

01

SCOR GROUP

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A TIER 1 REINSURER GLOBAL POSITION

WHAT IS REINSURANCE

Reinsurance is at the heart of risk management, it enables insurers to cover their risks by ceding part of them, in order to mutualize them worldwide. SCOR covers major Non-Life risks including large catastrophe risks (both natural and man-made catastrophes: hurricanes, floods, volcanic eruptions, explosions, fires, plane crashes, etc.), and Life biometric risks (mortality, longevity and lines, both long term and short term). The challenge for reinsurance professionals consists of identifying, selecting, assessing and pricing risks, in order to be able to absorb them.



15.3

BILLION EUROS
OF PREMIUM INCOME IN 2018



5TH

LARGEST REINSURER
IN THE WORLD



2,887

EMPLOYEES (EXCLUDING
REMARK) OF 65 NATIONALITIES
ACROSS 30 COUNTRIES,
EQUALLY DISTRIBUTED
(48% WOMEN / 52% MEN)



+4,000

CLIENTS THROUGHOUT
THE WORLD

Rating agencies

S&P Global	AA-	Stable outlook		A+	Stable outlook
FitchRatings	AA-	Stable outlook	MOODY'S	Aa3	Stable outlook

1.1. SELECTED FINANCIAL INFORMATION

1.1.1. GROUP KEY FIGURES

SCOR SE ("the Company") and its consolidated subsidiaries (referred collectively as "SCOR" or the "Group"), form the world's fifth largest reinsurer⁽¹⁾ serving more than 4,000 clients. The Group is organized in three divisions, SCOR Global P&C, SCOR Global Life and SCOR Global Investments, and three regional management platforms (the "Hubs"): the EMEA Hub, the Americas Hub and the Asia-Pacific Hub.

In a year marked by a significant series of natural catastrophes which occurred mostly in the second part of the year, SCOR's strong underlying results demonstrate its resilience and the effectiveness of its business model, based on extensive business and geographical diversification, while focusing on traditional reinsurance activities.

<i>In EUR millions</i>	Year ended December 31, 2018	Year ended December 31, 2017	Year ended December 31, 2016
Consolidated SCOR Group			
Gross written premiums	15,258	14,789	13,826
Net earned premiums	13,611	13,281	12,462
Operating result	658	491	951
Consolidated net income – Group share	322	286	603
Consolidated net income – Group share – before US tax reform ⁽¹⁾	390	286	603
Net investment income ⁽²⁾	615	764	670
Group cost ratio ⁽³⁾	5.0%	5.0%	5.0%
Return on invested assets ⁽³⁾	2.8%	3.5%	2.9%
Return on equity ⁽³⁾	5.5%	4.5%	9.5%
Return on equity – before US tax reform ⁽¹⁾	6.6%	4.5%	9.5%
Basic earnings per share <i>(in EUR)</i> ⁽⁴⁾	1.72	1.53	3.26
Book value per share <i>(in EUR)</i> ⁽³⁾	31.53	33.01	35.94
Share price <i>(in EUR)</i> ⁽⁵⁾	39.40	33.55	32.83
Operating cash flow	891	1,144	1,354 ⁽⁶⁾
Total shareholders' equity	5,828	6,225	6,695
SCOR Global P&C			
Gross written premiums	6,175	6,025	5,639
Net combined ratio ⁽³⁾	99.4%	103.7% ⁽⁷⁾	93.1%
SCOR Global Life			
Gross written premiums	9,083	8,764	8,187
Life technical margin ⁽³⁾	7.0%	7.1%	7.0%

(1) Refer to Section 1.3.3 – Significant events of the year for detailed information on the US tax reform (Tax Cuts and Jobs Act, the "TCJA").

(2) See Section 1.3.5.4 – Net investment income and investment income on invested assets.

(3) See Section 1.3.9 – Calculation of financial ratios, for detailed calculation.

(4) Earnings per share are calculated as net income divided by the number of ordinary shares, which includes the average number of shares over the reporting period, shares issued during the period and time-weighted treasury shares. See Section 4.6.21 – Earnings per share for detailed calculation.

(5) Closing stock price on December 31, 2018 (December 29, 2017 and December 30, 2016).

(6) Includes a EUR 301 million one-off cash in-flow from the repayment of a cedent's fund withheld.

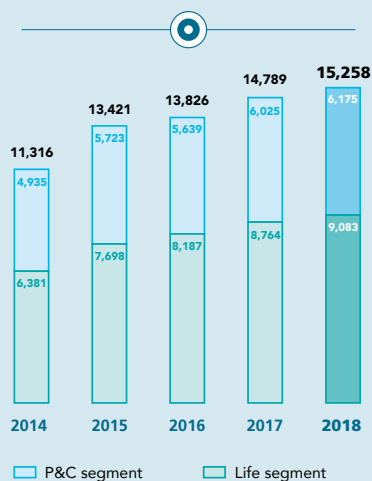
(7) In 2017, the net combined ratio calculation has been refined to exclude some immaterial non-technical items that were previously included. Considering their potential growth, these items have been excluded to ensure they do not distort the net combined ratio in the future. The impact on the previously reported ratio was +0.26% pt as at December 31, 2016.

(1) By net reinsurance premiums written, source: "AM Best Special Report Global Reinsurance 2018".

1.1.2. OVERVIEW

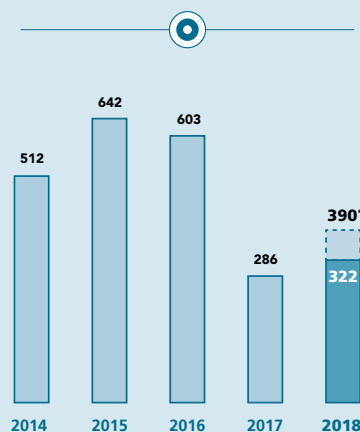
GROSS WRITTEN PREMIUM

In EUR millions



CONSOLIDATED NET INCOME – GROUP SHARE

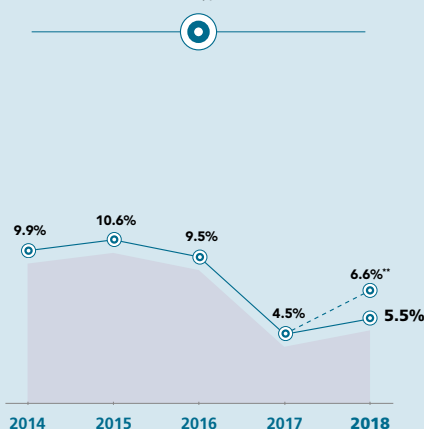
In EUR millions



* Excluding the impact of US tax reform

RETURN ON EQUITY*

In %

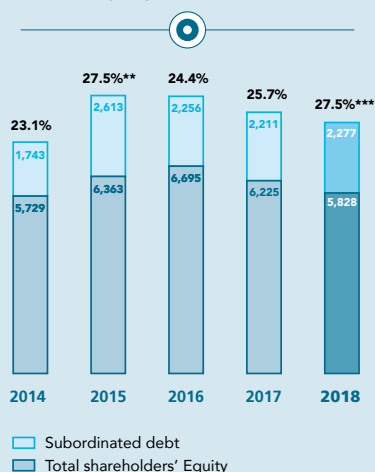


* Return on equity is based on the Group's share of net income divided by average shareholders' equity (calculated as shareholders' equity at the beginning of the period adjusted for the effect of all movements during the period using a prorata temporis method). The ROE calculation method was adjusted in 2014 to take into account material foreign exchange rates movements that do not occur evenly throughout the reporting period. A daily weighted average is used for the currency or currencies that experienced such movements and simple weighted average is used for the other currencies.

** Excluding the impact of US tax reform, return on equity would have been 6.6%.

SHAREHOLDERS' EQUITY, DEBT AND LEVERAGE RATIO*

(In %) In EUR millions

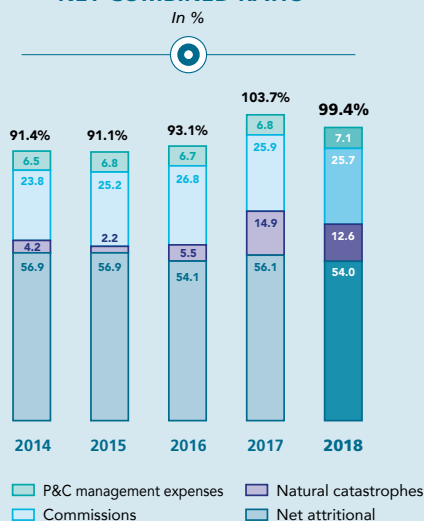


* The leverage ratio is calculated by dividing the subordinated debt by the sum of shareholders' equity and subordinated debt. The calculation excludes accrued interest and includes the impact of swaps related to subordinated debt issuances. This ratio is expressed as a percentage. It is used to determine how much lenders are financing the Group's activities over shareholders.

** In September 2014 and December 2015, SCOR issued two subordinated notes for EUR 250 million and EUR 600 million, respectively, with the intention to refinance through the proceeds of these two notes the optional redemptions of the outstanding balance of the 6.154% undated deeply subordinated EUR 350 million notes callable in July 2016 and of the 5.375% fixed to floating-rate undated subordinated CHF 650 million notes callable in August 2016. The proceeds of these notes were also meant to be used for general corporate purposes. Had these redemptions been effective on December 31, 2015, the leverage ratio would have amounted to 20.6%. These redemptions occurred on the expected dates.

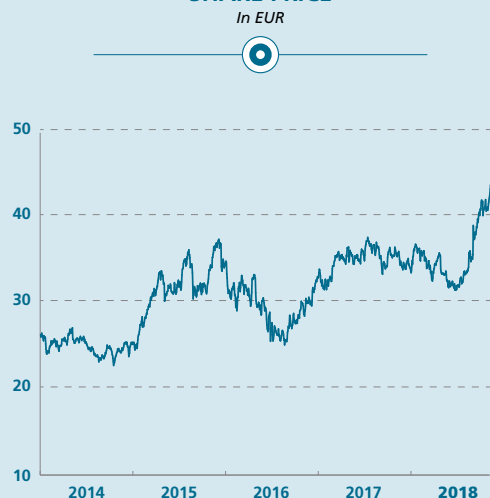
*** In March 2018, SCOR placed a perpetual note in the amount of USD 625 million. In June and November 2018, SCOR redeemed the CHF 315 million and CHF 250 million undated subordinated notes line, using the proceeds of the new instrument.

NET COMBINED RATIO*

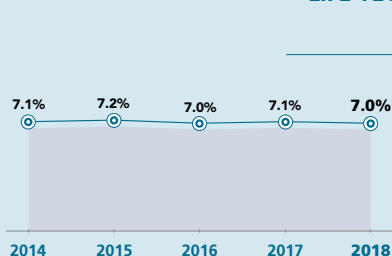


* The net combined ratio is calculated by taking the sum of incurred losses, commissions and management expenses net of retrocession, divided by earned premiums net of retrocession. The net combined ratio calculation has been refined in 2017 to exclude some immaterial non-technical items that were previously included. Considering their potential growth, these items have been excluded to ensure they do not distort the net combined ratio in the future. The impact on the previously reported ratios is +0.26% pt and +0.22% pt as at December 31, 2016 and December 31, 2015, respectively.

SHARE PRICE



LIFE TECHNICAL MARGIN*

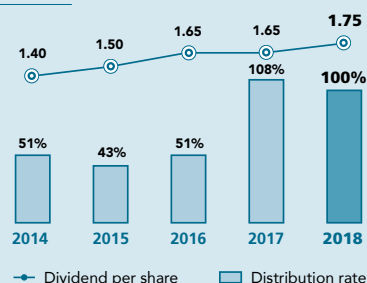


* The Life technical margin is calculated as the percentage of net technical result plus income from funds held by ceding companies and the net of gross and ceded earned premiums. The net technical result represents the result of the net reinsurance operations of SCOR Global Life division including income and expenses either implied in the reinsurance and retrocession arrangements or fully related to these arrangements.

1.1.3. DIVIDEND DISTRIBUTION POLICY

DIVIDEND PER SHARE AND DISTRIBUTION RATE

In EUR



A resolution will be presented to the Annual Shareholders' Meeting held during the first half of 2019, to approve the financial statements for the financial year 2018, proposing the distribution of a dividend of EUR 1.75 per share for the financial year 2018.

The statute of limitations for dividends is five years. Unclaimed dividends will be paid over to the French Treasury. See also Section 4.6 – Notes to the consolidated financial statements, Note 21 – Earnings per share.

1.2. INFORMATION ABOUT THE SCOR GROUP

1.2.1. INTRODUCTION

Legal name and commercial name of the issuer

Legal name: SCOR SE

Commercial name: SCOR

Place and registration number of the issuer

R.C.S. number: Paris 562 033 357

A.P.E. Code: 6520Z

LEI Code: 96950056ULJ4J17V3752

Date of incorporation and term of the issuer

The Company was incorporated on August 16, 1855, as a limited partnership (*société en commandite*), under the name Compagnie Impériale des Voitures de Paris. In 1866, the Company was converted into a joint stock company (*société anonyme*) under the name Compagnie Générale des Voitures de Paris. The Company changed its name to SCOR SA on October 16, 1989 and in 1990, absorbed Société Commerciale de Réassurance, created in 1970, and took over the reinsurance business of the latter. On May 13, 1996, SCOR SA changed its name to SCOR. On June 25, 2007, SCOR changed its legal form to a European Company (*Societas Europaea*) and became SCOR SE. In 2012, the Company relocated from Paris-La Défense to Paris. On April 25, 2013, the Company's term was extended for 99 years by decision of the Extraordinary Shareholders' Meeting and will expire on April 25, 2112 unless extended or previously dissolved.

Domicile and legal form of the issuer, legislation governing its activities, country of incorporation, address and telephone number of its registered office

Registered office and contact information of issuer

SCOR SE

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75116 Paris

France

Tel.: +33 (0) 1 58 44 70 00

Fax: +33 (0) 1 58 44 85 00

www.scor.com

E-mail: scor@scor.com

Listing

In 1989, the Company and UAP Réassurances, a subsidiary of the state-owned Société Centrale de l'Union des Assurances de Paris, combined their Property and Casualty and Life reinsurance businesses. Following a reverse merger with Compagnie Générale des Voitures, the Company listed its ordinary shares on the Paris stock exchange and changed its name to SCOR SA and to SCOR in 1996. In the same year, UAP Réassurances sold its 41% stake in SCOR through an IPO. SCOR's American depositary shares were also listed on the New York stock exchange at that time. They were delisted in 2007 and the Company's securities were deregistered with the US Securities and Exchange Commission (SEC) on September 4, 2007.

As at the date of this Registration Document, SCOR SE's shares are listed on the Eurolist of Euronext Paris SA and on the SIX Swiss Exchange (formerly SWX Swiss Exchange) in Zurich, where they were admitted for trading on August 8, 2007.

The ordinary shares are included on the following indices: SBF TOP 80, SBF 120, CAC Next 20, CAC Large 60, CAC Large 60 EW, CAC All-Shares, CAC All Tradable, CAC Financials, Euronext FAS IAS, Euronext 100, Euronext France Next 40 EW, Euronext Europe Sustainable 100 EW, Euronext France Energy Transition Leaders 40 EW, Euronext Vigeo® Europe 120, Euronext Vigeo® Eurozone 120, Ethibel® Sustainability Index Excellence Europe (ESI Europe), SBFT 50 ESG EW and CAC® Large 60 Responsible Investment SW.

The SBF TOP 80 index is made up of 80 French stocks which are the most traded on the continuous segments not included in the CAC 40 index. The SBF 120 index consists of the 120 most actively traded French stocks. The CAC Next 20 index includes the most representative stocks in terms of free float-adjusted capitalization and share turnover not included in the CAC 40 index. The CAC Large 60 index is composed of the constituents of the CAC 40 and CAC Next 20 indices. The CAC Large 60 Equal Weight is an equal weighted index that reflects the performance of the 60 largest and most actively traded shares listed on Euronext Paris. The CAC All-shares index is composed of all the stocks listed on Euronext Paris with an annual velocity ratio of over 5%. The CAC All Tradable index includes all the stocks of the Euronext Paris market with a free float of at least 20%. The CAC Financials index is composed of the stocks included in the CAC All Tradable index belonging to the financial sector. The Euronext FAS IAS index is composed of the stocks included in the CAC All Tradable index that fulfill the following conditions:

at least 3% of the capital is controlled by employees, a minimum of 25% of the workforce in France should own shares of the Company and a minimum of 15% of the overall workforce should own shares of the Company. The Euronext 100 index comprises the 100 largest and most liquid stocks traded on Euronext. The Euronext France Next 40 EW is composed of companies ranked from 41 to 80 in the SBF 120 index in terms of free float market capitalization. The Euronext Europe Sustainable 100 EW is an equal weighted index that reflects the performance of the top 100 stocks based on their traded value, ESG performance and 1 year drawdown, out of the 500 Largest stocks in terms of free float market capitalization, admitted to listing on the main markets of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and of the United Kingdom. The Euronext France Energy Transition Leaders 40 EW, is an equal weighted index that reflects the performance of the top 40 stocks, based on their performance in term of transition to a low-carbon economy, out of the CAC Large 60 Index. Euronext Vigeo indices are composed of the highest-ranking listed companies as evaluated by the Vigeo-Eiris agency in term of their performance in corporate responsibility. The ESI Europe indices universe is composed of companies included in the Russell Developed Europe Index that display the best performance in the field of Corporate Social Responsibility. The Ethibel family (ESI) consists of two variants: one regular and one "Multiplier" version whereby a factor between 0.5 and 1.5 is applied in order to align the sector weights of the ESI Europe index with the sector distribution of the Russell Developed Europe. Inclusion in the regular ESI Europe index means automatic inclusion in the 'Multiplier' version. The SBFT 50 ESG EW is an equal weighted index that contains the 50 highest-ranking companies in term of their ESG performance, as evaluated by the Vigeo-Eiris agency, out of the 80 highest ranking companies in term of free float market capitalisation that are expected to be included in the SBF120. The CAC® Large 60 Responsible Investment SW. The index consists of all the companies that are expected to be included in the CAC Large 60, whereby the weighting is based on the Responsible Investment score as provided by Mirova/ISS-oekom.

Applicable law and regulation

General

The Company was converted into a European Company (*Societas Europaea*) in 2007. As such, SCOR SE is governed by the provisions of Council Regulation (EC) No. 2157/2001 (the "SE Regulation") and those of European Council Directive 2001/86/EC of October 8, 2001 supplementing the Statute for a European Company with regard to the involvement of employees, and by the provisions of French law relating to European Companies, as well as for all other matters partially covered or not covered by the SE Regulation, by French legal provisions applicable to sociétés anonymes, subject that they do not contrary the specific provisions applicable to European Companies.

The Group's divisions' business activities of insurance, reinsurance and asset management are subject to comprehensive regulation and supervision in each of the jurisdictions where the Group operates. Given that the Group is headquartered in Paris (France), this supervision is based, to a significant extent, on European Union directives and on the French regulatory system. The Group's principal regulators in France are the financial markets authority (Autorité des marchés financiers – AMF), and the French insurance and reinsurance regulator (Autorité de contrôle prudentiel et de résolution – ACPR). While the extent and nature of regulation varies from country to country, most jurisdictions in which SCOR's insurance and reinsurance subsidiaries operate have laws and regulations governing solvency standards, levels of reserves, permitted types and concentrations of investments, and business conduct to be respected by insurance and reinsurance companies. The supervisory authorities with jurisdiction over the Group's operations may conduct regular or unexpected examinations of the insurers'/reinsurers' or asset managers' operations and accounts and request specific information from the insurer or reinsurer. Certain jurisdictions also require registration and periodic reporting by holding companies that control a licensed insurer or reinsurer. These holding company legislations typically require periodic disclosure concerning the corporate entity that controls the licensed insurer and other affiliated companies, including prior approval of transactions between the insurer, the reinsurer and other affiliated companies such as intragroup asset transfers and dividend payments by the authorized insurer or reinsurer. In general, these regulations are designed to protect the interests of insureds rather than shareholders.

Under the directive No. 2009/138/EC of November 25, 2009 named "Solvency II" transposed in French law in 2015 and entered into force on January 1, 2016, French companies, whose exclusive business is reinsurance, can only carry on said business after having obtained an official authorization, issued by the ACPR. Registered reinsurers in France can operate under certain conditions in the European Economic Area (EEA) under the freedom to provide services and/or the freedom of establishment (branch).

Prudential regulations

SCOR SE and its insurance and reinsurance subsidiaries are subject to regulatory capital requirements in the jurisdictions where they do business, which are designed to monitor capital adequacy and to protect insureds. While the specific regulatory capital requirements (including the definition of admitted assets and methods of calculation) vary between jurisdictions, an insurance or reinsurance company's required capital can be impacted by a wide variety of factors including, business mix, product design, sales volume, invested assets, liabilities, reserves and movements in the capital markets, including interest rates and equity markets.

SCOR Group is regulated by the "Solvency II" European directive which applies since January 1, 2016, having been transposed into national law in all relevant European jurisdictions over the last years.

The Solvency II regulation covers, among other matters, valuation of assets and liabilities, the treatment of insurance and reinsurance groups, the definition of capital and the overall level of required capital. A key aspect of Solvency II is that assessment of the Group's risks and capital requirements is aligned more closely with economic capital methodologies.

SCOR Group is subject to supervision by the ACPR which has extensive oversight authority as Group supervisor but also as local supervisor for each French insurance or reinsurance company.

Since January 1, 2016, the regulatory solvency position of the Group has been assessed using SCOR's internal model, which was approved in November 2015 by the relevant supervisory authorities.

For additional information on the impact of regulatory changes on the Group's operations and financial position, see Section 3.2.3.

For a detailed description of new governance requirements, see Section 2.

Asset management regulations

SCOR Investment Partners SE (formerly known as SCOR Global Investments SE) is subject to extensive regulation in the various jurisdictions in which it operates. These regulations are generally designed to safeguard client assets and ensure the adequacy of disclosures concerning investment returns, risk characteristics of invested assets in various funds, suitability of investments for client investment objectives and risk tolerance, as well as the identity and qualifications of investment managers. These regulations generally grant supervisory authorities broad administrative powers, including the power to limit or restrict the performance of business activities for failure to comply with such laws and regulations.

Reform of the European data protection rules

The reform of the rules of personal data protection, contained in the General Data Protection Regulation (GDPR) (EU 2016/679) of April 27, 2016, applicable since May 25, 2018, has updated within the European Union the principles of personal data. The main objectives of the reform are (i) the strengthening of individuals' rights, to grant them more control over their personal data and facilitate them the relevant access, (ii) the harmonization of the

applicable laws within the European Union as well as a system of one-stop shop resulting in closer cooperation between the Data protection authorities, and finally (iii) a stricter regime of application according to which the Data protection authorities can pronounce fines up to 4% of the global turnover of a company infringing the European regulation. The Group has terminated its project aiming to comply globally with the Regulation and closely monitor the various local regulations that are currently being developed.

The Group is also looking into the e-privacy reform, as the European Commission has precised its position by publishing its formal proposal on January 10, 2017.

In line with the GDPR, this draft regulation aims at completing the upgrade of personal data regulation.

Evolution of the regulatory and compliance environment

The legislative, regulatory and litigation environment in which the Group operates is constantly changing. In continental Europe, reinsurers, insurers, asset managers and other financial institutions could face a danger of increasing the number of legal dispute and associated costs, as a result of the introduction of class action.

Furthermore, complexity and extraterritorial scope of many legislations on the fight against financial criminality (fight against money laundering, financing of terrorism and corruption, compliance with national and international financial sanctions) create serious risks of significant penalties in case of non-compliance. As examples, see the French Law of December 9, 2016 on transparency, fight against corruption and modernization of the economic life (called "Law Sapin II") and the European Market Abuse Regulation (called "MAR Regulation") which came into force on July 3, 2016.

This complexity is likely to continue and could lead to increased costs of compliance incurred by financial institutions like SCOR.

1.2.2. HISTORY AND DEVELOPMENT OF SCOR

SCOR became a reinsurance company in 1970, at the initiative of the French government and with the participation of insurers on the Paris market, to create a reinsurance company of international stature under the name of Société Commerciale de Réassurance. SCOR rapidly developed in various world markets, building up a substantial international portfolio.

At the beginning of the 1980s, the French government's stake in the Company's share capital, held through the Caisse Centrale de Réassurance, was progressively reduced in favor of insurance companies that were active on the French market (for more details, see Section 1.2.1 – Introduction).

In 2003, the Group reorganized its Life reinsurance business. The Group transferred all of the Group's Life reinsurance business throughout the world to SCOR Vie and its subsidiaries. SCOR Vie, whose corporate name was changed to SCOR Global Life in 2006, and which became a European Company (*Societas Europaea*) in 2007, and its subsidiaries, are all directly or indirectly wholly owned by SCOR SE.

On May 16, 2006, SCOR transferred all of its Non-Life reinsurance business in Europe, comprising Property & Casualty Treaties (including Credit and Surety business), large Corporate Accounts and Construction reinsurance to Société Putéolienne de Participations, a French subsidiary wholly owned by SCOR, whose corporate name was changed to SCOR Global P&C, with retroactive effect from January 1, 2006. In 2007, SCOR Global P&C adopted the European Company status (*Societas Europaea*) via a merger by absorption of SCOR Deutschland Rückversicherungs AG and SCOR Italia Riassicurazioni SpA.

On November 21, 2006, SCOR completed the acquisition of Revios Rückversicherung AG (Revios), enabling it to become a leading worldwide Life reinsurer. Based in Cologne (Germany), Revios was the former Life reinsurance unit of Gerling Global Re Group and had successfully developed on a stand-alone basis from 2002 onward to become one of the leading European reinsurers specializing in Life reinsurance, with operations in 17 countries. The combination of Revios and SCOR Vie created

SCOR Global Life SE, which is now one of SCOR's three primary operational subsidiaries (along with SCOR Global P&C SE and SCOR Global Investments SE, which became SCOR Investment Partners SE, described below), with responsibility for the Life reinsurance business.

