

<b>Buy</b>  <b>EUR 4.50</b> (EUR)  Price <b>EUR 3.76</b> <b>Upside 19.8 %</b>	<b>Value Indicators:</b> EUR DCF: 4.47	<b>Share data:</b> Bloomberg: WIG1 GR Reuters: WIGGK.DE ISIN: DE000A1EMG56	<b>Description:</b> Media- and communication company with a special focus on amateur sports and racing
	<b>Market Snapshot:</b> EUR m Market cap: 73.1 No. of shares (m): 19.5 EV: 64.2 Freefloat MC: 42.4 Ø Trad. Vol. (30d): 66.39 th	<b>Shareholders:</b> Freefloat: 58.0 % Peter Lauterbach: 3.0 % Jens Reidel: 3.0 % Peter Martin: 5.0 % Allianz Global Investors GmbH: 5.0 %	<b>Risk Profile (WRe):</b> 2017e Beta: 1.5 Price / Book: 5.4 x Equity Ratio: 48 %

## Streaming of amateur football will drive growth; Initiation with Buy

We initiate Sporttotal AG with a **Buy recommendation and a PT of EUR 4.50**. Sporttotal AG is a media and communication company with a special focus on amateur sports and motor racing.

The company is in the process of reorganisation, to focus on **scalable business models in the digital advertising and live streaming segment** rather than the capital and labour-intensive business areas of the past, which were also loss-making.

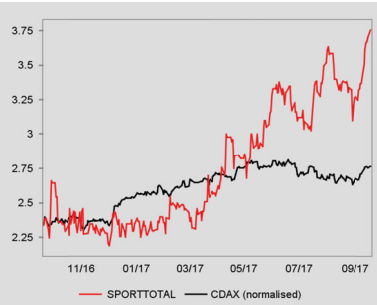
Sporttotal is currently investing heavily in a platform for online live streaming of amateur football in Germany (fourth league and lower). The platform, **sporttotal.tv, broadcasts with fully automated HD camera technology**. The technology uses four lenses to cover the full pitch with a 180-degree view and intelligent algorithm software to automatically follow the action. As no manpower is required for this technology, **operating costs are relatively low**. The platform will provide its users with live coverage as well as full-length re-runs and highlights videos on demand. By the end of 2019, the company plans to have about 3,000 camera systems installed and to broadcast roughly 70,000 games in that year.

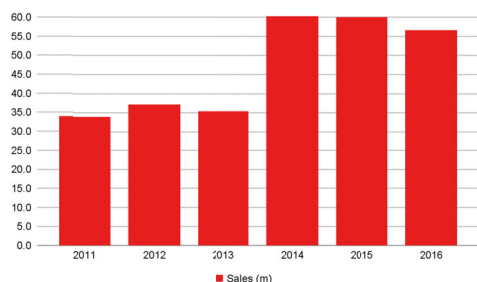
The platform will generate revenues with advertising, such as banner advertisements on the website and video advertisements before, during and after each game and / or highlight video. Judging from similar websites like fupa.net or fußball.de (cooperation partner), it is assumed that the appeal of this content, in a high and standardised quality, will be substantial. Considering that **digital internet advertising is currently outpacing advertising on traditional channels like TV and print**, this is a very attractive business model. In particular, the **advertising market for online videos**, which is most relevant for this case, **grew at a rate of 25% in 2016 and clear double-digit growth rates are forecast to continue for the years 2017 – 2021e**.

The company has partnerships with four major German corporations. **Allianz, Deutsche Post, Deutsche Telekom and Axel Springer** will support the project with their relevant expertise in the fields of insurance, logistics, internet connection / cloud service and marketing.

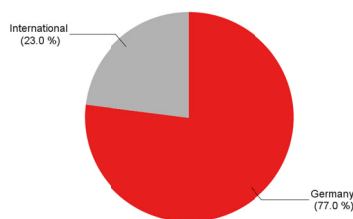
We estimate that the **sporttotal.tv segment** will generate revenues of **EUR 3.4m in 2017e, EUR 11.4m in 2018e and EUR 21m in 2019e**, making it the company's primary **growth driver**. We assume that at group level, the company will grow at a rate of **15% in 2018e and 16% in 2019e**. Given the scalability, we estimate an attractive EBIT margin of 10% in the mid term, driven by the increasing contribution of the higher margin sporttotal.tv segment to group revenues as well as (a rise in) the contribution of the Venues segment. After the rollout phase, we expect capex requirements to decrease, resulting in **highly attractive FCF and ROCE generation**. To account for the characteristics of a start-up that is entering a new market with a new technology and product, we use a beta of 1.5 and a WACC of 9.6% in our DCF model and derive a fair value of EUR 4.50.

In our view, the current project "sporttotal.tv" as well as growing opportunities within the Venues segment are not yet fully reflected in the current share price.

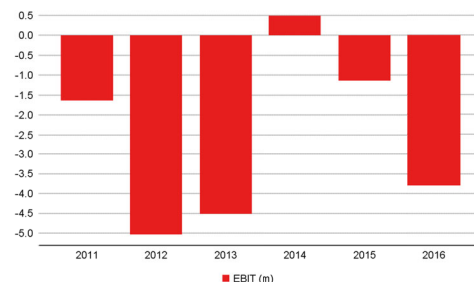
	FY End: 31.12. in EUR m	CAGR (16-19e)	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017e</b>	<b>2018e</b>	<b>2019e</b>
		10.3 %							
<b>Rel. Performance vs CDAX:</b> 1 month: 7.6 % 6 months: 46.5 % Year to date: 51.2 % Trailing 12 months: 38.2 %	<b>Sales</b>		35.4	60.2	60.0	56.6	57.0	65.4	75.9
	Change Sales yoy		-4.8 %	70.0 %	-0.4 %	-5.7 %	0.8 %	14.7 %	16.1 %
	Gross profit margin		42.6 %	31.8 %	23.6 %	25.5 %	24.7 %	29.5 %	34.0 %
	<b>EBITDA</b>	-	-1.5	3.5	0.5	-1.5	2.8	7.5	14.0
	Margin		-4.4 %	5.8 %	0.9 %	-2.6 %	4.9 %	11.5 %	18.5 %
	<b>EBIT</b>	-	-4.5	0.5	-1.1	-3.8	1.6	4.0	7.1
	Margin		-12.7 %	0.8 %	-1.9 %	-6.7 %	2.8 %	6.1 %	9.4 %
	<b>Net income</b>	-	-5.2	0.1	-1.5	-6.2	1.3	3.4	6.1
	<b>EPS</b>	-	-0.46	0.01	-0.12	-0.40	0.06	0.17	0.31
	<b>EPS adj.</b>	-	-0.46	0.01	-0.12	-0.40	0.06	0.17	0.31
	<b>DPS</b>	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dividend Yield		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	<b>FCFPS</b>		-0.01	-0.10	-0.44	-0.50	-0.08	-0.71	0.15
	<b>FCF / Market cap</b>		-0.8 %	-7.3 %	-28.1 %	-23.5 %	-2.0 %	-18.8 %	4.1 %
	<b>EV / Sales</b>		0.4 x	0.3 x	0.4 x	0.6 x	1.1 x	1.2 x	1.0 x
	<b>EV / EBITDA</b>		n.a.	4.4 x	44.0 x	n.a.	22.9 x	10.4 x	5.3 x
	<b>EV / EBIT</b>		n.a.	31.3 x	n.a.	n.a.	40.2 x	19.4 x	10.5 x
	<b>P / E</b>		n.a.	133.6 x	n.a.	n.a.	62.6 x	22.1 x	12.1 x
	<b>P / E adj.</b>		n.a.	133.6 x	n.a.	n.a.	62.6 x	22.1 x	12.1 x
	<b>FCF Potential Yield</b>		-14.8 %	21.8 %	2.8 %	-11.6 %	4.3 %	9.2 %	17.8 %
	<b>Net Debt</b>		-1.3	0.2	3.4	-1.1	-8.9	4.8	1.8
	<b>ROCE (NOPAT)</b>		n.a.	7.2 %	n.a.	n.a.	27.6 %	27.8 %	27.7 %
	<b>Guidance:</b>		2017: Revenue EUR 60m; EBITDA EUR 2.7 Mio.; EBIT EUR 1.5m						

**Sales development**  
in EUR m


Source: Warburg Research

**Sales by regions**  
2016; in %


Source: Warburg Research

**EBIT development**  
in EUR m


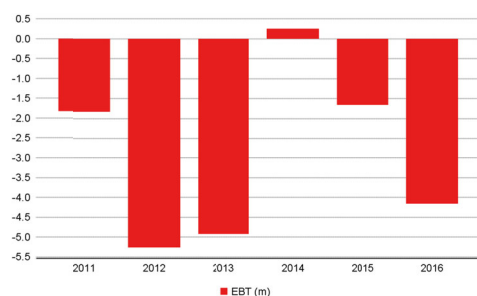
Source: Warburg Research

## Company Background

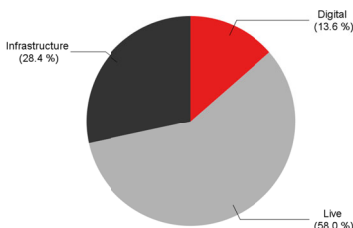
- Sporttotal AG, founded in 1979, is a media and communication company with a special focus on amateur sports and motor racing
- As well as providing technical and editorial services, Sporttotal AG is a marketing and event partner for large sports events organisers and corporations and a fully integrated brand strategy consultant.
- 2016 Sporttotal AG sold off parts of its TV production and technical departments to focus more on the sport streaming business.
- This includes a video platform, sporttotal.tv, which allows users to watch amateur soccer matches online live and on-demand via a fully automated HD camera system.

## Competitive Quality

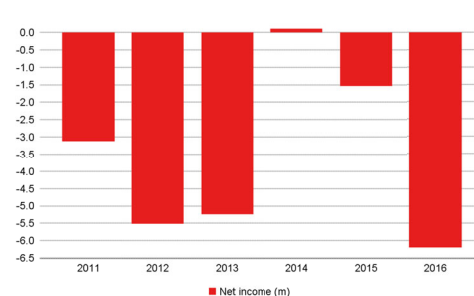
- Sporttotal AG has decades of experience and technical know-how in different areas of sports, but in particular in the motor-racing segment.
- The company identified clear niches, where it is able to compete with large and well known corporations.
- Sporttotal AG has an established and wide contact network, which is crucial for winning new customers and is difficult for competitors to replicate.
- For the online-streaming of amateur soccer, Sporttotal AG signed a cooperation with the German soccer association DFB and an exclusivity contract with the provider of the HD camera system Pixellot, Israel.

**EBT development**  
in EUR m


Source: Warburg Research

**Sales by segments**  
2016; in %


Source: Warburg Research

**Net income development**  
in EUR m


Source: Warburg Research

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## Summary of Investment Case

### Investment triggers

- Profitability starts to benefit from restructuring process following the **disposal of the Broadcasting and Solutions segments** in 2016, which eliminated **unprofitable, capital and labour intensive business areas**, while the recent disposal of the non-core segment **South & Browse** underpins the **transformation to digital and scalable business models**.
- While the **rollout of a revolutionary HD camera system** and the establishment of an appropriate platform for **extensive coverage of amateur football** require significant investment (3,000 camera-systems, ca. EUR 10k each, planned by 2020), **attractive returns are expected over the next three to five years and beyond**.
  - We estimate that capex of roughly EUR 35m in 2017e – 2019e will generate revenues of about EUR 21m in 2019e (11.4m for 2018e) and EBIT of about 3.5m for 2019e and 1.6m for 2018e, leading to an attractive double-digit ROCE.
- After winning the tenders to provide electronic and technical equipment for the **Kuwait and Sochi racetracks** in 2013 and 2016 respectively, we believe this **track record** will help significantly to **acquire further high-margin projects in the nearer future**.

### Valuation

- Our DCF-Model indicates a fair **value for the share of EUR 4.50**.
- Current sentiment and news-flow support the transformation, which can also be seen in the share price.

### Growth

- **The internet**, with its myriad distribution channels and vast content, has enabled sports fans to **be more selective** in their choice of sports. The emergence of numerous online streaming providers indicates that the broadcasting of certain sports in the past was not limited by lack of public interest but relatively high production and opportunity costs for the content provider or broadcaster.
  - For example: The number of Sport1+ subscribers increased from 1.8m in 2013 to 2.1m in 2015 or 17% growth. Over the same time period, the number of page impressions more than doubled from around 300m per month to about 700m.
- The **interest in amateur football is high** as indicated by the number of unique users and page impressions on specific portals like fupa.net. The numbers of page impressions increased by almost 85% from 2014 to 2016.
- Advertising revenues in **digital and online channels are growing significantly faster than traditional advertising** and by the end of 2017 the digital share of the advertising market will have overtaken the market share held by traditional channels. The most relevant sector for Sporttotal, **online video advertisement**, is expected to **grow at a significant rate of 22.4% in 2017 and even north of 40% in 2018**.
  - The share of online video users in Germany increased from 50% in 2011 to almost 75% in 2016.
- **Sporttotal AG is in a sweet spot to exploit this market potential** with its fully automated HD camera system and its clear focus on amateur sports. We estimate attractive sales development with a **CAGR of 147% to 2019e in the sporttotal.tv segment**. Additionally, we see further potential in the internationalisation of the project as well as the transfer to other sports.

### Competitive quality

- Since its founding in 1979, Sporttotal has established an **extensive network and a strong reputation** within the motor racing segment. The **key people** behind the network are the two board members **Peter Lauterbach** and **Oliver Grodowski**.
- Sporttotal AG negotiated an **exclusivity contract** with Pixellot Ltd, the HD camera system supplier/developer, and signed a **cooperation agreement** with the **German football association (DFB)**, which to some extent raises entry barriers for potential competitors and gives Sporttotal a first-mover advantage.
  - Pixellot delivers a state-of-the-art camera technology which allows for the fully automated broadcast of a game. However, this technology is not unrivalled. **Soccerwatch.tv has developed a similar technology and is ready to enter the market as well**. Nevertheless, we believe that Sporttotal's system is of superior quality and its roll-out is more advanced.
- Strong **partnerships** with major German corporations like **Allianz, Deutsche Post, Deutsche Telekom and Axel Springer** are in place, to support the roll-out and commercialisation of the project.

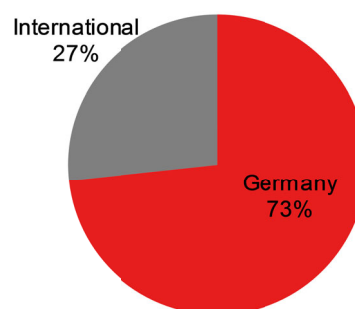
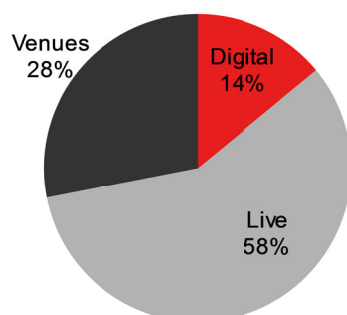
### Investment risks

- A slower than expected rollout of the camera systems could lead to weaker revenues, as well as it would allow competitors to gain a larger share of clubs, if Sporttotal fails to move quickly enough.

## Company Overview

Segments	Digital	Live	Venues	Group
Revenues (in m as of FY 2016)	6.5	26.8	13.0	56.6
% of total	14.0%	57.9%	28.1%	100.0%
Regions	Germany	International		
Revenues (in m as of FY 2016)	33.3	13.0		56.6
% of total	77.0%	23.0%		100.0%
Brands, Projects and Customers				
Activities	<b>Sporttotal.tv</b> Online Streaming platform for own produced German amateur football  <b>Content Marketing</b> editorial services and content in the area of sports as well as brand consulting	Planning, Marketing, Conception, Consulting and execution of corporate and sport events as well as brand positioning and digital content consulting (e.g. <b>Porsche Driving Experience</b> and <b>Red Bull Air-race</b> )	Electronic and technical equipment for international racetracks and other sports facilities (e.g. stadiums) including screens, cameras, lights etc.	
Products				
Competitors	Fupa.net / .tv soccerwatch.tv sport1.de sportdeutschland.tv mycujoo.tv	several smaller event manager	Siemens AT&T	
Partners and cooperations				

Revenues by region and segments (FY 2016)



Source: Warburg Research

## Competitive Quality

- Extensive network and strong reputation gained in its many years of experience in the motor racing segment
- Clear focus on niches like motor racing equipment and amateur soccer
- Exclusive licence on the technical supply side and tight collaborations on the commercial front
- First-mover advantage with installed cameras and infrastructure technology

## Digital

### Fully automated HD camera system

Sporttotal.tv is the new business segment of the media and telecommunications company formerly known as Wige Media AG and also gives its name to the company, which was renamed Sporttotal AG recently. In our view, the new business segment will be the main driver of revenue growth in the coming years with a new technology which enables the automated live streaming of soccer matches in HD quality. The HD camera system, developed by the Israeli start-up company Pixellot, is installed along the half-line of the pitch and uses intelligent algorithms to actively follow the action and to zoom in or out, as appropriate.

### Revolutionary camera technology

### HD camera system from Pixellot



Source: Sporttotal.tv, Warburg Research

The current installation costs are about EUR 20,000 for one camera per pitch. The camera costs amount to EUR 10,000 with another EUR 10,000 for the installation and accessories like cables, internet connection and, if necessary, a mast for the ideal positioning of the camera. However with economies of scale, we expect the costs to decrease significantly over time. The technology offers many features such as highlight videos and a full view of the pitch at every minute of the game. The user may halt the live stream and replay certain scenes or may move the camera to follow the action as the technology is constantly recording with its 180 degree view. The viewer may choose a tactical or broadcasting view, which determines how closely the camera follows the game. The tactical mode can be used for match analysis, for example.

