MOODY'S INVESTORS SERVICE

CREDIT OPINION
1 February 2023

Update

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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	Stable
Long Term Deposit	A1
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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Societe Generale

Update of credit analysis

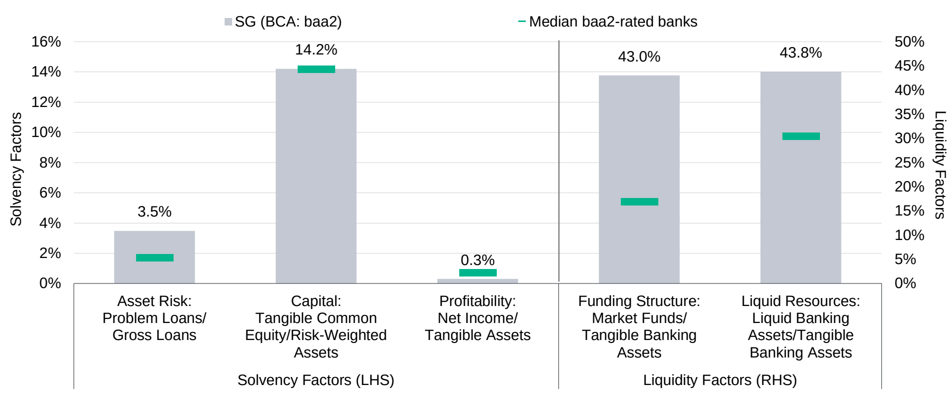
Summary

Societe Generale (SG) is a global systemically important bank based in France (Aa2 stable) with sizeable cross-border and international operations.

SG's baa2 Baseline Credit Assessment (BCA) reflects the bank's strong franchise and well-diversified universal banking business model; sound asset risk despite the high share of corporate in the loan portfolio, relatively large consumer finance book and exposures to regions with a weaker credit profile such as Africa; good capitalisation; and the high amount of liquid assets mitigating the large stock of confidence-sensitive wholesale funding. The BCA is, however, constrained by the risks stemming from the bank's sizeable capital market activities and its low profitability.

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 translates into an additional one-notch uplift for deposit and senior unsecured ratings[1]

Exhibit 1
Rating scorecard - Key financial ratios



Source: Moody's Banking Financial Metrics

Credit strengths

» Universal banking business model providing rather stable earnings

» Sound asset risk despite the high share of corporates in the loan portfolio, relatively large consumer finance book and exposures to regions with a weaker credit profile such as Africa

» Good regulatory capitalisation, although leverage is higher than at many peers

» High amount of liquid assets

Credit challenges

» Sizeable capital market activities carrying tail risks.

» 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 rating outlook is stable because we expect no significant changes in the bank's credit fundamentals over the next 12-18 months. The current ratings reflect the challenges stemming from the rising inflationary pressures in Europe as well the likely efficiency gains that will arise from the restructuring of the bank's retail networks and of its global market activities.

Factors that could lead to an upgrade

The BCA could be upgraded in case of:

» a significant and sustainable improvement in the bank's profitability metrics

» a structural improvement in the bank's funding profile

» significantly higher capitalisation

A higher BCA would likely lead to a rating upgrade.

An upgrade would also be contingent upon a stable operating environment where the bank operates and SG's ability to maintain solid asset quality and a low cost of risk.

Factors that could lead to a downgrade

The BCA could be downgraded in case of:

» a deterioration in operating conditions in SG's main markets with a sustained negative impact on the bank's financial performance

» a weakening in funding and liquidity

» a fall of the Common Equity Tier 1 (CET1) capital ratio significantly below 12% without a prompt recovery

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

SG's ratings could also be downgraded if management were to deviate from its committed funding plan, which would lead to a reduction in expected debt issuance; or a more rapid increase in assets than we currently expect, increasing the loss given failure for its junior depositors and senior unsecured investors.

Key indicators

Exhibit 2
Societe Generale (Consolidated Financials) [1]

	06-22[2]	12-21[2]	12-20[2]	12-19[2]	12-18[2]	CAGR/Avg.[3]
Total Assets (EUR Million)	1,499,793.0	1,365,991.0	1,314,636.0	1,223,398.0	1,200,523.0	6.6[4]
Total Assets (USD Million)	1,567,951.9	1,547,812.5	1,608,530.6	1,373,262.1	1,372,371.3	3.9[4]
Tangible Common Equity (EUR Million)	51,977.0	51,711.0	47,649.0	47,785.0	45,938.7	3.6[4]
Tangible Common Equity (USD Million)	54,339.1	58,594.0	58,301.2	53,638.6	52,514.6	1.0[4]
Problem Loans / Gross Loans (%)	3.2	3.3	3.8	3.6	4.2	3.6[5]
Tangible Common Equity / Risk Weighted Assets (%)	14.1	14.2	13.5	13.9	12.2	13.6[6]
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	26.0	26.3	28.7	27.5	31.4	28.0[5]
Net Interest Margin (%)	0.8	0.8	0.8	0.9	0.9	0.9[5]
PPI / Average RWA (%)	2.5	2.1	1.4	1.7	1.7	1.9[6]
Net Income / Tangible Assets (%)	0.4	0.4	0.1	0.3	0.3	0.3[5]
Cost / Income Ratio (%)	68.4	69.9	77.8	74.3	74.3	72.9[5]
Market Funds / Tangible Banking Assets (%)	46.9	43.0	48.1	46.8	47.1	46.4[5]
Liquid Banking Assets / Tangible Banking Assets (%)	42.9	43.8	47.6	43.8	43.5	44.3[5]
Gross Loans / Due to Customers (%)	98.2	98.4	99.1	105.8	106.0	101.5[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 Investors Service and company filings