SCOR's American Depositary Receipts (ADRs) have not been listed on the New York Stock Exchange (NYSE) since June 5, 2007. The American Depositary Receipt Facility program managed by The Bank of New York Mellon has been maintained as a sponsored level 1 facility. The ADR securities are now traded on the US over-the-counter market. SCOR's obligations to report to the US Securities and Exchange Commission (SEC) ended at the same time.

In August 2007, SCOR acquired Converium (which became SCOR Holding (Switzerland) AG (SCOR Holding Switzerland)). SCOR's shares were also admitted to trading in Swiss Francs on the SWX Swiss Exchange (which later became the SIX Swiss Exchange) in Zurich.

Following the acquisition of Revios and Converium, SCOR restructured its operations around several regional management platforms, or "Hubs", which were phased in gradually.

For more information on the Hub structure, see Section 1.2.3.1 – Brief description of the Group and of the position of the issuer.

On October 29, 2008, SCOR announced its decision to create SCOR Global Investments SE (which became SCOR Investment Partners SE), its asset management company (société de gestion de portefeuille) and third operational entity within the Group along with SCOR Global P&C SE and SCOR Global Life SE. This new company, incorporated on February 2, 2009, manages SCOR's investment portfolio and implements the investment strategy determined by the Group's Investment Committee chaired by the Group Chairman and Chief Executive Officer. SCOR Global Investments SE (which became SCOR Investment Partners SE) was approved by the AMF as a portfolio management company with effect from May 15, 2009. As a regulated portfolio management company, SCOR Investment Partners SE carries out its activities on an arms-length basis and with the operational independence required under Article L. 214-9 of the French Monetary and Financial Code (Code monétaire et financier).

On December 4, 2009, SCOR Global Life US Reinsurance Company, a wholly-owned subsidiary of the Group, acquired XL Re Life America Inc., a subsidiary of XL Capital Ltd, for an amount of EUR 31 million. The acquisition strengthened SCOR Global Life's services in the mortality protection field and reinforced its position in the US Life reinsurance market.

In 2011, the Lloyd's Market Franchise Board approved the creation of the Channel Syndicate 2015. SCOR is the sole capital provider for the Channel Syndicate. Underwriting by the Channel Syndicate began on January 5, 2011. The portfolio of the syndicate focuses on direct insurance business in markets, including property, marine, accident and health, financial institutions and professional civil liability.

On August 9, 2011, SCOR acquired the mortality portfolio of Transamerica Re, a division of AEGON N.V., for USD 919 million.

The transaction also included the acquisition of an Irish entity, which underwrote certain Transamerica Re's business risks. SCOR Global Life and Transamerica Re were merged into a new entity in North America: SCOR Global Life Americas Reinsurance Company (SCOR Global Life Americas).

On May 29, 2013, SCOR acquired a 59.9% stake in the capital of MRM, a listed real estate company subject to the French REIT régime (Régime des sociétés d'investissements immobiliers cotées or SIIC), as part of a cash capital increase, after the restructuring of MRM group's banking and bond debts. This investment amounted to EUR 53.3 million.

On October 1, 2013, SCOR acquired Generali's life reinsurance operations in the US (Generali US Holdings, Inc. or Generali US) for total consideration of EUR 573 million (USD 774 million).

On April 1, 2014, SCOR announced that it had obtained approval from Lloyd's, the Financial Conduct Authority and the Prudential Regulatory Authority in the UK to create a Managing Agent at Lloyd's. The new Managing Agency, "The Channel Managing Agency Limited", has acted as Managing Agent for SCOR's own Lloyd's syndicate, Channel 2015, since April 1, 2014.

On September 1, 2014, SCOR announced the creation of a local entity in Brazil, SCOR Brasil Resseguros SA (SCOR Brasil Re), following the granting of a license to operate as a Local Reinsurer beside the Brazilian insurance authority SUSEP on August 26, 2014.

On August 27, 2015, the English subsidiary SCOR UK Company Limited created a Canadian branch (SCOR Insurance – Canadian branch) whose activities started at the beginning of 2016.

In 2016, SCOR SE opened a Composite Branch office in India to conduct Life and P&C reinsurance business. This branch started underwriting business in 2017.

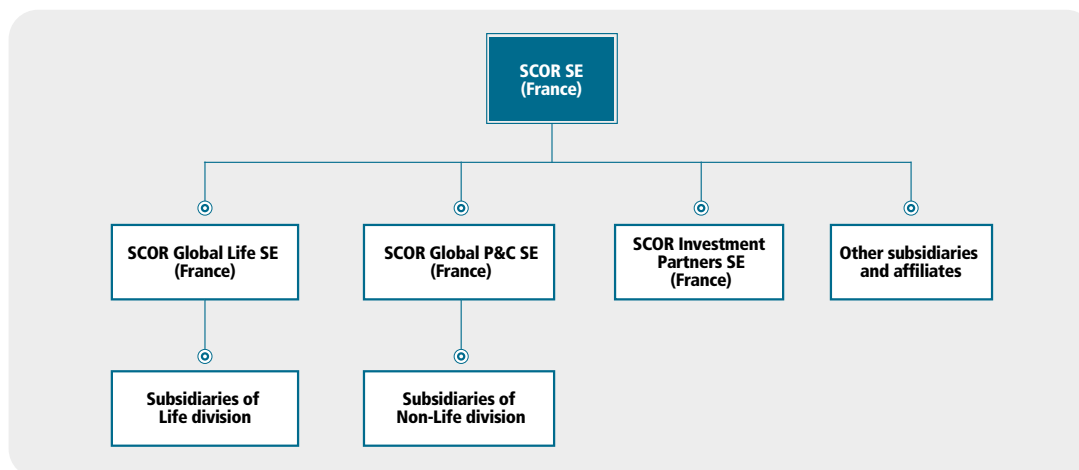
On January 3, 2018, SCOR has completed the increase of its stake in MutRé SA up to 100%. This acquisition has enabled SCOR to strengthen its Life & Health reinsurance offering to the French mutual insurance industry. On March 31, 2018, MutRé SA was merged into SCOR Global Life SE.

On May 31, 2018, in the Brexit context, SCOR SE created a new wholly owned subsidiary, SCOR Europe SE, an IARD insurance company, to ensure the continuity of shield and services provided to its clients after the Brexit effective date. Its business purpose is mainly direct insurance of major industrial risks across Europe. This subsidiary started its activities on January 1, 2019.

On March 23, 2018, the Blockchain Insurance Industry Initiative (B3i) announced the incorporation of B3i Services AG in Zurich, Switzerland. The company was formed by the founders of B3i, a consortium created in late 2016 by 15 global insurers and reinsurers to explore and test the potential of blockchain in the insurance industry. B3i Services AG's purpose is to provide insurance solutions on a blockchain platform that substantially improves efficiency across the value chain of the reinsurance industry. SCOR SE is one of the 13 founders and shareholders of the Swiss company B3i Services AG and holds, 7.94% of its registered share capital and voting rights of the Company.

1.2.3. ORGANIZATIONAL STRUCTURE OF SCOR

The main operational entities of the Group are presented in the chart below⁽¹⁾:



1.2.3.1. BRIEF DESCRIPTION OF THE GROUP AND OF THE POSITION OF THE ISSUER

Group operating companies

The Group parent company whose stock is listed on the Euronext Paris regulated market is SCOR SE.

The Group is a three-engine group driven by SCOR Global Life, SCOR Global P&C and SCOR Global Investments. The Group's organizational choices were guided by the principles of mobilization of skills and expertise, operating efficiency, structural simplicity, clear reporting lines and balance between teams from the Group's different entities.

SCOR Global P&C, the Group's Non-Life division, operates worldwide through two of the three main global reinsurance companies of the Group (SCOR Global P&C SE and SCOR SE) and their insurance and reinsurance subsidiaries and branches in the EMEA region, including Spain, Italy, Switzerland, the UK, Germany, Kenya, South Africa, Russia, the America region and the Asia-Pacific region, including Australia, China, India, South Korea, Hong Kong and Singapore.

SCOR Global Life, the Group's Life division, operates worldwide through two of the three main global reinsurance companies of the Group (SCOR Global Life SE and SCOR SE) as well as their insurance and reinsurance subsidiaries and branches in the EMEA region including Germany, the UK, Ireland, Italy, Spain, Switzerland, the Netherlands, Sweden, Belgium, Russia, South Africa, in the Americas region including Canada, the US, Latin America, and the Asia-Pacific region including Australia, New Zealand, China, Hong Kong, Japan, Singapore, Malaysia, South Korea and India and, in relation to its distribution and distribution solutions, through its specialized subsidiary of SCOR Global Life SE.

SCOR Global Investments, the third division of the Group, manages the investment portfolio of the Group's legal entities. It is composed of the Group Investment Office, a Strategic Planning and Investments Department and SCOR Investment Partners SE, a portfolio management company, approved by the AMF. The Group Investment Office manages the interaction between the SCOR Group and SCOR Investment Partners in managing the risk appetite, monitoring investment risks and setting investment guidelines. The Department Strategic Planning and Investments is in charge of financial planning and investments in Private Equity. SCOR Investment Partners manages directly the assets of many SCOR Group subsidiaries and manages also the funds on the behalf of the Group and third party clients.

The Group's subsidiaries, branches and offices are connected through a central network of applications and data exchange platforms, which allow local access to centralized risk analysis, underwriting or pricing databases and also gives access to information on local market conditions, to be shared among the Group's subsidiaries, branches and offices. In addition, by regularly rotating personnel between the various locations of the Group, the Group encourages its underwriters, actuaries, modelers, claims experts and risk controllers to share and exchange experience across its various geographic markets and business lines.

SCOR SE wholly owns its operating subsidiaries.

SCOR SE also makes loans to its subsidiaries and issues them guarantees so that they can underwrite under favorable conditions, particularly by benefiting from its credit ratings. SCOR SE provides actuarial, accounting, legal, administrative, IT, internal audit, investment, and human resources support to Group subsidiaries. Finally, SCOR SE acts, as needed, as retrocessionaire for its two operational subsidiaries through annually renewed proportional and non proportional treaties which constitute the Group's internal steering instrument through which it annually allocates capital

(1) The full organizational chart is available on SCOR's website www.scor.com.

to the operating subsidiaries based on the profitability expected from their underwriting activity. The contracts that formalize the relationships between SCOR SE and its subsidiaries are presented in Appendix C – 5.2.9 – Transactions with subsidiaries, affiliates and others.

The Group's restructuring

SCOR launched and completed several major restructuring projects, notably between 2005 and 2010, in order to simplify the legal structure of the Group and clearly differentiate between the operations of Life reinsurance subsidiaries and Non-Life reinsurance subsidiaries, with a view to optimizing the annual allocation of capital between operations under the Solvency I regime. In the context of Solvency II, SCOR announced in September of 2016 that it was considering merging its three reinsurance SE entities (SCOR SE, SCOR Global P&C SE and SCOR Global Life SE) as a way to optimize its legal entities' structure. At the date of this Registration Document, the merger is on track and is expected to be completed in 2019.

The Hub structure

SCOR has structured its operations around three regional management platforms, or Hubs: the EMEA Hub, the Americas Hub and the Asia-Pacific Hub.

Each Hub has local, regional⁽¹⁾ and Group responsibilities, with the heads of each Hub reporting to the Group Chief Operating Officer, COO. Each Hub typically includes the following functions: Legal and Compliance, Information technology support, Finance, Human Resources and General Services. This organization enables:

- ◆ SCOR's operational structures and support functions to be optimized by creating service platforms in charge of managing pooled resources, including information technology, human resources, legal and others in the Group's main locations;
- ◆ several Group functions to be carried out and managed in geographical locations other than Paris in order to benefit fully from the competencies within different Hubs; and
- ◆ the Group to develop a global culture while keeping local specificities.

The Hubs are not responsible for generating revenues or for underwriting or claims management. The local underwriting and claims management teams have direct reporting lines within the respective P&C and Life divisions. Hub-shared service costs are then allocated to the divisions.

Management reviews the operating results of the Non-Life and Life operating segments individually to assess the operational performance of the business and to allocate resources. For more information on SCOR's operating segments, see Section 4.6 Note 4 – Segment information.

The Hub structure is designed to facilitate access to local markets through a network of local subsidiaries, branches and representative offices, to better identify profit centers in each major reinsurance market, obtain a deeper understanding of the specific features of local risks and develop local management and underwriting expertise, and thereby improve customer service and maintain proximity relationships with ceding companies.

1.2.3.2. LIST OF ISSUER'S SIGNIFICANT SUBSIDIARIES AND BRANCHES

See:





- ◆ Section 1.2.3 – Organizational structure of SCOR;
- ◆ Appendix C – 5.2.1 – Investments;
- ◆ Section 4.6 Note 22 – Related party transactions;
- ◆ Section 4.6 Note 2.1 – Significant subsidiaries, investments in associates and joint ventures;
- ◆ Section 4.7 – Information on holdings;
- ◆ Section 1.2.3.1 – Brief description of the Group and of the position of the issuer (regarding the role of SCOR towards its subsidiaries);
- ◆ Section 4.6 Note 3 – Acquisitions and disposals;
- ◆ Section 2.1.2 – Board of Directors (regarding the duties carried out in the subsidiaries by the managers of the Company);
- ◆ Section 2.1.4 – Executive Committee (regarding the duties carried out in the subsidiaries by the managers of the Company); and
- ◆ Section 2.3.3 – Special report of the Statutory Auditors on related party agreements and commitments.

(1) EMEA Hub: European countries including Russia, Middle East and Africa; Asia-Pacific Hub: Asia and Australia; Americas Hub: North America and Latin America.

1.2.4. RATINGS INFORMATION

The Company and some of its insurance subsidiaries are rated by recognized rating agencies.

At December 31, 2018, the relevant ratings for the Company were as follows⁽¹⁾:

	Financial Strength	Senior Debt	Subordinated Debt
	A+ stable outlook	aa-	a
	AA- stable outlook	A+	A-
	Aa3 stable outlook	N/A	A2 (hyb)
	AA- stable outlook	AA-	A

On December 6, 2018, Fitch Ratings affirmed SCOR's insurer financial strength rating at "AA-" and long-term issuer default Rating at "A+", as in the previous year. Fitch Ratings also affirmed the ratings of SCOR's main subsidiaries. The outlooks remain stable.

On September 19, 2018, SCOR was informed of A.M. Best's decision to affirm the Group's Financial Strength Rating of "A+ (Superior)" and its Long-Term Issuer Credit Ratings of "aa-".

On September 6, 2018, SCOR was informed of the decision by Standard & Poor's (S&P) to affirm the financial strength rating for the Group and its main subsidiaries at "AA-", with a "stable

outlook", as in the previous year, and to maintain the counterparty credit ratings at "AA-/A-1+".

On September 23, 2016, Moody's upgraded SCOR's insurance financial strength rating to "Aa3" from "A1", and its subordinated debt rating to "A2" (hyb) from "A3" (hyb). According to Moody's, this decision reflects the "Group's improved franchise, its diversified business profile and lower exposure than peers to the segments currently under the most pricing pressure, a continued high stability of profits and strong and stable capitalization."

For more information on risks arising from credit ratings, please see Section 3.2.4 – Downgrade risk.

1.2.5. BUSINESS OVERVIEW

Since 2002, SCOR has defined its strategy and principle orientations through the creation of six successive three-year plans: "Back on Track" (2002-2004), "Moving Forward" (2004-2007), "Dynamic Lift" (2007-2010), "Strong Momentum" (2010-2013), "Optimal Dynamics" (2013-2016) and "Vision in Action" (2016-2019). The success of its various plans, along with the Group's acquisitions of Revios (in 2006), Converium (in 2007), Transamerica Re (in 2011) and Generali US (in 2013), has contributed to the diversification strategy by balancing the proportion of the consolidated premiums written between its Non-Life and Life segments and has enabled the Group to preserve both its solvency and its profitability.

In September 2016, SCOR launched its current three-year strategic plan, "Vision in Action". This plan covers the period from mid-2016 to mid-2019. It respects SCOR's four strategic cornerstones, which are:

- ◆ a strong franchise, achieved by:
 - deepening its presence in the local Non-Life and Life markets in which SCOR operates by strengthening client relationships through best-in-class services and product innovation, and
 - further developing the Non-Life US franchise and expanding in fast-growing Asia-Pacific Life markets through organic growth;

- ◆ a high degree of diversification of Non-Life and Life business and geographical presence, providing more stable results and robust capital diversification benefits;
- ◆ a controlled risk appetite on both sides of the balance sheet; and
- ◆ a robust capital shield policy (see Section 3.3.5 – Retrocession and other risk mitigation techniques).

With "Vision in Action", SCOR continues to focus on its two equally weighted strategic targets, profitability and solvency:

- ◆ a ROE above 800 basis points above the five-year rolling average of five-year risk-free rates over the cycle;
- ◆ an optimal solvency ratio in the 185-220% range (percentage of SCR, according to the internal model)⁽²⁾.

It also affirms the Group's consistent shareholder compensation policy set by SCOR's Board of Directors. SCOR aims to remunerate shareholders through cash dividends, and if relevant, does not exclude special dividends or share buy-backs. Overall, the Board will aim to maintain a minimum dividend payout of 35% over the cycle, while pursuing low variation in the dividend per share from year to year.

(1) Sources: www.standardandpoors.com; www.ambest.com; www.moody.com and www.fitchratings.com.

(2) Ratio between the Eligible Own Funds (EOF) and the Solvency Capital Requirement (SCR).

SCOR's risk appetite framework

SCOR's risk appetite framework is an integral part of the Group's strategic plan. It is approved by the Board of Directors upon the review of new strategic plans, based on recommendations from the Group's Executive Committee and the Risk Committee of the Board of Directors. The Board of Directors may vary the amount and the composition of risk that the Group is prepared to take.

SCOR's risk appetite framework encompasses four concepts: risk appetite, risk preferences, risk tolerances, and footprint scenarios:

Risk appetite

Risk appetite defines the quantity of risk that SCOR is willing to accept to achieve a desired level of profitability. This determines where the Group wishes to position itself on the assumed risk-expected return spectrum, between extremely risk averse (low risk-low return) and extreme risk taker (high risk-high return). SCOR uses a target solvency ratio as well as a target expected profitability. These two components provide a comprehensive definition of its risk appetite. The Group actual solvency ratio and profitability profile are regularly reported to the Board of Directors via the Risk Committee.

Risk preferences

Risk preferences are qualitative descriptions of the risks which SCOR is willing to accept. The Group aims to cover a wide range of reinsurance risks and geographical areas. On the other hand, it has no desire to take operational, legal, regulatory, tax or reputational risks. This does not mean that the Group is immune to these risks. These risk preferences determine the risks to be included in the Group's underwriting guidelines.

Risk tolerances

Risk tolerances are the limits required by SCOR's stakeholders (e.g. clients, shareholders, regulators, etc.). The Board of Directors defines and approves risk tolerance limits for the Group in terms of solvency by risk driver, and extreme scenario in order to ensure that the Group's risk profile remains aligned with its risk appetite framework. SCOR uses various risk assessment measures to verify that its exposures remain within these limits. These measures can take several forms depending on the technical constraints or the level of information available and are based on either internal model outputs, scenarios or expert opinions.

Footprint scenarios

Footprint scenarios are an innovative and complementary risk management tool. Whereas risk drivers and extreme scenarios are probability-based, the footprint approach consists of carrying out an impact assessment on the Group under a deterministic scenario. This approach is complementary to a probability-based view.

Taking into account SCOR's current exposure and all risk mitigation instruments, footprint scenarios provide impact assessments of past events on the Group's actual solvency ratio, liquidity, and current operations. SCOR regularly produces and evaluates footprint scenarios, providing comfort that the impact of such events on the Group's current solvency would be limited.

1.2.5.1. THE REINSURANCE BUSINESS

Principles

Reinsurance is a contract under which a company, the reinsurer, agrees to indemnify an insurance company, the ceding company, against all or part of the insurance risks underwritten by the ceding company under one or more insurance contracts. Reinsurance differs from insurance, primarily because of its higher level of mutualization by geography and by line of business.

Functions

Reinsurance has four essential functions:

- ◆ it offers the direct insurer greater security for its capital and solvency, as well as protection against the potentially high volatility of results when abnormally high frequency or severity of losses or events occur, by covering the direct insurer above certain contractually set amounts per event or in the aggregate;
- ◆ it allows insurers to increase the maximum amount they can insure for a given loss or series of losses by enabling them to underwrite a greater number of risks, or larger risks, without excessively raising their need to cover their solvency margin and, therefore, to increase their capital base;
- ◆ it gives insurers access to substantial available liquidity in the event of major loss events; and
- ◆ it provides insurers with efficient alternative capital solutions.

Reinsurance, however, does not discharge the ceding company from its liability to policyholders. Reinsurers themselves may feel the need to transfer some of the risks underwritten and/or some of the accumulated exposures derived from such risks to other reinsurers (known as retrocessionaires).

In addition, reinsurers may also provide advisory services to ceding companies by:

- ◆ helping them define their reinsurance needs and devise the most effective reinsurance program to better plan their capital needs and solvency margin;
- ◆ supplying a wide panel of support services, particularly in terms of knowledge sharing, best practices and risk assessment, modeling and management tools;
- ◆ providing expertise in certain highly specialized areas such as complex risk analysis and pricing; and
- ◆ enabling ceding companies to build up their business, particularly when launching new products requiring significant upfront investment or financing or when investing in new markets by starting their own operations or acquiring portfolios or companies.

Reinsurers, including SCOR, are usually compensated for the provision of such advisory services through the cedents' reinsurance premiums, rather than through fee-based compensation.

Types of reinsurance

Treaty and facultative

The two basic types of reinsurance arrangements are treaty and facultative reinsurance.

In treaty reinsurance, the ceding company is contractually bound to cede and the reinsurer is bound to assume a specified, contractually defined portion of a type or category of risks insured by the ceding company. Treaty reinsurers, including SCOR, do not separately evaluate each of the individual risks assumed under their treaties and, consequently, after a review of the ceding company's underwriting practices, they are dependent on the original underwriting decisions made by the ceding company's primary policy writers.

In facultative reinsurance, the ceding company cedes and the reinsurer assumes all or part of the risks covered by a particular specified insurance policy or by insurance policies covering a specific ultimate group insured as part of the same program. Facultative reinsurance is negotiated separately for each insurance policy that is reinsured. Facultative reinsurance is normally purchased by ceding companies for individual risks not covered by their reinsurance treaties, for amounts in excess of the monetary limits of their reinsurance treaties or for unusual risks. Underwriting expenses and, in particular, personnel costs, are higher relative to premiums written on facultative business because each risk is individually underwritten and administered. The ability to separately evaluate each risk reinsured, however, increases the probability that the underwriter can price the contract more accurately to reflect the risks involved.

Proportional and non-proportional reinsurance

Both treaty and facultative reinsurance can be written on (i) a proportional (or quota share) basis and/or (ii) a non-proportional (or excess of loss or stop loss) basis.

With respect to proportional (or quota share) reinsurance, the reinsurer, in return for a predetermined portion or share of the insurance premium charged by the ceding company, indemnifies the ceding company against the same portion of the losses under the covered insurance contract(s). In the case of reinsurance written on a non-proportional basis, through an excess of loss or a stop loss contract basis, the reinsurer indemnifies the ceding company against all or a specified portion of the loss sustained, on a claim by claim basis or for amounts incurred, in excess of a specified amount, known as the ceding company's retention or reinsurer's attachment point, and up to a negotiated reinsurance contract limit.

Although the frequency of losses under a quota share reinsurance contract is usually greater than on an excess of loss contract, it is generally simpler to predict the losses on a quota share basis and the terms and conditions of a quota share contract can be structured to limit the indemnity offered under the contract. A quota share reinsurance contract therefore does not necessarily imply that a reinsurance company assumes greater risk exposure than on an excess of loss contract.

Excess of loss reinsurance is often written in layers. One or a group of reinsurers accepts a tranche or layer of risk above the

ceding company's retention up to a specified amount, at which point another reinsurer or a group of reinsurers accepts the next layer of liability. The stacked layers protecting the same underlying portfolio are called a program, and after protection from the upper layer is exhausted liability reverts to the ceding company. The reinsurer taking on the risk immediately above the ceding company's retention layer is said to write primary or working layer or low layer excess of loss reinsurance. A loss just above the ceding company's retention will create a loss for the lower layer reinsurer, but not for the reinsurers on the higher layers. Loss activity in lower layer reinsurance tends to be more predictable than in higher layers due to greater historical frequency, and therefore, like quota share reinsurance, underwriters and actuaries have more data to price the underlying risks with greater confidence.

Premiums payable by the ceding company to a reinsurer for excess of loss reinsurance are not directly proportional to the premiums that the ceding company receives because the reinsurer does not assume a direct proportion of the risk. In contrast, premiums that the ceding company pays to the reinsurer for quota share reinsurance are proportional to the premiums that the ceding company receives, consistent with the proportional sharing of risk. In addition, in quota share reinsurance, the reinsurer generally pays the ceding company a ceding commission. The ceding commission is usually based on the ceding company's cost of acquiring the business being reinsured, including commissions, premium taxes, assessments and miscellaneous administrative expenses, and also may include a partial repayment of profit for producing the business.

Breakdown of the Group's business

The Group is organized into three divisions (SCOR Global P&C, SCOR Global Life and SCOR Global Investments), of which there are two reportable operating segments, and one corporate cost center referred to as "Group Functions". The reportable operating segments are: the SCOR Global P&C business, with responsibility for property and casualty insurance and reinsurance (also referred to in this Registration Document as "Non-Life"); and the SCOR Global Life business, with responsibility for Life reinsurance (also referred to in this Registration Document as "Life"). These two businesses represent SCOR's two "operating segments" for purposes of IFRS 8 – Operating segments, and are presented as such in its consolidated financial statements, included in Section 4 – Consolidated financial statements. Each operating segment underwrites different types of risks and offers different products and services, which are marketed via separate channels; responsibilities and reporting within the Group are established on the basis of this structure. SCOR Global Investments is the asset management division of the Group. Its role is complementary to the two operating segments as it manages SCOR Global P&C's and SCOR Global Life's investment assets associated with the contract liabilities. SCOR Global Investments also manages assets on behalf of third parties although these activities are currently not considered material. Therefore, SCOR Global Investments is not considered as a separate reportable operating segment for purposes of IFRS 8 – Operating segments.

