

CREDIT OPINION

22 April 2021

Update



RATINGS

SGS SA

Domicile	Switzerland
Long Term Rating	A3
Type	LT Issuer Rating - Dom 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.

Contacts

Kristin Yeatman +44.207.772.5213
VP-Senior Analyst
kristin.yeatman@moody.com

Peter Firth +44.20.7772.5222
Associate Managing Director
peter.firth@moody.com

Yuliya Panarina +44.20.7772.5226
Associate Analyst
yuliya.panarina@moody.com

CLIENT SERVICES

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

SGS SA

Update following EMTN rating

Summary

SGS SA (SGS or the company) is the market leader in the global testing, inspection and certification (TIC) industry. Even though the coronavirus outbreak created significant disruption over the past 12 months, we believe that the sector will recover strongly based on its solid growth fundamentals such as economic and population growth in emerging markets, increasing complexity of supply chains, the importance of brand reputation and regulation. Ongoing trade tensions and the coronavirus outbreak [will accelerate changes in some global supply chains](#). SGS's global footprint allows it to retain and capture market share as supply chains are nearshored or reshored.

SGS has a relatively high level of sector and geographic diversity which has historically helped to support stability of earnings, delivering positive annual organic revenue growth throughout the economic cycle. However, in 2020 organic revenue decreased by 6.5% in 2020 due to global lockdown measures resulting in limited economic activity and the inability to access customers' sites. Recovery began in second half of 2020 and the company returned to growth in December.

We expect [2021 to be a period of uneven recovery](#), as we forecast a [global GDP growth of 5.3%](#) for the G-20 economies in 2021 after a 3.3% contraction in 2020. The Agriculture, Food and Life and Consumer & Retail segments will continue to be drivers of growth for SGS in 2021 and beyond, with other areas more exposed to the economic cycle or logistical challenges posed by the continuation of the coronavirus outbreak. We understand management intends to continue to focus its M&A strategy on increasing exposure towards higher added value and more complex services including Life Sciences, Connectivity, Food and Environment.

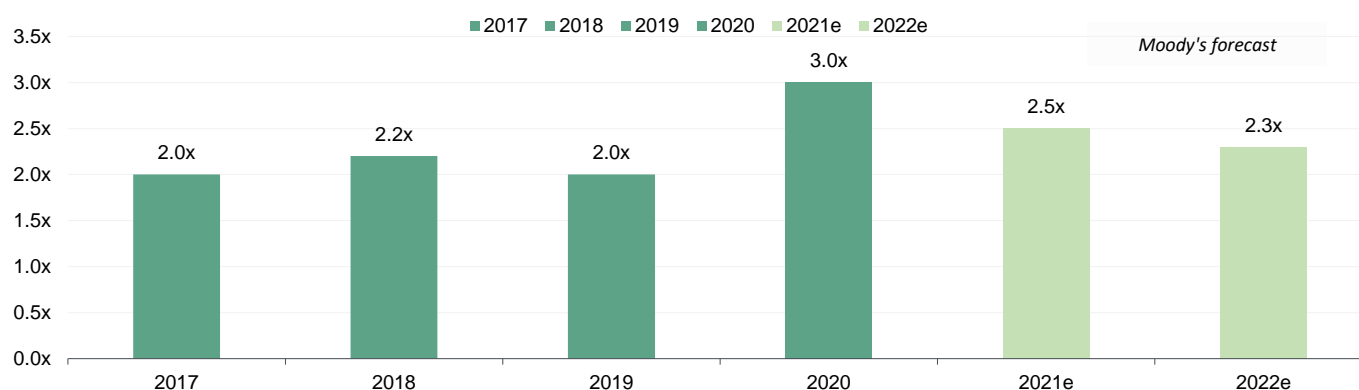
The company achieves stable, high adjusted operating margins (16.1% in 2020, reported basis), and we expect that profitability will remain one of management's key areas of focus. The move to increase the weight of higher-value added services in the portfolio, together with active portfolio management and initiatives in procurement, productivity and digitalisation are expected to support profitability growth.

