

## CREDIT OPINION

12 October 2023

Update



Send Your Feedback

### RATINGS

#### Compagnie Francaise d'Assurance pour le Comm.

Domicile	PARIS, France
Long Term Rating	A1
Type	Insurance Financial Strength
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

Benjamin Serra +33.1.5330.1073  
 Senior Vice President  
 benjamin.serra@moodys.com

Simon James Robin +44 207 772 5347  
 Ainsworth  
 Associate Managing Director  
 simon.ainsworth@moodys.com

Simone Galimberti +33.1.5330.3417  
 Rating Associate  
 simone.galimberti@moodys.com

### CLIENT SERVICES

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

# Compagnie Francaise d'Assurance pour le Comm.

Update following rating upgrade

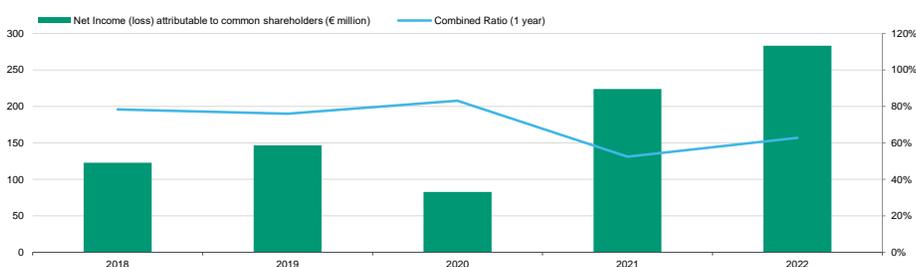
## Summary

The credit profile of Coface SA (A3 issuer rating) and of its lead insurance entity, Compagnie Francaise d'Assurance pour le Commerce Exterieur, rated A1 for insurance financial strength, is supported by the group's strong position in the global credit insurance industry, good economic capitalisation, underpinned by Coface's dynamic management of insured exposure and effective underwriting risk monitoring tools, and good underwriting profitability through the-cycle. These strengths are partially offset by inherent volatility in credit insurance, a cyclical and competitive industry.

Through consistent and disciplined execution, Coface has made significant progress in improving its risk management and underwriting profitability in recent years. The group has strengthened its capitalisation through de-risking actions, even if it returned a significant portion of profits to shareholders.

Exhibit 1

### Coface's net income (left axis) and combined ratio (right axis)



Sources: Company reports and Moody's Investors Service

## Credit Strengths

- » Third largest global credit insurer with very broad geographic presence
- » Dynamic management of exposure and effective underwriting risk monitoring tools
- » Good economic capitalisation that is resilient in a range of stress scenarios
- » Good profitability through-the-cycle

## Credit Challenges

- » Further improving diversification beyond credit insurance

- » Pursuing growth in revenues whilst maintaining a strong underwriting discipline in a deteriorating global macro environment

### Rating Outlook

The outlook is stable, reflecting our expectation that Coface will maintain a Solvency II ratio above 180%, a leverage ratio below 30% and that the group will not increase meaningfully its underwriting or asset risk appetite.

### Factors that Could Lead to an Upgrade

While unlikely in the next 12-18 months, Coface's ratings could be upgraded if:

- » the group's capital increased sustainably leading to Solvency II ratio above 220% and a financial leverage at 20% or below,
- » the group's profitability improves with a combined ratio below 75% through the cycle, with moderate volatility and limited spikes during credit crisis, and
- » the group's business diversification further improves with fee-based services representing more than 30% of its revenues.

### Factors that Could Lead to a Downgrade

Conversely, the following factors could exert downward pressure on the ratings:

- » a volatile underwriting profitability, with for example a spike in the combined ratio materially above 100%,
- » a decline in capital, as evidenced for example by a Solvency II capital coverage below 180%,
- » a financial leverage consistently exceeding 30% or a significant increase in the group's operational debt,
- » a significant erosion of the group's market position and franchise or
- » a meaningful change in asset or underwriting risk appetite.

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.