### Exclusivity for the state of the art camera technology

Sporttotal AG negotiated an exclusivity contract for the fully automated HD camera system of Pixellot until the end of 2019 for the DACH region, with an option of a two-year extension. For all other regions, Sporttotal has a right of first refusal, meaning that Sporttotal will be notified before Pixellot enters a cooperation agreement for another region. However, in our view, the development of a comparable product is not impossible and the exclusivity agreement rather gives Sporttotal AG a **first-mover advantage** than

### Competitive quality secured by exclusivity

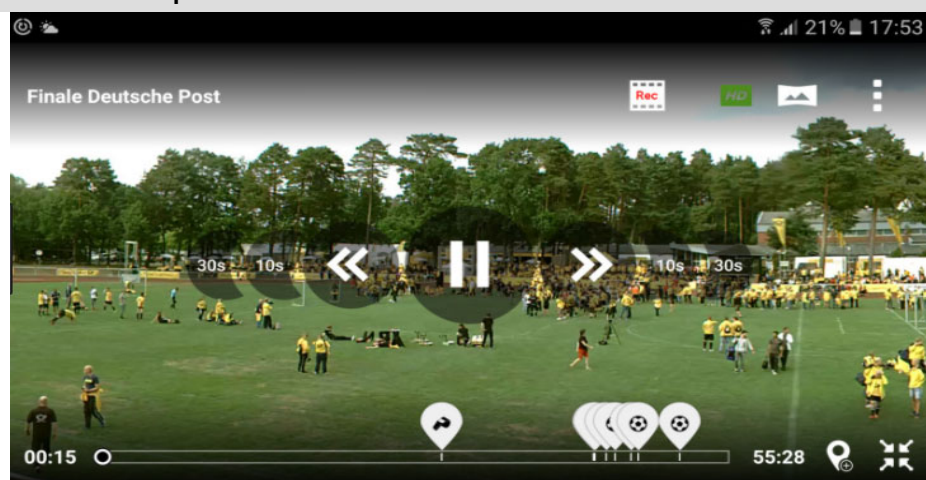
access to an extremely sophisticated technology. We are assuming that once the technology and related infrastructure is installed and completely rolled out, it would be rather unattractive for competitors to replicate this infrastructure. Nevertheless, a start-up from Essen, called soccerwatch.tv, which is using a similar camera technology, recently launched its website. However, there is little visibility about the quality of the streaming or potential support of the DFB, which gives Sporttotal the opportunity to firmly establish its first-mover advantage. The operating costs of such systems are rather low and include costs for depreciation and maintenance as well as some server and licensing costs.

### Cooperation with the DFB and own production

Sporttotal AG reached a **10-year cooperation agreement with the German soccer association (DFB)**. This gives Sporttotal AG access to the clubs and regional associations for the fourth league ("Regionalliga", regional league) and below and will support Sporttotal AG during the rollout. As Sporttotal AG produces content by itself, the company has the ultimate rights to the material it produces. Intensified interest in amateur soccer by other broadcasting companies would therefore represent an opportunity rather than a risk. Furthermore, a turning tide of public sentiment in the face of increasing commercialisation of professional football could support this trend. Important to note, however, is that exclusivity is not legally binding so if other broadcasting companies, like Sport1 or soccerwatch.tv, decide to broadcast an amateur match themselves, Sporttotal is not entitled to any "extra" compensation payments.

The cooperation also includes **collaboration with the website fuball.de**, which is the official video and information website of the DFB for the amateur leagues. With its roughly 300m page impressions per month it supports sporttotal.tv with an attractive reach. Fuball.de also includes a live ticker for every game, which is highly supportive, as the software of the automated HD camera technology can link up with the live ticker and to instantly create a highlight video. In practice, this means that if the live ticker reports a goal or attempt on goal, for instance in the 23<sup>rd</sup> minute, the software automatically cuts the video records around the 23<sup>rd</sup> minute to include the relevant sequence as a highlight. These highlight videos will be accessible on demand and, during a full video re-run of the game, a time-bar will indicate when the highlights occur.

#### Software example



Source: Sporttotal.tv, Warburg Research



### Standardised and high quality of videos and streaming

There are already several video platforms that focus on amateur soccer, like hartplatzhelden.de or FuPa.tv. Besides not having a licence, the videos offered are filmed mostly by fans on their smartphones which means the quality is often poor and the videos are only uploaded on a voluntary basis. Furthermore, the websites often only have a regional focus with limited coverage.

Sporttotal AG sets a whole new standard of quality with a HD camera system, a fixed position and an extensive live coverage of games with automatically generated highlight videos in cooperation with the fuball.de live ticker. In our view, the competitor soccerwatch.tv does not yet provide the same quality of streaming. However, the individual clubs make the final decision on their cooperation partners and, according to some press reports, soccerwatch.tv plans to give up a significant share of advertising revenue of up to 50%.

### Strong partners for a smooth rollout and increased credibility

Sporttotal AG has the support of strong, well-known and established corporations like **Allianz, Deutsche Post, Deutsche Telekom (Microsoft Cloud) and Axel Springer (Bild)**. These partners will provide the respective specialist support for the rollout of the technology. Allianz will insure the technology and its transport, which is provided by Deutsche Post. Internet connections will be provided by Deutsche Telekom and the software and cloud solutions by Microsoft. Axel Springer and its subsidiary Media Impact will market the project and the sporttotal.tv website. Overall, these strong and established partners will provide for a larger network and strengthen the credibility of the product.

### Competition

**Soccerwatch.tv**, a start-up company from Essen, has developed a similar technology, which also provides for the fully automated live streaming of football matches via a camera with six lenses and an intelligent algorithm to follow the action on the pitch.

We see the following advantages for soccerwatch.tv:

Soccerwatch.tv developed the technology itself and is therefore significantly cheaper than Sporttotal AG, which enables it to offer a higher revenue share ("up to 50%") to the collaborating clubs. In contrast, Sporttotal.tv is asking for a monthly fee of EUR 9.90. However, Sporttotal plans to give up revenue shares of about 10% which, in absolute terms, could be a higher amount for the clubs, due to efficient marketing.

Soccerwatch.tv aims to use LTE technology provided by Vodafone, which avoids internet connection installation costs and sometimes even the need for planning permits. Sporttotal will avail of this technology as well, where possible, but only if a certain streaming quality can be guaranteed. However many regional clubs are in rural areas, where LTE access is still limited, meaning that installation will sometimes be challenging, also for soccerwatch.tv. Furthermore, in large crowds, data capacity could well be limited due to an overload in single telecom cells, especially if spectators are also streaming a game or uploading/downloading clips and photos. Therefore, we believe that Sporttotal.tv will ultimately deliver a higher quality product, once the stable broadband connections are rolled out.

While there are certainly some arguments in favour of soccerwatch.tv, we think the quality offered by Sporttotal.tv is superior based on its cooperation with the DFB and especially its digital platform fuball.de. This differentiates it from competitors and gives the company the best access to a wide coverage of live tickers and data and access to the regional associations and clubs as well as the supporters. Fuball.de has significant reach to the world of amateur football and its fans with roughly 3bn page impressions in 2016. Sporttotal is also contributing to Bild.de and its new format "Tore Tritte Trallala"

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**A start-up company from Essen as  
strongest competitor**

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which also ensures a wide reach for the video footage generated by Sporttotal. Furthermore, Sporttotal.tv is already live and about 80 cameras are already in place, whereas soccerwatch.tv is still in its pilot phase and will go live later in October 2017.

Eventually, two cameras for live streaming may be installed at a pitch. Then, the higher quality live stream will attract the greater number of viewers. This combined with the first-mover advantage, the wider coverage of attractive leagues, and an assumed reluctance by users to change platforms (given equal quality and coverage) we regard sporttotal.tv to be in a better competitive position.

### Conclusion: A differentiated and competitive business model...

In our view, the unique position of Sporttotal AG, which differentiates it from competitors is a result of:

1. an unique infrastructure network comprised of **high-quality** and automated camera systems, high-speed internet connections and the 3,000 most attractive non-professional German football clubs. This network is planned to be installed by the end of 2019.
2. a 10-year cooperation with the German Football Association (DFB) including its information and data website fußball.de, which allows for the automated production of professional highlight videos – the most marketable product in this respect.
3. A professional app-supported distribution platform sporttotal.tv, which is marketed by Media Impact, a subsidiary of the German media giant Axel Springer (Bild).

## Venues

### Strong reputation and extensive network

Since its founding in 1979, Sporttotal has built up an extensive international contact network and gathered vast experience within the motor racing segment. Sporttotal AG provides technical equipment for race tracks and is well established in the sector. CEO Peter Lauterbach, who has been in charge of the operational business since 2013, is a former Formula-1 commentator for the German pay-tv channel "Sky". His prominence and contacts within the industry are key for Sporttotal AG. The second member of the Management Board, Oliver Grodowski (CTO), also plays a vital role in terms of the company's network of contacts. He is a race director of the Automobile World Association (FIA) and, in this position, has amassed thorough knowledge of racetrack infrastructure. Such knowledge is crucial in terms of the acquisition of new projects within the racetrack equipment segment, specifically expertise as to the ideal positioning of certain cameras, screens, lights etc.

With its small and dedicated team, Sporttotal AG also boasts a lower cost base than competitors. In 2013, Sporttotal AG was able to acquire a mandate to provide fully integrated services for technical racetrack equipment in Sochi. It was competing with large corporations like Siemens and AT&T, who had equipped racetracks in the past. In late 2016 Sporttotal AG acquired another project to provide the technical equipment for a racetrack in Kuwait, worth roughly EUR 25m over the next two to three years. This specialist knowledge and such high-profile reference projects form a solid base for future projects acquisitions.

## Live

### Track record shows strong customer relationships

In this segment, Sporttotal AG profits from long-standing and close relationships to its

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**Relationship network is difficult to replicate**

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customers, and to some extent from the valuable network of CEO Peter Lauterbach. This is illustrated by numerous high profile customers, for whom Sporttotal AG provides fully integrated services like video content, planning, marketing and execution of events or as an ongoing service provider and consultant.

- > **Customers: Porsche, Red Bull, Mercedes/AMG, Audi, BMW**
- > **Events: Red Bull Air Race, Formel-1, DTM, ADAC Zurich 24h Race**

#### Sample of customers



Source: Sporttotal AG, Warburg Research

Many of these customer relationships have been in existence for many years and are likely to continue to provide a reliable sales basis in future. In September 2016, Sporttotal AG secured an early extension of the contract with Porsche for the Porsche Driving Experience until the end of 2018. This again shows customer satisfaction and serves as an indication of trust. The contract is worth EUR 20m per year. Sporttotal's cooperation with RTL has been in existence for 25 years and, despite the disposal of its broadcasting segment, Sporttotal AG will continue to provide RTL with Formula-1 production services until 2018, demonstrating again the quality of the customer relationship.

## Analysis of Return on Capital

- Disposal of capital and labour intensive segments will have a positive effect on ROCEs
- However, significant investment is required in the new sporttotal.tv segment
- Once the HD camera system is completely rolled out, it will generate attractive returns and margins with its low cost base and high scalability.

### Capital employed

#### Disposal of legacy segments reduces the capital employed

Sporttotal AG is undergoing a transformation from an asset-heavy media company to an asset-light unique player in the field of amateur sports broadcasting and live streaming.

In the past, Sporttotal AG's level of capital employed was relatively high as characterized by the capital-intensive Broadcasting and Solutions segment with its technical equipment and broadcasting vans. However, these assets are easy to replicate and do not represent a factor of differentiation. The 2016 balance sheet differs from earlier years, as Sporttotal sold off its broadcasting business in 2016, including most of the technical equipment, which reduced fixed assets significantly. The segment was unprofitable, capital and labour intensive and we regard the divestment as a step in the right direction. With the recent change in strategy and the renaming of the company from Wige Media AG to Sporttotal AG in July 2017, the management also decided to sell the 51% stake in the sport media group gmbh, acquired in late 2016 at a profitable margin.

The divestments included the following segments / activities:

- **Broadcast:** The Broadcast segment was the production unit of Sporttotal AG with two HD broadcasting vans, which produced for broadcasters and / or organisers of different sports events. However, the segment was loss-making and quite capital intensive, considering the necessary technical equipment, including broadcasting vans. The Broadcasting segment was sold to Wolfgang Reeh, owner of the German TV service provider "TV Skyline" for EUR 0.5m in December 2016.
- **Solutions:** The Solutions segment provided media technology for corporate events, sports events, trade fairs etc. This included screens, video walls, audio- and lighting-equipment. The profitability of this segment was almost flat, but the segment was very capital intensive, as it constantly required the latest technology. In this context, the speed of the technology product cycle today speaks for itself. The Solutions segment was also sold in December for EUR 3.5m.
- **South & Browse:** The South & Browse segment included Sporttotal AG's TV entertainment formats, magazines, documents and factual entertainment productions like "Galileo" or "TerraX". The margins in this segment were rather low and the business was also rather capital intense. However, it contributed about EUR 5.5m to sales in FY 2016. The segment had about 30 employees. The South & Browse segment was sold for about EUR 1.1m (final price not yet confirmed) to All3Media Deutschland GmbH.
- **Sport media group gmbh:** the sport media group gmbh complemented the digital segments with its two online platforms www.motorsport-total.com (ca. 22m page impressions per month) and www.formel-1.de (ca. 20m page impressions per month), which are the leading motor-racing websites in Germany, Austria and Switzerland. The unit was sold for about EUR 2.4m to Motorsport Network LLC from Miami, Florida. The deal was closed in early August 2017.

By selling these activities, the company clearly committed itself to more scalable business models. The generated cash inflows will be used for the further roll-out of the

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#### Transformation through strategic divestments

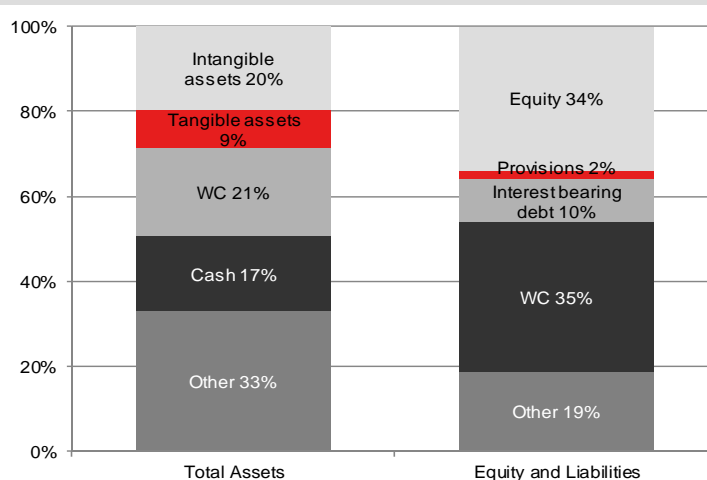
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HD camera technology.

### Investment in camera technology will hike capital employed

Camera technology for the sporttotal.tv platform will require significant capital expenditure in the next two years. We assume that about EUR 21m will be needed in 2018e to install roughly 1,500 camera systems and about another EUR 8m in 2019e for a further approx. 1,000 camera systems. These camera systems will be fixed assets that will depreciate on a linear basis over five years. The cameras are valuable assets owing to the exclusive contract with Pixellot. In the mid term, we assume that this technology is replicable, but the cooperation with the DFB and its regional associations paves the way for smooth access to the pitches / clubs while the company still has a first-mover advantage with the installed infrastructure. In the short term, we expect the capital employed to increase significantly, which will have a negative effect on the return on capital employed.

#### Strategy shift determines the balance sheet (as of FY 2016)



Source: Warburg Research

#### First credit agreement for six years will improve the capital structure

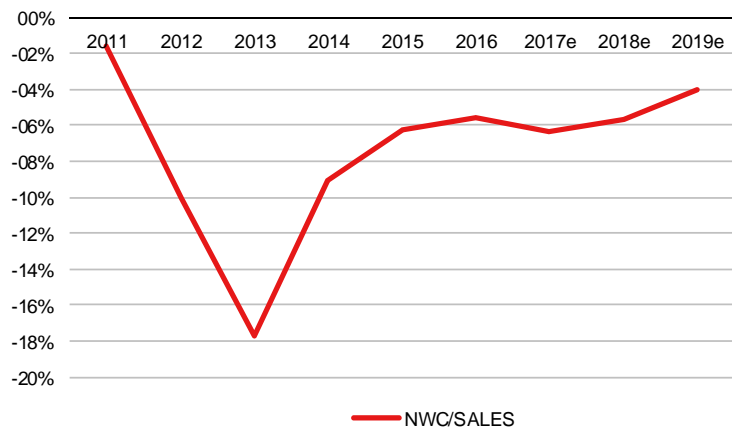
The balance sheet is dominated by “other assets”, which include receivables for the sale of the technical equipment, as well as the assets held for sale with regard to the broadcasting disposal. In future, we expect the balance sheet to be dominated by fixed assets, i.e. the installed camera systems. We expect the rollout to be funded by a mix of debt and equity, leading to a solid balance sheet structure. The last capital increase took place in March 2017 and the company was able to raise EUR 4m for its test phase. On July 18 the company announced a credit agreement of EUR 2.5m with Deutsche Postbank AG, which is the first loan agreement for six years. This indicates positive sentiment towards future projects and a positive business outlook as well as a more favourable capital structure from a shareholder perspective. Furthermore, the recent divestment of the sports media group gmbh will reduce intangible assets, as roughly EUR 2.7m was capitalised with its purchase in December 2016. The working capital on the asset side mainly includes accounts receivable and accounts payable as well as relatively high prepayments on the liability side, leading to negative net working capital.

### Rollout of camera systems should increase the NWC

Sporttotal AG’s net working capital is negative and has been consistently negative in recent years, due to relatively high advance payments (EUR 4.73m; 21.2% of B/S) and accounts payable (EUR 3.1m; 13.9% of B/S) in the racetrack equipment segment and from events like the Porsche Driving Experience. This was particularly apparent in 2013, when Sporttotal AG acquired the Sochi racetrack as a client. The prepayments received amounted to 30% of the balance sheet total, incidentally providing further evidence of the

high level of customer trust. However, as the sporttotal.tv segment expands, the different payment structure is likely to result in a slight increase in the net working capital, as the share of prepayments will be lower.

