

MOODY'S

INVESTORS SERVICE

CREDIT OPINION

1 June 2022

Update



Send Your Feedback

RATINGS

DEMIRE Deutsche Mittelstand Real Estate AG

Domicile	Germany
Long Term Rating	Ba3
Type	LT Corporate Family Ratings
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

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 to credit analysis

Summary

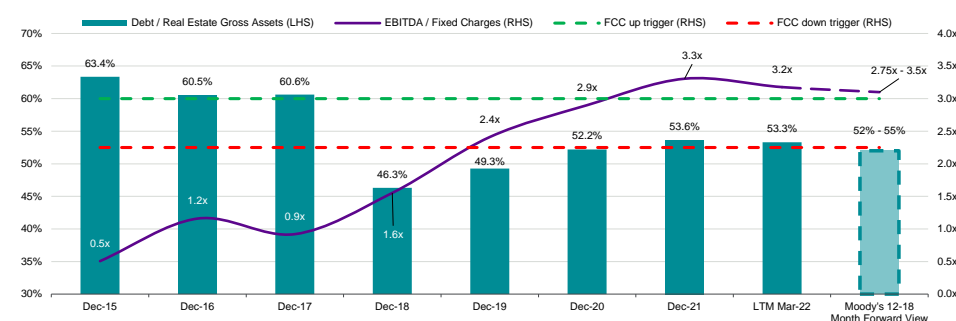
DEMIRE Deutsche Mittelstand Real Estate AG's (DEMIRE Ba3 stable) credit quality is supported by a relatively small but well-diversified commercial real estate portfolio, primarily comprising office properties in secondary locations but also including retail and logistics properties; its focused operations in Germany; a highly liquid real estate market with a robust funding environment; and its integrated business model and active portfolio management, which drives a solid fixed-charge coverage ratio and adequate liquidity.

The Ba3 corporate family rating (CFR) also reflects the company's main credit challenges arising from 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. Rising economic uncertainty could weigh on vacancy reduction plans, while tightening financial conditions will reduce capital availability and increase its cost.

There is a lingering event risk considering the targeted exit of DEMIRE's current shareholders.

Exhibit 1

We expect leverage to increase while coverage remains stable over the next 12-18 months
Moody's-adjusted leverage and fixed-charge coverage ratio



Sources: 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 and no short-dated debt maturities

Credit challenges

- » 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
- » Rising economic uncertainty, which could weigh on vacancy reduction plans, while tightening financial conditions will reduce capital availability and increase its cost

Rating outlook

The stable rating outlook reflects our expectation that DEMIRE's operating results will remain solid, resulting in credit metrics that are rather strongly positioned within our Ba3 rating guidance.

Visibility into future financial policy or capital structure after shareholder exit, in combination with the company's ability to improve occupancy, maintain at least stable leverage and strengthen the environmental credentials of its portfolio with investments funded in a conservative manner, will support any potential positive rating action over the next 12-18 months.

Factors that could lead to an upgrade

A rating upgrade could result from:

- » a track record of sustaining leverage in line with its financial policy
- » Moody's-adjusted debt/total assets sustained below 55%, in combination with net debt/EBITDA returning to the pre-pandemic level
- » sustained solid operating performance, reflected by a growing and higher-quality property portfolio, with at least a stable occupancy ratio
- » Moody's-adjusted fixed-charge coverage sustained at above 2.75x

Factors that could lead to a downgrade

Factors that could lead to a downgrade include:

- » additional shareholder distributions or debt-funded acquisitions resulting in DEMIRE departing from or relaxing its current financial policy
- » a deterioration in the asset quality within the portfolio or an increasing vacancy rate
- » Moody's-adjusted gross debt/total assets increasing to above 60%, accompanied by an increasing trend in net debt/EBITDA
- » Moody's-adjusted fixed charge coverage falling below 2.25x

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.