The Group organizes its operations around three regional management platforms, or "Hubs" named EMEA Hub, Asia-Pacific Hub and Americas Hub. Each main location of the Hubs has local,

regional and Group responsibilities, with the managing directors of each Hub reporting to the Group Chief Operating Officer. Each Hub includes the following functions: Legal and Compliance, Information Technology support, Finance, Human Resources and General Services. Hub shared service costs are allocated to the segments based on allocation keys. For a description of the Hub structure, see Section 1.2.3 – Organizational structure of SCOR.

The SCOR Global P&C segment carries out its global operations through the subsidiaries and branches of its two main global reinsurance entities (SCOR Global P&C SE and SCOR SE). Through those entities, their subsidiaries and branches, SCOR Global P&C is represented in three business regions, EMEA, the Americas and Asia-Pacific and operates in three business areas: Specialty Insurance (large corporate accounts underwritten through facultative insurance contracts, direct insurance and through the participation in Lloyd's syndicates' Channel 2015 for which SCOR is the sole capital provider), Reinsurance (including Property, Casualty, Credit and Surety, Decennial Insurance, Aviation, Space, Marine, Engineering, Agricultural risks and Natural Catastrophes); and P&C Partners. For a description of products and services, see Section 1.2.5.2 – Non-Life reinsurance.

The SCOR Global Life segment operates worldwide through the subsidiaries and branches SCOR Global Life SE and SCOR SE. Via this network SCOR Global Life is represented in three business regions Americas, EMEA and Asia-Pacific reinsuring Life and Health insurance risks along the three product lines Protection, Longevity and Financial Solutions with a strong focus on biometric risks. In order to achieve this, SCOR Global Life manages and optimizes the in-force book, deepens the franchise and aims at having the best team, organization and tools. The franchise strategy is composed of three elements, which are the expansion of the footprint in protection to defend and strengthen market presence around the world, the diversification of the risk profile by growing health and longevity, and growth of consumer demand by supporting clients with unique distribution solutions. SCOR Global Life aims to achieve diversification, both from a geographical and a product lines perspective. For a description of products and services, see Section 1.2.5.3 – Life reinsurance.

SCOR's cost center is referred to in this Registration Document as "Group Functions". Group Functions is not an operating segment and does not generate revenues. The costs in Group Functions are Group-related and are not directly attributable to either the P&C or Life segment, but those costs that are indirectly attributable are allocated to the operating segments based on suitable allocation keys. Group Functions includes the cost of departments fulfilling duties for the benefit of the whole Group, such as Group Internal Audit, Group Finance departments (Tax, Accounting, Consolidation and Reporting, Financial Communication, Treasury and Capital Management, Financial Planning and Analysis), Group Chief Operating Officer departments (Legal and Compliance, Communication, Human Resources, Information Technology, Cost Controlling and Budgeting) and Group Chief Risk Officer departments (Actuarial, Risk Management, Prudential Affairs, Internal Modeling).

SCOR Global P&C and SCOR Global Life, through their respective legal entities, are leading global reinsurers, executing an underwriting policy focused on profitability, developing value-added services and adhering to a cautious financial policy. As at December 31, 2018, the Group served more than 4,000 clients throughout the world. SCOR's strategy of offering both

P&C and Life products provides it with the benefits of balanced diversification (in terms of risks, geography and markets), which is a cornerstone of its strategy.

1.2.5.2. NON-LIFE REINSURANCE

SCOR's Non-Life segment is divided into three business areas:

- ◆ Reinsurance;
- ◆ Specialties Insurance;
- ◆ P&C Partners.

Reinsurance

SCOR's P&C Reinsurance business area provides proportional and non-proportional reinsurance in many forms across:

- ◆ Property: covering damage to underlying assets and direct or contingent business interruption losses caused by fire or other perils, including natural catastrophes.
- ◆ Motor: covering original risks of motor property damage and bodily injury.
- ◆ Casualty treaties: covering general liability, product liability and professional indemnity.

The teams underwrite on the basis of sophisticated risk evaluation, seeking flexibility and innovative approaches for their clients, working closely with the following global business line experts:

Credit and Surety

SCOR has been a global leader reinsuring Credit, Surety and Political risks for more than 40 years, providing underwriting capacity for:

- ◆ Domestic and Export Credit Insurance on short-term underlying trade credit periods and underlying policies.
- ◆ Surety: various products to guarantee the completion of commitments, whether these are legal or contractual (obligation to perform), or relate to the payment of a certain sum (obligation to pay).
- ◆ Political Risks: including single policy and Confiscation Expropriation Nationalization Deprivation (CEND).

Our clients and partners appreciate our consistent and longstanding approach to underwriting/pricing, along with our ability to share knowledge and expertise on a global basis throughout business, credit and financial cycles.

The team draws its expertise from an unparalleled local presence in the Americas (Miami), Europe (Paris, Zurich) and Asia (Singapore), combined with longstanding experience in the actual risk industry.

Decennial Insurance

Committed to a consistent underwriting approach over the past 40 years, SCOR's leading global position enables the team to be involved in most IDI (Inherent Defect Insurance) initiatives launched by insurers, governments, professional organizations and financial bodies across the world, and to keep up to date with and reinsure almost all new IDI schemes.

SCOR provides customized products and solutions tailored to local situations:

- ◆ Basic cover of construction damage caused by inherent defects in structural works;

- ◆ Tailored cover, including material damage caused by inherent defects in waterproofing works and/or in other specific parts of construction;
- ◆ Additional extensions to IDI policies such as waiver of subrogation against builders and consequential third party liability.

SCOR offers to its clients a global market vision on both established and emerging markets, from small residential to large industrial, as well as commercial buildings and public constructions such as hospitals, bridges, viaducts and tunnels.

Aviation

SCOR provides reinsurance and insurance solutions, from traditional insurance covers to bouquet multi-line structures, in all sectors of the Aviation market: airlines, aerospace, space treaty and general aviation.

With a consistent and long-term underwriting philosophy, SCOR manages business cycles and takes a sustainable approach to both attritional / frequency risks and severity / catastrophe risks. SCOR is committed to creating a mutually beneficial relationship with its clients and brokers in order to provide appropriate cover on a worldwide basis.

Marine and Energy

SCOR's dedicated Marine & Energy team combines local knowledge with global insights, in a line of business that requires constant monitoring of a rapidly changing global environment. SCOR offers flexible adequate solutions to protect its clients across a broad range of Marine and Energy risks: hull and cargo as well as marine liability, upstream energy, yacht, pleasure craft.

SCOR's broad range of reinsurance solutions provides significant and stable capacity to cover standalone, specialized Marine and Energy risks and risks forming part of broader composite covers.

Engineering

With a consistent underwriting approach and substantial capacity, SCOR's engineering team offers a broad and flexible range of reinsurance and insurance cover: Construction All Risks (CAR) and Erection All Risks (EAR) insurance, also advance loss of profits or delay in start-up following a CAR or EAR loss, contractors' plant and machinery, electronic equipment, machinery, machinery loss of profits and combined machinery/electronic equipment and property.

Agricultural Risks

With a consistent, long-term approach to underwriting and pricing, SCOR's dedicated Agriculture team offers a broad and flexible range of reinsurance cover, underpinned by a strong natural catastrophe modelling and analytics infrastructure. SCOR P&C provides customized risk transfer solutions and innovative approaches in the field of crop/crop hail, aquaculture, forestry, greenhouse and livestock/bloodstock insurance.

Property Catastrophes

For more than 15 years, SCOR's Property Cat team has provided non-proportional reinsurance and occasionally cat-driven proportional reinsurance. SCOR provides clients and brokers with flexible solutions and platforms in order to cover US and global Property Cat risks and manage accumulation issues.

Specialties Insurance

The Group has announced in September 2018 the grouping of its existing insurance units under a newly formed Specialties Insurance division. It is composed of SCOR Business Solutions, Channel 2015 SCOR's Lloyd's syndicate and MGAs.

SCOR Business Solutions (SBS)

It is SCOR's large corporate risk insurance and facultative reinsurance unit. Taking a consistent and long-term approach, SBS combines risk management expertise and advanced technology with creativity and flexibility to support the strategies and needs of its clients, particularly in Energy, Construction, Property, Liability and Financial lines.

The Channel syndicate

The Channel Syndicate 2015 is SCOR's Lloyd's syndicate, offering a full suite of insurance products, from core lines of business to specialist lines such as Political and Credit risks, Cyber and Environmental Impairment Liability.

SCOR is the sole capital provider of the Channel Syndicate 2015.

Managing General Agencies (MGA)

MGAs are a specialized type of insurance agent/broker vested with underwriting authority from an insurer. Accordingly, MGAs perform certain functions ordinarily handled only by insurers, such as underwriting, pricing and settling claims. MGAs are mainly involved with specialty lines of business in which specialized expertise is required.

SCOR has a very targeted approach, focused on North America, the London Market and Brazil (through Essor).

P&C Partners

To address the evolving needs of its clients and to reinforce its Tier 1 position in a rapidly changing risk ecosystem, P&C Partners, a global technical and expertise center, facilitates business development as well as synergies between underwriting teams.

Its dedicated decision-making committee provides rapid responses, promotes consistency and clear pathways for innovative ideas. It includes:

- ◆ Alternative Solutions focuses on the development of customized, non-traditional, and new products / solutions;
- ◆ Cyber Solutions helps corporate and insurance clients to develop Cyber insurance cover;
- ◆ Alternative Capital explores innovative retrocession tools and sourcing adequate capacity with optimal conditions;
- ◆ P&C Ventures and Strategic Partnership focuses on InsurTech investments, technical partnerships and expertise sharing.

1.2.5.3. LIFE REINSURANCE

SCOR's Global Life segment underwrites Life reinsurance business in the following product lines:

- ◆ Protection;
- ◆ Financial Solutions;
- ◆ Longevity.

Protection

Protection encompasses traditional Life reinsurance business on living and death benefits. The main risks undertaken are mortality, morbidity and behavioral risks for individuals and groups of individuals. Protection is predominantly underwritten in the form of proportional treaties (quota share, surplus basis or a combination of both). Quota share treaties include structures whereby SCOR Global Life's exposure is identical to those of its clients, and risk-based premium structures whereby treaty conditions differ from those of the underlying policies. A minority of the portfolio is underwritten in the form of non-proportional contracts: excess of loss per person, catastrophe excess of loss or stop loss.

The Protection reinsurance market, as well as SCOR Global Life's Protection portfolio, is characterized by the dominance of long-term contractual relationships. SCOR Global Life also writes short-term Protection business, in markets and product lines in which this is common practice.

Protection covers the following products and risks in reinsurance arrangements:

Mortality

Mortality protection represents 55% of the SCOR Global Life portfolio based on gross written premiums for the year ended December 31, 2018. SCOR Global Life actively underwrites mortality risk in all the geographical markets in which it operates.

Disability

Disability insurance mitigates the loss of income when the insured is totally or partially unable to continue his or her professional occupation or any occupation for which he or she is suited due to sickness or accident.

Long-Term Care

Long-Term Care (LTC) insurance covers the inability of the insured to perform predefined activities of daily living, resulting in the insured needing constant assistance from another person.

Critical Illness

Critical Illness (CI) insurance typically pays a lump sum benefit, to be used at the policyholder's discretion, if the insured suffers from a serious condition and survives a defined period.

Medical

Medical insurance covers medical and surgical expenses incurred by the insured person.

Personal Accident

Personal Accident insurance pays a lump sum benefit, if the insured person dies or is seriously injured as a result of an accident.

Financial Solutions

Financial Solutions combine traditional Life reinsurance with financial components providing liquidity, balance sheet, solvency and/or income improvements to the client. This type of reinsurance treaty is typically used by cedents to fund growth, stabilize earnings or optimize their solvency position (capital relief).

Longevity

Longevity products cover the risk of negative deviation from expected results due to the insured or annuitant living longer than assumed in the pricing of the cover provided by insurers or pension funds.

1.2.5.4. UNDERWRITING, DISTRIBUTION, CATASTROPHE RISK, CLAIMS AND RESERVES

For information on underwriting, catastrophe risk, claims and reserves, see Section 3.3.1.4 – Management of underwriting risks related to the P&C business and Section 3.3.2.7 – Management of underwriting risks related to the Life reinsurance business.

Distribution by production source

Reinsurance can be written through professional reinsurance brokers or directly from ceding companies. The involvement of a broker in the placement of a reinsurance contract is a decision belonging to the ceding insurance company, which depends on local market practices, the cedent's worldwide reinsurance market knowledge, the complexity of the risks the cedent intends to transfer and the corresponding available reinsurance capacity in the market, as well as the cedent's capability and resources to structure market submission data, place risks and manage the placements. In most of the cases, reinsurance programs are syndicated to several reinsurers, which follow a leader, and in some instances a co-leader.

The proportion of brokered and direct business written by the Group's subsidiaries varies according to market and cedent practices. For the year ended December 31, 2018, Non-Life wrote approximately 62% of gross written premiums through brokers and 38% through direct business, while Life wrote approximately 6% through brokers and approximately 94% through direct business.

For the year ended December 31, 2018, SCOR's largest brokers for the Non-Life division were MMC with approximately 21% of the Group's Non-Life gross written premiums, Aon Group with approximately 18% and Willis Group with approximately 12%. SCOR's largest brokers for the Life division were Aon Group with approximately 2% of the Group's Life gross written premiums and Willis Group with less than 1%.

The direct reinsurance market remains an important distribution channel for reinsurance business written by the Group. Direct placement of reinsurance enables SCOR to access clients who prefer to place their reinsurance partly or in totality directly with reinsurers based upon the reinsurer's in-depth understanding of the ceding company's needs.

1.2.5.5. CAPITAL SHIELD STRATEGY

The Group reconciles its strategic objectives with the protection of its capital via its "Capital Shield Strategy", which articulates the Group's risk appetite. This strategy is based on an economic approach and aims to protect the Group against potential shock losses. The policy builds on the following four concepts: traditional retrocession, capital market solutions, the solvency scale and the contingent capital facility.

For more information on the capital, refer to Section 1.3.6.1 – Capital. For more information on the Capital Shield Strategy, refer to Section 3.3.5 – Retrocession and other risk mitigation

techniques. For information on the Group's solvency scale, refer to Section 1.3.7 – Solvency and Section 4.6 – Notes to the consolidated financial statements, Note 12 – Information on share capital, capital management, regulatory framework and consolidated reserves. For information on the Atlas structured entities used in the Capital Shield Strategy, refer to Section 4.6 – Notes to the consolidated financial statements, Note 2 – Scope of consolidation.

1.2.5.6. INVESTMENTS

Investment philosophy and process

In 2008, SCOR decided to internalize the management of its insurance business investment portfolio, in order to implement its investment strategy centrally and globally, with strict monitoring of the risk appetite and a dynamic positioning according to an enhanced asset liability management (ALM) process, integrating economic and market expectations.

The investment portfolio is positioned dynamically in order to optimize the financial contribution from the investment portfolio to the Group's results and capital allocation. SCOR follows a capital-driven investment process, ensuring through a very strict ALM process that the tactical asset allocation is aligned with the Group's risk appetite. Meanwhile, the Group has set very stringent risk limits (value at risk "VaR", investment guidelines) that enable permanent monitoring of limits to protect the Group from extreme market events and severe loss scenarios.

SCOR has set up a rigorous governance process and an ERM-focused organizational structure:

- ◆ the Board of Directors approves risk appetite, risk limits and as a consequence, the capital allocated to insurance business investments on the basis of the Risk Committee's recommendations;
- ◆ the Executive Committee approves the overall investment strategy and the macro-positioning of the investment portfolio on the basis of the Group Investment Committee's recommendation.

The Group's asset management mandate, assigned to SCOR Global Investments, consists of:

- ◆ proposing the macro-positioning of the invested assets portfolio in line with the approved risk appetite and risk limits, respecting a strict ALM process, economic and market expectations, accounting rules and a strict foreign exchange congruency matching between assets and liabilities;
- ◆ implementing the investment strategy;
- ◆ optimizing the absolute return on invested assets and focusing on the recurrence of yields while controlling their volatility. This objective is achieved through active and dynamic management of the portfolio, the identification of cycles and market opportunities and strict qualitative and quantitative risk management.

Group Investment Committee

The Group Investment Committee is chaired by the Group's Chairman and Chief Executive Officer and is composed of the Group Chief Financial Officer, the Group Chief Risk Officer, the Chief Economist, the Chief Executive Officer of SCOR Global P&C, the Chief Executive Officer of SCOR Global Life, the Chief Executive Officer of SCOR Investment Partners and other representatives of SCOR Global Investments. The Group Investment Committee meets at least each quarter and defines the strategic and tactical asset allocation as well as the risk appetite of the Group.

SCOR Global Investments

SCOR Global Investments is the SCOR Group's asset management division and consists of two entities: (i) the Group Investment Office and (ii) a regulated asset management company, SCOR Investment Partners.

Group Investment Office

The Group Investment Office manages the interaction between the SCOR Group and SCOR Investment Partners in managing the risk appetite, monitoring investment risks and setting investment guidelines. It is also responsible for portfolio monitoring and reporting, development of the Group's strategic and operating plans, financial forecasts, performance analysis of SCOR's investments, and for defining policies, governance and reporting on Environmental, Social and Governance matters within the investment portfolio.

SCOR Investment Partners

SCOR Investment Partners centralizes the management of all the assets of the Group entities, however in some jurisdictions, such management is delegated to external asset managers.

The SCOR Investment Partners investment team is organized around six asset management desks:

- ◆ Aggregate, focusing on rates, covered bonds and investment grade credit;
- ◆ credit, focusing on high yield debt and on leveraged loans;
- ◆ equities and convertible bonds;
- ◆ infrastructure loans;
- ◆ Insurance-Linked Securities (ILS); and
- ◆ direct real estate investments and real estate loans.

Based on the expertise initially developed for the management of the SCOR Group's invested assets, SCOR Investment Partners decided in 2012 to open some of its investment strategies to third-party investors. Third-party assets under management stood at EUR 3.7 billion as at December 31, 2018 (including undrawn commitments).

SCOR Investment Partners benefits from third-party asset management through management fees on the assets under management. SCOR Investment Partners has seven investment strategies which are open to third parties with funds in key products such as High Yield, Private Debt (corporate, infrastructure and real estate loans) and ILS.

1.2.5.7. DEPENDENCY OF THE ISSUER WITH RESPECT TO PATENTS OR LICENSES, INDUSTRIAL, COMMERCIAL OR FINANCIAL CONTRACTS AND NEW MANUFACTURING PROCESSES

See Sections 3 – Risk factors and risk management mechanisms and 1.2.6.2 – Research and development, patents and licenses.

1.2.6. SCOR INVESTMENTS IN TANGIBLE AND INTANGIBLE ASSETS

1.2.6.1. PROPERTY, PLANT AND EQUIPMENT

Major existing or planned property, plant and equipment

SCOR owns offices in Paris (France), Cologne (Germany), London (UK), Singapore and Madrid (Spain), where its local subsidiaries and branches have their corporate offices. Any surplus space is leased to third parties as part of SCOR's investment management business. The Group leases office space for its other business locations. The Group believes that the Group's offices in each country in which it operates are adequate for its current needs.

SCOR owns a 5,100 m² office and retail leasehold building at 10 Lime Street in London. As at December 31, 2018, the building was occupied at 79% by SCOR for its London Hub office. The remaining space was rented to third parties. SCOR owns a second building in London at 32 Lime Street with a surface area of 1,800 m² and fully occupied for its London Hub office.

SCOR owns an office building in Paris, with a surface area of more than 20,000 m², located at 5, avenue Kléber. The building is held by its OPCI (French real estate UCIT) SCOR-Properties, and occupied at 85% by SCOR, the remaining area being rented to

third parties. In November 2016, a second building at 50 rue La Pérouse with a surface area of 1,500 m² was acquired. The building was delivered in January 2017 and SCOR employees moved in in May 2017.

In 2018, the Group vacated the floor in SCOR's former headquarters (La Défense, Paris), which had been leased mainly for teams working on IT projects. From December 2018 these teams moved in to a recently renovated building located at 3-5 rue Maurice Ravel in Levallois, owned by SCOR Group. SCOR occupies 3,300 m² of office space in this building, which is 86% of the total surface area.

In Cologne, since 2012 SCOR fully occupies an office building with a surface area of more than 6,000 m² located at Goebenstrasse 1, held by the German branch of SCOR SE "SCOR Rückversicherung Direktion für Deutschland, Niederlassung der SCOR SE".

SCOR Reinsurance Asia-Pacific PTE LTD owns several floors in a leasehold building in Singapore. The SCOR Singapore team occupy this office space.

SCOR owns an office area of 1,600 m² in Madrid which is occupied by SCOR Global Life SE Iberica Sucursal for its operational needs.

SCOR also holds additional property investments as part of its asset management strategy.

For more information on the Group's real estate, see Section 4.6 – Notes to the consolidated financial statements, Note 9.2 – Tangible assets and related commitments and Note 7.4 – Real estate investments.

Environmental issues that may affect the utilization of property, plant and equipment

See the social and environmental report in Appendix D, Note 2 – Environmental impact of SCOR's activity.

1.2.6.2. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES

Research and development activities

In order to ensure that the Life division is continually up-to-date with biometric trends and scientific developments, the expertise of eight dedicated Research & Development (R&D) Centers is used to analyze and assess the key factors underlying mortality, longevity, morbidity and policyholder behavior. Biometric risks such as mortality, longevity, disability and long-term care are at the heart of underwriting in Life reinsurance. Since these risks are subject to shocks and various trends, SCOR Global Life closely monitors their developments in:

- ◆ R&D Center for Mortality Insurance: carrying out mortality studies on life portfolios, enhancing modeling for pricing, reserving and capital modeling and providing support in setting assumptions for new business, in particular new products, and reserving;
- ◆ R&D Center for Longevity Insurance: carrying out mortality studies on pension and annuity portfolios, enhancing risk modeling for pricing, reserving and capital modeling and providing support in setting assumptions for new business, in particular new products, and reserving;
- ◆ R&D Center for Long-Term Care (LTC) Insurance: providing support in the development of LTC products (definitions, pricing, guidelines) and the monitoring of the corresponding portfolios;
- ◆ R&D Center for Disability Insurance: providing support in the development of disability products (definitions, pricing, guidelines), the understanding of the experience and the impact of claims management;
- ◆ R&D Center for Critical Illness: dedicated to the analysis of critical illness risks; complex risks due to multiple definitions, cover types and socio-economic environments;
- ◆ R&D Center for Medical Underwriting and Claims Management: evaluating the impact on insurance of new medical advances, for both known pathologies and the most recently discovered ones; advising clients on the pricing of substandard risks; and
- ◆ R&D Center for Policyholder Behavior: providing support mainly in modeling and pricing lapse behavior within protection products;
- ◆ R&D Center for Medical Expenses: carrying out studies on portfolios, enhancing risk modeling for pricing, and providing support in setting assumptions for new business, in particular new products.

Supporting research and teaching is a core feature of the Group's corporate responsibility policy. SCOR has for many years developed relationships with different kinds of institutions (foundations, associations, schools and universities, research centers), in various forms (corporate sponsorship, scientific research partnerships) and in a number of fields linked to risk, uncertainty, and reinsurance, both in France and abroad.

The Centers have entered into many scientific partnerships over the years, the active ones in 2018 being with the Assmann Foundation on cardiovascular diseases (EUR 100,000 annually) which ended in June 2018, the ADERA (Association pour le Développement de l'Enseignement et des Recherches auprès des universités, des centres de recherche et des entreprises d'Aquitaine – INSERM) on LTC (EUR 100,000 annually) and the Pierre et Marie Curie University at the Pitié-Salpêtrière Hospital on HIV developments (EUR 30,000 annually).

The R&D Centers are part of SCOR Global Life's range of services: analyses and risk projections produced by the Centers are used by SCOR Global Life's teams to advise their clients on the implementation and monitoring of their life and health insurance products.

The Centers provide input at the product development stage, giving advice on definitions, underwriting standards, pricing and reserving. They contribute to the monitoring of biometric risks by carrying out experience studies on portfolio data and by undertaking prospective risk modeling.

The R&D Centers are part of the Knowledge Department of SCOR Global Life. Their employees are based in Paris, Cologne, Dublin, Charlotte, Kansas City, Chicago and Singapore and are active worldwide, responding to requests from the local teams in charge of business development and client relationships.

At the forefront of risk modeling, particularly extreme risks in Life and Non-Life businesses, the Group devotes considerable resources to fundamental research and the promotion of scientific risk management techniques in various disciplines. As well as prize-winning internal research projects, conducted with the assistance of students from renowned schools and universities, SCOR Foundation for Science has signed partnership agreements with the following institutions:

- ◆ a Research Chair on Risk, in cooperation with the the Risk Foundation and Toulouse School of Economics of Toulouse University is dedicated to the risk market and to value creation, with a research program specially focused on Long-Term Care. For SCOR, this implies costs of EUR 0.9 million spread over three years;
- ◆ a Research Chair in Finance, in cooperation with the Toulouse School of Economics of Toulouse University, focuses on risk management, long-term investment, corporate governance and the links between insurance and financial markets. For SCOR, the related cost is EUR 1.5 million spread over five years;
- ◆ a Research Chair on Macroeconomic Risk in cooperation with the Paris School of Economics (PSE), is dedicated to the macroeconomic modeling of tail events, the consequences of uncertainty on the macroeconomic equilibrium and the contagion of extreme macroeconomic risks and crises. For SCOR, the related cost is EUR 900,000 spread over three years; and

- ◆ SCOR Foundation for Science also supports research in key areas of risk analysis: climate risks and their insurability, coastal flood forecasting, natural risks to crops, modeling risks in general, Alzheimer's disease, pandemics, emerging infectious diseases, genetic treatment of tuberculosis, modeling of life expectancy and mortality at extreme ages, the risks of meteorites, car insurance, pension funds, best practices in risk management, predictability of earthquakes, mathematics of extreme events, building of economic and financial expectations, international financial imbalances. The Foundation also participates in the development of actuarial practice in Tunisia and within the CIMA (Conférence Interfrancophone des Marchés d'Assurance) zone.