### Negative NWC is funded by customers' prepayments

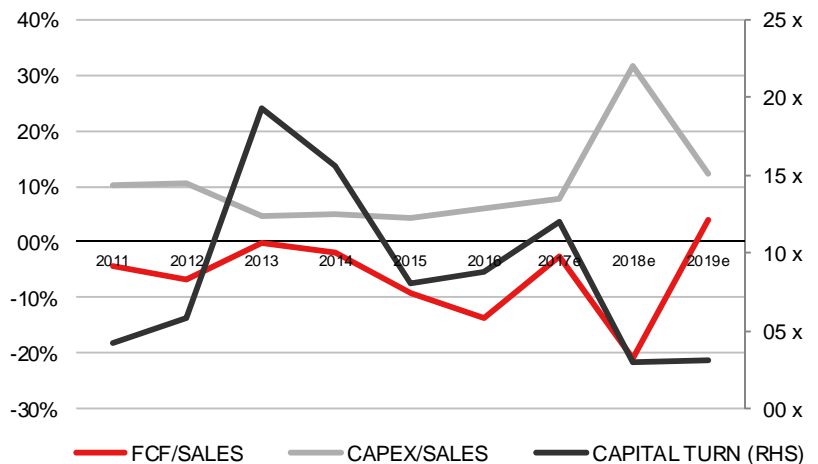


Source: Warburg Research

### Attractive free cash flow after high initial investments

As a high level of investment is needed for the camera systems, we expect significantly negative free cash flow during the early stage of the rollout until advertising revenues kick in and lift the operative cash flow. However, once the rollout is complete we expect positive cash flow, as maintenance expenditure will be relatively low and the depreciation will account for a significant position in the P&L, which is not cash relevant. The free cash flow will rise to about EUR 2.5m. in 2019e and EUR 7m in 2020e.

### Capex spending 2011 – 2019e



Source: Warburg Research

High free cash flow after ramp-up phase

### Operating profitability

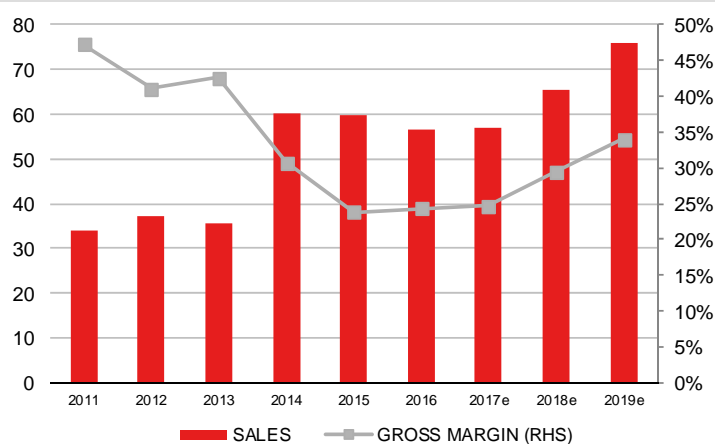
#### Gross margin increase as fewer services required

Once the sporttotal.tv segment is rolled out and starts generating revenue, the gross margin should increase as, after the roll-out period, the new segment will not require as many externally provided services as the disposed broadcasting segment. In addition, we assume these installation costs will decrease over time. That means that there are hardly any material costs on the additionally generated revenues, which will ultimately lead to higher margins overall.

The new segment will generate revenues with advertising income from the video

platform. While pricing is pretty much determined by the market, Sporttotal is likely to command a premium for advertising, owing to the website's relatively narrowly defined user group. Users of such online platforms are typically male, aged between 14 and 40, with an interest in sport, especially soccer. With its coverage of the regional leagues, Sporttotal enables advertisers to place targeted advertising for certain games (or leagues) in specific regions. This should also attract regional, typically smaller businesses with a regional advertisement focus. Such clients normally do not have the negotiating power to achieve large discount prices for their advertising placements. Agencies, in contrast, normally receive a 15-20% discount on gross CPMs (Contact per thousand represented by the Roman numeral "M").

#### Increase of gross margins in % (Sales in EUR m)



Source: Warburg Research

#### Lower personnel expenses to allow for EBIT margin expansion

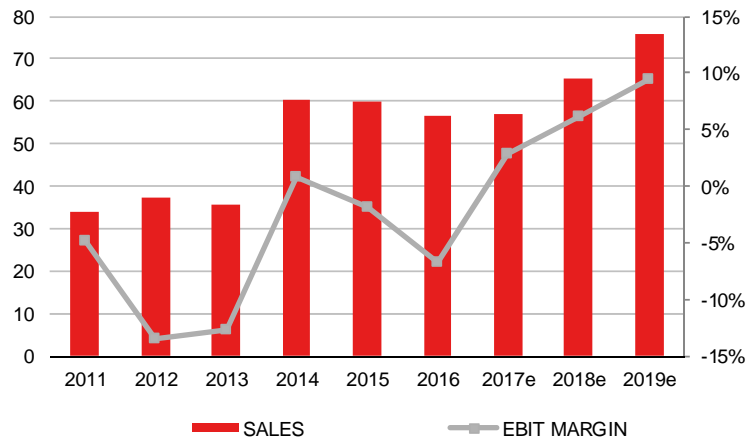
With the disposals of the Broadcasting segment, the South & Browse segment and the 51% stake in the sport media group, we expect a significant reduction in personnel expenses. The Broadcasting segment employed about 100 people, leading to an FTE reduction to roughly 150 for year-end 2017. These figures include the disposal of South & Browse and sport media group gmbh. Meanwhile growth within the sporttotal.tv segment, will probably only require about 30 recruitments until 2019e, showing that the scalability of the project lies in its low cost base. We assume that personnel costs will decrease from EUR 13.3m in 2016 to about EUR 10m in 2017e and 2018e.

However, we expect a notable increase in depreciation over the next years as the camera technology will be subject to linear depreciation over five years, leading to peak depreciation of about EUR 7.5m in 2020, which represents about 9.0% of total sales.

In addition, we expect the Kuwait project (in the Venues segment) to make a stronger contribution to revenues in 2017e and 2018e to increase the overall EBIT margin, as these projects tend to generate margins of 10-12%. We also assume that further projects might be acquired in the nearer future.

Overall, after years of continuously negative EBIT margins, we assume EBIT margins will turn positive in 2017e, steadily increasing towards our long-term assumption of about 11%.

**Disposal of personnel intense segments will drive EBIT margins**

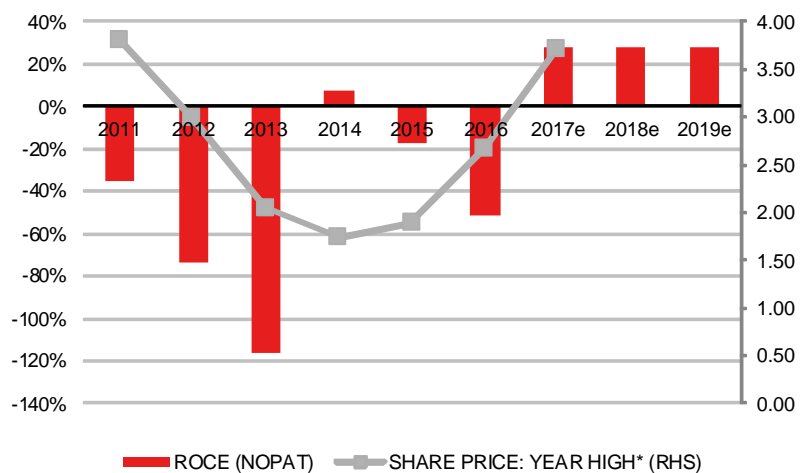
**% increase in EBIT margin (Sales in EUR m)**


Source: Warburg Research

## Returns

### Low cost base should drive attractive ROCEs in the mid term

Once the camera systems are rolled out, returns on capital employed should be attractive, as the operating and maintenance costs are relatively low, while the revenues are scalable. However, over time, every additionally installed camera should add a lower level of revenue, as we expect that the most attractive leagues in terms of marketability will be targeted first.

**Increased ROCE should drive the share price**


Source: Warburg Research

Attractive ROCE will drive the share price

As shown in the chart above as well as in the following table, the initial investments in the camera systems, combined with its returns will 1) significantly increase ROCE 2) slow down the ROCE expansion somewhat during the rollout phase and 3) lead to highly attractive ROCE of > 25% after the rollout phase.



ROCE calculations									
	2011	2012	2013	2014	2015	2016	2017e	2018e	2019e
<b>Average Capital Employed</b>	<b>8.0</b>	<b>7.2</b>	<b>4.1</b>	<b>2.8</b>	<b>5.6</b>	<b>6.9</b>	<b>5.6</b>	<b>13.2</b>	<b>23.2</b>
<i>thereof</i>									
Equity	7.5	2.9	3.1	3.7	4.0	7.5	13.6	16.8	22.9
Net Financial Debt	-0.1	3.0	-1.8	-0.4	2.9	-1.6	-9.4	4.3	1.3
Pensions	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5
<b>EBIT</b>	<b>-1.6</b>	<b>-5.0</b>	<b>-4.5</b>	<b>0.5</b>	<b>-1.1</b>	<b>-3.8</b>	<b>1.6</b>	<b>4.0</b>	<b>7.1</b>
<i>EBIT Margin</i>	-4.8%	-13.5%	-12.7%	0.8%	-1.9%	-6.7%	2.8%	6.1%	9.4%
Tax rate	-70.8%	-4.7%	-6.4%	58.3%	13.1%	6.2%	3.5%	8.8%	10.2%
<b>NOPAT</b>	<b>-2.8</b>	<b>-5.3</b>	<b>-4.8</b>	<b>0.2</b>	<b>-1.0</b>	<b>-3.6</b>	<b>1.5</b>	<b>3.7</b>	<b>6.4</b>
<b>ROCE (NOPAT)</b>	<b>-34.9%</b>	<b>-73.3%</b>	<b>-116.5%</b>	<b>7.2%</b>	<b>-17.5%</b>	<b>-51.5%</b>	<b>27.6%</b>	<b>27.8%</b>	<b>27.7%</b>
WACC	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%

Source : Warburg Research

## Growth / Financials

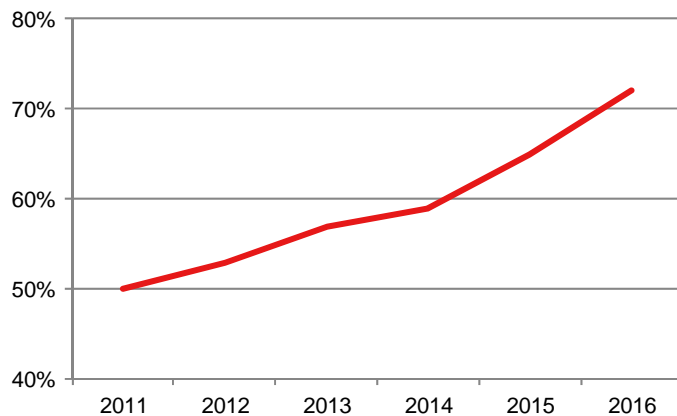
- With its unique access to German amateur soccer, Sporttotal AG is in excellent position to benefit from strong market trends, leading to sales growth in the sporttotal.tv segment at 147% CAGR from 2017-2019e.
- The internet distribution channels make a wider variety of content accessible for more specific consumer groups
- Digital advertising spending is outpacing the traditional advertisement channels
- Scalability of business model will quadruple the net income from 2017e to 2019e
- Promising pipeline within the Venues segment could boost additional revenue growth

### Growing online-streaming business

With sporttotal.tv, Sporttotal AG is entering the growing market for online streaming and video on demand. On the entertainment side, numerous online streaming providers have emerged in recent years like Netflix, Amazon Video, Maxdome, Pantaflix, iTunes, Sky (Ticket), Pantaleon and others. In sport too, the range of offers is increasing, allowing users to be increasingly specific in terms of what they want to watch and when. Online-streaming providers like SkyGo, Sport1+, sportdigital.de, EurosportPlayer, Laola1.tv or DAZN are already providing attractive content. One small drawback is that, in comparison to watching movies or a drama series on demand, watching a sports event on demand is probably less attractive as it is obviously more appealing to watch a sports event live. However, highlights videos are more likely to be watched for their entertainment factor. Additionally, the share of people watching video via the internet has increased significantly from 50% in 2011 to almost 75% in 2016.

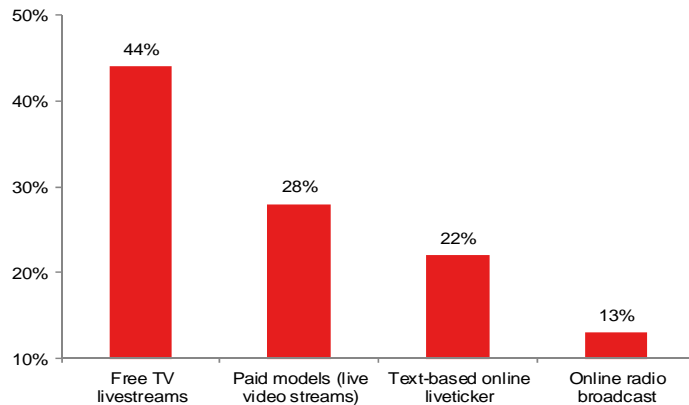
#### Online streaming market booming

#### Share of internet video users in Germany (as % of population)



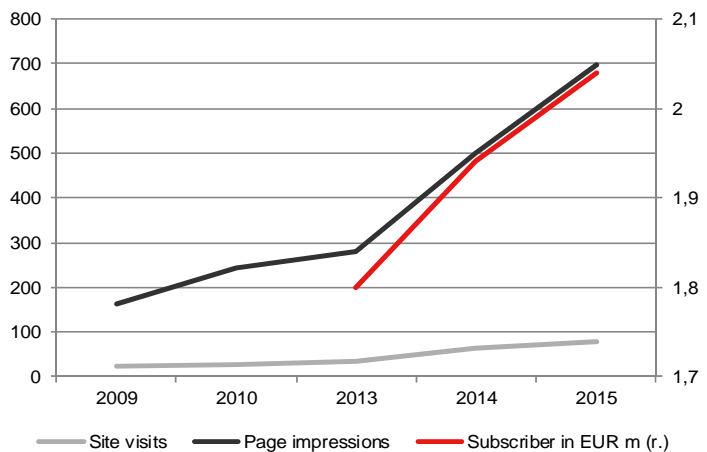
Source: ARD, ZDF, Statista, Warburg Research

More specifically, an increasing number of people are using the internet to follow their favourite sport and to watch highlights videos. Most still opt for a free version, but the increase in the share of paid online streaming services has also become more significant.

**Access to online live streaming of sports events (as of 2016)**


Source: Statista, Warburg Research

This trend is supported by statistics provided by Sport1+, the online channel of Sport1, which streams a wide range of sports. The significant increase in the number of subscribers is deserving of special attention in this context as it reflects increasing willingness by users to pay for specific content.

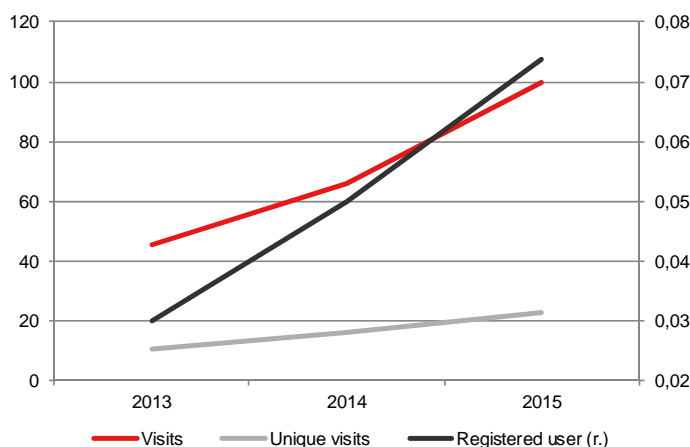
**Number of site visits and subscribers on Sport1+ (per month in m)**


Source: Constantin Medien, Warburg Research

**Amateur sports attracting growing attention**

For amateur football in particular, there is increasing demand for greater media presence and the opportunity to follow events live and in high quality. In recent years, numerous online video platforms like hartplatzhelden.de, fanreport.tv or fupa.net have evolved in an effort to cater to this increasing demand. The significant increase in the number of users of these websites shows the level of demand for video clips and the potential for professional streaming in the area of amateur sports, especially football. This is also highlighted by the rapid increase in the number of users of fußball.de the cooperation website and official DFB amateur partner. The number of visits and page impressions doubled from the season 2014/2015 to 2015/2016, according to an article on the company website in July 2016. The article also reported a new record in the month of April in terms of page impressions, hitting a remarkable 440m.

**Page impressions for DFB's amateur platform fußball.de doubled**

**Number of site visits and registered users on FuPa.net (per year in m)**


Source: Fupa, Warburg Research

The high number of page impressions proves that amateur soccer's low media presence in the past was not down to a lack of demand but, most likely, the high cost base on the production side and insufficient distribution channels – opportunity costs were too high to show content that was not relevant for a sufficient number of people. However with increasing internet access and speed, the parameters are changing. The internet provides more distribution channels, which leads to higher market fragmentation and extends the variety of events available to users. Combined with relatively cheap production technology, low operating costs and high scalability, this amounts to a very attractive and fast growing business model for Sporttotal AG.

But Sporttotal AG is not alone in recognising this attractive potential. soccerwatch.tv, a start-up based in Essen, is also entering the market for amateur football live streaming with automated camera technology. This increases competition on the production side, as the regional associations and clubs decide on their cooperation partners, and on the marketing side, as both platforms seek to maximise their user base to attract advertisers.

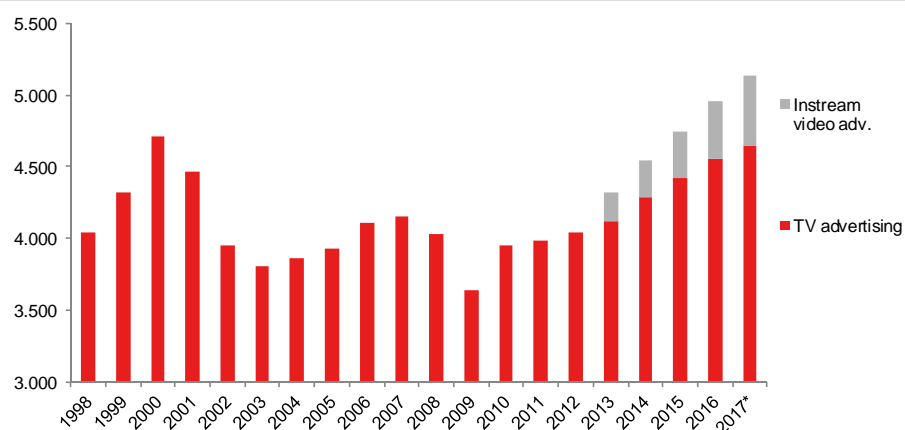
### Digital advertising increasingly important

The overall advertising market is growing, but the digital advertising market is growing strongly. According to a market report published by Global Magna in December 2016, the advertising spend on digital advertising channels, will overtake the advertising spend on classic TV advertising in 2017. According to another study from the VPRT (Verband Privater Rundfunk und Telemedien e.V.) the advertising revenues of moving content overall will grow between 3.4% and 4.3%, whereas the advertising revenues from instream video advertising, which are most relevant for Sporttotal AG, will grow by between 20% and 25%. According to the study, the net revenues from instream video advertisements in Germany increased from 200m in 2013 to 396m in 2016 and are expected to grow to 485m in 2017, representing a CAGR of 25% in this period.

