

## CREDIT OPINION

8 May 2018

Update

Rate this Research >>

### RATINGS

#### Dufry AG

Domicile	Switzerland
Long Term Rating	Ba2
Type	LT Corporate Family Ratings - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

### Contacts

Ernesto Bisagno 4420-7772-5403  
VP-Senior Analyst  
ernesto.bisagno@moody.com

Marina Albo 44-20-7772-5365  
MD-Corporate Finance  
marina.albo@moody.com

### CLIENT SERVICES

Americas 1-212-553-1653  
Asia Pacific 852-3551-3077  
Japan 81-3-5408-4100  
EMEA 44-20-7772-5454

## Dufry AG

### Update on Key Credit Factors

#### Summary Rating Rationale

[Dufry AG's](#) (Dufry) Ba2 Corporate Family Rating (CFR) reflects its (1) leading market position with over 20% global market share of the airport travel retail spending according to the company; (2) strong geographical footprint; (3) track record and know-how in operating a travel retail business; (4) expectation of steady earnings growth and free cash flow over 2018-19; (5) long term positive organic sales growth in line with growth of passenger air traffic

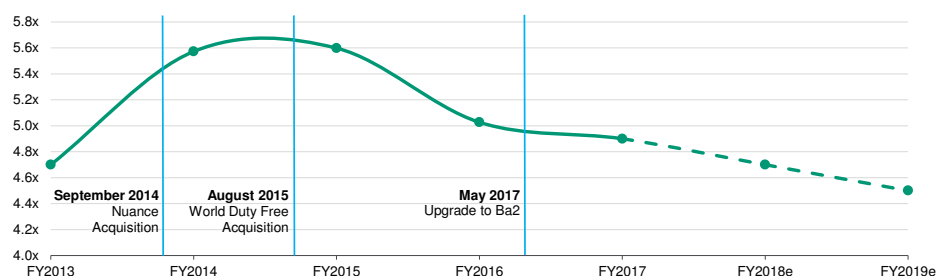
The rating is constrained by the (1) high leverage reflecting Dufry's past acquisitions combined with high concession costs; (2) cyclical nature of the company's travel retail business, which is tied to international passenger traffic, and exposed to discretionary items (e.g., perfumes and cosmetics, confectionary and luxury goods) and; (3) risks associated with the renewal of concession contracts as well as to certain event risks that would have implications on global travel behaviour.

We expect steady organic growth at around 4.0%-5.0% in 2018-19, in line with the low end of the 5%-7% range, as guided by Dufry's management. We expect profitability to continue to improve with reported EBITDA margin (according the management definition) to increase towards 13.0% in the medium term, in line with the company's guidance.

Despite the positive free cash flow, we expect gross adjusted debt to continue to increase modestly as a result of higher concession costs going forward, that we capitalize as debt in our adjusted ratios. Relatively higher level of adjusted debt will be offset by of higher EBITDA and therefore Moody's expects leverage (adjusted gross debt to EBITDA) to continue to decrease towards 4.5x over 2018-19, as shown in the exhibit 1.

Exhibit 1

#### Dufry's leverage to decline towards 4.5x by 2019 Adjusted (gross) debt/EBITDA



Source: Moody's Investors Service estimates

## Credit Strengths

- » Leading travel retail operator
- » Broad geographical diversification
- » Improved profitability and positive free cash flow generation
- » Expectation of long term positive organic growth in the industry

## Credit Challenges

- » High gross leverage reflecting Dufry's past acquisitions and concession costs
- » Cyclical nature of the business with revenues tied to passengers' spending
- » High proportion of sales related to discretionary categories (e.g. perfumes and cosmetics)
- » Exposure to event risk and risks associated with the renewal of concession contracts

## Rating Outlook

The stable outlook reflects our expectation that Dufry's credit metrics will continue to improve modestly, driven by stronger EBITDA and positive free cash flow generation thanks to the steady organic growth. The stable outlook also reflects Moody's expectations that management will remain focused on deleveraging towards 2.5x-3.0x on a reported basis, a level that would more firmly support the Ba2 rating.

