

CREDIT OPINION

6 August 2024

Update

Send Your Feedback

RATINGS

Groupe Bruxelles Lambert

Domicile	Belgium
Long Term Rating	A1
Type	LT Issuer Rating - 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

Martin Kohlhasse +49.69.70730.719
VP-Sr Credit Officer
martin.kohlhasse@moodys.com

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

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

CLIENT SERVICES

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

Groupe Bruxelles Lambert

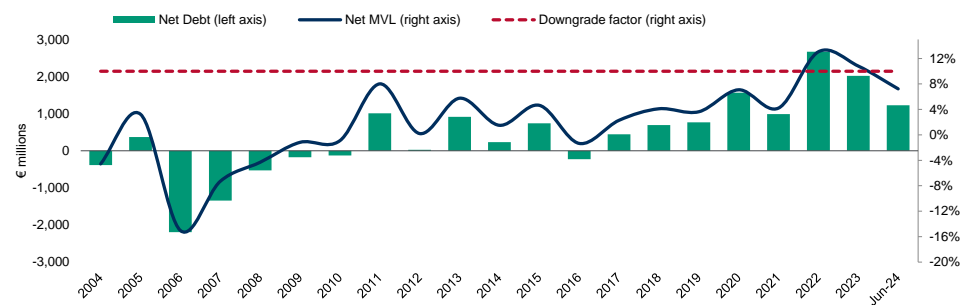
Update following rating affirmation

Summary

The A1 long-term issuer rating of [Groupe Bruxelles Lambert](#) (GBL) reflects its investment portfolio characterized by good end-market and geographic diversification and including listed companies that are leaders in their respective markets with strong credit profiles; its conservative financial policy, illustrated by low MVL coupled with a commitment to maintaining net MVL below 10% through the cycle; and a strong liquidity profile.

Ratings remain somewhat constrained by the moderate asset concentration with the top three assets accounting for about 40% of the portfolio's value and the top five contributing the majority of dividends; weak portfolio investment returns; and the portfolio transition to private (unlisted) assets that typically have a higher risk-return profile and weaker credit quality.

Exhibit 1
A long track record of conservative financial policies underpins the current rating



Sources: Company filings and Moody's Ratings

Credit strengths

- » Active and prudent investment strategy
- » Successful, active asset rotation strategy
- » Portfolio of investments with good end-market and geographic diversification, including market leaders with strong credit profiles
- » Conservative financial policy, illustrated by its track record and commitment of keeping MVL below 10% through the cycle

Credit challenges

- » Smaller size and lower diversification than rated peers, such as Investor AB and Temasek Holdings (Private) Limited
- » Share price discount against portfolio value incentivises higher share of riskier private assets and share buybacks
- » Shift toward private assets reduces liquidity and underlying credit quality

Rating outlook

The stable outlook reflects our expectation that GBL maintains a conservative leverage profile through market cycles. It also factors in commitment to net MVL below 10% through the cycle and restoring if above that threshold for a prolonged time.

Factors that could lead to an upgrade

- » Increase in size of portfolio of investments
- » Increased portfolio diversification with continued high contribution of listed assets to GBL's net asset value
- » Maintenance of conservative financial policies, with its net MVL maintained consistently below 10%, and a strong liquidity position

Factors that could lead to a downgrade

- » Sustainable increase in net MVL above 10% without an action plan to reduce net MVL within 12-18 months
- » Deterioration in credit quality of the underlying portfolio of investments (both across listed and private assets)
- » Deterioration in the group's liquidity profile

Key indicators

Exhibit 2

Groupe Bruxelles Lambert

(in € millions)	2019	2020	2021	2022	2023	Jun-24
Total Asset Value	21,117	22,061	23,491	20,446	18,694	16,994
Net MVL	3.6%	7.1%	4.2%	13.1%	10.8%	7.2%
(FFO + Interest Expense) / Interest Expense	32.5x	21.7x	24.3x	17.4x	7.9x	6.3x

The interest coverage for June 2024 is calculated on a last-12-month basis.

Source: Moody's Ratings

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.

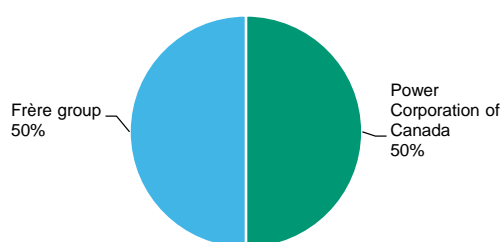
Profile

Groupe Bruxelles Lambert (GBL), headquartered in Brussels, Belgium, is a leading European investment holding company listed on Euronext Brussels (market capitalization as of 1 Aug 2024 of around €9.6 billion). GBL had gross asset value of around €16.3 billion (30 June 2024). The company has investments mainly in listed companies representing 61% of total assets (30 June 2024), private assets (20%), an alternative asset platform with its wholly-owned subsidiary GBL Capital (18%) and Sienna Investment Management, a third-party asset manager (less than 1%).