Profile

Societe Generale's (SG) is a large universal bank domiciled in France, with total consolidated assets of €1,594 billion as of end-September 2022. SG is included in the list of global systemically important banks. Its operations are organized across three main business lines.

The French Retail Banking division (**FRB**, 23% of the group's net result in the first 9 months of 2022[2]) includes the group's domestic retail and small and medium-sized enterprise (SME) banking franchise as well as its private banking activities.[3] SG ranks fourth in domestic retail banking where it operates through two branch networks (namely Societe Generale and Credit du Nord) and Boursorama, the leading fully digital bank in France. That being said, SG is currently in the process of merging Credit du Nord and Societe Generale's networks as part of FRB's transformation. The current strategy is also aimed at fostering Boursorama's growth, organic and otherwise. As such, the latter entered into a partnership agreement with ING Groep N.V. (ING, Baa1 senior unsecured rating) in April 2022, through which ING's banking customers in France were offered the possibility to migrate to Boursorama, following the decision of ING to discontinue its retail operation in the French retail market. The legal merger of Societe Generale and Credit du Nord's networks was completed in January 2023.

The International Retail Banking and Financial Services (**IBFS**, 44% of the group's net result in the first 9 months of 2022) focuses on businesses with strong growth potential and comprises :

» International retail banking activities are spread across a number of countries in Central and Eastern Europe[4] and Africa[5] where SG benefits from well-established franchises. International retail activities also include consumer finance distributed through both the group's local retail networks and specialized subsidiaries. Amid the escalation of Russia-Ukraine military conflict, SG swiftly completed the sale of Rosbank, its subsidiary in Russia, to Interros Capital in May 2022, which resulted in a one-off loss of €3.3. billion.

» Insurance operations capitalize on the group's bancassurance model and strong synergies with its retail banking, private banking and financial services. SG also is also developing external partnerships. The group offers life insurance savings, retirement savings and personal protection to individual and corporate clients through its insurance captive entities, the main of which are SOGECAP and SOGESSUR.

» Financial Services comprise operational vehicle leasing and fleet management operated by ALD, a 80%-owned subsidiary,[6] and vendor and equipment finance operated by Societe Generale Equipment Finance (SGEF), benefiting from a strong franchise in many European countries. The announced acquisition of LeasePlan Corporation N.V. (Baa1 deposit/Baa1 senior unsecured ratings, positive, baa3 BCA) by ALD will result in the largest fleet management company worldwide.[7]

The Global Banking and Investor Solutions (**GBIS**, 32% of the group's net result in the first 9 months of 2022) 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 geographic 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 to its global investment bank peers. In November 2022, SG announced its plan to create a London-based joint venture with AllianceBernstein, which will combine their cash equities and equity research businesses. This operation is aimed at creating a global leading equity house and support the diversification of SG's business model towards fee-based and recurring activities with low risk profile and complementary geographical reach.

Detailed credit considerations

Asset risk remains sound despite the sheer size of its corporate loan book, significant size of the consumer finance activity and exposures to regions with a low credit profile

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 between 2017 and end-June 2022 was 32 bps at SG versus 29 bps for the five largest French banks. We nonetheless 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, its sizeable consumer lending book, and exposures to regions with a weaker credit profile such as Africa. Our baa1 assigned Asset Risk score also takes account of the risks associated with the group's investment banking activities.

