MOODY'S RATINGS

CREDIT OPINION
25 June 2024

Update

Send Your Feedback

RATINGS

Societe Generale

Domicile	Paris, France
Long Term CRR	A1
Type	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	A1
Type	Senior Unsecured - Fgn Curr
Outlook	Negative
Long Term Deposit	A1
Type	LT Bank Deposits - Fgn Curr
Outlook	Negative

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

Malik Bendib +33.1.5330.3446
Sr Ratings Associate
malik.bendib@moodys.com

Alain Laurin +33.1.5330.1059
Associate Managing Director
alain.laurin@moodys.com

Ana Arsov +1.212.553.3763
MD-Financial Institutions
ana.arsov@moodys.com

Societe Generale

Update following rating action, outlook changed to negative

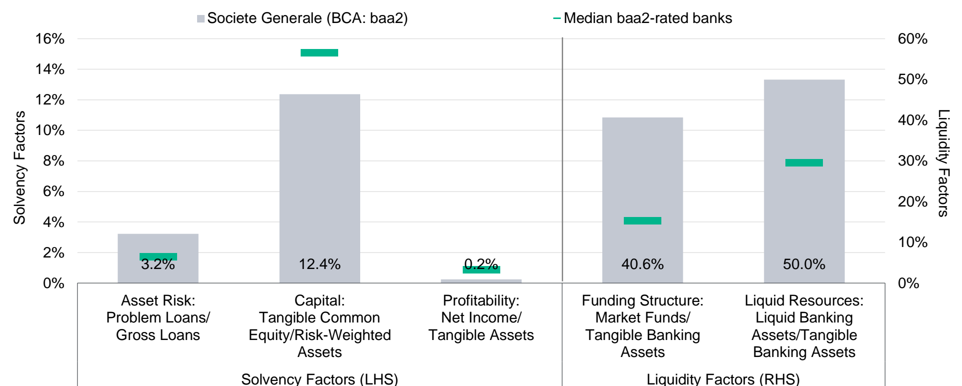
Summary

Societe Generale (SG) is a global systemically important bank based in France (Aa2 stable) with sizeable cross-border and international operations. On 31 May, we affirmed all ratings and changed the outlook on the deposit and senior unsecured debt ratings to negative from stable previously.

SG's baa2 Baseline Credit Assessment (BCA) reflects the bank's solid asset quality despite its high exposure to corporates, good capitalization, and high amount of liquid assets mitigating the large stock of confidence-sensitive wholesale funding. It also takes account of the bank's strong franchise and well-diversified universal banking business model. The BCA is, however, constrained by the risks stemming from SG's sizeable capital market activities and its profitability, which has remained at the lower end of its peer group over the past few years.

SG's A1 long-term deposit and senior unsecured debt ratings include a three-notch uplift resulting from our Advanced Loss Given Failure (LGF) analysis, reflecting our view that the bank's junior depositors and senior unsecured creditors face an extremely low loss given failure. In addition, our moderate assessment of government support given SG's status of Global Systemically Important Institution translates into an additional one-notch uplift for deposit and senior unsecured ratings.[1]

Exhibit 1
Rating Scorecard - Key financial ratios



These figures represent our methodology scorecard ratios, where asset risk and profitability reflect the weaker of either the latest reported or the average of the last three year-end and latest reported ratios. Capital is the latest available figure. The funding structure and liquid resources ratios reflect the latest year-end figures.
Source: Moody's Financial Metrics

Credit strengths

» Sound asset quality

» Good regulatory capitalisation

» High amount of liquid assets

» Universal banking business model with a well-diversified business portfolio

Credit challenges

» Track-record of relatively low profitability

» Sizeable capital market activities

» Large stock of confidence-sensitive wholesale funding, mitigated by well-diversified funding sources, proven access to wholesale funding markets and high amount of liquid assets

Outlook

The outlooks on the long-term deposit, senior unsecured debt and issuer ratings are negative. This reflects our view that, despite the improvements expected in 2024, the bank's profitability may still fall short of levels consistent with the current BCA.

Factors that could lead to an upgrade

Although unlikely over the outlook horizon, the BCA could be upgraded in case of (1) a significant and sustainable improvement in the bank's profitability metrics; or (2) a structural improvement in the bank's funding profile; or (3) materially higher capitalization.

A higher BCA would likely lead to rating upgrades.

Factors that could lead to a downgrade

The BCA could be downgraded if we assess that, following a further round of restructuring activities, SG continues to face significant challenges in posting higher and more stable profitability. It could also be downgraded if the Tangible Common Equity ratio were to fall significantly below the current level without a prompt recovery; or if its funding and liquidity were to weaken.

A lower BCA would likely result in a downgrade of all of SG's ratings.

SG's ratings could also be downgraded in the case of lower debt issuance than expected under its current funding plan, or a more rapid increase in assets than currently expected, which would increase the loss the junior depositors and senior unsecured investors would incur in case of failure.

Key indicators

Exhibit 2

Societe Generale (Consolidated Financials) [1]

	12-23[2]	12-22[2]	12-21[2]	12-20[2]	12-19[2]	CAGR/Avg.[3]
Total Assets (EUR Million)	1,472,683.0	1,390,797.0	1,365,991.0	1,314,636.0	1,223,398.0	4.7[4]
Total Assets (USD Million)	1,626,806.7	1,484,324.3	1,547,812.5	1,608,530.6	1,373,262.1	4.3[4]
Tangible Common Equity (EUR Million)	48,059.0	50,234.0	51,711.0	47,649.0	47,785.0	0.1[4]
Tangible Common Equity (USD Million)	53,088.6	53,612.1	58,594.0	58,301.2	53,638.6	(0.3)[4]
Problem Loans / Gross Loans (%)	3.2	3.1	3.3	3.7	3.8	3.4[5]
Tangible Common Equity / Risk Weighted Assets (%)	12.4	13.9	14.2	13.5	13.9	13.6[6]
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	27.0	25.8	25.9	28.4	28.7	27.2[5]
Net Interest Margin (%)	0.7	1.0	0.8	0.8	0.9	0.8[5]

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.

PPI / Average RWA (%)	1.5	2.4	2.1	1.4	1.7	1.8[6]
Net Income / Tangible Assets (%)	0.2	0.3	0.4	0.1	0.3	0.3[5]
Cost / Income Ratio (%)	76.7	68.6	69.9	77.8	74.3	73.5[5]
Market Funds / Tangible Banking Assets (%)	40.6	38.5	43.0	48.1	46.8	43.4[5]
Liquid Banking Assets / Tangible Banking Assets (%)	50.0	46.6	43.8	47.6	43.8	46.4[5]
Gross Loans / Due to Customers (%)	80.8	88.4	98.4	99.1	105.8	94.5[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; IFRS. [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 Ratings and company filings

Profile

Societe Generale (SG) is a large universal bank domiciled in France, with total consolidated assets of €1,554 billion as of the end of December 2023. SG is included on the list of global systemically important banks. Its operations are organised across three main business lines.

