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INVESTORS SERVICE

CREDIT OPINION

28 September 2023

Update



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RATINGS

Muenchener Hypothekbank eG

Domicile	Munich, Germany
Long Term CRR	Aa3
Type	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	Aa3
Type	Senior Unsecured - Fgn Curr
Outlook	Stable
Long Term Deposit	Aa3
Type	LT Bank Deposits - Fgn Curr
Outlook	Stable

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

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Muenchener Hypothekbank eG

Update to credit analysis

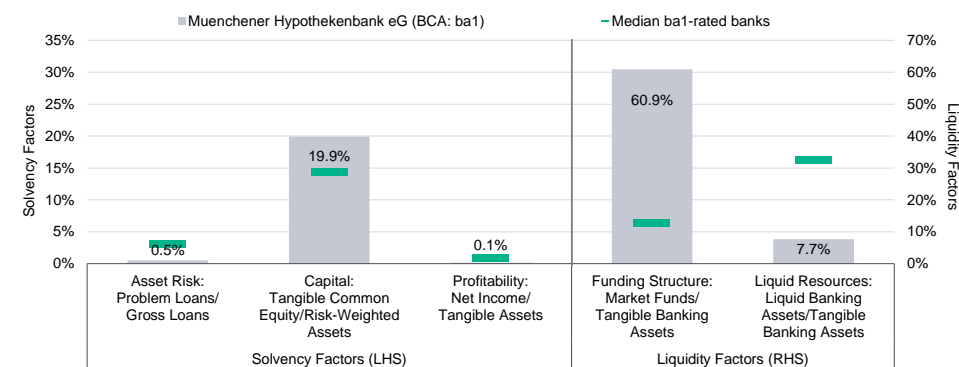
Summary

Muenchener Hypothekbank eG's (Muenchener Hyp) Aa3 deposit and senior unsecured debt ratings reflect the bank's ba1 Baseline Credit Assessment (BCA); a three-notch rating uplift based on the bank's membership in the institutional protection scheme of the German cooperative banking association (Genossenschaftliche FinanzGruppe [G-Finanzgruppe]); three notches of rating uplift from our Advanced Loss Given Failure (LGF) analysis, which incorporates the relative loss severity of a liability class; and an additional one-notch government support uplift because of the bank's membership in the systemically relevant G-Finanzgruppe.

Muenchener Hyp's ba1 BCA is constrained by the bank's extremely focused business model as a cooperative real estate lending specialist, which exposes the bank to considerable concentration risks; its high balance-sheet leverage; and sustained weak profitability. The BCA further reflects Muenchener Hyp's very strong asset quality and satisfactory funding profile, which benefits from the bank's access to ample surplus liquidity in the German cooperative banking sector.

Exhibit 1

Rating Scorecard - Key financial ratios



Source: Moody's Investors Service

Credit strengths

- » Strong asset quality as reflected in its very low problem loan ratio and further supported by the high granularity of its large residential mortgage portfolios in [Germany](#) (Aaa stable) and [Switzerland](#) (Aaa stable)
- » Strong risk-weighted capital metrics
- » Largely matched asset-liability profile and access to sector funds from G-Finanzgruppe to obtain longer-term funding
- » Creditors further benefit from the bank's membership in the institutional protection scheme of G-Finanzgruppe, which is highly likely to support its members

Credit challenges

- » Weak profitability owing to the bank's position within G-Finanzgruppe, which limits the bank's ability to generate capital internally
- » The bank's solvency is vulnerable to the cyclical pressures in the commercial real estate (CRE) and residential real estate markets
- » High balance-sheet leverage implies vulnerability to an extended downturn or market stress
- » Dependence on market funding
- » Limited, but sufficient liquidity buffer

Outlook

- » The stable rating outlook reflects our expectation that Muenchener Hyp's financial profile and liability structure will remain broadly stable over the next 12-18 months.

Factors that could lead to an upgrade

- » An upgrade of Muenchener Hyp's ratings could be prompted by an upgrade of the bank's BCA. Also, Muenchener Hyp's junior senior unsecured debt instruments could receive an additional rating uplift from our Advanced LGF analysis if the bank significantly increases the volume of its capital instruments (subordinated debt and Additional Tier 1 [AT1]), translating into a lower loss severity for this debt class.
- » Muenchener Hyp's BCA could be upgraded following a significant improvement in the bank's leverage ratio on a sustained basis, combined with a substantial increase in its profitability without compromising on credit quality; and a greater diversification of its funding tools.
- » The rating of the subordinated debt instruments could be upgraded if Muenchener Hyp's BCA and Adjusted BCA are upgraded. The rating could also be upgraded if the bank were to issue significant volumes of AT1 instruments, such that it leads to a reduced loss severity for more senior ranking instruments and a higher outcome from our Advanced LGF analysis.

Factors that could lead to a downgrade

- » Downward pressure on Muenchener Hyp's ratings could arise from a downgrade of the bank's BCA; or a significant deterioration in the credit strength of the overall cooperative sector or indications of a weakening in the support from the cooperative sector, in turn, leading to downward pressure on the bank's Adjusted BCA.
- » Muenchener Hyp's BCA could be downgraded as a result of a deterioration in the bank's asset quality, a decline in its risk-weighted capital buffers, a further increase in its dependence on market funding or a decline in its liquidity buffer.

