DEAG Deutsche Entertainment AG

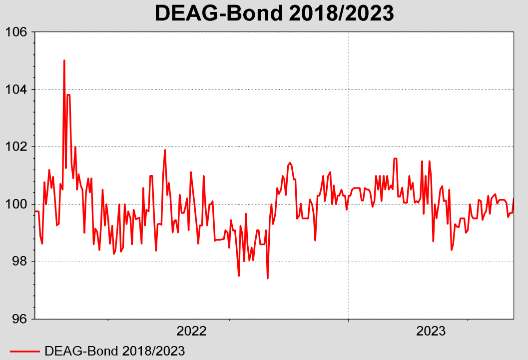
Attractive (Attractive)

Price (08.05.2023)	100.20 %
Yield-to-Maturity	5.95 %
Coupon	6% p.a., 6.50% beg. 01.11.2022
Outstanding Volume	25 m €
Nominal Value/Denomination	1,000 €
Interest Payment	yearly
Maturity Date	31.10.2023
ISIN	DE000A2NBF25
Market Segment	Freiverkehr (Open Market) Frankfurt
Homepage	www.deag.de

Key figures and estimates

in m €	2022	2023e	2024e	2025e
Sales	324.8	300.0	310.0	325.5
EBITDA	30.9	32.3	34.0	35.6
EBITDA margin	9.5%	10.8%	11.0%	10.9%
EBIT	19.9	21.6	23.3	24.4
EBIT margin	6.1%	7.2%	7.5%	7.5%
Group net income	9.9	11.2	12.7	13.6
Net debt	7.3	6.3	-2.0	-19.4
Equity ratio	14.4%	16.8%	19.2%	20.6%
Int. cover ratio	3.8	4.0	4.4	4.7

DEAG-Bond 2018/2023



Source: Refinitiv Datastream

Financial calendar

- 05/26/2023: Quarterly Financial Statement (3M)
- 06/29/2023: Annual General Meeting
- 08/31/2023: Half-Year Financial Report (6M)
- 11/30/2023: Quarterly Financial Statement (9M)

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Strong year 2022 – Record sales and EBITDA – good outlook 2023

DEAG Deutsche Entertainment AG (DEAG) had an excellent business year 2022. After two years of the pandemic influence, business has recovered brilliantly. Sales and EBITDA reached record levels of 324.8 m € (prev. yr: 90.7 m €) and 30.9 m € (+40% vs.prev. yr: 22.1 m €) respectively. At the bottom line DEAG reported consolidated earnings after taxes of 9.9 m € (3.6 m €). Company figures clearly exceeded our expectations. Despite the difficult consumer environment, management is positive for the development of the current business year 2023. With planned sales of some 300 m €, EBITDA should increase moderately to significantly. The expansion of company own, high-margin content and ticketing is having an effect. We confirm our "attractive" rating for the issuer.

Drivers of the successful development of the company are the **build-up**, in the past years, **of the company-own content**, the **M&A activities** as well as the **expansion of the ticketing business**. Own, high-margin and recurring event formats now account for almost half of sales. The growth can be clearly seen from the number of tickets sold. In the 2022 business year, over 9 m tickets were sold. The company is expecting to sell more than 10 m tickets for 2023. Before the corona pandemic, the number of tickets sold was slightly higher than 5 m. In the meantime, a large proportion of ticketing is processed via the group's own platforms *myticket*, *Gigantic Tickets* and *tickets.ie*. The own platforms make up an above-average contribution to the EBITDA.

Successful formats in the **important Q4 2022** were Christmas circuses, Christmas markets and above all the ***"Christmas Garden"***. More than 2 m visitors were counted at 19 locations (10 Germany, 9 in other European countries). In the coming season, DEAG plans to expand to over 25 locations.

Equity increased to **38.5 m €** (2021: 29.8 m €) at year end 2022. The equity ratio was up significantly to 14.4% after 9.6% in 2021.

As of 12/31/22 DEAG had **financial resources** of **85.5 m €** (2021: 144 m €) at its disposal. **Net debt** (bank debt + bond - cash) was negative at **16.5 m €** (2021: -70.8 m €, 2019: -8.4 m €). Taking the leasing liabilities (23.8 m €) into account, net debt amounted to **7.3 m €**.