» the company failing to maintain good liquidity or refinance debt maturities well in advance

Key indicators

Exhibit 2

DEMIRE Deutsche Mittelstand Real Estate AG

EUR Millions	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	LTM Mar-22	Moody's 12-18 month forward view
Real Estate Gross Assets	1,094.8	1,148.7	1,378.7	1,677.4	1,625.3	1,705.6	1,717.6	1,600 - \$1,700
Amount of Unencumbered Assets	N/A	N/A	N/A	51%	64%	55%	55%	53% - 56%
Debt / Real Estate Gross Assets	60.5%	60.6%	46.3%	49.3%	52.2%	53.6%	53.3%	52% - 55%
Net Debt / EBITDA	13.9x	14.8x	10.9x	12.5x	13.1x	13.4x	13.7x	14.0x - 16.0x
Secured Debt / Real Estate Gross Assets	50.6%	25.4%	20.0%	12.9%	14.7%	17.5%	17.3%	16.5% - 18.5%
EBITDA / Fixed Charges	1.2x	0.9x	1.6x	2.4x	3.3x	3.3x	3.2x	2.75x - 3.5x

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

[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.

Source: Moody's Investors Service

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 currently comprises 64 single properties, with a total lettable floor space of around 913,000 square metres (sqm) and an aggregate portfolio value of around €1.4 billion. The company's annualised contracted rent amounted to €79 million as of March 2022, with a 4.7-year weighted average lease term (WALT).

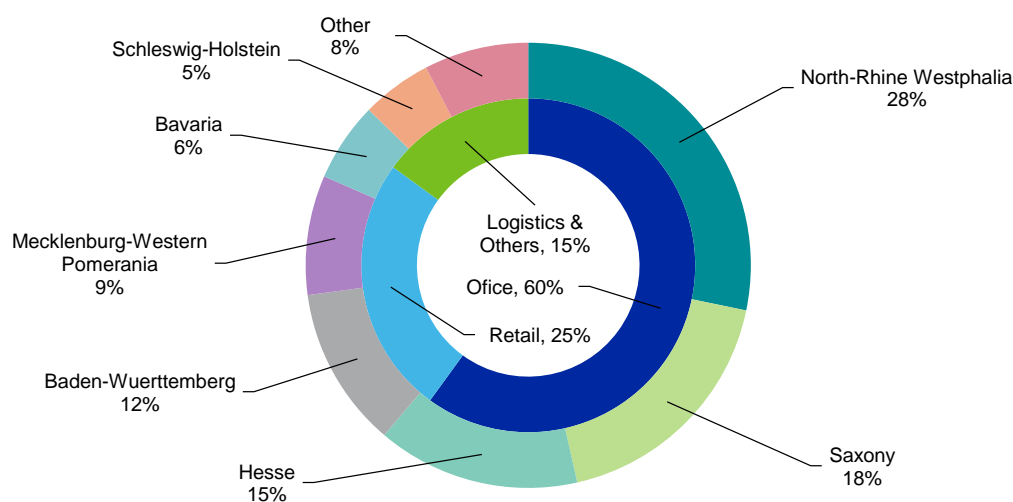
DEMIRE holds an 84.35% stake in Fair Value REIT-AG, which is fully consolidated and accounted for around €340 million in assets, or around 20% of DEMIRE's total assets, as of 31 March 2022.

DEMIRE is listed on the Frankfurt stock exchange and had a market capitalisation of around €451 million as of 24 May 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 31 March 2022.

Source: Company information

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 [Commerzbank AG](#) (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 €79 million, which is derived from more than 800 individual tenants across diverse business sectors.

[Deutsche Telekom AG](#) (Deutsche Telekom, Baa1 stable) remained the largest tenant as of Q1 2022 and accounts for around 14.3% of DEMIRE's GRI, followed by the fashion distributor Imotex with 6.8% and the German retailer Karstadt, currently under restructuring, representing 4.7%. All other tenants account for 2.7% 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.

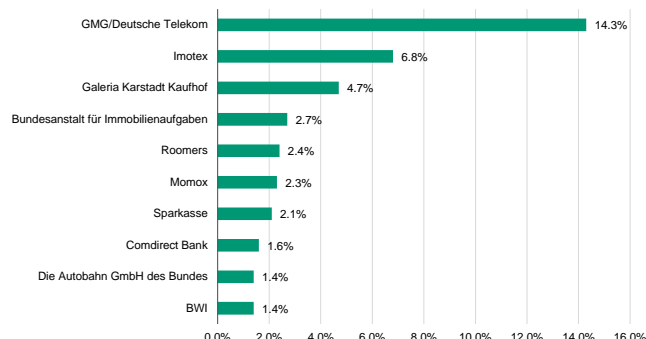
Tenant credit quality is moderate because of its secondary locations and B-type properties attracting small and medium-sized enterprises (SMEs). This is partly balanced by public-sector tenants comprising more than 10% of DEMIRE's tenant base, whose credit quality is strongly correlated with the sovereign's 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.