## Key Indicators

Exhibit 2

### Compagnie Francaise d'Assurance pour le Comm.

Compagnie Francaise d'Assurance pour le Comm. [1][2]	2022	2021	2020	2019	2018	2017
<b>As reported (Euro millions)</b>						
Gross Premiums Written	1,556	1,341	1,196	1,233	1,157	1,121
Net Premiums Written	1,131	822	651	882	830	805
Net Income (Loss) Attributable to Common Shareholders	283	224	83	147	122	83
Total Shareholders' Equity	1,960	2,141	1,999	1,925	1,806	1,803
<b>Moody's Adjusted Ratios</b>						
High Risk Assets % Shareholders' Equity	25.5%	34.8%	36.3%	41.0%	44.0%	48.8%
Reinsurance Recoverable % Shareholders' Equity	37.4%	29.7%	38.9%	30.8%	29.9%	28.3%
Goodwill & Intangibles % Shareholders' Equity	14.6%	12.6%	13.3%	13.6%	14.6%	14.5%
Net Total Exposure % Shareholders' Equity	253.6x	174.3x	144.7x	220.7x	224.6x	214.9x
Net Underwriting Leverage (Credit Insurers)	1.27x	0.94x	0.85x	1.10x	1.12x	1.09x
Combined Ratio (1 yr.)	62.8%	52.4%	83.1%	76.0%	78.3%	86.3%
Sharpe Ratio of ROC (5 yr.)	231.8%	245.6%	239.9%	255.2%	257.4%	235.5%
Adjusted Financial Leverage	25.0%	20.0%	21.3%	22.5%	23.1%	23.5%
Total Leverage	25.0%	20.0%	21.3%	22.5%	23.1%	23.5%
Earnings Coverage	12.8x	13.7x	6.5x	9.6x	8.5x	6.8x

[1] Information based on IFRS financial statements as of the fiscal year ended 31 December. [2] Certain items may have been relabeled and/or reclassified for global consistency. [3] FY 2020 data based on unaudited financials.

Sources: Company's filings and Moody's Investors Service

## Profile

[Compagnie Francaise d'Assurance pour le Comm.](#) is the main operating entity of the holding company [Coface SA](#). Established in 1946, specialising in export credit insurance. Coface is a publicly listed company, traded in the Euronext exchange in Paris, with 70.1% being considered as free float. The remaining shares are owned by Arch Capital Group Ltd (rated Baa1 for senior debt rating, stable outlook and whose main subsidiaries are rated A2 for insurance financial strength). Arch's significant minority investment is [credit positive for Coface](#) because it will provide a strong platform for Coface to expand its presence in the US market and give it access to the expertise and resources of a strong diversified insurer as a strategic partner. In addition, we believe that Coface will benefit from opportunities to leverage Arch's reinsurance capacity to gain capital efficiencies, particularly as it seeks to grow its single risk and bonding businesses.

Coface offers credit insurance, factoring, surety bonds and other services such as credit information and receivables management to clients in over 200 countries.

## Recent Developement

In the first half of 2023, Coface reported a net income of €129 million and a net combined ratio of 65.5%, up from 63.4% in the first half of 2022 (57.2% excluding the impact of governments' reinsurance schemes). The group's turnover increased to €960 million, driven by growth in credit insurance business premiums and in revenues from other services. Client retention stood at 94.4% while pricing was negative at -2.0%.

While corporate insolvencies have started to increase since the beginning of 2023 in most advanced economies, the group has increased the number of prevention plans to adjust the quality of its insured exposure.

## Detailed Credit Considerations

Moody's rates Coface A1 for insurance financial strength, which is in line with the adjusted score indicated by Moody's insurance financial strength rating scorecard.

## Insurance Financial Strength Ratings

### Market Position and Distribution: Strong franchise as top tier insurer in the global credit insurance market - A

As the third largest global trade credit insurer by premiums (with a market share between 18% and 19% in 2022 according to data compiled by the International Credit Insurance & Surety Association, "ICISA", and Moody's analyses), Coface has a strong position in the global credit insurance market, with an extensive global footprint, albeit orientated towards Europe. In line with its differentiated growth strategy, Coface strengthened its presence in the Adriatic region through its 2018 purchase of Slovenian credit insurer SID-PKZ, and in the Nordics region through its 2020 purchase of Norwegian credit insurer GIEK Kredittforsikring. We expect Coface to continue growing its market position, including in its factoring business, in a measured and focused manner.