The French Retail, Private Banking and Insurance (FRPBI, 14% of the group's net result[2] in 2023) division includes the group's domestic retail and small and medium-sized enterprise (SME) banking franchise as well as its private banking activities[3] and insurance operations[4]. SG ranks fourth in domestic retail banking with a market share of around 10% and, operating through a branch network and BoursoBank (the leading fully digital bank in France). SG is currently in the process of completing the operational merger of Credit du Nord's and Societe Generale's networks as part of FRPBI's transformation. The full benefit of this merger is expected to materialize in 2025. The bank's strategy is also aimed at increasing BoursoBank's customer base to 8 million by 2026 from 6 million in January 2024.

Insurance operations capitalise on the group's bancassurance model and strong synergies with its retail banking, private banking and financial services. The group offers life insurance savings, retirement savings and personal protection to individual and corporate clients through its insurance captive entities, mainly SOGECAP and SOGESSUR.

The International Retail, Mobility and Leasing Services (IRMLS, 36% of the group's net result in 2023) division focuses on businesses with strong growth potential and comprises the following:

» International retail banking activities, which are spread across a number of countries in Central and Eastern Europe,[5] and Africa[6] where SG benefits from well-established franchises. Amid the escalation of the Russia-Ukraine military conflict, SG swiftly completed the sale of Rosbank, its subsidiary in Russia, to Interros Capital in May 2022.

» Mobility and Leasing Services, which comprise operational vehicle leasing and fleet management operated by Ayvens (previously ALD, A1 negative, baa3), a 53%-owned subsidiary, and consumer finance distributed through both the group's local retail networks and specialised subsidiaries. Ayvens is the largest fleet management company in the world[7] with a presence in over 40 countries, and results from the combination of ALD and LeasePlan Corporation N.V. acquired by the group on 22 May 2023.

The **Global Banking and Investor Solutions** (GBIS, 51% of the group's net result in 2023) division houses the group's corporate and investment banking activities[8]. Although SG has strong expertise in specific areas such as structured products with a global leadership in equity derivatives and despite its large geographical presence[9], we consider SG a "tier-two" global investment bank because of its lack of scale and the less diversified nature of its capital market activities compared with its global investment bank peers.

SG announced in 2022 the creation of a London-based joint venture with AllianceBernstein, which combines their cash equities and equity research businesses. This operation is aimed at creating a global leading equity house and will support the diversification of SG's business model towards recurring fee-based activities. In September 2023, the group also announced that it will launch a large private debt fund through a partnership with Brookfield, which is expected to scale up SG's origination and distribution capacities.

The bank's new management has undertaken - since September 2023 - an evaluation of its business portfolio, with the objective of achieving greater cross selling opportunities between business lines and a more efficient allocation of its capital. The ultimate goal of this endeavor is to boost its profitability. This process resulted in the sale of multiple African subsidiaries, including amongst others the sale of subsidiary in Morocco, announced in April 2024, with a closing expected at the end of the year. In the same month, SG

announced its decision to sell its equipment finance business (excluding activities in Czech Republic and Slovakia) to BPCE (A1/A1 stable, baa1), motivated by a lack of sufficient scale that constrained the business' profitability.

Considering the new management's objective of increasing the group's capital buffer, SG is devising a plan to limit the organic expansion of its risk-weighted assets (RWAs) to less than 1% per year until 2026. Excluding BoursoBank and Ayvens, which are earmarked as growth sectors and will therefore continue to be allocated additional capital, SG foresees a halt in organic RWA growth for the rest of its business divisions. This strategy signals a restrained revenue growth over the 2024-2026 period while aiming for increased profitability.

Detailed credit considerations

Asset quality remains sound despite the sheer size of its corporate loan book and exposures to regions with weak credit profiles

SG's asset performance over the past five years has been slightly weaker than that of the French banking system. The average cost of risk[10] between 2019 and 2023 was 33 basis points (bps) at SG, broadly in line with the average of the five largest French banks. We believe that the group's asset risk is somewhat higher than that of its domestic peers, and notably the mutual banking groups, because of its larger exposure to corporates and exposures to regions with weaker credit profiles such as Africa. Our baa1 assigned Asset Risk score also takes account of the risks associated with the group's sizeable market activities.

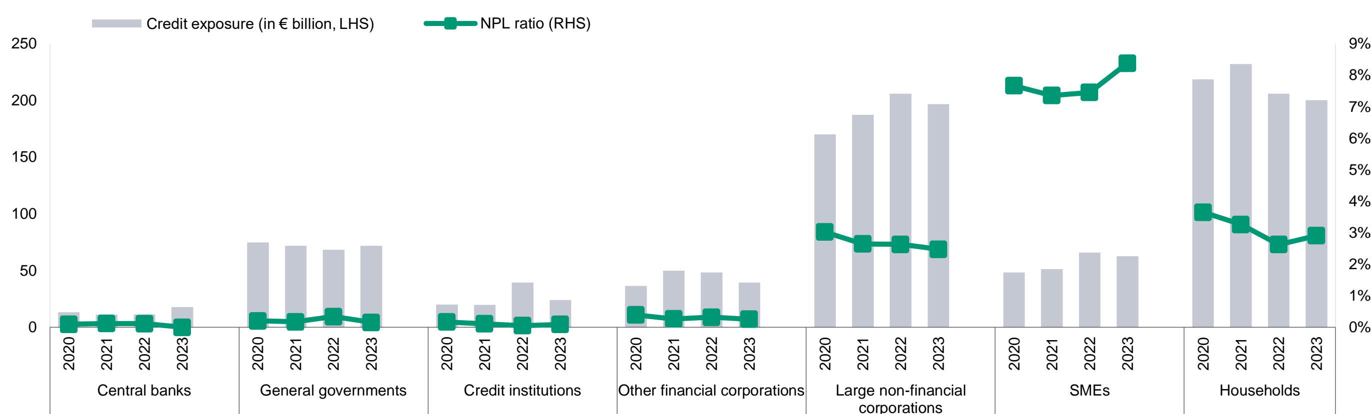
As of the end of December 2023, exposures to the corporate sector (including large non-financial corporates, financial corporates other than banks and SMEs) accounted for around half of the group's total on-balance-sheet credit exposures of €613 billion[11] versus only 33% to households (Exhibit 3). SG's exposures to corporates is significantly geared towards large corporates[12], which are generally more resilient in economic downturns than SMEs but involve higher single name concentrations. At the same time, the 10 largest corporate counterparties (in terms of exposure-at-default or EAD) accounted for around 60% of the group's CET1 capital at end-December 2023, which remains broadly in line with that of other large French banks.