## Factors that Could Lead to an Upgrade

An upgrade is unlikely in the near term given the high adjusted leverage. However, upward pressure on the ratings would reflect further deleveraging below 4.0x (adjusted gross debt to EBITDA), combined with positive organic growth and additional margins strengthening in line with Dufry's strategy.

## Factors that Could Lead to a Downgrade

Conversely, downward pressure on the rating would reflect operational weakness combined with negative organic growth. Quantitatively, downward pressure could be exerted on the ratings as a combination of leverage not returning towards 4.5x in the next 12-18 months and adjusted RCF / net debt declining below 15%.

## Key Indicators

Exhibit 2

### KEY INDICATORS [1]

#### Dufry AG

	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	Moody's 12-18 Month Forward View
Revenue (CHF Billion)	CHF 3.6	CHF 4.2	CHF 6.1	CHF 7.8	CHF 8.4	CHF 8.7-9.1
EBIT / Interest Expense	1.6x	1.3x	1.0x	1.1x	1.2x	1.3x-1.4x
RCF / Net Debt	15.4%	12.5%	12.2%	14.4%	15.5%	15%-16%
Debt / EBITDA	4.7x	5.6x	5.6x	5.0x	4.9x	4.5x-4.7x

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

Source: Moody's Financial Metrics™

## Company Profile

Headquartered in Basel Switzerland, with 2017 reported sales and EBITDA of CHF8.4 billion/CHF1 billion, Dufry is the leading global travel retailer covering 64 countries and over 390 locations, operating around 2,200 shops in airports, border downtown and hotel

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

shops, railway stations, cruise liners and seaports. The acquisition of WDF in 2015, the second largest operator in the travel retail industry, further consolidated Dufry's leading position in the travel retail market. DFS Group (LVMH Group, unrated) and Lotte Duty Free (unrated) are the second and third players respectively with a much lower revenue.

Dufry's network includes general travel retail shops, 'walk-through' shops, brand boutiques, news agents and convenience stores with a product offer spanning perfumes & cosmetics, wines & spirits, tobacco, watches & jewellery, and accessories.

In February 2018, the company completed the IPO of 43% in its US subsidiary in Hudson Limited for \$714 million. With an EBITDA of \$172 million at December 2017, Hudson accounts for around 17% of Dufry total EBITDA. Following the transaction, we expect that earnings to non controlling shareholders increased to about CHF 70 million. We do not expect significant dividends to be paid to Hudson's shareholders in 2018.

Dufry is listed on SWX Swiss Exchange with a market capitalization of around CHF7.2 billion and a free float of 80.5% as of April 2018.