DEAG follows the idea to issue of a **new corporate bond** depending on the market environment. The funds could be used for the early refinancing of the 2018/2023 bond (25 m €, term October 31, 2023) and to finance further growth.

DEAG got off to a good start in **2023**. Highlights in Q1 2023 were *"Disney on Ice"*, *Ed Sheeran at The O2* and the dance show *"Riverdance"*. In total DEAG plans to hold around 6,000 events in 2023 and sell more than 10 m tickets in 2023.

M&A activities will likely be intensified again in the second half of 2023. DEAG is currently exploring several targets, with the focus on ticketing.

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FY 2022: Record figures in year one after the pandemic

DEAG achieved in FY 2022 **sales** of **324.8 m €**. In the previous year, sales were only 90.7 m € due to the pandemic. Compared to the pre-Corona year 2019, sales increased by **around 75%** (2019: 185.2 m €). At a level of 2.9 m €, insurance reimbursements owing to concert cancellations and postponements only played a minor role in sales in 2022. In the 2021 business year the reimbursements amounted to 23.7 m €.

The reasons for the strong increase in sales were both organic growth and catch-up effects from the holding of postponed events from 2020 and 2021 as well as M&A transactions in previous years.

After **cost of sales** of **263.6 m €** (prev. yr: 74.5 m €), **gross profit** increased to **61.2 m €** (16.2 m €; 2019: 41.9 m €).

At **30.9 m €** (prev. yr: 22.1 m €, 2019: 14.1 m €), the **EBITDA** reached a new record level. The **EBITDA margin** came in at **9.5%** (24.4%, 2019: 7.6%).

Depreciation amounted to **11 m €** (8.9 m €) and is made up of depreciation of leasing rights of use to the tune of 5.3 m € (4.6 m €), PPA of 2.8 m € (2.2 m €) and scheduled depreciation of property, plant and equipment totaling 2.9 m € (2.1 m €).

The **EBIT** of **19.9 m €** came in clearly above the previous year (12.7 m €). In the pre-Corona period 2019 the EBIT amounted to 7.7 m €. DEAG achieved an **EBIT margin** of **6.1%** (2021: 14%, 2019: 4.2%).

DEAG reported a **financial result** of **-6 m €** (-5.6 m€). Thereof the lion's share was the interest result of -5.2 m € (-4.5 m €).

On an **EBT** level DEAG reported **14 m €** (prev. yr: 7.1 m €). With tax expenses of 4.1 m € (3.5 m €), **group earnings after tax** reached **9.9 m €** (3.6 m €). Thereof 4.7 m € (1.4 m €) was attributable to minorities. The remainder for **DEAG shareholders** is **5.2 m €** (2.3 m €) or **.24 € per share** (.11 €) respectively.

Positive Outlook 2023

Despite general consumer restraint, DEAG remains positive for the current business year. DEAG has indicated that 2023 has gotten off to a good start. In Q1 2023, events such as *"Disney on Ice"* and *"Riverdance"* have sold quite well. In the current year DEAG has a bulging event pipeline of some 6,000 events and is expecting to sell more than 10 m tickets (> 9 m).

Management expects a **sales** figure of about **300 m €** (324.8 m €; 2019: 185 m €) in 2023. The **EBITDA** is expected to further increase at a **moderate to significant** level in comparison to the previous year (30.9 m €). These expectations do not include any acquisitions, which the company anticipates to make in the second half.

Balance Sheet structure Dec. 31, 2022

DEAG's **total assets** decreased markedly compared to the end of 2021 by 42.4 m € to **266.4 m €** (Dec. 31, 2021: 308.8 m €). The reason for this was the significant increase in operating activities following the lifting of the pandemic restrictions.

On the **asset side** of the balance sheet**, current assets** decreased notably to **126.1 m €** (Dec. 31, 2021: 178 m €). In addition to lower payments (-6 m €), the **liquid funds**, which had risen sharply in the previous quarters (primarily ticket income), fell. For 2022 the liquid funds dropped off by 44 m and ended the year at € **74.8 m €** (118.8 m €). This is due to the high number of events held after the pandemic restrictions ended. However, compared to 2019, the last year before the pandemic, cash and cash equivalents have gone up by 28.4 m €. **Non-current assets** went up by 9.6 m € to **140.4 m €** (130.8 m €) and **goodwill** increased slightly to 53.8 m € (52 m €).