GBL is ultimately de facto controlled by the Frère and Desmarais families through their jointly owned holding company Pargesa S.A. (Pargesa). Pargesa owned 31.0% of the outstanding shares of GBL but controlled 45.3% of the voting rights as of year-end 2023.

Exhibit 3

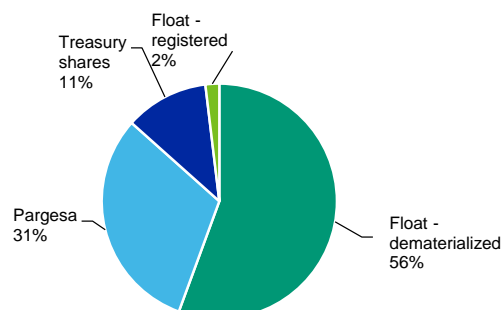
Pargesa's shareholder structure (2023)



Source: Company filings

Exhibit 4

GBL's shareholder structure (2023)



Float-dematerialized: Refers to shares that are no longer in the form of share certificates but are held electronically in a depository system.

Source: Company filings

Detailed credit considerations

Clearly defined and conservative investment strategy

GBL clearly articulates its well-defined investment strategy to shareholders and creditors of the group. GBL invests in market leaders in their respective sectors with long-term growth prospects, high barriers to entry, resilience to the macroeconomic cycle and a fragmented competitive landscape that allows for consolidation opportunities. GBL's key sectors include the consumer goods, industrial, business services, healthcare and digital sectors. GBL's investment strategy aims at capitalizing on long-term identified trends, such as health awareness, consumer experience, digital transformation and disruption, sustainability and resource scarcity. In 2012 GBL started exiting the utilities and oil & gas sectors and expressed that it will also refrain from investing in the financial, real estate, telecom, biotech and regulated industry sectors, notwithstanding the fact that GBL has made an investment in CEPSA through GBL Capital.

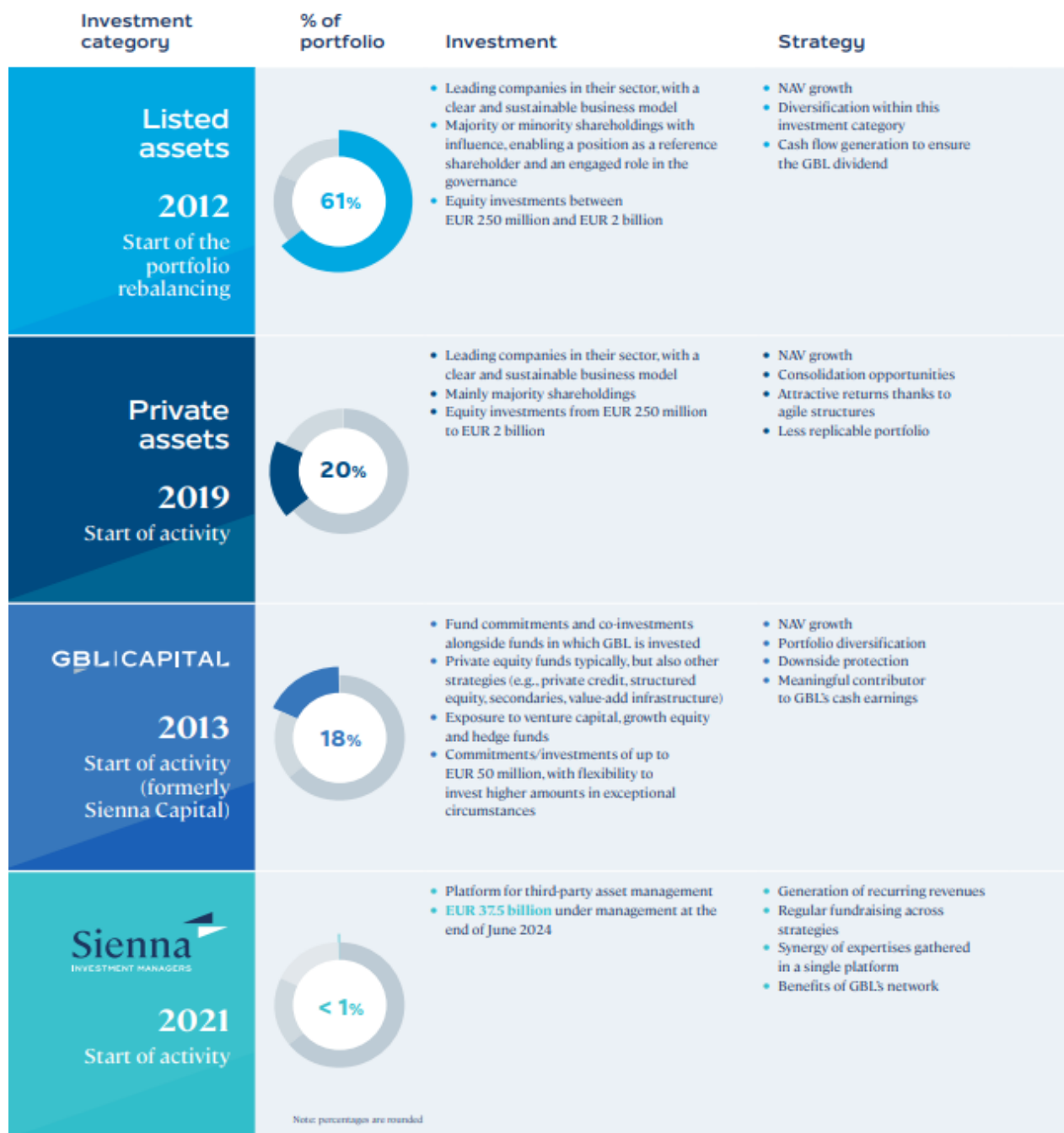
GBL has four defined investment categories: Listed Assets, Private Assets, GBL Capital and Sienna Investment Managers (exhibit 5). Its portfolio of listed assets, accounting for nearly two thirds of the portfolio value, is made up of blue chip multinational companies with investment grade credit profiles. These include [adidas AG](#) (adidas, A3 negative), [Pernod Ricard S.A.](#) (Pernod Ricard, Baa1 stable), [SGS SA](#) (SGS, A3 negative), [Imerys S.A.](#) (Imerys, Baa3 stable), [Concentrix Corporation](#) (Baa3 stable) and Umicore. These investments are the primary source of recurring dividend income to GBL.

