

CREDIT OPINION

19 September 2022

Update



RATINGS

DEMIRE Deutsche Mittelstand Real Estate AG

Domicile	Germany
Long Term Rating	B1
_	
Туре	LT Corporate Family Ratings
Outlook	Negative

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Ana Luz Silva, CFA +49.69.70730.914

Vice President - Senior Analyst

ana.silva@moodys.com

Malak Yaaqoubi +49.69.70730.811 Associate Analyst malak.yaaqoubi@moodys.com

Anke Rindermann +49.69.70730.788

Associate Managing Director anke.rindermann@moodys.com

CLIENT SERVICES

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

DEMIRE Deutsche Mittelstand Real Estate AG

Update following rating downgrade

Summary

On 27 July 2022, we downgraded <u>DEMIRE Deutsche Mittelstand Real Estate AG</u>'s (DEMIRE, B1) corporate family rating (CFR) to B1 from Ba3 and downgraded the rating on the senior unsecured notes due in 2024 to B1 from Ba3. The outlook has also been changed to negative from stable.

The downgrade of DEMIRE's ratings reflects the increased credit risk from the repayment wall under the company's senior unsecured notes maturing in 2024, combined with much weaker capital market conditions amid increasing interest rates and pronounced widening of credit spreads. We expect these factors to significantly increase DEMIRE's funding costs from the current level of 1.67% and thus notably weaken its interest coverage at the point of refinancing from 3.3x for the 12 months that ended June 2022 (Exhibit 1).

In this context, we expect the company to increasingly rely on alternative funding sources such as secured bank lending, which is more cost-efficient, over the next 12-24 months, which we expect will lead to a subsequent reduction in unencumbered assets and thus in the protection level of unsecured bondholders.

The B1 CFR also reflects the main credit challenges arising from the company's private-equity-dominated ownership structure, which has an aggressive financial risk appetite. The company's lower-quality portfolio than that of its higher-rated peers, without any significant environmental credentials, increases investment needs to respond to changing occupier preferences and more stringent environmental regulation, while a weakening economic environment will weigh on DEMIRE's operating performance and vacancy reduction plans.

DEMIRE's CFR remains supported by its relatively small but well-diversified commercial real estate portfolio; the focus of its operations in Germany, a historically more liquid real estate market with a robust funding environment; its integrated business model and active portfolio management supporting solid earnings for the 12 months that ended June 2022; adequate liquidity; and solid credit metrics.

Exhibit 1
The fixed charge coverage is likely to decrease significantly in 2024
Moody's-adjusted leverage and fixed-charge coverage ratio [1]



- [1] All ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations
- [2] This represents Moody's forward view, not the view of the issuer
- [3] Moody's-adjusted EBITDA/fixed charges in 2024 illustrates different scenarios calculated assuming an increase in total cost of debt compared to 2023 of 150 bps, 200 bps, 260 bps, and 320 bps respectively upon refinancing

Source: Moody's Financial Metrics™ and Moody's Investors Service estimate

Credit strengths

- » Relatively small but well-diversified commercial real estate portfolio
- » Focus of its operations in Germany
- » Integrated business model and active portfolio management supporting solid earnings
- » Adequate liquidity

Credit challenges

- » Rising exposure to higher refinancing costs and likely reduction in unencumbered asset base
- » Rising economic uncertainty, which could weigh on vacancy reduction plans, while tightening financial conditions will imply mixed funding sources, which could reduce bondholders' protection
- » High leverage and a private-equity-dominated ownership structure, which has demonstrated an aggressive financial risk appetite
- » Its lower-quality portfolio than that of its higher-rated peers, without environmental credentials, which will increase investment needs to respond to changing occupier preferences and more stringent environmental regulation

Rating outlook

Over the next 12-18 months, we expect DEMIRE to retain leverage and coverage metrics that are rather strong for the new rating category. However, the negative outlook reflects our expectation of a much tougher funding environment, which will challenge the company's refinancing strategy and weigh on its fixed charge coverage ratio, the latest in 2024 when the senior unsecured notes mature. We expect the company to start shoring up liquidity and securing alternative financing options to reduce the refinancing wall in 2024.

The negative outlook further reflects a deteriorating operating environment for commercial real estate companies across Europe because of tightening financial conditions; rising cost of capital leading to subdued commercial real estate investment activity; and

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.moodys.com for the most updated credit rating action information and rating history.

the expected negative pressure on capital values. A potentially sharper economic slowdown could also result in a higher number of business insolvencies, reduced demand for commercial real estate and negative pressure on rents.