On the **liabilities side, current liabilities** decreased by 17.6 m € to **180.8 m €** (Dec. 31, 2022: 198.4 m €). The decline is also related to the sharp increase in operational activity. As a result, **contract liabilities** fell by 63.7 m € to **62.6 m €** (126.3 m €). In the pre-crisis period of 2019, contract liabilities were notably lower at 26 m €. The currently higher value indicates a sustained high event density in the coming months. **Current financial liabilities** (bank liabilities + bond) increased to **46.8 m €** (5.3 m €); the reason is primarily due to maturities (e.g. bond expiring 2023).

Non-current liabilities went down by 33.1 m € to **47.5 m €** (Dec. 31, 2022: 80.6 m €). The main reason for this is the reclassification of financial liabilities due to the maturity profile. Long-term financial liabilities fell by 31.1 m € to **11.5 m €** (42.6 m €)

Equity increased by 8.7 m € to **38.5 m €** (29.8 m €). The increase resulted from the positive earnings development. The **equity ratio** improved markedly to **14.4%** after 9.6% on Dec. 31, 2021. **Minority interests** in equity are relatively high **15.3 m €** (11 m €). This is typical for the industry, which is heavily dependent on the people involved. Even after takeovers, the founders usually retain a significant stake in the company. DEAG is trying to reduce minorities over time.

Net debt (bank liabilities + bond - liquid funds) was **-16.5 m €** (-70.8 m €) as of Dec. 31, 2022. **Bank liabilities** of **33.7 m €** and **bond liabilities** of **24.6 m €** were offset by **74.8 m €** of **liquid funds**. In addition, DEAG has leasing liabilities, which amounted to 23.8 m € (25.5 m €) at year end 2022. By taking the leasing liabilities into consideration, DEAG's **net debt** amounts to **7.3 m €**.

Cash Flow Statement business year 2022

The **cash outflow from operating activities** in business year 2022 reached **30.8 m €** (94.4 m € inflow of funds). This is chiefly owing to the sharp increase in business activity after the corona-related restrictions. During the corona years 2020 and 2021, on the other hand, there were hardly any relevant operational liquidity outflows.

The **outflow of funds from investments** equaled **12.8 m €** and were therefore slightly higher than in the previous year (11.7 m €). The outflow is mainly the result of purchase price payments (2.8 m €) for acquisitions and payments for investments in intangible assets, property, plant and equipment and investments (10.4 m €).

Outflow of funds from financing activities came to **.1 m €** (9.2 m €).

Overall the **liquid funds** in 2022 went down by 44 m € to **74.8 m €** (prev. yr: 118.8 m €). Including unused credit lines, DEAG still had a very solid **financial framework** as of Dec. 31, 2022 of around 85.5 m € (144 m €).

Credit Metrics

In the first year after the pandemic, DEAG impressively demonstrated the earnings power of the business model. The prospects for 2023 are also good and management anticipates a further improvement in profitability. Accordingly, DEAG's key financial figures should continue to improve in the current fiscal year and beyond. The restructuring of the group in the recent years with the focus on higher-margin events such as *"Christmas Garden"* and ticketing is bearing fruit and has raised the profile of DEAG to a sustainably higher level of earnings. For these reasons we anticipate a constantly improving equity ratio. Net financial liabilities are fluctuating around the zero level and are likely to remain at this level going forward. We estimate the interest coverage ratio (EBIT/Interest expenses) at > 4 in the coming years. Overall, DEAG therefore has solid key financial figures.

DEAG: Credit Metrics

in m €	2022	2023e	2024e	2025e
Net debt	7.3	6.3	-2.0	-19.4
Equity	38.5	46.4	56.1	63.2
Equity ratio	14.4%	16.8%	19.2%	20.6%
Net debt/Equity (Gearing)	0.2	0.1	0.0	-0.3
EBITDA	30.9	32.3	34.0	35.6
EBIT	19.9	21.6	23.3	24.4
Interest Expense	5.2	5.4	5.3	5.2
Net debt/EBITDA	0.2	0.2	-0.1	-0.5
EBIT/Interest Expense	3.8	4.0	4.4	4.7

Source: Solventis Research

Conclusion

With a strong final spurt, DEAG ended the 2022 business year on better footing than we expected. The company guidance was exceeded for both sales and EBITDA. Even the beginning of the current business year 2023, once again stamped as a challenging one, is off to a successful start. Despite the current difficult consumer sentiment, DEAG is planning in the current business year with sales again at a high level of around 300 m € (324.8 m €). The company expects EBITDA to increase at a moderate - significant level in comparison to the previous year (30.9 m €).