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's.com> for the most updated credit rating action information and rating history.

- » In addition, Muenchener Hyp's debt and deposit ratings could be downgraded if the volume of the bank's junior senior instruments decreases significantly compared with its tangible banking assets. This situation could result in a fewer notches of uplift from our LGF analysis.
- » The rating of the subordinated debt instruments could be downgraded if the BCA and the Adjusted BCA are downgraded.

Key indicators

Exhibit 2

Muenchener Hypothekbank eG (Consolidated Financials) [1]

	12-22 ²	12-21 ²	12-20 ²	12-19 ²	12-18 ²	CAGR/Avg. ³
Total Assets (EUR Billion)	49.8	48.0	44.9	42.3	39.2	6.2 ⁴
Total Assets (USD Billion)	53.2	54.4	54.9	47.5	44.9	4.4 ⁴
Tangible Common Equity (EUR Billion)	1.8	1.7	1.7	1.6	1.5	4.9 ⁴
Tangible Common Equity (USD Billion)	1.9	2.0	2.0	1.8	1.7	3.1 ⁴
Problem Loans / Gross Loans (%)	0.5	0.5	0.5	0.5	0.3	0.5 ⁵
Tangible Common Equity / Risk Weighted Assets (%)	19.9	21.8	22.7	22.8	23.3	22.1 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	11.9	12.3	11.8	12.1	7.3	11.1 ⁵
Net Interest Margin (%)	0.9	0.9	0.8	0.7	0.7	0.8 ⁵
PPI / Average RWA (%)	2.0	1.7	1.4	1.0	1.5	1.5 ⁶
Net Income / Tangible Assets (%)	0.1	0.1	0.1	0.1	0.1	0.1 ⁵
Cost / Income Ratio (%)	47.3	51.2	56.2	67.5	58.8	56.2 ⁵
Market Funds / Tangible Banking Assets (%)	60.9	63.4	62.6	58.8	60.1	61.2 ⁵
Liquid Banking Assets / Tangible Banking Assets (%)	7.7	9.2	8.9	9.7	11.4	9.4 ⁵
Gross Loans / Due to Customers (%)	2430.5	2656.5	3833.0	3365.2	6061.3	3669.3 ⁵

[–] Further to the publication of our revised methodology in July 2021, only ratios from annual 2020 onwards included in this report reflect the change in analytical treatment of the "high-trigger" Additional Tier 1 instruments. [1] All figures and ratios are adjusted using Moody's standard adjustments. [2] Basel III - fully loaded or transitional phase-in; LOCAL GAAP. [3] May include rounding differences because of the scale of reported amounts. [4] Compound annual growth rate (%) based on the periods for the latest accounting regime. [5] Simple average of periods for the latest accounting regime. [6] Simple average of Basel III periods.

Sources: Moody's Investors Service and company filings

Profile

With a reported asset base of €52.4 billion as of year-end 2022 (€54.2 billion including M.M.Warburg & CO Hypothekbank), Muenchener Hyp is a medium-sized mortgage lender in Germany. The bank operates largely in its home market Germany, where it has a well-established market position in real estate finance. The bank provides residential and commercial lending, syndicated loans and mortgage-related capital market services. Muenchener Hyp is headquartered in Munich and has regional offices in 11 German cities, along with cooperation partners in Paris and Madrid. The bank had 630 employees as of year-end 2022.

The bank is a member of G-Finanzgruppe and is collectively owned by the primary banks in the German cooperative banking sector and individual members.

In November 2022 Muenchener Hyp has announced the acquisition of M.M.Warburg & CO Hypothekbank AG (Warburg Hypothekbank). The share transfer of Warburg Hypothekbank to Muenchener Hyp was completed on 1 June 2023. The legal merger took effect retrospectively on 1 January 2023. With this transaction Muenchener Hyp effectively assumed Warburg Hypothekbank's total assets of around €1.8 billion.

Macro Profile of Strong +

Muenchener Hyp is focused on the German market and is also active in the Swiss residential market. The bank's assigned Strong + weighted Macro Profile is at the same level as Germany's Strong + Macro Profile.

Detailed credit considerations

Adequate capitalisation constrained by weak leverage ratio

We assign a baa2 Capital score to Muenchener Hyp, which includes substantial negative adjustments to the aa2 initial score. Our assessment balances the bank's relatively strong regulatory capital ratios with the risk to its capital stemming from its weak absolute

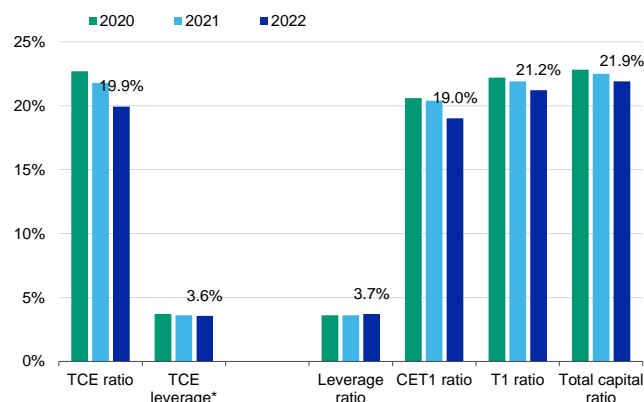
capital levels and, therefore, its high leverage in relation to the balance sheet. This risk is mitigated by the bank's proven access to capital from its owners within G-Finanzgruppe.