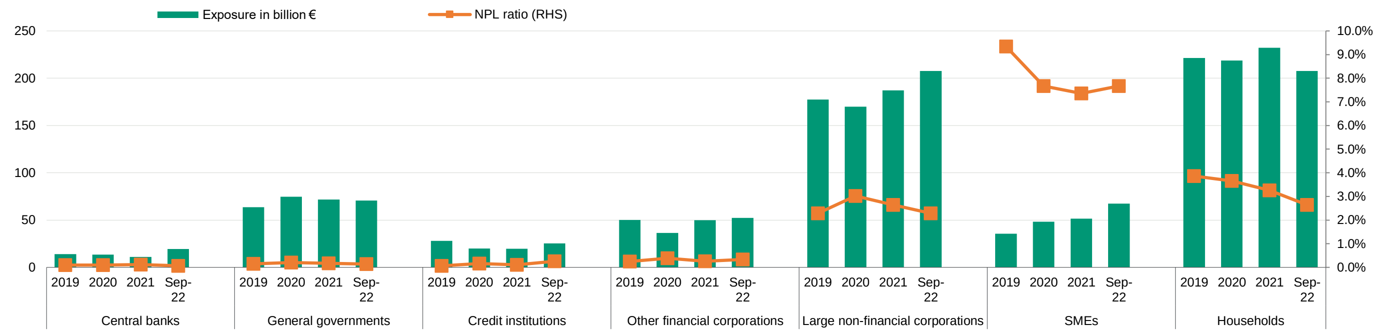
At end-September 2022, exposures to the corporate sector (including large non-financial corporates, financial corporates other than banks, and SMEs) accounted for 50% of the €650 billion group's total on-balance-sheet credit exposures[10] versus only 32% to households (Exhibit 3). SG's exposures to corporates is materially geared towards large corporates,[11] which are generally more resilient in economic downturns than SMEs but imply higher single name concentrations. That being said, the ten largest corporate counterparties (in terms of Exposure-at-Default or EAD) represented 42% of the group's Common Equity Tier1 (CET1) capital at end-June 2022, which remains broadly in line with the other large French banks. Despite good sector diversification, exposures to highly cyclical sectors are relatively high. At end-September 2022, the oil and gas sector amounted to €22 billion (1.9% of group EAD[12]) and the commercial real estate sector amounted to €40 billion (3.5% of group EAD[13]). Positively, SG's direct exposure to leveraged buyouts (LBO) remains contained at around €5 billion, i.e. less than 0.5% of group EAD.

Consumer finance,[14] which we consider as particularly vulnerable in times of economic stress, accounts for a substantial portion of the group's exposure to households. At year-end 2021, the EAD exposure to consumer finance to retail customers amounted to €59 billion (€8.4 billion of which were revolving credits) or 34% of the group's total exposure to households.

Exhibit 3

The corporate sector accounts for 50% of total exposures versus only 32% for households

Breakdown of credit exposures (1) by type of counterparty (in billion €) 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

In terms of geographic exposure, the domestic market represents approximately 50% of the group's total on-balance-sheet credit exposures (Exhibit 4). Excluding France, Europe represents around 30%, which in addition to the Czech Republic and Romania where the group operates through large local subsidiaries, includes, the UK, Germany, Italy and Luxembourg amongst the largest. The exposure to Russia fell to €2.3 billion at end-September 2022 from €15 billion at year-end 2021 following the completion of the disposal of Rosbank in May 2022. The residual exposure to Russia essentially consists of off-shore exposures that were 21% covered by loan loss provisions at end-September 2022.

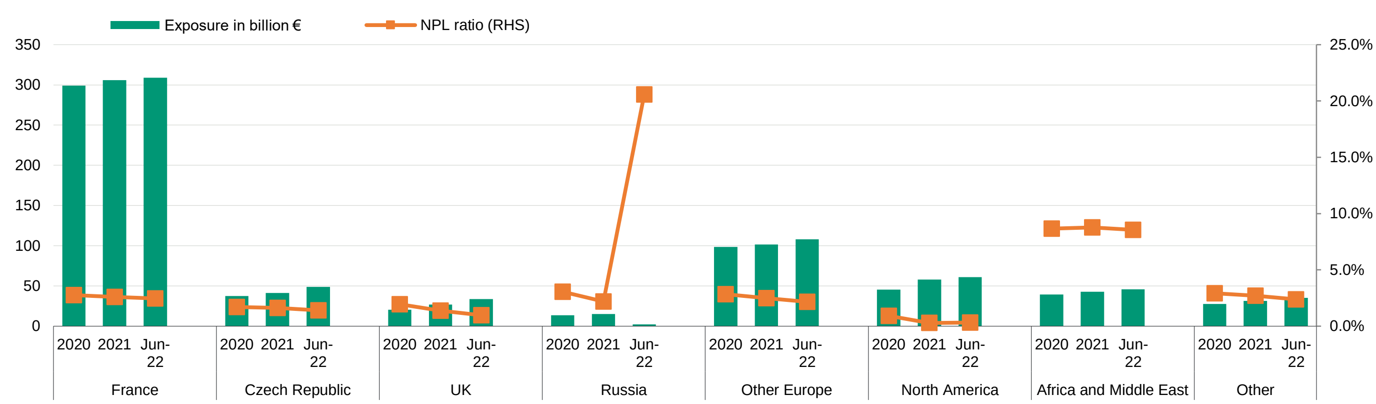
Exposures to North America and Asia primarily stem from the Global Banking and Investors Solution business and consist of exposures to corporate, sovereign and institutional counterparties.

SG has confirmed in recent years its intent to continue doing business in Africa, which differentiates the group from most of its large international peers. Although very diversified (19 countries) and focused in regions with more stable operations, such as West Africa, the expected growth in SG's business in the region, in particular in the more vulnerable SME segment, could imply higher credit risks. At end-June 2022, Africa and the Middle East represented 7% of the group's total on-balance-sheet credit exposures but around 24% of its problem loans.