Coface's distribution network is significantly reliant on brokers, in line with the commercial nature of the credit insurance industry, which to an extent limits the company's ability to control pricing. Nevertheless, direct sales are somewhat above peers (representing around a third of premiums). In addition, Coface maintains strong and flexible market access, as evidenced by the various partnerships concluded with smaller credit insurers in many parts of the globe, banks and multi-line insurers.

Notwithstanding Coface's strong position in the credit insurance market, we believe the group's overall franchise strength is somewhat constrained by its limited diversification beyond credit insurance, an industry that we view as highly competitive and exposed to economic cycles.

### Product Risk and Diversification: Strong sector and country diversification together with a growing amount of service and fee income - A

Consistent with its peers, Coface is primarily focused on credit insurance, with approximately 89.8% of its 2022 revenue being sourced from trade credit insurance. Coface is also active in factoring (3.9% of revenues), bonding (3.2%) and other services (3.1%). Although the group is not benefitting anymore from the fee income related to the French Government's export guarantee business, Coface's level of services business compares well against peers, as credit insurance revenues include around 8.8% of services (policy management costs). Overall, around 16% of revenues are sourced from fee-based activities (including factoring) and this percentage will increase as Coface is growing its services business as part of its strategic plan, while debt collection revenues will grow as the level of insolvencies will normalise. We expect the revenues from services to grow at a quicker pace than insurance premiums in the next 12-18 months, and the weight of services in overall revenues will gradually increase.

The group's credit exposure is generally granular and well diversified by country and by sector, although its predominant focus is on Europe. At the end of 2022, the group's largest country exposures continued to be Germany (12.4%), USA became the second largest country (10.8%) while France placed third (10.0%). The proportion of exposure to emerging markets remains stable at 21%. The group's largest sector exposures were to Agriculture, meat, agri-food and wine (16.6%), Minerals, chemistry, oils, plastics, pharma and glass (14.9%), and construction (10.9%), with the remaining of its exposures being spread across a further 12 broad industry sectors. Coface increased its total exposure by about 14% during 2022 (from €588 billion at year-end (YE) 2021 to €667 billion at YE 2022), mostly as a result of the rebound in the global economy.

The low average duration of Coface's policies as well as its dynamic management of exposure and good risk monitoring tools enable the company to act quickly and to actively manage its exposure, protecting its profitability through the cycle. These exposure management capabilities are evidenced by the sustained good underwriting profitability across the cycle (five-year average reported net combined ratio 71% between 2018 and 2022), and the sharp turnaround in profitability in the aftermath of the financial crisis in 2008 and its emerging market losses in 2015/16. Combined ratio gross of reinsurance deteriorated 10 p.p. at 64.7% YE 2022 (54.4% YE 2021) while the ratio after reinsurance remained stable at 64.9% YE 2022 (64.6% YE 2021), Coface is targeting a combined ratio of 80% through the cycle.

### Asset quality: Generally high quality liquid investment portfolio - A

The ratio of high risk assets to shareholders' equity decreased to 26% at year-end 2022. The group's investment portfolio is predominantly fixed income focused, with some allocations to equity, real estate and other short-term securities and cash/cash equivalents. Coface de-risked materially its investment portfolio early in 2020, notably by selling convertible bonds, equities and below investment grade bonds. Coface's investment portfolio remains slightly higher risk than its credit insurance peers, primarily due to the higher allocations to equities (12% of total investments and cash), although this is driven by inclusion of investments in subsidiaries

in the equity portfolio. Equities not related to investments in subsidiaries only represent 5.7% of financial assets. Coface also holds around 3% of below investment grade debt (as a percentage of total investments including cash). Cash and cash equivalents comprise a significant portion of the portfolio (around 15% of total cash and invested assets at end of 2022).