DEAG's financial resources are currently in a comfortable range with a financial cushion of about 85.5 m €. This provides the basis for further organic and inorganic growth. In addition, the company is backed by financially strong anchor shareholders, who could also inject additional equity if necessary. Even in the ongoing difficult capital market environment, DEAG should continue to rely on a financing mix including bonds, in our opinion. In this respect we consider the issue of a new bond to be likely. We rate DEAG as a solid issuer with a good track record over the past few years. We can therefore well imagine the successful issue of a new bond. Otherwise the refinancing of the bond from current liquid funds is also available.

DEAG bond 2018/2023

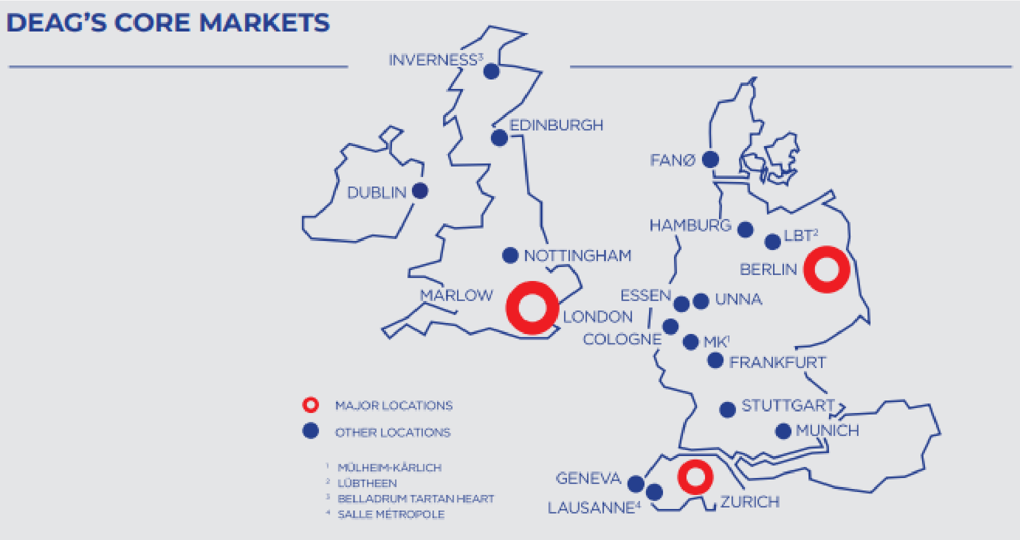
Issuer	DEAG Deutsche Entertainment AG, Berlin
ISIN/WKN	DE000A2NBF25 / A2NBF2
Market segment	Freiverkehr Frankfurt (Open Market, Segment Quotation Board)
Term	5 years up until 31 October 2023
Coupon	6% p.a.; beg. 1 Nov. 2022: 6.50% p.a.
Denomination (Nominal amount)	1,000 € per bond
Outstanding Volume	25 m €
Callable	Issuer right to call after year 3 at 102% and after year 4 at 101% of the nominal amount
<u>Investor protective clause</u>	
Equity ratio	Interest rate increase of .5%, if equity ratio - under 10% on 31 Dec. 2018 - under 12.5% on 31 Dec. 2019 - under 15% on 31 Dec. 2020, 2021, 2022
Debt restrictions	Provided that Pro-Forma Net Leverage exceeds 3.5x after the incurrence of the financial liabilities takes effect.
Adverse obligation	Of the issuer and its subsidiaries related to financial liabilities.
Payout limitation	On 25% of the net annual income
Listing & Reporting	In addition to maintaining the listing of the bond, the current capital market reporting (including quarterly financial statements, ad-hoc, etc.) must be retained.
Arm's Length Principle	On business transactions and restrictions on the granting of loans and guarantees in favor of third parties.
Asset sale restrictions	Sale of assets is regulated in the interest of the creditors.
Guarranties	The main operating subsidiaries in Germany; thereby structural approximation of the creditor position to operational units.

