.0% in H219 (H119: 12.6%, H218: 16.0%) and 15.0% in FY20.

| <b>Exhibit 15: Revised estimates</b>         |       |           |           |           |        |           |           |        |
|--|-------|-----------|-----------|-----------|--------|-----------|-----------|--------|
| Year end 31 December                         | €000s | 2018      | 2019e     | 2019e     | Change | 2020      | 2020e     | Change |
|  |       | Actual    | Old       | New       |        | Old       | New       |        |
| Revenue                                      |       | 250,805   | 299,559   | 315,202   | 5.2%   | 335,506   | 349,874   | 4.3%   |
| Cost of Sales                                |       | (154,997) | (188,485) | (197,542) | 4.8%   | (212,569) | (217,868) | 2.5%   |
| Gross Profit (inc tax credits)               |       | 95,808    | 111,075   | 117,659   | 5.9%   | 122,937   | 132,005   | 7.4%   |
| Gross Margin (%)                             |       | 38.2%     | 37.1%     | 37.3%     |        | 36.6%     | 37.7%     |        |
| EBITDA                                       |       | 44,232    | 51,382    | 48,546    | -5.5%  | 57,424    | 59,838    | 4.2%   |
| Operating Profit (before amort. and except.) |       | 38,916    | 38,916    | 45,172    | 42,011 | -7.0%     | 50,468    | 52,584 |
| Operating Margin                             |       | 15.5%     | 15.1%     | 13.3%     |        | 15.0%     | 15.0%     |        |
| Profit Before Tax (norm)                     |       | 37,911    | 44,167    | 40,011    | -9.4%  | 49,463    | 51,584    | 4.3%   |
| Profit After Tax (norm)                      |       | 30,720    | 35,996    | 32,609    | -9.4%  | 40,559    | 42,299    | 4.3%   |
| EPS - normalised (c)*                        |       | 40.1      | 54.4      | 45.8      | -15.8% | 61.0      | 59.5      | -2.5%  |
| Dividend per share (p)                       |       | 1.61      | 1.77      | 1.77      |        | 1.95      | 1.95      |        |
| Closing net debt/(cash)                      |       | 427       | 8,950     | 6,716     | -25.0% | (5,256)   | (15,776)  | 200.1% |

Source: Keywords accounts, Edison Investment Research. \* EPS has been revised, in line with the company, to better reflect the tax impact of adjustments for FY18 and forecast years.

## Valuation

Keywords' shares trade on a 2019e P/E of 28.9x, falling to 22.2x in 2020e, but we see scope for organic upside to these earnings. Additionally, accretive acquisition activity (at multiples in line with historical levels) should also bring the 2020e P/E down, potentially to c 18-20x, based on our assumptions.

## Peer group

Establishing a peer group for valuation purposes is difficult. Although Keywords operates in the games industry, it provides support services to the industry and therefore has a different business model from mainstream developers/publishers. However, as it enjoys the growth of the games industry, these companies (and their global peers) are likely to remain the companies to which it is most frequently compared. Other than these, we have also looked at a broad basket of translation and localisation companies (SDL, RWS, Appen, ZOO), as well as software (Learning Technologies Group, Constellation Software) and people-centric outsourcing businesses (Reply, Wavestone, Capita). Finally, we considered other AIM-listed companies operating buy-and-build models, but decided the grouping was too diverse to be of real relevance.

As can be seen in Exhibits 16 and 17 below, the valuation ranges indicated by each of these peer groups are relatively consistent, with a forecast P/E range of 22–28x and an EV/EBITDA range of 14–19x. Keywords, despite its market leadership, international reach, track record and superior growth potential, trades broadly in line with these multiples.