Despite good sector diversification, SG has some exposures to highly cyclical sectors. The exposure to the oil and gas sector amounted to €14 billion at end-December 2023 (1.2% of group EAD[13]), down from €20 billion at year-end 2022. The exposure to the commercial real estate (CRE) sector amounted to €23 billion (2% of group EAD[14]). The average current LTV of the CRE portfolio remains at a reasonable 53% and the exposure to US CRE is limited to around 13% of the portfolio. At year-end 2023, SG indicated a NPL ratio of around 2.5% on the entire CRE portfolio and of around 8.8% on the US CRE portfolio. Positively, SG's direct exposure to leveraged buyouts (LBOs) remains contained at around €5 billion, that is, 0.4% of group EAD at end-March 2024.

Exhibit 3

The corporate sector accounts for 49% of total exposures versus only 33% for households

Breakdown of credit exposures(1) by type of counterparty and corresponding problem loan ratios



(1) Credit exposures based on loans and advances, and debt securities. These exclude cash at central banks and off-balance-sheet exposures.

Source: Company data and Moody's Ratings

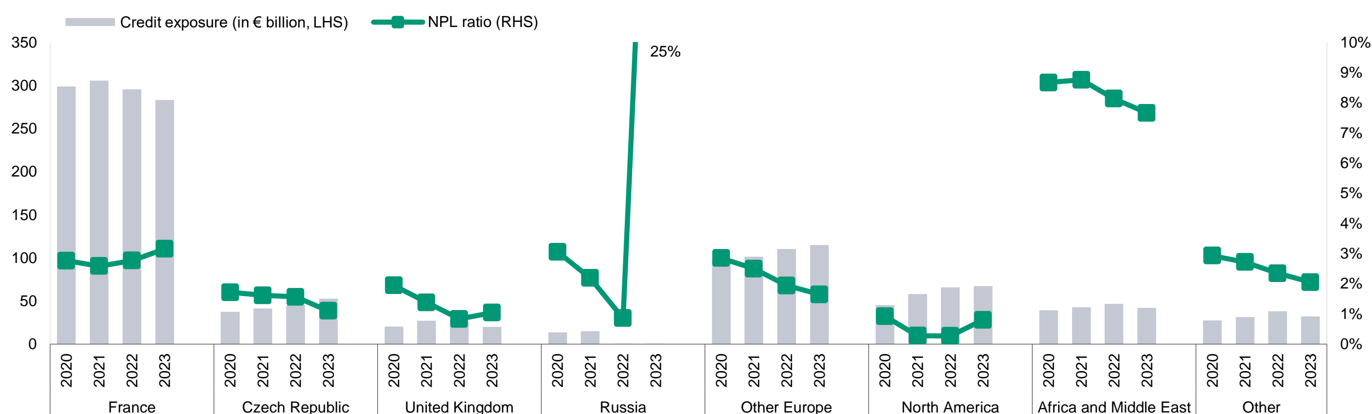
In terms of geographical exposure, the domestic market represents around 46% of the group's total on-balance-sheet credit exposures (Exhibit 4). Excluding France, Europe represents around 31%, which, in addition to the Czech Republic and Romania where the group operates through large local subsidiaries, includes, the UK, Germany, Italy and Luxembourg. The residual exposure to Russia (€0.9 billion at year-end 2023) essentially consists of offshore exposures that were 20% covered by loan loss provisions, the rest being largely guaranteed by export credit agencies. Exposures to North America and Asia primarily stem from the GBIS business, and consist of exposures to corporate, sovereign and institutional counterparties.

Despite SG's recent disposal of some of its African subsidiaries, the bank will pursue its business in Africa, which differentiates it from most of its large international peers. The portfolio is well diversified (10 countries excluding the aforementioned subsidiaries that will be sold) and focused on African regions with more stable operations, such as West Africa. At year-end 2023, Africa and the Middle East nevertheless represented 7% of the group's total on-balance-sheet credit exposures but around 20% of its problem loans.

Exhibit 4

France represents around 50% of the group's exposures

Breakdown of credit exposures[(1)] by geographical region and corresponding problem loan ratios



(1) Credit exposures based on loans and advances, and debt securities. These exclude cash at central banks and off-balance-sheet exposures.
Source: Company data and Moody's Ratings

Our analysis of asset risk at SG also factors in its sizeable capital market activities, which typically carry tail risks. Capital allocated to market activities represents some 14% of the bank's total capital at end-December 2023.[15] After it was hit in 2020 by substantial negative price adjustments on equity derivative transactions following the suspension of dividends by many companies, the group has been de-risking its structured products portfolio with the objective of decreasing its sensitivity to market dislocations. SG's decreased risk appetite on market activities are reflected in a material decrease in its global market stress test and levels of S-VaR.

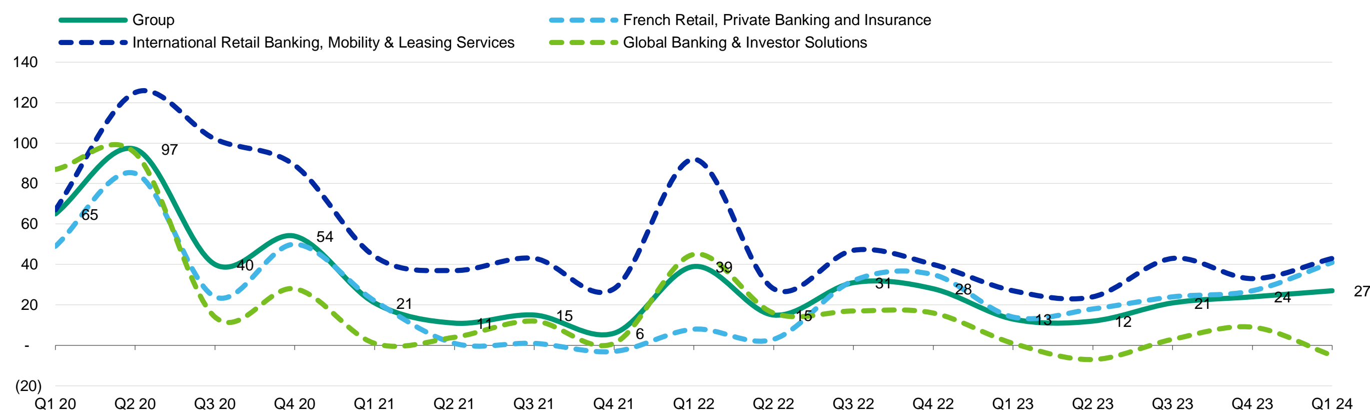
The group's asset performance remains good. The nonperforming loan (NPL) ratio was 2.9%[16] as of the end of December 2023, flat compared with year-end 2022, reflecting still very low levels of defaults. The stage 2 loan ratio was down to 7.1% at end-December 2023 from 7.6% a year earlier and lower than the EU average of 9.6%.[17]

Reported cost of risk was 17 bps of gross loans (or €1 billion) in 2023, down from 28 bps in 2022 and slightly up from 13 bps in 2021. The 2023 cost of risk included a net release of stage 1 and stage 2 provisions (€168 million) whereas around 40% of the loan loss provision charge of 2022 consisted of forward-looking provisions. The loan loss charge on stage 3 loans nonetheless remained broadly stable at a low 20 bps in 2023 versus 17 bps in 2022. SG's cost of risk guidance for 2024 is between 25 to 30 bps. Although within the guidance, the loan loss provision charge of Q1 2024 rose to 27 bps (Exhibit 5) as a result of the default of a few large corporate borrowers in France. The group's stock of forward-looking provisions was comfortable at €3.6 billion or 0.6% of total loans as of the end of December 2023. This remains close to the level of forward-looking provisions the bank had built at year-end 2020 (€3.6 bn or 0.7% of total loans).