Since the start of Private Assets activities in 2019, GBL acquired [Piolin II S.a.r.l.](#) (Parques, B3 stable) in 2019, followed by a majority stake in Canyon Bicycles and in [Stan Holding S.A.S.](#) (Voodoo, B3 stable), a mobile games developer, both in 2021. In 2022 GBL closed the acquisition of [Celeste BidCo B.V.](#) (Affidea, B3 stable), the leading pan-European provider of advanced diagnostic imaging, outpatient, laboratory and cancer care services, and the acquisition of a majority stake in Sanoptis AG, a leading network of ophthalmology clinics across Europe. We believe that the investments into Private Assets are driven by higher return prospects and to close GBL's share price discount against its book value since unlisted assets are impossible to be replicated by GBL's shareholders. However, the credit quality

is lower - typically in the low to mid single B-range for those companies that are rated by us - and thus the propensity to pay regular dividends is also lower compared to GBL's Listed Assets portfolio.

Exhibit 5

Share of private assets has grown to 20% since 2019 when activity started



Source: GBL, 2024 half-year report

GBL's ideal investment size for direct investments is between €250 million and €2 billion. GBL has a mixture of minority and majority stakes in its portfolio. Therefore, the need to be a controlling shareholder is not absolutely critical to its investment philosophy like it is for [JAB Holding Company S.a.r.l.](#) (Baa1 stable). However, GBL aims to have a sufficiently material ownership stake in a company to be an influential shareholder with sufficient representation on the board of directors. Members of GBL's investment team closely monitor all investments to track the operating performance.

