

CREDIT OPINION

23 April 2024

Update



Send Your Feedback

RATINGS

JAB Holding Company S.a r.l.

Domicile	Luxembourg
Long Term Rating	Baa1
Type	LT Issuer Rating - Fgn 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

Martin Kohlhase +49.69.70730.719
VP-Sr Credit Officer
martin.kohlhase@moodys.com

Karen Berckmann, +49.69.70730.930
CFA
Associate Managing Director
karen.berckmann@moodys.com

Jingchao Zhao, CFA +49.69.70730.812
Sr Ratings Associate
jingchao.zhao@moodys.com

CLIENT SERVICES

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

JAB Holding Company S.a r.l.

Update to credit analysis

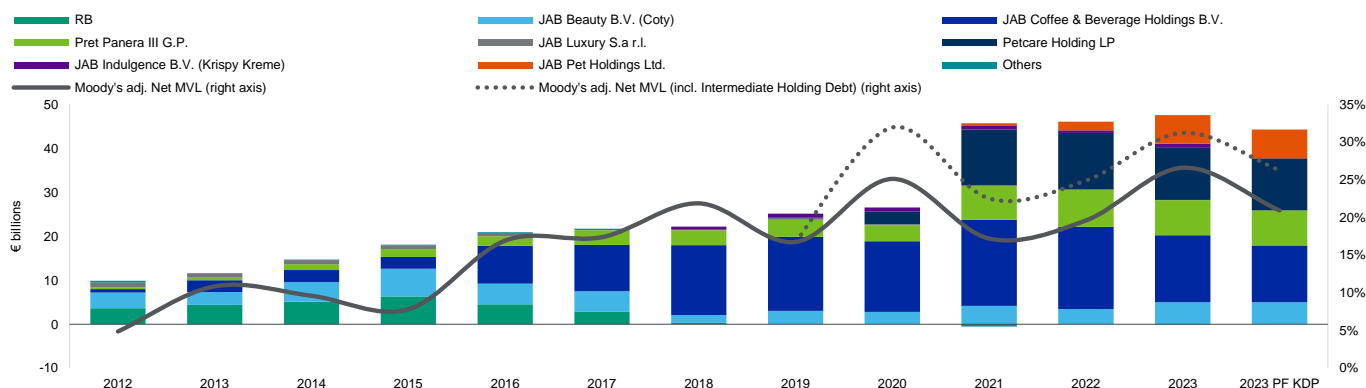
Summary

The Baa1 rating of [JAB Holding Company S.a r.l.](#) (JAB, Baa1 stable) reflects the company's strong investment portfolio that comprises cash-generative and typically defensive consumer goods and services companies. Its investments through JAB Coffee & Beverages Holdings 2 B.V. (formerly held by Acorn Holdings B.V.) include [JDE Peet's N.V.](#) (Baa3 stable) and [Keurig Dr Pepper Inc.](#) (KDP, Baa1 stable) and account for around 31% (including direct shares) of JAB's 2023 portfolio value. JAB's investments into petcare and pet insurance continued in 2023. Financial information for these companies is not accessible. JAB, on a stand-alone basis, funded approx. 35% of the pet insurance investments, with JCP and other minorities funding the remaining 65%. The addition of a new platform (pet health services) has also improved diversification.

Following the divestment of 100 million KDP shares, JAB's company reported stand-alone net market value-based leverage (MVL) improved to around 20% by February 2024 compared to 26.7% for year end 2023, which puts JAB's capital structure back within its own financial policy target of 15%-20%. The divestment of KDP shares to offset the climb in leverage resulting from JAB's investments into the pet insurance platform during 2023 underpins its commitment to stay within its leverage targets. JAB reports MVL on a standalone basis excluding debt at the intermediate holding company level, and on a Moody's adjusted basis including intermediate holding company level debt, JAB's net MVL was worse than our expectations for its rating as of year end but generally in line with our expectations based on the February 2024 estimate.

Exhibit 1

JAB's moody's adjusted net MVL increased moderately in 2023



Periods are financial year-end unless indicated.

Columns represent investment portfolio breakdown (left axis).

2023 PF KDP pro forma the divestment of 100 million KDP shares.

Values for 2017 and 2018 are pro forma the disposal of two-thirds of Bally's Corporation; 2018 is pro forma the tender offer for Coty (301 million shares at \$11.65 per share); Others include other investments; JAB Coffee & Beverage Holdings B.V. includes investments in JDE Peet's N.V. and Keurig Dr Pepper Inc.