The company delivers high levels of operating cash flows and has conservative balance sheet and financial policies. In 2020 Moody's adjusted net leverage was 1.6x and Moody's-adjusted gross leverage was 3x. Management's cash preservation measures have resulted in robust cash flow metrics, which together with the good liquidity available continue to support SGS's rating positioning. We expect that leverage will reduce from 2021 onwards to levels more commensurate with the rating category, driven by revenue growth as economic activity returns to more normalised levels.

Exhibit 1

Leverage expected to reduce to a normal level going forward

Moody's-adjusted leverage, 2017-2022e



Source: Company reports, Moody's estimates

Credit Strengths

- » Strong long-term track record of growth through the cycle and positive long-term industry growth dynamics
- » Market leadership, global reach and sector diversity
- » Track record of effective portfolio management and cost efficiencies, offsetting price pressure in mature segments
- » Low leverage, high operational cash generation and solid liquidity

Credit Challenges

- » Exposure to cyclical sectors and commoditisation in challenging macro-economic conditions
- » Fragmented and competitive markets exposed to change in technology and innovation, the latter bringing opportunities and threats
- » Currency translation exposures particularly to depreciating emerging markets currencies

Rating Outlook

The stable outlook reflects primarily the appropriate positioning in the A3 category and our expectation that the company will generate continued positive organic growth and that the long-term growth outlook of the industry is sustained post 2020. Additionally we expect that company will maintain conservative financial policies with low leverage and solid liquidity.

Factors that Could Lead to an Upgrade

Positive pressure on the ratings could arise if (1) Moody's-adjusted leverage falls comfortably below 2x on a sustainable basis; (2) Moody's-adjusted retained cash flow/net debt in the mid-30s in percentage terms or above while maintaining positive organic growth and stable or growing margins; and (3) the company maintains a conservative financial policy.

Factors that Could Lead to a Downgrade

Negative ratings pressure could develop if (1) Moody's-adjusted leverage increases above 2.5x on a sustained basis; (2) there is a material decline in growth or profitability for a sustained period of time; (3) Moody's-adjusted retained cash flow/net debt falls below the mid-20s in percentage terms or (3) the company adopts more aggressive financial policies in relation to leverage, shareholder distributions and/or liquidity.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

Key Indicators

SGS SA

	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021E	12/31/2022E
Revenue (USD billion)	\$6.6	\$7.0	\$6.9	\$6.0	\$6.6	\$6.9
EBITA Margin	15.8%	16.0%	16.5%	16.2%	16.0%	16.1%
Debt/ EBITDA	2.0x	2.1x	2.0x	3.0x	2.5x	2.3x
EBITA / Interest	18.0x	17.5x	19.4x	15.4x	18.1x	19.7x
RCF / Net Debt	41.3%	36.3%	34.0%	15.7%	24.2%	27.7%

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

[2] This represents Moody's forward view, not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures

Source: Moody's Financial Metrics™

Company Profile

SGS is the global leader in the testing, inspection and certification market. The company is headquartered in Geneva, Switzerland and is listed on the Swiss Stock Exchange. The company's market capitalisation was CHF19.9 billion as at 26 March 2021.

SGS operates a network of more than 2,600 offices and laboratories worldwide and employs over 89,000 staff. In 2020, the company reported revenues of CHF5.6 billion and adjusted operating income of CHF900 million.

Detailed Credit Considerations

High levels of sector and geographic diversity

In the last half of 2020 SGS completed a strategic refocussing plan in order align its global network more closely to key TIC megatrends and customer demand. It is now organised as six areas of focus compared to eight previously. There are now four divisions and two cross-divisional strategic units:

Divisions:

- » Connectivity & Products
- » Health & Nutrition
- » Industries & Environment
- » Natural Resources