Factors that could lead to an upgrade

A rating upgrade is unlikely because of the negative outlook and increased economic risks. However positive pressure could result from:

- » Company's ability to early refinance its debt maturities and through a diversified mix between secured and unsecured instruments, so that the coverage of unsecured properties to unsecured debt does not materially deteriorate
- » Moody's-adjusted fixed charge coverage at above 2.25x
- » Company's ability to maintain leverage largely in line with its financial policy of maximum net loan-to-value (LTV) of 50% in combination with at least stable net debt to EBITDA levels
- » Stable operating performance

Factors that could lead to a downgrade

DEMIRE's rating could come under greater negative pressure if an economic recession would materialize. Other factors that could lead to a downgrade include:

- » The company fails to proactively manage its refinancing activities for the unsecured notes amid the currently disrupted capital markets, hereby elevating refinancing risk
- » Moody's-adjusted fixed charge coverage falling significantly below 2x after refinancing of the 2024 bond.
- » Evidence of further deterioration of financial conditions raising the risk of noncompliance with covenants
- » Failure to maintain adequate liquidity
- » Debt-funded shareholder distributions or acquisitions resulting in DEMIRE departing again from or relaxing its current financial policy
- » Moody's-adjusted gross debt/total assets increasing to above 60%, accompanied by an increasing trend in net debt/EBITDA

Key indicators

Exhibit 2
DEMIRE Deutsche Mittelstand Real Estate AG

DEMIRE Deutsche Mittelstand Real Estate AG

EUR MIIIIons	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	LTM Jun-22	Moody's Forward Vlew (Dec. 2022 - Dec. 2023)
Real Estate Gross Assets	1,094.8	1,148.7	1,378.7	1,677.4	1,625.3	1,705.6	1,688.3	1,550 - 1,750
Amount of Unencumbered Assets	N/A	N/A	N/A	51%	64%	55%	54%	48% - 56%
Debt / Real Estate Gross Assets	60.5%	60.6%	46.3%	49.3%	52.2%	53.6%	53.9%	55% - 60%
Net Debt / EBITDA	13.9x	14.8x	10.9x	12.5x	13.1x	13.4x	13.9x	15.0x - 18.0x
Secured Debt / Real Estate Gross Assets	50.6%	25.4%	20.0%	12.9%	14.7%	17.5%	17.3%	16.0% - 20.0%
EBITDA / Fixed Charges	1.2x	0.9x	1.6x	2.4x	3.3x	3.3x	3.3x	2.75x - 3.5x

^[1] All figures and ratios are calculated using Moody's Estimates and Standard Adjustments.

Source: Moody's Investors Service

^[2] Periods are financial year-end unless indicated. LTM = Last 12 months.

^[3] All ratios are based on "Adjusted" financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

Profile

Headquartered in Langen, Germany, DEMIRE Deutsche Mittelstand Real Estate AG (DEMIRE) is a publicly listed commercial real estate company with a focus on offices in secondary locations across Germany. The company's portfolio has 64 single properties, with a total lettable floor space of around 915,000 square metres (sqm) and an aggregate portfolio value of around €1.4 billion. The company's annualised contracted rent amounted to €80.6 million as of June 2022, with a 4.6-year weighted average lease term (WALT).

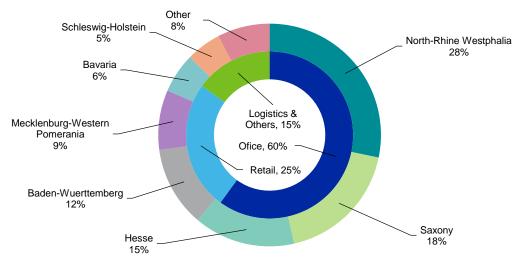
DEMIRE holds an 84.35% stake in Fair Value REIT-AG, which is fully consolidated and accounted for around €334.5 million in assets, or around 20% of DEMIRE's total assets, as of 30 June 2022.

DEMIRE is listed on the Frankfurt stock exchange and had a market capitalisation of around €295.4 million as of 8 September 2022. Apollo-managed funds and Wecken Group together hold around 90.75% of DEMIRE's shares.