**Exhibit 16: Peer valuations – outsourcing/localisation businesses**

| Name                   | Current price<br>(local ccy) | Market<br>cap (\$m) | EV<br>(\$m) | EV/sales<br>1FY (x) | EV/sales<br>2FY (x) | EV/<br>EBITDA<br>1FY (x) | EV/<br>EBITDA<br>2FY (x) | P/E<br>1FY (x) | P/E<br>2FY (x) | PEG<br>FY1/2 | FCF<br>yield 1FY<br>(%) |
|------------------------|------------------------------|---------------------|-------------|---------------------|---------------------|--------------------------|--------------------------|----------------|----------------|--------------|-------------------------|
| Constellation Software | CAD1288.9                    | 20,563              | 20,907      | 6.0                 | 5.1                 | 22.0                     | 18.7                     | 33.4           | 26.5           | 1.2          | 3.5                     |
| Capita                 | 146.2p                       | 3,048               | 4,800       | 1.0                 | 1.0                 | 8.7                      | 7.8                      | 11.2           | 9.8            | 0.8          | -4.1                    |
| Reply                  | €51.7                        | 2,139               | 2,123       | 1.6                 | 1.5                 | 11.3                     | 10.2                     | 19.1           | 17.1           | 1.2          | 3.1                     |
| RWS Holdings           | 559.0p                       | 1,912               | 1,992       | 4.5                 | 4.2                 | 19.2                     | 17.9                     | 26.7           | 24.3           | 2.8          | 2.8                     |
| Appen                  | A\$21.8                      | 1,814               | 1,792       | 4.9                 | 3.9                 | 27.9                     | 21.1                     | 45.6           | 34.3           | 1.1          | 2.9                     |
| Learning Technologies  | 122.0p                       | 1,019               | 1,033       | 6.4                 | 5.9                 | 19.5                     | 17.5                     | 27.5           | 24.8           | 2.4          | 2.5                     |
| Wavestone              | €26.8                        | 599                 | 642         | 1.4                 | 1.2                 | 9.4                      | 8.2                      | 16.9           | 13.4           | 0.7          | 5.9                     |
| SDL                    | 488.0p                       | 546                 | 578         | 1.2                 | 1.2                 | 10.2                     | 9.1                      | 16.9           | 14.9           | 1.2          | 3.5                     |
| ZOO Digital Group      | 83.0p                        | 76                  | 79          | 2.4                 | 1.9                 | 28.4                     | 13.8                     | nm             | 32.8           | nm           | 1.0                     |
| <b>Mean</b>            |                              |                     |             | <b>3.3</b>          | <b>2.9</b>          | <b>17.4</b>              | <b>13.8</b>              | <b>24.7</b>    | <b>22.0</b>    | <b>1.4</b>   | <b>2.3</b>              |
| <b>Median</b>          |                              |                     |             | <b>2.4</b>          | <b>1.9</b>          | <b>19.2</b>              | <b>13.8</b>              | <b>22.9</b>    | <b>24.3</b>    | <b>1.2</b>   | <b>2.9</b>              |

Source: Edison Investment Research, Refinitiv data. Note: Priced as at 17 September 2019.