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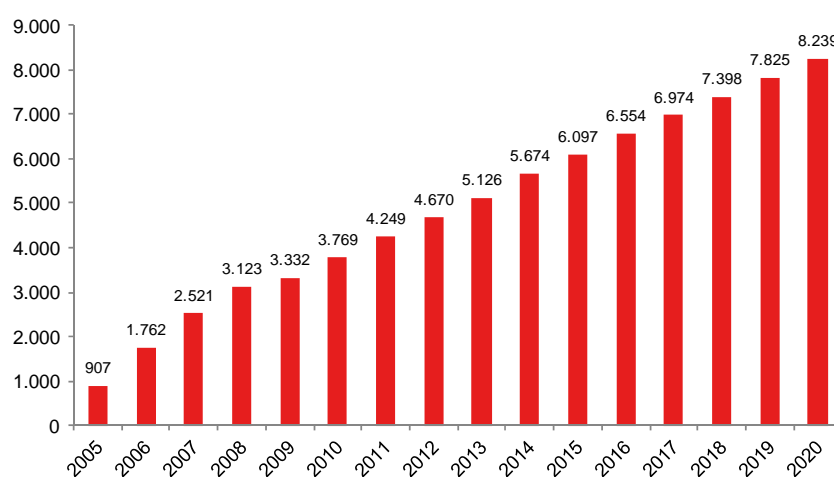
**Online advertising is outpacing the traditional advertising markets**

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**Net revenues from video advertising in Germany (EUR m)**


Source: VPRT, Warburg Research

The revenues from online advertising in Germany are expected to hit roughly EUR 8.2 billion in 2020 from about EUR 6.5 billion in 2016, which represents a CAGR of about 6%. This highlights the attractiveness of these online channels and the ability to generate significant revenues and revenue growth from placing advertisements on these channels.

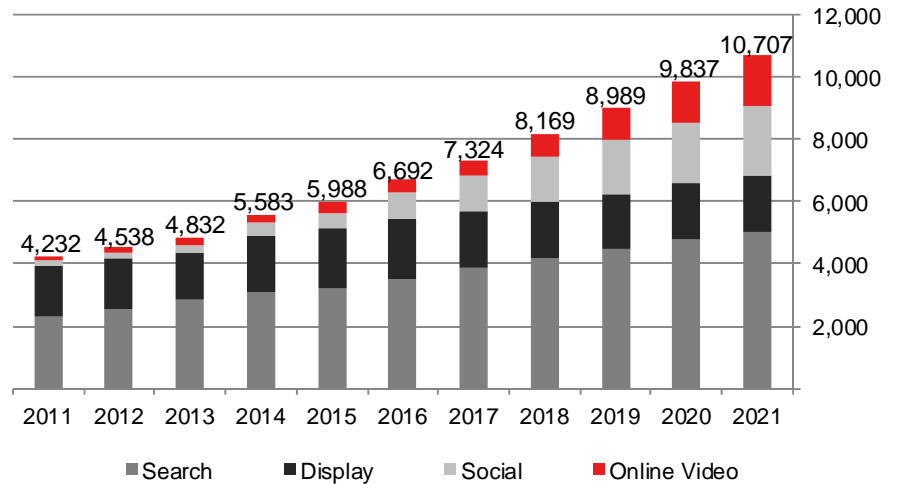
**Revenues from online advertising in Germany 2005–2020 (in EUR m)**


Source: VPRT, Warburg Research

**Online video advertisements offer the greatest growth potential**

If we break down the German online advertising markets further, it becomes clear that the relevant markets are experiencing significant growth. While online desktop market growth rates are already decreasing, the market for mobile advertisements is growing faster and faster. The limited screen space on mobile devices is part of the attractiveness of mobile advertising as the attention of the user is assumed to be higher. This implies higher revenues as the discounts will be smaller for mobile advertisements. This also applies to videos and banners. With its sporttotal.tv app, Sporttotal AG will play a significant role in that market and will be able to demand higher advertisement prices based on its share of mobile users. In addition, the advertising market for online videos is forecast to grow significantly with double-digit growth rates in the coming years.

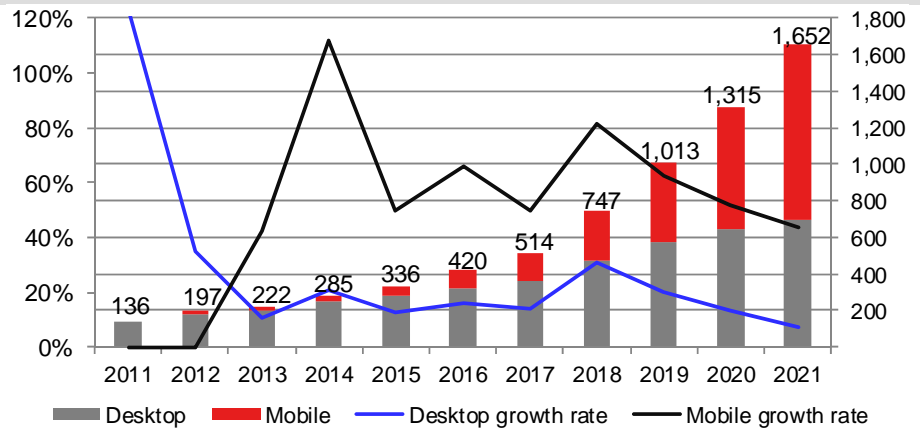
**Internet advertising revenues in Germany by type in USD m (2011 – 2021)**



Source: Bloomberg; Magna Global; Warburg Research

As the table above indicates, online video advertising is significantly outgrowing the rest, especially mobile videos as demonstrated below. With sporttotal.tv's mobile app, we expect Sporttotal to significantly participate in this market too.

**Online video advertising desktop and mobile split in USD m (2011–2021)**

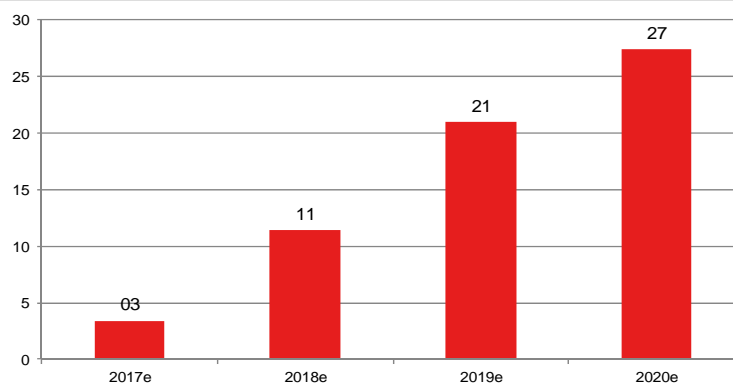


Source: Bloomberg; Magna Global; Warburg Research

**Market potential for sporttotal.tv**

**Overall revenue estimates**

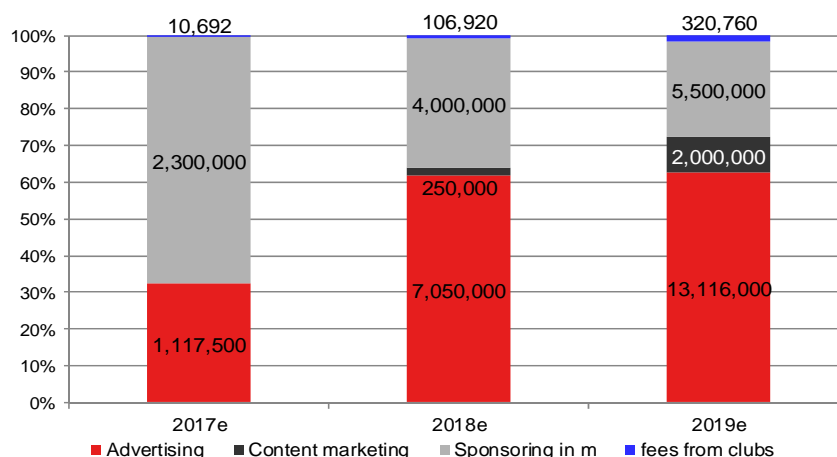
We expect significant revenue growth for the sporttotal.tv segment from 2017e to 2019e for the reasons indicated above. These estimates reflect a CAGR of 147% over that period and are built on the assumptions presented on the following pages.

**Estimated revenues 2017–2020e in EUR m**


Source: Warburg Research

**Analysis of the specific growth drivers**

The sporttotal.tv segment will generate four different streams of revenue:

**Estimated revenue split by type 2017–2019e (in % share)**


Source: Warburg Research

**Advertising revenues are supported by secured sponsoring payments**

**Advertising:** The largest portion (ca. 70%) of revenues will be generated by banner advertising on the website as well as advertisements before, during, and after highlight clips and games of full length. Revenues will be determined by the traffic on the website, as measured by the number of video views, page impressions and the number of unique users. These figures will depend on the number of games broadcast live and the subsequent “Video on Demand” highlights (VoD), as well as full-length reruns. The number of games will be determined by the number of camera-systems that are installed at the football club grounds.

Our estimated growth potential is based on the following assumptions:

- Sporttotal AG aims to **install roughly 3,000 camera-systems by the end of 2019**. We calculate an average base of installed camera systems per year, since the cameras will be installed over the course of a given year. After some setbacks in the early rollout phase, we expect increasing efficiency towards the middle and later stages of the rollout, which will accelerate the speed of the rollout and reduce the installation costs per unit.

However, the **rollout of the camera systems might represent the biggest bottleneck**. Although, Sporttotal AG has reached a cooperation agreement with the DFB, the company must still seek the permission of each individual club to install the camera technology and stream online. In some cases the necessary infrastructure, like internet connections, cables etc. need to be installed, which could lead to delays during the

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**Rollout of the camera system might be the bottleneck**


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rollout phase and therefore to a smaller number of games broadcast and ultimately less advertising revenue. In our view, this does not necessarily jeopardise the entire project. However, it could allow potential competitors, like soccerwatch.tv, to gain better access to more pitches.

- Since the number of installed cameras equals the number of teams, we base our assumptions on games per camera per year. Since every team plays every opponent twice, but only once at home, and most leagues consist of 18 teams, we assume **20 games per camera per year**, which will increase over time as we account for second teams and cup games, for example. However, this is still a conservative approach, since additional games played by second teams or training games could add further traffic. We do not account for the full future potential, including all games of second or even third teams as well as youth teams as some legal issues still need to be clarified in terms of media rights, especially for the youth teams.
- In terms of traffic on the website, we assume an **average number of 10,000 views per game / highlight clip for 2017e and 7,500 for 2018e**, regardless of whether users watch an entire game or only a highlight clip. In May 2017, the company stated an **average number of views per game of 15,500**. However, we assume that this is not sustainable, as the reported period included some charity-matches with FC Bayern Munich and the “Regionalliga” share (highest league in the coverage) matches will also decrease over time. Hence, we assume a decline to an average of 4,000 views per game in 2019e, since we expect that over time, less attractive teams and leagues will be added to the coverage. Our assumptions for the number of page impressions are estimated by crossreads from similar websites like fupa.net or fußball.de.
- In terms of monetising this traffic, we assume a **CPM (Contact of Thousand Price) based on the number of page impressions of EUR 8 and a CPM based on video views of EUR 25 for 2017e**. Afterwards we assume that these numbers will increase, as the profile quality of each user increases with additional information like region or age for example and simply the longer track record of the website. The utilisation rate of advertisement spots on the website should also increase towards its maximum of 100% with the increasing efficiency of commercialisation and marketing. We do not explicitly estimate the rate of utilisation, but reflect the assumed increase indirectly with a rising CPM.

**Content Marketing:** In the mid term, sporttotal.tv plans to further market its content as an analysis tool for coaches, for example, or as a possible solution for wide coverage of scouting opportunities for clubs. They are also considering a “Team App” which allows every club to create its own YouTube channel enabling users to interact and upload additional video clips. However, we only include a small revenue share for this service / product as we believe the potential to monetise these services / products is limited.

**Sponsoring:** The strategic partners Allianz, Deutsche Post and Deutsche Telekom will pay sponsoring revenues of roughly EUR 2.3m combined for 2017e, which will increase to EUR 7m in 2020e, reflecting an upfront secured revenue stream. In return, the partners enjoy constant sponsoring presence on the scoreboard of each game.

**Camera fees:** The participating clubs pay a monthly fee of EUR 9.90 for the installed camera system. However, in return, they take a 10% share of the advertising revenue.



**Assumptions for the sporttotal.tv segment (2017–2019e)**

<b>Assumptions:</b>	<b>2017e</b>	<b>2018e</b>	<b>2019e</b>
Average number of installed cameras	90	900	2700
Games / camera p.a.	7	20	22
# of games	630	18,000	59,400
Ø views per game	10,000	7,500	4,000
Total views p.a.	6,300,000	135,000,000	237,600,000
CPM (views) in EUR	25	30	35
Page impressions p.a.	120,000,000	300,000,000	400,000,000
CPM (PIs) in EUR	8	10	12
Advertising revenue	1,117,500	7,050,000	13,116,000
Sponsoring	2,300,000	4,000,000	5,500,000
Content marketing	0	250,000	2,000,000
Fees	10,692	106,920	320,760
<b>Revenue (in EUR)</b>	<b>3,428,192</b>	<b>11,406,920</b>	<b>20,936,760</b>

Source: Warburg Research

**Explaining definitions:**

- **Page impression:** A page impression, also known as page views, is the number of times a specific website has been accessed or viewed by users within a given timeframe, typically a month, regardless of how often one user repeatedly accessed the page. The page impression is regarded as a measure of the relevance and attractiveness of the website's content.
- **Unique user:** A unique user is an individual visitor to a website, who is counted once, irrespective of the number of times he or she revisits the site. Websites usually rely on some type of identification, such as IP addresses, browser IDs or individual registrations to ensure that unique users are only counted once. In contrast to page impressions, unique user statistics are a better measure of the reach of a website.
- **Video view:** Video views count the number of times certain videos are viewed by the website's users. Video views are more valuable than page impressions and unique user visits, as (multiple) video advertisements can be placed during one video.
- **CPM:** CPM is the thousand of contact price (or in German, TKP "Tausender Kontakt Preis"). CPM stands for Contact Price of thousand (symbolized by "M", the Roman numeral for thousand). The CPM is the price a company pays to place its advertisements on certain websites. For instance the CPM for an advertisement banner is EUR 10, then the company has to pay 10\*(page impressions/1,000). Obviously, the more page impressions a website generates, the more the company has to pay for its advertisement placement. Another example would be a video advertisement, for which the CPM is normally much higher – around EUR 100 – for example for a pre-roll-ad, which will run for 20 seconds before every single video that is viewed on the page. In this case, the company would have to pay 100\*(video views/1000).

**For accurate understanding of CPM:**

The CPMs to be found on the internet or by media agencies are generally gross prices and cannot be used to derive a realistic impression of the future revenue stream of a website based on CPMs for page impressions and video views etc, as the website will only receive the net price, which includes discounts for agencies and larger advertisement packages, for example.

Furthermore, advertising capacity is also unlikely to be 100%-utilised, especially on new websites. This will lead to lower revenues through less advertisement or implicitly, lower prices. Our model takes this into consideration with a significantly lower CPM (than the gross prices), which will increase over time, as the utilisation rate increases and the enhanced profile of the target group leads to CPM premiums. We do not estimate a

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**Calculate with significant discount on gross CPMs**

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specific utilisation rate, but we include that implicitly in our CPM estimates.


Below, the tables show the stated gross CPMs from Media Impact:

#### Sporttotal.tv's gross CPMs for online display ads

 TOTAL	Channel	ROS
Skyscraper	50 €	40 €
Superbanner	50 €	40 €
Medium Rectangle	55 €	45 €
Wallpaper	85 €	65 €
Sitebar	90 €	70 €
Halfpage Ad	90 €	70 €
Fireplace	95 €	75 €
Billboard	95 €	75 €
Understitial	95 €	85 €
Banderole Ad	90 €	70 €
Video Wall	110 €	90 €
Interstitial	110 €	90 €

Source: Media Impact, Warburg Research

#### Sporttotal.tv's gross CPMs for online video ads

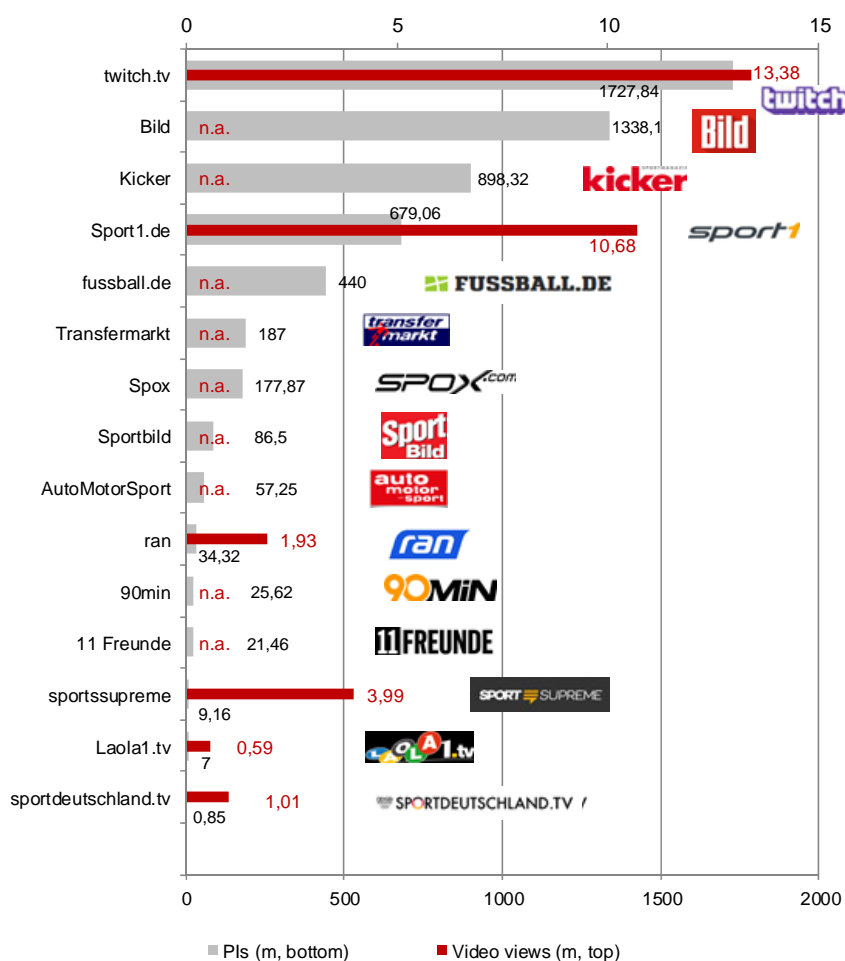
 TOTAL	Channel	ROS
<b>Standards</b>		
Pre-Roll	100 €	90 €
Mid-Roll	100 €	90 €
Post-Roll	60 €	50 €
<b>Specials</b>		
Interaktives Pre-Roll	115 €	105 €
Branded Player (Desktop only)	115 €	105 €
Overlay	40 €	30 €

source: Media Impact, Warburg Research

To put our page impressions and video views estimates into context, the chart below shows the number of video views (where available) and page impressions of other websites and portals with a sports focus within the German market. The data has been sourced from marketing agencies.