Source: Company information and Moody's Ratings

Credit strengths

- » Clearly defined and largely successful investment strategy
- » Investments in defensive global consumer businesses, somewhat limiting market value volatility
- » Highly experienced management
- » Good liquidity

Credit challenges

- » Volatility in MVL resulting from listed assets
- » Presence of debt at intermediate holding companies albeit progress on simplification of the structure
- » Opaqueness of the petcare and pet insurance business

Rating outlook

The outlook is stable, and reflects the relative stability of the operating performance of JAB's core investments and management's conservative financial policy. It also takes into consideration further simplification of the structure, either by increasing the transparency through stock market listings of currently private investments or through further steps to simplify the complex organisational structure.

Factors that could lead to an upgrade

- » Net MVL dropping sustainably below 20% including intermediate holding company debt (equivalent to 15% on a standalone basis when excluding debt at the intermediate holding company level)
- » Interest cover remaining around 3.0x on a sustained basis, supported by higher dividend and interest income
- » Further transparency on the corporate structure could support positive rating pressure over time if coupled with stronger credit metrics

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

Factors that could lead to a downgrade

- » Net MVL approaches the high 20s in percentage terms including proportional intermediate holding company assets and debt (increases above 20% on a standalone basis when excluding debt at the intermediate holding company level)
- » Interest cover falling below 2.0x on a sustained basis
- » Weakening liquidity
- » More aggressive financial policy

Profile

JAB Holding Company S.a r.l. (the guarantor) together with JAB Holdings B.V. (the issuer) and four wholly owned holding companies (JAB Luxury S.a r.l, JAB Forest B.V., JAB Holding Company, LLC and JAB Holding Sao Paulo Ltda.) form the JAB Group. JAB is majority owned by Agnaten SE and Joh. A. Benckiser B.V. (together the family office).

JAB is a privately held investment holding company focused on long-term investments in consumer goods and retail companies with premium brands. JAB's key investments in terms of market value as of December 2023 include:

1. JDE Peet's (around 59% ownership) and KDP (around 28%; around 21% post the share sale in February 2024), which are held via JAB Coffee & Beverage Holdings B.V. (Acorn Holdings B.V., 100%)
2. [Coty Inc.](#) (Ba2 positive, around 50%), a global leader in fragrances with an expanding position in cosmetics and body care, held through JAB Beauty B.V. (100%)
3. Pret A Manger, Panera Bread Company, Caribou Coffee Company and Espresso House, which are all held via Pret Panera III G.P. (around 50% indirect voting rights in Pret Panera)
4. Petcare G.P. (38.3%) with a 90% stake in NVA
5. JAB Pet Services (35.0%) with a 92% stake in IPH and 66% in Pinnacle Pet Group
6. Krispy Kreme Doughnuts, Inc. (around 45%)

Detailed credit considerations

Clearly defined and successful investment strategy; investments in defensive global consumer businesses

JAB's strategy focuses on long-term investments in companies with premium brands in the consumer goods and retail sectors such as Coty, JDE Peet's, Krispy Kreme and KDP. According to the company, it has strong working knowledge and networking advantage in the consumer goods and retail sectors. We consider these sectors less cyclical and more cash generative than many other industries, and JAB's assets tend to benefit from product portfolio breadth and strong market positions. These advantages limit the impact from customers switching products in a downturn or changes in customer preferences. Most of JAB's investees have relatively strong pricing power, which we expect to protect margins even in an inflationary environment.

JAB acquires and integrates companies or brands in a particular subsector, as shown by its past acquisitions in household goods, cosmetics and coffee brands, with a view of listing them once operations have been sufficiently consolidated and optimised. Recent examples of this strategy are the integration of Keurig into Dr Pepper, and the IPOs of JDE Peet's and Krispy Kreme. Sales and cost synergies are achieved through R&D, scaling of factories and development of distribution channels. Ultimately, management intends to replicate [Reckitt Benckiser Group Plc's](#) (A3 positive) success in cosmetics through Coty, and in nonalcoholic beverages via JDE Peet's and KDP.

The global diversification of JAB's investments also adds stability to performance and market values. However, because of JAB's strategy of acquiring businesses domiciled in the US and Europe, and then expanding into emerging markets, there is a greater concentration in Western markets.