**Exhibit 17: Peer valuations – games companies**

| Name                     | Current price<br>(local ccy) | Market<br>cap (\$m) | EV<br>(\$m) | EV/sales<br>1FY (x) | EV/sales<br>2FY (x) | EV/<br>EBITDA<br>1FY (x) | EV/<br>EBITDA<br>2FY (x) | P/E<br>1FY (x) | P/E<br>2FY (x) | PEG<br>FY1/2 | FCF<br>yield 1FY<br>(%) |
|--------------------------|------------------------------|---------------------|-------------|---------------------|---------------------|--------------------------|--------------------------|----------------|----------------|--------------|-------------------------|
| <b>UK games</b>          |                              |                     |             |                     |                     |                          |                          |                |                |              |                         |
| Frontier Developments    | 1048.0p                      | 406                 | 508         | 463                 | 5.4                 | 4.4                      | 16.7                     | 11.9           | 43.5           | 26.7         | 0.4                     |
| Team17 Group             | 290.0p                       | 381                 | 476         | 431                 | 6.7                 | 6.2                      | 19.1                     | 17.8           | 28.8           | 26.6         | 4.5                     |
| Codemasters Group        | 218.5p                       | 302                 | 377         | 359                 | 3.5                 | 3.2                      | 15.6                     | 13.8           | 17.5           | 15.1         | 1.4                     |
| Sumo Group               | 168.5p                       | 254                 | 317         | 312                 | 4.9                 | 4.2                      | 18.0                     | 15.3           | 25.5           | 21.9         | 1.4                     |
| <b>Mean</b>              |                              |                     |             | <b>5.1</b>          | <b>4.5</b>          | <b>17.3</b>              | <b>14.7</b>              | <b>28.8</b>    | <b>22.6</b>    | <b>1.9</b>   | <b>2.7</b>              |
| <b>Median</b>            |                              |                     |             | <b>5.1</b>          | <b>4.3</b>          | <b>17.4</b>              | <b>14.6</b>              | <b>27.1</b>    | <b>24.2</b>    | <b>1.4</b>   | <b>3.3</b>              |
| <b>US/European Games</b> |                              |                     |             |                     |                     |                          |                          |                |                |              |                         |
| Activision Blizzard Inc  | \$56.0                       | 42,915              | 40,918      | 6.5                 | 5.9                 | 18.6                     | 15.5                     | 25.5           | 22.1           | 1.7          | 3.9                     |
| Electronic Arts Inc      | \$98.5                       | 29,023              | 24,831      | 4.8                 | 4.5                 | 14.2                     | 12.6                     | 21.5           | 19.5           | 1.9          | 5.0                     |
| Take-Two Interactive     | \$125.1                      | 14,159              | 12,616      | 4.5                 | 4.5                 | 18.5                     | 17.3                     | 26.7           | 25.4           | 1.8          | 3.4                     |
| Ubisoft Entertainment SA | €72.6                        | 9,049               | 9,383       | 3.9                 | 3.5                 | 8.5                      | 7.6                      | 24.4           | 20.9           | 1.6          | 1.9                     |
| Zynga Inc                | \$5.9                        | 5,574               | 5,304       | 3.5                 | 3.1                 | 18.9                     | 15.3                     | 25.5           | 22.1           | 1.5          | 4.5                     |
| THQ Nordic AB            | SEK234.0                     | 2,276               | 1,948       | 3.2                 | 2.7                 | 10.4                     | 7.7                      | 34.4           | 25.6           | 1.3          | 3.1                     |
| Glu Mobile Inc           | \$5.5                        | 807                 | 707         | 1.7                 | 1.5                 | 20.4                     | 11.6                     | 24.8           | 13.5           | 0.2          | 6.6                     |
| <b>Mean</b>              |                              |                     |             | <b>4.0</b>          | <b>3.7</b>          | <b>15.6</b>              | <b>12.5</b>              | <b>26.1</b>    | <b>21.3</b>    | <b>1.4</b>   | <b>4.1</b>              |
| <b>Median</b>            |                              |                     |             | <b>3.9</b>          | <b>3.5</b>          | <b>18.5</b>              | <b>12.6</b>              | <b>25.5</b>    | <b>22.1</b>    | <b>1.6</b>   | <b>3.9</b>              |

Source: Edison Investment Research, Refinitiv data. Note: Priced as at 17 September 2019.

## M&A upside sensitivity analysis

Although our base case estimates do not reflect any material contribution from M&A, our sensitivity analysis in Exhibits 18 and 19 suggests that if management retains historical price discipline (ie paying 7–11x PBT for acquisitions) and deploys at least €40m in cash (plus equity, assuming a 70/30 cash/equity split) in acquisitions, it is reasonable to expect 15-20% accretion to our FY20 EPS estimate. With good execution, the company could exit FY19 rated at a forward P/E of c18-20x, not very demanding given Keywords' growth prospects.

Consequently, we continue to believe that sustained execution should drive robust returns for shareholders.

**Exhibit 18: Sensitivity analysis – estimated 2020 EPS (c) assuming €40m in cash spend on acquisitions in FY20**

|                              | Acquisition adjusted<br>2020 EPS (59.5p) | Average EV/PBT paid for acquisitions in FY20 |      |      |       |       |
|------------------------------|--|--|------|------|-------|-------|
|                              |  | 7.0x   | 8.0x | 9.0x | 10.0x | 11.0x |
| Organic<br>revenue<br>growth | 10.0%                                    | 69.4   | 68.2 | 67.2 | 66.4  | 65.8  |
|                              | 12.5%                                    | 70.8   | 69.6 | 68.6 | 67.9  | 67.3  |
|                              | 15.0%                                    | 72.3   | 71.0 | 70.1 | 69.3  | 68.7  |

Source: Edison Investment Research

**Exhibit 19: Sensitivity analysis – estimated 2020 P/E assuming €40m in cash spend on acquisitions in FY20**

|                        | Acquisition adjusted<br>2020 P/E multiple (x) | Average EV/PBT paid for acquisitions in FY20 |      |      |       |       |
|------------------------|---|--|------|------|-------|-------|
|                        |   | 7.0x   | 8.0x | 9.0x | 10.0x | 11.0x |
| Organic revenue growth | 10.0%   | 19.1   | 19.4 | 19.7 | 19.9  | 20.1  |
|                        | 12.5%   | 18.7   | 19.0 | 19.3 | 19.5  | 19.7  |
|                        | 15.0%   | 18.3   | 18.6 | 18.9 | 19.1  | 19.3  |

Source: Edison Investment Research

## Divisional overview

Keywords' business is managed across seven service lines, reviewed at a high level below.