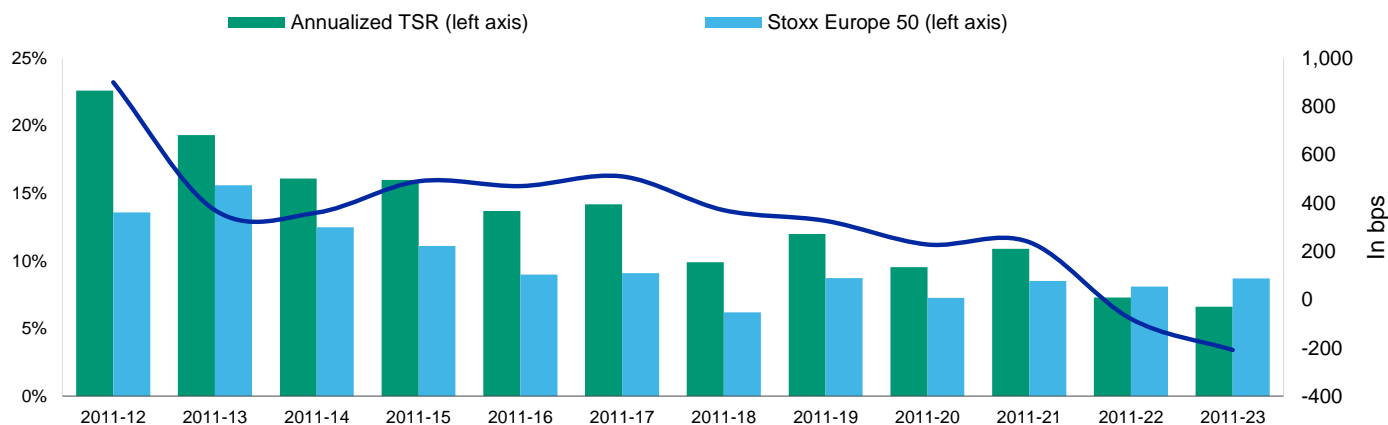
GBL Capital deploys capital by investing in funds, typically private equity funds, but also venture capital, growth equity and hedge funds. Ticket sizes are up to €50 million with flexibility to invest higher amounts in exceptional circumstances. Investments are broadly diversified with a number of funds. Sienna Investment Management, a platform for third-party asset management, is still small with €37.5 billion of assets under management (AuM) as of June 2024. We expect GBL to further grow AuM to benefit from economies of scale as more assets can be spread across its fixed cost base.

GBL's portfolio of listed investments remains of high credit quality with ratings clustered in the Baa1-A3 range and good ability of paying high, recurring dividends through the market cycle, although at a slightly lower absolute level than that before 2012. Compared with other rated European investment holding companies, GBL has had a fairly active investment strategy with a high turnover in its portfolio. GBL exited the oil and gas and utilities sectors starting in 2013, two sectors characterized by high dividend yield stocks, and transitioned to a portfolio much more oriented toward growth and resilience. The rotation also significantly reduced GBL's NAV carbon intensity profile, with greenhouse gas (GHG) emissions scope 3 related to investments at 1.4 million tonnes (Mt) CO₂ equivalent (CO₂e) in FY2023 compared with 34.2Mt CO₂e in FY2012 and a carbon intensity ratio (GHG emissions scope 3 investment / NAV) divided by 32 over the same period.

GBL has had a strong track record of value creation with an annualized TSR of 10.8% (at the end of 2021) on average since the portfolio rebalancing strategy was initiated in 2012. Since 2022, however, GBL has no longer beaten its benchmark.

Exhibit 6

GBL's track record of beating the benchmark broken since 2022

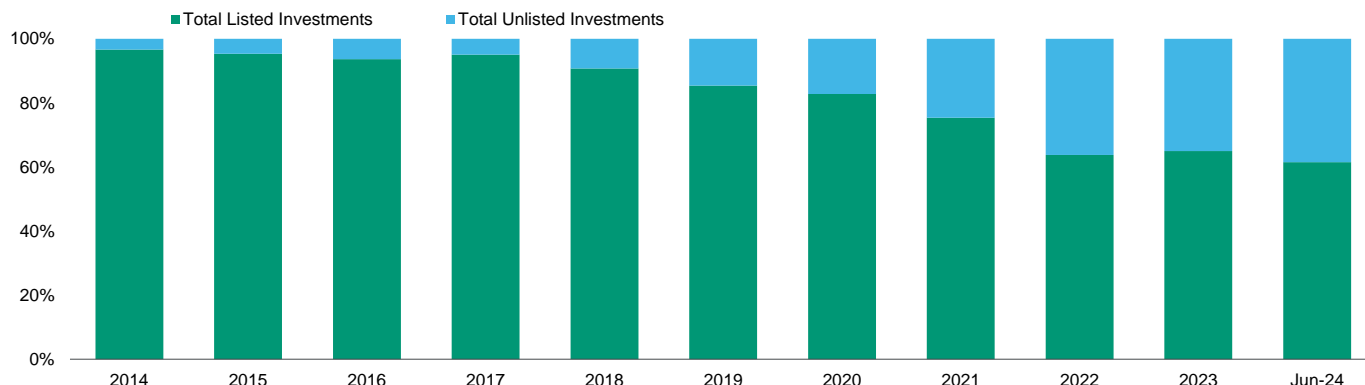


Sources: Company filings and Moody's Ratings

GBL has a high share of listed assets in its portfolio. Listed assets accounted for 59% of the value of its portfolio as of 30 June 2024, which ensures excellent valuation transparency and liquidity. GBL is committed to maintaining a good balance between listed and unlisted assets. The ability to increase the share of its private assets will also depend on the share price performance of its listed portfolio over the next few years.