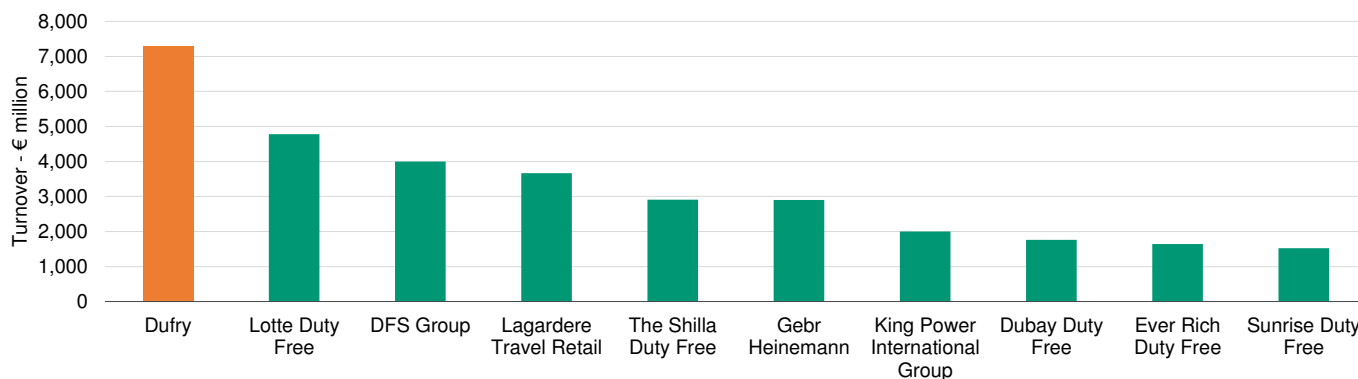
## Detailed Rating Considerations

### Leader in the travel retail industry with broad geographic diversification but exposure to discretionary categories

With total revenues of CHF8.4 billion, Dufry is the global leader in the travel retail industry with above 20% market share as of December 2016, as shown in the exhibit 3.

Exhibit 3

#### 2016 Turnover of Top 10 Travel Retailers

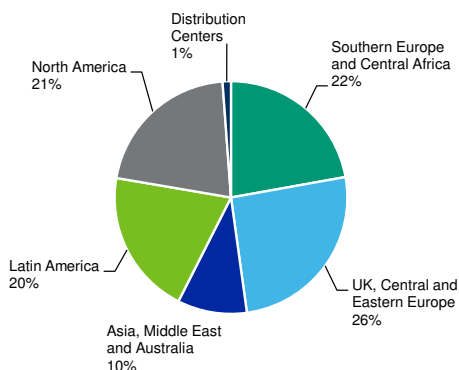


Source: The Moodie Davitt Report, July/August 2017.

The company operates over 2,200 shops in airports (91% of sales), border downtown and hotel shops (3%), railway stations (3%), cruise liners and seaports (3%). Dufry has a global footprint with operations in 64 countries and over 390 locations, and with its largest business region, UK, Central and Eastern Europe accounting for less than 30% of total sales as shown in exhibit 4. Through the acquisition of WDF the company improved its geographical reach by increasing presence in Europe whilst decreasing presence in emerging markets. Overall, its good geographic diversification should help cushion any severe contraction in sales in any category or in any region.

Exhibit 4

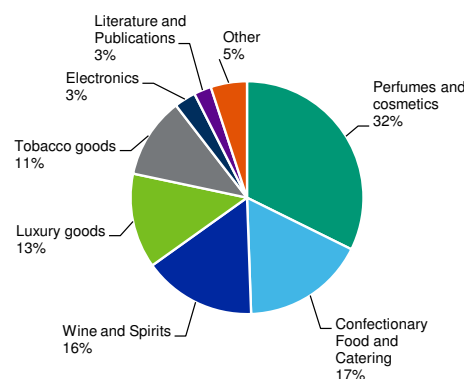
Dufry is well diversified geographically, turnover split by geography for 2017...



Source: Company information

Exhibit 5

... and is well diversified by product offering, revenue by category for 2017



Source: Company information

Moreover, the company reduced its reliance on single contracts with the company's largest concession with the Heathrow airport currently accounting for around 7% of total sales and the top 10 contract for less than 35%.

The company's stores sell a wide assortment of products including perfumes, cosmetics, confectionary, wines and spirits, tobacco, and accessories. However, the company is exposed to certain discretionary product categories with perfumes and cosmetics, confectionary and luxury goods categories accounting for around 62% of total sales as exhibit 5 shows.