**Exhibit 20: Business mix by division (€000s)**

| Division             | Year ended<br>31 December 2017 | Year ended<br>31 December 2018 | Y-o-y revenue<br>growth | Period ended<br>30 June 2019 | Proportion of<br>H119 revenues |
|----------------------|--------------------------------|--------------------------------|-------------------------|------------------------------|--------------------------------|
| Art Creation         | 26,193                         | 41,688                         | 59%                     | 22,245                       | 14.5%                          |
| Game Development     | 3,572                          | 26,161                         | 632%                    | 29,567                       | 19.3%                          |
| Audio Services       | 20,657                         | 34,190                         | 66%                     | 17,815                       | 11.6%                          |
| Functional Testing   | 30,033                         | 49,128                         | 64%                     | 31,815                       | 20.8%                          |
| Localisation         | 41,959                         | 43,983                         | 5%                      | 23,139                       | 15.1%                          |
| Localisation Testing | 19,848                         | 19,751                         | 0%                      | 10,288                       | 6.7%                           |
| Player Support       | 9,168                          | 35,904                         | 292%                    | 18,321                       | 12.0%                          |
| <b>Total</b>         | <b>151,430</b>                 | <b>250,805</b>                 | <b>66%</b>              | <b>153,190</b>               | <b>100%</b>                    |

Source: Keywords Studios, Edison Investment Research

Due to the effect of the next-generation (gen) console launches in Q420, Keywords has started to see some shifts in projects as clients focus on the new consoles rather than existing devices. This is likely to suppress seasonal growth for Audio Services and Localisation Testing, otherwise management expects strong growth in H219 in Functional Testing, Art Services and Game Development.

### Art Creation (14%)

*Creation of video game graphical art, including concept art, 2D/3D art asset production and animation. Marketing services including game trailers, marketing art and materials.*

Keywords' teams produce art assets tailored to the design requirements and technical specifications set by the client. Keywords delivers handcrafted art, produced by well-trained artists using the latest tools. The company has dedicated art studios around the world, working locally with American, European and Asian developers. The group's footprint across four continents helps ensure it can serve diverse markets and cultures and is continuously increasing the sophistication of game assets as technology advances.

### Focus for 2019

- Further organic growth complemented by one or two acquisitions (Sunny Side Up the first)
- Sperasoft Art to be moved to Game Development
- Marketing services will become a separate service line if there are further acquisitions

### Game Development (19%)

*Development, porting of games from one platform to another, software consulting, data analytics.*

Keywords provides access to development services and exclusive technology platforms that enhance both the visual elements and the underlying performance of video games, learning applications or visualisation and simulation experiences. Keywords offers general and speciality

engineering talent to augment in-house teams, or port a title to a new platform, as well as full teams to provide bespoke co-development support. Keywords' game development teams work across all major game engines, tools and platforms.

### **Focus for 2019**

- All six studios actively recruiting
- Strong year of organic growth with acquisitions (GetSocial, Wizcorp already completed)
- Aim to add critical mass and extend geographic reach

### **Audio Services (12%)**

*Multi-language voiceover recording, original language voice production, Hollywood production, music and related services.*

Audio Services handles all aspects of the complex supply chain, delivering an extensive range of high-quality audio services, using a unique mix of artistic and technical skills to support both original and localised language content, providing customised solutions to fulfil the voiced audio needs of immersive and interactive content.

Services range from sourcing and managing voice actors and celebrities to offering technical support from state-of-the-art audio studios and partners around the world.