In addition, the baa2 score factors in the prospect of a significant reduction in the regulatory capital ratios for Muenchener Hyp, given the planned harmonisation of risk weights under Basel III finalisation for banks using the internal ratings-based approach (IRBA) for the calculation of risk-weighted assets (RWA). This factor will significantly affect Muenchener Hyp, given the ultralight risk weights assigned to large portions of its lending book. However, the bank continues to benefit from its access to capital from its owners, and it will have time to prepare, given the five-year phase-in period for this regulatory reform starting from 2022.

Muenchener Hyp's tangible common equity (TCE) ratio declined to 19.9% as of year-end 2022 from 21.8% in 2021 (Exhibit 3), driven by the increase in RWA by 11.8% to €8.9 billion in 2022, while its TCE grew by 2.4% over the same period. The bank has also reported a lower CET1 capital ratio of 19.0% as of year-end 2022, down from 20.4% as of year-end 2021. In the first half of 2023 Muenchener Hyp the CET1 capital ratio further declined to 17.7%, driven by a further increase in RWA to €9.8 billion as of end of June 2023. The bank's regulatory leverage ratio slightly increased to 3.7% in 2022 (H1 2023: 3.7%) from 3.6% in 2021. Nevertheless, Muenchener Hyp's capitalisation provides sufficient leeway to absorb an unexpected weakness in its asset performance and serves as a substantial buffer compared with the regulatory minimums.

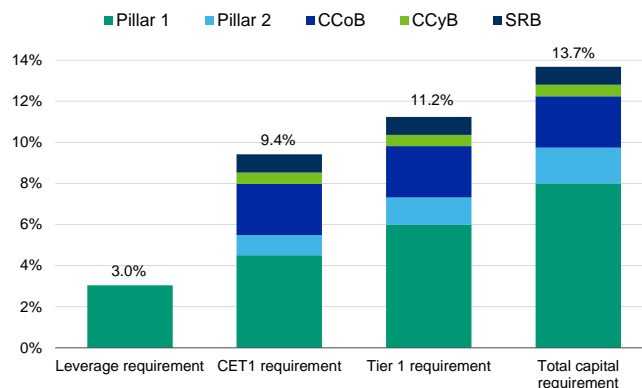
From 2023, the bank needs to maintain a CET1 capital ratio of 9.4% (year-end 2022: 8.03%), consisting of a pillar one requirement of 4.5%, a 2.5% capital conservation buffer, a 0.98% Pillar 2 requirement, a countercyclical buffer of 0.55% (up from 0.05% as of year-end 2022). Effective February 2023, the regulator introduced an additional systemic risk buffer (SRB) of 0.88% to limit potential risks arising from domestic residential housing loans (Exhibit 4).

Exhibit 3
CET1 and TCE ratios



TCE = Tangible common equity (Moody's calculation; excludes high-trigger AT1 instruments for all periods). CET1 = Common Equity Tier 1; T1 = Tier 1 capital.
Sources: Company reports and Moody's Investors Service

Exhibit 4
Capital substantially exceeded regulatory requirements (capital requirements as of 2023)



CCoB = Capital conservation buffer; CCyB = Countercyclical capital buffer; SIIB = Systemically important institutions buffer; SRB = Systemic risk buffer.
Source: Company reports

Muenchener Hyp's very low average risk weight compared with total assets is attributable to the bank's extended use of internal models to determine the risk weight of its mortgage portfolio. The proposed regulatory amendments to the calculation of RWA, which, among other purposes, are designed to limit the benefits of the application of the internal model to RWA calculation, will expectedly result in significantly lower regulatory capital ratios. Notwithstanding the regulatory changes ahead, we expect Muenchener Hyp's ratios to remain at satisfactory levels because the bank has already taken steps to counter the impact, such as the issuance of AT1 instruments of CHF125 million in 2019, CHF75 million in May 2022 and further issuance of Tier 2 instruments in 2023.