Exhibit 4

Top 10 tenants

Total GRI of €79 million

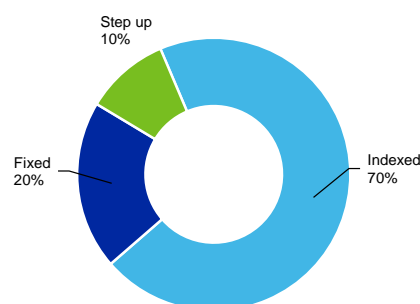


Source: Company information, as of 31 March 2022

Exhibit 5

Lease types

By number of contracts



Source: Company information

Germany's real estate market fundamentals are solid, but macroeconomic uncertainty is rising

Real estate market fundamentals in strong jurisdictions like [Germany](#) (Aaa stable) have proved to be resilient through market cycles. A highly liquid market and a robust funding environment have been supporting demand for real estate assets and underlying valuations. The investment volume for 2021 amounted to around €112 billion, compared with around €80 billion in 2020¹, including €32 billion and €28 billion offices' investments in 2021 and 2020, respectively. Investment volume of around €24 billion as of Q1 2022 was up 50% from that in Q1 2021, demonstrating a strong rebound following the recovery from the pandemic-induced economic contraction. Investments in offices amounted to €10 billion in Q1 2022.

The German economy is supported by its wealthy and highly competitive economy; sound institutional framework; tradition of prudent fiscal policies; and ready market access because of its safe-haven status. The main credit challenges are the high level of openness of the economy that is exposed to global business cycles and trade tensions. In addition, an ageing population weighs on the German economy's growth potential and social security systems.

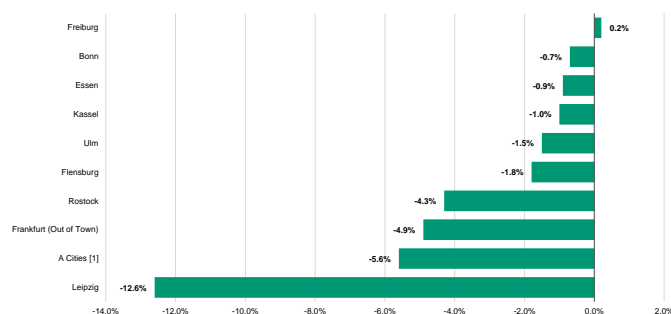
However, the [macroeconomic environment](#) weakened in Q1 2022 because of geopolitical tensions, which will worsen inflationary pressures and likely weigh on consumer and business sentiment. [Weaker investor sentiment and tightening financial markets](#) are the main risks to European real estate companies' credit quality.

In this context, DEMIRE's vacancy reduction plans and overall operating performance could be hurt. Moreover, tightening financial conditions will reduce capital availability and increase its costs.

Weaker rental growth prospects and tightening financial conditions will likely put downward pressure on capital values. Partly balancing that risk is the fact that during the past 10 years capital and rental appreciation in secondary locations have been less pronounced than for prime office segments in the top seven German cities. Also, decreasing office vacancy rates across secondary German markets, little speculative office building activity in secondary locations and rising construction costs limiting new construction activity, should protect the portfolio's occupancy rate.