Exhibit 5

Cost of risk is increasing since the second quarter of 2023

Loan loss provisioning charges by division (in basis points of outstanding loans)



Source: Company data

Capital is commensurate with the bank's risk profile

As of year-end 2023, SG's common equity Tier 1 (CET1) ratio was 13.1% (including the phase-in of IFRS 9, resulting in a positive effect of 6 bps on the reported ratio), slightly down compared to 13.5% at year-end 2022. Organic capital generation was offset by the negative impact of several regulatory adjustments and the acquisition of LeasePlan. The CET1 ratio at year-end 2023 was around 340 bps above the maximum distributable amount (MDA) of 9.8%[18]. It nonetheless remains materially lower than the French banking system's average CET1 ratio of 16% as of year-end 2023.[19]

The decline in the Tangible Common Equity (TCE) ratio to 12.4% at year-end 2023 from 13.9% at the end of 2022 primarily results from the acquisition of LeasePlan. The decrease in the ratio is higher compared to that of the CET1 ratio because minority interests of Ayvens are excluded from the TCE ratio calculation while they are recognized as capital in the CET1 ratio.

In September 2023, SG announced its intention to enhance its solvency and raised its CET1 target for 2026 to 13% from 12%. The bank plans to attain this objective via restrained organic growth, disciplined portfolio management, and active risk transfer strategies. We interpret this increase in the capital target as a credit-positive development. However, due to the anticipated 85 basis point impact of Basel IV beginning in 2025, the CET1 ratio could temporarily fall below the 13% target in 2025. SG indicates that, post the Basel IV finalisation, it will sustain a minimum buffer of 200 basis points over the MDA.

The regulatory leverage ratio slightly declined to 4.3% at end-December 2023 from 4.4% at the close of 2022, primarily driven by 6% increase in the exposure amount. SG's leverage ratio also remains somewhat lower than the UK and Europe-based global investment banks' average which stood at 4.8% at end-December 2023. From 2026, SG has set a through-the-cycle leverage ratio target between 4% and 4.5%, in line with the current levels.

With a total loss-absorbing capacity (TLAC) ratio of 29% excluding senior preferred debt as of end-March 2024, SG meets the requirement of 22.3% including countercyclical buffers. SG also meets both the 27.2% minimum requirements for own funds and eligible liabilities (MREL) and 22.6% subordinated MREL ratios.

Our baa2 assigned score for Capital reflects the bank's resilient capital position despite a leverage ratio lower than that of most peers. It also incorporates our expectation that SG's CET1 ratio will remain around 13% over the next two years.

Despite its well-diversified business portfolio, profitability is at the lower end of the peer group

Based on its average return on tangible assets from 2018 to 2023, SG's profitability is modest relative to both its global investment bank peers and French universal bank peers. SG's average ratio of adjusted net income[20] to tangible assets was 27 bps over the period, below the average ratio of the global investment banks (65 bps) and that of the French banking system (35 bps[21]).

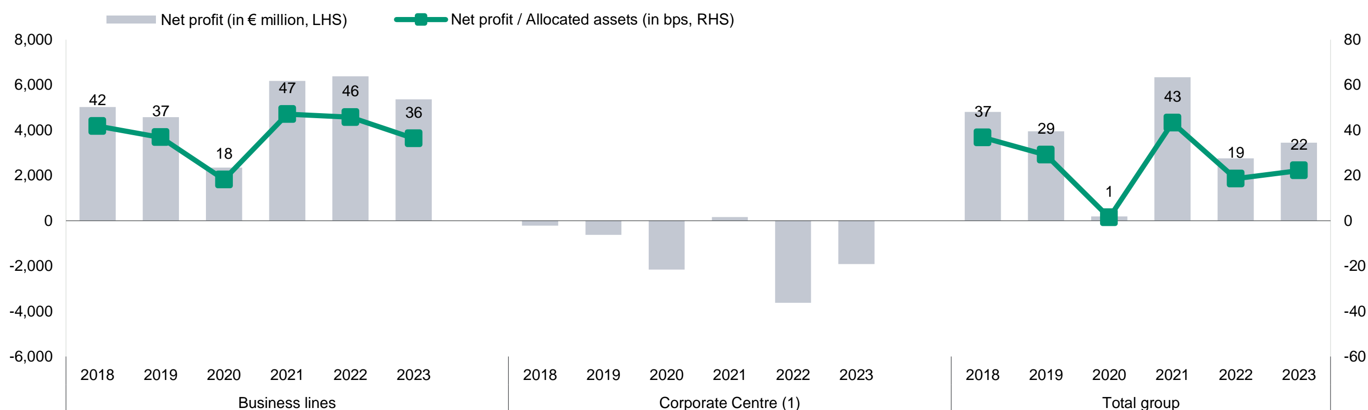
Transformation charges as well as other non-recurring items (the largest of which was €3.3 billion capital loss on the disposal of the Russian subsidiary in 2022), generally reported under the Corporate Centre[22], have generated a lot of volatility in the group's reported

profit since 2018 (Exhibit 6). These items also contributed to lowering the group's average return over the period by an average 10 bps of tangible assets per annum, of which around 4 bps stemmed from transformation costs. Excluding the results allocated to the Corporate Centre and with the exception of 2020, the business lines' return on assets[23] has been holding within a range of 36 bps to 47 bps between 2018 and 2023. Despite some improvement from the pre-pandemic period in 2021 and 2022, the aggregate business lines' profitability was back to its 2019 level in 2023.

Exhibit 6

Non-recurring items and transformation costs (under Corporate Centre) have driven the group's net profit volatility

Breakdown of reported net profit between business lines and the Corporate Centre



(1) In 2021, transformation charges and goodwill impairments were more than offset by around €0.6 billion gain on the disposals of Lyxor and Haussmann office. In 2022, Corporate Center's result included €3.3 billion capital loss on the disposal of its Russian subsidiary. In 2023, it included €0.3 billion goodwill impairment, €0.3 billion TLTRO hedge unwinding cost and €0.4 billion impairment of deferred-tax assets.