Cross-Divisional Strategic Units

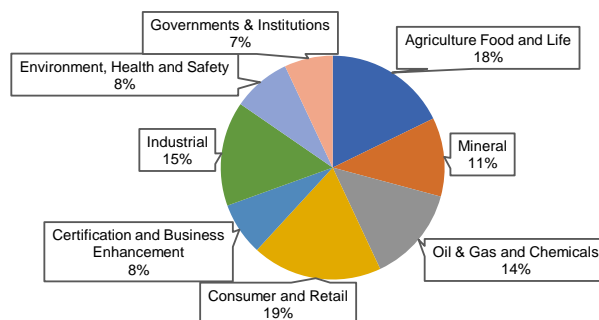
- » Knowledge
- » Digital & Innovation

Revenues are well spread across divisions, with no more than 19% represented by a single division (segmentation to change going forward as discussed above) whilst customer concentration is low. The largest customers include oil majors, national governments, retailers and energy companies. The diversity of revenues has enabled the company to achieve long-term positive organic growth at a group level over periods of constraints in capital investment and in commodities-related markets.

Exhibit 3

Revenues are well spread across divisions

Split of total revenue by division, FY 2020



Source: Company

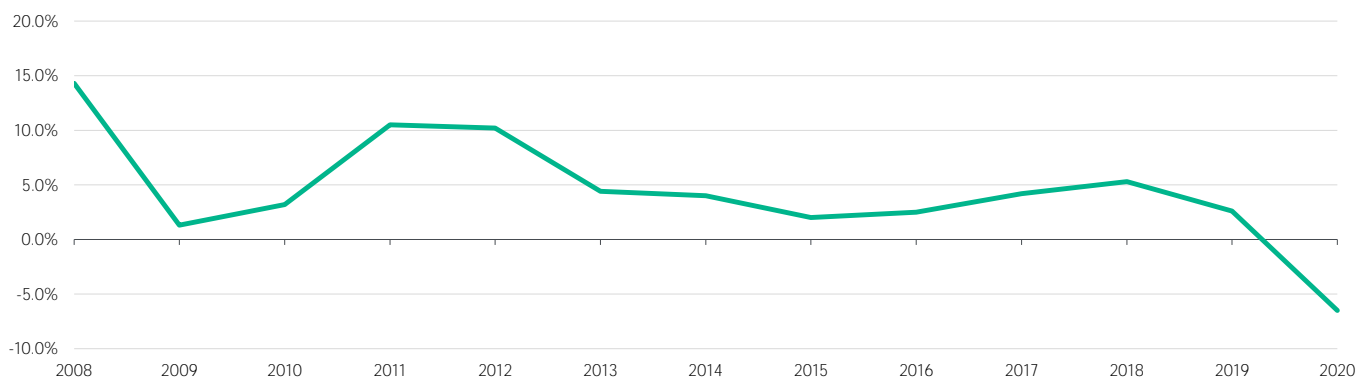
Revenues are spread across Europe, Middle East and Africa (EMEA, 45% of 2020 revenues), Asia Pacific (35%) and Americas (20%). Emerging markets in total represent approximately c.55% of revenues and are a key driver of growth due to increasing trade flows, improving product quality standards and growth in private consumption.

Ongoing trade tensions and the coronavirus outbreak [will accelerate changes in some global supply chains](#). SGS's global footprint allows it to retain or capture market share as supply chains are nearshored or reshored.

Long-term track record of positive organic growth and positive long-term growth fundamentals

SGS has delivered positive organic revenue growth through the cycle, with a low of 1.3% in 2009 and positive growth in each of the last 10 years, apart from 2020 which was exceptional due to the coronavirus pandemic. This reflects the company's high sector, geographic and customer diversity and its entrenched positions with customers. Customer retention rates are very high supported by the company's strong reputation, the low average invoice and integration of upstream laboratory activities into customer operations.

Exhibit 4

Organic revenue growth has remained positive over the last 10 years apart from 2020

Source: Company

SGS benefits from high levels of sector diversity and sound levels of growth within the TIC sector as a whole. This is driven by a range of factors, in particular increasing regulation and regulatory demand for independent testing, increasing customer focus on regulatory compliance and risk management, greater demand for product quality amongst emerging markets consumers, the growing complexity and globalisation of supply chains, and growing concerns over environmental, health and safety and food standards. These factors have historically driven growth (excluding cyclical factors) in the mid to high single digits. Despite the disruption caused by the coronavirus outbreak, we still expect that the TIC industry will continue to be able to grow ahead of GDP from 2021.