SCOR also finances the Insurance Risks and Finance Research Center in cooperation with Nanyang Business School (Singapore), whose aim is to promote research in the field of risk management. For SCOR, the related cost is SGD 2.5 million spread over five years.

Alongside these partnership agreements, the Group works to further scientific research in the field of risks through sponsorship initiatives (see Appendix D) conducted by its corporate foundation, the SCOR Corporate Foundation for Science.

SCOR and the SCOR Foundation for Science also organize Actuarial Awards in Europe (Germany, France, Italy, Spain and Portugal, Sweden, Switzerland and the United Kingdom), and in Asia (Singapore). The Group places great importance on the development of actuarial science and each year awards prizes for the best academic papers in the field of actuarial science. These prizes are designed to promote actuarial science, develop and encourage research in this field and contribute to the improvement of risk knowledge and management. The SCOR Actuarial Awards are recognized as a mark of excellence in the insurance and reinsurance industries. The winning papers are selected on the basis of criteria including an excellent command of actuarial concepts, the use of high-quality analysis instruments, and subjects that could have a practical application in the world of risk management.

Since 2015, SCOR has also been organizing, with the partnership of the French Institut of Actuaries, an actuarial symposium in Paris. In November 2015, the theme was centered around "Actuarial and Data Science", in December 2016, the theme was "Scientific laws and mathematical models: from physics to actuarial science", in December 2017, the theme was "Will Artificial Intelligence revolutionize actuarial science?", and in December 2018, the theme was "Macroeconomic and Financial instabilities".

In addition to the above, scientific risk management techniques are promoted, and knowledge shared, via the involvement in collective studies through the Geneva Association and the teaching of insurance and scientific risk management techniques in schools and universities (e.g. the 218 Master's at Paris Dauphine, the Zurich ETH, the University Ca'Foscari in Venice Italy and the graduations, the masters and the Executive MBA supplied by the Ecole Nationale d'Assurance (ENASS) of the Paris Conservatoire National des Arts et Métiers (CNAM)).

Information technologies

SCOR was one of the first reinsurers to implement a global information system. This strategy is reaffirmed during the integration process after a new acquisition, when SCOR aims to rapidly reestablish a global integrated information system. In accounting, consolidation and financial reporting, SCOR has delivered its global solution based on SAP, embedding a unique chart of accounts and standard processes in all its Hubs throughout the Group. This solution has been reinforced by the introduction of Hana technology to extend its real-time analytical capabilities.

The Group's Life and Non-Life reinsurance global back-office operates on a custom software package known as "Omega." Omega was designed to allow the tracking of brokers and ceding companies within the Group, manage premiums and claims, analyze the technical profitability of contracts, and perform quarterly closings based on the latest estimated results. The Omega databases reflect the reinsurance risk of SCOR Global P&C and SCOR Global Life's portfolios worldwide. Fully modernized in 2016, OMEGA has since been enriched every year, especially by the addition of analytical features powered by a big data solution – "Reinsurance Analytics".

The focus in 2018 was again on strengthening SCOR's front office applications to improve risk selection, anticipation and reactivity in markets and products, and simulations of results. Several of projects have been launched in recent years which will continue through 2019 through division specific solutions fully integrated with the core back-office, OMEGA. Among these projects, to start with the P&C division, the ForePlan tool provides capability to build the underwriting plan and follow its execution. Non-Life pricing is closely managed using xAct, the global in-house standard P&C treaty pricing tool, which uses standardized models, and profitability analysis, to provide full visibility of proportional and non-proportional business. The underwriting and pricing process of large industrial or specialty risks is now supported by new in-house solutions like ForeWriter and specific modules in different expertise fields such as space, agriculture, cybersecurity... Control of exposure to natural catastrophes and pricing is under improvement through the development of the SCOR Cat Platform which monitors all liabilities and accumulations through use and calibration or the model combination deemed as most efficient. A first version of a platform to monitor the MGA book of business in the US through automatic underwriting controls has been rolled-out. Its development continues in 2019. Norma, the P&C internal model, combines the risk assessment produced by these front-office tools to produce an overall P&C risk measure. Life Division has developed an IT roadmap which aims at preparing SCOR Global Life for the future by increasing its competitiveness, providing high level of service to clients, complying with all regulatory requirements (ie. IFRS 17, GDPR) and increasing the understanding of Life business. Other front-office solutions have been developed for SCOR Global Life to harmonize and further enhance the underwriting of substandard risks and develop tele-underwriting in different countries. The introduction of Artificial Intelligence completes these solutions. Underwriting solutions like Velogica are proposed to SCOR's Life clients,

notably in the US market. The integration of Life Individual policy management systems is now completed in the US, and will now be extended to the rest of the world by the development of a new platform, named hElios, which will provide an even more accurate knowledge of the risks. These individual data are the basis for enhanced actuarial modeling, in which SCOR Global Life is also investing, targeting to unify pricing and reserving in one single technical platform and through the roll-out of a new experience analysis solution.

At the Group level, and in the frame of an integrated architecture, the various risk modeling tools are feeding the enterprise internal model which has been key in the Solvency II compliance process.

In all areas, the modeling and analysis methods are getting gradually richer in Machine Learning & Artificial intelligence innovative technologies that actuaries can test through a test platform "Sandbox" which is made available to them to assess their new algorithms.

In the asset management area, SCOR Investment Partners is now equipped with a global front-office solution, Bloomberg AIM, reinforcing the real-time monitoring of all investments. The record keeping of the portfolio managed by SCOR Global Investment and the investment accounting are managed through an integrated platform, Simcorp Dimension. A global Treasury management platform, Trace, has been rolled out in all European sites, before the finalization of the worldwide deployment in 2019. All this asset management information is now available through global analytical platforms powered by strong market solutions: Markit EDM and SAP Hana.

The Group is promoting a paperless environment. Internally, global document management and sharing processes have been set up for the Life and Non-Life divisions. With its clients, SCOR can automatically process claims, reinsurance and financial accounts received electronically in the standard formats defined by ACORD, an association created for the development of e-processing in insurance and reinsurance, without having to re-enter them. SCOR is also actively participating to the B3i initiative which aims at exploiting the power of the Blockchain technology to ease exchanges between actors of the insurance value chain.

The SCOR technical environment is based on a secured international network, a cloud-based global data center with a fully replicated dual site, and a standard workstation deployed everywhere in the world. SCOR has also implemented an ambitious security plan based on stronger physical and logical access controls, cyber security reinforcement, large program for data protection, and recovery in the event of any type of disaster. Such capabilities are key enablers that allowed SCOR to reach the GDPR compliance level in May 2018.

SCOR's IT Department is playing a key role in implementing the Group's "Green SCOR" policy, and drives several elements of this multi-year plan, including data center consolidation, server virtualization, the purchase of new low-energy desktops and laptops, and reductions in printing. Mobility is still being enhanced through ongoing developments in line with technological progress and business needs that require a more permanent connection with the company, while complying with security standards.

Finally, the IT strategy is aligned with the SCOR business objectives and especially those defined through the strategic plan, "Vision in Action". A new IT strategy has been developed, jointly by the Group IT and businesses, and validated by the Group Executive Committee. This strategy defines a framework for the development of the Group information system, with a focus on the digital transformation of SCOR, steered by the Business Divisions in close partnership with Group IT. Innovation areas have been defined and will enable SCOR to obtain maximum leverage from the new capabilities offered by new technology like Big Data, Artificial intelligence, Cloud or Robotics.

1.2.6.3. INVESTMENTS

Principal investments made over the past three financial years

See Section 3.4.2 – Management of market risks, for a description of risk management connected with SCOR investments in debt instruments and equity securities as well as with investments it owns.

See Section 1.2.2 – History and development of SCOR, and Section 4.6 Note 3 – Acquisitions and disposals.

See Section 1.2.5.6 – Investments.

See Section 1.2.6 – SCOR investments in tangible and intangible assets.

Principal investments in progress

None.

Principal future investments

SCOR's success relies on the consistent implementation of the four principles on which its strategic plans, "Dynamic Lift", "Strong Momentum", "Optimal Dynamics" and now "Vision in Action" are based: a strong franchise, extensive diversification, a controlled risk appetite and a robust capital shield. Success in implementing such a strategy requires that, at regular intervals, the Group assesses whether opportunities which may present themselves relating to the optimization of its business portfolio via acquisitions and disposals and which would be likely to deliver value for its shareholders are in line with this consistent set of principles.

1.3. MARKET AND FINANCIAL REVIEW

1.3.1. REINSURANCE MARKET DEVELOPMENTS

The global reinsurance industry comprises Life and Non-Life reinsurance.

Life reinsurance is a concentrated industry with significant regulatory and operational barriers to entry. Most global Life reinsurers are based in established markets with rigorous regulatory frameworks suitable for long-term business. Global Life reinsurers have developed strong underwriting, pricing, actuarial, claims management and product development capabilities, as well as long-term relationships with their clients. Because of the long-term nature of some Life risks, the Life reinsurance market historically has been less cyclical than Non-Life.

Non-Life reinsurance is a cyclical market estimated by various analysts at USD 160 to 170 billion of premium globally, covering

property, casualty, financial, and specialty lines. The sector is exposed to volatility in the form of development of past reserves and large natural and man-made losses. Losses from natural disasters were above historical averages in both 2017 and 2018, which particularly affected property reinsurance. Demand for reinsurance has risen as a result of recent disasters and other factors, while the supply of reinsurance capital has risen slower than demand because reinsurers paid losses from their capital and some providers exited lines of business or reduced their risk appetite. Thus, on average, reinsurance pricing has risen for contracts incepting in 2018 and 2019. Generally benign macroeconomic conditions over the past year have helped the sector.

1.3.2. FINANCIAL MARKET DEVELOPMENTS

The year was marked by a shift, in the last quarter, in market expectations and in the development of financial asset prices. During the first part of the year, the economic cycle remained virtuous, with a sharp rise in corporate earnings (+20% in the US) and a progressive exit from accommodative monetary policies on the back of controlled inflation. Against this backdrop, financial asset volatility was low, with equity indices posting positive returns, rates rising gradually in the US and virtually stable credit spreads. Thus, the US Federal Reserve, relying in particular on the very low unemployment rate (3.8%) and on a rising trend towards endogenous inflation, gradually raised its key policy rates from 1.5% to 2.5%, while conducting a programmed reduction in the size of its balance sheet. The European Central Bank left its rates unchanged at -0.4% but resolutely began to reduce its asset purchase program.

By contrast, in the last quarter of the year, the increase in political and commercial uncertainties led to a downward revision in terms of economic outlook, leaving an impression of insufficiently accommodative monetary policies. The correction was therefore relatively violent, with equities falling by almost 20% and a flight-to-quality movement to risk-free assets such as government bonds.

Over the year, the 10-year rates in the United States rose from 2.53% to 3.23% before ending at 2.68%. In Europe, the rates fell constantly, ending at 0.24% for the 10-year German rate, compared to 0.47% at the beginning of the year. The interest rate differential between the two zones thus remains historically very high, due to growth dynamics that are still very different. The Euro continued to fall against the US dollar, with an exchange rate that fell from 1.20 to 1.15, while the annualized cost of hedging dollars to euros rose from 2.3% to 3.1%.

In this environment, the main equity indices posted negative returns over the year with, including dividends, -4.4% for the S&P 500, -10.7% for the Stoxx Europe 600 and -10.4% for the Japanese Nikkei.

Linked to these movements, the credit markets suffered from a general widening of spreads, with the global investment grade index spreads against government securities rising from 0.97% to 1.58%, while global high-yield index spreads against government securities rose from 3.49% to 5.40%.

1.3.3. SIGNIFICANT EVENTS OF THE YEAR

US Tax reform

On December 22, 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted, reducing the statutory rate of US federal corporate income tax to 21% effective January 1, 2018. This reduction resulted in the remeasurement of US deferred taxes at 21% recognized in 2017.

In 2018, SCOR has assessed the TCJA implications, in particular with respect to certain complex provisions including the Base Erosion and Anti-Abuse Tax («BEAT»). SCOR has implemented an alternate business structure to adapt to the new environment by establishing a new Irish entity, SCOR Life Ireland, which is treated as a US taxpayer.

The execution of this implementation was subject to certain standard regulatory approvals which have been obtained before the end of 2018. The TCJA implications including the implementation of the new business structure resulted in an expense of USD 81 million (EUR 68 million) which has been recognized in SCOR's 2018 result. The overall impact of the TCJA on the Group's solvency ratio is not material.

SCOR reaffirms its independence and acknowledges Covéa's decision to withdraw its proposal on a potential combination

On August 24, 2018, Covéa sent a letter to SCOR proposing to initiate discussions relating to an unsolicited project of Covéa to acquire a majority stake in SCOR's share capital and voting rights, by way of a tender offer. The conditions for the implementation of this project set forth in Covéa's letter included notably the favorable recommendation by the Board of Directors of SCOR and the execution of a business combination agreement with SCOR. On August 30, 2018, SCOR's Board of Directors reviewed the terms and conditions of this unsolicited proposal in detail and determined that it reflected neither the intrinsic value nor the strategic value of SCOR and it would be put into question SCOR's independence which is a key factor in SCOR's status as a Tier 1 reinsurer with its clients and the financial strength and flexibility which has been acknowledged by its AA ratings. SCOR's Board of Directors also noted that this project was met with unanimous opposition from SCOR's Executive Committee. Consequently, the Board of Directors of SCOR unanimously decided not to initiate discussions with Covéa and reaffirmed its complete trust in SCOR's management to continue to create value.

On September 4, 2018, SCOR acknowledged Covéa's decision to withdraw its proposal on a potential combination with SCOR, as announced by Covéa in its press release of the same day.

On September 21, 2018, following in particular Covéa's renewed expressions of interest in an unsolicited proposed combination with SCOR, SCOR's Board of Directors unanimously decided to reaffirm in all respects its decision of August 30, 2018 not to enter into discussions with Covéa, and noted that the procedure and methods used by Thierry Derez and Covéa to prepare, submit and make public this proposed combination, as well as their renewed expressions of interest, could only be considered as hostile, unfriendly and disruptive to the functioning of SCOR.

On September 27, 2018, Covéa announced that it would comply with its standstill undertaking dated April 8, 2016 prohibiting it from exceeding, directly or indirectly, the threshold of 10% of the share capital of SCOR until April 7, 2019, at midnight.

On November 13, 2018, Thierry Derez resigned from SCOR's Board of Directors following multiple reminders by SCOR of the situation of conflicts of interests that affected him and the opinion rendered on October 30, 2018 by the Haut Comité de Gouvernement d'Entreprise, which confirmed SCOR's position in all respects.

On January 29, 2019, SCOR announced that it had decided to initiate legal actions against in particular Thierry Derez and Covéa in relation to the misconduct committed to the detriment of SCOR, in the context of the preparation and submission by Covéa of its unsolicited proposed combination with SCOR. These legal proceedings are described in Section 4.6 – Notes to the consolidated financial statements, Note 26 – Subsequent events.

On January 29, 2019, Covéa announced that a transaction with SCOR was no longer part of its strategic options.

SCOR announces the creation of SCOR Europe SE

In November 2018, SCOR announced the creation of SCOR Europe SE, its new Paris-based P&C specialty insurance company, which has been approved by the French supervisory authority, the ACPR (Autorité de Contrôle Prudentiel et de Résolution). This license enables SCOR Europe SE to operate within the European Economic Area (EEA) with effect from January 1, 2019. As announced on September 6, 2017, this enables the Group to ensure the continuity of the services offered to its insured clients in view of Brexit.

With effect from January 1, 2019, SCOR Europe SE, a 100%-owned subsidiary of SCOR SE, will underwrite all new and renewed business relating to risks located in the EEA that can no longer be accepted by SCOR UK Company Ltd. after the Brexit date. SCOR Europe SE will also take over all commitments from policies previously issued by SCOR UK Company Ltd. if the latter can no longer honor these following Brexit, the terms of which remain uncertain at this stage.

SCOR Europe SE benefits from the SCOR Group's financial strength, which is recognized by the rating agencies. S&P in particular has assigned SCOR Europe SE an AA- rating.

New catastrophe bond Atlas Capital UK 2018 PLC

On June 1, 2018, as part of its policy of diversifying its capital protection tools, SCOR sponsored a new catastrophe bond ("catbond"), Atlas Capital UK 2018 PLC, which provides the Group with multi-year risk transfer capacity of USD 300 million to protect itself against named storms in the US, earthquakes in the US and Canada, and windstorms in Europe. The risk period for Atlas Capital UK 2018 will run from June 1, 2018, to May 31, 2022.

With this transaction, SCOR became the first reinsurer to use the new UK “ILS” (“Insurance-Linked Securities”) regime to issue a cat bond. This transaction received the approval of the PRA and the UK regulatory authorities.

The contract has been accounted for as a reinsurance contract, in accordance with IFRS 4 – Insurance Contracts.

Issuance of innovative deeply subordinated Tier 1 notes

On March 6, 2018, SCOR placed a perpetual deeply subordinated notes issue on the “Regulation S” USD market in the amount of USD 625 million. This was the first transaction for a restricted Tier 1 instrument with a principal write-down feature in USD, which provides the Group with the greatest financial flexibility and strongest quality of capital for a debt instrument.

The coupon for this new USD placement has been set at 5.25%, until the first call date of March 13, 2029, and resets every 5 years thereafter at the prevailing 5-year US Treasury yield plus 2.37% (no step-up). The notes were swapped into EUR for an 11-year period providing an effective yield cost to SCOR of 2.95%, corresponding to a 177-basis point spread over the 11-year EUR mid-swap rate.

The proceeds from the notes are eligible for inclusion in SCOR’s Tier 1 regulatory capital, in accordance with applicable rules and regulatory standards, and as equity credit in the rating agency capital models.

Redemption of CHF 315 million undated subordinated notes

In June 2018, SCOR redeemed the CHF 315 million undated subordinated notes, using the proceeds of the newly issued deeply subordinated Tier 1 Notes.

Redemption of the CHF 250 million undated subordinated notes

On November 30, 2018, SCOR redeemed the CHF 250 million undated subordinated notes callable in November 2018.

Acquisition of MutRé S.A.

SCOR has been a 33% shareholder and a major technical and commercial partner of MutRé S.A. since the company was created in 1998. In January 2018, SCOR completed the increase of its stake in MutRé S.A. to 100%. The control of MutRé S.A. by SCOR was obtained on the same date.

The acquisition of MutRé S.A., which will have an accretive impact on SCOR’s return on equity and earnings per share, is in line with the strategic plan “Vision in Action” and its profitability and solvency targets. This acquisition fully respects SCOR’s close historical relationships with its mutual insurance partners. The acquisition of MutRé S.A. will enable SCOR to strengthen its Life & Health reinsurance offering to the French mutual insurance industry.

1.3.4. INFORMATION ON SCOR’S COMPETITIVE POSITION

SCOR competes for business in the European, American, Asian and other international markets with numerous international and domestic reinsurance and insurance companies, some of which have a larger market share than its own, greater financial resources and, in certain cases, higher ratings from the rating agencies. Competition in the types of reinsurance and insurance that the Group underwrites is based on many factors, including financial strength as perceived by the rating agencies, customers and their brokers, underwriting expertise, reputation and experience in the lines of reinsurance and insurance written, country of operation, premiums charged, the quality of the proposed reinsurance structures, the services offered and the speed at which claims are paid.

SCOR’s competitors include independent and state-owned reinsurance companies, subsidiaries or affiliates of established worldwide insurance companies, and reinsurance departments of certain primary insurance companies. Among the Group’s major competitors are European reinsurers (for example, Swiss Re, Munich Re and Hannover Re) and US/Bermudian reinsurers (for example, Partner Re, RGA, Chubb, Axis Capital, TransRe, Odyssey Re, GenRe and Everest Re). Moreover, Lloyd’s syndicates (where SCOR is also represented as a sole capital provider of the Channel Syndicate 2015) are recognized as competitors.

SCOR SE and its consolidated subsidiaries formed the world’s fifth largest reinsurer⁽¹⁾ serving more than 4,000 clients.

(1) By Net Reinsurance premiums written, source: “AM Best Special Report Global Reinsurance 2018”.

1.3.5. REVENUES & EARNINGS SUMMARY

The Group's financial data are presented in Section 1.1 – Selected financial information and in Section 4 – Consolidated financial statements. The commentary below is based on the financial data presented in the aforementioned sections.

See also Section 4.6 – Notes to the consolidated financial statements, Note 1 – Accounting principles and methods, Note 15 – Net contract liabilities and Note 24 – Insurance and financial risks.

1.3.5.1. OPERATING RESULT

SCOR is characterized by its strategic positioning aimed at diversifying its exposures. To this end, the Group seeks to preserve:

- ◆ the diversification of its business by maintaining a broadly balanced split between its Life and Non-Life reinsurance activities. The business volume split for the year ended December 31, 2018 was approximately 60% for Life reinsurance and 40% for Non-Life reinsurance based on gross written premiums;
- ◆ the geographic diversification of the Group's business by:
 - operating in a large number of countries, both mature and emerging,
 - maintaining its policy of being positioned on strong-growth markets such as Asia-Pacific and Latin America,

- operating as a mixed Non-Life and Life reinsurer in China using the license received in 2011, enabling SCOR to add Life reinsurance services to the existing Non-Life activities; and

- ◆ the diversification of underwritten risks by product lines in Life reinsurance (Protection, Financial Solutions, Longevity) and in Non-Life reinsurance (Specialties Insurance, Reinsurance and P&C Partners).

Gross written premiums

Gross written premiums for the financial year ended December 31, 2018 amounted to EUR 15,258 million, an increase of 3.2% compared to EUR 14,789 million in 2017. At constant exchange rates the growth is 7.1%. The overall increase in gross written premiums of EUR 469 million in 2018 is composed of an increase of EUR 150 million for SCOR Global P&C and of EUR 319 million for SCOR Global Life.

Gross written premiums for the financial year ended December 31, 2017 amounted to EUR 14,789 million, an increase of 7.0% compared to EUR 13,826 million in 2016. At constant exchange rates the growth was 8.6%. The overall increase in gross written premiums of EUR 963 million in 2017 was composed of an increase of EUR 386 million for SCOR Global P&C and of EUR 577 million for SCOR Global Life.

Breakdown of gross written premiums by segment

<i>In EUR millions</i>	2018		2017		2016	
By operating segment						
SCOR Global P&C	6,175	40%	6,025	41%	5,639	41%
SCOR Global Life	9,083	60%	8,764	59%	8,187	59%
TOTAL	15,258	100%	14,789	100%	13,826	100%
Non-Life reinsurance						
Specialties Insurance ⁽¹⁾	1,516	25%	1,393	23%	1,221	22%
Reinsurance ⁽¹⁾	4,659	75%	4,632	77%	4,418	78%
TOTAL SCOR GLOBAL P&C	6,175	100%	6,025	100%	5,639	100%
Life reinsurance						
Protection	6,865	75%	6,756	77%	6,460	79%
Financial Solutions	1,354	15%	1,243	14%	1,038	13%
Longevity	864	10%	765	9%	689	8%
TOTAL SCOR GLOBAL LIFE	9,083	100%	8,764	100%	8,187	100%

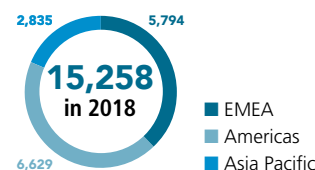
⁽¹⁾ P&C partners is a business unit supporting the development of Reinsurance and Specialties Insurance.

See Section 4.6 – Notes to the consolidated financial statements, Note 4 – Segment information, for further details on the results of the reportable segments.

Distribution by geographical area

In 2018, SCOR generated approximately 38% of its gross written premiums in Europe, Middle East and Africa (EMEA) (2017: 37%), with significant market positions in France, Germany, Spain and Italy, 43% of its gross written premiums in the Americas (2017: 46%) and 19% in Asia (2017: 17%).

GROUP GROSS WRITTEN PREMIUMS BY GEOGRAPHICAL AREA (In EUR millions)



The following table shows the breakdown by volume of Life and Non-Life gross premiums written by geographical area based on market responsibility, taking into account the country in which the ceding company operates for treaty business and location of the insured for facultative business:

In EUR millions	Total			SCOR Global Life			SCOR Global P&C		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
EMEA	5,794	5,492	5,355	2,980	2,733	2,677	2,814	2,759	2,678
Americas	6,629	6,736	6,318	4,375	4,567	4,429	2,254	2,169	1,889
Asia-Pacific	2,835	2,562	2,153	1,728	1,464	1,081	1,107	1,098	1,072
TOTAL	15,258	14,790	13,826	9,083	8,764	8,187	6,175	6,025	5,639

Net earned premiums

Net earned premiums for the year ended December 31, 2018 amounted to EUR 13,611 million as compared to EUR 13,281 million and EUR 12,462 million for the years ended December 31, 2017 and 2016, respectively. The overall increase in net earned premiums of EUR 330 million from 2017 to 2018 and EUR 819 million from 2016 to 2017 is consistent with the evolution in gross written premiums.