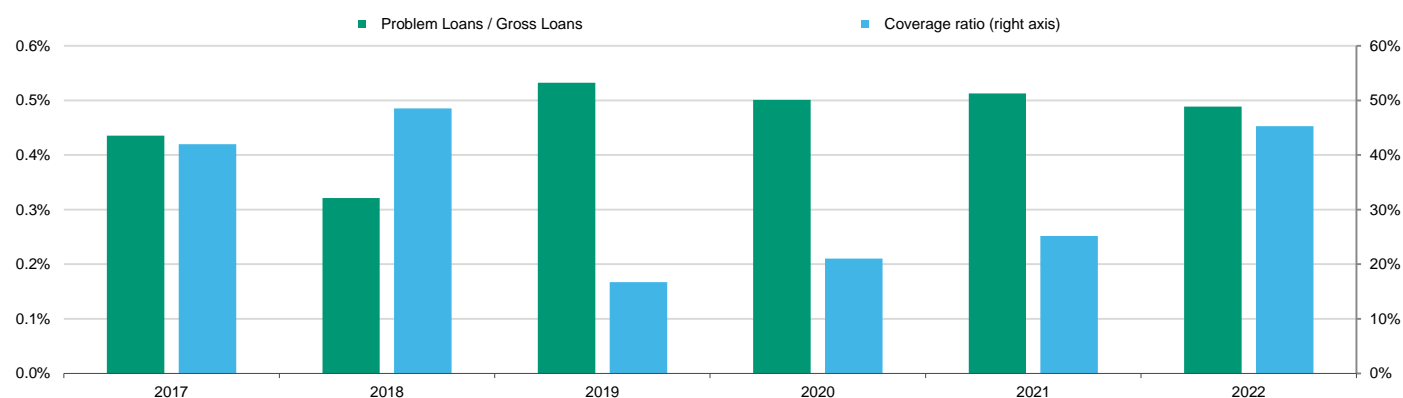
Asset base is supported by high portfolio granularity, although CRE finance poses concentration risks

Muenchener Hyp's overall good asset quality is one of the bank's main credit strengths, reflected in the assigned baa1 Asset Risk score, five notches below the aa2 initial score. Our negative adjustment primarily reflects the bank's high risk concentration in the CRE sector, which makes up almost 9x its TCE.

Since 2019, Muenchener Hyp's problem loan ratio has been consistently around 0.5%, largely stemming from the private households segment and resulting business focus on residential lending. The bank's portfolio also benefits from conservative lending criteria and resulting low loan-to-value ratios and strongly improved and now adequate cash coverage ratios (Exhibit 5). In the residential segment the average LTV (as of 30.06.2023) was 54.3%, while for the CRE it was 55.5%, with a very low share of LTVs above 80% in both segments.

Nevertheless, the bank exhibits high concentrations to residential but also non-residential, non-recourse business, exposing it to valuation swings which could lead to quickly rising LTVs in an adverse scenario.

Exhibit 5

Problem loans remained low at 0.5% of total problem loans in 2022**Coverage ratio is solid**

The problem loan ratio is in accordance with Moody's definition.

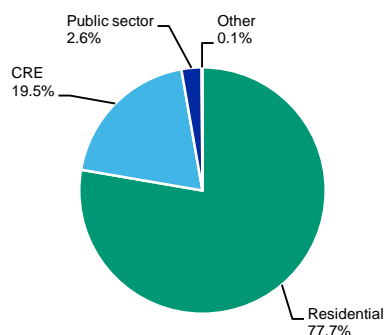
Sources: Company reports and Moody's Investors Service

Muenchener Hyp's residential mortgage portfolio accounted for 78% of its lending portfolio as of the end of 2022 while CRE accounted for around 19.5% and public-sector lending for 2.6% (Exhibit 6). In 2022, the bank's residential mortgage loans grew by 5.8% to €35.3 billion and CRE loans grew 8% to €8.9 billion since 2021.

Non-domestic loans accounted for 22% of Muenchener Hyp's mortgage loan book as of year-end 2022. The bank's international CRE exposures, amounting to €4.1 billion, or around 10% of the lending portfolio, are broadly diversified by country, with loans and commitments in the [United States of America](#) (Aaa stable) [United Kingdom](#) (Aa3 negative), the [Netherlands](#) (Aaa stable), [France](#) (Aa2 stable) and [Spain](#) (Baa1 stable) representing the biggest single-country exposures. The bank's Swiss residential mortgage portfolio accounts for 12% of the lending portfolio and remained broadly stable at €5.3 billion in 2022 as compared with €5.2 billion in 2021.

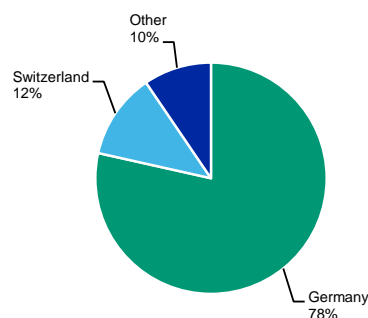
Loan growth has significantly slowed down in 2023 in both segments residential and CRE as weaker demand reflects higher interest rates and macroeconomic uncertainties.

Exhibit 6

Portfolio composition by sector, based on year-end 2022 data

Source: Company reports

Exhibit 7

Portfolio composition by country, based on year-end 2022 data

All country segments with a share lower than 2% are added to "Other".
Source: Company reports

Low profitability reflects the specific business model

We assign a b2 Profitability score to Muenchener Hyp, currently one notch below the initial b1 score, reflecting the fact that the bank's profitability has only started to improve in 2022 after a prolonged period of low profitability in the ultra-low interest rate environment.