This shows that our estimates are rather ambitious with regard to video views. However, since sporttotal.tv is a pure video portal and does not provide any other content, like news, we believe these estimates can be attained. However, for many pages no specific numbers were given for video views. In contrast, our estimates for the number of page impressions are lower, for similar reasons. It can be assumed that users will not click through different articles and pictures, but will watch highlight videos instead.

## Monthly page impressions and video views of sports websites



Source: Ströer, Media Impact, BurdaForward, SevenOne Media, Warburg Research

### Additional growth opportunities

Our model leaves room for more potential. However, several aspects are not concrete enough, in our view, to include them in our case. Additional revenues could be generated in the following ways:

- > Including **more teams and therefore games per camera** of all second and third teams of a club or even youth teams. This taps into the generation of digital natives while friends and family would form a reliable base of page-visitors as well as additional social spread.
- > **International expansion** to foreign markets and to include UEFA under 16, 18 and 21 tournaments and games. **China**, in particular, seems to be an interesting market and Sporttotal AG also has a right of first refusal for Pixellot's HD camera system for this region. Current developments with respect to the popularity of football in China look promising, especially considering the sums paid for European football players in recent months. Sporttotal holds a 45% stake in **China Media Sports. Ltd.**, which was founded in spring 2017 with the aim of exploring the potential scalability of the digital business in collaboration with Chinese partners for the Chinese market.
- > **Expanding to other sports like basketball, handball, hockey** etc. Other sports associations or single clubs have already expressed interest and are willing to pay for the camera system. However, technology aspects have to be considered as the camera software needs to be individually adapted for each sport.

## Explaining the cost structure

To better understand the profitability of the sporttotal.tv segment as well as the scalability opportunities, we break down our estimated segment P&L:

### P&L for the sporttotal.tv segment (2017e – 2019e)

P & L Sporttotal.tv	2017e	2018e	2019e
<b>Revenue</b>	<b>3,428,192</b>	<b>11,406,920</b>	<b>20,936,760</b>
- Material expenses	1,300,000	1,805,000	2,311,600
- Cloud costs	750,000	3,000,000	4,000,000
- Camera licenses	0	216,000	2,160,000
- Personnel expenses	600,000	1,600,000	2,500,000
<b>= EBITDA</b>	<b>778,192</b>	<b>4,785,920</b>	<b>9,965,160</b>
- D & A	370,000	3,200,000	6,500,000
<b>= EBIT</b>	<b>408,192</b>	<b>1,585,920</b>	<b>3,465,160</b>
EBIT-margin	11.9%	13.9%	16.6%

Quelle: Warburg Research

#### Cloud costs make up the largest cost position

As already outlined, revenue will be generated with the number of page impressions and video views combined with an assumed CPM. "Material expenses" mainly include maintenance costs associated with the camera system and we also include a 10% revenue share for the clubs and regional associations in that position. By 2020e, cloud costs will make up a considerable cost position, as significant server volume is required to store the video data. Sporttotal AG also has to pay a license fee to Pixellot of approximately EUR 200 per camera system per month for software maintenance and improvement, which has potential to decline in the coming years with economies of scale. These license fees occur with a time-lag of one year as the first year is always free of charge. The personnel expenses estimates are based on the company's stated target of 30-35 FTEs for the sporttotal.tv segment. The D&A position includes the depreciation of the camera systems, on a linear basis over five years. Overall, this structure highlights the attractiveness of the business model. However, key is the generation of sufficient revenue based on the attractive content and the resulting number of page impressions. The cost structure is mainly determined by the number of installed camera systems.

#### Project-driven segment could surprise positively

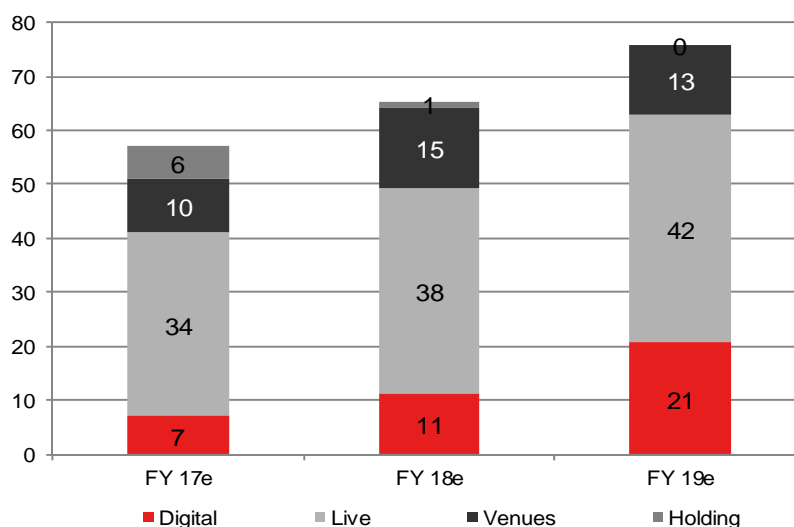
## Promising pipeline within the Venues segment

For the Venues segment, the company gives a rather promising guidance. While the potential of this segment is difficult to independently verify, the segment's recent track record with the acquisition of racetrack projects in Sochi and Kuwait give us some grounds for confidence in the future pipeline. For now, our estimates remain rather conservative but there is a reasonable chance that they may be strengthened in the short to mid term.

Visible potential here could be a real catalyst for the stock price in our view, as these projects normally deliver a relatively reliable revenue stream as well as an attractive EBIT margin for a period of normally two to three years.

## Digital segment will be the growth driver

To gain a better overview of the potential of the individual segments to drive growth at group level, the sales split for the three segments Digital (including sporttotal.tv), Live and Venues for 2017–2019e is shown below:

**Revenue growth driver at group level (2017–2019e)**


Source: Warburg Research

This shows quite clearly the potential of the sporttotal.tv segment to drive overall growth. This could be complemented by some of the factors already mentioned such as a greater number of teams, international expansion or extension of the service to other sports.

The following table shows the P & L statement at group level and highlights again the growing portion of the Digital segment, which includes the sporttotal.tv segment. This segment will significantly increase the EBITDA margin at group level. However, the expansion of the EBIT margin will slow down slightly, due to higher depreciation of the camera systems in 2019e and 2020e. With tax loss carry forwards, the tax rate is relatively low, but will increase over time again.

**P&L at group level (2016–2019e)**

P & L Group	2016	2017e	2018e	2019e	CAGR
<b>Digital</b>	<b>6.5</b>	<b>7.0</b>	<b>11.4</b>	<b>20.9</b>	<b>34.0%</b>
as % of total	11.5%	12.3%	17.4%	27.6%	
<b>Live</b>	<b>26.8</b>	<b>34</b>	<b>38</b>	<b>42</b>	<b>11.9%</b>
as % of total	47.3%	59.6%	58.1%	55.3%	
<b>Venues</b>	<b>13.0</b>	<b>10.0</b>	<b>15.0</b>	<b>13.0</b>	<b>0.0%</b>
as % of total	23.0%	17.5%	22.9%	17.1%	
<b>Holding</b>	<b>10.3</b>	<b>6.0</b>	<b>1.0</b>	<b>0.0</b>	
as % of total	18.2%	10.5%	1.5%	0.0%	
<b>Revenue</b>	<b>56.60</b>	<b>57.03</b>	<b>65.41</b>	<b>75.94</b>	<b>7.6%</b>
+ Other operating income	2.96	3.48	2.62	3.04	
- Material expenses	42.81	42.94	46.11	50.12	
as % of total	75.6%	75.3%	70.5%	66.0%	
<b>= Gross Revenue</b>	<b>13.79</b>	<b>14.09</b>	<b>19.30</b>	<b>25.82</b>	<b>17.0%</b>
Gross margin	24.4%	24.7%	29.5%	34.0%	
- Personnel expenses	13.3	9.6	9.8	10.3	
as % of total	23.5%	16.9%	15.0%	13.5%	
- Other operating expenses	5.5	5.1	4.6	4.6	
<b>= EBITDA</b>	<b>-1.5</b>	<b>2.8</b>	<b>7.5</b>	<b>14.0</b>	<b>n.m.</b>
EBITDA margin	-2.6%	4.9%	11.5%	18.5%	
- D & A	1.8	1.2	3.5	6.9	
as % of Revenues	3.2%	2.1%	5.4%	9.1%	
<b>= EBIT</b>	<b>-3.8</b>	<b>1.6</b>	<b>4.0</b>	<b>7.1</b>	<b>n.m.</b>
EBIT margin	-6.7%	2.8%	6.1%	9.4%	
+/- Financial Result	-0.4	-0.2	-0.3	-0.3	
<b>= EBT</b>	<b>-4.2</b>	<b>1.4</b>	<b>3.7</b>	<b>6.8</b>	<b>n.m.</b>
EBT margin	-7.3%	2.5%	5.7%	9.0%	
- Tax	-0.26	0.05	0.33	0.70	
Tax rate	6.2%	3.5%	8.8%	10.2%	
<b>= Net income</b>	<b>-6.36</b>	<b>1.36</b>	<b>3.40</b>	<b>6.11</b>	<b>n.m.</b>
Net income margin	-11.2%	2.4%	5.2%	8.0%	
<b>= EPS</b>	<b>-0.41</b>	<b>0.07</b>	<b>0.17</b>	<b>0.31</b>	<b>n.m.</b>
yoy growth		n.m.	150.7%	79.5%	

Source: Warburg Research

## Valuation

- Our DCF model leads to a fair value of EUR 4.50
- Current sentiment and news-flow supports higher valuation
- Peer group segments are only partly comparable

## DCF model

Our DCF approach leads to a fair **value of of EUR 4.50 for the Sporttotal AG stock**.

We estimate a significant increase in revenue growth of roughly 15% for the year 2018e and a further increase of about 16% in 2019e. Afterwards, we calculate with a declining growth rate to our perpetuity growth rate of 1.5%.

After recording losses for the last several years, we estimate a positive net income for 2017e and the following years. We assume a steep increase in the company's EBIT margin from -6.7% in 2016 to 3.5% in 2017e followed by marginally but steadily increasing EBIT margins to the long-term margin of 12%.

For our DCF model, we calculate with a WACC of 9.6% and a beta of 1.5, reflecting the higher risk associated with the new business model and heavy up-front investments. Due to some tax loss carry forwards, we calculate with a reduced tax rate for the mid term. However, for the long term, we calculate with a higher rate again and with 30% in perpetuity.

## Current sentiment and news-flow

The current company news-flow and sentiment supports the focus on the planned strategy, while the share price rise signals the positive perception of investors.

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**Current strategy focus is appreciated by investors**

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- **July 6:** Sporttotal AG announced a **marketing cooperation with Hyundai**, signalling that Hyundai anticipates successful development of the project. Furthermore it demonstrates that sporttotal.tv is seen as an attractive platform for advertisement and to present the company to a very active and young target group with an interest in sport.
- **July 17:** Sporttotal AG announced an extensive **10-year cooperation agreement with the German Football Association (DFB)**, to exclusively broadcast amateur football with an automatic technology for the fourth league and lower. After the pilot phase, the DFB was convinced of the project's vast potential based on the number of viewers. It also signals that the DFB is willing to support amateur football in Germany rather than letting it slide out of focus in the face of the commercialisation of the professional leagues. That will help Sporttotal AG to gain better access the clubs and regional associations during the rollout phase of the project and to better market its platform beyond.
- **July 18:** Sporttotal AG announced an **EUR 2.5m loan from the Deutsche Postbank AG with an attractive interest rate of 3.25%** for the period to June 2018. This is the first loan agreement in six years for Sporttotal AG and shows the trust in the project by third parties. This might pave the way for further opportunities for loan agreements to enhance the capital structure and thus enhance shareholder value.
- **July 20:** Wige Media AG announced its **relaunch as SPORTTOTAL AG**, signalling the commitment to the new strategy and an end to the low-margin and capital intense media business of the past.
- **July 28:** Sporttotal AG announced the **disposal of the South & Browse segment**, underpinning the new strategy towards a scalable business model and away from the

capital intense entertainment production business. The proceeds of the sale, cash inflow of roughly EUR 0.7m, can be used to further finance the rollout of the camera systems. A reduction in personnel expenses is another positive aspect.

- **July 31:** Sporttotal AG announced the **disposal of the 51%-stake in the sports media group gmbh** with its two platforms [www.motorsport-total.com](http://www.motorsport-total.com) and [www.formel-1.de](http://www.formel-1.de) for about EUR 2.4m. This announcement was slightly surprising, as Sporttotal AG just bought this stake in 2016, and the acquisition made sense in terms of strengthening its digital presence for the motor racing oriented Venues segment. The selling price seemed to be quite attractive compared to the acquisition price. However, this also demonstrates a clear focus and commitment to the growth of the sporttotal.tv segment and provides further cash inflows for the rollout of the camera technology.

On July 14, the closing share price was EUR 3.03 and increased to EUR 3.62 on August 4, representing an increase of 19.5%. We believe that at the current level, the future potential of the projects (including potential projects within the Venues segment) is not fully priced in and that the share price still has potential to reach our DCF-based PT of EUR 4.50.

**DCF model**

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	
Sales	57.0	65.4	75.9	84.8	92.2	98.2	103.1	107.2	110.6	113.6	116.3	118.7	121.0	1.5 %
Sales change	0.8 %	14.7 %	16.1 %	11.7 %	8.7 %	6.5 %	5.0 %	4.0 %	3.2 %	2.7 %	2.3 %	2.1 %	1.9 %	
EBIT	1.6	4.0	7.1	8.6	9.9	10.9	11.7	12.4	12.9	13.4	13.8	14.1	14.4	
EBIT-margin	2.8 %	6.1 %	9.4 %	10.2 %	10.7 %	11.1 %	11.4 %	11.6 %	11.7 %	11.8 %	11.9 %	11.9 %	11.9 %	
Tax rate (EBT)	3.5 %	8.8 %	10.2 %	12.0 %	13.0 %	14.0 %	15.0 %	16.0 %	17.0 %	18.0 %	19.0 %	25.0 %	30.0 %	
NOPAT	1.5	3.7	6.4	7.6	8.6	9.4	10.0	10.4	10.7	11.0	11.2	10.6	10.1	
Depreciation	1.2	3.5	6.9	7.6	6.6	5.8	5.2	4.8	4.4	4.2	4.1	4.0	3.9	
in % of Sales	2.1 %	5.4 %	9.1 %	9.0 %	7.2 %	5.9 %	5.1 %	4.4 %	4.0 %	3.7 %	3.5 %	3.3 %	3.2 %	
Changes in provisions	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	
Change in Liquidity from														
- Working Capital	-0.5	-0.1	0.7	0.8	0.6	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	
- Capex	4.5	20.8	9.3	6.6	5.1	4.2	3.8	3.6	3.5	3.5	3.5	3.6	3.6	
Capex in % of Sales	7.9 %	31.7 %	12.2 %	7.8 %	5.5 %	4.3 %	3.7 %	3.4 %	3.2 %	3.1 %	3.0 %	3.0 %	3.0 %	
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC Model)	-1.3	-13.5	3.3	7.8	9.7	10.7	11.3	11.4	11.5	11.6	11.6	10.9	10.4	
PV of FCF	-1.3	-12.3	2.8	5.9	6.7	6.7	6.5	6.0	5.5	5.1	4.6	4.0	3.4	42
share of PVs	<b>-12.61 %</b>			<b>63.56 %</b>										<b>49.04 %</b>

**Model parameter**

Derivation of WACC:		Derivation of Beta:	
Debt ratio	5.00 %	Financial Strength	1.50
Cost of debt (after tax)	2.8 %	Liquidity (share)	1.50
Market return	7.00 %	Cyclicality	1.60
Risk free rate	1.50 %	Transparency	1.60
		Others	1.50
<b>WACC</b>	<b>9.61 %</b>	<b>Beta</b>	<b>1.54</b>

**Valuation (m)**

Present values 2029e	44		
Terminal Value	42		
Financial liabilities	2		
Pension liabilities	1		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	4	No. of shares (m)	19.5
<b>Equity Value</b>	<b>87</b>	<b>Value per share (EUR)</b>	<b>4.47</b>

**Sensitivity Value per Share (EUR)**

Beta	WACC	Terminal Growth							Beta	WACC	Delta EBIT-margin						
		0.75 %	1.00 %	1.25 %	1.50 %	1.75 %	2.00 %	2.25 %			-1.5 pp	-1.0 pp	-0.5 pp	+0.0 pp	+0.5 pp	+1.0 pp	+1.5 pp
1.73	10.6 %	3.73	3.77	3.82	3.86	3.91	3.96	4.02	1.73	10.6 %	3.19	3.42	3.64	3.86	4.08	4.31	4.53
1.64	10.1 %	3.99	4.04	4.09	4.15	4.20	4.27	4.33	1.64	10.1 %	3.44	3.68	3.91	4.15	4.38	4.62	4.85
1.59	9.9 %	4.13	4.19	4.24	4.30	4.36	4.43	4.50	1.59	9.9 %	3.58	3.82	4.06	4.30	4.54	4.78	5.02
1.54	9.6 %	4.28	4.34	4.40	4.47	4.54	4.61	4.69	1.54	9.6 %	3.72	3.97	4.22	4.47	4.71	4.96	5.21
1.49	9.4 %	4.44	4.50	4.57	4.64	4.72	4.80	4.88	1.49	9.4 %	3.88	4.13	4.39	4.64	4.90	5.15	5.41
1.44	9.1 %	4.61	4.68	4.75	4.83	4.91	5.00	5.09	1.44	9.1 %	4.04	4.30	4.56	4.83	5.09	5.35	5.62
1.35	8.6 %	4.98	5.06	5.15	5.24	5.34	5.45	5.56	1.35	8.6 %	4.40	4.68	4.96	5.24	5.52	5.80	6.08

- The sporttotal.tv segment will be the future revenue growth driver at group level
- A Beta of 1.5 and a WACC of 9.6% reflecting the risk associated with the start-up characteristics
- Due to tax loss carry forwards, we calculate with a reduced tax rate in the mid term



## Peer group

Due to the specific business segments and special activities within Sporttotal AG's segments there is no direct peer for Sporttotal AG. Nevertheless we take a look at companies with similar business activities, even if only partially comparable. In addition, we divided our peer group into two segments. The first includes companies, which are more digital and content-driven, as a comparison for Sporttotal AG's Digital segment. The second includes companies, which are more events-based and project-driven, as a comparison for Sporttotal AG's Venues and Event segments.