Net investment income

Net investment income⁽¹⁾ for the year ended December 31, 2018 amounted to EUR 615 million as compared to EUR 764 million and EUR 670 million for the years ended December 31, 2017 and 2016, respectively. The net return on investments in 2018 was 2.3% compared to 2.9% in 2017 and 2.5% in 2016. The evolution of investment income is essentially driven by higher investment revenues and by the active portfolio management strategy implemented by SCOR Global Investments. The Group recorded a lower realized capital gains of EUR 123 million in 2018 compared to 2017 (EUR 272 million), mostly achieved on the equity portfolio and to a lesser extent on the real estate portfolio, which had in 2017 benefited from higher realized gain on sale.

The return on invested assets in 2018 was 2.8% as compared to 3.5% in 2017 and 2.9% in 2016.

Gross benefits and claims paid

Gross benefits and claims paid were EUR 11,168 million, EUR 11,963 million and EUR 9,848 million in 2018, 2017 and 2016, respectively. The level of gross benefits and claims paid for SCOR Global P&C decreased to EUR 3,942 million during 2018 from EUR 4,564 million in 2017 (2016: EUR 3,164 million). For SCOR Global Life the level of gross benefits and claims paid also decreased to EUR 7,226 million in 2018 from EUR 7,399 million in 2017 (2016: EUR 6,684 million).

Net retrocession result

The net result of the Group's retrocession program was a net cost of EUR (264) million in 2018 as compared to a net gain of EUR 398 million and a net cost EUR (388) million in 2017 and 2016, respectively.

The impact of alternative retrocession coverage, Atlas IX 2015 and 2016 catastrophe bonds (SCOR Global P&C) and Atlas IX mortality risk transfer contract (SCOR Global Life) (see Section 3.3.5 – Retrocession and other risk mitigation techniques) are not included in the net cost of retrocession as the products are accounted for as derivatives.

The total amount recorded under «other operating expenses» in 2018 is an expense of EUR 24 million (vs 2017: EUR 38 million; 2016: EUR 35 million) mainly linked to the Atlas CAT bonds' depreciation.

Other "operating income" includes a recovery of EUR 23 million on Atlas IX 2015-1 related to 2017 HIM's events (hurricanes Harvey, Irma and Maria).

(1) See Section 1.3.9 – Calculation of financial ratios.

Expenses

The Group cost ratio calculated as the total of all management expenses less certain non-controllable expenses (e.g. bad debts), legal settlements, acquisition expenses and amortization, divided by gross written premiums, was 5.0% for the year ended December 31, 2018, unchanged from 5.0% in 2017 and 2016. Management expenses for the years ended December 31, 2018, 2017 and 2016 were EUR 893 million, EUR 858 million, and EUR 815 million respectively, on a comparative basis.

Operating result

Operating result before impact of acquisitions for the year ended December 31, 2018 amounted to EUR 632 million as compared to EUR 491 million in 2017 and EUR 951 million in 2016. The increase between 2017 and 2018 is notably due to the lower severity of natural catastrophes. For the year ended December 31, 2018, the operating segment SCOR Global Life contributed EUR 371 million (EUR 342 million and EUR 396 million in 2017 and 2016, respectively) and SCOR Global P&C EUR 393 million (EUR 265 million and EUR 680 million in 2017 and 2016, respectively) to the operating result. In 2018, 2017 and 2016, EUR (132) million, EUR (116) million and EUR (125) million respectively, related to Group functions. A gain from bargain purchase of EUR 26 million related to the acquisition of MutRé was recognized in 2018.

2016 operating income benefited from the strong technical performance of SCOR Global Life and the robust profitability of SCOR Global P&C.

Consolidated net income – Group share

SCOR generated a consolidated net income of EUR 322 million in 2018, compared to EUR 286 million and EUR 603 million for the years ended December 31, 2017 and 2016, respectively.

In a year marked by a significant series of natural catastrophes which occurred mostly in the second part of the year, the results benefited from a positive underlying performance of SCOR Global P&C and SCOR Global Life and a prudent asset management policy which safeguarded shareholders' interests whilst delivering solid returns.

The consolidated net income was also impacted by a tax expense of USD 81 million (EUR 68 million) resulting from the Tax Cuts and Jobs Act (the "TCJA"). Excluding the impact of the US tax reform, SCOR's group net income for 2018 would have amounted to EUR 390 million. See Section 1.3.3 – Significant events of the year.

In 2018, the effective tax rate was 34.7% compared to 16.3% in 2017 mainly due to the US tax reform which had a negative impact of EUR 68 million. See Section 4, Note 17 – Income taxes, for explanations on the effective tax rate.

In 2016, SCOR benefited from a strong performance from both operating segments, and an active portfolio management strategy implemented by SCOR Global Investments which safeguarded shareholders' interests while delivering solid returns. In 2016, the effective tax rate was 21.7%.

Return on equity was 5.5%, 4.5% and 9.5% for the years ended December 31, 2018, 2017 and 2016 respectively. Basic earnings per share were EUR 1.72, EUR 1.53 and EUR 3.26 for the years ended December 31, 2018, 2017 and 2016, respectively.

1.3.5.2. SCOR GLOBAL P&C

SCOR Global P&C is a leading P&C reinsurer with a worldwide footprint.

The business comprises: Specialities Insurance and Reinsurance. SCOR Global P&C capitalizes on a long-standing franchise, experience, and an extensive data base comprising multi-line expertise.

SCOR Global P&C has had a strong growth in 2018, supported by renewals in line with the Group's strategic plan "Vision In Action", benefiting from improved pricing for its reinsurance programs as well as improvements in the insurance market environment through its Reinsurance and Specialties Insurance activities. Despite a year marked by natural catastrophes, SCOR Global P&C confirms its position as a leading reinsurer, in particular thanks to an efficient portfolio management policy.

2017 has been marked by an exceptional series of large natural catastrophes that occurred during the 2nd half of the year. The in-force retrocession programs have responded as expected, bearing witness to the SCOR Global P&C efficient capital shield policy. Despite these events and an increasing competition in the market since last year, the "Vision in Action" objectives are confirmed thanks notably to January 2017 renewals and strengthening of initiatives undertaken in 2016.

The January 2016 renewals were characterized by a market environment that shows some signs of levelling out for certain types of contracts and exposures, but where competition regained some momentum since the very end of 2015. SCOR Global P&C continued to find pockets of profitable new business, counterbalancing the premium reductions caused by increased selectivity and heightened portfolio management, thereby maintaining overall expected profitability. This has been made possible by a combination of several factors, such as the successful deployment of the client-focused initiative in the US, and having developed the right culture and the right tools to manage global client relationships and steer business in real time.

Gross written premiums

In 2018, gross written premiums increased by 2.5% compared to 2017 from EUR 6,025 million to EUR 6,175 million. At constant exchange rates the growth is 6.7% and is consistent with the trend indicated after January 2018 renewals.

In 2017, gross written premiums increased by 6.9% compared to 2016 from EUR 5,639 million to EUR 6,025 million. At constant exchange rates the growth was 8.8% and was consistent with the trend indicated after January 2017 renewals, driven by Property and Casualties treaties.

In 2016, gross written premiums decreased by 1.5% compared to 2015 from EUR 5,723 million to EUR 5,639 million. At constant exchange rates the growth was 1.2%. Compared to 2015, growth at constant exchange rates was driven by the performance of the Property and Casualty Treaties (mainly in the Casualty and Natural Catastrophes portfolios).

Net combined ratio

SCOR Global P&C achieved a net combined ratio⁽¹⁾ of 99.4% in 2018 against 103.7% in 2017 and 93.1% in 2016.

In 2018, the net combined ratio reflects severe and extended natural catastrophes that occurred, especially in Japan and the Americas, partially absorbed by 1.9 percentage points of reserve releases (EUR 100 million). The natural catastrophe ratio stands at 12.6% compared to 14.9% in 2017 and 5.5% in 2016.

In 2017, the net combined ratio reflected the severity of higher natural catastrophes that occurred compared to previous years,

especially the American hurricanes, earthquake and wildfires. The natural catastrophe ratio stands at 14.9% compared to 5.5% in 2016 and 2.2% in 2015. The net combined ratio was also negatively impacted by 1.4 percentage points (EUR 71 million) due to the change in the Ogden discount rate, partially balanced by a 0.9 percentage points of reserve releases (EUR 45 million).

In 2016, the net combined ratio reflected very strong technical results, with a decreasing net attritional loss ratio (54.1% compared to 56.9% in 2015) despite higher natural catastrophes compared to 2015. Natural catastrophes had a 5.5% impact on the Group net combined ratio for year-end 2016 compared to a 2.2% impact in 2015 and a 4.2% impact in 2014.

Impact of natural catastrophes

SCOR defines a catastrophe as a natural event involving several risks and causing pre-tax losses, net of retrocession, totaling EUR 3 million or more.

(1) See Section 1.3.9.5 – Net Combined ratio.

The following table highlights losses due to natural catastrophes for the years 2018, 2017 and 2016:

	As at December 31		
	2018	2017	2016
CURRENT FINANCIAL YEAR EVENTS			
Number of catastrophes occurred during the financial year	24 ⁽³⁾	17 ⁽⁵⁾	18 ⁽⁷⁾
<i>In EUR millions</i>			
Losses and loss adjustment expenses due to catastrophes, gross	901	1,363	355
Losses due to catastrophes, net of retrocession	681	768	307
PREVIOUS FINANCIAL YEAR EVENTS INCLUDED IN CURRENT LOSS RATIO			
Number of catastrophes occurred during previous financial year	7 ⁽⁴⁾	2 ⁽⁶⁾	14 ⁽⁸⁾
<i>In EUR millions</i>			
Losses and loss adjustment expenses due to catastrophes, gross	4 ⁽⁴⁾	12 ⁽⁶⁾	(32) ⁽⁸⁾
Losses due to catastrophes, net of retrocession	(25) ⁽⁴⁾	11 ⁽⁶⁾	(33) ⁽⁸⁾
TOTAL OF EVENTS INCLUDED IN CURRENT LOSS RATIO			
Number of catastrophes occurred during current and previous financial years	31 ⁽⁴⁾	19 ⁽⁶⁾	32 ⁽⁸⁾
<i>In EUR millions</i>			
Losses and loss adjustment expenses due to catastrophes, gross	906 ⁽⁴⁾	1,374 ⁽⁶⁾	323 ⁽⁸⁾
Losses due to catastrophes, net of retrocession ⁽²⁾	656 ⁽⁴⁾	779 ⁽⁶⁾	274 ⁽⁸⁾
Group net loss ratio ⁽¹⁾	66.6% ⁽⁴⁾	71.0% ⁽⁶⁾	59.6% ⁽⁸⁾
Net attritional ratio	54.0% ⁽⁴⁾	56.1% ⁽⁶⁾	54.1% ⁽⁸⁾

(1) The net loss ratio is calculated by dividing Non-Life claims (including claims arising from natural catastrophes) by Non-Life premiums earned. This ratio is net of retrocession (See Section 1.3.9.5 – Net combined ratio). The natural catastrophe ratio is determined by dividing the losses due to catastrophes (net of retrocession) by the net earned premiums (see Section 1.3.9.5 – Net combined ratio); i.e. for 2018: EUR 656 million divided by EUR 5,216 million, equaling a ratio of 12.6%.

(2) Net of retrocession and reinstatement premiums (assumed and retrocession).

(3) Including Typhoons Jebi, Trami, Mangkhut and Yutu in Saipan and Tinian, Hurricanes Michael, Florence and Leslie, Camp California Fire and Woolsey California Fire, Friederike storm, Papua New Guinea Earthquake, Ituango heavy rains, Italian Storms, Kilauea volcanic eruption in Hawaii, floods in Japan and Kerala, Cyclone Mekunu, Northern Osaka Earthquake, US storms in May and July, Carr Wildfire in California and Swedish wildfires, Ontario windstorm and Sydney hailstorms.

(4) Including developments on Hurricane Harvey, Irma, Maria, Mexico Earthquakes, Northern and Southern California wildfires and Flash Flood N. Italia (Brescello). These figures do not take into account the late information received on typhoon Jebi and that do not have any impact on the Group financial statements as mentioned in Section 4.6 – Notes to the consolidated financial statements, Note 15.1 – Net contract liabilities, SCOR Global P&C.

(5) Including Hurricane Harvey, Irma, Maria, Mexico Earthquakes, Northern and Southern California wildfires, Cyclone Debbie, South Africa climatic events, Typhoon Hato, Peru El Nino Costero events, Newcrest Mining Earthquake loss, US April and May Winds, Mumbai Floods, Portuguese Fires.

(6) Including development on Hurricane Matthew and Kaikoura Earthquake.

(7) Including Hurricane Matthew, Fort McMurray Wildfires, Earthquakes in Ecuador, in Taiwan, in Kaikoura and in Italy, floodings in Europe, in Sri Lanka, in Texas, in Louisiana, in Johannesburg and in United Arab Emirates, Typhoon Meranti and Cyclone Winston.

(8) Including developments on UK Flooding, Chennai Floods (India), US Northeast Winterstorms, Storm Niklas, US South and Midwest Weather, Chile Earthquake 2015, Typhoon Rainbowl/Mujigae, Italy Snow & Windstorm, South Carolina Floods, Chilean Storm and Mudslides and Texas and Oklahoma Heavy Rain.

In 2018, SCOR was affected by the following catastrophes which resulted in total net estimated losses of EUR 681 million as at December 31, 2018:

<i>In EUR millions</i> Cat losses	Date of loss	Estimated loss net of retrocession as at December 31, 2018
Typhoon Jebi ⁽¹⁾	September 2018	167
Hurricane Michael	October 2018	125
Camp California Wildfire	November 2018	110
Hurricane Florence	September 2018	60
Woolsey California Wildfire	November 2018	34
Typhoon Trami	September 2018	31
Friederike Storm	January 2018	26
Typhoon Mangkhut	September 2018	22
Papua New Guinea EQ	February 2018	18
Ituango heavy rain	April 2018	11
Italian Storms	October 2018	10
Other natural catastrophes (less than EUR 10 million)		68
TOTAL		681

(1) These figures do not take into account the late information received on typhon Jebi and that do not have any impact on the Group financial statements as mentioned in Section 4.6 – Notes to the consolidated financial statements, Note 15.1 – Net contract liabilities, SCOR Global P&C.

In 2017, SCOR was affected by the following catastrophes which resulted in total net estimated losses of EUR 768 million as at December 31, 2017:

<i>In EUR millions</i> Cat losses	Date of loss	Original estimated loss net of retrocession as at December 31, 2017	Adjusted Estimated loss net of retrocession as at December 31, 2018
Hurricane Irma	September 2017	245	270
Hurricane Harvey	August 2017	209	197
Hurricane Maria	September 2017	113	98
California wildfire	October 2017	73	44
Earthquake in Mexico	September 2017	24	18
Cyclone Debbie	March 2017	21	17
Southern California Wildfires	December 2017	18	28
Western Cape Storm & Fire	June 2017	15	13
Typhoon Hato	August 2017	12	12
Flash Flood N. Italy (Brescello)	December 2017	-	2
Other natural catastrophes (less than EUR 10 million)		37	56
TOTAL		768	755

In 2016, SCOR was affected by the following catastrophes which resulted in total net estimated losses of EUR 307 million as at December 31, 2016:

In EUR millions Cat losses	Date of loss	Original estimated loss net of retrocession as at December 31, 2016	Adjusted estimated loss net of retrocession as at	
			December 31, 2017	December 31, 2018
Hurricane Matthew	October 2016	55	47	47
Fort McMurray Wildfire	May 2016	51	47	44
Kumamoto Earthquake	April 2016	31	26	23
European Hailstorm	June 2016	30	27	27
European Floods	June 2016	26	27	25
Ecuador Earthquake	April 2016	23	23	23
Taiwan Earthquake	February 2016	22	21	20
Sri Lanka Flooding	May 2016	12	11	11
Texas Hail	April 2016	11	12	12
Kaikoura Earthquake	November 2016	10	28	22
Other natural catastrophes (less than EUR 10 million)		36	41	44
TOTAL		307	310	298

1.3.5.3. SCOR GLOBAL LIFE

SCOR Global Life operates through its unified global organization with a specialized market approach in three regions: Americas, EMEA (Europe, Middle East and Africa) and Asia-Pacific. It underwrites Life reinsurance business in the following product lines:

- ◆ Protection;
- ◆ Financial Solutions;
- ◆ Longevity.

Protection encompasses traditional Life reinsurance business for living and death benefits. The main risks undertaken are mortality, morbidity and behavioral risks for individuals and groups of individuals. Financial Solutions combine traditional Life reinsurance with financing components providing liquidity, balance sheet, solvency and/or income improvements to the client. Longevity products cover the risk of negative deviation from expected results due to the insured or annuitant living longer than assumed in the pricing of insurance cover provided by insurers or pension funds.

In 2018, SCOR Global Life continued to grow profitably in a competitive Life reinsurance market. The solid operating profitability of SCOR Global Life was maintained thanks to a robust flow of new business and expansion of franchise in various key regions and product lines, including the acquisition of MutRé SA. The US in-force book contributed with a robust performance given the strong reserve position set up at the time of the Transamerica Re and Generali US acquisitions and the successful repricing of individual reinsurance treaties, despite underlying US mortality claim experience being higher than expected. Both claim expenses and in-force management actions may vary over time.

Gross written premiums by product line

SCOR Global Life ranks among the top four life reinsurers worldwide⁽¹⁾ and has grown by 3.6% in gross written premiums from EUR 8,764 million in 2017 to EUR 9,083 million in 2018 (a 7.3% increase at constant exchange rates⁽²⁾). SCOR Global Life has increased its new business premiums from new clients and with existing clients in all three regions and across all three product lines. Growth was recognized in the Protection product line in Americas, in the Financial Solutions product line in Asia-Pacific and in the Longevity product line in Europe.

Protection

The Protection business accounts for 75% of total gross written premiums in 2018 and remains the main driver for premium growth (5.7% growth in gross written premiums in 2018 at constant exchange rates⁽²⁾). SCOR Global Life has maintained its leadership in the US Life reinsurance market⁽³⁾, the largest life reinsurance market in the world. In the EMEA region, SCOR Global Life reinforced its franchises in key European markets such as France (including acquired business of MutRé SA), the UK, and Nordic countries.

Asia-Pacific remains a region with significant growth opportunities both in terms of premiums and profitability. Premiums development in Asia-Pacific was driven by higher business volumes for Protection and Financial Solutions mainly in China, Australia, South Korea and India.

(1) Based on 2017 gross written premiums.

(2) At December 31, 2018 exchange rates.

(3) Source: 2017 SOA/Munich Re survey of US life reinsurance, published in 2018.

Within the Protection product line, mortality was the main risk underwritten.

- ◆ Mortality protection: 55% of SCOR Global Life's portfolio is traditional mortality reinsurance business, based on 2018 gross written premiums. SCOR Global Life developed a strong position in Mortality in the US, as well as in the major European markets.
- ◆ Long-Term Care: SCOR Global Life has been pioneering LTC reinsurance solutions in the French market for twenty years, and has acquired a sound practical experience in the underwriting and the management of LTC risks.
- ◆ Disability: SCOR Global Life has established strong market positions in disability in many continental Europe markets and Canada.
- ◆ Critical Illness: SCOR Global Life is a market leader in the UK. It also leverages its experience and expertise from the UK to expand into selected Asian markets and South Africa.
- ◆ Although Medical represents a rather small portion of SCOR Global Life's portfolio, it was a key growth driver within the Protection product line in 2018 due to new business volume in Asia and in France (due to the MutRé SA acquisition).
- ◆ Personal Accident also represents a small proportion of SCOR Global Life's portfolio. A main source of Personal Accident business for SCOR Global Life is obtained through its distribution services company, ReMark, which provides direct marketing of life insurance products to insurers, financial institutions and affinity partners.

Through its Global Distribution Solutions (GDS), SCOR Global Life has successfully deployed a number of innovative and tailored

client services which aim to help insurers expand and develop their own client bases (ReMark, Velogica and SCOR Telemed). SCOR Global Life has leadership positions in many markets in the EMEA and Asia-Pacific regions.

Financial Solutions

In the Financial Solutions product line, accounting for 15% of 2018 gross written premiums, SCOR Global Life has built a recognized position in providing capital and solvency solutions. Since 2013, SCOR Global Life has signed landmark transactions in Southern Europe, the US, Asia and Latin America. In 2018 SCOR Global Life expanded its footprint in the Asia-Pacific region and in the US market.

Longevity

SCOR Global Life has established itself as a recognized provider for longevity reinsurance, focusing on longevity risk transfer transactions for large in-payment pension portfolios, creating a new business pipeline with growth opportunities. The Longevity product line accounts for 10% of SCOR Global Life's gross written premiums in 2018 and is one of the main drivers of premium growth (14.4% increase in gross written premiums in 2018 at constant exchange rate⁽¹⁾). The main active market to date for SCOR Global Life is UK with a portfolio from recent years and new business signed in 2018.

Life technical margin

Overall, the Life technical margin in 2018 was 7.0% compared to 7.1% in 2017 and 7.0% in 2016.

1.3.5.4. NET INVESTMENT INCOME AND INVESTMENT INCOME ON INVESTED ASSETS

Net investment income for the year ended December 31, 2018 amounted to EUR 615 million compared to EUR 764 million and EUR 670 million for the years ended December 31, 2017 and December 31, 2016, respectively.

The return on invested assets in 2018 was 2.8% as compared to 3.5% in 2017 and 2.9% in 2016. The evolution of investment income in 2018 is essentially driven by higher investment revenues and by the active portfolio management strategy implemented

by SCOR Global Investments, which translated into substantial realized capital gains of EUR 123 million, mostly achieved on the equity portfolio and to a lesser extent on the real estate portfolio, which had in 2017 benefited from a higher realized gain on sale.

The following table presents a reconciliation of these figures with the IFRS figures as presented in Section 4.6 – Notes to the consolidated financial statements, Note 18 – Investment income.

(1) At December 31, 2018 exchange rates.

In EUR millions	As at December 31		
	2018	2017	2016
Investment revenues on invested assets⁽¹⁾	463	403	374
Realized gains/(losses) on fixed income	5	66	125
Realized gains/(losses) on loans	-	-	-
Realized gains/(losses) on equities	107	-	5
Realized gains/(losses) on real estate ⁽²⁾	10	192	58
Realized gains/(losses) on other investments	1	14	19
Realized gains/(losses) on invested assets⁽²⁾	123	272	207
Impairment of fixed income	(2)	-	(2)
Impairment of loans	(1)	(1)	-
Impairment of equities ⁽³⁾	-	-	(8)
Impairment/depreciation of real estate ⁽⁴⁾	(22)	(20)	(21)
Impairment of other investments	(1)	(5)	-
Impairment/amortization on invested assets^{(3) (4)}	(26)	(26)	(31)
Fair value through income on invested assets ⁽⁵⁾	(24)	11	5
Financing costs on real estate ⁽⁶⁾	(4)	(4)	(5)
TOTAL INVESTMENT INCOME ON INVESTED ASSETS	532	656	550
Net interest income on funds withheld and contract deposits	151	177	182
Investment management expenses	(68)	(69)	(62)
TOTAL NET INVESTMENT INCOME	615	764	670
Foreign exchange gains/(losses)	(13)	(27)	11
Income from other consolidated entities ⁽⁷⁾	12	(12)	-
Income/(expenses) on technical items ⁽⁸⁾	1	(1)	1
Financing costs on real estate	4	4	12
IFRS INVESTMENT INCOME NET OF INVESTMENT MANAGEMENT EXPENSES	619	728	694
Average invested assets	19,041	18,757	18,677
Return on invested assets (ROIA as a %)	2.8%	3.5%	2.9%

(1) Investment revenues on invested assets are presented net of EUR 2 million real estate revenues attributable to 3rd parties and net of EUR 2m revenues related to investments not held for investment purposes.

(2) Realized gains/(losses) on invested assets is net of EUR 4 million realized gain attributable to 3rd parties, included in realized capital gains/losses on investments under IFRS.

(3) Net of EUR (2) million impairments on certain types of equities not held for investment management purposes.

(4) Impairment/depreciation of real estate is presented net of EUR (5) million impairment/depreciation attributable to 3rd parties.

(5) Fair value through income on invested assets includes EUR (12) million investment income from other consolidated entities.

(6) Real estate financing expenses relate to real estate investments (buildings owned for investment purposes) only, net of financing expenses attributable to 3rd parties.

(7) Includes (5).

(8) Income/(expenses) on technical items include (1), (2), (3) and (4) amongst other technical items.

During 2018, invested assets increased to EUR 19,153 million from EUR 18,580 at December 31, 2017, mainly as a result from positive FX impacts and positive income generated by the invested assets portfolio in 2018, partially offset by negative mark-to-market development net of realized gains. The negative mark-to-market development primarily results from the increase in interest rates that impacted the valuation of the fixed-income portfolio.

SCOR announced its current investment strategy in September 2016, as part of its “Vision in Action” strategic plan. During the three-year period covered by the strategic plan SCOR intends to achieve higher investment returns through a normalization of its asset management policy, consisting in (i) reducing liquidity to 5%, (ii) closing the duration gap by the end of the strategic plan by increasing invested assets’ duration and (iii) providing additional degrees of freedom in the Strategic Asset Allocation.

Consistent with “Vision in Action”, SCOR Global Investments has finalized the repositioning of the investment portfolio in 2018, according to objectives defined for the strategic plan. Liquidity, defined as SCOR’s share of cash and cash equivalents and short-term government bonds (with maturities above three months and below twelve months) and bank overdrafts, was kept at the target level of 5% of invested assets as at December 31, 2018, stable compared to 5% as at December 31, 2017.

Meanwhile, SCOR further rebalanced its invested assets portfolio towards its target asset allocation, and increased its exposure to corporate bonds, representing 49% of invested assets at the

end of 2018 compared to 46% at the end of 2017. Over the same period, government bonds and assimilated were kept at 24% of invested assets and covered bonds and Agency MBS decreased from 10% to 8%. The fixed income portfolio continues to represent a significant portion of SCOR’s invested assets with 82% invested within this asset class (as at year end 2017: 81%), and an average rating at “A+” at the end of 2018. The duration of the fixed income portfolio stood at 4.3 years at the end of 2018 compared to 4.6 years at the end of 2017.