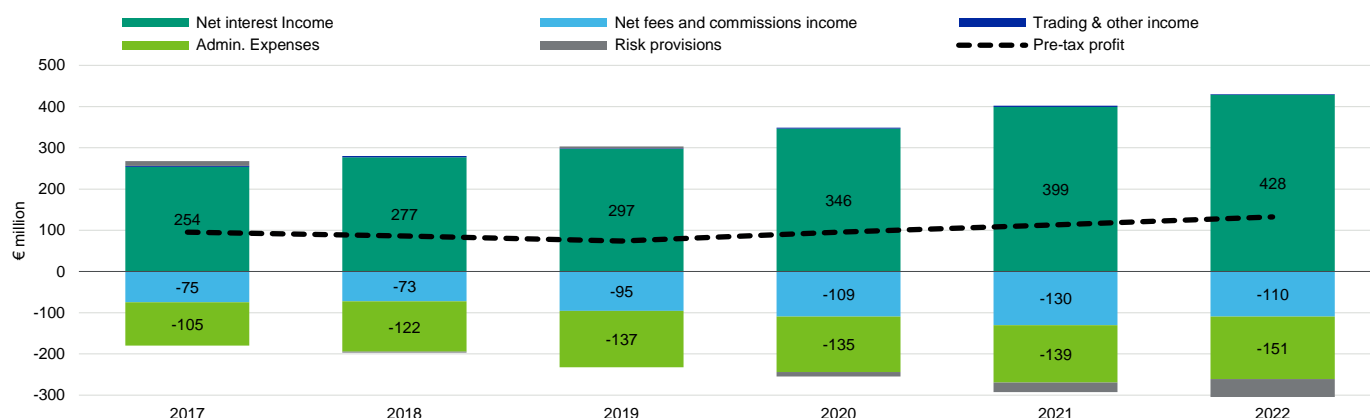
Historically, the bank's profitability has been low, displaying a return on assets of just 0.1% over the past four years, which principally reflects its focus on low-yielding residential mortgages and its specific cooperative business model since the bank pays commission fees to its cooperative members, which in turn serve as Muenchener Hyp's sales network. As a result, the bank's profitability has only been sufficient to cover historically limited loan losses in the past, exposing it to higher loan losses – and meaningfully lower profitability – in case of a more meaningful deterioration in underlying asset quality.

In 2022, Muenchener Hyp reported a net income of €68.1 million, up from €59.1 million a year earlier, largely driven by stronger net interest income but also by lower commission fees paid to the cooperative sales network: The bank's net interest income increased by 7% from 2021 to €428 million in 2022. The bank's negative net commission income decreased to €109.7 million as of year-end 2022 from €130.2 million in 2021, reflecting the bank's reduced new business volume in 2022. The bank's administrative expenses moderately increased by €12.4 million to €151.5 million in 2022. The increase is attributable to the acquisition of Warburg Hypothekbank and higher bank levy.

In 2022, the bank booked significantly higher loan loss provisions of €45.5 million as compared with €23.5 million in 2021, largely reflecting the expectation of a more challenging economic environment. For 2022, the bank's improved net income indicates that the increase in net interest income and the reduced volume of commissions paid have more than offset the adverse developments in administrative expenses and in loan loss provisions.

In the first half of 2023, Munchener Hyp has reported an extraordinary strong net income of €53.5 million and is expecting to reach €80-100 million in net profits for the full year 2023. Despite slower loan growth and higher expected risk provisions, the bank disproportionately benefits from increased interest rates on the one hand and from lower commission fees due to reduced new business volumes on the other hand.

Exhibit 8

Higher interest earnings and reduced commission expenses drive pretax profit

Sources: Company reports and Moody's Investors Service

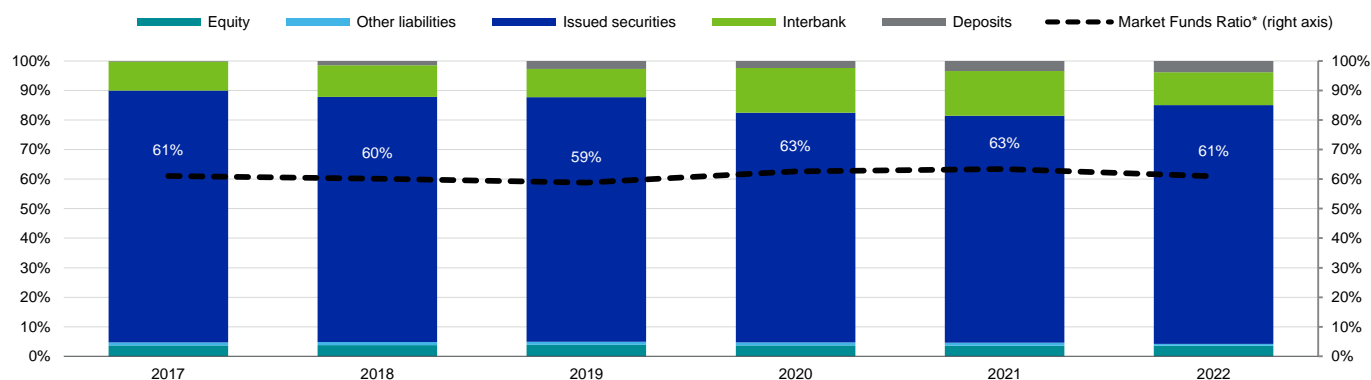
Funding structure benefits from a well-matched maturity profile and access to sector funds

We assign a Funding Structure score of ba1 to Muenchener Hyp, six notches above the caa1 initial score. The positive adjustment reflects Muenchener Hyp's access to funds of the German cooperative banking sector for the issuance of its covered bonds and other medium-term notes and the bank's overall more limited refinancing risk because the maturity profile of its assets is well matched by the maturities of its covered bond programmes.