Exhibit 6

Vacancy rates have decreased in DEMIRE's top 20 cities over the period of 2011 to 2020

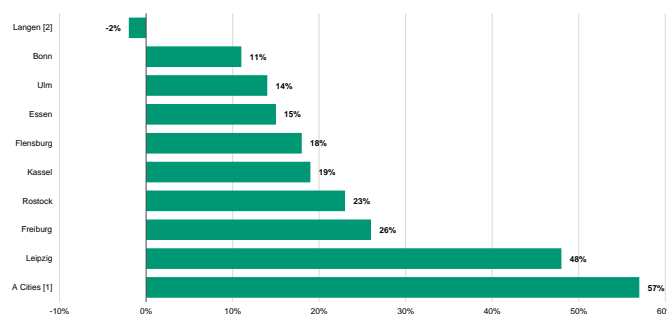


[1] A Cities include Berlin, Hamburg, Munich, Köln, Frankfurt am Main, Stuttgart, and Düsseldorf

Source: Bulwiengesa research, November 2021

Exhibit 7

Robust office employment trends and decreasing vacancy rates have driven the increase in average office prices over the period of 2011 to 2020



[1] A Cities include Berlin, Hamburg, Munich, Köln, Frankfurt am Main, Stuttgart, and Düsseldorf

[2] Langen inclusive Dreieich

Source: Bulwiengesa research, November 2021

The company's diversification into structurally favoured logistics-type properties, although small, could mitigate a potential weakening of office and retail real estate markets.

Integrated business model supports solid earnings and stable occupancy rate across the portfolio

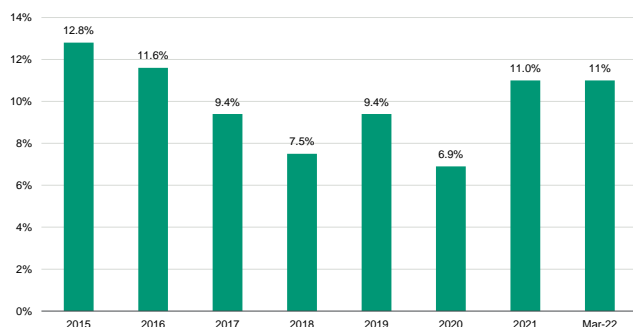
DEMIRE benefits from an integrated business model comprising portfolio and asset management. Property and facility management services were outsourced to STRABAG SE in 2018, increasing the company's cost efficiency and operational scalability.

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 around 43,000 sqm in Q1 2022 compared with 23,265 sqm signed in Q1 2020. The leasing activity in Q1 2022 secures €2.9 million rental income per year with a 4.5 years WALT.

As of March 2022, the company maintained a stable European Public Real Estate Association (EPRA) vacancy rate based on rental value and expects to reduce it in the course of 2022 to the levels observed before the pandemic. (see Exhibit 8).

Exhibit 8

Vacancy rate has declined over the last few years [1]
In percentage terms

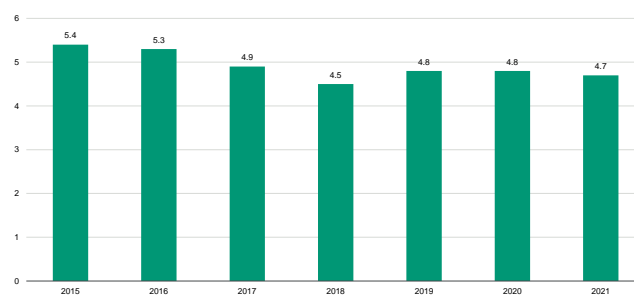


[1] EPRA Vacancy rate excludes properties held for sale and project developments

Source: Company information

Exhibit 9

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 5.6% with an average in-place rent for the total portfolio of €8.1 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.

The top 20 properties represent around 72% of the total portfolio by value.

Exhibit 10

Portfolio review
As of 31 March 2022

	No. of properties	GAV (€ m)	GRI p.a. (€ m)	EPRA Vacancy (in %)	WALT (years)
Office	42	843.7	47.8	12.2%	3.8
Retail	17	357.1	23.0	7.4%	5.3
Logistics & Other	5	221.6	8.2	13.3%	8.0
Total	64	1,412.5	79.0	11.0%	4.7