Exhibit 7

Pivot toward unlisted assets reduces transparency, but the share of listed assets is still sufficiently high



Sources: Company filings and Moody's Ratings

GBL's asset portfolio is fairly well diversified across end markets and geographies

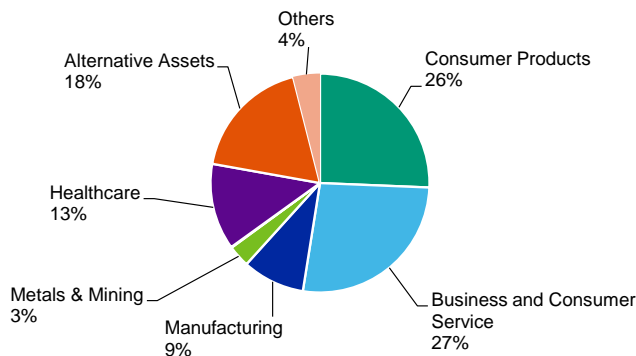
GBL's asset portfolio is reasonably well diversified across business sectors (see Exhibit 8) with exposure to the business consumer goods, business services and industrial sectors. In addition, GBL Capital, a wholly owned subsidiary of GBL, is an alternative investment arm primarily investing in independent asset managers. The defensive nature of the industries in which GBL invests and the credit quality of its investments in their respective industries mitigates the slight concentration across business sectors.

GBL's portfolio of investments is well-diversified geographically because of the global footprint of all its largest investments, with adidas, Pernod Ricard and SGS having very broad geographic exposure. We also highlight the good revenue mix of GBL's portfolio of investments between developed and emerging economies.

Exhibit 8

GBL's investment portfolio is adequately diversified across business sectors

Split of portfolio value by business sector as of June 2024



Source: Company filings and Moody's Ratings

High credit quality of asset portfolio mitigates some modest portfolio concentration

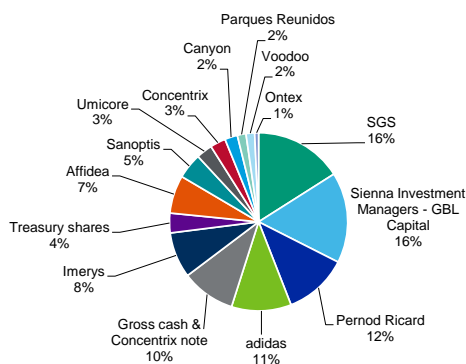
GBL has some modest portfolio concentration, with the top three assets accounting for 38% of the portfolio value (including cash and Concentrix note) as of June 2024. The concentration reduced from 40% at year end 2023, driven by the disposals of adidas shares in the first half of 2024. GBL has entered a forward sales of adidas share for €250 million maturing in October 2024, which will further reduce the concentration.

The concentration is driven by GBL's willingness to focus on a limited number of assets which it can influence through board representation rather than a desire to make concentrated speculations on individual investments, which, along with the strong stock performance of those assets, is mechanically fueling concentration. In addition, GBL's strategy to have a position of influence in leading

companies in their respective sectors implies relatively high ticket sizes and some concentration in light of GBL's still relatively small size.

Exhibit 9

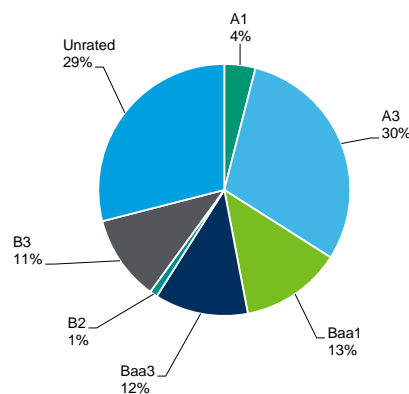
Modest portfolio concentration ...
Split of portfolio value by investment as of June 2024



Source: Company filings and Moody's Ratings

Exhibit 10

... more than mitigated by the credit quality of investments



Source: Company filings and Moody's Ratings

Conservative financial policy, illustrated by a long track record of low net MVL combined with very strong interest cover