In 2019, JAB created the Petcare Investment Platform and has since acquired veterinary clinics consolidated into Petcare Holding LP (Petcare platform) as well as pet insurance businesses through JAB Pet Holdings Ltd. (Pet Insurance platform). This has resulted in greater business diversity as we have added business and consumer services (veterinary clinics) and insurance (pet insurance) as distinct sectors to our Business Diversity score. The investments have also contributed to a sizeable increase in JAB's portfolio value. JAB in 2023 announced the creation of two distinct veterinary businesses under the NVA and Ethos brands and the intention to publicly list both companies within two to three years. At the time JAB disclosed revenues of around \$4.0 billion for NVA and around \$2.0 billion run-rate revenues for Ethos, without providing any other financial information such as profitability, leverage and funding.

Leverage increased in 2023 following investments into pet insurance, but has since been fallen thanks to KDP share divestiture

JAB has stressed that the leverage increase in 2023 due to pet insurance related investments was temporary. The investment holding company has since reduced its stake in KDP to around 21% by selling 100 million shares. The net proceeds of around €2.7 billion result, on a pro forma basis, in JAB's company report net loan-to-value ratio of 20%, which is at the upper end of management's leverage targets. We expect JAB to continue to operate within the leverage requirements of 15%-20% net MVL (on a JAB standalone basis when excluding debt at the intermediate holding company level) through the cycle, which is commensurate with the Baa1 rating category. JAB is currently solidly positioned in the Baa1 rating category based on our expectation that the company will maintain metrics in line with the current rating level.

In addition, the credit quality of investments has improved with Coty being upgraded by four notches since September 2021, along with the one-notch upgrade of JDE Peet's in April 2021 and the one-notch upgrade of KDP in April 2023.

Exhibit 2

Credit quality of rated investments has improved further

Recent rating actions for Coty, JDE Peet's and KDP

Company	Rating Action	Previous Rating	Date
Keurig Dr Pepper Inc.	▬ Baa1 affirmation / Outlook remains stable	Baa1 / Stable	29-Feb-2024
Coty	▲ Upgrade to Ba2 / Positive	Ba3 / Positive	15-Feb-2024
Coty	▬ Ba3 affirmation / Outlook changed to positive	Ba3 / Stable	11-Sep-2023
Keurig Dr Pepper Inc.	▲ Upgrade to Baa1 / Stable	Baa2 / Stable	3-Apr-2023
Coty	▲ Upgrade to Ba3 / Stable	B1 / Stable	16-Feb-2023
Coty	▲ Upgrade to B1 / Stable	B2 / Stable	24-May-2022
Coty	▲ Upgrade to B2 / Stable	Caa1 / Negative	21-Sep-2021
JDE Peet's	▲ Upgrade to Baa3 / Stable	Ba1 / Positive	26-Apr-2021
Keuring Dr Pepper	▬ Baa2 affirmation / Outlook changed to stable	Baa2 / Negative	26-Feb-2021
JDE Peet's	Assign Ba1 / Positive	NEW	7-Jul-2020

Source: Moody's Ratings

Underlying investments are held through intermediate holding companies

Because JAB Holding Company S.a r.l. holds its stakes through intermediate holding companies, which are co-owned by JAB Holdings B.V. and JAB Consumer Partners SCA SICAR (JCP), it is important to assess the credit quality of the intermediate holding companies. Excessive leverage at the intermediate holding company level would impair JAB Holding's ability to recover the value of the underlying investments. Hence, the analysis of net MVL at the JAB Holding level is not sufficient to assess its credit quality.

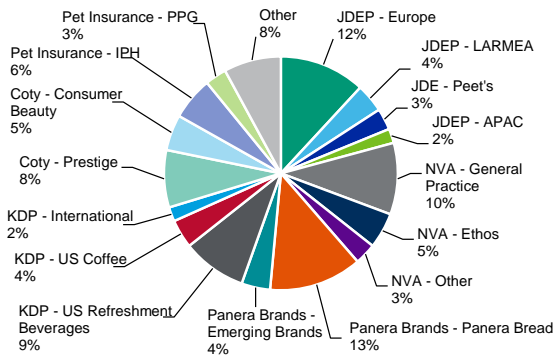
JAB Coffee & Beverages B.V. is JAB Holding's largest intermediate holding company. JAB Coffee & Beverages B.V. owns around 21% in KDP and 57% in JDE Peet's. JAB Coffee & Beverages B.V. is 78% owned, with 100% voting rights, by JAB Holdings B.V. In September 2020, JAB Holdings contributed all its shares in Acorn Holdings B.V. (€17.2 billion) to the newly created entity JAB Coffee & Beverages B.V. Acorn Holdings B.V. was levered, especially if we included preferred shares and equity warrants on its balance sheet in its leverage calculation. Acorn Holdings B.V. has reduced its debt liabilities by around 20%, compared with 2020, to around €3.3 billion in 2023 and eliminated its contingent liabilities, maintaining only bank debt in the structure.