Most of Muenchener Hyp's funding is raised through mortgage and public covered bonds, totaling to €33.2 billion as of year-end 2022. The bank's funding profile further comprised senior unsecured liabilities of €5.7 billion and junior senior unsecured liabilities of €6.2 billion as of year-end 2022. Muenchener Hyp started to build a retail deposit franchise in March 2018 to diversify its funding sources, although the share of deposits within its funding profile remains very limited to date at around €1.9 billion.

In the absence of a fully developed deposit franchise, Muenchener Hyp mainly depends on the availability of the aforementioned market funding. However, in light of Muenchener Hyp's firm integration in the German cooperative sector, the continuous availability of longer-term funds from sector members ensures a higher degree of stability in the bank's funding profile. The bank's net stable funding ratio was satisfactory at 110% as of June 2023 (December 2022: 107.2%).

Exhibit 9

The bank's market funding has been stable**Composition of market funding sources**

*Market funding ratio = Market funds/tangible banking assets.

Sources: Company reports and Moody's Investors Service

Liquidity remains satisfactory

Muenchener Hyp's Liquid Resources score is ba1, one notch above the ba2 initial score. The positive adjustment takes into account the bank's ability to generate additional liquidity through its covered bond programmes, largely raised from within G-Finanzgruppe. The assigned score also reflects the fact that some assets are encumbered assets in Muenchener Hyp's liquidity reserve.

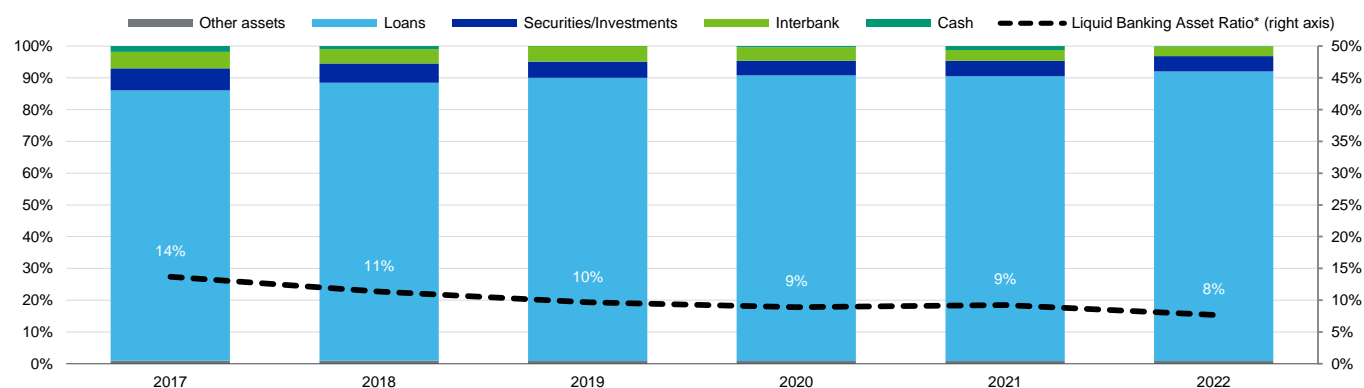
As of 31 December 2022, Muenchener Hyp's liquid resources comprised a very low €39 million cash reserve (year-end 2021: €575 million), €1.5 billion due from banks and a €2.3 billion liquid securities portfolio which includes largely longer-dated securities. Overall, Muenchener Hyp maintains only modest liquid resources because of its limited liquidity need as a mortgage lender and also owing it to its well-matched and diversified maturity profile and limited volume of maturing liabilities in the coming years.

However, Muenchener Hyp could generate additional liquidity through the issuance of covered bonds, in case of need. As of March 2023 and based on an outstanding issuance volume of €31.7 billion, the over-collateralisation in [Muenchener Hyp's mortgage cover pool](#) was 15.1% on an unstressed present value basis. Therefore, the bank has some leeway in using its existing cover pool to quickly generate fresh liquidity through additional issuance of covered bonds, in case of need.

Exhibit 10

Liquid resources ratio has been declining since 2017

Composition of liquid assets



*Liquid banking assets ratio = Liquid assets/tangible banking assets.
Sources: Company reports and Moody's Investors Service

Business model-related risks constrain the BCA

We adjust Muenchener Hyp's baa3 Financial Profile score downward by one notch because of the bank's low revenue and income diversification outside its residential and commercial mortgage lending businesses.

Business diversification is an important gauge of a bank's sensitivity to stress in a single business line. It is related to earnings stability in the sense that earnings diversification across distinct and relatively uncorrelated lines of business increases the reliability of a bank's earnings streams and its potential to absorb shocks affecting a business line.

Being a mortgage lending specialist, Muenchener Hyp is exposed to a rather volatile banking business through the cycle. Specifically, we consider the bank's exposure to CRE, in addition to the highly cyclical commercial residential lending segment, higher-risk sector exposure. The specialist mortgage lender status benefits the bank's sector-specific risk management know-how but naturally limits the chances for earnings diversification within the bank to balance the potential losses from its higher-risk exposures. As a result, we classify Muenchener Hyp as a monoline bank, according to our approach for business diversification.