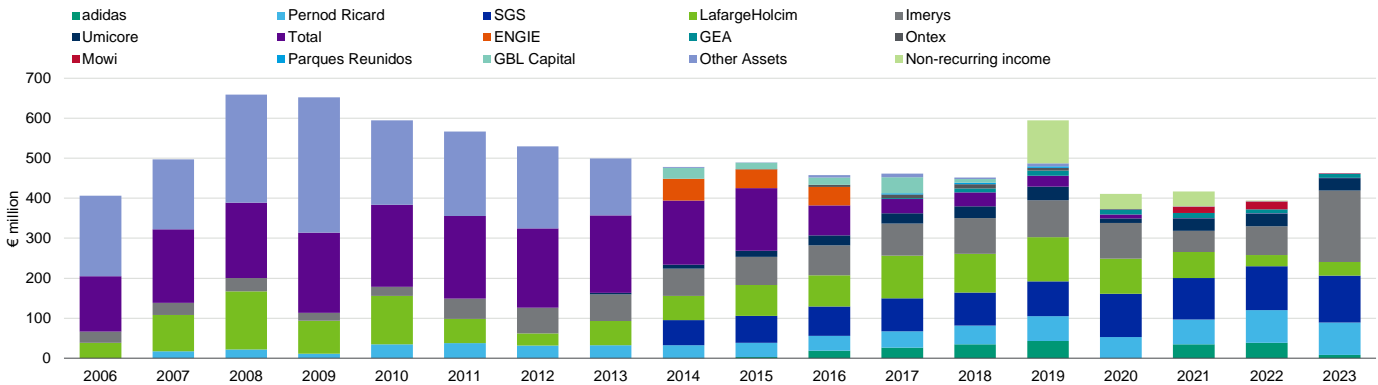
GBL's financial policy has been very conservative over the last 15 years, with its MVL below 10% at all times until 2021. GBL committed to a loan-to-value ratio for the first time in 2020, specifically to maintaining a loan-to-value ratio below 10% through the cycle and that this ratio should not exceed 10% for a prolonged period and should remain below 25% at all times. When net MVL increased to above 10% in 2022-2023, GBL sold stakes in Mowi, GEA, Pernod Ricard and more recently adidas during the first half of 2024 to get back to its target. GBL's conservative financial policies are also underpinned by the conservative posture of the Frère and Desmarais families, who de facto control GBL through their joint holding company Pargesa.

GBL has maintained very strong interest cover of more than 15x over the five years until 2022. In 2023 the interest coverage declined to 7.9x driven by the increase of interest expense. The strong interest cover pertains to the group's very low net leverage, a very low interest charge also partly resulting from the use of exchangeable and convertible bonds to reduce the cost of debt, and the strong dividend income from its portfolio companies. GBL received more than €450 million in dividends on average per year over the last 15 years (see Exhibit 11). This is high compared with €1.2 billion of net debt on GBL's balance sheet as of 30 June 2024.

In the first half of 2024, GBL generated €999 million proceeds with €630 million of capital gains by reducing the stake in adidas from 7.6% by the year end 2023 to 5.1% by the end of June 2024. The company plans to propose a record-high dividend per share of €5.00 for FY 2024 to distribute part of this capital gains to the shareholders. Compared to the dividend for FY 2023 of €2.75 per share, it is a 82% increase and a yield of 7.5%. It is in line with GBL's dividend policy, which is a payout ratio between 75% and 100% of cash earnings as ordinary dividend, and on top an exceptional dividend when deemed appropriate.

Exhibit 11

GBL received a diversified stream of dividends of more than €450 million on average per year over the last 15 years



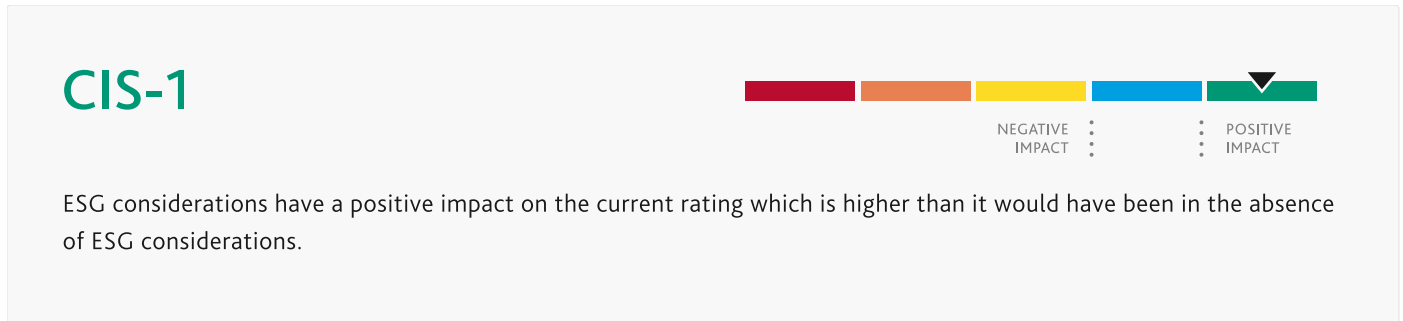
Source: Company filings and Moody's Ratings