Sources: Company data and Moody's Ratings

The improvement in the business lines' profitability in 2021 and 2022 compared with the pre-pandemic period came from auto leasing businesses and market activities (Exhibit 7). Since year-end 2020, ALD (renamed Ayvens since 2023) not only benefited from sustained business momentum but also from high profit generated by the sales of cars in the secondary market, underpinned by very strong secondhand car prices. Increased activity in capital markets boosted Global Markets' revenue and profitability in 2021 and 2022.

In 2023, the net profit generated by the business lines fell by 16% year-on-year, primarily driven by 77% drop in the result of the French retail banking business (excluding insurance), only partly offset by the resilience of the other activities and lower cost of risk in most businesses (Exhibit 7).

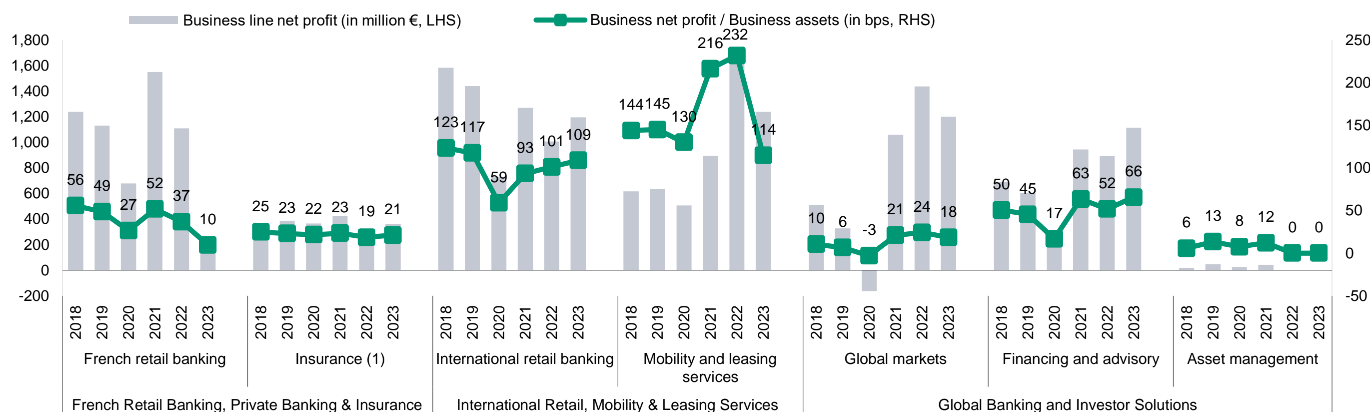
Similar to peers, revenue from French retail banking (down 15% on 2022 excluding insurance) was strongly affected from mid-2022 to mid-2023 by the successive hikes in the interest rate paid on regulated savings[24], combined with the difficulty in fully reflecting the rise in interest rates in new housing loans because of the so called "taux d'usure" (the formula-based legal cap applicable on lending rates in France). The progressive shift of customer deposits from sight to remunerated savings and term deposits also weighed on French retail banking's funding costs. Moreover, the business' profits further diminished as interest rates increased, due to the fixed rate receiver/floating rate payer swaps initiated in 2021. These were originally implemented with the intention of safeguarding the revenues of French retail banking from the prospect of lower interest rates.

The performance of leasing and market activities, which had been the main drivers of the group's improved profitability in 2021 and 2022, has declined in 2023 compared to the two previous years. Ayvens' lease margins have decreased from the very high levels achieved in 2021 and 2022. The used cars sales results also fell materially as a consequence of a progressive normalization in the second-hand car prices and the negative effects of prospective depreciation[25]. The profitability of the newly acquired LeasePlan was also affected by the negative mark-to-market of hedging operations[26] and first-time consolidation adjustments. The slight decrease in the profitability of market activities in 2023 reflects lower performance compared to the record levels reported in 2022 amid less favourable market conditions.

Exhibit 7

The drop in the result of French retail banking drove the 16% decrease in overall business lines' profit in 2023

Breakdown of reported net profit by business line (excludes the Corporate Centre)



(1) Insurance business was reporting under the International retail banking and financial services until Q2 2023. It is now reporting under the French Retai, Private Banking and Insurance business line.

Sources: Company data and Moody's Ratings

The long-term profitability of the bank will hinge on its ability to capitalise on its well-diversified business portfolio by (1) reducing the occurrence and magnitude of non-recurring charges and restructuring costs; (2) realizing the benefits of the enlarged business scale and cost synergies within its Mobility and Leasing services through a successful integration of LeasePlan by Ayvens; (3) maintaining the performance of market activities, which have benefited from refocus and cost savings since 2019, yet could be less favourable under future market conditions; (4) materializing the efficiency gains in French retail banking and further improve BoursoBank's profitability.

In 2024, assuming stable revenue from market activities and excluding one-offs, we expect some improvement in the group's net profit. Earnings will likely improve as French retail banking revenue gradually recover as the aforementioned fixed rate receiver swaps mature in Q2 2024. The French government's decision to freeze the interest rate on the main regulated savings until the beginning of 2025 instead of proceeding to further increases is also supportive of French retail banking's NIMs. These positives will however likely be at least partly offset by the continuation of depositors' shift from sight to better remunerated term deposits ("so called beta") across business lines.

The end of the contribution to the Single Resolution Fund (SRF) will help containing the rise in operating expenses but on-going transformation costs (around €1 billion of which €750 million to €800 million will be achieved in 2024) will still weigh on net profits in 2024. We also expect the cost of risk to slightly increase from the very low levels of 2023.

The assigned ba3 Profitability score, one notch above the b1 Macro-Adjusted score, reflects our expectation that profitability will improve over the coming quarters.

Term structure of liabilities and high amount of liquid assets mitigate large stock of onfidence-sensitive wholesale funding

SG has a large customer deposit base stemming from both its retail networks and global banking businesses. Similar to other French banks, customer deposits have increased substantially since the beginning of the pandemic, resulting in an improved loan-to-deposit (LTD) ratio[27] of 89% as of year-end 2023 (year-end 2019: 106%), below the 104% average ratio of the five largest French banks as of the end of June 2023. The total amount of customer deposits has remained broadly stable to date since it peaked in the course of 2023, although its composition shifted and interest-bearing deposits exceeded non-interest bearing deposits at end-March 2024[28].

However, similar to other French banks and some of its international peers with sizeable capital market activities and other specialised financing such as leasing and consumer finance that generate little or no customer deposits, SG is highly reliant on wholesale funding. Despite its well-diversified funding sources and proven access to wholesale funding markets, this exposes the bank to the risk of changes in market conditions.