Exhibit 4

France represents around 50% of the group's exposures

Breakdown of credit exposures (1) by geographic region (in billion €) 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

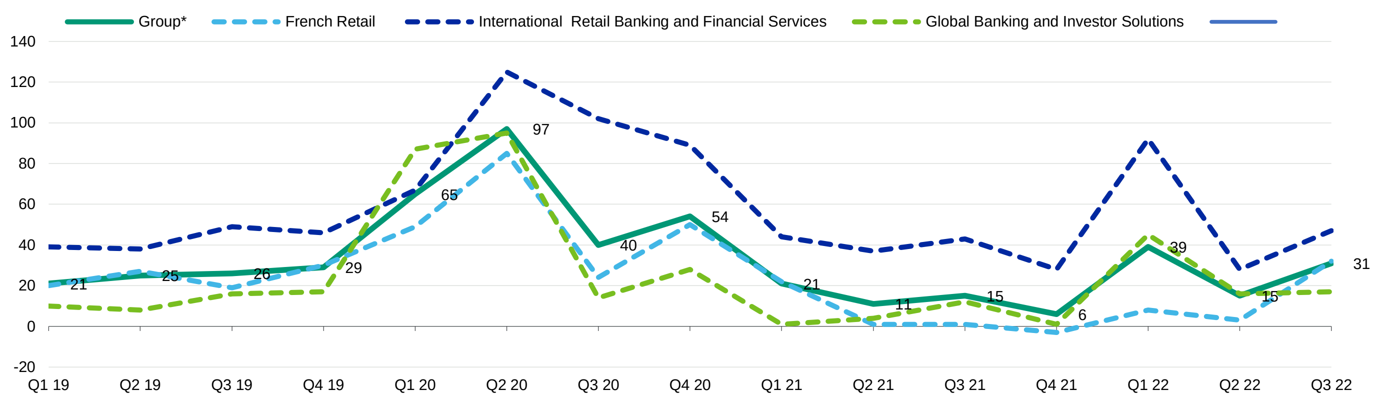
Source: Company data

Our analysis of asset risk at SG also encompasses its sizeable capital market activities, which typically carry tail risks. Revenues from pure market activities[15] represented on average 21% of the group's net banking income from 2018 to 2021, which is materially higher than the average of the French mutual banking groups (below 10%) and even slightly higher than at BNP Paribas (18% over the same period). In H1 2020, SG's market activities were hit by substantial negative price adjustments on equity derivative transactions following the suspension of dividends by many companies, which fully reversed the Global Markets' profit of the year. This reflects the high level of risk that some derivative operations involve. The group has since then been de-risking its structured products portfolio with the objective of decreasing its sensitivity to market dislocations.

The group's asset performance has continued to improve in the first nine months of 2022. The nonperforming loan (NPL) ratio was 2.7%[16] as of year-end September 2022, down from 2.9% at year-end 2021 and 3.3% at year-end 2020, still reflecting very low levels of defaults. The stage 2 loan ratio is also down to 7.5% at end-September 2022 from 7.8% at year-end 2021 and 9.6% at year-end 2020, although the decrease in the ratio since the end of 2021 is essentially due to an increase in the denominator.

The cost of risk in the first nine months of 2022 was 29 bps of outstanding loans (Exhibit 5), up from 16 bps over the same period in 2021. The rise is due to the higher provision charges taken in Q1 2022 in response to rising risks on the bank' exposures to Russia and further provisioning on stage 1 and stage 2 loans in Q3 2022,[17] reflecting a cautious stance in anticipation of a deterioration in the macroeconomic environment. Overall, half of the €1,2 billion cost of risk reported during the first nine months of 2022 were made up of stage 1 and stage 2 provisions.[18] This results in a stock of forward-looking provisions of €3,754 million at the end of September 2022, up from €3,355 million as of year-end 2021. The bank maintained its cost of risk guidance at a range of 30 bps to 35 bps for 2022.

Exhibit 5
Cost of risk somewhat rose in 2022
Loan loss provisioning charges by division in basis points of outstanding loans



Source: Company data

Capitalisation is good despite a lower leverage ratio than most peers

At end-September 2022, the bank's phased-in CET1 capital ratio was 13.1%,[19] down from 13.7% at year-end 2021. The combined effect of the negative rating migration following the outbreak of the conflict in Ukraine and loss on the disposal of Rosbank (-20 bps), the decrease in Other Comprehensive Income (OCI) stemming from the negative impact of higher interest rates on sovereign exposures and insurance portfolios (-29 bps) and regulatory changes (-35 bps) more than offset the positive impact of organic capital generation (+14 bps). The phased-in leverage ratio was 4.2%[20] at end-September 2022, also down from 4.9% at year-end 2021.

Although lower than the French banking system's average CET1 ratio of 15%, SG's CET1 ratio as of end-September 2022 was 383 bps above the Maximum Distributable Amount (MDA) of 9.27%.[21] SG's guidance is to maintain a minimum buffer of 200 bps to 250 bps over the MDA after the finalisation of Basel IV. The bank expects an impact of so called Basel IV of around 120 bps on its CET1 capital ratio (roughly a 10% RWA increase) in 2025, including the effects of the Fundamental Review of the Trading Book (FRTB). SG's target CET1 ratio net of the residual impact from Basel IV is 12%.