From 1 Nov. 2022 onwards, the interest on the 2018/2023 bond will increase by .5% percentage points to **6.5% p.a.** The reason for this is an equity ratio of less than 15% as of 30 June 2022 (according to section 2.2 of the bond conditions).

Company profile

DEAG Deutsche Entertainment AG (DEAG) is a leading entertainment company in Europe. With its group companies, DEAG is situated in 20 locations in the core markets of Germany, Great Britain, Switzerland, Ireland and Denmark. Founded in Berlin in 1978, the company focuses on the areas of Rock/Pop, Classics & Jazz, Family Entertainment, Arts+Exhibitions and Ticketing. The entire value chain is covered, from concerts to sales of sound recordings, exploitation of rights, sponsorship and merchandising to ticketing. The company conducts as well numerous cooperations and activities such as the management of the *Jahrhunderthalle* in Frankfurt Höchst, a traditional events location. For more than 6,000 events, over 10 million tickets are sold annually for own and third-party content – a continuously growing share of these is sold via the group's own e-commerce platforms *"myticket"*, *"Gigantic Tickets"* and *"tickets.ie"*.

DEAG: Core Markets



Source: Solventis Research, DEAG Deutsche Entertainment AG

DEAG: P+L (€ thous.)

	2022	yoy	2023e	yoy	2024e	yoy	2025e	yoy
Sales	**324,801**	**258.2%**	**300,000**	**-7.6%**	**310,000**	**3.3%**	**325,500**	**5.0%**
Cost of sales	263,622	254.1%	235,000	-10.9%	242,833	3.3%	254,975	5.0%
Gross profit	**61,179**	**276.9%**	**65,000**	**6.2%**	**67,167**	**3.3%**	**70,525**	**5.0%**
Gross profit margin	**18.84%**	**0.9 pp**	**21.67%**	**2.8 pp**	**21.67%**	**0.0 pp**	**21.67%**	**0.0 pp**
Distribution costs	24,091	149.2%	25,347	5.2%	25,649	1.2%	26,931	5.0%
Administrative costs	30,444	61.6%	32,032	5.2%	32,413	1.2%	34,034	5.0%
Other operating expenses	4,617	280.9%	4,858	5.2%	4,916	1.2%	5,161	5.0%
Other operating income	17,903	-31.7%	18,837	5.2%	19,061	1.2%	20,014	5.0%
EBITDA	**30,884**	**42.9%**	**32,341**	**4.7%**	**33,991**	**5.1%**	**35,554**	**4.6%**
EBITDA-margin	**9.51%**	**-14.3 pp**	**10.78%**	**1.3 pp**	**10.96%**	**0.2 pp**	**10.92%**	**-0.0 pp**
EBIT	**19,930**	**56.6%**	**21,600**	**8.4%**	**23,250**	**7.6%**	**24,413**	**5.0%**
EBIT-margin	**6.14%**	**-7.9 pp**	**7.20%**	**1.1 pp**	**7.50%**	**0.3 pp**	**7.50%**	**0.0 pp**
earnings from affiliated companies	-76	-49.3%	-76	0.0%	-76	0.0%	-76	0.0%
Income from investments	-431	-58.2%	-431	0.0%	-431	0.0%	-431	0.0%
Interest income	265	197.8%	116	-56.3%	126	8.6%	133	6.0%
Interest expenses	5,342	6.9%	5,400	1.1%	5,300	-1.9%	5,200	-1.9%
Financial result	-5,964	-6.8%	-5,791	2.9%	-5,681	-1.9%	-5,574	-1.9%
Earnings before taxes (EBT)	**13,966**	**95.7%**	**15,809**	**13.2%**	**17,569**	**11.1%**	**18,839**	**7.2%**
EBT-margin	4.30%	-3.6 pp	5.27%	1.0 pp	5.67%	0.4 pp	5.79%	0.1 pp
Income taxes	4,064	14.7%	4,585	12.8%	4,919	7.3%	5,275	7.2%
Tax rate	29.10%	-20.5 pp	29.00%	-0.1 pp	28.00%	-1.0 pp	28.00%	0.0 pp
Earnings after taxes (EAT)	**9,902**	**175.4%**	**11,224**	**13.4%**	**12,649**	**12.7%**	**13,564**	**7.2%**
Minorities	4,678	246.3%	5,303	13.4%	5,976	**12.7%**	6,408	**7.2%**
Net income	**5,224**	**132.7%**	**5,922**	**13.4%**	**6,673**	**12.7%**	**7,156**	**7.2%**
No. of shares (m)	21.59	0.0%	21.59	0.0%	21.59	0.0%	21.59	0.0%
Earnings per share (€)	**0.24**	**132.7%**	**0.27**	**13.4%**	**0.31**	**12.7%**	**0.33**	**7.2%**