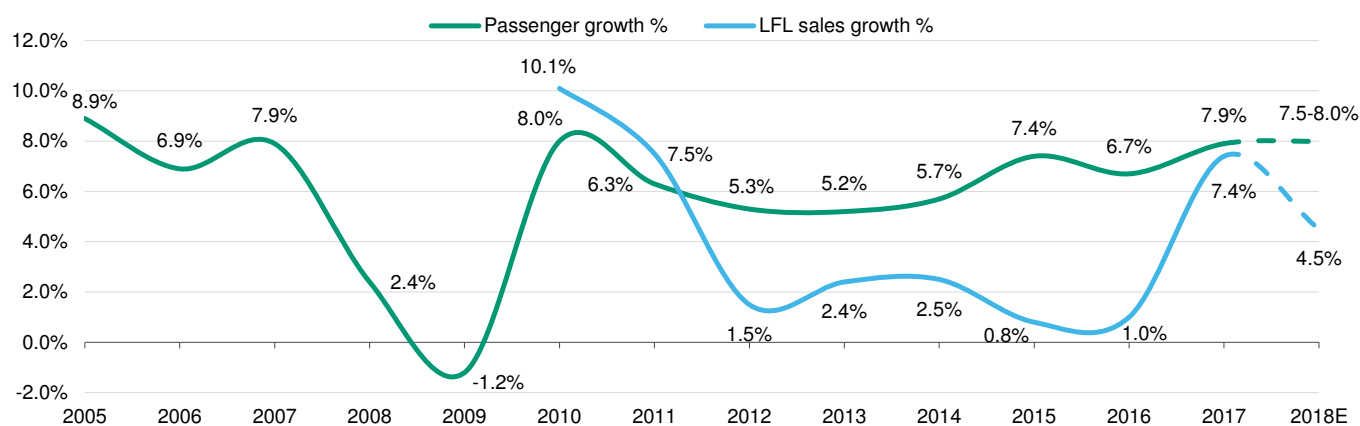
Dufry's diversified revenue base mitigates exposure to disruptions related to adverse local or regional economic or political events and the renewal of concession contracts in key markets. Positively, the company has a strong track record with approximately 80%-90% retention rate for expired contracts. The average life of the existing concessions is eight years. The acquisition of WDF further enhanced the combined group's geographical footprint, providing it with a balanced geographic portfolio that holds strong positions in mature and emerging markets. WDF's portfolio strengthened Dufry's position in Europe and North America and expanded the geographical footprint in the Middle East and Asia.

#### Revenue highly correlated to international passenger flows but expectation of long term positive organic growth

Dufry's travel retail operations are correlated to international passenger flows, and are, therefore, subject to a degree of cyclicality. Positively, total passenger flows have continued to grow steadily at around 5% per annum and only in 2009 was there a decline, with volumes falling 1.5%, according to the IATA, as shown in the exhibit 6.

Exhibit 6

**Passenger Flows have been historically resilient - Dufry weaker sales growth over 2012-15 reflected higher exposure to emerging markets**  
 Passenger Growth over 2005-2017, Dufry organic sales over 2010-2017



Source: IATA, Dufry reports

Despite the resilient passenger growth over the years, in 2015 Dufry reported negative like for like growth of -5.3% (+0.8% including WDF) due to the negative impact from Brazil and Russia as a combination of lower volumes of passengers traveling outbound and decreased passengers spending. In the first half of 2016 the negative impact from Brazil and Russia continued but the second half saw performance improvements which filtered into 2017, resulting in Dufry's organic growth of 7.4% for fiscal 2017, due to the recovery in Russia and Brazil and a stable contribution from the North American and Europe.

We expect organic growth to remain steady at around 4.0%-5.0% in 2018-19. Our forecast for Dufry's organic growth reflects three factors: (1) steady passenger flows through the airports in which Dufry's concessions operate; (2) resilient passenger spending including Russia and Brazil, where macroeconomic conditions have improved, boosting travelers' disposable income (we forecast GDP growth in Brazil of around 2.5% in 2018 and 2019 and 1.6% and 1.5% in 2017 and 2018 respectively in Russia) and; (3) new commercial space and Dufry's refurbishment programme to increase sales.