As a mitigant to the remaining unsecured liabilities, the intermediate structures also have some equity buffer from JCP, an investment fund managed by partners of JAB. JCP invests alongside JAB Holding in most of its investments. As of December 2023, JCP had \$19 billion of invested capital and distributed more than \$14 billion to its limited partners since 2019.

Successful IPOs of JDE Peet's and Krispy Kreme improved investment transparency and liquidity of the investment portfolio

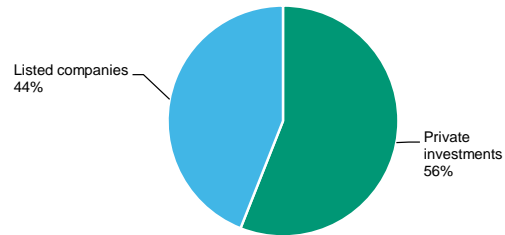
The successful IPO of JDE Peet's in a difficult market environment in 2020, along with the IPO of Krispy Kreme in July 2021, led to an improvement in portfolio transparency. Around 44% of JAB's portfolio is currently publicly listed. JAB's investment portfolio is now much more liquid, with around €14 billion of the portfolio value invested in large cap and liquid investments. Additionally, JAB has increased the free float of KDP, leading to a more liquid stock, and established an additional stock market listing for Coty at Euronext Paris.

Exhibit 3
JAB's portfolio composition (2023)



Source: Company information and Moody's Ratings

Exhibit 4
Proportion of listed and unlisted assets (2023)



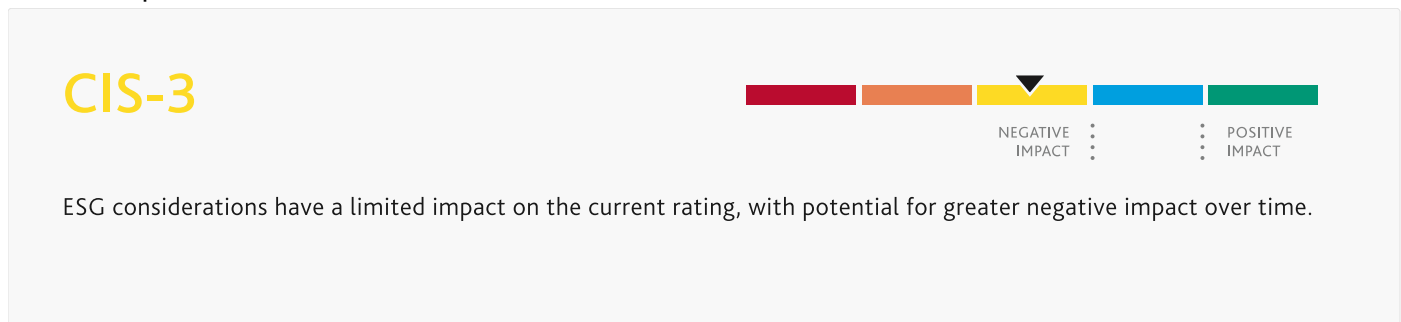
Sources: Company information and Moody's Ratings

Management has also demonstrated that it remains committed to publicly list shares of its holdings and has flagged Panera Brands as a company to list on the stock market. While the decision and readiness to go public are positive, capital markets currently are not receptive for listings. However, we expect the Panera Brands to be listed once markets have opened to listings again. Furthermore, in March 2023, [JAB announced that it will form two distinct businesses in its petcare platform, Ethos Veterinary Health \(Ethos\) and NVA](#), with the aim of stock market listings for both entities in the next two to three years.