Source: Solventis Research, DEAG Deutsche Entertainment AG

DEAG: Balance sheet (€ thous.)

	2022	yoy	2023e	yoy	2024e	yoy	2025e	yoy
Assets								
Cash and securities	74,780	-37.0%	74,722	-0.1%	84,506	13.1%	96,058	13.7%
Accounts receivables	17,806	33.9%	16,446	-7.6%	16,995	3.3%	17,844	5.0%
Inventories	1,530	46.4%	1,413	-7.6%	1,460	3.3%	1,533	5.0%
Other current assets	13,985	-36.0%	13,985	0.0%	13,985	0.0%	13,985	0.0%
Tax claims	1,754	109.1%	1,754	0.0%	1,754	0.0%	1,754	0.0%
Total current assets	**126,069**	**-29.2%**	**133,320**	5.8%	**144,533**	8.4%	**158,299**	9.5%
Tangible assets	11,520	64.2%	15,020	30.4%	18,520	23.3%	21,620	16.7%
Intangible assets	36,213	10.6%	36,213	0.0%	36,213	0.0%	36,213	0.0%
Goodwill	53,777	3.4%	53,777	0.0%	53,777	0.0%	53,777	0.0%
Financial assets	7,858	103.4%	7,858	0.0%	7,858	0.0%	7,858	0.0%
Deferred taxes	950	-56.7%	950	0.0%	950	0.0%	950	0.0%
Leasing usage rights	21,208	-6.7%	20,967	-1.1%	19,726	-5.9%	17,485	-11.4%
Other long-term assets	8,854	-13.6%	8,854	0.0%	10,854	22.6%	10,854	0.0%
Total fixed assets	**140,380**	**7.3%**	**143,639**	2.3%	**147,898**	**3.0%**	**148,757**	**0.6%**
Total assets	**266,449**	**-13.7%**	**276,959**	3.9%	**292,431**	5.6%	**307,056**	5.0%
Liabilities and equity								
Subscribed capital	21,587	0.0%	21,587	0.0%	21,587	0.0%	21,587	0.0%
Capital reserves	32,520	0.0%	32,520	0.0%	32,520	0.0%	32,520	0.0%
Retained earnings	-32,813	12.9%	-26,891	18.0%	-20,218	24.8%	-16,300	19.4%
Accumulated other comprehensive income	1,890	-20.7%	1,890	0.0%	1,890	0.0%	5,128	171.3%
Shareholder's equity	**23,184**	**23.2%**	**29,106**	**25.5%**	**35,779**	**22.9%**	**42,935**	**20.0%**
Minorities	15,301	39.6%	17,301	13.1%	20,301	17.3%	20,301	0.0%
Shareholder's equity with minorities	**38,485**	**29.2%**	**46,407**	**20.6%**	**56,080**	**20.8%**	**63,236**	**12.8%**
Long-term liabilities								
Accurals	722	9.1%	667	-7.6%	689	3.3%	724	5.0%
Financial debt	11,466	-37.8%	11,466	0.0%	11,466	0.0%	11,466	0.0%
Long-term lease liabilities	18,745	-7.6%	16,504	-12.0%	14,263	-13.6%	12,022	-15.7%
Tax liabilities/Deferred taxes	8,703	6.5%	8,038	-7.6%	8,306	3.3%	8,722	5.0%
Other liabalities	7,841	-11.1%	7,242	-7.6%	7,484	3.3%	7,858	5.0%
Total long-term liabilities	**47,477**	**-41.1%**	**43,918**	-7.5%	**42,208**	-3.9%	**40,791**	-3.4%
Short-term liabilities								
Accurals	22,112	6.8%	20,424	-7.6%	21,104	3.3%	22,160	5.0%
Liabilities of goods and services	46,766	97.2%	43,195	-7.6%	44,635	3.3%	46,867	5.0%
Financial debt	24,602	362.6%	24,602	0.0%	24,602	0.0%	24,602	0.0%
Short-term lease liabilities	11,805	126.4%	11,805	0.0%	11,805	0.0%	11,805	0.0%
Tax liabilities	4,485	66.3%	4,143	-7.6%	4,281	3.3%	4,495	5.0%
Other liabilities	8,084	-43.9%	7,467	-7.6%	7,716	3.3%	8,101	5.0%
Contract liabalities	62,633	-50.4%	75,000	19.7%	80,000	6.7%	85,000	6.3%
Total short-term liabilities	**180,487**	**-9.0%**	**186,635**	**3.4%**	**194,143**	**4.0%**	**203,029**	**4.6%**
Total liabilities and equity	**266,449**	**-13.7%**	**276,959**	**3.9%**	**292,431**	**5.6%**	**307,056**	**5.0%**