### Good profitability compared to other speciality retailers

With an EBITDA margin (Moody's reported including concession costs) of 11.8% at December 2017, Dufry's profitability is stronger than rated UK department stores [Debenhams Plc](#) (B1 stable 8.1%), and French specialty retailer [FNAC Darty SA](#) (Ba2 stable 3.4%); and ranks better than Dixons Carphone Plc (unrated 5.8%), and French travel retailer Lagardère Travel Retail (unrated 6.4%).

Although Dufry's profitability continues to benefit from higher-return emerging markets, the acquisitions of WDF had a negative impact on margins given the higher exposure to developed markets (more than 60% of EBITDA in 2016 compared to 47% before WDF acquisition).

Positively, the company's concession-based business model is considered to be more flexible than that of a traditional retailer because concession fees are mostly variable, whereas rents tend to be mostly a fixed charge. Therefore, operating margins are less likely to be eroded as sharply if footfall and sales slowed-down.

### Strong 2017 results driven by improved organic growth

More in general, Dufry reported strong 2017 results ahead of Moody's expectations with organic growth of 7.4% driven by (1) improved market conditions in all the geographies; (2) increase in retail space (+30,000 sqm opened in 2017 bring the total space to 437,000 sqm); and (3) contribution from the refurbishment program (32,000 sqm refurbished in 2017).

Operating cash flow was stable at CHF524 million in 2017 (CHF505 million in 2016) with the increase in profits offset by higher working capital needs mainly reflecting one off inventories needs related with new openings in Southern Europe and in Latin America. With stable capex at CHF 205 million and no dividends, free cash flow was around CHF150 million in 2017 and reported net debt declined to CHF3.7 billion at December 2017 (CHF3.8 billion in 2016).

As a result adjusted gross debt to EBITDA marginally improved to 4.9x (5.0x in 2016). However, despite the positive free cash flow, gross adjusted debt continued to increase to CHF15.9 billion (CHF 15 billion in 2016) as a result of higher concession costs, that we capitalize as debt in our adjusted ratios.

### Credit metrics to improve modestly over 2018-19

We expect organic growth to be around 2017 to 4.0%-5.0% in 2018-19, in line with the low end of Dufry's guidance of 5.0%-7.0%. This is an improvement from 2015-16, but is below the rate of 2017, which was higher given that the first half of 2016 was particularly weak.

We expect profitability to continue to improve as a combination of better operating leverage driven by higher revenues and increased efficiencies. The latter reflects the implementation of the new business model announced last year, which aims to standardize and unify processes and share best practices, leading to additional efficiencies. Management has also reaffirmed its guidance of reported EBITDA margin to increase towards 13.0% in the mid-term (by 2018 in the previous guidance) from current 12%.