ESG considerations

Muenchener Hypothekenbank eG's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 11

ESG Credit Impact Score

CIS-2

Neutral-to-Low

For an issuer scored CIS-2 (Neutral-to-Low), its ESG attributes are overall considered as having a neutral-to-low impact on the current rating; i.e., the overall influence of these attributes on the rating is non-material.



Source: Moody's Investors Service

Muenchener Hypothekenbank's Credit Impact Score is **CIS-2** and indicates that ESG considerations do not have a material impact on the current ratings. It also takes into consideration the mitigating rating impact of affiliate support from Genossenschaftliche FinanzGruppe (G-Finanzgruppe) over its ESG risk profile. Environmental and social factors have a limited credit impact on the rating to date. The bank's corporate governance risks stem from its moderate risk appetite as part of its business model as a commercial and residential real estate specialist but are mitigated by sound control mechanisms.

Exhibit 12

ESG Issuer Profile Scores

ENVIRONMENTAL

E-3

Moderately Negative



SOCIAL

S-4

Highly Negative



GOVERNANCE

G-3

Moderately Negative



Source: Moody's Investors Service

Environmental

Muenchener Hypothekenbank faces moderate exposure to environmental risks, primarily because of its portfolio exposure to carbon transition risk as a large commercial real estate lender. In line with its peers, Muenchener Hypothekenbank is facing mounting business risks and stakeholder pressure to meet broader carbon transition goals. In response, Muenchener Hypothekenbank is engaging in transforming its lending book towards less carbon-intensive assets and is part of cooperative group-wide initiatives to further develop its comprehensive risk management and climate risk reporting frameworks.

Social

Muenchener Hypothekenbank faces high industrywide social risks, in particular customer relations risks associated with regulatory risk, exposure to litigation and it has to meet high compliance standards in its operations. High cyber and personal data risks are mitigated by technology solutions and organizational measures to prevent data breaches.

Governance

Muenchener Hypothekenbank governance risks are moderate, reflecting the bank's low profitability, given its role as a focused real estate lending specialist within the G-Finanzgruppe network. However, it provides only a limited buffer against adverse developments and limits the bank's capital generation capacity. Its organizational structure, reporting policies and risk management and compliance framework are in line with industry practices. Muenchener Hypothekenbank's Supervisory Board composition reflects the group's

cooperative owners, with limited independent representation, but this does not result in incremental governance risks because of Germany's developed institutional framework.

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.

Support and structural considerations

Affiliate support

Based on Muenchener Hyp's key service function for the sector and its majority ownership by the sector's member banks, the bank is highly likely to receive support in case of need. This support significantly reduces the probability of default because the cooperative group's cross-sector support mechanism aims to stabilise its members by avoiding any form of loss participation by creditors or bail-ins. Cross-sector support provides three notches of uplift to the bank's debt and deposit ratings.

Government support considerations

Because of its size, on a consolidated basis, we consider G-Finanzgruppe systemically relevant and assume a moderate probability of support from the German government for all members of the group. This level of government support is in line with the support assumptions for other systemically relevant banking groups in Europe, and results in one notch of uplift for the senior debt and deposit ratings of the cooperative banks incorporated in Germany, including Muenchener Hyp.

Loss Given Failure (LGF) analysis

Muenchener Hyp is subject to the EU Bank Recovery and Resolution Directive, which is an operational resolution regime. Therefore, we apply our Advanced LGF analysis, where we consider the risks faced by the different debt and deposit classes across the liability structure should the bank enter resolution.

In line with our standard assumptions, we assume that equity and asset losses are 3% and 8%, respectively, of tangible banking assets in a failure scenario. We also assume a 25% runoff in junior wholesale deposits and a 5% runoff in preferred deposits. Moreover, we assign a 25% probability to junior deposits being preferred to senior unsecured debt. We apply a standard assumption for European banks that 26% of deposits are junior.

The following are the results of our Advanced LGF analysis:

- » For deposits and senior unsecured debt, our LGF analysis indicates an extremely low loss given failure, leading us to position their Preliminary Rating Assessments three notches above the bank's baa1 Adjusted BCA.
- » For junior senior unsecured debt, our LGF analysis indicates a very low loss given failure, leading to two notches of rating uplift from the bank's baa1 Adjusted BCA.
- » For subordinated debt, our LGF analysis indicates a high loss given failure, leading to a one-notch deduction from the bank's baa1 Adjusted BCA.

High-trigger AT1 securities

The Ba1(hyb) rating assigned to the high-trigger undated, deeply subordinated AT1 notes issued by Muenchener Hyp reflects our approach to rating high-trigger securities, under which we assign the lower of a model-based outcome and a non-viability security rating. This captures the credit risk associated with the distance to a trigger breach and the credit risk of these securities' non-viability component. For Muenchener Hyp, the outcome of a model-implied rating is Baa3(hyb), reflecting the low likelihood of the instrument's trigger level being breached, while the non-viability security rating is Ba1(hyb). Accordingly, the Ba1(hyb) rating of the higher-trigger AT1 securities is capped at the level of the non-viability security rating.