Exhibit 3

DEMIRE's portfolio

By gross asset value (GAV)



As of 30 June 2022. Source: Company

Detailed credit considerations

Small but well-diversified commercial real estate portfolio primarily in secondary German locations

DEMIRE's portfolio is spread across several key regions in Germany (see Exhibit 3). The top 20 properties represent around two-thirds of the total investment portfolio, with around 10% located in the "Big Seven" German cities and the remainder in secondary locations.

In 2019, DEMIRE acquired 11 assets, including two portfolios and two single assets, for around €360 million. The transaction includes the acquisition of Roomers Hotel in Frankfurt and Imotex, a fashion distribution centre, in Neuss, for around €118 million. In the same year, the company also divested four non-strategic assets for €46.1 million.

In 2020, DEMIRE sold 18 non-strategic assets located in 12 different cities across Germany for €87.8 million in proceeds.

In July 2021, DEMIRE acquired an around 50% stake in CIELO, an office complex in Frankfurt, from RFR Group, for an overall transaction volume of €276 million. As part of the agreement, DEMIRE has secured a purchase right to the shares of its joint venture partner, RFR Group, as well as the land.

The CIELO property is 100% occupied by <u>Commerzbank AG</u> (senior unsecured A1 negative) under a lease agreement until 2033 with no option to break it and an annual rent of €9.8 million, subject to inflation adjustments.

Following the above transactions, the current portfolio's annual contracted Gross Rental Income (GRI) amounts to €80.6 million, which is derived from more than 800 individual tenants across diverse business sectors.

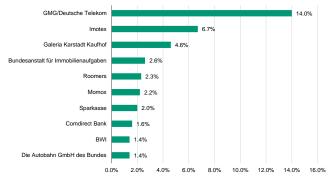
<u>Deutsche Telekom AG</u> (Deutsche Telekom, Baa1 stable) remained the largest tenant as of June 2022 and accounts for around 14% of DEMIRE's GRI, followed by the fashion distributor Imotex with 6.7% and the German retailer Karstadt, currently under restructuring, representing 4.6%. All other tenants account for 2.6% or less of DEMIRE's GRI.

Rental income concentration towards Deutsche Telekom is one of the highest among the company's peers that we rate but mitigated by the strong credit standing of its main tenant and notably reducing since 2018, where it accounted for 30%. We understand based on company information that upcoming lease maturities have been either extended or with some spaces already subleased by Deutsche Telekom and DEMIRE partly onboarding these tenants or signing new leases, mostly with local and federal administration entities.

Tenant credit quality is moderate because of its secondary locations and B-type properties attracting small and medium-sized enterprises (SMEs). This is partly balanced by public-sector tenants comprising more than 10% of DEMIRE's tenant base, whose credit quality is strongly correlated with the sovereign's credit strength. The historical default rate of the company's portfolio is below 2%. Uncollected rents were €1.5 million as of year-end 2021, representing around 1.8% of the 2021 gross rental income. Pandemic-related impairment of receivables was significantly down to €3.5 million from €6.1 million reported in 2020, reflecting a more stable operating environment, especially for the company's retail and hotel properties.

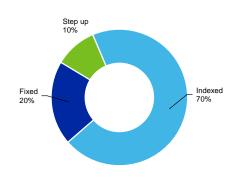
In the current inflationary environment, the company will benefit from a large share of lease agreements that include indexation clauses. However, a sharper macroeconomic deterioration in Germany would hurt commercial landlords' ability to get rent increases.





Source: Company information, as of 30 June 2022

Exhibit 5 Lease types By annualised contracted rent



Source: Company information

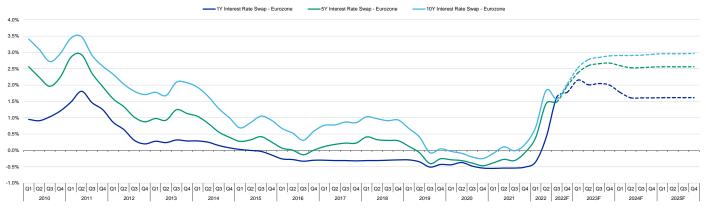
Weaker operating environment for European real estate amid tightening financial conditions and a deteriorating economic environment

The <u>outlook for commercial real estate companies across Europe</u> has turned negative because of higher economic uncertainty, tightening financial conditions and rising cost of capital leading to stalling commercial real estate investment activity, and the expected negative pressure on capital values over the next 12-24 months.

As of the end of Q2 2022, the total investment volume in Germany reached €11.6 billion, down 37% year over year. For H1 2022, the total investment volume was €35.5 billion (up 3% year over year). Real estate investment activity in Germany during Q2 2022 has been significantly affected by concerns over the country's dependence on Russian energy and economic outlook, on top of rising debt costs.