ESG considerations

Groupe Bruxelles Lambert's ESG credit impact score is CIS-1

Exhibit 12

ESG credit impact score

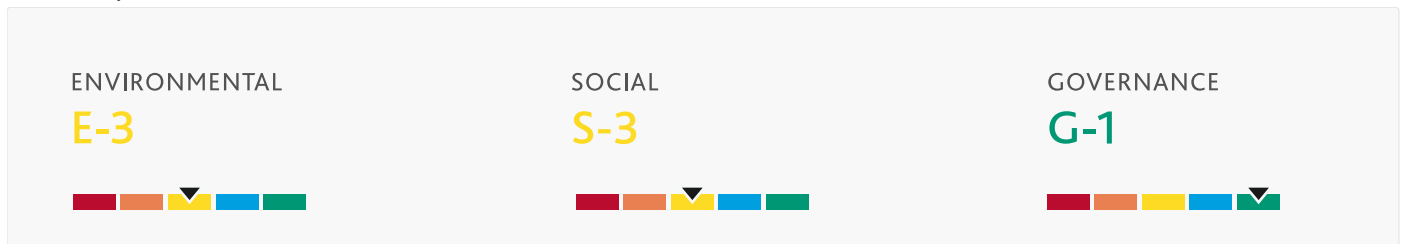


Source: Moody's Ratings

CIS-1 indicates that ESG considerations have a positive impact on the rating. This reflects GBL's strong governance practices, specifically prudent financial management, a long-standing track record and conservative financial policies. It also incorporates GBL's exposure to environmental and social considerations because of the exposures of investees such as Parnod Ricard, SGS, adidas, and Imerys (listed investments) and GBL Capital (unlisted) that account for the majority of GBL's portfolio value.

Exhibit 13

ESG issuer profile scores



Source: Moody's Ratings

Environmental

GBL has indirect exposure to environmental risk through its investee companies. It mostly reflects the investees' exposure to carbon transition, water management, natural capital as well as waste and pollution risks. The issuer initiated a comprehensive portfolio

rotation in excess of €30 billion since 2012, exiting high-yielding companies in the oil & gas and utilities sectors to invest in companies with higher growth potential. The portfolio rotation has also contributed to a lower carbon footprint of investees in GBL's portfolio.

Social

GBL's social risk exposure reflects its indirect exposure through its investee companies. It mostly reflects the investees' risk exposure to health and safety, responsible production as well as demographic & societal trends.

Governance

GBL's active, successful and prudent investment strategy, as well as its very conservative financial policy, support its credit quality. The company has maintained very low market value leverage below 10% for more than 15 years (aside from a temporary increase to 13.1% in 2022 and 10.8% in 2023) and through different market cycles. GBL is ultimately de facto controlled by the Frère and Desmarais families through their jointly owned holding company Pargesa S.A. Pargesa owns 29% of the outstanding shares of GBL but controls 44%, which poses some risk due to concentrated ownership. GBL has committed to a loan to value ratio of below 10% through the cycle and aims for this ratio to remain below 25% at all time and not in excess of 10% for a prolonged period. In addition, GBL's underlying portfolio of investments is of high credit quality with ratings mostly in a range of around A3-Baa3 for the listed part of its portfolio of investments that account for around 60% of the portfolio value.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.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

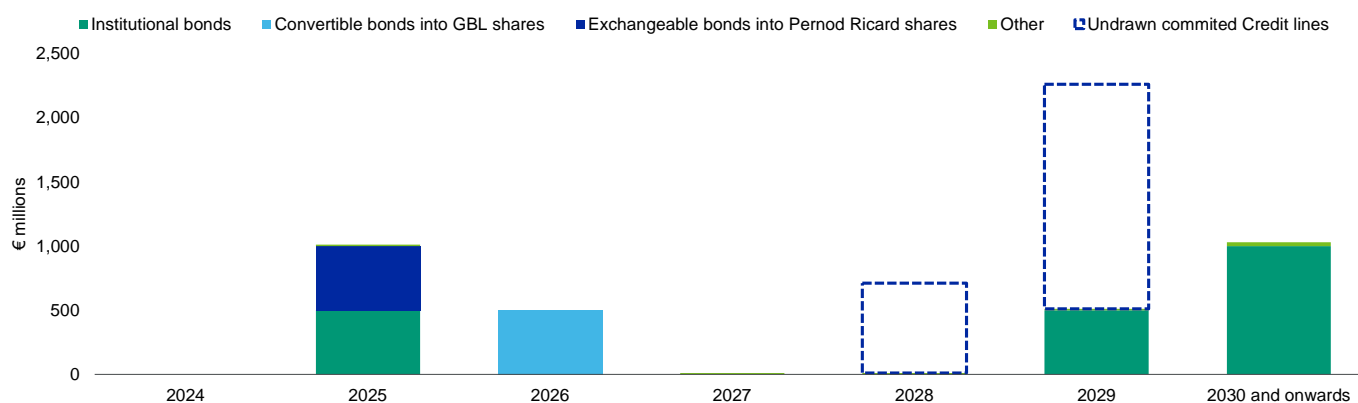
GBL's liquidity is strong with around €1.4 billion of cash as of 30 June 2024, access to €2.45 billion of undrawn revolving credit lines and a Concentrix note valued at €485 million. The availability of the revolving credit facilities is not subject to any financial covenants. The group's senior unsecured, exchangeable and convertible bonds are not subject to maintenance financial covenants.