Source: Company information

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

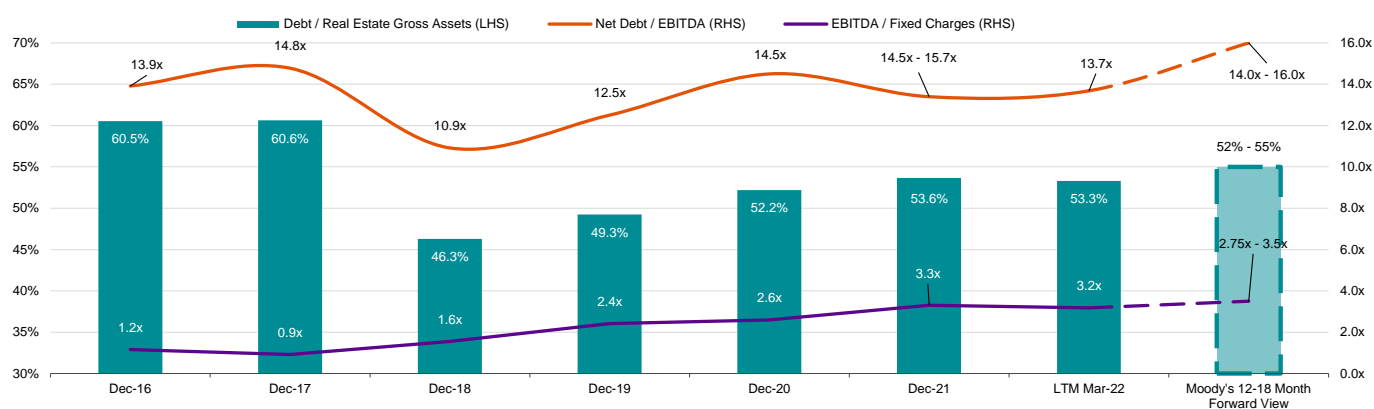
We expect Moody's-adjusted gross debt/assets to remain between 53% and 56%. The company remains committed to its publicly communicated financial policy of a reported net loan-to-value (LTV) target of maximum 50%, currently backed up by a strong cash position of €137 million as of Q1 2022.

We expect earnings to remain broadly stable and support a net debt/EBITDA at a level between 14x-16x over the next 12-18 months. Fixed-charge coverage ratio will remain at a solid level of 2.75x-3.5x, supported by previous refinancing activities that significantly reduced financing costs to the current level of 1.66%. The absence of near-term debt maturities will help the company manage its refinancing risk and cost amid tightening financial conditions.

Over the next 12-18 months, we expect DEMIRE to retain leverage and coverage metrics that positions the company strongly within its Ba3 rating category.

Exhibit 11

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

Environmental

DEMIRE's lower-quality portfolio than that of higher-rated real estate companies with no environmental credentials, makes it more vulnerable to rising regulation on carbon emissions and greater tenant scrutiny with respect to energy performance, while increasing the investment requirements to upgrade its properties to prevent obsolescence risk.

Social

Occupier demand for commercial real estate is vulnerable to rising hybrid-working models and accelerated shift towards e-commerce. Nonessential retail and non-prime office property landlords will need to adjust strategies and increase capital spending to adapt properties to changing consumer and working preferences. The economic and digital transformation will favour the company's logistics operations.

Governance

The private-equity-dominated ownership of DEMIRE reflects negatively on its credit quality. Its majority shareholders, Apollo and Wecken, have demonstrated an aggressive financial stance, tolerant of debt-funded mergers and acquisitions, shareholder distributions and high leverage, which was temporarily outside of the company's publicly communicated financial policy in 2021.

There is a lingering event risk amid the review process initiated by DEMIRE's shareholders, which includes a potential sale of their entire stake to a strategic or financial investor, as communicated by the company in November 2021. The latter could make us change our view on governance risks, depending on the background and financial risk appetite of the new shareholders.

The continuation of a seasoned management team, on board since 2019, provides stability to DEMIRE's business strategy.