Exposure to cyclical markets and commoditisation in challenging macro-economic conditions

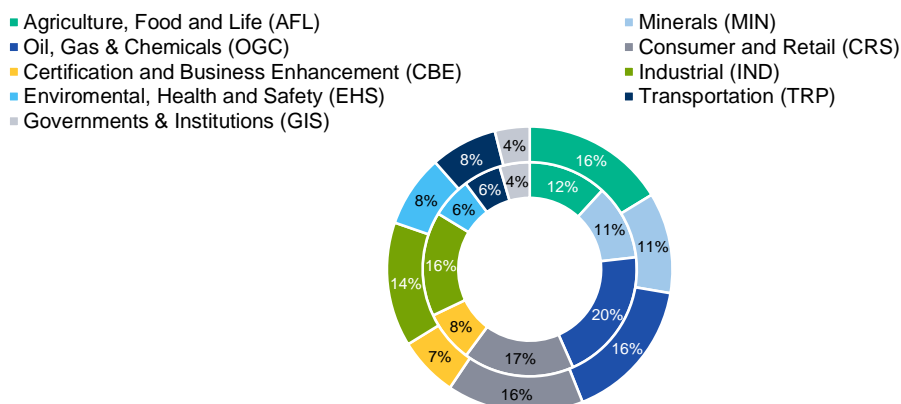
The coronavirus outbreak had a significant impact in SGS's revenues, but after decreasing by 10.4% in H1 2020, the recovery seen in H2 2020 meant that the decrease for the year 2020 was only 6.5%. The decline was mainly due to global lockdown measures resulting in limited economic activity, and some of the first half revenue was not lost but delayed into H2.

Although organic revenue declined across all divisions except Consumer and Retail (CRS) (+2.3%), the extent of the decline varied greatly from moderate at the Agriculture, Food and Life (AFL) (-1.1%) and to significant at Oil Gas & Chemicals (OGC) (-22.9%) and Industrial (IND) (-15.2%), all on a constant currency basis. We understand that a big driver of the decline at the latter two divisions was the inability to access customers' sites.

Whilst there is a broad sector diversity SGS is exposed to certain commodity markets and their inherent cyclicity, in particular the OGC and mineral sectors, with exposure to upstream oil & gas also captured in the Industrials division. All three divisions represented 40% of revenues in 2020 vs 41% 2019, a steadily declining proportion of the total group revenue as the company continues to diversify and grow faster in other sectors.

Exhibit 5

Exposure to commodity markets has steadily declined over the last ten years 2009 and 2019 revenue by division



Inner circle represents 2009 revenue by division while outer circle represents that of 2019; AFL includes both Agriculture and Life Sciences

Source: Company

SGS's total revenue grew by 40% to CHF6.6 billion 2009 -2019, before the pandemic-driven drop in 2020. The AFL division is a key driver of, followed by Environmental, Health and Safety (EHS) and Transportation (TRP), with all of the other divisions growing either at par or below group total, as shown in exhibit 6. We note that effective as of 1 January 2020, TRP is no longer reported separately in SGS' accounts.

We expect that AFL and CRS will continue to be drivers of growth for SGS in 2021 and beyond (under the new divisional segmentation), with other divisions more exposed to the economic cycle or logistical challenges posed by the outbreak. We understand management intends to focus its M&A strategy in reducing exposure to commodity sectors and inspection services towards more value added testing and certification services.

Leading market position in a highly fragmented industry with significant M&A activity

A large share of TIC activities are still conducted in-house or by public organisations, but we expect that outsourcing will continue given the increased volumes and complexity created by the trends above. In the outsourced market (about 45% of total according to the company) the top 20 companies globally have around a 40% combined market share, followed by a long tail of smaller companies.