Because of the cyclical nature of trade credit insurance exposures, we believe there is higher correlation between insurance exposures and invested assets, than is typical for other insurers. In addition, there is the risk of assuming exposure to the same names on both the asset and liability sides of the balance sheet, although Coface has controls in place to manage correlation between its asset and liability exposures.

Credit exposure to reinsurers is relatively modest due to the still high retention levels and the high quality of the reinsurance panel. For 2022, Coface maintained a cession rate of 23%.

### Capital adequacy: Good capitalisation supported by dynamic exposure management - A

We consider the group's capitalisation to be good, with its economic/regulatory capital levels supported by the company's dynamic management of the exposure and good underwriting risk monitoring tools, which can mitigate the volatility of the liability profile in an economic downturn. Coface currently manages its capital according to the Solvency II partial internal model (PIM) formula, for which it targets a range of 155% to 175% coverage of its capital requirement, but the company has maintained a level of solvency above this range for several years. Coface's solvency ratio was 192% as at 30 June 2023 (201% at year-end 2022).

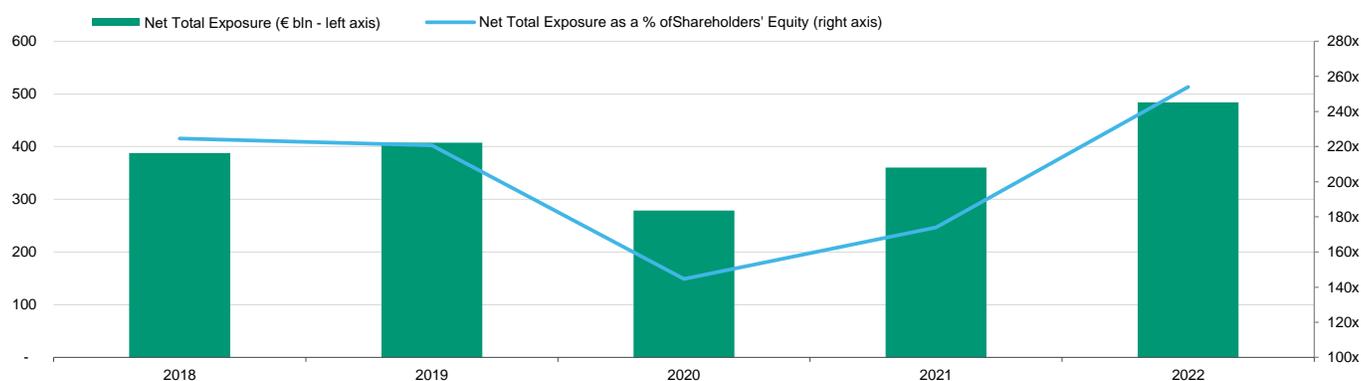
Negative impacts on capital requirements from the growth in exposure have been offset by the management of the quality of exposure and improvements in asset quality. Own funds have not materially changed recently as the group distributed a high level of its earnings to shareholders (Coface's target is to distribute more than 80% of its profits to shareholders and the payout ratio was 100% in 2021).

Based on the group's published sensitivity analysis, the Solvency II ratio is resilient to a range of financial market stresses. The ratio would for example remain within the target range in a 1 in 50 years credit crisis scenario (based on Coface's model).

Total net exposure to shareholders' equity (Moody's calculations) was also very strong at 254x in 2022. After the termination of reinsurance government schemes premiums cession rate decreased at 26.9% in 2022 (39% in 2021), private reinsurance contracts were renewed under the same conditions despite tightening of the reinsurance market. Net underwriting leverage was at 1.27x in 2022.