Aa3/P-1 Counterparty Risk Ratings (CRRs)

The CRRs, before government support, are three notches above the Adjusted BCA of baa1, reflecting the extremely low loss given failure from the high volume of instruments that are subordinated to CRR liabilities. Muenchener Hyp's CRRs further benefit from one notch of rating uplift based on government support, in line with our support assumptions on deposits and senior unsecured debt.

Aa3(cr)/P-1(cr) Counterparty Risk (CR) Assessment

The CR Assessment, before government support, is three notches above the Adjusted BCA of baa1, based on the buffer against default provided to the senior obligations represented by the CR Assessment by more subordinated instruments, including junior deposits and senior unsecured debt. Because the CR Assessment captures the probability of default on certain senior operational obligations, rather than expected loss, we focus purely on subordination and take no account of the volume of the instrument class.

Muenchener Hyp's CR Assessment further benefits from one notch of rating uplift based on government support, in line with our support assumptions on deposits and senior unsecured debt.

Methodology and scorecard

The principal methodology used in rating Muenchener Hyp was our [Banks Methodology](#), published in July 2021.

About Moody's Bank Scorecard

Our scorecard is designed to capture, express and explain in summary form our Rating Committee's judgement. When read in conjunction with our research, a fulsome presentation of our judgement is expressed. As a result, the outcome of our scorecard may significantly differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The scorecard outcome and the individual scores are discussed in Rating Committees and may be adjusted up or down to reflect conditions specific to each rated entity.

Rating methodology and scorecard factors

Exhibit 13

Muenchener Hypothekenbank eG

Macro Factors

Weighted Macro Profile Strong + 100%

Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2
Solvency						
Asset Risk						
Problem Loans / Gross Loans	0.5%	aa2	↔	baa1	Sector concentration	Long-run loss performance
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	19.9%	aa2	↔	baa2	Nominal leverage	Access to capital
Profitability						
Net Income / Tangible Assets	0.1%	b1	↔	b2	Return on assets	Expected trend
Combined Solvency Score		a2		baa3		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	60.9%	caa1	↔	ba1	Market funding quality	Term structure
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	7.7%	ba2	↔	ba1	Asset encumbrance	Additional liquidity resources
Combined Liquidity Score		b2		ba1		
Financial Profile				baa3		
Qualitative Adjustments				Adjustment		
Business Diversification				-1		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				-1		
Sovereign or Affiliate constraint				Aaa		
BCA Scorecard-indicated Outcome - Range				baa3 - ba2		
Assigned BCA				ba1		
Affiliate Support notching				-		
Adjusted BCA				baa1		

Balance Sheet is not applicable.

Debt Class	De Jure waterfall		De Facto waterfall		Notching		LGF Notching Guidance vs. Adjusted BCA	Assigned LGF notching	Additional Notching	Preliminary Rating Assessment
	Instrument subordination	Sub- ordination volume +	Instrument subordination	Sub- ordination volume +	De Jure	De Facto				
Counterparty Risk Rating	-	-	-	-	-	-	-	3	0	a1
Counterparty Risk Assessment	-	-	-	-	-	-	-	3	0	a1 (cr)
Deposits	-	-	-	-	-	-	-	3	0	a1
Senior unsecured bank debt	-	-	-	-	-	-	-	3	0	a1
Junior senior unsecured bank debt	-	-	-	-	-	-	-	2	0	a2
Dated subordinated bank debt	-	-	-	-	-	-	-	-1	0	baa2
Non-cumulative bank preference shares	-	-	-	-	-	-	-	-1	-2	ba1

Instrument Class	Loss Given Failure notching	Additional notching	Preliminary Rating Assessment	Government Support notching	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Rating	3	0	a1	1	Aa3	Aa3
Counterparty Risk Assessment	3	0	a1 (cr)	1	Aa3(cr)	
Deposits	3	0	a1	1	Aa3	Aa3
Senior unsecured bank debt	3	0	a1	1	Aa3	Aa3
Junior senior unsecured bank debt	2	0	a2	0	A2	A2
Dated subordinated bank debt	-1	0	baa2	0	Baa2	Baa2
Non-cumulative bank preference shares	-1	-2	ba1	0		Ba1 (hyb)

[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.

Source: Moody's Investors Service

Ratings

Exhibit 14

Category	Moody's Rating
MUENCHENER HYPOTHEKENBANK EG	
Outlook	Stable
Counterparty Risk Rating	Aa3/P-1
Bank Deposits	Aa3/P-1
Baseline Credit Assessment	ba1
Adjusted Baseline Credit Assessment	baa1
Counterparty Risk Assessment	Aa3(cr)/P-1(cr)
Issuer Rating	Aa3
Senior Unsecured	Aa3
Junior Senior Unsecured	A2
Junior Senior Unsecured MTN	(P)A2
Subordinate	Baa2
Pref. Stock Non-cumulative	Ba1 (hyb)
Commercial Paper -Dom Curr	P-1
Other Short Term -Dom Curr	(P)P-1

Source: Moody's Investors Service

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REPORT NUMBER

1374774

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