GBL has a well-spread maturity profile with no institutional bond maturity before 2025. The group's cash and available credit lines as of 30 June 2024 cover more than seven years of debt maturities taking the current 2028 and 2029 maturities of GBL's credit lines into account. Assuming extensions of its credit lines - as has been the case historically - the maturities would even extend to more than nine years. Debt maturities include the €500 million bond exchangeable into Pernod Ricard S.A. (Baa1 stable) shares and a €500 million senior unsecured bond, both due in 2025. The exchangeable bond is currently out of the money.

As a backup form of liquidity, GBL's high proportion of listed assets provides it with the flexibility to more quickly monetize its investments.

Exhibit 14

GBL's debt maturity profile is well spread, with an average maturity of around four years



Source: Company filings and Moody's Ratings

Rating methodology and scorecard factors

The principal rating methodology used in this rating was our Investment Holding Companies and Conglomerates rating methodology, published in April 2023.

The scorecard-indicated outcome of Aa3, based on our current and forward view, is one notch above the assigned rating of A1 and reflects strong metrics such as low MVL and strong coverage ratios.

Exhibit 15

Rating factors

Groupe Bruxelles Lambert

Investment Holding Companies Industry	Current LTM Jun-24		Moody's 12-18 month forward view	
	Measure	Score	Measure	Score
Factor 1 : Investment Strategy (10%)				
a) Investment Strategy	A	A	A	A
Factor 2 : Asset Quality (40%)				
a) Asset Concentration	Baa	Baa	Baa	Baa
b) Geographic Diversity	Aa	Aa	Aa	Aa
c) Business Diversity	Baa	Baa	Baa	Baa
d) Investment Portfolio Transparency	Aa	Aa	Aa	Aa
Factor 3 : Financial Policy (10%)				
a) Financial Policy	Aa	Aa	Aa	Aa
Factor 4 : Estimated Market Value-based Leverage (MVL) (20%)				
a) Estimated Market Value-Based Leverage	Aaa	Aaa	Aaa	Aaa
Factor 5 : Debt Coverage and Liquidity (20%)				
a) (FFO + Interest Expense) / Interest Expense	6.3x	Aa	8x - 10x	Aaa
b) Liquidity	A	A	A	A
Rating:				
a) Scorecard-Indicated Outcome		Aa3		Aa3
b) Actual Rating Assigned				A1

All figures and ratios are based on adjusted financial data and incorporate Global Standard Adjustments for Non-Financial Corporations. LTM = Last 12 months.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

Appendix

Exhibit 16

Peer Comparison

Groupe Bruxelles Lambert

	Groupe Bruxelles Lambert	Investor AB	Criteria Caixa	JAB Holding Company S.a.r.l
Rating & Outlook	A1 Stable	Aa3 Stable	Baa1 Positive	Baa1 Stable
Country of Domicile	Belgium	Sweden	Spain	Luxembourg
	As of June 2024	As of September 2023	As of December 2023	As of December 2023
Total Portfolio Value (in €m)	16,994	58,731	25,970	34,379
Cash (in €m)	1,841	2,087	558	1,586
Asset Concentration (Top 3 Assets)	38%	43%	66%	70%
Proportion of Listed Assets	59%	84%	85%	44%
Company Guidance / Financial Target	MVL below 10%	MVL in the range of 0% - 10%	Target MVL ~10%	MVL in the range of 15% - 20% in mid/long term
Net Market Value Leverage (MVL)	7%	2%	15%	PF KDP 26%
(FFO + Interest Expense) / Interest Expense	6.3x	6.0x	8.5x	3.6x

Source: Moody's Ratings

Ratings

Exhibit 17

<u>Category</u>	<u>Moody's Rating</u>
GRUPE BRUXELLES LAMBERT	
Outlook	Stable
Issuer Rating -Dom Curr	A1
Senior Unsecured -Dom Curr	A1

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