Exhibit 3

#### Net Total Exposure and Net Total Exposure as % of Shareholders' Equity



Estimate based on the reported gross total exposure and the premium retention rate  
Sources: Company reports and Moody's Investors Service

### Profitability: Good profitability across the cycle - A

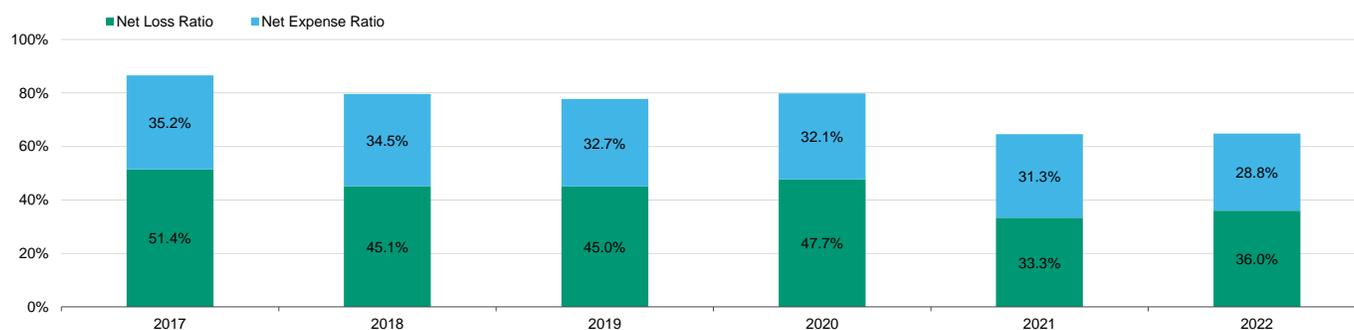
We consider Coface's profitability to be good on a through-the-cycle basis, with the group benefiting from underwriting actions it had taken on its portfolio in recent years.

The group's dynamic exposure management and loss mitigation capabilities have been effective in the past, enabling it to recover from a spike in loss ratios during the 2008/09 financial crisis relatively quickly. While Coface did not fully anticipate the performance of its Asian and Latin American exposures in the face of the economic slowdown, its history of successful portfolio steering and the actions

taken recently to revise its risk management approach to these markets, has driven a reduction in loss ratios since 2017. Dynamic exposure management was also evidenced by the reduction of Coface's exposure to Russia in 2022, when exposures went down from €4.8 billion as at 24 February 2022 to €0.6 billion as at 31 December 2022.

As corporate insolvencies have increased and claims start to normalise, we expect Coface's net combined ratio (65.5% in the first half of 2023) to deteriorate. Expense ratio will also negatively be impacted by inflation and a possible hardening of the reinsurance cycle. Nonetheless, even if earnings volatility will remain a feature of the credit insurance industry, we expect volatility to remain moderate. Coface is targeting a combined ratio of 80% through the cycle.

Exhibit 4

**Reported Net Combined Ratio**

Sources: Company filings and Moody's Investors Service

**Reserve Adequacy: Short-tailed risk profile limits reserve risk - A**

We consider Coface's reserving risk to be low, mainly because of the short-tailed nature of its insurance risks and its ability to manage insured exposures dynamically. During 2016, the group strengthened reserves on certain emerging markets business that exhibited higher than expected loss patterns, although aggregate reserve development remained favourable. Coface has reported favourable aggregate reserve run-off since 2009 when negative reserve development was reported due to the exceptionally high claims frequency experienced at the end of 2008 and the subsequent challenging assessment of IBNR. Nonetheless, Coface has significantly increased its prudence in reserving after 2009, with reserve releases consistently exceeding 20% of premiums.

Coface also provisioned underwriting years 2022 and 2023 at a relatively high level in view of the low level of reported claims globally, suggesting some conservatism in technical reserves.

**Financial Flexibility: Good financial leverage but substantial operational debt as part of the factoring business - A**

Coface's financial flexibility remains good and the group's financial leverage has decreased slightly in recent years. The group's financial leverage is moderate, at 25% at YE 2022 (+5 p.p. compared to 2021). Coface issued €300 million of new Tier 2 debt, subordinated guaranteed notes, in September 2022 to early refinance the debt maturing in 2024 (€380 million). The company bought back €153 million of this debt at the same time. The interest expense of the new debt is higher than on the old debt (6% vs 4.125%), in the short term, financial leverage will therefore increase and earnings coverage will reduce, but these metrics will normalise within eighteen months to levels consistent with a high A-rating or higher.

Coface carries a significant amount of debt and payables to support its factoring business, that Moody's currently classifies as operating debt (YE 2022: €2.5 billion).