However, we do not derive any pricing or valuation indications for our price target from that peer group. Nevertheless, looking purely at the EBITDA and EBIT multiples on the time line, gives us reason to assume that the market does not yet believe in the development of our estimated results and we see further upside potential for the stock price, once the visibility increases in 2018.

Peers are only partly comparable

### Peergroup

#### Peergroup - Key Figures

Company	LC	Price in LC	MC in LC m	EV in LC m	EPS			Sales			EBITDA			EBIT		
					17e	18e	19e	17e	18e	19e	17e	18e	19e	17e	18e	19e
Segment (1)																
Constantin Medien AG	EUR	2.22	207.7	264.3	0.06	0.19	0.24	511.0	565.0	610.0	34.3	48.8	59.2	27.5	41.9	49.7
ProSiebenSat.1Media SE	EUR	27.94	5,996.1	8,862.5	2.33	2.48	2.63	4,099.8	4,287.4	4,558.0	1,033.0	1,080.2	1,135.0	827.0	887.5	928.0
PANTAFlix AG	EUR	131.95	152.4	149.1	3.37	17.35	29.04	56.9	116.6	162.4	18.9	40.2	60.9	5.8	28.4	47.9
Stroer SE & Co. KGaA	EUR	55.51	3,068.7	3,717.0	3.16	3.45	3.84	1,272.6	1,398.0	1,514.8	325.0	360.0	391.2	160.0	200.0	218.5
Splendid Medien AG	EUR	162	15.8	29.1	-0.35	0.15	0.16	52.1	62.2	63.0	7.4	14.2	3.6	-3.0	2.8	2.7
Segment (2)																
GL Events SA	EUR	26.30	610.8	1,070.2	1.73	1.83	1.92	961.5	996.3	1,015.2	137.7	141.1	149.5	87.0	88.1	91.0
CTS Eventim AG & Co. KGaA	EUR	37.64	3,613.1	3,326.4	1.23	1.35	1.50	970.0	1,009.8	1,079.4	218.8	242.5	266.2	190.3	207.8	232.6
UnUsual Ltd.	SGD	0.48	305.5	288.4	0.01	0.02	0.03	54.8	93.7	129.1	11.7	20.7	26.5	10.2	19.2	24.9
<b>SPORTTOTAL AG</b>	<b>EUR</b>	<b>3.76</b>	<b>73.1</b>	<b>68.3</b>	<b>0.06</b>	<b>0.17</b>	<b>0.31</b>	<b>57.0</b>	<b>65.4</b>	<b>75.9</b>	<b>2.8</b>	<b>7.5</b>	<b>14.0</b>	<b>1.6</b>	<b>4.0</b>	<b>7.1</b>

#### Peergroup - Valuation Multiples

Company	LC	Price in LC	MC in LC m	EV in LC m	P / E			EV / Sales			EV / EBITDA			EV / EBIT		
					17e	18e	19e	17e	18e	19e	17e	18e	19e	17e	18e	19e
Segment (1)																
Constantin Medien AG	EUR	2.22	207.7	264.3	37.0 x	11.7 x	9.2 x	0.4 x	0.3 x	0.3 x	6.1 x	3.9 x	2.8 x	7.7 x	4.5 x	3.4 x
ProSiebenSat.1Media SE	EUR	27.94	5,996.1	8,862.5	12.0 x	11.3 x	10.6 x	1.9 x	1.8 x	1.7 x	7.7 x	7.3 x	6.9 x	9.6 x	8.9 x	8.4 x
PANTAFlix AG	EUR	131.95	152.4	149.1	39.2 x	7.6 x	4.5 x	2.7 x	1.2 x	0.7 x	8.2 x	3.6 x	2.0 x	26.6 x	5.0 x	2.5 x
Stroer SE & Co. KGaA	EUR	55.51	3,068.7	3,717.0	17.6 x	16.1 x	14.4 x	2.6 x	2.4 x	2.1 x	10.3 x	9.2 x	8.2 x	20.9 x	16.6 x	14.7 x
Splendid Medien AG	EUR	162	15.8	29.1	n.a.	10.7 x	10.2 x	0.7 x	0.6 x	0.6 x	4.6 x	2.4 x	9.9 x	n.a.	12.4 x	13.1 x
Average					26.4 x	11.5 x	9.8 x	1.7 x	1.3 x	1.1 x	7.4 x	5.3 x	6.0 x	16.2 x	9.5 x	8.4 x
Median					27.3 x	11.3 x	10.2 x	1.9 x	1.2 x	0.7 x	7.7 x	3.9 x	6.9 x	15.2 x	8.9 x	8.4 x
Segment (2)																
GL Events SA	EUR	26.30	610.8	1,070.2	15.2 x	14.4 x	13.7 x	1.0 x	0.9 x	0.9 x	7.2 x	6.6 x	6.0 x	11.4 x	10.6 x	9.8 x
CTS Eventim AG & Co. KGaA	EUR	37.64	3,613.1	3,326.4	30.5 x	27.9 x	25.1 x	3.3 x	3.2 x	2.9 x	14.8 x	13.2 x	11.9 x	17.0 x	15.4 x	13.6 x
UnUsual Ltd.	SGD	0.48	305.5	288.4	36.0 x	19.2 x	14.8 x	5.9 x	3.5 x	2.6 x	27.8 x	16.0 x	12.8 x	31.9 x	17.2 x	13.7 x
Average					27.2 x	20.5 x	17.9 x	3.4 x	2.5 x	2.1 x	16.6 x	11.9 x	10.2 x	20.1 x	14.4 x	12.3 x
Median					30.5 x	19.2 x	14.8 x	3.3 x	3.2 x	2.6 x	14.8 x	13.2 x	11.9 x	17.0 x	15.4 x	13.6 x
<b>SPORTTOTAL AG</b>	<b>EUR</b>	<b>3.76</b>	<b>73.1</b>	<b>68.3</b>	<b>62.6 x</b>	<b>22.1 x</b>	<b>12.1 x</b>	<b>1.2 x</b>	<b>1.0 x</b>	<b>0.9 x</b>	<b>24.4 x</b>	<b>9.1 x</b>	<b>4.9 x</b>	<b>42.8 x</b>	<b>17.0 x</b>	<b>9.6 x</b>
Segment (1)																
Valuation difference to Average					-58%	-48%	-19%	39%	21%	20%	-70%	-42%	22%	-62%	-44%	-12%
Fair value per share based on Average					1.59	1.95	3.04	5.22	4.54	4.52	1.13	2.18	4.60	1.42	2.09	3.31
Segment (2)																
Valuation difference to Average					-56%	-7%	48%	187%	143%	139%	-32%	31%	110%	-53%	-15%	29%
Fair value per share based on Average					1.63	3.48	5.54	10.30	8.79	8.62	2.63	4.85	7.62	1.89	3.22	4.78

**Constantin Medien AG** operates as a holding company, which engages in international media operations. It operates the following segments: Sports, Film, Sports & Event Marketing, and Other Business Activities. The Sports segment comprises activities in the areas of TV, online/mobile and digital sports radio under the umbrella brand SPORT1 and the activities of the PLAZAMEDIA group in the production area. The Film segment combines the activities of Constantin Film AG and Highlight Communications AG. Constantin Film is a film production company which also undertakes in-house productions and acquires film rights. The Sports & Event Marketing segment consists of the activities of Team Holding AG. Its main project, undertaken by subsidiaries, is the marketing of the UEFA Champions League. The Other Business Activities segment includes the activities of Highlight Event & Entertainment AG and Pokermania GmbH. The company was founded in 1989 and is headquartered in Ismaning, Germany.

**ProSiebenSat.1 Media SE** is a holding company engaged in the provision of television advertising and broadcasting services. It operates the following segments: Broadcasting German-speaking, Digital & Adjacent and Content Production and Global Sales. The Broadcasting German-speaking segment includes its core business, advertising-financed free television and the distribution revenues generated from the sale of its own high definition and basic pay TV stations. The Digital and Adjacent segment offers digital entertainment which comprises online video and online games, digital commerce that covers all ventures activities and adjacent business unit which includes music, live entertainment, events, ticketing and artist management. The Content Production and Global Sales segment refers to its international programme production and distribution business. The company was founded on October 2, 2000 and is headquartered in Unterföhring, Germany.

**PANTALEON Entertainment AG** is a media company focused on cinema. It specializes in the development and production of feature films and licensing rights to those films on a national and international basis, mainly through globally-leading film distributors across many stages of the licensing chain. It operates the following divisions: Film Production, Video-on-Demand, and Other. The Film Production division includes the production of feature films as in-house productions and co-productions and the licensing of the resulting rights together with its global partners. The Video-on-Demand division is the operation of Pantaflix platform which enables the company to provide consumers worldwide with access to films that were previously unavailable to them. The Other division refers to the production of feature films and the PANTAFLIX video-on-demand platform. The company was founded by Marco Beckmann on July 15, 2009 and is headquartered in Kronberg im Taunus, Germany.

**Ströer SE & Co. KGaA** is a multi-channel media company that offers individualized communication solutions. It operates the following segments: Ströer Digital, OOH Deutschland, and OOH International. The Ströer Digital segment provides digital advertising spaces in the internet, on mobile terminals, and in the public area as public video network. The OOH Deutschland segment offers advertising services such as street furniture, billboard, and transport. The OOH International comprises outdoor advertising and blowUP media. The company was founded by Udo Müller and Heinz W. Ströer in 1990 and is headquartered in Cologne, Germany.

**Splendid Medien AG** engages in the marketing of films and entertainment programmes for cinema, home entertainment, and television. It specializes in digitization, new media, and dubbing. The company operates Content and Services segments. The Content segment buys licensing rights to feature special-interest and children's programmes, films, and TV productions. The Services division provides dubbing and digital post-

production services. Splendid Medien was founded by Albert E. Klein in 1974 and is headquartered in Cologne, Germany.

**GL Events SA** provides international event solutions and services. It operates three business units: GL Events Live, GL Events Exhibitions, and GL Events Venue. The GL Events Live segment groups the full range of business lines and services for corporate, institutional, and sports events. The GL Events Exhibitions manages and coordinates the portfolio of proprietary trade fairs. The GL Events Venues manages operations for its network of event venues. The company was founded by Olivier Ginon, Olivier Roux, Gilles Gouédard-Comte, and Jacques Danger in 1978 and is headquartered in Lyon, France.

**CTS Eventim AG & Co. KGaA** engages in ticketing and live entertainment event management. It operates the segments Ticketing and Live Entertainment. The Ticketing segment includes the production, sale, distribution, and marketing of tickets for concerts, theatre, art exhibitions, sports, and other events. The Live Entertainment segment includes the planning, organization, and execution of concert events and tours, festivals, and other live events. The company was founded on July 19, 1996 and is headquartered in Bremen, Germany.

**UnUsUal Ltd.** is an investment holding company engaged in the production and promotion of large-scale live events and concerts by renowned international artists in Singapore and the surrounding regions. It operates the segments: Promotion, Production, and Others. The promotion segment relates to admission fees, sponsorship income and trading of performance rights. The Production segment includes the rental of stage sound systems and equipment, and rendering of technical services. The Others segment comprises the rental of exhibition and concert halls as well as related equipment, and co-management of exhibition or concert halls. The company was founded in 1997 and is headquartered in Singapore.

## Company & Products

### Business segments

#### Digital

##### Sporttotal.tv

Within this segment, Sporttotal AG operates the newly established video platform sporttotal.tv, which focuses on German amateur soccer. Revenues are to be generated by advertising and the aim is to present and market video content in high and standardised quality. An additional fee-based and advertising-free premium account may be offered once the rollout is at a more advanced stage. By the end of 2017, Sporttotal AG is aiming to have about 200 camera systems installed at football pitches around Germany. The new camera technology, which is produced by a relatively new Israeli company, Pixellot LTD, can carry out a fully automated broadcast of a soccer game. The technology uses four lenses that constantly record the soccer pitch from a fixed point at the half-way line with a 180-degree view. It uses intelligent algorithms to follow the action on the pitch and to zoom in and out as appropriate. The user can chose between the broadcast and the tactical view, which determines how closely the camera is following the game. The tactical mode is somewhat wider, which allows for a more general analysis of the game. This may be particularly useful for coaches, for a broader view of the positions of the players on the pitch. The user can access the platform from desktop PC, tablet or smartphone, both web based or via App.

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Intelligent technology is key

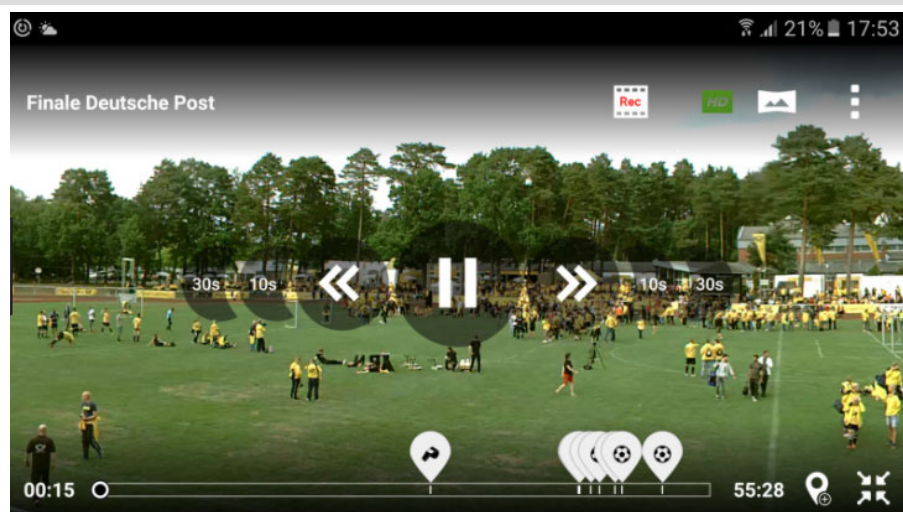
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#### HD camera system from Pixellot



Source: Warburg Research

The specialised software enables the user to stop the game at any time and to rerun certain sequences. In addition, the user can direct the camera to any spot on the pitch at every moment of the game, regardless of where the action is. Highlight videos will be generated by linking up with the live-ticker from fußball.de, which is the official amateur website of the German football association, DFB. The technology will automatically cut the minutes around a certain highlight of the live ticker, for example when a goal is scored, and will include that sequence automatically in the highlight video of the game. The timing of the highlights will also be indicated on a time bar during the video replay of a full game.

**Software example**

Source: Warburg Research

**Venues**

In this segment, Sporttotal AG equips sport facilities, but especially race tracks with technical equipment, which includes conception, planning, coordination, supply and installation. The necessary infrastructure like cable, internet access, measurement technology and hardware components are also included. Sporttotal AG was responsible for the technical equipment of the racetrack built in Sochi 2013 and acquired the order for the electronic and technical equipment of a new racetrack in Kuwait in 2016.

**Live**

The newly established segment Live will take over the commercialisation, conception, planning and execution of the Porsche Driving Experience, ADAC Zurich 24h Race at the Nürburgring, as well as the activities of the "Nürburgring Awards" and the "Ball des Sports" of the Deutsche Sporthilfe. Until recently, these activities were conducted by the holding company, Sporttotal AG. For better control and greater transparency, the company decided to report these activities in a separate segment.

**Content Marketing**

The marketing segment markets the TV rights, owned by Sporttotal AG, especially in the automotive sector. Within that, Sporttotal AG is constantly developing new brand and content marketing strategies for classic and digital distribution channels. In the included consulting segment, Sporttotal AG is also developing marketing strategies for brands, personalities and especially sport events.

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Company led by well-connected management team

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## Management



**Peter Lauterbach** has been a member of the board since 2011 when he sold Lauterbach GmbH to Sporttotal AG. Appointed CEO in 2013, he was solely responsible for the operations until 2016 when Oliver Grodowski joined the board. Before Mr. Lauterbach joined Sporttotal AG, he was a formula-1 commentator for the German pay-TV-channel "Sky" for 12 years. Peter Lauterbach studied law at the Johannes Gutenberg-University in Mainz, Germany.



**Oliver Grodowski** is the CTO of Sporttotal AG and has been responsible for the technical segments since 2016. He joined the company in 2013 as Head of Research & Development and was appointed Senior Vice President Technology in 2014. Previously Mr. Grodowski established several IT companies like "Develop IT" and "ISTARI Sports". He is a race director at the Automobile World Association FIA and is responsible for the Formula-1 and Formula-E.

## History

Sporttotal AG offers a wide range of products and services as a media and communication provider for marketing and moving content productions. Sporttotal AG is specialised in the motor racing segment as well as other sport niches like handball and amateur football. It offers the conception, broadcasting, execution and marketing of live events. For example Sporttotal AG is active for the formula-1, Red Bull Airrace and DTM or VELUX EHF Handball Champions. The company also acts as a consultant for household names like Porsche, Red Bull, BMW and others in terms of their brand positioning and digital media strategy.

After winning the contract to provide technical equipment for the racetrack in Sochi, Sporttotal AG significantly increased its revenues and built a base as well as a strong reference for future projects within this segment. With the disposal of its broadcasting segment in 2016, the company exited a business which was capital and personnel intensive as well as loss-making. Most of the technical equipment was sold, including two broadcasting vans. With the focus on digital streaming within the niche of amateur football, the company is targeting promising new markets in terms of return on investment.