The bank's CET1 ratio at end-September 2022 was in line with the 13.1% median of its global investment bank peers, but its leverage ratio remained below the 5.4% median of the global investment banks.

Based on our estimates, the announced acquisition of Leaseplan Corporation N.V. (Baa1/Baa1 positive, baa3) by its subsidiary ALD is expected to have a negative impact of 40 bps of capital under the proposed financial structure.

With a Total Loss Absorbing Capacity (TLAC) ratio of 29.9% at end-September 2022, excluding senior preferred debt, SG already meets 2022 requirements of 21.6% including countercyclical buffers. SG also meets the 25.2% Minimum Requirements for own funds and Eligible Liabilities (MREL) ratio notified to the bank for 2022.

Our baa2 assigned score for Capital reflects the bank's resilient capital position despite a leverage ratio lower than most peers. It also incorporates our expectation that SG's CET1 ratio will remain well above 12% over the next two years.

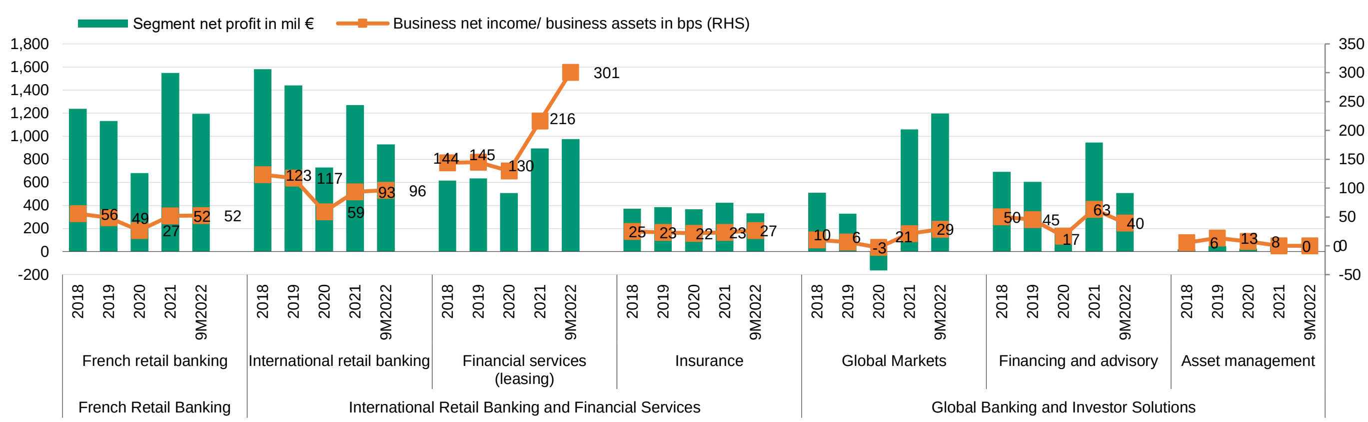
Underlying profitability improved in the past two years but its sustainability remains to be seen

Based on its average return on tangible assets from 2017 to end-June 2022, SG's profitability is modest relative to both its global investment bank peers and French universal bank peers. The group's average ratio of adjusted net income[22] by tangible assets was 30 basis points (bps) over the period, below the average ratio of our global investment bank universe (67 bps) and that of the French banking system (37 bps[23]). The lower ratio compared to peers is underpinned by the low return on asset[24] of investment banking activities until 2020 (and notably of capital market activities), offsetting the high returns of international retail banking and leasing businesses and the relatively good return of French retail banking (Exhibit 6). The group has also been continuously undertaking restructuring measures (the cost of which is generally reported under Corporate Center, i.e. outside the business lines' results), which have weighed on its operating costs, and thus on profitability, since 2018.[25]

That being said, both the group's net income and profitability (excluding non-recurring items) have materially improved in 2021 and 2022 compared to the pre-Covid period. Adjusted net profit in 2021 was up 49% on 2019. The positive trend continued into 2022 with an adjusted net profit 7% higher in the first nine months of 2022 compared to the same period in 2021 despite doubling cost of risk.[26] The ratio of adjusted net income by tangible assets was 39 bps in full-year 2021 and even reached an estimated 51 bps in the first nine months of 2022 versus 29 bps in 2019. While all business lines recovered from 2020 both in terms of revenues and cost of risk, the main progress in profitability compared to 2019 comes from auto leasing businesses and market activities (Exhibit 6). Since the end of 2020, ALD has indeed not only benefited from sustained business momentum but also from high profits on sales of vehicles coming off contract, underpinned by very strong second-hand car prices. Increased activity in capital markets since the beginning of 2021 have boosted Global Markets' revenues and profitability. In 2021 and 2022, revenues from market activities have reached their highest levels since 2009 in equity business but also in fixed-income and currency activities, which benefited from the volatile interest rate environment in 2022.