### **Focus for 2019**

- H219 growth likely to be affected by switch to next-gen console development
- Complemented by acquisitions in key locations, such as TV Synchron in Berlin
- Scope to add further capabilities

### **Functional Testing (21%)**

*Quality assurance including discovery and documentation of game bugs and testing to verify the game's compliance with console manufacturer specifications.*

Effective defect discovery and resolution is essential to video game development. Functional Testing delivers customised functionality quality assurance (QA) offerings that help ensure clients' games perform as designed and offer an optimal end-user experience.

Functionality Testing specialises in providing dedicated on-site teams, technical and certification support teams as well as customised QA support. It helps clients by orchestrating and designing their testing strategies or by adapting and merging with their internal QA set up to act as a seamless extension of their internal teams. Keywords has the capacity and flexibility to scale up and down to support the biggest players in the gaming industry.

### **Focus for 2019**

- Expect strong continued growth in 2019
- Continued consolidation of market leadership in North America
- Organic expansion opportunities in Poland and Russia

### **Localisation (15%)**

*Translation in over 50 languages of in-game text, audio scripts, marketing materials, cultural and local adaptation and accreditation.*

Keywords' team of native multilingual professionals deliver culturally adapted content in more than 50 languages, recognising that mere content translation is not sufficient and that localised content needs to provide an experience as close to the original version as possible. Keywords translates around 250 million words each year from dedicated studios around the world, supporting game developers and publishers worldwide.

Keywords also offers highly advanced localisation technologies including XLOC, the content management system for global video games development.

### **Focus for 2019**

- Expected to continue to build on its leading market position
- Continued focus on establishing machine translation
- Aims to return to double-digit organic growth

### **Localisation Testing (7%)**

*Testing for out-of-context translations, truncations, overlaps, spelling, grammar, age-rating issues and console manufacturer compliance requirements in over 30 languages using native speakers.*

With dedicated testing studios across Asia, Europe and North America, Keywords provides fully integrated localisation QA solutions, covering casual and mobile games, AAA blockbusters as well as virtual and augmented reality systems. Games are developed in multiple languages simultaneously with the original version. At the last phase of production, prior to the content going live, Keywords helps ensure that products are free from language-related bugs and defects. Keywords has tested more than 2,000 games titles from the Alpha stage to post-launch DLC and has provided more than three million hours of in-game testing covering more than 50 different languages across all major platforms.

### **Focus for 2019**

- H219 growth likely to be affected by switch to next-gen console development
- Focused on re-energising division and returning it to growth
- Exploring Katowice, Poland studio

### **Player Support (12%)**

*24/7, in-live operation multilingual customer support, forum moderation services and social media engagement on behalf of the game brand.*

With the GaaS model, player retention is all important. Player Support helps clients retain their customers, providing the tools and expertise to deliver enhanced player satisfaction and improved player retention to align with brand values. Keywords' dedicated teams of native speakers provide around-the-clock, multilingual, multi-channel customer support for live games in 50+ languages – including support for email, live chat, phone, social media, mobile, technical and billing activity as well as in-game support and FAQ management.

### **Focus for 2019**

- Extraordinary 2018 growth to be consolidated in 2019
- Aim to differentiate specialised video games services from other large generalist customer support providers

## Sensitivities

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It is difficult to see any one factor that would significantly compromise Keywords' progress, although setbacks could significantly dent the share price.

**Acquisitions:** Keywords' strategy and track record of making earnings-enhancing acquisitions and providing a platform for these businesses to perform well is key to the investment case. The success of this strategy hinges on the company's ability to select the right acquisitions, maintain price discipline and retain a reputation as an attractive acquirer and employer. While an acquisition strategy does bring inherent risk, each target is relatively small compared to the overall group, reducing the risk of any single acquisition significantly affecting results.

**Scale/rating:** pressure on management to pursue a more aggressive strategy could increase as the size of company required to 'move the needle' rises or multiples re-rate upwards. M&A can deliver accelerated upside but also increases risk.

**Games industry growth:** the games industry has been enjoying strong structural growth for a number of years. FY16–18 growth outstripped expectations and although we believe this structural growth is set to continue (Newzoo forecasts growth of c 9% pa to 2022), we add the caveat that it is difficult to estimate how trading has been boosted by particularly buoyant near-term conditions. That said, the recent attention paid to the games industry by the tech majors and the potential step-up in investment they are likely to bring as we move towards the console transition in Q420 make this an exciting time to be in the games industry.