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Levelling a bumpy road

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Important milestones of Sporttotal AG are:

- > **1979** Foundation of the WIGE DATA Datenservice GmbH
- > **1996** Development of the Infotainment-programme "FAN TV" together with the later subsidiary (since 1998) (WIGE) MIC Informationssysteme GmbH (Large digital information screens in stadiums and racetracks)
- > **2000** IPO of Wige Media AG and reorganisation of the television and communications segment into 100% subsidiaries of Wige Media AG
- > **2001** Milestone in live broadcasting events with the new broadcasting vans, of the highest technical standard.
- > **2002** The subsidiary WIGE MIC Informationssysteme GmbH is named WIGE DATA and takes over the entire data provision services for the Olympic Winter Games 2002 in Salt Lake City
- > **2005** Wige Media hosts the "World Games" as a broadcaster with its new broadcasting van HD-one
- > **2006** The company relocates from Frechen to Germany's media and

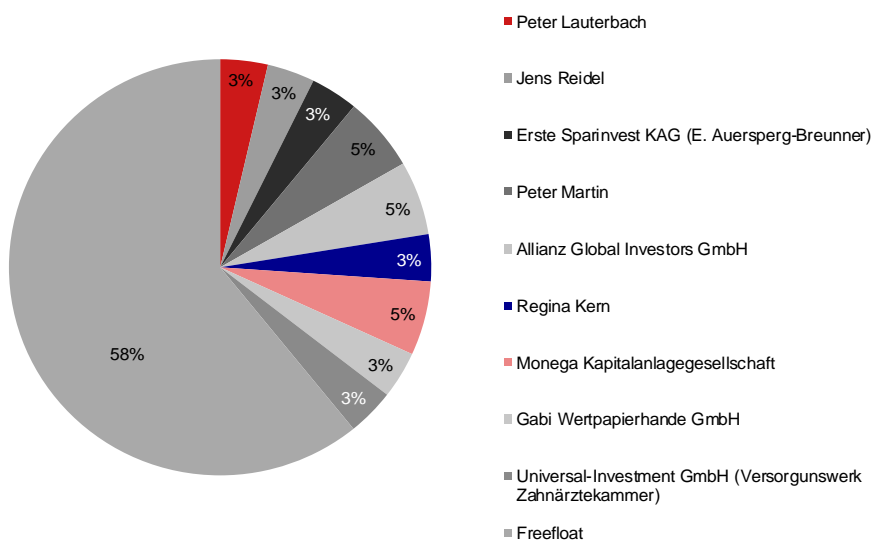
communications city, Cologne.

- > **2013** Wige Media wins the pitch for the technical equipment of the new formula-1 racetrack in Sochi, Russia, which was finished in 2014 and wins Porsche as a large client for its Porsche Driving Experience, which is the largest order in the history of the company
- > **2015** With its second broadcasting van (HD-two) Wige Media extends its live HD production capacities
- > **2016** Wige Media builds a strategic cooperation with the Alibaba Sports Group and wins another pitch for the technical equipment of a racetrack in Kuwait
- > **2016** New streaming segment sporttotal.tv GmbH founded. Test phase begins. Disposal of the segment Broadcasting and Solutions
- > **2017** Change of the company name from Wige Media Ag to SPORTTOTAL AG, as well as disposal of the segments South & Browse and sport media group gmbh

## Shareholder structure

The shareholder structure of Sporttotal AG is rather fragmented. There is no major anchor investor. A few individual investors as well as institutional investors hold shares of 3% or 5%. Peter Lauterbach, as the CEO and main driver of future growth, holds a share of >3%. Recently, Jens Reidel, member of the supervisory board, increased his position to >3% as well.

### Shareholder structure



Source: Warburg Research

**DCF model**

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	
Sales	57.0	65.4	75.9	84.8	92.2	98.2	103.1	107.2	110.6	113.6	116.3	118.7	121.0	1.5 %
Sales change	0.8 %	14.7 %	16.1 %	11.7 %	8.7 %	6.5 %	5.0 %	4.0 %	3.2 %	2.7 %	2.3 %	2.1 %	1.9 %	
EBIT	1.6	4.0	7.1	8.6	9.9	10.9	11.7	12.4	12.9	13.4	13.8	14.1	14.4	
EBIT-margin	2.8 %	6.1 %	9.4 %	10.2 %	10.7 %	11.1 %	11.4 %	11.6 %	11.7 %	11.8 %	11.9 %	11.9 %	11.9 %	
Tax rate (EBT)	3.5 %	8.8 %	10.2 %	12.0 %	13.0 %	14.0 %	15.0 %	16.0 %	17.0 %	18.0 %	19.0 %	25.0 %	30.0 %	
NOPAT	1.5	3.7	6.4	7.6	8.6	9.4	10.0	10.4	10.7	11.0	11.2	10.6	10.1	
Depreciation	1.2	3.5	6.9	7.6	6.6	5.8	5.2	4.8	4.4	4.2	4.1	4.0	3.9	
in % of Sales	2.1 %	5.4 %	9.1 %	9.0 %	7.2 %	5.9 %	5.1 %	4.4 %	4.0 %	3.7 %	3.5 %	3.3 %	3.2 %	
Changes in provisions	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	
Change in Liquidity from														
- Working Capital	-0.5	-0.1	0.7	0.8	0.6	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	
- Capex	4.5	20.8	9.3	6.6	5.1	4.2	3.8	3.6	3.5	3.5	3.5	3.6	3.6	
Capex in % of Sales	7.9 %	31.7 %	12.2 %	7.8 %	5.5 %	4.3 %	3.7 %	3.4 %	3.2 %	3.1 %	3.0 %	3.0 %	3.0 %	
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC Model)	-1.3	-13.5	3.3	7.8	9.7	10.7	11.3	11.4	11.5	11.6	11.6	10.9	10.4	
PV of FCF	-1.3	-12.3	2.8	5.9	6.7	6.7	6.5	6.0	5.5	5.1	4.6	4.0	3.4	42
share of PVs	<b>-12.61 %</b>			<b>63.56 %</b>										<b>49.04 %</b>

**Model parameter**

Derivation of WACC:		Derivation of Beta:	
Debt ratio	5.00 %	Financial Strength	1.50
Cost of debt (after tax)	2.8 %	Liquidity (share)	1.50
Market return	7.00 %	Cyclicality	1.60
Risk free rate	1.50 %	Transparency	1.60
		Others	1.50
<b>WACC</b>	<b>9.61 %</b>	<b>Beta</b>	<b>1.54</b>

**Valuation (m)**

Present values 2029e	44		
Terminal Value	42		
Financial liabilities	2		
Pension liabilities	1		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	4	No. of shares (m)	19.5
<b>Equity Value</b>	<b>87</b>	<b>Value per share (EUR)</b>	<b>4.47</b>

**Sensitivity Value per Share (EUR)**

Beta	WACC	Terminal Growth							Beta	WACC	Delta EBIT-margin						
		0.75 %	1.00 %	1.25 %	1.50 %	1.75 %	2.00 %	2.25 %			-1.5 pp	-1.0 pp	-0.5 pp	+0.0 pp	+0.5 pp	+1.0 pp	+1.5 pp
1.73	10.6 %	3.73	3.77	3.82	3.86	3.91	3.96	4.02	1.73	10.6 %	3.19	3.42	3.64	3.86	4.08	4.31	4.53
1.64	10.1 %	3.99	4.04	4.09	4.15	4.20	4.27	4.33	1.64	10.1 %	3.44	3.68	3.91	4.15	4.38	4.62	4.85
1.59	9.9 %	4.13	4.19	4.24	4.30	4.36	4.43	4.50	1.59	9.9 %	3.58	3.82	4.06	4.30	4.54	4.78	5.02
1.54	9.6 %	4.28	4.34	4.40	4.47	4.54	4.61	4.69	1.54	9.6 %	3.72	3.97	4.22	4.47	4.71	4.96	5.21
1.49	9.4 %	4.44	4.50	4.57	4.64	4.72	4.80	4.88	1.49	9.4 %	3.88	4.13	4.39	4.64	4.90	5.15	5.41
1.44	9.1 %	4.61	4.68	4.75	4.83	4.91	5.00	5.09	1.44	9.1 %	4.04	4.30	4.56	4.83	5.09	5.35	5.62
1.35	8.6 %	4.98	5.06	5.15	5.24	5.34	5.45	5.56	1.35	8.6 %	4.40	4.68	4.96	5.24	5.52	5.80	6.08

- The sporttotal.tv segment will be the future revenue growth driver at group level
- A Beta of 1.5 and a WACC of 9.6% reflecting the risk associated with the start-up characteristics
- Due to tax loss carry forwards, we calculate with a reduced tax rate in the mid term



**Peer Group****Peergroup - Key Figures**

Company	LC	Price in LC	MC in LC m	EV in LC m	EPS			Sales			EBITDA			EBIT			
					17e	18e	19e	17e	18e	19e	17e	18e	19e	17e	18e	19e	
Segment (1)																	
Constantin Medien AG	EUR	2.22	207.7	264.3	0.06	0.19	0.24	511.0	565.0	610.0	34.3	48.8	59.2	27.5	41.9	49.7	
ProSiebenSat.1Media SE	EUR	27.94	5,996.1	8,862.5	2.33	2.48	2.63	4,099.8	4,287.4	4,558.0	1,033.0	1,080.2	1,135.0	827.0	887.5	928.0	
PANTAFLEX AG	EUR	131.95	152.4	149.1	3.37	17.35	29.04	56.9	116.6	162.4	18.9	40.2	60.9	5.8	28.4	47.9	
Stroeer SE & Co. KGaA	EUR	55.51	3,068.7	3,717.0	3.16	3.45	3.84	1,272.6	1,398.0	1,514.8	325.0	360.0	391.2	160.0	200.0	218.5	
Splendid Medien AG	EUR	162	15.8	29.1	-0.35	0.15	0.16	52.1	62.2	63.0	7.4	14.2	3.6	-3.0	2.8	2.7	
Segment (2)																	
GL Events SA	EUR	26.30	610.8	1,070.2	1.73	1.83	1.92	961.5	996.3	1,015.2	137.7	141.1	149.5	87.0	88.1	91.0	
CTS Eventim AG & Co. KGaA	EUR	37.64	3,613.1	3,326.4	1.23	1.35	1.50	970.0	1,009.8	1,079.4	218.8	242.5	266.2	190.3	207.8	232.6	
UnUsUal Ltd.	SGD	0.48	305.5	288.4	0.01	0.02	0.03	54.8	93.7	129.1	11.7	20.7	26.5	10.2	19.2	24.9	
<b>SPORTTOTAL AG</b>	<b>EUR</b>	<b>3.76</b>	<b>73.1</b>	<b>68.3</b>	<b>0.06</b>	<b>0.17</b>	<b>0.31</b>	<b>57.0</b>	<b>65.4</b>	<b>75.9</b>	<b>2.8</b>	<b>7.5</b>	<b>14.0</b>	<b>1.6</b>	<b>4.0</b>	<b>7.1</b>	

**Peergroup - Valuation Multiples**

Company	LC	Price in LC	MC in LC m	EV in LC m	P / E			EV / Sales			EV / EBITDA			EV / EBIT			
					17e	18e	19e	17e	18e	19e	17e	18e	19e	17e	18e	19e	
Segment (1)																	
Constantin Medien AG	EUR	2.22	207.7	264.3	37.0 x	117 x	9.2 x	0.4 x	0.3 x	0.3 x	6.1 x	3.9 x	2.8 x	7.7 x	4.5 x	3.4 x	
ProSiebenSat.1Media SE	EUR	27.94	5,996.1	8,862.5	12.0 x	11.3 x	10.6 x	19 x	18 x	17 x	7.7 x	7.3 x	6.9 x	9.6 x	8.9 x	8.4 x	
PANTAFLEX AG	EUR	131.95	152.4	149.1	39.2 x	7.6 x	4.5 x	2.7 x	12 x	0.7 x	8.2 x	3.6 x	2.0 x	26.6 x	5.0 x	2.5 x	
Stroeer SE & Co. KGaA	EUR	55.51	3,068.7	3,717.0	17.6 x	16.1 x	14.4 x	2.6 x	2.4 x	2.1 x	10.3 x	9.2 x	8.2 x	20.9 x	16.6 x	14.7 x	
Splendid Medien AG	EUR	162	15.8	29.1	n.a.	10.7 x	10.2 x	0.7 x	0.6 x	0.6 x	4.6 x	2.4 x	9.9 x	n.a.	12.4 x	13.1 x	
Average					26.4 x	11.5 x	9.8 x	1.7 x	1.3 x	1.1 x	7.4 x	5.3 x	6.0 x	16.2 x	9.5 x	8.4 x	
Median					27.3 x	11.3 x	10.2 x	1.9 x	1.2 x	0.7 x	7.7 x	3.9 x	6.9 x	15.2 x	8.9 x	8.4 x	
Segment (2)																	
GL Events SA	EUR	26.30	610.8	1,070.2	15.2 x	14.4 x	13.7 x	1.0 x	0.9 x	0.9 x	7.2 x	6.6 x	6.0 x	11.4 x	10.6 x	9.8 x	
CTS Eventim AG & Co. KGaA	EUR	37.64	3,613.1	3,326.4	30.5 x	27.9 x	25.1 x	3.3 x	3.2 x	2.9 x	14.8 x	13.2 x	11.9 x	17.0 x	15.4 x	13.6 x	
UnUsUal Ltd.	SGD	0.48	305.5	288.4	36.0 x	19.2 x	14.8 x	5.9 x	3.5 x	2.6 x	27.8 x	16.0 x	12.8 x	31.9 x	17.2 x	13.7 x	
Average					27.2 x	20.5 x	17.9 x	3.4 x	2.5 x	2.1 x	16.6 x	11.9 x	10.2 x	20.1 x	14.4 x	12.3 x	
Median					30.5 x	19.2 x	14.8 x	3.3 x	3.2 x	2.6 x	14.8 x	13.2 x	11.9 x	17.0 x	15.4 x	13.6 x	
<b>SPORTTOTAL AG</b>	<b>EUR</b>	<b>3.76</b>	<b>73.1</b>	<b>68.3</b>	<b>62.6 x</b>	<b>22.1 x</b>	<b>12.1 x</b>	<b>1.2 x</b>	<b>1.0 x</b>	<b>0.9 x</b>	<b>24.4 x</b>	<b>9.1 x</b>	<b>4.9 x</b>	<b>42.8 x</b>	<b>17.0 x</b>	<b>9.6 x</b>	
Segment (1)																	
Valuation difference to Average					-58%	-48%	-19%	39%	21%	20%	-70%	-42%	22%	-62%	-44%	-12%	
Fair value per share based on Average					1.59	1.95	3.04	5.22	4.54	4.52	1.13	2.18	4.60	1.42	2.09	3.31	
Segment (2)																	
Valuation difference to Average					-56%	-7%	48%	187%	143%	139%	-32%	31%	110%	-53%	-15%	29%	
Fair value per share based on Average					1.63	3.48	5.54	10.30	8.79	8.62	2.63	4.85	7.62	1.89	3.22	4.78	

- No direct peer companies available, so the peer group analysis just gives a broad indication
- The two peer group segments represent the digital segment (1) and the Infrastructure/event segment (2) of Sporttotal AG.

**Valuation**

	2013	2014	2015	2016	2017e	2018e	2019e
Price / Book	4.4 x	4.2 x	4.9 x	4.3 x	5.4 x	4.3 x	3.2 x
Book value per share ex intangibles	n.a.	n.a.	n.a.	0.18	0.69	0.86	1.16
EV / Sales	0.4 x	0.3 x	0.4 x	0.6 x	1.1 x	1.2 x	1.0 x
EV / EBITDA	n.a.	4.4 x	44.0 x	n.a.	22.9 x	10.4 x	5.3 x
EV / EBIT	n.a.	31.3 x	n.a.	n.a.	40.2 x	19.4 x	10.5 x
EV / EBIT adj.*	n.a.	31.3 x	n.a.	n.a.	40.2 x	19.4 x	10.5 x
P / FCF	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24.3 x
P / E	n.a.	133.6 x	n.a.	n.a.	62.6 x	22.1 x	12.1 x
P / E adj.*	n.a.	133.6 x	n.a.	n.a.	62.6 x	22.1 x	12.1 x
Dividend Yield	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield (on market EV)	-14.8 %	21.8 %	2.8 %	-11.6 %	4.3 %	9.2 %	17.8 %