Exhibit 6

The main progress in profitability compared to 2019 comes from auto leasing businesses and market activities
Evolution of net profit (million €) and profitability by business line from 2018 to end-September 2022



(1) Corporate Center's results are excluded from the chart
(2) The amount of net profit for the first nine months of 2022 are not annualised, but the profitability ratios are annualised
(3) The profitability ratios for the first nine months of 2022 are calculated against businesses' assets as of end-June 2022
Source: Company data, Moody's Investors Service

Whether or not the improved profitability of the past two years will be sustainable over time will hinge on (i) the profitability of auto leasing which is likely to recede from the very high levels of 2021 and 2022 when the second-hand car market normalizes, and (ii) the performance of Global Banking and Investors Solutions, which has benefitted from refocus and cost savings since 2019, yet could be less favourable under future market conditions.

The group's ability to improve its long-term profitability will also depend on the effectiveness of the strategic projects currently being implemented. The announced acquisition of LeasePlan by ALD will result in the world's largest player in the dynamic auto leasing and fleet management sector. If successful, the enlarged business scale and cost synergies will likely allow the group to further enhance the profitability of this business line, once the integration costs are absorbed.[27]

As indicated by the group, the merger between its two domestic retail networks is also expected to result in efficiency gains in French Retail Banking. Profitability of the domestic retail activities will also improve if Boursorama manages to break-even in 2024 as planned through a fast growth in its client base.

In the short-term, assuming a slight decline in market activities from the high levels of 2022 and roughly stable cost of risk, we expect the group's underlying profit to somehow recede in 2023 compared to 2022. Revenues from French Retail Banking will be the most subject to pressure in the context of rising interest rates. The successive hikes in the interest rate paid on regulated savings[28] combined with the difficulty in fully reflecting the rise in interest rates in new housing loans because of the taux d'usure - the formula-based legal cap applicable on lending rates in France – will affect the business line's net interest margins in 2023. Additionally, as a result of the change in the terms of the Targeted Long-term Refinancing Operation (TLTRO) since 23 November 2022, SG, like all other banks, no longer benefits from the cheap funding the instrument provided over the past three years.

Our ba2 Profitability score, one notch above the macro-adjusted score of ba3[29], reflects both the improvement in the group's underlying profitability in 2021 and 2022 and the challenges it will be faced with to maintain it at these levels.

Large stock of confidence-sensitive wholesale funding is mitigated by high amount of liquid assets and proven access to wholesale funding markets

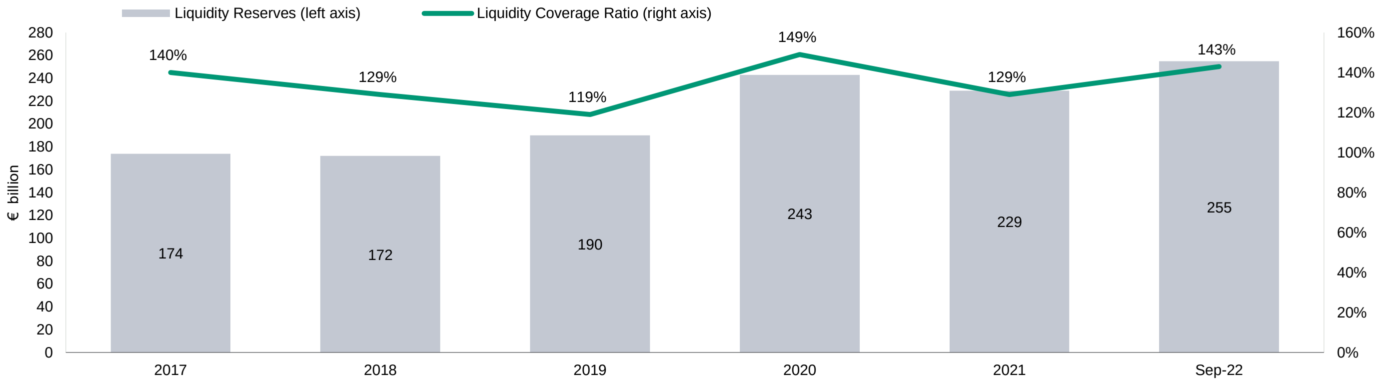
SG has a large customer deposit base stemming from both its retail networks and global banking businesses. Similar to other French banks, customer deposits have increased substantially since the beginning of the Covid-19 pandemic (+24% from year-end 2019 to end-June 2022), resulting in an improved loan-to-deposit (LTD) ratio of 98% at end-June 2022 (year-end 2019: 106%), below the 103% average ratio of the five largest French banks at the same date.

We however consider the high share of non-operational deposits within SG's total customer deposits (around 40% at end-June 2022, based on our calculation) as a weakness, partly offsetting the benefit of its favorable LTD ratio. Although these have proven very stable over the past few years, these deposits, which include institutional and large corporate deposits, are deemed more volatile than retail deposits.

Similar to other French banks and some of its international peers with sizeable capital market activities and other specialized financing such as leasing and consumer finance that generate little or no customer deposit, 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 estimation, around 45% of the stock of funds raised in the wholesale markets were short-term at end-June 2022.[30] [31]The group's funding policy is based on maturity matching between assets and liabilities with very limited leeway left to each business unit to run maturity transformation. We therefore believe that the short-term portion of market funds essentially finances short-term assets, including market activities and part of the liquidity portfolio. This nonetheless makes the bank sensitive to swings in investor confidence.