Additionally, a significant portion of the stock of wholesale funding is short term. Based on our calculation, around half of the stock of funds raised in the wholesale markets were short term as of year-end 2023[29].

The high share of non-operational deposits within the customer deposits (around 25% as of year-end 2023, based on our estimation) is also a weakness, partly offsetting the benefit of its favourable LTD ratio. Although these have proven very stable historically, these deposits, which include institutional and large corporate deposits, are deemed more volatile than retail deposits.

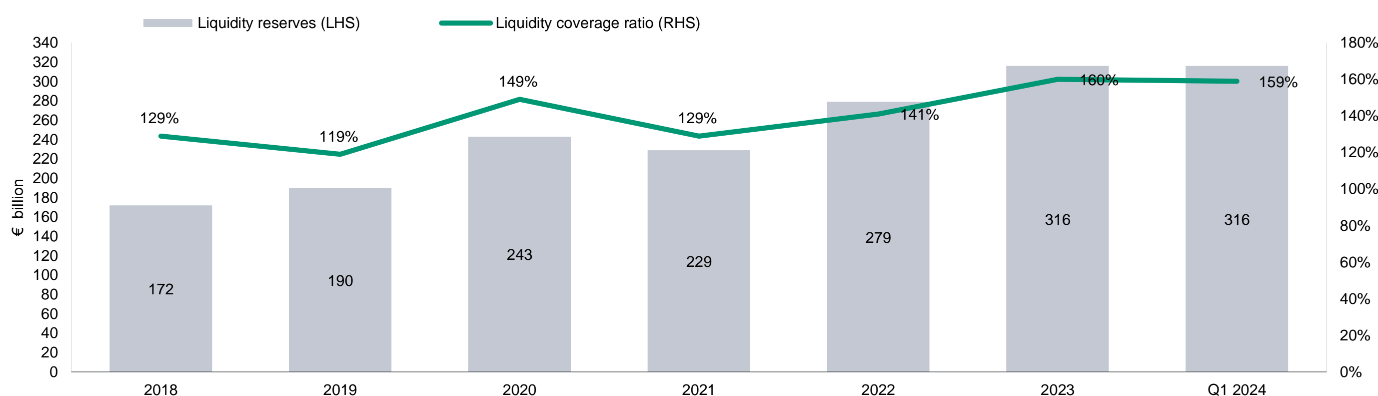
The group's funding strategy is predicated on aligning the maturities of assets and liabilities, leaving minimal flexibility for individual business units to engage in maturity transformation. Our analysis leads us to the conclusion that the short-term segment of market funds primarily finances short-term assets, which partly mitigates the risks stemming from high reliance on short-term funding. Long-term assets including loans to customers and net trading assets (i.e. the portion of trading assets that are not financed with trading liabilities) are financed with customer deposits and long-term wholesale funding.

On the other hand the bank is holding a substantial amount of liquid assets, which mitigates its reliance on market funds. As of year-end 2023, SG had a liquidity buffer of unencumbered assets of €316 billion (Exhibit 8), 68% of which were cash at central banks and 23% were high-quality liquid assets. This portfolio amply covered the stock of short-term market funds[30], inclusive of the long-term debt that matures within the following 12 months. The average liquidity coverage ratio was 155% in Q4 2023, up from 145% in Q4 2022 and above the through the cycle targeted threshold of 130%. The net stable funding ratio was 119% as of the same date, slightly up from 114% at year-end 2022 and above the targeted threshold of 112%.

Exhibit 8

SG has a high liquidity buffer

SG's liquidity reserves and liquidity coverage ratio



Source: Company reports

We assign a baa3 Combined Liquidity score to SG, derived from an assigned ba3 Funding Structure score and an assigned a1 Liquid Resources score. Our ba3 score for SG's Funding Structure is one notch higher than the initial Macro-Adjusted score of b1. The one notch of positive adjustment reflects the following adjustments that are not captured in the historical ratio:

» the portion of borrowings from the TLTRO redeposited at the European Central Bank (ECB), which temporarily inflates the bank's balance sheet is removed from the numerator. We expect SG to repay the remaining balances as and when they fall due at the latest;

» the small-denominated structured notes that are traded to retail investors and, therefore, are stable in nature, are also removed from the market funds.

» the positive effect on the score of the diversification of wholesale funding, both by investor base and currency, is offset by the negative effect stemming from the high share of non-operational deposits.

Our assigned score of a1 for Liquid Resources is in line with the Macro-Adjusted score of a1. This takes account of the portion of encumbrance stemming from market activities in the stock of liquid resources. The liquid resources ratio is also adjusted for the aforementioned impact of the TLTRO and centralised deposits.

Qualitative adjustments

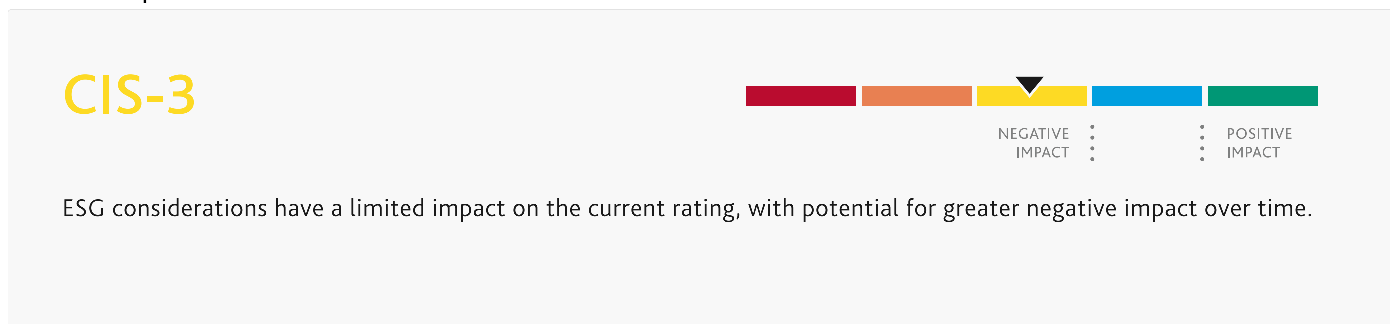
We assign a positive one-notch adjustment for Business Diversification in the qualitative section of our BCA scorecard. SG's business portfolio is well-balanced and diversified both geographically and across different business types. The main businesses are well-established franchises with strong or leading positions in their respective sectors. The acquisition of LeasePlan Corporation N.V. in 2023, which resulted in the largest leasing and fleet management in Europe, further buttressed the group's diversification. This positive adjustment could be removed if, following a further round of restructuring activities, SG was unable to post higher and more stable profitability.

We also assign a negative one-notch adjustment for Opacity and Complexity in the qualitative section of our BCA scorecard, reflecting the risks associated with the capital market activities. Notwithstanding an active risk reduction strategy since 2020, these activities continue to contribute to the bank's overall complexity and are more susceptible to volatility compared to the entity's other business areas.