The testing industry is fragmented and competitive in nature. The market set-up tends to favour large companies such as SGS which benefit from barriers to entry and have a history of active M&A activity to consolidate the market. The brand, reputation and track record of quality are key in this industry. The threat from new entrants is mitigated by the regulated nature of significant parts of the industry meaning the need to be certified, approved by regulatory authorities and audited by the customers.

SGS is the global leader in the TIC market, competing directly with the two other large global diversified companies, Bureau Veritas and Intertek. The company also competes with a number of more sector-focused operators such as [Eurofins Scientific SE](#) (Baa3 Stable, food and biopharma), ALS Global (minerals and life sciences), Core Labs (oil and gas) and Applus (automotive and industrial).

As a result of the fragmentation, there is significant M&A activity in the market, largely bolt-on acquisitions that contribute additional footprint, technical capabilities or products to the acquirer's portfolio and can be a more efficient use of capital than the large investments required to compete effectively with the acquiree. The company continues to accelerate its M&A activity as part of its 2020 strategic plan, with six acquisitions completed in 2020. Most notably the acquisition of SYNLAB Analytics & Services (A&S) for a consideration of €550 million further aligns SGS to the Health, Nutrition and Environment TIC megatrends and enhances its market position in Europe. It also adds a range of complex services and accelerates the adoption of its hub and spoke model, offering greater scope for automation and digitalization and generating strong operating synergies. This was the largest acquisition in the Group's history, enhancing its market position in Europe and accelerating the adoption of its hub and spoke model, offering greater scope for automation and digitalisation. It also confirms the next stage of the Group's strategic evolution, which further aligns the Group with the key TIC megatrends of Health, Nutrition and Environment.

On 7 January 2021, the Group announced that it had acquired Analytical & Development Services in the UK, a fully accredited food testing laboratory offering pesticides, nutrition, microbiology, food molecular biology and allergen testing services.

The Group expects to complete the acquisition of the lab facilities of International Service Laboratory from Novartis Ireland Limited in Ireland, providing regulated analytical laboratory and stability testing services for a broad variety of pharmaceutical products during the first half of 2021.

Exposure to innovation and technologic changes represent risks and opportunities

The TIC sector is well-suited to technological innovation and is expected to see considerable change both in the way services are delivered and in the digitalisation of its customer base. Innovations in robotics, automation, the use of sensors, data analytics and artificial intelligence, are expected to change the industry over the medium term. In addition the growth of e-commerce is changing the nature of TIC requirements with sourcing, fraud detection and assurance and cyber-security key service elements. The attractiveness of this market is evident by the high adjusted operating income margins achieved by SGS's consumer and retail division, at 25% in 2020, well ahead of group total (16.1%).

These changes are expected to bring opportunities but also the threat of disruption. Some of the more labour-intensive and simple tasks, such as physical inspections have been automated using digital inspections or drones, reducing operating costs and increasing efficiency but also increasing the risk of added competition and disintermediation as customers could potentially take these TIC functions back in house.

However we view the larger TIC companies such as SGS as well placed to respond to these challenges, with their scale, strength of reputation, global networks and long-term customer relationships enabling companies to invest in and commercialise new technologies.

SGS is adapting its offering in response to these changes with an investment programme to improve its technology platform and develop its business model as well as through selective technology-driven acquisitions.

Increased leverage in 2020 will decrease going forward

As a result of the impact of the coronavirus outbreak, the company's (Moody's-adjusted,) gross leverage increased to 3x 2020 from 2x in the prior year. The company retains significant levels of cash and marketable securities of approximately CHF1,785 million as at 31 December 2020 and net leverage is 1.7x on a Moody's-adjusted basis.