\*Adjustments made for: -

**Consolidated profit & loss**

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
<b>Sales</b>	<b>35.4</b>	<b>60.2</b>	<b>60.0</b>	<b>56.6</b>	<b>57.0</b>	<b>65.4</b>	<b>75.9</b>
Change Sales yoy	-4.8 %	70.0 %	-0.4 %	-5.7 %	0.8 %	14.7 %	16.1 %
Increase / decrease in inventory	-0.1	0.6	-0.2	0.6	0.0	0.0	0.0
Own work capitalised	0.1	0.1	0.0	0.0	0.0	0.0	0.0
<b>Total Sales</b>	<b>35.4</b>	<b>60.9</b>	<b>59.8</b>	<b>57.2</b>	<b>57.0</b>	<b>65.4</b>	<b>75.9</b>
Material expenses	20.3	41.7	45.7	42.8	42.9	46.1	50.1
<b>Gross profit</b>	<b>15.1</b>	<b>19.2</b>	<b>14.1</b>	<b>14.4</b>	<b>14.1</b>	<b>19.3</b>	<b>25.8</b>
<i>Gross profit margin</i>	<i>42.6 %</i>	<i>31.8 %</i>	<i>23.6 %</i>	<i>25.5 %</i>	<i>24.7 %</i>	<i>29.5 %</i>	<i>34.0 %</i>
Personnel expenses	11.0	12.2	11.4	13.3	9.6	9.8	10.3
Other operating income	1.0	2.9	2.0	3.0	3.5	2.6	3.0
Other operating expenses	6.7	6.3	4.2	5.5	5.1	4.6	4.6
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>-1.5</b>	<b>3.5</b>	<b>0.5</b>	<b>-1.5</b>	<b>2.8</b>	<b>7.5</b>	<b>14.0</b>
<i>Margin</i>	<i>-4.4 %</i>	<i>5.8 %</i>	<i>0.9 %</i>	<i>-2.6 %</i>	<i>4.9 %</i>	<i>11.5 %</i>	<i>18.5 %</i>
Depreciation of fixed assets	2.7	2.9	1.5	1.5	0.9	3.2	6.5
<b>EBITA</b>	<b>-4.3</b>	<b>0.7</b>	<b>-1.0</b>	<b>-3.0</b>	<b>1.9</b>	<b>4.3</b>	<b>7.5</b>
Amortisation of intangible assets	0.3	0.2	0.1	0.3	0.3	0.3	0.4
Goodwill amortisation	0.0	0.0	0.0	0.5	0.0	0.0	0.0
<b>EBIT</b>	<b>-4.5</b>	<b>0.5</b>	<b>-1.1</b>	<b>-3.8</b>	<b>1.6</b>	<b>4.0</b>	<b>7.1</b>
<i>Margin</i>	<i>-12.7 %</i>	<i>0.8 %</i>	<i>-1.9 %</i>	<i>-6.7 %</i>	<i>2.8 %</i>	<i>6.1 %</i>	<i>9.4 %</i>
<b>EBIT adj.</b>	<b>-4.5</b>	<b>0.5</b>	<b>-1.1</b>	<b>-3.8</b>	<b>1.6</b>	<b>4.0</b>	<b>7.1</b>
Interest income	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.4	0.4	0.5	0.4	0.2	0.3	0.4
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBT</b>	<b>-4.9</b>	<b>0.3</b>	<b>-1.7</b>	<b>-4.2</b>	<b>1.4</b>	<b>3.7</b>	<b>6.8</b>
<i>Margin</i>	<i>-13.9 %</i>	<i>0.4 %</i>	<i>-2.8 %</i>	<i>-7.4 %</i>	<i>2.5 %</i>	<i>5.7 %</i>	<i>9.0 %</i>
Total taxes	0.3	0.1	-0.2	-0.3	0.0	0.3	0.7
<b>Net income from continuing operations</b>	<b>-5.2</b>	<b>0.1</b>	<b>-1.4</b>	<b>-3.9</b>	<b>1.4</b>	<b>3.4</b>	<b>6.1</b>
Income from discontinued operations (net of tax)	0.0	0.0	-0.1	-2.5	0.0	0.0	0.0
<b>Net income before minorities</b>	<b>-5.2</b>	<b>0.1</b>	<b>-1.5</b>	<b>-6.4</b>	<b>1.4</b>	<b>3.4</b>	<b>6.1</b>
Minority interest	0.0	0.0	0.0	-0.2	0.1	0.0	0.0
<b>Net income</b>	<b>-5.2</b>	<b>0.1</b>	<b>-1.5</b>	<b>-6.2</b>	<b>1.3</b>	<b>3.4</b>	<b>6.1</b>
<i>Margin</i>	<i>-14.8 %</i>	<i>0.2 %</i>	<i>-2.6 %</i>	<i>-11.0 %</i>	<i>2.2 %</i>	<i>5.2 %</i>	<i>8.0 %</i>
Number of shares, average	11.3	11.4	12.8	15.4	19.5	19.5	19.5
<b>EPS</b>	<b>-0.46</b>	<b>0.01</b>	<b>-0.12</b>	<b>-0.40</b>	<b>0.06</b>	<b>0.17</b>	<b>0.31</b>
EPS adj.	-0.46	0.01	-0.12	-0.40	0.06	0.17	0.31

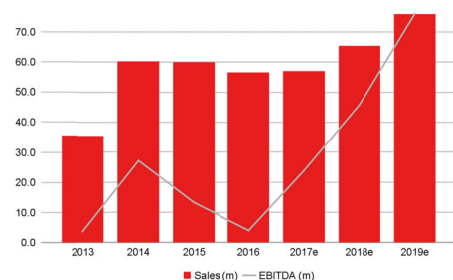
\*Adjustments made for:

**Guidance: 2017: Revenue EUR 60m; EBITDA EUR 2.7 Mio.; EBIT EUR 1.5m**
**Financial Ratios**

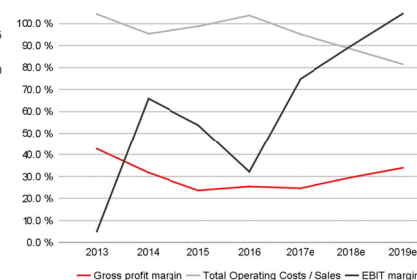
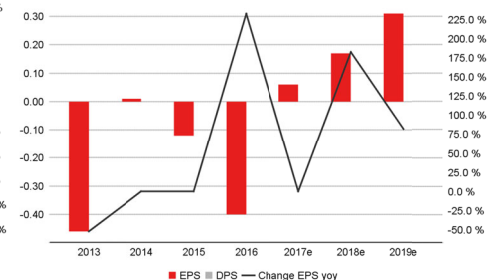
	2013	2014	2015	2016	2017e	2018e	2019e
Total Operating Costs / Sales	104.3 %	95.3 %	98.8 %	103.7 %	95.1 %	88.5 %	81.5 %
Operating Leverage	2.2 x	n.a.	n.a.	-41.2 x	n.a.	10.3 x	4.8 x
EBITDA / Interest expenses	n.m.	8.1 x	1.0 x	n.m.	14.0 x	25.1 x	40.1 x
Tax rate (EBT)	-6.4 %	58.3 %	13.1 %	6.2 %	3.5 %	8.8 %	10.2 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	151,436	246,922	204,092	181,968	393,298	436,046	474,605

**Sales, EBITDA**

in EUR m


**Operating Performance**

in %


**Performance per Share**


Source: Warburg Research

Source: Warburg Research

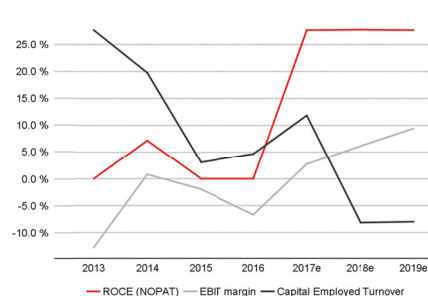
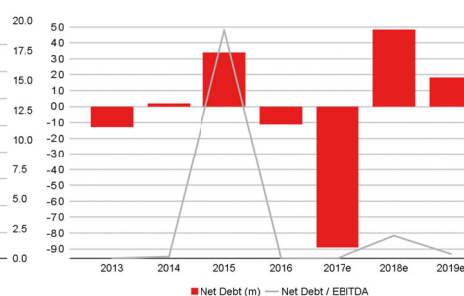
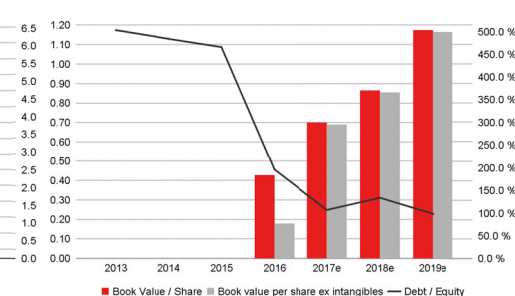
Source: Warburg Research

**Consolidated balance sheet**

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
<b>Assets</b>							
Goodwill and other intangible assets	1.9	1.8	2.0	4.4	0.2	0.2	0.2
thereof other intangible assets	0.0	0.0	0.0	0.0	0.2	0.4	0.5
thereof Goodwill	0.0	0.0	0.0	1.9	0.0	0.0	0.0
Property, plant and equipment	6.6	6.8	7.2	1.5	4.3	21.3	23.6
Financial assets	0.0	0.0	0.6	0.0	0.0	0.0	0.0
Other long-term assets	0.0	0.4	0.5	0.5	0.5	0.5	0.5
<b>Fixed assets</b>	<b>8.4</b>	<b>9.1</b>	<b>10.2</b>	<b>6.4</b>	<b>5.0</b>	<b>22.0</b>	<b>24.3</b>
Inventories	0.4	0.9	0.8	1.2	1.2	1.4	1.7
Accounts receivable	2.2	3.1	4.9	3.4	4.1	4.1	4.6
Liquid assets	3.9	5.2	3.4	3.9	10.4	4.2	7.2
Other short-term assets	4.0	2.9	3.5	7.3	7.5	7.5	7.5
<b>Current assets</b>	<b>10.5</b>	<b>12.2</b>	<b>12.5</b>	<b>15.9</b>	<b>23.2</b>	<b>17.1</b>	<b>21.0</b>
<b>Total Assets</b>	<b>18.9</b>	<b>21.3</b>	<b>22.7</b>	<b>22.3</b>	<b>28.2</b>	<b>39.2</b>	<b>45.3</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	11.3	11.4	12.8	17.7	19.5	19.5	19.5
Capital reserve	0.2	0.7	1.2	5.4	7.7	7.7	7.7
Retained earnings	-8.4	-8.4	-9.9	-16.1	-14.9	-11.5	-5.4
Other equity components	0.0	0.0	0.0	0.6	1.3	1.1	1.0
Shareholders' equity	3.1	3.7	4.0	7.5	13.6	16.8	22.9
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total equity</b>	<b>3.1</b>	<b>3.7</b>	<b>4.0</b>	<b>7.5</b>	<b>13.6</b>	<b>16.8</b>	<b>22.9</b>
Provisions	2.3	1.3	1.0	1.1	1.1	1.1	1.1
thereof provisions for pensions and similar obligations	0.5	0.6	0.5	0.5	0.5	0.5	0.5
Financial liabilities (total)	2.1	4.9	6.3	2.3	1.0	8.5	8.5
thereof short-term financial liabilities	1.0	1.3	1.8	1.1	0.0	0.0	0.0
Accounts payable	3.1	6.5	5.3	3.1	4.2	4.5	4.6
Other liabilities	8.2	5.0	6.1	8.3	8.3	8.3	8.3
<b>Liabilities</b>	<b>15.8</b>	<b>17.7</b>	<b>18.7</b>	<b>14.7</b>	<b>14.6</b>	<b>22.4</b>	<b>22.5</b>
<b>Total liabilities and shareholders' equity</b>	<b>18.9</b>	<b>21.3</b>	<b>22.7</b>	<b>22.3</b>	<b>28.2</b>	<b>39.2</b>	<b>45.3</b>

**Financial Ratios**

	2013	2014	2015	2016	2017e	2018e	2019e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	131.2 x	44.3 x	17.4 x	-33.9 x	88.6 x	3.7 x	3.7 x
Capital Employed Turnover	19.2 x	15.6 x	8.1 x	8.8 x	12.1 x	3.0 x	3.1 x
ROA	-62.1 %	1.2 %	-15.0 %	-97.4 %	25.3 %	15.5 %	25.1 %
<b>Return on Capital</b>							
ROCE (NOPAT)	n.a.	7.2 %	n.a.	n.a.	27.6 %	27.8 %	27.7 %
ROE	-174.6 %	3.1 %	-40.0 %	-107.3 %	11.9 %	22.3 %	30.8 %
Adj. ROE	-174.6 %	3.1 %	-40.0 %	-107.3 %	11.9 %	22.3 %	30.8 %
<b>Balance sheet quality</b>							
Net Debt	-1.3	0.2	3.4	-1.1	-8.9	4.8	1.8
Net Financial Debt	-1.8	-0.4	2.9	-1.6	-9.4	4.3	1.3
Net Gearing	-41.1 %	5.5 %	84.6 %	-14.8 %	-65.3 %	28.7 %	8.0 %
Net Fin. Debt / EBITDA	n.a.	n.a.	548.4 %	n.a.	n.a.	57.7 %	9.5 %
Book Value / Share	n.a.	n.a.	n.a.	0.4	0.7	0.9	1.2
Book value per share ex intangibles	n.a.	n.a.	n.a.	0.2	0.7	0.9	1.2

**ROCE Development**

**Net debt**  
in EUR m

**Book Value per Share**  
in EUR


Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

**Consolidated cash flow statement**

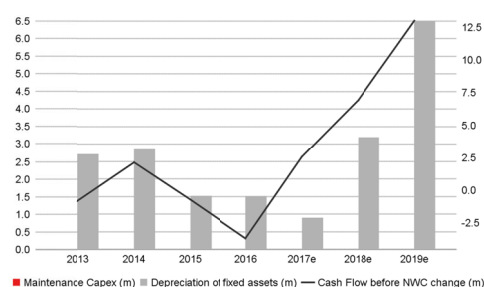
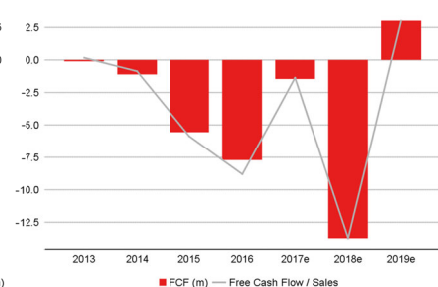
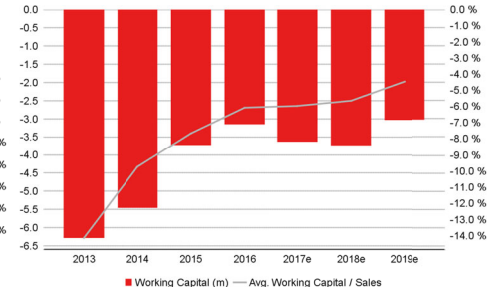
In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
Net income	-5.2	0.1	-1.5	-6.4	1.4	3.4	6.1
Depreciation of fixed assets	2.7	2.9	1.5	1.5	0.9	3.2	6.5
Amortisation of goodwill	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Amortisation of intangible assets	0.3	0.2	0.1	0.3	0.3	0.3	0.4
Increase/decrease in long-term provisions	1.5	-1.0	-0.3	0.0	0.0	0.0	0.0
Other non-cash income and expenses	0.0	0.0	-0.6	0.3	0.0	0.0	0.0
<b>Cash Flow before NWC change</b>	<b>-0.8</b>	<b>2.1</b>	<b>-0.7</b>	<b>-3.7</b>	<b>2.6</b>	<b>6.9</b>	<b>13.0</b>
Increase / decrease in inventory	0.0	0.0	0.0	-0.5	0.0	-0.2	-0.3
Increase / decrease in accounts receivable	0.3	-1.0	-1.7	1.4	-0.7	0.0	-0.5
Increase / decrease in accounts payable	2.1	0.7	-0.2	-1.5	1.1	0.3	0.1
Increase / decrease in other working capital positions	0.0	0.0	-0.3	-0.1	0.0	0.0	0.0
Increase / decrease in working capital (total)	2.4	-0.3	-2.2	-0.7	0.5	0.1	-0.7
<b>Net cash provided by operating activities [1]</b>	<b>1.6</b>	<b>1.9</b>	<b>-2.9</b>	<b>-4.4</b>	<b>3.0</b>	<b>7.0</b>	<b>12.3</b>
Investments in intangible assets	0.0	0.0	-0.3	-0.3	-0.5	-0.5	-0.5
Investments in property, plant and equipment	-1.7	-3.0	-2.3	-3.0	-4.0	-20.3	-8.8
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	1.5	-0.1	0.0	0.0	0.0
Income from asset disposals	0.0	0.0	0.3	1.2	5.5	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>-1.7</b>	<b>-3.0</b>	<b>-3.9</b>	<b>-2.1</b>	<b>1.0</b>	<b>-20.8</b>	<b>-9.3</b>
Change in financial liabilities	-1.9	2.8	1.4	-4.0	-1.3	7.5	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	6.8	3.8	0.0	0.0
Other	0.0	0.0	0.0	-0.4	0.0	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>-1.9</b>	<b>2.8</b>	<b>1.4</b>	<b>2.4</b>	<b>2.5</b>	<b>7.5</b>	<b>0.0</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>-2.0</b>	<b>1.7</b>	<b>-5.4</b>	<b>-4.0</b>	<b>6.5</b>	<b>-6.2</b>	<b>3.0</b>
Effects of exchange-rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	-0.9	5.6	-0.1	-0.6	10.4	4.2	7.2

**Financial Ratios**

	2013	2014	2015	2016	2017e	2018e	2019e
<b>Cash Flow</b>							
FCF	-0.1	-1.1	-5.6	-7.7	-1.5	-13.7	3.0
Free Cash Flow / Sales	-0.3 %	-1.8 %	-9.3 %	-13.6 %	-2.6 %	-21.0 %	4.0 %
Free Cash Flow Potential	-1.9	3.4	0.6	-3.7	2.7	7.2	13.4
Free Cash Flow / Net Profit	2.0 %	-1047.2 %	362.6 %	124.4 %	-116.1 %	-403.8 %	49.3 %
Interest Received / Avg. Cash	1.3 %	4.2 %	0.7 %	0.7 %	0.1 %	0.1 %	0.2 %
Interest Paid / Avg. Debt	14.1 %	12.4 %	9.8 %	9.0 %	12.2 %	6.3 %	4.1 %
<b>Management of Funds</b>							
Investment ratio	4.8 %	4.9 %	4.4 %	5.9 %	7.9 %	31.7 %	12.2 %
Maint. Capex / Sales	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Capex / Dep	57.3 %	98.9 %	159.0 %	144.7 %	375.0 %	592.9 %	134.8 %
Avg. Working Capital / Sales	-14.2 %	-9.7 %	-7.7 %	-6.1 %	-5.9 %	-5.6 %	-4.5 %
Trade Debtors / Trade Creditors	69.1 %	48.3 %	92.3 %	111.4 %	97.6 %	91.1 %	100.0 %
Inventory Turnover	57.2 x	45.5 x	59.7 x	34.9 x	35.8 x	32.9 x	29.5 x
Receivables collection period (days)	22	19	30	22	26	23	22
Payables payment period (days)	56	57	42	26	36	36	34
Cash conversion cycle (Days)	-152	-75	-68	-56	-65	-61	-55

**CAPEX and Cash Flow**

in EUR m


**Free Cash Flow Generation**

**Working Capital**


Source: Warburg Research

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-B-	<b>Buy:</b>	The price of the analysed financial instrument is expected to rise over the next 12 months.
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Rating	Number of stocks	% of Universe
Buy	110	54
Hold	86	42
Sell	8	4
Rating suspended	1	0
<b>Total</b>	<b>205</b>	<b>100</b>

**WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING ...**

... taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	29	71
Hold	10	24
Sell	1	2
Rating suspended	1	2
<b>Total</b>	<b>41</b>	<b>100</b>

**PRICE AND RATING HISTORY SPORTTOTAL AS OF 19.09.2017**


Markings in the chart show rating changes by Warburg Research GmbH in the last 12 months. Every marking details the date and closing price on the day of the rating change.

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