ESG considerations

JAB Holding Company S.a r.l.'s ESG credit impact score is CIS-3

Exhibit 5
ESG credit impact score

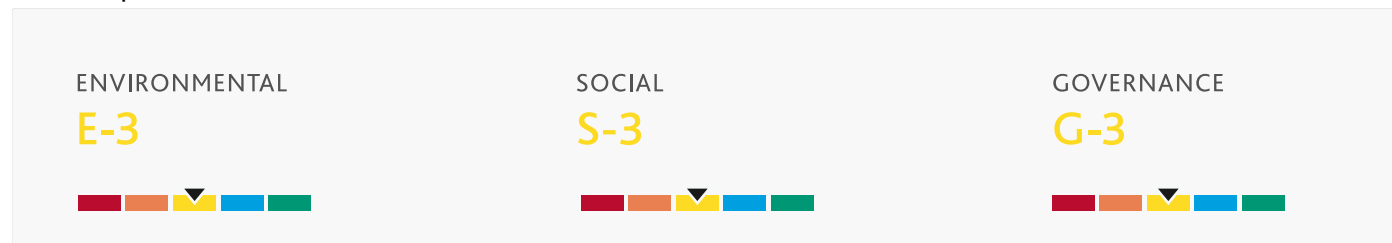


Source: Moody's Ratings

JAB's **CIS-3** indicates that ESG considerations have a limited impact on the current credit rating with potential for greater negative impact over time. JAB has indirect exposure to environmental and social risks through its investee companies. This reflects the exposure of investments in consumer-related end markets. More specifically, JAB's primary investments, accounting for more than 50% of JAB's portfolio value, are in soft beverage producer Keurig Dr Pepper (KDP, around 30% of JAB's portfolio value), Petcare (around one quarter), Pet Insurance, Pret Panera (nearly 20%), JDE Peet's (around 15%) and Coty (nearly 10%).

Exhibit 6

ESG issuer profile scores



Source: Moody's Ratings

Environmental

JAB has moderately elevated environmental risk exposure to natural capital as well as waste & pollution through its investments in KDP, Petcare and JDE Peet's. The environmental risk exposure is somewhat offset by the sizeable investments in the Petcare and the restaurant platform.

Social

JAB's social risk factors are largely in line with its investees, reflecting JAB's indirect exposure to social risks. These mostly stem from JAB's exposure in the consumer products and services industries. Social risks encompass moderately elevated exposure to customer relations, reflecting JDE Peet's and KDP's exposure, and responsible production combined with low exposure to human capital, health and safety as well as demographic & societal trends. Responsible production, for instance, reflects the sourcing of a number of raw materials, such as coffee, from emerging markets.

Governance

JAB's governance issuer profile score (IPS) reflects the company's complex organizational structure, the concentrated ownership as well as the opaqueness of private investments. This is offset by the company's financial target of 15% to 20% net debt to portfolio value in the medium term as well as the solid investment track record. JAB benefits from the deep sector experience of its executives/partners with long senior management tenure in the respective consumer end markets that JAB has invested in.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Liquidity analysis

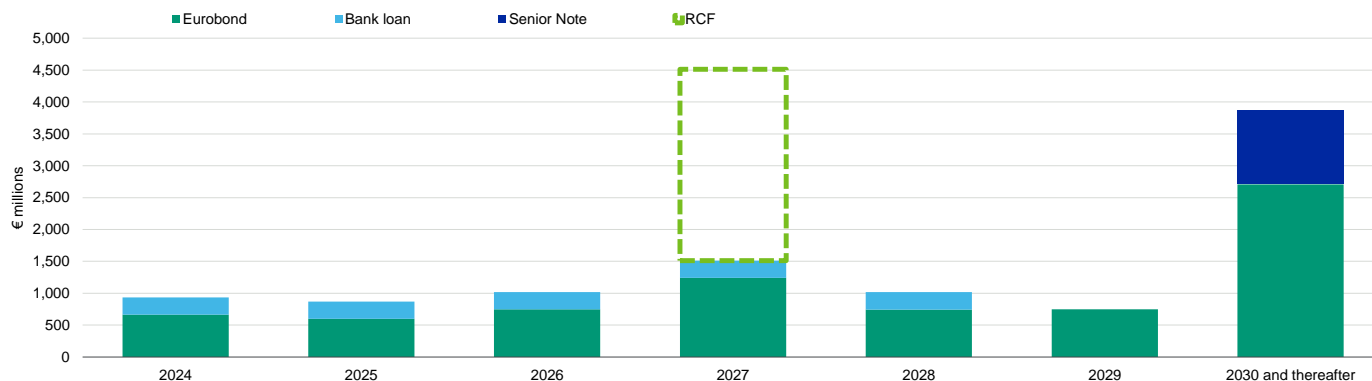
JAB's liquidity is solid. Pro-forma the KDP share sale JAB in late February 2024 had access to €4.6 billion of cash on balance sheet and to €3.0 billion under a committed revolving credit facility (RCF) maturing in 2026.