SCOR’s exposure to loans increased to EUR 878 million as at December 31, 2018 and stands at 5% of invested assets (as at December 31, 2017: EUR 724 million, representing 4% of invested assets).

SCOR’s exposure to equity securities decreased to EUR 355 million as at December 31, 2018, representing 2% of invested assets (as at December 31, 2017: EUR 645 million, representing 3% of invested assets). This exposure is essentially composed of convertible bonds and listed equities.

The real estate portfolio increased marginally to EUR 699 million as at December 31, 2018, and stands at 3% of invested assets (as at December 31, 2017: EUR 680 million, 4% of invested assets).

Other investments, comprising mainly Insurance-Linked Securities (ILS), private equity and infrastructure funds and non-listed equities slightly decreased to EUR 486 million as at December 31, 2018 and represent 3% of invested assets (as at December 31, 2017: EUR 494 million, 3% of invested assets).

The following table presents a reconciliation of these figures with the IFRS amounts as presented in Section 4 – Consolidated financial statements:

As at December 31, 2018												
Management classification							Total invested assets	Funds withheld and other	Total investments	Accrued interests	Technical items ⁽¹⁾	Total IFRS classification
IFRS classification	Cash	Fixed income	Loans	Equities	Real estate	Other investments						
Real estate investments	-	-	-	-	685	-	685	-	685	-	-	685
Equities	-	46	61	137	117	110	471	41	512	-	-	512
Debt securities	-	15,821	1,142	-	-	-	16,963	-	16,963	136	-	17,099
Available-for-sale financial assets	-	15,867	1,203	137	117	110	17,434	41	17,475	136	-	17,611
Equities	-	-	-	266	-	979	1,245	-	1,245	-	-	1,245
Debt securities	-	-	-	-	-	-	-	-	-	-	-	-
Investments at fair value through income	-	-	-	266	-	979	1,245	-	1,245	-	-	1,245
Loans and receivables ⁽²⁾	-	39	874	-	-	3	916	8,060	8,976	2	-	8,978
Derivative instruments	-	-	-	-	-	-	-	-	-	-	67	67
TOTAL INSURANCE BUSINESS INVESTMENTS	-	15,906	2,077	403	802	1,092	20,280	8,101	28,381	138	67	28,586
Cash and cash equivalents	1,175	-	-	-	-	-	1,175	-	1,175	-	-	1,175
TOTAL INSURANCE BUSINESS INVESTMENTS AND CASH AND CASH EQUIVALENTS	1,175	15,906	2,077	403	802	1,092	21,455	8,101	29,556	138	67	29,761
Less third parties' interests ⁽³⁾	(195)	(124)	(1,199)	(48)	(64)	(879)	(2,509)	-	(2,509)	-	-	-
Other consolidated entities ⁽⁴⁾	-	5	-	-	-	273	278	-	278	-	-	-
Direct real estate unrealized gains and losses ⁽⁵⁾	-	-	-	-	179	-	179	-	179	-	-	-
Direct real estate debt ⁽⁶⁾	-	-	-	-	(218)	-	(218)	-	(218)	-	-	-
Cash payable/receivable	(32)	-	-	-	-	-	(32)	-	(32)	-	-	-
TOTAL MANAGEMENT CLASSIFICATION	948	15,787	878	355	699	486	19,153	8,101	27,254	-	-	

(1) Including Atlas CAT bonds and foreign exchange derivatives.

(2) Loans and receivables excluded from invested assets are certificates of deposit (CDs) maturing in more than three months and less than twelve months.

(3) Assets invested by third parties in mutual funds and non-controlling real estate investments fully consolidated by SCOR.

(4) Certain consolidated entities held for investment purposes have been included in the scope of Invested Assets in Q3 2017.

(5) Fair value less carrying amount of real estate investments excluding EUR 5 million attributable to third-party investors.

(6) Real estate financing related to real estate investments (buildings owned for investment purposes) excluding EUR 30 million attributable to third-party investors.

As at December 31, 2017

Management classification												Total IFRS classification
IFRS classification	Cash	Fixed income	Loans	Equities	Real estate	Other investments	Total invested assets	Funds withheld and other	Total investments	Accrued interests	Technical items ⁽¹⁾	
Real estate investments	-	-	-	-	701	-	701	-	701	-	-	701
Equities	-	58	45	430	125	129	787	-	787	-	-	787
Debt securities	-	15,141	1,043	-	-	-	16,184	-	16,184	118	-	16,302
Available-for-sale financial assets	-	15,199	1,088	430	125	129	16,971	-	16,971	118	-	17,089
Equities	-	-	-	266	-	891	1,157	-	1,157	-	-	1,157
Debt securities	-	-	-	-	-	-	-	-	-	-	-	-
Investments at fair value through income	-	-	-	266	-	891	1,157	-	1,157	-	-	1,157
Loans and receivables ⁽²⁾	-	8	782	-	3	3	796	8,501	9,297	2	-	9,299
Derivative instruments	-	-	-	-	-	-	-	-	-	-	114	114
TOTAL INSURANCE BUSINESS INVESTMENTS	-	15,207	1,870	696	829	1,023	19,625	8,501	28,126	120	114	28,360
Cash and cash equivalents	1,001	-	-	-	-	-	1,001	-	1,001	-	-	1,001
TOTAL INSURANCE BUSINESS INVESTMENTS AND CASH AND CASH EQUIVALENTS	1,001	15,207	1,870	696	829	1,023	20,626	8,501	29,127	120	114	29,361
Less third parties' interests ⁽³⁾	(145)	(132)	(1,146)	(51)	(73)	(768)	(2,315)	-	(2,315)	-	-	-
Other consolidated entities ⁽⁴⁾	-	45	-	-	-	239	284	-	284	-	-	-
Direct real estate unrealized gains and losses ⁽⁴⁾	-	-	-	-	152	-	152	-	152	-	-	-
Direct real estate debt ⁽⁵⁾	-	-	-	-	(228)	-	(228)	-	(228)	-	-	-
Cash payable/receivable	61	-	-	-	-	-	61	-	61	-	-	-
TOTAL MANAGEMENT CLASSIFICATION	917	15,120	724	645	680	494	18,580	8,501	27,081	-	-	-

(1) Including Atlas CAT bonds, mortality swap and FX derivatives.

(2) Other loans and receivables excluded from invested assets are certificates of deposit (CDs) maturing in more than three months and less than twelve months included in short-term investments as well as infrastructure loans and real estate loans.

(3) Assets invested by third parties in mutual funds and non-controlling real estate investments fully consolidated by SCOR.

(4) Fair value less carrying amount of real estate investments excluding EUR 9 million attributable to third-party investors.

(5) Real estate financing related to real estate investments (buildings owned for investment) excluding EUR 30 million attributable to third-party investors.

1.3.6. FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

The strength of the 2018 results and balance sheet demonstrates the effectiveness of SCOR's strategy which is based on extensive business and geographical diversification, focusing on traditional reinsurance activity with reinsurance liabilities with very limited exposure to economic activity risks, and no material off balance sheet exposure.

1.3.6.1. CAPITAL

Shareholders' equity

Shareholders' equity stood at EUR 5,828 million at December 31, 2018 compared to EUR 6,225 million at December 31, 2017 and EUR 6,695 at December 31, 2016. See Section 4.5 – Consolidated statement of changes in shareholders' equity for a description of this change.

Book value per share⁽¹⁾ stood at EUR 31.53 at December 31, 2018 compared to EUR 33.01 and EUR 35.94 at December 31, 2017 and 2016, respectively.

On December 15, 2016, SCOR arranged a contingent capital facility with BNP Paribas. Under this EUR 300 million arrangement, SCOR raised its level of protection by EUR 100 million. On June 29, 2018 BNP Paribas transferred all the warrants to UBS in agreement with SCOR. UBS has thus fully substituted BNP Paribas in relation to all the rights and obligations arising from the contingent capital facility. For more information on contingent capital, see Section 4.6 – Notes to the consolidated financial statements, Note 12 – Information on share capital, capital management, regulatory framework and consolidated reserves.

On July 26, 2017, SCOR launched a share buy-back program commencing on July 27, 2017, for an amount of up to EUR 200 million over 24 months, subject to market conditions. This share buy-back has been fully executed in the course of 2018. For more information on the share buy-back program, see Section 4.6 – Notes to the consolidated financial statements, Note 12 – Information on share capital, capital management, regulatory framework and consolidated reserves.

Capital Shield Strategy

The Group reconciles its strategic objectives with the protection of its capital via its "Capital Shield Strategy", which articulates the Group's risk appetite. This policy is based on an economic approach and aims to protect the Group against potential shock losses. The policy is built on the following four concepts: traditional retrocession, capital market solutions, solvency buffer and contingent capital facility.

For more information on the Capital Shield Strategy, refer to Section 3.3.5 – Retrocession and other risk mitigation techniques.

For information on the Group's solvency scale, refer to Section 1.3.7 – Solvency and Section 4.6 – Notes to the consolidated financial statements, Note 12 – Information on share capital, capital management, regulatory framework and consolidated reserves.

For information on the Atlas special purpose vehicles used in the Capital Shield Strategy, see Section 4.6 – Notes to the consolidated financial statements, Note 2 – Scope of consolidation.

Restrictions on the use of capital

Some of the letters of credit granted by SCOR to cedents require 100% collateral coverage in case of non-compliance with financial covenants or in case of a decrease in the Group's financial strength rating. For example, the Group and its companies are subject to minimum net worth requirements and maximum debt levels under the terms of certain stand-by letter of credit agreements. Non-respect of these covenants could lead to an increase in the percentage of required collateralization.

However, SCOR makes every effort to limit collateral requirements related to financial covenants or to the Group's financial strength rating in its financial agreements.

For information on collateral requirements, see Section 3.6 – Liquidity risks and Section 4.6 – Notes to the consolidated financial statements, Note 23 – Commitments received and given.

For more information on regulatory restrictions on the use of capital, see Section 1.2.1 – Introduction, and Section 4.6 – Notes to the consolidated financial statements, Note 12 – Information on share capital, capital management, regulatory framework and consolidated reserves.

1.3.6.2. BORROWING CONDITIONS AND FINANCING STRUCTURE

Debt is a key component of the Group's financing strategy. It is essentially composed of subordinated debt used to optimize its cost of capital. Subordinated debt provides long-term financial resources as well as financial flexibility.

The total level of financial liabilities which includes subordinated debt, real estate financing and other financial liabilities increased to EUR 2,831 million from EUR 2,702 million in 2017 (2016: EUR 2,758 million).

For information on financial liabilities, including their related covenants, see Section 4.6 – Notes to the consolidated financial statements, Note 13 – Financial liabilities.

For a description of the derivatives used to hedge the risks related to financial liabilities, see Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments.

(1) See Section 1.3.9 – Calculation of financial ratios.

Subordinated debt and leverage ratio

The total amount of subordinated debt increased to EUR 2,277 million from EUR 2,211 million in 2017 (2016: EUR 2,256 million).

On March 6, 2018, SCOR placed a perpetual deeply subordinated notes issue on the "Regulation S" USD market in the amount of USD 625 million.

On June 8, 2018, SCOR redeemed the CHF 315 million undated subordinated notes (issued in 2012), and on November 30, 2018, SCOR redeemed the CHF 250 million undated subordinated notes callable in November 2018. The proceeds of the newly issued deeply subordinated Tier 1 Notes issued in 2018 were used to redeem those two subordinated CHF notes.

On May 24, 2016, SCOR successfully placed a dated subordinated notes issue on the Euro market in the amount of EUR 500 million. On July 28 and August 2, 2016 respectively, SCOR completed the calls of the remaining balance of its EUR 350 million (issued in 2006) and CHF 650 million (issued in 2011) perpetual subordinated note lines.

On June 2, 2015, SCOR successfully placed a dated subordinated notes issue on the Euro market in the amount of EUR 250 million. SCOR also called the balance of the USD subordinated step-up floating-rate notes due 2029, and of the EUR subordinated step-up floating-rate notes due 2020, on June 25 and July 6, 2015 respectively. On December 2, 2015, SCOR successfully placed a dated subordinated notes issue on the Euro market in the amount of EUR 600 million.

On September 24, 2014, SCOR successfully placed perpetual subordinated notes on the Swiss franc market, with a first call date on October 20, 2020, for an amount of CHF 125 million. On September 25, 2014, SCOR successfully placed perpetual subordinated notes on the Euro market, with a first call date on October 1, 2025, for a total amount of EUR 250 million.

The Group has a leverage ratio of 27.5% at December 31, 2018, as compared to 25.7% at December 31, 2017 and 24.4% at December 31, 2016. This ratio is calculated as the percentage of subordinated debt compared to total shareholders' equity plus subordinated debt. The calculation of the leverage ratio excludes accrued interest from debt.

Real estate debt and other financial liabilities

SCOR uses real estate debt and other financial liabilities mainly to finance real estate investments and for general corporate purposes. Real estate debt are non-recourse, the debtors' claims are limited to assets underlying the financing, and there is an asset and liability matching with little to no risk that the assets will be insufficient to service and settle the liabilities. They meet the conditions for operational leverage and can be classified as operational debts, and therefore excluded by the rating agencies from financial leverage calculations. As at December 31, 2018, real estate financing and other financial liabilities amounted to EUR 510 million and EUR 44 million, respectively (December 31, 2017: EUR 479 million and EUR 12 million, respectively). This includes the real estate debt of MRM for the amount of EUR 75 million (EUR 74 million as at December 31, 2017).

Credit facilities

The Group has been granted credit facilities from several companies of the banking sector to guarantee the reinsurance activities of various subsidiaries for a global issued amount of USD 3.7 billion as at December 31, 2018. These credit facilities are stand-by letters of credit that the banking counterparty agrees to issue in the form acceptable to the American National Association of Insurance Commissioners (NAIC) or other appropriate regulatory body.

1.3.6.3. LIQUIDITY

The Group's total liquidity, defined as cash and cash equivalents (including cash and cash equivalents from third parties)⁽¹⁾, short-term government bonds with maturities above three months and below twelve months and bank overdrafts, which is well diversified across a limited number of banks, stood at EUR 1.2 billion at the end of 2018 (2017: EUR 1.0 billion and 2016: EUR 2.3 billion) supported by strong operating cash flow generation. The Group executed its strategy of redeployment of liquidity as described by the "Vision in Action" asset management policy.

See Section 4.6 – Notes to the consolidated financial statements, Note 11 – Cash and cash equivalents.

Total investments, including cash and cash equivalents, amounted to EUR 29.8 billion at December 31, 2018 compared to EUR 29.4 billion and EUR 29.8 billion at December 31, 2017 and 2016, respectively.

(1) See Section 1.3.5.4 – Net investment income and investment income on invested assets.

1.3.7. SOLVENCY

The Group is regulated by the “Solvency II” European Directive which applies since January 1, 2016. For more details on solvency regulations, see Section 1.2.1 – Introduction.

SCOR's internal model

Since January 1, 2016, the regulatory solvency position of the Group has been assessed using SCOR's internal model, which was approved in November 2015 by the relevant supervisory authorities.

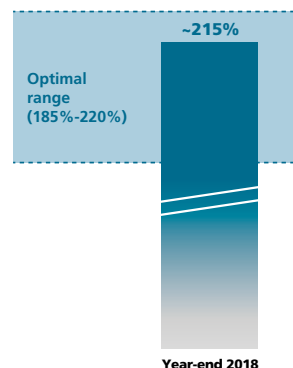
This comprehensive and holistic model was developed internally, on the basis of SCOR's experience and expertise. It covers all known material quantifiable risks to which the Group is exposed (Life and Non-Life underwriting risk, market and credit risk, operational risk) and reflects SCOR's risk profile and strategy. This model is based on the highest scientific standards, systematically applying stochastic simulations and modeling dependencies across risks and using cutting-edge methodologies.

SCOR's internal model is used extensively to help to prepare management decisions which involve risk management or solvency considerations. The solvency position of the Group is monitored on SCOR's dynamic solvency scale which defines SCOR's solvency target – the “optimal range” being between 185% and 220% – as well as the various management actions to be taken depending on the solvency position, as shown below. The Solvency scale is well established and has been confirmed by the strategic plan Vision in Action.

Solvency ratio

At year-end 2018, SCOR's solvency ratio stood at 215%⁽¹⁾, in the upper part of the optimal solvency range of 185%-220% as defined in the “Vision in Action” plan.

Estimated solvency ratio (in %)



Solvency II places great emphasis on the robustness of the risk management system of (re)insurance companies. SCOR has an established and robust ERM framework covering existing and emerging risks.

For further information on risk management mechanisms, see Section 3 – Risk factors and risk management mechanism and Appendix A – Internal control and risk management procedures.

1.3.8. CASH FLOWS

Positive operating cash flows amounted to EUR 891 million in 2018 (2017: EUR 1,144 million and 2016: EUR 1,354 million, respectively). In 2018, SCOR Global P&C provided strong operating cash flows globally in line with 2017. The decrease of technical operating cash flows in 2018 compared to 2017 for SCOR Global Life is mainly due to positive one-off impacts in 2017. In 2017, SCOR Global P&C provided strong cash flow in line with expectations, despite of having commenced payments on Q3 2017 cat events. SCOR Global Life showed elevated technical business cash flow in the last quarter of 2017 due to two large transactions. In 2016, strong recurring cash flows were generated and one exceptional item occurred: SCOR Global P&C received a non-recurring funds withheld settlement of approximately EUR 301 million.

Cash flow used in financing activities amounted to EUR (638) million in 2018, (EUR (467) million in 2017 and EUR (895) million in 2016). This figure mainly includes dividend payments, the share buyback and treasury shares program, the issuance of a perpetual subordinated note of USD 625 million and the redemption of two subordinated notes of CHF 250 million and CHF 315 million.

Net investing cash flow amounted to EUR (101) million in 2018, (EUR (1,280) million in 2017 and EUR (368) million in 2016). In

2018 cash flows used in investing activities were mainly composed of acquisitions of tangible and intangible assets, while in 2017 they were mainly composed of acquisitions and disposals of other business investments.

The Group's total liquidity, defined as cash and cash equivalents (including cash and cash equivalents from third parties)⁽²⁾, short-term government bonds with maturities above three months and below twelve months and bank overdrafts, which is well diversified across a limited number of banks, stands at EUR 1.2 billion at the end of 2018 (2017: EUR 1.0 billion and 2016: EUR 2.3 billion), supported by a very strong operating cash flow generation. The Group executed its strategy of redeployment of liquidity as described by the “Vision in Action” asset management policy.

See Section 4.4 – Consolidated statement of cash flows and Section 4.6 – Notes to the consolidated financial statements, Note 4 – Segment information for an analysis of the main cash flow statement items and Note 11 – Cash and cash equivalents, for a reconciliation between consolidated net income and operating cash flows, and between cash and cash equivalents and Group's total liquidity.

(1) Solvency ratio based on Solvency II requirements. The Group solvency final results are to be filed to supervisory authorities by June 2019, and may differ from the estimates expressed or implied in this Registration Document. The overall impact of the Tax Cuts and Jobs Act enacted in United States on the Group's solvency ratio is not material.

(2) See Section 1.3.5.4 – Net investment income and investment income on invested assets.

1.3.9. CALCULATION OF FINANCIAL RATIOS

1.3.9.1. BOOK VALUE PER SHARE

In EUR millions	As at December 31, 2018	As at December 31, 2017	As at December 31, 2016
Group shareholders' equity	5,800	6,195	6,661
Shares issued as at closing date	193,085,792	193,500,317	192,534,569
Treasury shares as at closing date	(9,137,286)	(5,866,249)	(7,203,282)
Basic number of shares	183,948,506	187,634,068	185,331,287
BASIC BOOK VALUE PER SHARE	31.53	33.01	35.94

1.3.9.2. RETURN ON INVESTMENTS AND RETURN ON INVESTED ASSETS

The return on investments (ROI) is used to assess the profitability of the Group's investments, including funds withheld by cedents and other deposits less cash deposits. This percentage return is calculated by dividing the total net investment income by the average investments (calculated as the quarterly averages of the total investments).

The return on invested assets (ROIA) is used to assess the return on the Group's invested assets excluding funds withheld by cedents. This percentage return is calculated by dividing the total investment income on invested assets by the average invested assets (calculated as the quarterly averages of the total invested assets).

In EUR millions	As at December 31, 2018	As at December 31, 2017	As at December 31, 2016
Average investments ⁽¹⁾	26,770	26,468	26,921
Total net investment income	615	764	670
Return on investments (ROI)	2.3%	2.9%	2.5%
Average invested assets ⁽¹⁾	19,041	18,757	18,677
Total investment income on invested assets	532	656	550
Return on invested assets (ROIA)	2.8%	3.5%	2.9%

(1) Average investments are the quarterly averages of the total investments as per the "Invested assets" reconciliation table included in Section 1.3.5.4 – Net investment income and investment income on invested assets, adjusted for ceded funds withheld.

1.3.9.3. GROUP COST RATIO

In EUR millions	Year ended December 31, 2018	Year ended December 31, 2017	Year ended December 31, 2016
Total expenses as per profit & loss account ⁽¹⁾	(831)	(801)	(761)
Unallocated loss adjustment expenses (ULAE) ⁽²⁾	(62)	(57)	(54)
Total management expenses	(893)	(858)	(815)
Investment management expenses	68	69	62
Total expense base	(825)	(789)	(753)
Corporate finance	12	2	1
Amortization	43	42	37
Non controllable expenses	14	10	18
Total management expenses (for cost ratio calculation)	(756)	(735)	(697)
Gross written premiums	15,258	14,789	13,826
GROUP COST RATIO	5.0%	5.0%	5.0%

(1) Total expenses are investment management expenses, acquisition and administrative expenses and other current operating expenses as presented in Section 4.2 – Consolidated statement of income.

(2) Unallocated loss adjustment expenses are part of gross benefits and claims paid.

1.3.9.4. RETURN ON EQUITY

Return on equity (ROE) is based on the Group's share of net income divided by average shareholders' equity (calculated as time weighted average shareholders' equity).

<i>In EUR millions</i>	Year ended December 31, 2018	Year ended December 31, 2017	Year ended December 31, 2016
Consolidated net income – Group share	322	286	603
Consolidated net income – Group share – before US tax reform impact⁽¹⁾	390	286	603
Opening shareholders' equity – Group share	6,195	6,661	6,330
Weighted consolidated net income ⁽²⁾	161	143	301
Payment of dividends ⁽³⁾	(208)	(204)	(185)
Weighted increase in capital ⁽³⁾	(23)	5	(8)
Effect of changes in foreign exchange rates ⁽⁴⁾	47	(261)	(90)
Revaluation of assets available-for-sale and others ⁽²⁾	(261)	32	(31)
Weighted average shareholders' equity	5,911	6,376	6,317
Weighted average shareholders' equity – before US tax reform impact⁽¹⁾	5,945	6,376	6,317
ROE	5.5%	4.5%	9.5%
ROE – BEFORE US TAX REFORM IMPACT⁽¹⁾	6.6%	4.5%	9.5%

(1) Refer to Section 1.3.3 – Significant event of the year on the US tax reform (Tax Cuts and Jobs Act, the "TCJA").

(2) Pro-rata of 50%: linear acquisition throughout the period.

(3) Considers time weighted transaction based on transaction dates.

(4) A daily weighted average is applied used for the currency or currencies that experienced material foreign exchange rates movements, and simple weighted average is applied used for the other currencies.

1.3.9.5. NET COMBINED RATIO

The loss ratio is calculated by dividing Non-Life claims (including natural catastrophes) by Non-Life premiums earned. This ratio is net of retrocession.

The commission ratio is calculated by dividing Non-Life reinsurance commissions by Non-Life premiums earned. This ratio is net of retrocession.

The technical ratio is a Non-Life indicator and is calculated as the sum of the loss ratio and commission ratio. This ratio is net of retrocession and is used to assess the net performance of reinsurance transactions excluding P&C management expenses.

The P&C management expense ratio is calculated by dividing management expenses incurred for Non-Life reinsurance operations by Non-Life premiums earned. This ratio is net of retrocession.

3.1. INTRODUCTION

The information included in this section referring to the nature and extent of risks arising from financial instruments and insurance and reinsurance contracts as required by IFRS 7 – Financial Instruments: Disclosures and IFRS 4 – Insurance Contracts, is an integral part of the consolidated financial statements as at December 31, 2018. As such, the corresponding information is audited.

The Group regularly conducts reviews of the risks that could have a material adverse effect on its activity, its financial situation or its results (or capacity to reach objectives). However, the risks described below are not the only risks that SCOR faces. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial may also materially adversely affect our business, financial condition, results of operations or cash flows. SCOR may also change its view of the relative importance of risk factors at any time, particularly if new external or internal facts come to light. With this in mind, this section outlines the management's current view of SCOR's main risks and main risk management mechanisms currently in place.

The Group has identified the following risk categories:

- ◆ strategic risks;
- ◆ underwriting risks related to the P&C and Life reinsurance businesses;
- ◆ market risks;
- ◆ credit risks;
- ◆ liquidity risks;
- ◆ operational risks.

If the risks disclosed in this section were to occur, they could potentially have a significant impact on SCOR's business, present and future revenues, net income, cash flows, financial position, and potentially, on its share price.

All risks described in Section 3 are managed through a variety of mechanisms in SCOR's ERM (Enterprise Risk Management) Framework and the most important of these are described below.

SCOR's ERM framework is further described in Appendix A – Internal control and risk management procedures which contains a description of the Group risk management procedures as well as the role and function of each administrative and management body and team involved in risk management and related control functions.

Although risk management mechanisms have been designed and rolled out across the Group in order to prevent all risks from having a significant impact, there is no guarantee that these mechanisms achieve their intended objective. Many of SCOR's methods for managing risks and exposures are based on observed historical market behavior, statistics based on historical models, or expert judgment. As a result, these methods may not fully predict future exposures, which may be significantly greater than estimated, particularly in unstable or volatile markets and environments. Other risk management methods depend upon the evaluation of information regarding markets, clients, natural catastrophes or other matters that is publicly available or otherwise accessible to SCOR. This information may not always be accurate, complete, up-to-date or properly evaluated.