We expect the much weaker capital market conditions with increasing interest rates (see Exhibit 6) and pronounced widening of credit spreads to significantly increase the company's funding costs from the current level of 1.67% and thus notably weaken its interest coverage at the point of refinancing from 3.3x for the 12 months that ended June 2022.

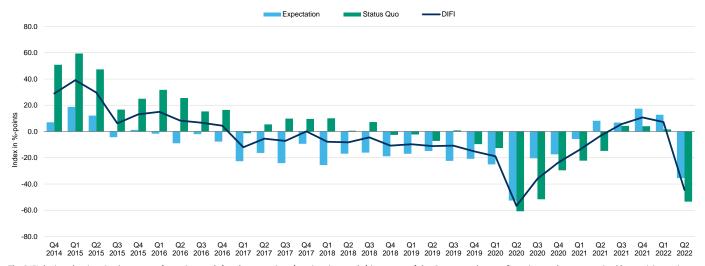
Exhibit 6
Eurozone swap rates have increased since February 2022



Source: Moody's Investors Service and DataBuffet

The German Real Estate Finance Index (DIFI) dropped to -44.5 points in Q2 2022 from 7.2 points in Q1 2022. The drop of 51.7 points is the biggest for the index since the pandemic began (see Exhibit 7). According to the report, the current and future financing situation has deteriorated across all asset types, reflecting investors' concerns over the impact of slower economic growth and inflation, as well as the impact of higher interest rates.

Exhibit 7
The DIFI Index decreased significantly in Q2 2022



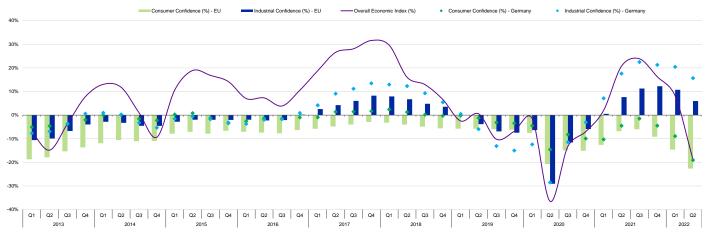
The DIFI depicts the situation/status quo (past six months) and expectations (coming six months) in respect of the German real estate financing market, as perceived by participants in a regular survey. The index is calculated quarterly as an average of the office, retail, logistics and residential segments of the real estate market. The results per segment are based on the percentage shares of positive and negative replies provided by participants regarding the situation/status quo, and their expectations from the German real estate financing market. The DIFI is published jointly by Zentrum für Europäische Wirtschaftsforschung (ZEW) and Jones Lang Lasalle (JLL).

Sources: ZEW and JLL

In this context, we expect the company to start shoring up liquidity and securing alternative financing options to reduce the refinancing wall in 2024. The company will likely increasingly rely on alternative funding sources such as secured bank lending, which is more cost-efficient, over the next 12-24 months, which we expect to lead to a subsequent reduction in unencumbered assets and thus in the protection level of unsecured bondholders.

Additionally, the high inflation and soaring energy prices, which are eroding real household income, in combination with the risk of a sharper economic deceleration across Europe as the energy crisis persists, are straining business and consumer confidence.

Exhibit 8
Investor morale, consumer confidence and industrial confidence have decreased during H1 2022



Overall Economic Index is calculated from a monthly survey of private and institutional financial market investors on their assessment of the current economic situation and their economic expectations over the next six months. Survey responses are usually reported in terms of "percentage balance" - the difference between the percentage of respondents giving positive replies and that of those giving negative replies. Thus, a lower/negative value indicates weaker investor morale, and a higher/positive value indicates stronger investor morale. Sources: Harver Analytics and Moody's Investors Service

We expect the economy in <u>Germany</u> (Aaa stable) to decelerate in H2 2022 with real GDP growth slipping from 2.6% in 2021 to 1.4% in 2022 and further down to -0.4% in 2023.

A potentially sharper economic slowdown could also result in a higher number of business insolvencies, reduced demand for commercial real estate, and negative pressure on rents and thus on property valuations.

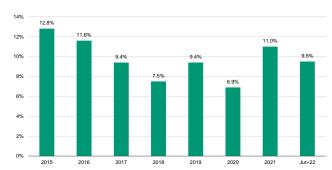
Integrated business model supports solid earnings

DEMIRE benefits from an integrated business model comprising portfolio and asset management. Property and facility management services were outsourced to STRABAG SE in 2018, increasing the company's cost efficiency and operational scalability.