ESG considerations

Societe Generale's ESG credit impact score is CIS-3

Exhibit 9
ESG credit impact score



Source: Moody's Ratings

SG' s **CIS-3** indicates limited impact of ESG considerations on the rating to date, with potential negative impact over time. It also reflects our industrywide view of the opacity, complexity and tail risks inherent to capital market activities, which is captured under our governance assessment. The bank's track record of managing these risks and its strong financial fundamentals are important considerations, but do not fully offset this exposure.

Exhibit 10
ESG issuer profile scores

Source: Moody's Ratings

Environmental

SG faces moderate exposure to environmental risks because of carbon transition risks from its diversified lending and investment activities, including corporate banking. SG is facing mounting business risks and stakeholder pressure to meet demanding carbon transition goals. In response, SG is actively engaging in further developing its comprehensive risk management and climate risk reporting frameworks and transitioning its lending and investment portfolios to achieve carbon neutrality targets.

Social
SG faces high industrywide social risks related to regulatory risk and litigation exposure, in particular in the area of customer relations. The bank is required to meet high compliance standards. High cyber and personal data risks are mitigated by technology solutions and organizational measures to prevent data breaches.

Governance
SG has strong corporate governance practices and a successful track record and generally conservative financial policies. However, the business opacity and complexity of capital markets operations, which accounts for around 20% of the group revenue, and in some of its riskier emerging market operations expose the firm to tail risks. The bank's profitability has also been impacted by a series of exceptional events over the past few years such as the sale of PJSC Rosbank, the write-downs of goodwill and deferred tax assets. More recently the hedging strategy deployed to protect its retail franchise's revenue ended up hampering its profitability.

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

Loss Given Failure (LGF) analysis
We apply our Advanced LGF analysis to SG because the bank is incorporated in France, which we consider an operational resolution regime because it is subject to the EU Bank Recovery and Resolution Directive (BRRD). For this analysis, we assume that equity and losses are 3% and 8%, respectively, of tangible banking assets in a failure scenario. We also assume a 25% run-off of junior wholesale deposits and a 5% run-off in preferred deposits. Moreover, we assign a 25% probability to junior deposits being preferred to senior unsecured debt. These are in line with our standard assumptions. We apply a standard assumption for European banks that 26% of deposits are junior. Considering the bank's overseas subsidiaries, we view that groupwide resolutions will be coordinated in a unified manner for entities required to issue internal loss-absorbing capital in jurisdictions that have an operational resolution regime for banks, leading to a likely transfer of losses from subsidiaries to parents at the point of failure.

In the case of SG, we include the tangible banking assets of its Romanian subsidiary BRD - Groupe Societe Generale in the resolution perimeter of SG, designated as the single point of entry for the group resolution. We leave Komercni Banka, a.s.'s assets outside the group's resolution perimeter because we estimate that the financial and business independence of the Czech subsidiary, and its lower probability of default — reflected in a BCA of a3, two notches higher than SG's BCA — indicate a low probability that the subsidiary would have to be resolved simultaneously with the group at the point of its failure.

Under our forward-looking Advanced LGF analysis, the portion of SG's TLTRO drawdowns, which we estimate is redeposited at the ECB, is deducted from the bank’s projected tangible banking assets, thereby reducing the inflationary impact of TLTRO on the bank’s balance sheet. We assume that the portion of borrowed funds redeposited at the ECB will be running off by the end of the year.

Our Advanced LGF analysis indicates an extremely low loss given failure for junior depositors and senior unsecured creditors, resulting in a three-notch uplift in the relevant ratings from the bank’s baa2 Adjusted BCA. For junior senior creditors, because of the subordination of these instruments, our Advanced LGF analysis indicates likely low loss severity in the event of the bank’s failure, leading to a position in line with the bank’s Adjusted BCA.

Finally, for SG's junior securities, our LGF analysis shows a high loss given failure, given the small volume of debt and limited protection from more subordinated instruments and residual equity. We also incorporate additional notching for junior subordinated instruments (one notch) and for preference share instruments (two notches), reflecting coupon suspension risk ahead of failure.

Government support
We assess a moderate probability of government support for SG's long-term senior unsecured and junior depositors, resulting in a one-notch uplift to the relevant A1 ratings. For other junior securities, we continue to believe that potential government support is low and these ratings do not include any related uplift.

Methodology and scorecard

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 output of our scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The scorecard output 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 11
Societe Generale

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	3.2%	baa1	↔	baa1	Quality of assets	Market risk
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - fully loaded)	12.4%	baa1	↔	baa2	Capital retention	Stress capital resilience
Profitability						
Net Income / Tangible Assets	0.2%	b1	↔	ba3	Expected trend	Return on assets
Combined Solvency Score		baa2		baa3		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	40.6%	b1	↔	ba3	Expected trend	Market funding quality
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	50.0%	a1	↔	a1	Asset encumbrance	
Combined Liquidity Score		baa3		baa3		
Financial Profile				baa3		
Qualitative Adjustments				Adjustment		
Business Diversification				1		
Opacity and Complexity				-1		
Corporate Behavior				0		
Total Qualitative Adjustments				0		
Sovereign or Affiliate constraint				Aa2		
BCA Scorecard-indicated Outcome - Range				baa2 - ba1		
Assigned BCA				baa2		
Affiliate Support notching				0		
Adjusted BCA				baa2		

Balance Sheet	in-scope (EUR Million)	% in-scope	at-failure (EUR Million)	% at-failure
Other liabilities	486,251	41.3%	535,764	45.5%
Deposits	485,422	41.3%	435,909	37.1%
Preferred deposits	359,212	30.5%	341,252	29.0%
Junior deposits	126,210	10.7%	94,657	8.0%
Senior unsecured bank debt	104,976	8.9%	104,976	8.9%
Junior senior unsecured bank debt	39,900	3.4%	39,900	3.4%
Dated subordinated bank debt	15,455	1.3%	15,455	1.3%
Preference shares (bank)	9,100	0.8%	9,100	0.8%
Equity	35,292	3.0%	35,292	3.0%
Total Tangible Banking Assets	1,176,395	100.0%	1,176,395	100.0%

Debt Class	De Jure waterfall		De Facto waterfall		Notching		LGF Notching Guidance vs. Adjusted BCA	Assigned LGF notching	Additional Notching	Preliminary Rating Assessment
	Instrument volume + subordination	Sub-ordination	Instrument volume + subordination	Sub-ordination	De Jure	De Facto				
Counterparty Risk Rating	25.4%	25.4%	25.4%	25.4%	3	3	3	3	0	a2
Counterparty Risk Assessment	25.4%	25.4%	25.4%	25.4%	3	3	3	3	0	a2 (cr)
Deposits	25.4%	8.5%	25.4%	17.4%	3	3	3	3	0	a2
Senior unsecured bank debt	25.4%	8.5%	17.4%	8.5%	3	3	3	3	0	a2
Junior senior unsecured bank debt	8.5%	5.1%	8.5%	5.1%	0	0	0	0	0	baa2
Dated subordinated bank debt	5.1%	3.8%	5.1%	3.8%	-1	-1	-1	-1	0	baa3
Junior subordinated bank debt	3.8%	3.8%	3.8%	3.8%	-1	-1	-1	-1	-1	ba1
Non-cumulative bank preference shares	3.8%	3.0%	3.8%	3.0%	-1	-1	-1	-1	-2	ba2