Exhibit 6

LTM June 2020 Moody's adjusted leverage reconciliation

CHF million	LTM June 2020	CHF million	LTM June 2020
Pretax income	686	Reported Debt	3,300
Interest Expense	47	Moody's pensions adjustment	151
Depreciation	435	Moody's Adjusted Debt	3,451
Amortisation	113		
Moody's pensions adjustment	11		
Company other non-recurring items	53		
Moody's Adjusted EBITDA	1,345	Moody's Adjusted Leverage	2.6x

Source: Moody's Investors Service

Management implemented cash preservation measures during H1 2020 that resulted in strong cash flow generation in the context of declining revenues and challenging profitability in 2020. Our expectation is that market conditions will continue to recover over the next 12 months, and that SGS's leverage will reach 2.5x by the end of this year and continue to delever towards 2x in 2022.

SGS's M&A strategy is well defined and the annual expenditure is relatively low in the context of cash generation, as it is combined with the ongoing portfolio optimisation, which includes the disposal of already identified underperforming and non-core business.

Dividend distributions and the company's share buyback programmes tend to be financed from internally generated cash with limited requirements for additional debt funding.

Whilst the company has not stated a leverage target, management has expressed their commitment to an investment grade rating with gross leverage around 2.5x.

Exposure to emerging market currencies and risks of ongoing currency depreciation against the swiss franc

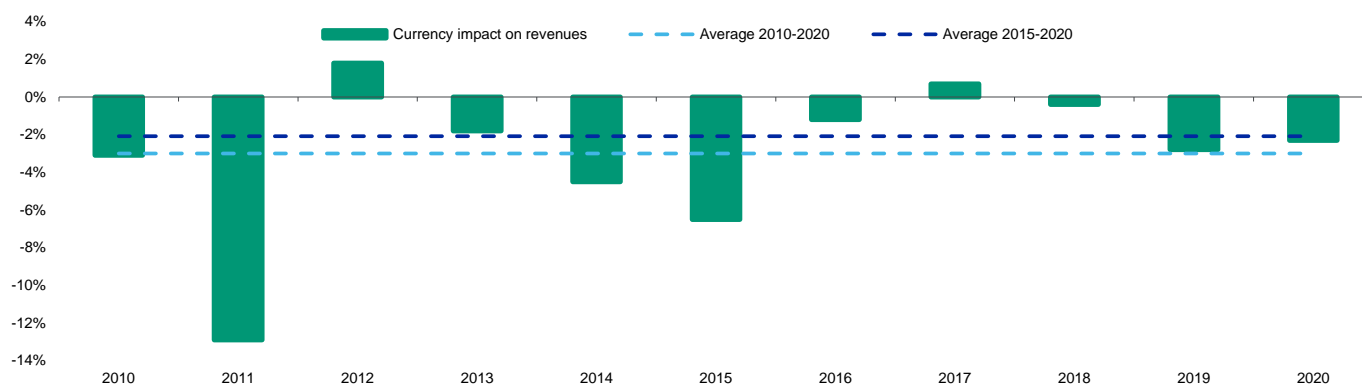
Currency movements have had a significant impact on historic trading results, as the company has very limited trading activity in CHF (representing less than 2% of revenue). Adverse currency movements have been experienced in each year since 2009 except for 2012 and 2017. In 2020 it was 2.1%.

The largest currency exposures are to the euro (25.2% of H1 2020 revenues), Chinese renminbi (14.8%), and US Dollar (9.9%) and around half of revenues are in emerging markets currencies. The high emerging markets exposure is likely to give rise to long-term currency depreciation given the higher inflation rates in these economies. The company seeks to mitigate these risks through both inflation and currency indexation in a proportion of its contracts.

Exhibit 7

Currency effects have reduced revenues by just over 2% on average since 2015

Annual revenue impact of currency movements 2010-2020



Source: Company presentations, Moody's analysis

As a result of exposure to depreciating emerging markets currencies we expect that SGS will continue to experience currency depreciation reducing revenue growth by an average rate of around 1-2% per annum, although with significant annual variations.