Through its integrated approach, the company is able to actively monitor properties' operating performance and maintain close relationships with tenants, which allows for proactive management of rental contracts and early marketing of expiring leases. This is reflected in the strong letting performance of DEMIRE. The company has signed lease contracts for 144,882 sqm in H1 2022 compared with 121,929 sqm signed in H1 2021.

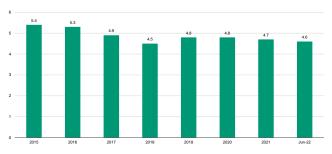
As of June 2022, the company reduced its European Public Real Estate Association (EPRA) vacancy rate based on rental value to 9.5% and expects to further reduce it in the course of 2022 to the levels observed before the pandemic. (see Exhibit 9).

Exhibit 9
Vacancy rate has returned to 2019 level [1]
In percentage terms



[1] EPRA Vacancy rate excludes properties held for sale and project developments Source: Company information

Exhibit 10
WALT remained broadly stable over the last few years
In years



Source: Company information

While DEMIRE successfully disposed smaller properties, we consider its average portfolio quality still below that of its higher-rated peers. This is reflected in a current gross rental yield of 5.7% with an average in-place rent for the total portfolio of €8.2 per sqm per month. This low level of rent compared with prime office rents could in turn offer some buffer against the rising economic uncertainty and inflationary pressures. On the other hand a weakening economic environment will weigh on DEMIRE's operating performance and vacancy reduction plans.

Exhibit 11

Portfolio review

As of 30 June 2022

	No. of properties	GAV (€ m)	GRI p.a. (€ m)	EPRA Vacancy (in %)	WALT (years)
Office	42	843.7	48.8	11.9%	3.7
Retail	17	357.1	23.6	3.2%	5.3
Logistics & Other	5	221.6	8.2	12.9%	8.5
Total	64	1,412.5	80.6	9.5%	4.6

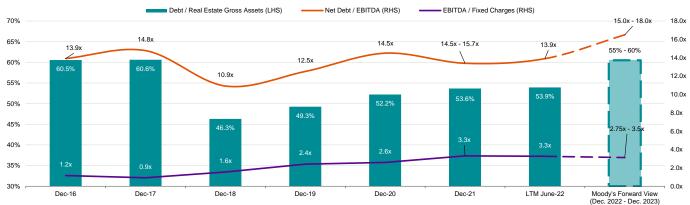
Source: Company information

High leverage ratio, but strongly positioned within its current rating category

We expect Moody's-adjusted gross debt/assets to remain between 48% and 56%. The company remains committed to its publicly communicated financial policy of a reported net loan-to-value (LTV) target of maximum 50%, currently backed up by a strong cash position of €93.5 million as of H1 2022.

We expect earnings to remain broadly stable while net debt/EBITDA at a level between 15x-18x over the next 12-18 months. Fixed-charge coverage ratio will remain at a solid level of 2.75x-3.5x until refinancing of its 2024 notes, supported by previous refinancing activities that significantly reduced financing costs to the current level of 1.67%.

Exhibit 12 Leverage will increase while coverage will remain stable In percentage and times



Source: Moody's Financial Metrics™ and Moody's Investors Service estimate

ESG considerations

ESG considerations have a highly negative credit impact on DEMIRE. This reflects exacerbated governance risks because of the aggressive financial stance of its sponsors favouring shareholder distributions and leaving the company temporarily outside of financial policy during 2021. Credit risk is compounded by the company's high exposure to environmental risks, which represent investment requirements to respond to changing occupier preferences and more stringent environmental regulation and in order to avoid asset obsolescence risk.

Liquidity analysis

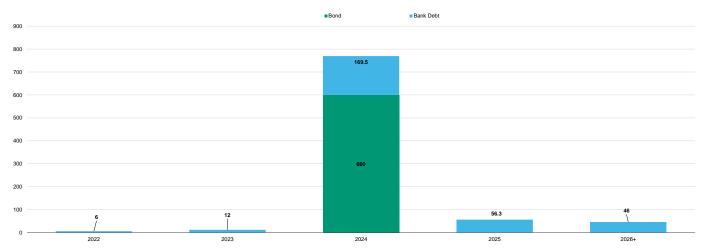
The company has adequate liquidity, which is driven by:

- » cash and cash equivalents of €93.5 million as of June 2022
- » an undrawn committed €6 million revolving credit facility
- » expected annual funds from operations of around €30-40 million (Moody's-defined) in the next 12 to 18 months
- » a pool of around €917 million of unencumbered assets as of June 2022, which provides a source of alternative liquidity

Under the bond documentation, the company is subject to the fulfilment of a maintenance covenant of a minimum interest coverage of 2.0x effective from the end of March 2021, and two debt-incurrence tests of a maximum 60% net LTV and a maximum net secured LTV of 40%.