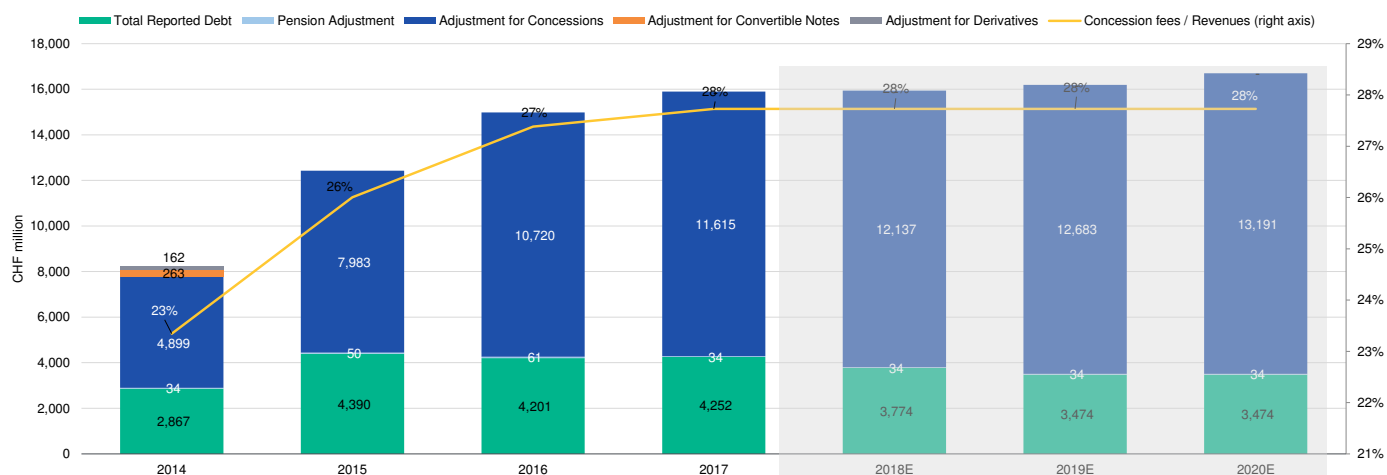
We expect operating cash flow to improve in 2018 due to more favourable working capital dynamics (see comment above). We model dividends of at least CHF 200 million each year, in line with the company guidance provided in April, and modest level of capex at 3%-3.5% of total sales. As a result, we expect a positive free cash flow of free cash flow available for debt reduction to around CHF 200 - CHF 250 million each year. In addition, part of the \$714 million proceeds from the Hudson IPO, net of the [CHF400 million share buyback](#) will be available for debt reduction. We assume management to continue to focus on deleverage and target a net leverage between 2.5x-3.0x (3.6x at December 2017).

Despite the positive free cash flow, we expect gross adjusted debt to continue to increase modestly as a result of higher concession costs going forward, that we capitalize as debt in our adjusted ratios. Relatively higher level of adjusted debt will be offset by of higher EBITDA and therefore Moody's expects leverage (adjusted gross debt to EBITDA) to continue to decrease towards 4.5x over 2018-19, our trigger to support the Ba2 rating.

Positively, we note that Dufry mostly operates under concessions with variable payments based upon the revenues of each shop which provides Dufry a more flexible debt structure when compared to the typical retailer. However, some concessions also include a fixed fee component called "MAG" which would be payable to the airport operator regardless of the amount of sales generated from the shop.

Exhibit 7

### Adjusted Gross Debt To Increase Despite Positive Free Cash Flow Generation Evolution of adjusted debt 2017-19



Source: Moody's Financial Metrics and Moody's Investors Service estimates

### Liquidity Analysis

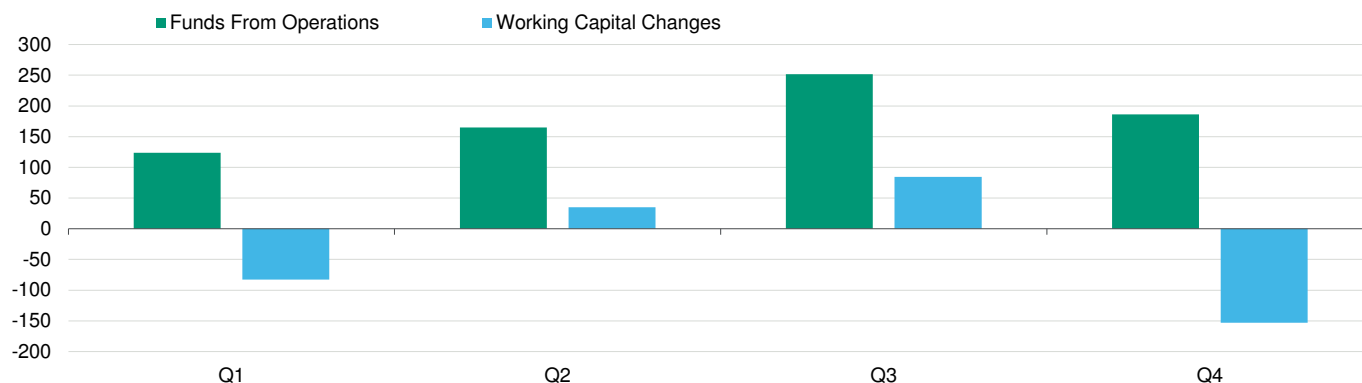
Dufry's liquidity is good, underpinned by cash balances of CHF565 million (December 2017), an undrawn €1.3 billion revolving credit facility (RCF) maturing in November 2022 (CHF 715 million undrawn at fiscal 2017); and our expectation of ongoing positive free cash