Source: Solventis Research, DEAG Deutsche Entertainment AG

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a) Completion of the preparation: **09 May 2023, 10:00**, first publication: **09 May 2023, 11:00**

b) Timing conditions of planned updates: quarterly.

c) Regulatory authority: Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt/M.

d) Previous research: No research has been published in the 12 months prior to publication of this report containing a recommendation for a given Investment decision differing from the recommendation in this report.

e) The analysis was not made available to the issuer prior to its publication.

f) All prices and price developments stated in the analysis are based on the closing prices on the date and time specified, so far as no other indication is made with regard to the prices and price developments.

g) The analysis will be made available to all interested persons simultaneously.

3. Disclosures

Overview of the recommendations for the bond of the company in the last 12 months:

Date of publication	**Analyst**	**Rating**	**Market price on date of publication**	**Period of validity**
10/19/2022	Ulf van Lengerich	Attractive	101.0%	12 months
12/22/2022	Ulf van Lengerich	Attractive	101.0%	12 months

The ratings distribution of our investment universe is currently:

Ratings Overview Research Reports (04/01/22 - 03/31/23)		**in %**	**Fee-based Research**	**in %**
Buy	60	95.2%	51	81.0%
Hold	3	4.8%	3	4.8%
Sell	0	0.0%	0	0.0%
Total	63	100.0%	54	85.7%

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2. holds 5% or more of the share capital of the company which is the subject of this report.

3. have held or led the public issuance of financial instruments of the issuer during the previous twelve months.

4. were market makers or liquidity providers in the financial instruments of the issuer.

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b) Author
Ulf van Lengerich, Senior-Analyst

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Irrespective of the assessment made, there are significant risks from the sensitivity analysis due to change in the underlying assumptions. Risks include unforeseen changes in competitive pressure, demand for the products of an issuer and the supply of materials required for production, and non-occurrence of assumed development. Such fluctuations may result from changes in technology, changes in the economy, changes in the law and currency exchange rates. This discussion of risk factors does not claim to be exhaustive.

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Domestic and foreign media and information services (e.g. VWD, Refinitiv etc), the financial press (e.g. Börsen-Zeitung, Handelsblatt, FAZ, Wall Street Journal, Financial Times etc), the trade press, published statistics, as well as publications, announcements, data and information of or provided by the issuers analysed, and the internet.

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Individual issuers: The companies are valued using common, generally accepted methods of valuation (such as the DCF method, Excess Return Model, Dividend Discount Model and Peer Group Analysis). With the DCF method, the capitalized earnings value of the issuer is calculated, which represents the sum of the company's discounted anticipated future cash flows, i.e., the net present value of the issuer's future net distributions. The capitalized earnings value is therefore determined by the future cash flows which are anticipated and by the discount rate which is applied. The Excess Return Model and Dividend Discount Model are applied using standard models. With the Peer Group Analysis, issuers are valued by comparison with valuation multiples (e.g. price/earnings ratio, price/book ratio, enterprise value/sales, enterprise value/EBITDA, enterprise value/EBIT) of other listed companies. The comparability of the valuation multiples is determined primarily by the respective company's business activity and economic potential. Information about the models you can for example find at the following site: http://pages.stern.nyu.edu/~adamodar/.

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