As of June 2022, DEMIRE was compliant with all of the above with sufficient capacity.

Exhibit 13
The company faces a significant refinance wall in 2024
DEMIRE's debt maturity (in € millions)



As of 30 June 2022. Source: Company

Structural considerations

The current B1 rating of the senior unsecured bond, in line with the long-term CFR, reflects our view that most of the debt is senior unsecured. As of June 2022, senior unsecured creditors were adequately covered with unencumbered assets/unsecured liabilities of 1.5x. Bondholders are subordinated to existing secured debt of around €292 million.

Methodology and scorecard

The following table shows DEMIRE 's scorecard-indicated outcome using the <u>REITs and Other Commercial Real Estate Firms</u> <u>Methodology</u>, with data as of 30 June 2022.

The scorecard-indicated outcome for the 12 months that ended 30 June 2022 and under the forward view are two notches above the assigned rating.

The increased credit risk from the repayment wall under the company's senior unsecured notes maturing in 2024, combined with much weaker capital market conditions, is straining the rating. We expect these factors to significantly increase the company's funding costs and thus notably weaken DEMIRE's interest coverage at the point of refinancing.

In this context, we expect the company to increasingly rely on alternative funding sources such as secured bank lending, which is more cost-efficient, over the next 12-24 months, which we expect to lead to a subsequent reduction in unencumbered assets and thus in the protection level of unsecured bondholders.

Exhibit 14
Rating factors
DEMIRE Deutsche Mittelstand Real Estate AG

REITs and Other Commercial Real Estate Firms Industry Scorecard [1][2]	Curi LTM 06/		Moody's Forward View (Dec. 2022 Dec. 2023) [3]	
Factor 1 : Scale (5%)	Measure	Score	Measure	Score
a) Gross Assets (USD Billion)	\$1.7	Ва	\$1.6 - \$1.8	Ва
Factor 2 : Business Profile (25%)				
a) Market Positioning and Asset Quality	Ва	Ва	Ba	Ва
b) Operating Environment	Baa	Baa	Baa	Baa
Factor 3 : Liquidity and Access To Capital (25%)				
a) Liquidity and Access to Capital	Ва	Ва	Ba	Ва
b) Unencumbered Assets / Gross Assets	54.4%	Ва	48.0% - 56.0%	Ва
Factor 4 : Leverage and Coverage (45%)				
a) Total Debt + Preferred Stock / Gross Assets	53.9%	Ва	55.0% - 60.0%	Ва
b) Net Debt / EBITDA	13.9x	Ca	15.0x - 18.0x	Ca
c) Secured Debt / Gross Assets	17.3%	Baa	16.0% - 20.0%	Baa
d) Fixed Charge Coverage	3.3x	Baa	2.75x - 3.5x	Baa
Rating:				
a) Scorecard-Indicated Outcome		Ba2		Ba2
b) Actual Rating Assigned	·			B1

^[1] All ratios are based on "Adjusted" financial data and incorporate Moody's Global Standard Adjustments for non-financial corporations.

Ratings

Exhibit 15

Category	Moody's Rating
DEMIRE DEUTSCHE MITTELSTAND REAL ESTATE AG	
Outlook	Negative
Corporate Family Rating	B1
Senior Unsecured -Dom Curr	B1
Source: Moody's Investors Service	

^[2] As of 30 June 2022.

^[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. Sources: Moody's Financial Metrics™ and Moody's Investors Service estimates

© 2022 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 BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") 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 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. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ON NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT CONSTITUTE OR PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND 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, ASSESSMENTS, OTHER OPINIONS, AND 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, ASSESSMENTS, OTHER OPINIONS OR 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND 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 its 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 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 fees ranging from \$1,000 to approximately \$5,000,000. 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 and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.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 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 Japan only: Moody's Japan K.K. ("MJKK") 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 MJKK. 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. MJKK 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.

MJKK 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 MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

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

REPORT NUMBER

1337158

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454