Environmental, Social and Governance considerations

Exposure to environmental risks with respect to air, water and soil pollution, water shortages and carbon regulation is considered low for SGS. SGS is more exposed to social risks such as cybersecurity, societal vulnerability, corruption and talent retention amongst others. The structural trends that underpin the expected growth in the TIC industry are heavily linked to environmental and social considerations, given the increased focus on product quality, safety standards and sustainability from consumers, and the expanding regulation on environmental and product safety considerations, which should support demand for SGS's services. This is despite the operational challenges posed by the coronavirus outbreak, which we consider as a social risk under our ESG framework, given the substantial implications for public health and safety.

The company's reputation as a trusted provider is critical to its success and any decline in its standing, through poor quality of testing or weakness in its control environment could have a material effect. The company has a strong control culture to protect its reputation. It operates staff rotation, has a matrix reporting structure with local country managers and divisional heads, and carries out internal audit procedures. Quality issues continue to be relatively limited and isolated in nature to our knowledge.

ESG considerations are well embedded into the group's KPIs and its management structure, with sustainability considerations included and considered as part of the group's risk management framework. The CEO is the head of Sustainability, and the Board is ultimately responsible for reviewing sustainability risks as part of its annual risk review.

SGS is led by a Board of Directors with significant breadth and depth of industry experience. The composition of the Board has changed substantially over the last two years, with four out of ten directors elected for the first time to the Board during that time, including the new Chairman, who was elected to the board in 2019 and as Chairman in March 2020. We note that the new board members bring in depth experience in digital and e-commerce industries, robotics and automation, aligned to some of the main challenges and opportunities the industry is currently facing. The von Finck family, a long standing shareholder of SGS, divested a c.15% stake during 2020 leaving them with around 3%. We expect that this disposal will bring further changes to the Board at the next election. The senior management team consists of industry veterans with substantial experience in the industry. We positively note the addition of the Chief Information Officer to SGS's Operations Council in 2019.

Liquidity Analysis

SGS has a good liquidity position with balance sheet cash and marketable securities of CHF1,785 million at 31 December 2020. It also has a commercial paper programme of €1 billion and committed RCFs of CHF600 million available until 2021 which were undrawn as at 31 December 2020 (to be renewed).

Rating Methodology and Scorecard Factors

The principal methodology used in rating SGS was the Business and Consumer Service Industry Rating Methodology published in October 2016. Please see the Credit Policy page on www.moody's.com for a copy of this methodology.

Exhibit 8

Business and Consumer Service Industry Scorecard [1][2]			Current 12/31/2020		Moody's 12-18 Month Forward View As of 10/20/2020 [3]	
Factor 1 : Scale (20%)	Measure	Score	Measure	Score	Measure	Score
a) Revenue (USD Billion)	\$6.0	Baa	\$6.6 - \$6.8	Baa		
Factor 2 : Business Profile (20%)						
a) Demand Characteristics	A	A	A	A		
b) Competitive Profile	A	A	A	A		
Factor 3 : Profitability (10%)						
a) EBITA Margin	16.6%	Ba	16%	Ba		
Factor 4 : Leverage and Coverage (40%)						
a) Debt / EBITDA	3.0x	Baa	2.0x - 2.5x	Baa		
b) EBITA / Interest	15.4x	Aa	15x - 16x	Aa		
c) RCF / Net Debt	15.7%	Ba	24% - 28%	Ba		
Factor 5 : Financial Policy (10%)						
a) Financial Policy	A	A	A	A		
Rating:						
a) Scorecard-Indicated Outcome		Baa1		Baa1		
b) Actual Rating Assigned				A3		

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. [2] Based on audited accounts as of 12/31/2020.

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics™

Ratings

Exhibit 9

Category	Moody's Rating
SGS SA	
Outlook	Stable
Issuer Rating -Dom Curr	A3
ST Issuer Rating	P-2
SGS NEDERLAND HOLDING B.V.	
Outlook	Stable
Bkd Sr Unsec MTN	(P)A3
Bkd Commercial Paper	P-2
ST Issuer Rating	P-2

Source: Moody's Investors Service

© 2021 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

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

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

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

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

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

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

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

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

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

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

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

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

REPORT NUMBER

1275022

CLIENT SERVICES

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