Effective June 2019, Coface SA was included in the SBF120 index, which tracks the top 120 companies on the Paris stock exchange, in terms of market capitalization and liquidity. Inclusion in this index has led to improved perception amongst investors and enhance its financial flexibility.

**Other Considerations**

Coface operates a meaningful factoring business, focused on the German and Polish markets.

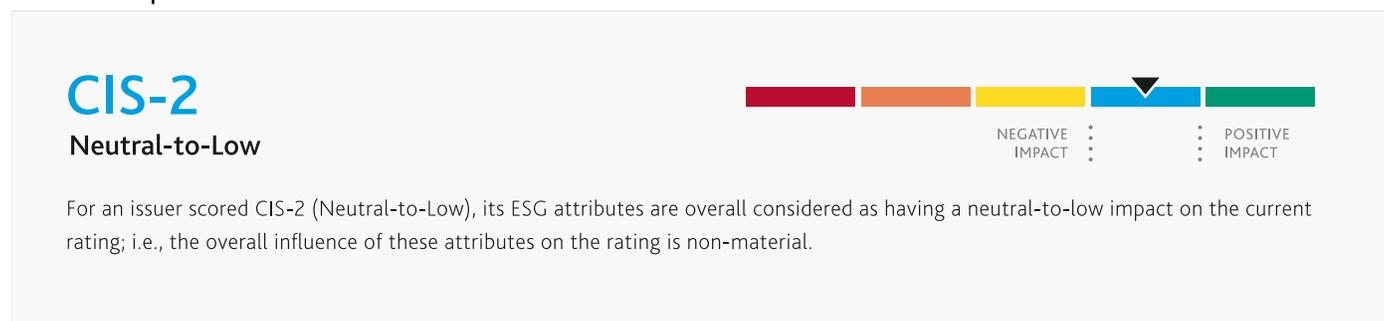
As of December 2022, net factoring receivables amounted to approximately €2.9 billion (YE2021: €2.7 billion), while revenue from factoring amounted to €70 million in 2022 and €64 million in 2021. The factoring business exposes Coface to liquidity risk not faced in its traditional credit insurance business, and the management of funding sources and maturity matching is a key consideration. Coface manages funding and liquidity risk in its factoring business through a diverse set of funding mechanisms. The group's main sources of funding for its factoring business include the following facilities: (i) a receivables securitisation programme in the amount of €1.2 billion, (ii) commercial paper programme (with backup facility in place) in the amount €700 million, and (iii) bilateral credit lines with a panel of banks, in the amount of about €1.7 billion.

## ESG considerations

### Coface SA's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 5

#### ESG Credit Impact Score



Source: Moody's Investors Service

Coface's **CIS-2**, reflects the limited credit impact of environmental and social risks on the rating to date. The group's strong governance, including risk management and capitalisation, along with its predominant focus on trade credit insurance and its diversified portfolio of very short-tail exposures help reduce its physical climate and social risks.

Exhibit 6

#### ESG Issuer Profile Scores



Source: Moody's Investors Service

### Environmental

Coface has low exposure to environmental risk, although it does have indirect exposure to environmental risk through the exposures the group insures. These include, for example, companies in the automotive sector which are exposed to carbon transition risk, and manufacturers and retailers with large physical footprints that are meaningfully exposed to physical climate risks. These indirect risks are mitigated by the significant geographic and sectoral diversification of Coface's portfolio and the very short-term nature of these exposures, which allows credit insurers to quickly manage down their exposures to sectors facing rising environmental risks.

### Social

Coface has low exposure to social risks. Social pressures may affect indirectly Coface because its clients or its insured exposures may be affected by new societal trends, but the impact is low because of the exposures' short-term nature and extensive diversification.

Nonetheless, as credit insurers also play a role in the global economy by facilitating the development of trade, they are subject to an increasing level of political scrutiny which could result in new business or financial constraints, notably in France or in the UK.

### Governance

Coface faces low governance risks. As a leading credit insurer, Coface maintains a strong level of solvency, which is a key requirement from brokers and clients. Risk management is also a pillar of the business model of credit insurers which monitor the quality of their exposures and can cut limits quickly to adapt their risk profile. Coface benefits from an independent board and experienced management with a good track record.