The other side of the coin is the substantial amount of liquid assets, which mitigates SG's reliance on market funds. At end-September 2022, SG had a liquidity buffer of encumbered assets of €255 billion (Exhibit 7), 74% of which were cash at central banks and 24% were high-quality liquid assets (HQLA), which amply covered the stock of short-term market funds,[32] inclusive of the long-term debt that matures within the following 12 months. Its liquidity coverage ratio (LCR) was 143% at end-September 2022 (143% on average for the quarter), up from 129% as year-end 2021.

Exhibit 7
SG has a high liquidity buffer
SG's liquidity reserves and liquidity coverage ratio



Source: Company reports

We assign a baa2 Combined Liquidity score to SG, derived from an assigned ba2 Funding Structure score and an assigned a2 Liquid Resources score. Our ba2 score for SG's Funding Structure is two notches higher than the Macro-Adjusted initial score of b1. These two notches of positive adjustment reflect the diversification of wholesale funding, both by investor base and currency and the lengthening maturity of the bank's long-term funding as it substantially increases its MREL and TLAC eligible debt. The score is also adjusted for:

» the portion of borrowings from the Targeted longer-term refinancing operations (TLTRO) redeposited at the ECB, that temporarily inflates the bank's balance-sheet. Given the recent changes in the terms of the TLTRO, which makes it a less attractive funding source, we anticipate SG to repay the remaining balances as and when they fall due at the latest;

» and the small denominated structured notes that are traded to retail investors and, therefore, are stable in nature.[33]

Our assigned score of a2 for Liquid Resources incorporates a one-notch negative adjustment from the initial Macro-Adjusted score of a1. This reflects the portion of encumbrance stemming from market activities in the stock of liquid resources retained for the calculation of our initial liquidity score. The liquid resources ratio is also adjusted for the aforementioned impact of the TLTRO.

Qualitative adjustments

We assign a positive one-notch adjustment for Business Diversification in the qualitative section of our BCA scorecard because of the superior diversification, not only geographically but also across different business types. SG has historically shown lower (and declining) earnings volatility than many of its global peers. We expect the acquisition of LeasePlan by ALD , which will enhance the group's position in auto leasing and fleet management, to further buttress the group's diversification.

We also assign a negative one-notch adjustment for Opacity and Complexity in the qualitative section of our BCA scorecard. Although the proportion of capital market activities in the group (25% of total revenue in the first nine months of 2022) is lower than those of some of the bank's global peers, it brings elements of earnings volatility - as recently seen - , confidence sensitivity and complexity, which all mitigate the value we attribute to these franchises.

ESG considerations

Societe Generale's ESG Credit Impact Score is Moderately Negative CIS-3

Exhibit 8
ESG Credit Impact Score

For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.

Source: Moody's Investors Service

SG' s ESG Credit Impact Score is moderately negative (**CIS-3**), reflecting the limited credit impact of environmental and social risk factors on the bank's ratings to date. However, the score 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 9
ESG Issuer Profile Scores

Source: Moody's Investors Service

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, litigation exposure, reputational risk and high compliance standards. The French regulator's focus on mis-selling and misrepresentation is mitigated by well-developed policies and procedures. However, the design of complex, opaque or speculative financial products for institutional clients increases the exposure to the potential for reputational risk and litigation. High cybersecurity and personal data risks are mitigated by the technology solutions and organisational measures put into place by SG 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.

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. 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 are redeposited at the ECB, are deducted from the projected bank's 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 in the medium term. This adjustment does not result in a change in the rating uplift.

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 firm'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.

Counterparty Risk Ratings (CRRs)

SG's CRRs are A1/P-1

The CRRs of A1 reflect the Adjusted BCA of baa2, three notches of uplift through the extremely low loss given failure from the high volume of instruments that are subordinated to CRR liabilities and one additional notch through our government support assumptions. The CRRs also benefits from one notch of systemic support, as an assumption of a very high likelihood of government support. The short-term CRR is P-1.

Counterparty Risk (CR) Assessment

SG's CR Assessment is A1(cr)/P-1(cr)

The CR Assessment is three notches above the SG's BCA of baa2, based on the buffer against default provided to the senior obligations represented by the CR Assessment by subordinated instruments and one notch through our government support assumptions. The main difference with our Advanced LGF approach used to determine instrument ratings is that the CR Assessment captures the probability of default on certain senior obligations, rather than expected loss; therefore, we focus purely on subordination and take no account of the volume of the instrument class. SG's CR Assessment also benefits from one notch of government support, in line with the moderate support assumption incorporated in the group's long-term debt and deposit ratings.