flow generation. We note that the first quarter is seasonally the weakest for the company with Dufry having its strongest season of turnover and EBITDA between July and September corresponding to the summer time in the northern hemisphere.

Dufry has managed its liquidity and debt maturity profile well with the refinancing activities which took place in 2017 including (1) the refinancing of its €500 million 2022 senior notes being replaced with €800 million senior notes and (2) refinancing of its main bank credit facilities of CHF3.4 billion extending the maturities to 2022 from 2019. We continue to assume that Dufry will address its refinancing needs in a timely manner, or in any case, at least 12 months in advance.

Exhibit 8

### Q3 is the strongest quarter 3-years average cash flow by quarter



Notes: Both figures are as reported  
Source: Moody's Financial Metrics

The main financial covenants are with better conditions following the company's recent refinancing, include a max net debt/ Adj. EBITDA threshold of 4.00x (compared to 3.75x previously). We expect the company to maintain sufficient headroom under its covenants.

## Structural Considerations

Dufry's Ba2 senior unsecured instrument ratings are in line with the corporate family rating (CFR). This reflects the lack of significant subordination with all the obligations benefiting from a guarantee from Dufry AG, Dufry Financial Services B.V. and the subsidiaries that collectively represent 100% of the consolidated net assets and EBITDA of the company. The IPO These instruments rank behind a small amount of secured debt which is not material to create subordination, located at the operating subsidiaries' level. Following the IPO completed in February, Hudson Limited is not included among the guarantors.

## Rating Methodology and Scorecard Factors

Indicated Rating from the grid is Ba2 in line with the actual rating assigned.

Exhibit 9

## Credit Metrics to strengthen over the next 12-18 months

Rating Factors			Moody's 12-18 Month Forward View As of 4/20/2018 [3]	
Dufry AG				
Retail Industry Grid [1][2]				
Current FY 12/31/2017				
Factor 1 : Scale (10%)	Measure	Score	Measure	Score
a) Revenue (USD Billion)	\$8.5	Ba	\$8.9 - \$9.3	Ba
Factor 2 : Business Profile (30%)				
a) Stability of Product	Ba	Ba	Ba	Ba
b) Execution and Competitive Position	Baa	Baa	Baa	Baa
Factor 3 : Leverage and Coverage (45%)				
a) EBIT / Interest Expense	1.2x	B	1.3x-1.4x	B
b) RCF / Net Debt	15.5%	Ba	15% - 16%	Ba
c) Debt / EBITDA	4.9x	B	4.5x - 4.7x	B
Factor 4 : Financial Policy (15%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Rating:				
a) Indicated Rating from Grid		Ba2		Ba2
b) Actual Rating Assigned				Ba2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. [2] As of 31/12/2017; Source: Moody's Financial Metrics. [3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics

Exhibit 10

## Moody's adjustments to Dufry's debt

(in CHF Millions)	FYE Dec-12	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17
As Reported Debt	1,385	2,000	2,867	4,390	4,201	4,252
Pensions	21	9	34	50	61	34
Operating Leases	3,300	3,937	4,899	7,983	10,720	11,615
Hybrid Securities	0	0	263	0	0	0
Non-Standard Adjustments	0	0	162	0	0	0
Moody's-Adjusted Debt	4,705	5,945	8,225	12,424	14,982	15,900