SCOR may also be exposed to emerging risks, which include new threats or constantly changing current risks with a high degree of uncertainty. They may arise from the numerous changes to the environment in which the Group operates, such as changes in professional practices, or in legal, jurisdictional, regulatory, social, political, economic, financial and environmental conditions.

Emerging risks may adversely affect SCOR's reinsurance business due to either a change in interpretation of the contracts leading to extensions of covers beyond what policyholders had expected (e.g. due to the inapplicability or interpretation of certain clauses) or by increasing the frequency and/or severity of claims. Such risks may also lead to higher fluctuations than expected in macroeconomic indicators such as interest rates and price level, or disruptions in financial markets, further impacting SCOR's business. In addition, emerging risks may also have a direct impact on SCOR's operations, for instance by generating unexpected additional expenses.

Therefore, the Group cannot exclude the possibility of exceeding SCOR's risk tolerance limits due to an incorrect estimation of its risks and exposures. This may have an adverse impact on SCOR's business, present and future revenues, net income, cash flows, financial position, and potentially, on SCOR's share price.

3.2. STRATEGIC RISKS

Strategic risks can arise either from the strategy itself (such as the accumulation of risks or development in lines of business or less known markets), from external risks (such as an adverse economic environment), or from internal risks (such as certain causes of operational risk). Therefore, many of the risks discussed

throughout Section 3, including emerging risks, could also impact the success of the strategy.

The main strategic risks to which SCOR is exposed are described below.

3.2.1. RISKS RELATED TO THE MACROECONOMIC ENVIRONMENT AFFECTING SCOR'S STRATEGY

The main risks are the uncertain economic recovery that may affect SCOR's growth, in both emerging and advanced economies, and the poor returns on financial markets exacerbating the adverse competitive environment.

3.2.1.1. A DETERIORATION IN THE GLOBAL CAPITAL MARKETS AND GLOBAL ECONOMY FROM PRESENT CONDITIONS COULD HAVE A MATERIAL ADVERSE EFFECT ON SCOR'S BUSINESS AND OPERATING RESULTS

The Group's operating result could be materially affected by the economic and financial situations in France and other countries in continental Europe, the United Kingdom, the United States of America and elsewhere around the world, particularly in Latin America and Asia-Pacific. Any protracted deterioration in macroeconomic trends could have an adverse effect on SCOR's business and operating result. Even though the global economy is expected to continue its expansion in 2019, several imbalances accumulated since the 2008 crisis and escalating trade conflicts pose significant risks. For example, the growing debt of governments in advanced economies and of private companies in emerging countries could generate significant adjustments if the main central banks were to significantly raise interest rates. As a result, financial markets could enter a period of high volatility, which could lead to adverse consequences such as waves of company defaults, significant decreases in the prices of major assets (i.e. bonds, equity, real estate), or a major liquidity crisis. Current trade conflicts could significantly reduce growth rates, spur inflation and destabilize exchange rates and financial systems, especially in vulnerable emerging economies.

Although growth in the Eurozone has become more robust over the years, thanks to both internal and external momentum, its maintenance may become increasingly difficult due to several challenges; for example, the ongoing Brexit negotiations, continuing economic disparities between EU countries and increased political risks. Increases in Eurozone members' sovereign

yields or even sovereign defaults by major eurozone members, may result from these challenges. SCOR cannot predict whether any of the government securities that it holds in its investment portfolio will be adversely affected in the future by ratings downgrades or potential sovereign debt market tensions. This uncertain environment and the potential market volatility may have an adverse effect on SCOR, from both an investment and reinsurance business viewpoint. For further information on investments, see Section 1.3.5.4 – Net investment income and investment income on invested assets and Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments.

Impact on SCOR's investment activities

SCOR has a large investment portfolio. In the event of extreme prolonged market events, such as global credit crises, SCOR could incur significant losses in its investment portfolio.

See Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments, which includes analyses of unrealized and realized investment losses.

Even in the absence of a market downturn, SCOR remains exposed to a substantial risk of losses due to market volatility. See Section 3.4 – Market risks.

Impact on SCOR's reinsurance business

SCOR is also dependent upon customer behavior and premium growth. The Group's premiums could decline in the case of an unfavourable macroeconomic environment and its profit margins could erode. In an economic downturn, the demand for SCOR's and its clients' products could be adversely affected. Factors such as government and consumer spending, corporate investment, the volatility and strength of both debt and equity markets, and inflation, all affect the business and economic environment and ultimately, the size and profitability of SCOR's business. In addition, the ongoing low interest rate environment continues to stimulate the inflow of alternative capital, which has been contributing to the current soft market i.e. the reduction in (re) insurance premium rates.

03 RISK FACTORS AND RISK MANAGEMENT MECHANISMS

Strategic risks

The Group may also experience an elevated incidence of claims or be impacted by a decrease in demand for reinsurance and increased surrenders of policies from the cedents (see paragraph on lapse risk in Section 3.3.2 – Life reinsurance) that could affect the current and future profitability of its business. Although written premiums have seen steady growth in prior years, a prolonged economic crisis could result in lower written premiums in the future.

3.2.1.2. SCOR IS EXPOSED TO SIGNIFICANT AND PROTRACTED DEVIATIONS OF INFLATION FROM ITS TREND

The Group's liabilities are exposed to a significant increase in the rate of inflation (prices and salaries) which would require an increase in the value of reserves, in particular in respect of P&C long-tail business, e.g. general liability (medical among others) and motor bodily injury claims. In addition, SCOR is exposed to claims inflation over and above general inflation and in particular to the inflation of court awards in respect of general liability and bodily injury claims. For further information on P&C long-tail reserve deterioration, refer to Section 3.3.1 – P&C reinsurance.

SCOR's assets are also exposed to increased inflation or inflationary expectations, accompanied by a rise in the yield curve with a subsequent reduction in the market value of its fixed income portfolios. Increased inflation could also have a negative impact on the solvency of bond issuers; a widening of credit spreads would lead to a loss of value for the issuers' bonds. Finally, depending on the macroeconomic environment, an increase in inflation could also reduce the value of SCOR's equity portfolio. Any negative fluctuations in equity values would lead to a similar decrease in shareholders' equity.

Although the risk of inflation is relatively higher in the current context of exceptionally accommodating monetary policies, theoretically, the risk of deflation cannot be excluded. The Group's liabilities could be exposed to a protracted period of deflation which could exert a negative pressure on reinsurance prices and decrease the value of new premiums.

A protracted period of deflation would also induce a decrease in interest rates all along the yield curve and may therefore negatively impact the returns on SCOR's fixed income assets. In addition, the value of SCOR's equity portfolio might be reduced as deflation could reduce the future cash flows of the companies whose stocks are part of the Group's portfolio.

In conclusion, both high inflation and a protracted episode of deflation could have a material adverse effect on SCOR.

3.2.1.3. MANAGEMENT OF RISKS RELATED TO THE MACROECONOMIC ENVIRONMENT

These risks are monitored via a robust strategic planning approach and regular risk reporting mechanisms throughout the Group, including complementary risk analyses on ad-hoc topics, where deemed necessary. Potential impacts on SCOR's risk profile are managed through a variety of dedicated and transversal risk management mechanisms. For more details on risk reporting mechanisms and roles and responsibilities of SCOR's main governance bodies, see Appendix A – Internal control and risk management procedures.

3.2.2. RISKS RELATED TO LEGAL AND REGULATORY DEVELOPMENTS

3.2.2.1. MAIN RISKS RELATED TO LEGAL AND REGULATORY DEVELOPMENTS

SCOR is subject to comprehensive and detailed regulations and to the supervision of the insurance and reinsurance regulatory authorities in all countries in which it operates. Some of these authorities, especially in non-European countries, are considering or may in the future consider enhanced or new regulatory requirements intended to prevent future crises or otherwise assure the stability of institutions under their supervision and submit them to reinforced measures of control and higher capital requirements. These changes could affect the calculation of the local solvency ratio and have a material adverse impact on the Group. Insurance and reinsurance supervisory authorities have broad administrative power over many aspects of the reinsurance industry and SCOR cannot predict the timing or form of any future regulatory initiatives.

The Solvency II regime applies since January 1, 2016, in the European Union. It was transposed into national laws in all relevant European jurisdictions over recent years. Actual implementation by supervisory and regulatory authorities could vary between these jurisdictions, which could place SCOR at a competitive disadvantage with regard to other European financial services groups. The ongoing Solvency II reviews could lead to additional requirements for insurance and reinsurance undertakings. Furthermore, Solvency II may no longer apply in the United Kingdom after its departure from the European Union and the new regulatory framework could lead to additional requirements for SCOR.

In addition, the supervisory and regulatory authorities could develop new regulations with the objective of further strengthening the protection of policyholders and/or financial stability, especially in developing countries. These new regulations may then increase solvency margin obligations, thereby restricting SCOR's underwriting capacity.

The International Association of Insurance Supervisors (IAIS) is developing a new approach to evaluating and mitigating systemic risk in the insurance sector and SCOR may be impacted by the revised systemic risk framework scheduled to become effective in 2020. This revised systemic risk framework could result in a higher capital requirement, a Higher Loss Absorbency (HLA) and greater regulatory burdens such as the establishment of resolution plans.

In the meantime, the IAIS has been developing a common framework for internationally active insurance groups (IAIGs), the "ComFrame". It is the IAIS's intention to develop Insurance Capital Standards (ICSs) to be applied by all IAIGs with full implementation in 2025. This development could jeopardize the extent of recognition of diversification effects or the use of internal models and there is a risk that these rules could have an impact on capital management aspects. Moreover, these standards involve risks in terms of competition on a level playing field if they are not implemented simultaneously and consistently across different jurisdictions.

Similarly, changes in tax legislation and regulations, or in their interpretation, may have a negative impact on SCOR's performance, including financial results, and business model (such as unfavorable changes in deferred taxes resulting from the Tax Cuts and Jobs Act enacted in United States). Refer to Section 1.3.3 – Significant events of the year.

3.2.2.2. OTHER LEGAL AND REGULATORY DEVELOPMENTS

The reinsurance sector has been exposed in the past, and may be exposed in the future, to involvement in legal proceedings, regulatory inquiries and actions by various administrative and regulatory authorities, as well as to regulation concerning certain practices used in the insurance sector.

More generally, adverse changes in laws or regulations or an adverse outcome of any legal proceeding could have an adverse impact on SCOR. For further details on SCOR's current litigations, see Section 4.6 – Notes to the consolidated financial statements, Note 25 – Litigation.

For further information on risks related to current legislation and regulations and their impact on SCOR's operations, see Section 3.7.1.4 – Risks related to external events.

3.2.2.3. MANAGEMENT OF RISKS RELATED TO LEGAL AND REGULATORY DEVELOPMENTS

SCOR monitors the legal and regulatory developments which could have an impact on the Group and its entities, ensuring in particular that it takes an active position in relation to the requirements to which it is exposed or could be exposed in the different jurisdictions where it operates and that it prepares in due time for their implementation.

In particular, developments in existing or emerging prudential regulations (such as Solvency II, ComFrame or the regulations on systemic risk) are monitored at Group level by the Prudential and Regulatory Affairs Department. Regulations relating to corporate law and business compliance are monitored by the General Secretariat and, within it, the Legal Department.

3.2.3. THE VALUATION OF SCOR'S INTANGIBLE ASSETS AND DEFERRED TAX ASSETS MAY SIGNIFICANTLY AFFECT ITS SHAREHOLDERS' EQUITY AND THE PRICE OF ITS SECURITIES

3.2.3.1. RISKS RELATED TO THE VALUATION OF SCOR'S INTANGIBLE ASSETS AND DEFERRED TAX ASSETS

A significant portion of SCOR's assets consists of intangible assets, the value of which depends on its expected future profitability and cash flows. The valuation of intangible assets is largely based on subjective and complex judgments concerning items that are uncertain by nature. If a change were to occur in the assumptions underlying the valuation of its intangible assets (including goodwill, value of business acquired and deferred acquisition costs), SCOR would have to reduce their value, in whole or in part, thereby reducing shareholders' equity and its results.

The recognition of deferred tax assets, i.e. the likelihood of recognizing sufficient profits in the future to offset losses, depends on the performance of each entity concerned as well as applicable tax laws, regulatory requirements and accounting methods. The occurrence of events, such as operational earnings lower than currently projected or losses continuing over a longer period than originally planned or changes in tax legislation, regulatory requirements, or accounting methods could lead to the derecognition of part of the deferred tax assets for accounting and/or regulatory purposes.

Details of intangible assets, related impairment testing policy and recent acquisitions are included in Section 4.6 – Notes to the consolidated financial statements, Note 1 – Accounting principles and methods, Note 3 – Acquisitions and disposals, Note 5 – Goodwill, Note 6 – Value Of Business Acquired and Note 17 – Income taxes.

3.2.3.2. MANAGEMENT OF VALUATION RISKS RELATED TO SCOR'S INTANGIBLE ASSETS AND DEFERRED TAX ASSETS

Valuation risks related to SCOR's intangible assets and deferred tax assets are managed through robust processes and controls throughout the Group.

See Section 3.7 – Operational risks for further details on SCOR's Internal control system approach, Appendix A – Internal control

and risk management procedures, Section 4.1 – Group functions for a description of some of the departments involved in the management of intangible assets and Appendix A – Internal control and risk management procedures, Section 7 – Financial reporting for further details on the production of SCOR's technical and financial results, including intangible assets.

For further details on the management of valuation risks related to goodwill and Value of Business Acquired, see Section 3.2.6.2 – Risks related to acquisitions.

3.2.4. RISKS RELATED TO THE COMPETITIVE ENVIRONMENT

3.2.4.1. SCOR OPERATES IN A HIGHLY COMPETITIVE SECTOR AND WOULD BE ADVERSELY AFFECTED BY LOSING COMPETITIVE ADVANTAGE OR IF ADVERSE EVENTS HAD AN IMPACT ON THE REINSURANCE INDUSTRY

Reinsurance is a highly competitive sector. As is the case for all other reinsurers, SCOR's position in the reinsurance market is based on several factors, such as its financial strength as assessed by the rating agencies, its underwriting expertise, its reputation and experience in the lines written, the countries in which it operates, the premiums charged, as well as the quality of the proposed reinsurance products and services offered, particularly in terms of claims settlement and payment. The Group competes for business in the European, American, Asian and other international markets with numerous international and domestic reinsurance companies, some of which have a larger market share than SCOR, greater financial resources, state backing, and, in certain cases, higher ratings from the rating agencies.

Therefore, SCOR remains exposed to the risk of losing its competitive advantage. In particular, when available reinsurance capacity via traditional reinsurers or capital markets is greater than the demand from ceding companies. Its competitors, in particular (re)insurers benefiting from higher ratings than SCOR's or other competitors in alternative capital markets, may be better positioned to enter new contracts and gain market shares at SCOR's expense.

Furthermore, the Group's reputation is sensitive to reinsurance sector information. It can be affected by adverse events concerning competitors but also by its own business activity, such as financial difficulties following a major market event. Loss of reputation due to internal risks would also weaken SCOR's competitive position.

3.2.4.2. CONSOLIDATION IN THE INSURANCE AND REINSURANCE INDUSTRIES COULD ADVERSELY IMPACT SCOR

There has been an increase of the M&A activity among (re)insurers in 2018.

Within the insurance industry, these consolidated entities may use their enhanced market power and broader capital base to negotiate price reductions for SCOR's products and services, and reduce their use of reinsurance, and as such, the Group may experience price declines and possibly write less business.

Within the reinsurance industry, such external growth activity could potentially enhance these players' competitive position, e.g. in terms of being able to offer greater capacity or broader product offerings, which could permit them to gain market shares at SCOR's expense.

3.2.4.3. MANAGEMENT OF RISKS RELATED TO THE COMPETITIVE ENVIRONMENT

As for risks related to the macro-economic environment, risks related to the competitive environment are monitored via a robust strategic planning approach and regular risk reporting mechanisms throughout the Group, including complementary risk analyses on ad-hoc topics, where deemed necessary. For more details on risk reporting mechanisms and roles and responsibilities of SCOR's main governance bodies, see Appendix A – Internal control and risk management procedures.

3.2.5. DOWNGRADE RISK

3.2.5.1. OVERVIEW OF SCOR'S DOWNGRADE RISK

Credit ratings are very important to all reinsurance companies, including SCOR, as ceding companies wish to reinsure their risks with companies that have a satisfactory financial position. For more details on the current rating of the Group, see Section 1.2.4 – Ratings information.

Impact on SCOR's reinsurance business

Some of SCOR's cedents' credit models or reinsurance guidelines face regulatory capital requirements or depend on their reinsurers' credit rating. If SCOR's rating deteriorates, cedents could be forced to increase their capital requirement in respect of their counterparty risk on SCOR. This could lead to a loss of competitive advantage for SCOR.

Consequently, the Group's reinsurance activities are sensitive to the way its existing and prospective clients perceive its financial strength, notably through its ratings.

Many of SCOR's reinsurance treaties, notably in the US and in Asia, and also increasingly in Europe, contain clauses concerning the financial strength of the Company and/or its operating subsidiaries, and provide for the possibility of early termination for its cedents if the rating of the Company and/or its subsidiaries is downgraded. Early termination may also occur when the net financial position of the Company falls below a certain threshold, or if it carries out a reduction in share capital.

Impact on the Group's letters of credit

Many of the Group's reinsurance treaties contain a requirement to put in place letters of credit (LOC) as a general requirement or when triggered by a downgrade of SCOR or one of its subsidiaries. In certain circumstances, the cedent has the right to draw down on a LOC issued by a bank in SCOR's name.

Some LOCs issued by banks providing such facilities may be collateralized with securities. The value of the collateral can be different from the amount of the LOC. For some facilities, initial collateral requirements may be increased following a downgrade of SCOR's rating, impacting the Group's liquidity level. In the case of a LOC being drawn by a cedent, the bank has the right to request a cash payment from this collateral, up to the amount drawn by the cedent.

In the case of a large number of LOCs being drawn simultaneously, SCOR could encounter difficulties in providing the total amount of required cash or fungible assets, i.e. exposing itself to a liquidity risk.

Moreover, some of SCOR's facilities contain conditions about its financial situation which, if not met, constitute a default and might result in the suspension of the use of current credit facilities and/or a prohibition on obtaining new lines of credit or result in the need to negotiate new LOC facilities under adverse conditions.

For more details about the Group's lines of credit, see Section 1.3.6 – Financial position, liquidity and capital resources. For more details on liquidity risk, see Section 3.6 – Liquidity risks.

3.2.5.2. MANAGEMENT OF DOWNGRADE RISK

SCOR's current ratings are at the highest levels within the reinsurance sector after Standard & Poor's and Fitch upgraded the Group's ratings to "AA-/Stable" from "A+/Positive" in 2015, followed by a Moody's upgrade to "Aa3/Stable" in 2016 and the recent upgrade by AM Best to "A+/Stable" in 2017. Therefore, a downgrade by one notch would have a limited impact on its future business development, its liquidity position or its capacity to raise funds. For further information on SCOR's current rating, see Section 1.2.4 – Ratings information.

SCOR monitors its ratings assigned by the top four rating agencies via a dedicated team placed under the supervision of the Group Chief Financial Officer.

This team analyses rating agencies' methodologies, reports published on the reinsurance market, on SCOR and on its main competitors, in order to anticipate any potential rating actions. It also monitors specific qualitative and quantitative Key Performance Indicators developed by the four main rating agencies and performs analyses of selected deterministic scenarios (for more details on 'footprint scenarios' process, see Appendix A – Internal control and risk management procedures). The team also monitors the capital adequacy level as measured by the capital models developed by rating agencies.

3.2.6. OTHER STRATEGIC RISKS

SCOR may be exposed to other less significant strategic risks further described below.

3.2.6.1. RISKS RELATED TO CAPITAL

Capital may not be completely fungible between different regulated legal entities, which may have negative consequences

SCOR's regulated legal entities must satisfy local regulatory capital requirements. There could potentially be some local regulatory constraints, which in certain circumstances could affect SCOR's ability to transfer capital from one legal entity to another, and in particular from one subsidiary or branch to another, or to the parent legal entity. This may have negative consequences for the legal entity concerned and could have a material adverse impact on SCOR.

In addition, ongoing regulatory developments and discussions on global standards may impact SCOR in the future.

Adverse capital and credit market conditions may significantly affect SCOR's ability to access capital and/or liquidity and increase the cost of capital

Disruptions, uncertainty or volatility in the capital and credit markets may also limit the Group's access to capital required to operate its business, most significantly its insurance operations. Such market conditions may limit its ability to:

- ◆ replace, in a timely manner, maturing debts;
- ◆ access the capital needed to grow its business;
- ◆ satisfy statutory capital requirements and maintain a solvency ratio in line with its risk appetite framework.

As such, SCOR may be forced to delay raising capital, issue shorter term securities than it prefers, or bear an unattractive cost of capital which could decrease its profitability and significantly reduce its financial flexibility.

Disruptions to financial markets, and more particularly credit market conditions, could also affect SCOR's ability to access liquidity. Please see Section 3.6 – Liquidity risks, for further details.

For further information on changes in the macro-economic environment that could impact SCOR, refer to Section 3.2.1 – Risks related to the macroeconomic environment affecting SCOR's strategy.

Management of risks related to capital

Risks related to capital are managed via specific principles and processes throughout the Group. SCOR ensures maximum capital fungibility within the Group through:

- ◆ a reduced number of subsidiaries enhancing fungibility while supporting local business presence. It is facilitated by the "Societas Europaea" (SE) structure supported by an efficient branch set-up in Europe, enabling integrated supervision at Group parent company level through SCOR SE, focusing on communication with a limited number of supervisors with whom SCOR can share its global strategy, while taking advantage of diversification benefits;
- ◆ an integrated supervision of regulatory constraints at Group level and an optimal capital allocation.

SCOR efficiently manages its capital allocation and fungibility between subsidiaries within the legal and regulatory constraints. SCOR is continuously leveraging, in its day-to-day activity, on various tools that are core to the reinsurance activity (such as intra-group reinsurance, intra-group financing, portfolio transfer, capital transfer or collateral posting).

3.2.6.2. RISKS RELATED TO ACQUISITIONS

Overview of risks related to acquisitions

SCOR has made a number of acquisitions around the world. Acquisitions involve risks that could adversely affect its operating results, including the substantial amount of management time that may be diverted from operations to pursue and complete acquisitions. Acquisitions could also result in additional indebtedness, costs, contingent liabilities, impairment and amortization expenses related to goodwill and other intangible assets. In addition, acquisitions may expose SCOR to operational challenges and various risks.

A failure to successfully manage such operational challenges could adversely affect the Group.

The businesses SCOR has recently acquired are described in Section 1.2.2 – History and development of SCOR.

Specific risks relating to the acquired businesses are as follows:

Integration of the acquired activities may prove to be more difficult than expected

Integrations may take longer, be more expensive or more difficult than expected. The success of integrations may depend on operational and commercial planning, execution of systems and procedures, and on the retention of key employees. Difficulties could result in higher integration costs or fewer synergies than expected.

Retaining client relationships and related business volumes

It may be outside the control and influence of SCOR to retain certain client relationships and business volumes related to acquired businesses. Related earnings and efficiencies may be lower than expected, which may dilute the return on such acquisition related investments.

Acquisitions could result in the concentration of business and the reliance on intermediate business relationships

In certain cases, e.g. SCOR's acquisition of Transamerica Re's mortality reinsurance portfolio from Aegon in 2011, SCOR may acquire a reinsurance portfolio from a company (the vendor) where not all underlying reinsurance agreements between cedants and the vendor are immediately novated. In such cases, SCOR could be at risk if the vendor becomes insolvent, since the vendor's cedants could reduce or terminate reinsurance premium payments.

Certain risks relating to acquired companies may not yet be known

Due notably to the size and complexities of acquisitions, and despite pre-acquisition due diligence work carried out, there may be a risk that not all financial elements (including litigation related to prior periods) have been fully and/or correctly evaluated. Unknown or unexpected financial risks could emerge, which may have significant consequences on the initially estimated impact of the relevant acquisition on the combined Group.

Management of risks related to acquisitions

SCOR adheres to high internal standards for acquisition processes, governance and integration, based on an approach approved by its Executive Committee.

SCOR retains outside legal, accounting, tax, actuarial, regulatory and financial counsel for its due diligence, valuation and integration assessments and execution, led by experienced employees in various multi-jurisdictional disciplines, including but not limited to underwriting, structuring, valuation, accounting, tax, actuarial, risk management, legal, audit, strategy, claims management, regulatory, rating agencies, and asset management. SCOR's governance is overseen by a Group Steering Committee, chaired by its Chief Executive Officer and includes various members of SCOR's Executive Committee. All progress, assessments and any offers made to third parties are generally presented and approved by the Strategic Committee of SCOR's Board of Directors.

All planned acquisition projects that may have an impact on SCOR's risk profile are reviewed in collaboration with SCOR's risk management teams. Integration of acquired businesses typically begins during the due diligence phase and is carefully planned between SCOR and the personnel of the acquired companies. SCOR integration plans typically take into account all systems, procedures, commitments and constraints, as well as employees, clients, suppliers and contractual third parties, and focuses on pre-closing, closing day and post-closing objectives. While SCOR has experience in managing acquisitions and takes care in planning and executing such operations, the outcomes may not always meet expectations.

3.3. UNDERWRITING RISKS RELATED TO THE P&C AND LIFE REINSURANCE BUSINESSES

For further details on the terminology used to describe the Group's activity, see Section 1.2.5 – Business overview.