Liquidity analysis

The company has adequate liquidity, which is driven by:

- » cash and cash equivalents of €137 million as of 31 March 2022
- » an undrawn committed €6 million revolving credit facility
- » expected funds from operations of €45 million (Moody's-defined)
- » a pool of around €947 million of unencumbered assets, which provides a source of alternative liquidity

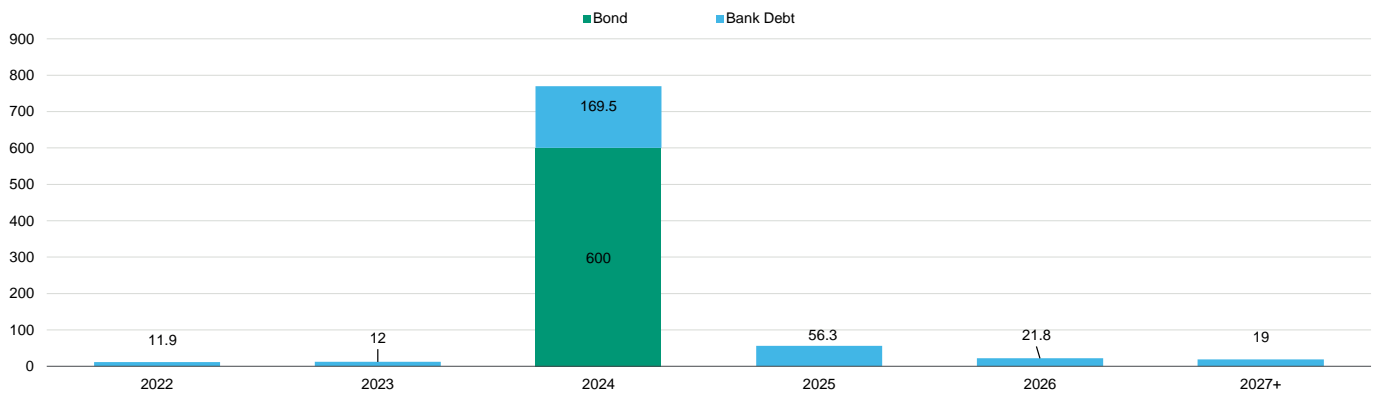
We expect cash resources to cover all the company's cash outflows over the next 12-18 months, including small debt repayments, net committed capital spending of around €38 million, a potential bolt-on acquisition, and expected dividend payments of €33 million or 2022. The company currently has a weighted average debt maturity of 3.7 years with an average cost of debt of 1.66%.

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 31 March 2022, DEMIRE was compliant with all of the above with sufficient capacity.

Exhibit 12

No major refinancing needs until 2024 when the company faces a refinance wall
DEMIRE's debt maturity (in € millions)



As of 31 March 2022.

Source: Company information

Structural considerations

The current Ba3 rating of the senior unsecured bond, in line with the long-term CFR, reflects that most of the debt is senior unsecured. As of December 2021, senior unsecured creditors were adequately covered with unencumbered assets/unsecured liabilities of 1.3x. Bondholders are subordinated to existing secured debt of around €296.5 million.

Methodology and scorecard

Exhibit 13 shows Summit's scorecard-indicated outcome using [REITs and Other Commercial Real Estate Firms Methodology](#), based on data as of 30 June 2021.

The scorecard-indicated outcome for the 12 months that ended 31 March 2022 and under the forward-view are one notch above the assigned rating.

A private-equity-dominated ownership structure and its demonstrably more aggressive financial approach to shareholder distributions than we had previously factored into our assessment are weighing on the assigned rating. No visibility into the future financial policy and capital structure after the shareholder exit limits any positive rating action at this stage.

Exhibit 13

Rating factors

DEMIRE Deutsche Mittelstand Real Estate AG

REITs and Other Commercial Real Estate Firms Industry Scorecard [1][2]		Current LTM 03/31/2022	Moody's 12-18 Month Forward View As of 5/31/2022 [3]	
Factor 1 : Scale (5%)	Measure	Score	Measure	Score
a) Gross Assets (USD Billion)	\$1.9	Ba	\$1.7 - \$1.8	Ba
Factor 2 : Business Profile (25%)				
a) Market Positioning and Asset Quality	Ba	Ba	Ba	Ba
b) Operating Environment	Baa	Baa	Baa	Baa
Factor 3 : Liquidity and Access To Capital (25%)				
a) Liquidity and Access to Capital	Ba	Ba	Ba	Ba
b) Unencumbered Assets / Gross Assets	55.1%	Ba	53% - 56%	Ba
Factor 4 : Leverage and Coverage (45%)				
a) Total Debt + Preferred Stock / Gross Assets	53.3%	Ba	52% - 55%	Ba
b) Net Debt / EBITDA	13.7x	Ca	14x - 16x	Ca
c) Secured Debt / Gross Assets	17.3%	Baa	16.5% - 18.5%	Baa
d) Fixed Charge Coverage	3.2x	Baa	2.75x - 3.5x	Baa
Rating:				
a) Scorecard-Indicated Outcome		Ba2		Ba2
b) Actual Rating Assigned				Ba3