Source: Moody's Financial Metrics

Exhibit 11

## Moody's adjustments to Dufry's EBITDA

(in CHF Millions)	FYE Dec-12	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17
As Reported EBITDA	443.5	467.0	495.7	570.6	825.1	991.8
Pensions	0.5	-0.5	-11.9	-1.7	1.3	-19.8
Operating Leases	659.9	787.3	979.7	1,596.6	2,143.9	2,322.9
Unusual	10.6	9.6	14.7	57.6	13.9	-75.0
Non-Standard Adjustments	0.0	0.0	-2.3	-4.0	-3.9	1.6
Moody's-Adjusted EBITDA	1,114.5	1,263.4	1,475.9	2,219.1	2,980.3	3,221.5

Source: Moody's Financial Metrics



Exhibit 12

## Moody's rated peers

(in US millions)	Dufry AG			FNAC DARTY SA			Nordstrom, Inc.			Macy's, Inc.			Debenhams plc		
	Ba2 Stable			Ba2 Stable			Baa1 Stable			Baa3 Stable			B1 Stable		
	FYE Dec-16	FYE Dec-17	LTM Dec-17	FYE Dec-15	FYE Dec-16	LTM Jun-17	FYE Jan-17	FYE Feb-18	LTM Feb-18	FYE Jan-17	FYE Feb-18	LTM Feb-18	FYE Aug-15	FYE Sep-16	LTM Sep-17
Revenue	\$7,948	\$8,512	\$8,512	\$4,151	\$5,941	\$7,646	\$14,757	\$15,478	\$15,478	\$25,778	\$24,837	\$24,837	\$3,608	\$3,373	\$2,956
EBITDA	\$3,026	\$3,273	\$3,273	\$284	\$413	\$470	\$1,838	\$1,857	\$1,857	\$3,232	\$3,381	\$3,381	\$697	\$662	\$562
Total Debt	\$14,741	\$16,316	\$16,316	\$758	\$1,911	\$2,065	\$4,982	\$5,213	\$5,213	\$10,430	\$9,283	\$9,283	\$3,823	\$3,396	\$3,280
Cash & Cash Equiv.	\$405	\$532	\$532	\$592	\$691	\$410	\$1,007	\$1,181	\$1,181	\$1,297	\$1,455	\$1,455	\$50	\$75	\$52
EBITDA Margin	38.1%	38.5%	38.5%	6.8%	7.0%	6.1%	12.5%	12.0%	12.0%	12.5%	13.6%	13.6%	19.3%	19.6%	19.0%
EBIT / Int. Exp.	1.1x	1.2x	1.2x	2.2x	1.8x	2.2x	4.8x	4.3x	4.3x	3.7x	4.7x	4.7x	1.8x	1.9x	1.8x
Debt / EBITDA	5.0x	4.9x	4.9x	2.7x	4.9x	4.2x	2.7x	2.8x	2.8x	3.2x	2.7x	2.7x	5.6x	5.5x	5.7x
RCF / Net Debt	14.4%	15.5%	15.5%	111.2%	20.3%	20.3%	26.3%	24.9%	24.9%	18.6%	21.0%	21.0%	10.5%	11.0%	10.2%
FCF / Debt	1.2%	1.1%	1.1%	11.6%	7.0%	6.0%	11.2%	8.2%	8.2%	5.3%	8.7%	8.7%	2.1%	2.2%	0.6%

Moody's Financial Metrics

## Ratings

Exhibit 13

Category	Moody's Rating
<b>DUFRY AG</b>	
Outlook	Stable
Corporate Family Rating -Dom Curr	Ba2
<b>DUFRY ONE B.V.</b>	
Outlook	No Outlook
Bkd Senior Unsecured -Dom Curr	Ba2/LGD4
<b>DUFRY FINANCE S.C.A.</b>	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	Ba2/LGD4

Source: Moody's Investors Service

© 2018 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody's.com](http://www.moody's.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJJK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJJK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJJK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJJK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJJK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJJK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJJK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

## CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454