JAB has a well-spread maturity profile. The company has maturities of around €665 million due in 2024 and €600 million due in 2025. The company extended its maturity profile with issuances of 30-year US dollar and 20-year euro bonds. JAB's access to listed investments (around 44% as of 31 December 2023) further supports the company's financial flexibility in the short to medium term as was illustrated in February when JAB sold KDP shares.

Exhibit 7

JAB has already addressed its 2023 maturities

Debt maturity profile as of December 2023



Periods are financial year-end unless indicated.

Light green dashed line indicates the (currently undrawn) revolving credit facility.

Source: Company information

Structural considerations

Excluding the guarantor, the intermediate holding companies within the JAB Group and JAB's investments do not provide guarantees to the issuer of the bonds. The payment of interest and debt at the issuer is therefore dependent on timely reception of dividends from its investments, which are mostly controlled, and gives JAB the ability to declare the dividend levels; the ability to monetise its investments via a disposal or an IPO; and, where possible, the upstreaming of cash from majority-owned investments. All debt is held and raised by the issuer.

Methodology and scorecard

The principal rating methodology used in this rating was our Investment Holding Companies and Conglomerates rating methodology. The current and our forward view are in line with the assigned rating of Baa1.

Exhibit 8

Rating factors

JAB Holding Company S.a.r.l.

		Current FY Dec-23
Investment Holding Companies Industry		
Factor 1 : Investment Strategy (10%)	Measure	Score
a) Investment Strategy	Baa	Baa
Factor 2 : Asset Quality (40%)		
a) Asset Concentration	Ba	Ba
b) Geographic Diversity	A	A
c) Business Diversity	Baa	Baa
d) Investment Portfolio Transparency	A	A
Factor 3 : Financial Policy (10%)		
a) Financial Policy	Baa	Baa
Factor 4 : Estimated Market Value-based Leverage (MVL) (20%)		
a) Estimated Market Value-Based Leverage	A	A
Factor 5 : Debt Coverage and Liquidity (20%)		
a) (FFO + Interest Expense) / Interest Expense	3.6x	Baa
b) Liquidity	Baa	Baa
Rating:		
a) Scorecard-Indicated Outcome		Baa1
b) Actual Rating Assigned		Baa1

All figures and ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

Source: Moody's Ratings

Appendix

Exhibit 9

Peer comparison

JAB Holding Company S.a.r.l.

(in € millions)	JAB Holding S.a.r.l	Investor AB	Groupe Bruxelles Lambert	Criteria Caixa	Wendel SE
Rating & Outlook	Baa1 Stable	Aa3 Stable	A1 Stable	Baa2 Positive	Baa2 Stable
Country of Domicile	Luxembourg	Sweden	Belgium	Spain	France
	As of December 2023	As of December 2023	As of December 2023	As of December 2023	As of December 2023, PF
Total Portfolio Value	34,379	64,302	18,694	25,970	7,669
Cash	1,586	2,187	1,557	558	1,754
Asset Concentration (Top 3 Assets)	70%	44%	40%	66%	61%
Proportion of Listed Assets	44%	86%	61%	85%	50%
Company Guidance / Financial Target	MVL in the range of 15% - 20% in mid/long term	MVL in the range of 0% - 10%	MVL below 10%	Target MVL ~20%	To retain an investment grade profile
Net Market Value Leverage (MVL)*	PF KDP 26%	2%	11%	15%	8%
(FFO + Interest Expense) / Interest Expense**	3.6x	10.9x	7.4x	8.8x	3.8x

All figures and ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

* Preliminary Moody's adjusted MVL for JAB Holding, including Intermediate Holding Debt. PF KDP pro forma the divestment of 100 million KDP shares.

** Interest coverage is preliminary for JAB Holding and Criteria Caixa.

Source: Company information and Moody's Ratings

Ratings

Exhibit 10

<u>Category</u>	<u>Moody's Rating</u>
JAB HOLDING COMPANY S.A R.L.	
Outlook	Stable
Issuer Rating	Baa1
JAB HOLDINGS B.V.	
Outlook	Stable
Bkd Senior Unsecured	Baa1

Source: Moody's Ratings

© 2024 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 CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. 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 OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS 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, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS 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. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS 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 credit rating process or in preparing its Materials.

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 CREDIT RATING, ASSESSMENT, 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 credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. 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 under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Clasificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

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 657AFSL 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.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

CLIENT SERVICES

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