**Interest rates and stock market rating:** the current macro environment is very supportive for Keywords to execute its acquisition strategy, with low interest rates and volatile stock market valuations. This tailwind would moderate somewhat if interest rates were to rise or Keywords' shares to be de-rated or lose their attraction as an acquisition currency.

**Foreign exchange risk:** Keywords operates a number of offices around the world and generates revenues in multiple currencies, and it is therefore exposed to exchange rate risk.

**Key person exposure:** over 2018, Keywords substantially strengthened its senior management team. Despite this, we believe that Keywords' share price and potentially its operations could be affected by the loss of key management, particularly Andrew Day, CEO.



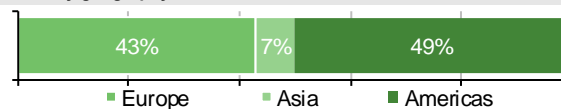
**Exhibit 21: Financial summary**

|  | €'000s | 2016     | 2017     | 2018      | 2019e     | 2020e     |
|--|--------|----------|----------|-----------|-----------|-----------|
| 31-December                                  |        | IFRS     | IFRS     | IFRS      | IFRS      | IFRS      |
| <b>PROFIT &amp; LOSS</b>                     |        |          |          |           |           |           |
| Revenue                                      |        | 96,525   | 151,430  | 250,805   | 315,202   | 349,874   |
| Cost of Sales                                |        | (59,907) | (96,345) | (154,997) | (197,542) | (217,868) |
| Gross Profit (inc multimedia tax credits)    |        | 36,618   | 55,085   | 95,808    | 117,659   | 132,005   |
| EBITDA                                       |        | 16,833   | 26,645   | 44,232    | 48,546    | 59,838    |
| Operating Profit (before amort. and except.) |        | 15,030   | 23,915   | 38,916    | 42,011    | 52,584    |
| Intangible Amortisation                      |        | (1,629)  | (3,038)  | (6,872)   | (7,559)   | (8,315)   |
| Exceptionals                                 |        | (1,316)  | (3,016)  | (5,607)   | 0         | 0         |
| Other  |        | (686)    | (1,426)  | (4,129)   | (6,000)   | (6,600)   |
| Operating Profit                             |        | 11,399   | 16,435   | 22,308    | 28,451    | 37,669    |
| Net Interest                                 |        | (287)    | (818)    | (1,005)   | (2,000)   | (1,000)   |
| FOREX  |        | (1,737)  | (3,623)  | 791       | (1,159)   | 0         |
| Profit Before Tax (norm)                     |        | 14,804   | 23,097   | 37,911    | 40,011    | 51,584    |
| Profit Before Tax (FRS 3)                    |        | 9,375    | 11,994   | 22,094    | 25,292    | 36,669    |
| Tax  |        | (3,223)  | (4,731)  | (7,191)   | (7,402)   | (9,285)   |
| Profit After Tax (norm)                      |        | 11,581   | 18,366   | 30,720    | 32,609    | 42,299    |
| Profit After Tax (FRS 3)                     |        | 6,152    | 7,263    | 14,903    | 17,891    | 27,384    |
| Average Number of Shares Outstanding (m)     |        | 55.9     | 58.7     | 64.3      | 65.1      | 66.6      |
| EPS  |        | 20.8     | 31.3     | 41.8      | 45.9      | 59.5      |
| EPS - normalised (c)                         |        | 20.2     | 30.0     | 40.1      | 45.8      | 59.5      |
| EPS - (IFRS) (c)                             |        | 11.0     | 12.4     | 23.2      | 27.5      | 41.1      |
| Dividend per share (p)                       |        | 1.33     | 1.46     | 1.61      | 1.77      | 1.95      |
| Gross Margin (%)                             |        | 37.9%    | 36.4%    | 38.2%     | 37.3%     | 37.7%     |
| EBITDA Margin (%)                            |        | 17.4%    | 17.6%    | 17.6%     | 15.4%     | 17.1%     |
| Operating Margin (before GW and except.) (%) |        | 15.6%    | 15.8%    | 15.5%     | 13.3%     | 15.0%     |
| <b>BALANCE SHEET</b>                         |        |          |          |           |           |           |
| Fixed Assets                                 |        | 61,873   | 142,927  | 198,055   | 213,733   | 209,390   |
| Intangible Assets                            |        | 55,495   | 131,610  | 180,086   | 194,447   | 187,358   |
| Tangible Assets                              |        | 5,498    | 10,111   | 15,002    | 16,319    | 19,065    |
| Investments                                  |        | 880      | 1,206    | 2,967     | 2,967     | 2,967     |
| Current Assets                               |        | 38,677   | 80,182   | 100,519   | 107,863   | 138,126   |
| Stocks                                       |        | 0        | 0        | 0         | 0         | 0         |
| Debtors                                      |        | 13,879   | 27,473   | 37,019    | 43,238    | 47,994    |
| Cash   |        | 17,020   | 30,374   | 40,041    | 37,225    | 59,717    |
| Other  |        | 7,778    | 22,335   | 23,459    | 27,400    | 30,414    |
| Current Liabilities                          |        | (27,830) | (51,677) | (95,031)  | (81,094)  | (80,732)  |
| Creditors                                    |        | (19,805) | (32,734) | (54,960)  | (34,023)  | (33,661)  |
| Short term borrowings                        |        | (8,025)  | (18,943) | (40,071)  | (47,071)  | (47,071)  |
| Long Term Liabilities                        |        | (6,016)  | (10,420) | (11,158)  | (11,703)  | (10,718)  |
| Long term borrowings                         |        | (345)    | (337)    | (230)     | (230)     | (230)     |
| Other long term liabilities                  |        | (5,671)  | (10,083) | (10,928)  | (11,473)  | (10,488)  |
| Net Assets                                   |        | 66,704   | 161,012  | 192,385   | 228,799   | 256,065   |
| <b>CASH FLOW</b>                             |        |          |          |           |           |           |
| Operating Cash Flow                          |        | 17,108   | 21,389   | 38,481    | 38,036    | 45,944    |
| Net Interest                                 |        | (58)     | (253)    | (502)     | (2,394)   | (1,000)   |
| Tax  |        | (2,129)  | (4,731)  | (6,304)   | (7,402)   | (9,285)   |
| Capex  |        | (2,306)  | (3,803)  | (9,440)   | (9,000)   | (10,500)  |
| Acquisitions/disposals                       |        | (21,104) | (90,090) | (30,296)  | (24,356)  | (1,362)   |
| Financing                                    |        | 643      | 82,936   | 174       | 0         | 0         |
| Dividends                                    |        | (825)    | (867)    | (1,080)   | (1,173)   | (1,304)   |
| Net Cash Flow                                |        | (8,671)  | 4,581    | (9,919)   | (6,289)   | 22,493    |
| Opening net debt/(cash)                      |        | (17,284) | (8,650)  | (11,094)  | 427       | 6,716     |
| Forex gain on cash                           |        | 1        | (891)    | (3)       | 0         | 0         |
| Other  |        | 36       | (1,246)  | (1,599)   | 0         | 0         |
| Closing net debt/(cash)                      |        | (8,650)  | (11,094) | 427       | 6,716     | (15,776)  |