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	a2	1	A1	A1
Counterparty Risk Assessment	3	0	a2 (cr)	1	A1(cr)	
Deposits	3	0	a2	1	A1	A1
Senior unsecured bank debt	3	0	a2	1	A1	A1
Junior senior unsecured bank debt	0	0	baa2	0	Baa2	Baa2
Dated subordinated bank debt	-1	0	baa3	0	Baa3	Baa3
Junior subordinated bank debt	-1	-1	ba1	0	(P)Ba1	
Non-cumulative bank preference shares	-1	-2	ba2	0	Ba2 (hyb)	Ba2 (hyb)

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

Ratings

Exhibit 12

Category	Moody's Rating
SOCIETE GENERALE	
Outlook	Negative
Counterparty Risk Rating	A1/P-1
Bank Deposits	A1/P-1
Baseline Credit Assessment	baa2
Adjusted Baseline Credit Assessment	baa2
Counterparty Risk Assessment	A1(cr)/P-1(cr)
Issuer Rating	A1
Senior Unsecured	A1
Junior Senior Unsecured	Baa2
Junior Senior Unsecured MTN	(P)Baa2
Subordinate	Baa3
Jr Subordinate MTN -Dom Curr	(P)Ba1
Pref. Stock Non-cumulative	Ba2 (hyb)
Commercial Paper	P-1
Other Short Term	(P)P-1
LEASEPLAN CORPORATION N.V.	
Outlook	Negative
Counterparty Risk Rating	A1/P-1
Bank Deposits -Dom Curr	A1/P-1
Baseline Credit Assessment	baa3
Adjusted Baseline Credit Assessment	baa2
Counterparty Risk Assessment	A1(cr)/P-1(cr)
Issuer Rating -Dom Curr	A1
Senior Unsecured	A1
AYVENS	
Outlook	Negative
Baseline Credit Assessment	baa3
Adjusted Baseline Credit Assessment	baa2
Issuer Rating	A1
Senior Unsecured	A1
ST Issuer Rating	P-1

Source: Moody's Ratings

Endnotes

1 Counterparty Risk Ratings, and Counterparty Risk Assessment also benefit from it.

2 Net profit excluding results generated by Corporate Centre.

3 Private banking business results have entirely been reported under FRPBI since the beginning of 2022. Private banking was previously located in different business segments.

4 Insurance results have been reported under RPBI since September 2023. Previously, insurance business was located under the International Retail, Mobility and Leasing Services segment.

5 SG's main subsidiaries in Central and Eastern Europe include Komercni Banka, a.s. (A1 stable, a3 (the ratings shown in this report are the banks' deposit rating, senior unsecured debt rating where applicable and Baseline Credit Assessment)) in the Czech Republic and BRD - Groupe Societe Generale (Baa1 stable, ba1) in Romania. Both banks rank among the top three banks in their respective countries.

6 SG has one of the largest footprint in Africa amongst international banks. It has a leading position in the Mediterranean Basin, Ivory Coast, Guinea, Cameroon and Senegal. On 8 June 2023, SG announced its decision to revisit its network and sell its subsidiaries in Congo, Equatorial Guinea, Mauritania and Chad. It also announced a strategic review on its subsidiary in Tunisia. The sale of the subsidiaries on Congo and Chad were completed in January 2024.

7 Excluding captives and financial leasing companies.

8 This encompasses capital market activities (fixed income and currencies, equities and securities services), and financing and advisory activities.

9 As of year-end 2023, GBIS was located in 35 countries and had operations in more than 50 countries.

10 Moody's calculations.

11 These include loans and advances, and debt securities. Cash balances at central banks are excluded from the calculation.

12 As of the end of September 2023, SMEs represented 21% of total exposures to corporates. SMEs are primarily located in France.

13 Exposure to the oil and gas sector represented 27% of the group's CET1 capital as of the end of December 2023.

14 Exposure to the commercial real estate sector represented 45% of the group's CET1 capital as of the end of December 2023.

15 This also includes capital allocated to securities services.

16 This NPL ratio is that reported by the bank, and includes amounts due from banks in the calculation in addition to loans and advances to customers and finance leases. Our calculation of problem loan ratios presented in Exhibit 2 of this report is solely based on loans and advances to customers.

17 Based on EBA dashboard

18 The MDA includes a 4.5% pillar 1 requirement, a 1.2% pillar 2 requirement, a 2.5% capital conservation buffer, a 1% global systemically important institution buffer and a 0.56% countercyclical buffer. The MDA applicable in 2024 is 10.2%, including a 0.79% countercyclical buffer and 1.44% Pillar 2 requirement.

19 Source: European Banking Authority

20 This calculation is based on adjusted profit and excludes the impact of items we consider as non-recurring.

21 Based on the average profitability of the five largest French banks.

22 Business transformation costs were reported under Corporate Centre until Q2 2023. Since the reporting of Q3 2023 results, they are allocated to the business lines.

23 Business lines' net income as a percentage of total assets allocated to the business lines.

24 The interest rate on the Livret A increased to 1% from 0.5% in February 2022, to 2% in August 2022 and then to 3% in February 2023.

25 Since 2022, SG has been required to spread the gains on the disposal of used cars over time instead of taking them entirely at the time of sale. This accounting approach implies a slower depreciation of cars when secondhand car prices are high. This results in the "gain" to be partly taken before the sale of the vehicle occurs through lower depreciation costs, and a decrease in the gain reported at the time of disposal because of a higher book value. This had a very positive impact in 2022 because of reduced depreciation costs and still high gains on used car sales. But the impact was negative in 2023 because of lower sales price and higher book values.

26 Hedge accounting cannot be used for leasing operations.

27 According to our chart of accounts but excluding small-denominated structured notes from the deposit base.

28 The French retail banking deposit base was 45% composed of sight deposits at end-March 2024 versus 58% at year-end 2022.

29 This calculation is based on wholesale funding with a residual maturity of less than one year as of year-end 2023. We have excluded trading liabilities, repo transactions, the small-denominated structured notes and the portion of borrowings from the TLTRO redeposited at the ECB from the calculation.

30 Excluding trading liabilities.

© 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

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

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

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

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

REPORT NUMBER 1410459

CLIENT SERVICES

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