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 10

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	3.5%	baa1	↔	baa1	Quality of assets	Market risk
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - fully loaded)	14.1%	a2	↔	baa2	Capital retention	Stress capital resilience
Profitability						
Net Income / Tangible Assets	0.3%	ba3	↔	ba2	Return on assets	Loan loss charge coverage
Combined Solvency Score		baa1		baa2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	43.0%	b1	↔	ba2	Expected trend	Market funding quality
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	43.8%	a1	↔	a2	Asset encumbrance	
Combined Liquidity Score		baa3		baa2		
Financial Profile				baa2		
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				baa1 - baa3		
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	424,031	41.5%	468,597	45.9%
Deposits	436,921	42.8%	392,355	38.4%
Preferred deposits	323,322	31.6%	307,156	30.1%
Junior deposits	113,600	11.1%	85,200	8.3%
Senior unsecured bank debt	69,615	6.8%	69,615	6.8%
Junior senior unsecured bank debt	37,700	3.7%	37,700	3.7%
Dated subordinated bank debt	15,094	1.5%	15,094	1.5%
Preference shares (bank)	7,998	0.8%	7,998	0.8%
Equity	30,661	3.0%	30,661	3.0%
Total Tangible Banking Assets	1,022,019	100.0%	1,022,019	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	24.1%	24.1%	24.1%	24.1%	3	3	3	3	0	a2
Counterparty Risk Assessment	24.1%	24.1%	24.1%	24.1%	3	3	3	3	0	a2 (cr)
Deposits	24.1%	8.9%	24.1%	15.8%	3	3	3	3	0	a2
Senior unsecured bank debt	24.1%	8.9%	15.8%	8.9%	3	2	3	3	0	a2
Junior senior unsecured bank debt	8.9%	5.3%	8.9%	5.3%	0	0	0	0	0	baa2
Dated subordinated bank debt	5.3%	3.8%	5.3%	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)

[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 11

Category	Moody's Rating
SOCIETE GENERALE	
Outlook	Stable
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

Source: Moody's Investors Service

Endnotes

1 Counterparty Risk Rating, Counterparty Risk Assessment also benefit from it.

2 Based on net profit excluding results generated by Corporate Center

3 Private banking business' results are entirely reported under FRB since the beginning of 2022. Private banking was previously located in different business segments.

4 SG's main subsidiaries in Central and Eastern Europe include Komercni Banka a.s. (A1 deposit rating stable, a3 BCA) in the Czech Republic and BRD (Baa1 deposit rating, stable, ba1 BCA) in Romania. Both banks rank among the top three banks in their respective countries.

5 SG is part of the three international banks with the largest footprint in Africa. It has a leading position in the Mediterranean Basin, Ivory Coast, Guinea, Cameroon and Senegal.

6 ALD is not yet regulated as a standalone entity but is expected to be so in the near future.

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 At the end of 2021, GBIS was located in 39 countries and fielded operations in more than 60 countries.

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

11 At end-September 2022, SMEs represented 21% of total exposures to corporates (Exhibit 3). SMEs are primarily located in France.

12 The exposure to the oil and gas sector represented 45% of the group's CET1 capital at end-September 2022.

13 The exposure to the commercial real estate sector represented 83% of the group's CET1 capital at end-September 2022.

14 At year-end 2021, around 15% of consumer loans outstanding were revolving loans.

15 These also includes revenues from securities services.

16 These NPL ratios are those 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 are solely based on loans and advances to customers.

17 The bulk of which were on French Retail Banking

18 SG released €250 million of stage 1 and stage 2 provisions in full-year 2021.

19 CET1 ratio was around 12.9% on a fully loaded basis.

20 The fully-loaded leverage ratio was 4.1%.

21 The MDA includes a Global Systemically Important Institution buffer of 1%.

22 This calculation is based on adjusted profits and excludes the impact of items we consider as non-recurring. For H1 2022, the adjusted result excludes the €3.3 billion pre-tax loss on the disposal of Russian operations, which more than absorbed the bank's recurring profit of the period.

23 Based on the average profitability of the five largest French banks

24 Return is measured in terms of the net profit generated by the business divided by the business' assets

25 Based on our estimation, these costs (including those reported as transformation or refocusing costs as well as goodwill impairments) represented some 3 to 7 bps (after tax) of consolidated tangible assets per annum since 2018.

26 Cost of risk increased to 29 bps in the first nine months of 2022 from 16 bps over the same period in 2021. Refer to the section on asset risk for more details.

27 Refer to our report Acquisition of LeasePlan will enhance global fleet management leadership and support profitability from January 2022.

28 Starting 1 February 2023, the interest rate on the Livret A will increase to 3% from 2%. This increase comes after two previous hikes in 2022: on 1 February to 1% from 0.5%, and on 1 August to 2% from 1%

29 The macro-adjusted score materially understates SG's current profitability levels because of the impact of the poor results of 2020.

30 In this calculation, we have excluded trading derivatives and the repo matched book (i.e. securities borrowed through reverse repo transactions that are re-lent through repo transactions) from both the numerator and the denominator of the ratio.

31 Short-term debt designates wholesale liabilities issued with a maturity of less than one year.

32 Excluding trading liabilities

33 We have removed these small-denominated structured notes from the market funds to assign the score. This adjustment is not captured in the historic ratio.

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CLIENT SERVICES

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

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