Source: Company accounts, Edison Investment Research

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**Revenue by geography**

**Management team**
**Chairman: Ross Graham**

Ross worked at Misys from 1987 to 2003, initially as finance director and later as corporate development director. He has also been a non-executive director at Psion and is currently non-executive director at Wolfson Microelectronics. He is a chartered accountant and fellow of the ICAEW.

**CEO: Andrew Day**

Andrew joined Keywords as CEO in April 2009. Prior to that, he was CEO of Unipower Solutions and head of retail and CPG for EMEA at US-listed FICO, which has a \$2.9bn market cap.

**CFO: David Broderick**

David joined Keywords in 2016 from Dublin-based aviation software supplier Arconics, where he was CFO. Previously, he was finance director at Stobart Air and spent eight years at Ryanair, where he was head of investor relations and oversaw the group's inflight sales unit's finance and operations.

**Principal shareholders**

|                                     | (%)  |
|-------------------------------------|------|
| Franklin Resources Inc              | 7.00 |
| Octopus Investment Partners         | 5.84 |
| PEQ Holdings                        | 5.38 |
| Andrew Day                          | 5.07 |
| T Rowe Price Global Investments     | 4.48 |
| Teachers Insurance & Annuity        | 3.96 |
| Aegon NV                            | 3.72 |
| Canaccord Genuity Wealth Management | 3.45 |
| FMR LLC                             | 3.04 |

**Companies named in this report**

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