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.

### Rating methodology and scorecard factors

Exhibit 7

#### Compagnie Francaise d'Assurance pour le Comm.

Financial Strength Rating Scorecard [1][2]	Aaa	Aa	A	Baa	Ba	B	Caa	ScoreAdj	Score
Business Profile								A	A
<b>Market Position and Brand (10%)</b>								A	A
-Relative Market Share Ratio				X					
-Distribution and Access to New Markets			X						
<b>Product Focus and Diversification (20%)</b>								A	A
-Business Diversification				X					
-Flexibility of Underwriting			X						
-Risk Diversification		X							
Financial Profile								Aa	A
<b>Asset Quality (15%)</b>								Aaa	A
-High Risk Assets % Shareholders' Equity		X							
-Reinsurance Recoverable % Shareholders' Equity		37.4%							
-Goodwill & Intangibles % Shareholders' Equity		14.6%							
<b>Capital Adequacy (20%)</b>								A	A
-Net Total Exposure to Shareholders' Equity			X						
-Net Underwriting Leverage (Credit Insurers)		X							
<b>Profitability (20%)</b>								A	A
-Combined Ratio (5 yr. avg.)		70.5%							
-Sharpe Ratio of ROC (5 yr.)		231.8%							
<b>Reserve Adequacy (5%)</b>								Aaa	A
-Worst Reserve Development for the Last 10 Years % Beg. Reserves		0.0%							
<b>Financial Flexibility (10%)</b>								Aa	A
-Adjusted Financial Leverage		25.0%							
-Earnings Coverage (5 yr. avg.)		10.2x							
Operating Environment								Aaa - A	Aaa - A
Preliminary Standalone Outcome								A1	A1

[1] Information based on IFRS financial statements as of fiscal year ended December 31, 2022. [2] The Scorecard rating is an important component of the company's published rating, reflecting the standalone financial strength before other considerations (discussed above) are incorporated into the analysis.

Source: Moody's Investors Service

### Support and Structural Considerations

The A3(hyb) rating assigned to the subordinated notes is two-notches below Coface's IFS rating, and reflects Moody's standard notching for subordinated debt that lacks a mandatory trigger that we consider meaningful, and is issued or guaranteed by an insurance operating company. The subordinated notes benefit from an unconditional and irrevocable guarantee provided by the operating company.

Coface SA's A3 long-term issuer rating is two notches below the A1 IFS rating of the Compagnie, Coface's lead operating insurance entity. Coface SA benefits from a 2 notches difference between the ratings of the holding company and the operating entities due to the holding company being within the ambit of enhanced regulatory supervision under a Solvency II regime.

The Baa1(hyb) rating of the most recent subordinated debt is one notch below the other subordinated debt (three notches below the IFSR) because it does not benefit from the guarantee of the operating company. Hence, the debt issued by the holding is structurally subordinated to the obligations of the operating company.

The P-2 Commercial Paper (CP) rating is supported by the holding company's strong liquidity sources, including committed multi-bank credit facilities, an intercompany liquidity account, which facilitates loans between holding and affiliates, as well as cash and short-term investments at the holding company. The CP programme (€700 million capacity) is used to refinance the factoring receivables (€2.9 billion as of December 2022), as part of a diverse receivables funding structure.

## Ratings

Exhibit 8

Category	Moody's Rating
<b>COMPAGNIE FRANCAISE D'ASSURANCE POUR LE COMM.</b>	
Outlook	Stable
Insurance Financial Strength	A1
ST Insurance Financial Strength	P-1
<b>COFACE SA</b>	
Outlook	Stable
LT Issuer rating	A3
Subordinate	Baa1 (hyb)
Bkd Subordinate	A3 (hyb)
Commercial Paper	P-2

Source: Moody's Investors Service

## Moody's related publication

### Sector In-Debt

- » [Credit insurers face new challenges from position of strength \(February 2023\)](#)

© 2023 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

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

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

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

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit 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, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

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

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

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

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

REPORT NUMBER 1368867

## CLIENT SERVICES

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