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

[2] As of 31 March 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

Ratings

Exhibit 14

Category	Moody's Rating
DEMIRE DEUTSCHE MITTELSTAND REAL ESTATE AG	
Outlook	Stable
Corporate Family Rating	Ba3
Senior Unsecured -Dom Curr	Ba3

Source: Moody's Investors Service

Appendix

Exhibit 15

Peer comparison

	DEMIRE Deutsche Mittelstand Real Estate AG			Globe Trade Centre S.A.			Summit Properties Limited			Fastpartner AB		
	Ba3 Stable			Ba1 Positive			Ba1 Stable			Baa3 Stable		
	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	LTM
(in EUR million)	Dec-19	Dec-20	Dec-21	Dec-19	Dec-20	Dec-21	Dec-19	Dec-20	Dec-21	Dec-20	Dec-21	Mar-22
Real Estate Gross Assets	1,677	1,625	1,706	2,523	2,481	2,844	1,706	1,637	1,765	3,289	3,698	3,704
Amount of Unencumbered Assets	50.6%	64.0%	55.0%	24.0%	22.9%	61.2%	56.8%	51.6%	67.6%	17.3%	33.1%	33.5%
Debt / Real Estate Gross Assets	49.3%	52.2%	53.6%	49.7%	52.6%	52.2%	34.9%	36.3%	33.4%	47.2%	43.4%	45.0%
Net Debt / EBITDA	12.5x	13.1x	13.4x	8.9x	10.5x	12.8x	5.2x	8.2x	3.6x	12.1x	12.4x	12.5x
Secured Debt / Real Estate Gross Assets	12.9%	14.7%	17.5%	41.8%	43.3%	25.3%	17.3%	17.9%	16.4%	26.8%	19.3%	20.0%
EBITDA / Fixed Charges (YTD)	2.4x	3.3x	3.3x	3.4x	2.7x	2.8x	4.3x	4.0x	3.3x	3.5x	3.7x	4.4x

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments.

[2] FYE= Financial year-end. LTM = Last 12 months. RUR*= Ratings under review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics™

Exhibit 16

Moody's-adjusted debt reconciliation for DEMIRE Deutsche Mittelstand Real Estate AG

(in EUR million)	FYE Dec-16	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21
As Reported Total Debt	662.6	694.9	638.3	826.2	848.4	915.0
Leases	0.8	1.5	0.0	0.0	0.0	0.0
Hybrid Securities	(0.5)	(0.2)	0.0	0.0	0.0	0.0
Moody's Adjusted Total Debt	662.9	696.3	638.3	826.2	848.4	915.0
Cash & Cash Equivalents	(31.3)	(73.9)	(190.4)	(102.1)	(94.9)	(136.4)
Moody's Adjusted Net Debt	631.6	622.4	447.9	724.0	753.6	778.5

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments.

[2] FYE= Financial year-end. LTM = Last 12 months. RUR*= Ratings under review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics™

Exhibit 17

Moody's-adjusted EBITDA reconciliation for DEMIRE Deutsche Mittelstand Real Estate AG

(in EUR million)	FYE Dec-16	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21
As Reported EBITDA	81.2	80.3	117.3	149.5	24.9	99.0
Unusual Items - Income Statement	(41.5)	(46.7)	(88.5)	(99.2)	29.3	(39.8)
Leases	0.2	0.4	0.0	0.0	0.0	0.0
Non-Standard Adjustments	5.6	8.2	12.3	7.6	3.4	(1.1)
Moody's Adjusted EBITDA	45.4	42.1	41.0	57.9	57.6	58.1

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments.

[2] FYE= Financial year-end. LTM = Last 12 months. RUR*= Ratings under review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics™

Endnotes

1 Source: CBRE Research.

© 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 DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 ITS 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.moody.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

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

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

1325822

CLIENT SERVICES

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