The main risk the Group faces in relation to insurance and reinsurance contracts is that the actual amounts of claims and indemnity payments, or the timing thereof, differ from estimates. The frequency of claims, their severity, the actual payments made, the development of long-tail claims (whether they be litigated or not), and long-term mortality trends as well as external factors such as those listed below, are all beyond the Group's control. Additionally, the Group is dependent on the quality of underwriting of its cedents for certain reinsurance treaties, and on the quality of claims management by these companies and the data provided by them. Under these uncertainties, the Group seeks to ensure that sufficient reserves are available to cover its liabilities.

Generally, SCOR's ability to increase or maintain its portfolios of insurance and reinsurance risks in the P&C and Life divisions may depend on external factors such as professional practices, legal, jurisdictional, regulatory, social, political, economic, financial and environmental conditions. These factors create uncertainties and may adversely affect SCOR's business due to either an interpretation of the contracts leading to an extension of coverage (e.g. through inapplicability or interpretation or overriding of treaty clauses) or by increasing the frequency and/or severity of claims beyond what was anticipated at the time of the underwriting.

SCOR mitigates its underwriting risks related to the P&C and Life reinsurance businesses through the purchase of risk-mitigation covers, both on the traditional retrocession market and on the capital markets via alternative risk transfer solutions

(e.g. the multi-year securitization of catastrophic risk in the form of Insurance-Linked Securities ("ILS") and the issuance of contingent capital facilities). However, there is a risk that SCOR may not be able to transfer its liabilities through the purchase of such instruments on economically viable terms and conditions in the future. For further details on retrocession and other risk mitigation techniques within SCOR, see Section 3.3.1.4 – Management of underwriting risks related to the P&C business and 3.3.2.7 – Management of underwriting risk related to Life reinsurance business and Appendix A – Internal control and risk management procedures – paragraph on capital shield strategy.

Consistent with the Group's strategy of selective market and business division development, SCOR seeks to maintain a portfolio of business risks that is strategically diversified geographically, by line and class of business and over time (short and long-tail). The Group's insurance risk exposure is mitigated by diversification across a large portfolio of reinsurance contracts. The volatility of risks is reduced by careful business selection, implementation of underwriting guidelines, the use of retrocession and other risk transfer arrangements and proactive claims handling as well as underwriting, claims and administration audits at ceding companies.

SCOR underwrites reinsurance covers in P&C and Life and occasionally in direct P&C and Life insurance.

SCOR writes direct insurance, primarily on a business-to-business basis to cover large corporate risks through the Business Solutions domain of the P&C division and through the participation in Lloyd's syndicates including the Channel Syndicate, for which SCOR is the sole capital provider as well as through some participations in Business Ventures and Partnerships.

3.3.1. P&C REINSURANCE

The main risks linked with the P&C reinsurance business (and direct insurance activity) underwritten by SCOR's P&C division are, natural catastrophes, P&C long-tail reserves deterioration and man-made catastrophes, including terrorism, and other risks beyond its direct control such as systemic crises or the cyclicity of the business.

3.3.1.1. P&C LONG-TAIL RESERVE DETERIORATION

This is the risk that the P&C claims inflation is higher than assumed in the calculation of the reserves and mostly affects the long-tail lines of business, such as all casualty, professional liability and

financial lines, inherent defect and construction warranty, medical malpractice, motor (first and third-party liability) and workers' compensation. Claims inflation is influenced by, but not directly linked to general inflation.

For casualty business, the frequency and severity of claims and the related amounts of indemnity paid can be affected by several factors. The most significant factors are the changing legal and regulatory environment, including changes in civil liability law and jurisprudence.

For further information on risks related to reserves, see Section 3.3.4 – Risks related to reserves.

3.3.1.2. NATURAL AND MAN-MADE CATASTROPHES

SCOR's property business underwritten by the P&C division is exposed to multiple insured losses arising from single or multiple events, which can be catastrophic, being either caused by nature (e.g. hurricane, typhoon, windstorm, flood, hail, severe winter storm, earthquake) or man-made (e.g. explosion, fire at a major industrial facility, act of terrorism). Any such catastrophic event can generate insured losses in one or several of SCOR's lines of business.

Natural catastrophes

The most material catastrophes in SCOR's risk profile are related to natural events, mainly tropical cyclones, windstorms, earthquakes and floods arising in North America and Europe and affecting property, engineering and possibly other lines of business.

SCOR manages its gross exposure to catastrophes through a comprehensive risk transfer and capital protection program which combines traditional retrocession and non-traditional solutions, including catastrophe bonds and a contingent capital equity line.

For further information on management of underwriting risks within the P&C division, refer to Section 3.3.1.4 – Management of underwriting risks related to the P&C business. For further information on SCOR's retrocession and other risk mitigation techniques, refer to Section 3.3.5 – Retrocession and other risk mitigation techniques.

Man-made catastrophes

SCOR is exposed to insured losses, arising from single or multiple events, which can be catastrophic, caused by the occurrence of a man-made event. The lines of business mostly exposed to man-made catastrophe are Property (other than natural catastrophe), Marine, Motor, Casualty, Credit and Surety, Aviation and Space.

Property

Man-made catastrophes refer to negligent or deliberate human actions, e.g. conflagration, a large explosion and fire at a major industrial site, and terrorism. These events can cause great damage to property and lives. Malicious man-made events often target large cities and illustrious landmarks such as international airports and governmental facilities.

In particular, SCOR is exposed to single or multiple terrorist attacks through some P&C treaties and national terrorism pools. Terrorism exposures are monitored on a worldwide basis as a fully integrated part of the Underwriting Management Framework. Underwriting guidelines stipulate the rules and procedures for terrorism risk for Reinsurance and Specialty Insurance. SCOR monitors this risk using a very conservative approach.

SCOR's exposure to terrorism arises from participation in the protection of existing national terrorism pools and exposure from some markets that do not permit the exclusion of terrorism from insurance policies due to local regulation, such as in the US, or due to market practice. Furthermore, the US insurance market is exposed to significant risks due to the insurance obligation created by the law. However federal aid is also provided by the Terrorism Risk Insurance Program Reauthorization Act ("TRIPRA").

A terror event could also have an impact on SCOR's life portfolio. Although in past events the life claims incurred have been relatively small compared to the non-life claims, a terrorist act might claim a large number of insured lives.

Casualty

SCOR is also exposed to man-made casualty catastrophes whose underlying nature and key specificities can vary widely, from commonly used products (with Asbestos as a typical example) or massive product liability losses emanating from items produced by a single manufacturer, to a single disastrous event (e.g. Deepwater Horizon oil rig explosion).

The amount of information available on casualty catastrophes is limited. In contrast to property catastrophes, which are short term in nature (limited number of days between insured event and loss emergence) and for which reasonable estimates of the size of the loss can be calculated, most casualty catastrophes emerge gradually and the full extent of the losses is often not known for decades.

SCOR is engaged in the development of advanced liability catastrophe analytics, and data mining and modeling techniques for improving its prediction capabilities for man-made casualty event losses.

Property and Casualty

The extent of the loss event and the affected lines of business will vary depending on the man-made event. SCOR can be affected from a man-made event simultaneously in the property and the casualty lines of business, e.g. if the explosion at a large industrial site destroys the industrial facility, but also pollutes the environment, given its proximity to vulnerable landscape (e.g. river, lake), and causes property damages and bodily injuries affecting the population.

For further information on management of underwriting risks within the P&C division, refer to Section 3.3.1.4 – Management of underwriting risks related to the P&C business.

03 RISK FACTORS AND RISK MANAGEMENT MECHANISMS

Underwriting risks related to the P&C and Life reinsurance businesses

3.3.1.3. OTHER RISKS

In addition to the two main underwriting risks of SCOR's P&C division as listed above, other factors could have an adverse impact, such as systemic crises, cyclicity of the business and concentration risks related to its broker business.

Systemic crises

Historically, reinsurers have experienced significant fluctuations in operating income due to volatile and unpredictable developments, many of which are beyond the control of the reinsurer including general economic conditions, levels of capacity offered by the market, and the level of competition with regards to pricing. In particular, some of SCOR's lines of business which are directly linked to financial activities, are more exposed to global economic recessions (e.g. the Global Financial Crisis): as an example, specialty lines such as credit and surety or liability risk such as Errors & Omissions and Directors & Officers Liability.

Cyclicity of the business

P&C insurance and reinsurance businesses are cyclical. The primary consequences of the market softening are a reduction in the volume of P&C reinsurance premiums on the market, an increase in competition within the reinsurance market, and also a preference for those operators who are most attentive to the specific needs of the cedents and the most capable of meeting them. This could potentially lead to a loss of competitive advantage for SCOR.

Beyond the general trends, the premium rate cycle affects certain geographic markets and/or certain lines of business in different ways and different extents, independently of each other.

Concentration risk related to its broker business

SCOR generates its P&C business both through brokers and through direct relationships with insurance company clients. The risk for SCOR is mainly the concentration of premiums written through a limited number of brokers. A significant reduction in the business generated through these brokers could potentially reduce premium volume and net income. For further information, refer to Section 1.2.5.4 – paragraph on Distribution by production source. for a breakdown of SCOR's business through brokers.

3.3.1.4. MANAGEMENT OF UNDERWRITING RISKS RELATED TO THE P&C BUSINESS

The P&C division is organized in order to enable it to assess and control its risks at each level of its business.

- ◆ Most of the business underwritten is renewed on agreed dates. This enables SCOR to establish annual underwriting plans, both qualitative (description of the environment) and quantitative (activity budget). These plans are approved by the Executive Committee.

- ◆ The Property and Casualty Treaty underwriters manage client relationships and offer reinsurance support after a careful review and assessment of the cedents' underwriting policies, portfolio profiles, exposures and management procedures. They are responsible for writing treaty business as well as associated support on small and medium-size facultative risks in their respective territories within the limits of their individually delegated underwriting authority and the scope of underwriting guidelines.

- ◆ Most of SCOR's facultative underwriters work in the Business Solutions domain of Specialty Insurance, which operates worldwide. The Business Solutions area is dedicated to large corporate businesses and is geared to provide clients with solutions for coverage of large conventional risks.

- ◆ Underwriting and pricing guidelines, defined by the P&C division, specify the underwriting capacities delegated to each underwriter in each entity, as well as the underwriting rules and principles to be complied with. These guidelines are subject to a regular review and approval process. SCOR's underwriting guidelines are more restrictive regarding certain areas with difficult or uncertain legal environments.

- a. Underwriting guidelines in place within the P&C division specify (i) the underwriting rules and principles to be complied with; (ii) the underwriting capacities individually delegated to the underwriters in each of the markets and lines of business in which the Group operates as well as (iii) the relevant maximum acceptable commitments per risk and per event. They are reviewed and updated annually by Underwriting Management and approved by the Chief Executive Officer and Chief Risk Officer of SCOR's P&C division.

- b. Pricing guidelines and parameters apply to all treaties priced within the P&C division. There are additional guidelines related to Natural Catastrophes and others specific to certain products which include Agriculture and Credit & Surety. These guidelines seek to ensure that the analyses provide: i) best estimate of the costs and profitability of a treaty as well as the uncertainty surrounding estimates; ii) assistance with underwriting decisions and iii) the suitable outputs needed for the risk management process, in particular the internal model, such as probability distributions for losses/Net Present Value (NPV), cash flow patterns for premium/losses, etc. They are set to provide consistency and continuity across the organization but also to take into account differences between markets and lines of business as well as the geographical location of the client and the risks insured. Parameters are revised at least once a year to consider, as the case may be, changing market conditions and environment. Contracts that meet certain risk thresholds are subject to mandatory peer reviews that have to be performed and documented before pricing is completed. SCOR's P&C division uses a data system that allows management to monitor and review the results from pricing tools.

- ◆ The underwriting teams are supported by P&C division's Underwriting Management. This function provides worldwide treaty and facultative underwriting guidelines, policies regarding the delegation of capacity, underwriting support to specific lines of business or individual risks when required, ceding company portfolio analysis and risk surveys and is responsible for monitoring and referral of non-standard business and for authorizing exceptions to the underwriting guidelines.
- ◆ Business opportunities going beyond the stipulations of the guidelines previously defined are subject to special referral procedures at two levels: (1) by Underwriting Management and, where applicable, by Legal and/or Finance; (2) and for cases which may have a significant impact on the balance sheet (thresholds and/or conditions defined in a procedure or specific guidelines) by Group Risk Management.
- ◆ P&C division's Actuarial Pricing is responsible for the pricing of the reinsurance business which is done by individual treaty. Guidelines, methods and tools are set and maintained at the global level which are used by the pricing team across the SCOR offices. Delegation authorities specify criteria under which the underwriters may price certain contracts still subject to the use of the Pricing Guidelines and tools. Pricing results quantify expected underwriting statistics (such as loss and expense ratios), volatility measures, and profitability measures (such as NPV, Return on Risk Adjusted Capital (RORAC), and Profit Excess Targets). The results are also used as criteria for referrals within Underwriting teams. Pricing actuaries, team up with underwriters and modelers by market or by line of business.
- ◆ Risk Modeling & Global Natural Hazards is responsible for monitoring accumulations. A "CAT" sub-group of the P&C Risk and Capital Committee meets regularly to review accumulations and decide on or arbitrate the allocation of CAT capacities by country. Earthquake and storm risks gross exposures are measured using proprietary external models from industry-leading catastrophe model suppliers, including Risk Management Solutions RiskLink® ("RMS") and AIR Worldwide Catrader® ("AIR"). These tools enable the Group to quantify its exposure in terms of a probable maximum loss ("PML") at various levels of probability for each peril and geographic location. The overall aggregate annual PML per peril, allowing for potential multiple events, provides the information required to determine the level of retrocession and other alternative risk transfer solutions (e.g. catastrophe bonds) that are needed to ensure that the net aggregate exposure is optimized for the Group's risk appetite and remains within predefined tolerance limits.
- ◆ In order to mitigate its property exposure, the Group retrocedes a portion of the risks it underwrites. See 3.3.5 – Retrocession and other risk mitigation techniques for further information on how these instruments are managed.
- ◆ The claims handling function is performed by the claims teams, which review, process and monitor reported claims. P&C division's Claims & Commutations is responsible for the implementation and overview of the overall claims handling and commutation management policy for the P&C division, implementing worldwide control and reporting procedures and managing commutation of portfolios and commitments. It supports and controls the day-to-day activity and takes over the direct management of large, litigious, serial and latent claims. In addition, periodic audits are conducted on specific claims and lines of business, and claims processing and procedures are examined at the ceding companies' offices with the aim of evaluating their claims adjustment process, valuation of case reserves and overall performance. When needed, recommendations are given to underwriters and local management.
- ◆ The adequacy of the P&C division's reserves is controlled based on specific procedures. For further information on how risks related to reserves are managed, see Section 3.3.4 – Risks related to reserves.
- ◆ Risks specific to the administration of contracts are subject to checks performed at the subsidiary and branch level. SCOR's Group Information System includes multiple automatic checks and additional tools.
- ◆ A quarterly review of technical results is performed by business area (Reinsurance, Specialty Insurance, Business Ventures and Partnerships) and region. The review enables the analysis of technical results by underwriting year, by nature and by line of business.
- ◆ The P&C division's Risk Management organizes the quarterly P&C Risk and Capital Committee, which is responsible for overseeing and guiding the identification, management and monitoring of risks and defined mitigation actions with the P&C division.
- ◆ Cross reviews are conducted by P&C division's Risk Management, to assess the quality of underwriting, pricing and claims handling of particular business units or certain lines of business, to identify and assess risks, to evaluate the appropriateness and effectiveness of controls and to propose risk management measures, including mitigating actions.

03 RISK FACTORS AND RISK MANAGEMENT MECHANISMS

Underwriting risks related to the P&C and Life reinsurance businesses

3.3.2. LIFE REINSURANCE

The main underwriting risks for SCOR's Life division are described below.

3.3.2.1. LONG-TERM MORTALITY DETERIORATION

This risk refers to potential negative deviations in future mortality relative to current best-estimate assumptions, due to a higher-than-anticipated number of deaths (i.e. increased mortality rates) among the portfolio of lives reinsured by SCOR. This could result from inherent volatility, incorrect estimation of the expected claim level or an adverse long-term trend.

SCOR's long term mortality reserves are based on a number of assumptions and information provided by third parties, which, if incorrect and/or incomplete, could have an adverse effect on the Group. For further information on risks related to reserves, see Section 3.3.4 – Risks related to reserves.

3.3.2.2. PANDEMIC

In Life reinsurance, a severe pandemic is a major risk. In the past century, three major outbreaks of influenza occurred and claimed millions of lives. The occurrence of a similar event could cause large losses to SCOR due to an increased mortality far beyond the usual volatility. A lethal virus strain not only of influenza but of any other communicable disease could lead to a material increase in mortality rates and increased medical costs which could significantly affect SCOR's results.

3.3.2.3. LONGEVITY

Longevity risk refers to the risk of a negative deviation from expected results due to the insured or annuitant living longer than assumed in the pricing or reserves. This risk could have an impact on longevity swaps, annuity and long-term care covers and on other longevity protection products.

3.3.2.4. POLICYHOLDER BEHAVIOR RISKS

SCOR's Life division is also exposed to risks related to policyholder behavior, including risks such as lapsation and adverse selection.

Lapses refer to either non-payment of premiums by the policyholder or to policies which are terminated by the policyholder before the maturity date of the policy. Depending upon the product design, higher or lower policyholder lapses than assumed in the pricing or reserving may reduce the expected future income of the Life division.

Adverse selection refers to the problem of asymmetry of information between the insured and the insurer. An individual applying for life or health insurance cover usually has better knowledge about his or her own state of health than the insurer.

The risk to the (re)insurer is of policyholders deliberately deciding among other things to:

- ◆ take out a policy in the knowledge that either their chance of claiming is high or higher than average;
- ◆ terminate a policy in the knowledge that their chance of claiming is low or lower than average; or
- ◆ choose and exercise a policy option which increases the policyholder's expected benefit.

This might lead to a portfolio composition which differs from the one assumed during pricing and might imply lower than expected profits for both the direct insurer and the reinsurer.

3.3.2.5. MORBIDITY RISKS

Products such as critical illness, short-term and long-term disability and long-term care, which all contain morbidity risk, are subject to the risk of negative trends in health, as well as to the consequences of improved medical diagnoses capabilities which increase the number of claims due to conditions that otherwise would possibly have remained undetected. Medical progress may in the future enable better treatment, resulting in higher claims, since certain diseases would have otherwise led to a much shorter life expectancy of the insured. Products providing cover for medical expenses are in particular subject to the risk of higher than expected incidence and inflation of medical costs.

3.3.2.6. OTHER RISKS

In addition to the main underwriting risks of SCOR's Life division, as listed above, other factors could have an adverse impact, whether related to policyholder behavior such as resale or purchase of policies by third parties with no insurable interest, or other risk factors such as risks related to product guarantees.

3.3.2.7. MANAGEMENT OF UNDERWRITING RISKS RELATED TO THE LIFE REINSURANCE BUSINESS

In addition to the transversal risk management mechanisms described in the introduction to this section, SCOR's Life division also implements mechanisms to mitigate certain risks specific to the division:

- ◆ Claims deterioration risks are mitigated through yearly renewable terms for parts of the mortality business, and through premium adjustment clauses for some Disability, Long-Term Care (LTC) and Critical Illness (CI) products. In the case of LTC, the premium adjustments are designed to offset worsening incidence or increasing longevity of disabled lives. In the case of CI, premium adjustments mitigate potential negative impacts on future claims patterns due to a general deterioration in health and improved medical diagnosis.

- ◆ Lapse risks are mitigated through appropriate reinsurance treaty clauses, as well as product, client and market diversification.
- ◆ Adverse selection risks are mitigated through careful product design and a well-defined medical and financial underwriting process.

SCOR's Life division is organized in order to be able to assess and control its risks at each level of its business.

- ◆ Generally, the Life reinsurance business is underwritten throughout the year. The Life business underwritten is monitored on a quarterly basis against prior year development as well as the business plan and regular updates are provided to the Executive Committee.
 - ◆ Underwriting of the Life business within the Group is under the worldwide responsibility of SCOR's Life division. Clients are worldwide insurance companies. They are served by SCOR's specialized underwriters and actuaries who are familiar with the specific features of the markets in which they operate, particularly with local lines of business and policy conditions, as well as the technical specifics such as mortality tables, morbidity incidence rates and persistency rates. In the Life underwriting process, consideration is typically given to the quality of the client's medical and financial underwriting standards, the target clientele of the ceding company, as well as past experience to the extent credible data is available.
 - ◆ The Life business is underwritten following internal underwriting and pricing guidelines. Mandates for underwriting Life reinsurance business are assigned to teams on a mutually exclusive basis.
 - ◆ In order to ensure that the Life division is continually up-to-date with biometric trends and scientific developments, the expertise of seven dedicated Research & Development centers is used to analyze and assess the key factors underlying mortality, longevity, morbidity and policyholder behavior. These Research & Development Centers provide recommendations for the implementation of the research results into the pricing, underwriting and determination of exposure limits.
 - ◆ Guidelines and other documents defined by the Life division specify the underwriting rules and principles to be complied with, underwriting capacities delegated to the underwriters and pricing actuaries in each of the markets in which the Group operates, as well as maximum acceptable commitments per risk and per event. These guidelines outline contract types and terms and conditions of acceptance. Furthermore, they set out the level of retention of the Life division for various risks and types of cover (for more information, see Section 3.3.5 – Retrocession and other risk mitigation techniques). Revisions and updates follow a formalized approval process.
- Business opportunities going beyond the stipulations of these guidelines and documents are subject to a special referral process in order to ensure that the business complies with established risk-adjusted return criteria and risk tolerance limits. These cases are examined at the Life division level by the Regional and Global Pricing and Risk Management

Departments and, where applicable, the Finance Department. Cases which may have a significant impact on the balance sheet of the Group are additionally reviewed by the Group Risk Management. Thresholds or conditions for a referral to Group Risk Management are outlined in specific guidelines.

- ◆ Accumulations of risk particularly exposed to catastrophes in the Life business are regularly assessed in "footprint" scenarios and local catastrophe scenarios. Specific tools are used to monitor known group cover accumulation in selected geographical areas. Specifically, designed retrocession programs aim at protecting the Life reinsurance business. One program protects assumed catastrophe excess of loss acceptances; another one protects the net retained lines in respect of proportional and per risk acceptances. SCOR uses the RMS model for infectious diseases in order to assess the potential exposure to risk arising from global pandemics.
- ◆ Maximum underwriting capacities are established to limit the Life division's exposure from various types of treaties underwritten, proportional and non-proportional, covering individual or Group policies. These capacities are reviewed each year, taking into account the capacities obtained by retrocession coverage. The exposure is monitored throughout the year against SCOR's defined risk limits and used for decisions on mitigating measures. Monitoring of peak exposures is included in Life regular risk reporting. See Section 3.3.5 – Retrocession and other risk mitigation techniques for further information on how these instruments are managed.
- ◆ Claims handling is performed by local claims teams that handle and monitor claims. Claims exceeding a predefined threshold are reviewed by the Life division's global medical underwriting and claims research center (CREDISS). In addition, where deemed appropriate, audits are conducted on claims or specific lines of business at the ceding companies' offices.
- ◆ The adequacy of SGL reserves is monitored based on specific procedures. For further information on how risks related to reserves are managed, see Section 3.3.4.2 – Management of reserving risks.
- ◆ Risks specific to the management of contracts are mitigated by specific controls supported by SCOR's IT systems which include numerous automatic controls and additional tools.
- ◆ A quarterly review of technical results is performed by region and by business area.
- ◆ The Life division's Risk Management Department organizes quarterly meetings of the Life Risk Committee which is responsible for reviewing the main risks to which the division is exposed.
- ◆ In addition, cross reviews are commissioned by the Life division's Chief Executive Officer to evaluate, on the one hand, the quality of underwriting, pricing, medical underwriting and claims handling of particular market areas or lines of business and, on the other hand, to identify and assess risks, to evaluate the appropriateness and effectiveness of controls and to propose risk-management actions.

3.3.3. INTERDEPENDENCE AND ACCUMULATION RISKS BETWEEN SCOR'S AREAS OF BUSINESS

3.3.3.1. OVERVIEW OF THE MAIN INTERDEPENDENCE AND ACCUMULATION RISKS BETWEEN SCOR'S AREAS OF BUSINESS

P&C and Life reinsurance activities take place in two different market environments. The two business divisions are subject to a range of external constraints and benefit from a high diversification effect. The overall balance between the two business areas within the Group therefore provides stability. However, in some cases, changes in the P&C and Life activities are linked to each other as well as to those of the financial markets. This exposes SCOR to possible accumulation of risks between its lines of business and/or asset classes.

Unforeseen events, such as natural catastrophes or man-made catastrophes, can make SCOR's claims experience vary significantly from one year to the next, which can have a significant impact on its profitability and financial position. These types of risk primarily affect Non-Life business areas. However, in cases where SCOR faces a large number of casualties, the possibility of the losses also affecting its Life lines of business cannot be excluded. Similarly, unforeseen events such as terrorist attacks may materially impact the P&C business area, but also the Life business area, in the case of attacks resulting in many fatalities. Although in past events the Life claims incurred have been comparatively small in relation to the Non-Life claims incurred, a terrorist act might claim a large number of insured lives.

In the event of a very large natural catastrophe or terrorist attack, the losses generated in the P&C and Life Divisions could potentially accumulate, with losses on financial assets related to the potential reaction of markets (i.e. movements in interest rates, exchange rates, spreads and/or equity market prices). In the same way, a major pandemic event may cause financial market turmoil and/or business interruptions.

In addition, depending on the frequency and nature of losses, the speed with which claims are made and the terms of the policies affected, it may be required to make large claim payments within a short period. SCOR may be forced to fund those obligations by liquidating investments in distressed market conditions, or by raising funds under unfavorable conditions. For further information on such risks, see Section 3.6 – Liquidity risks.

SCOR's ability to grow or maintain its portfolios in the P&C and Life reinsurance divisions may also be subject to external factors which may be interconnected, such as economic and political risks. For instance, slowdowns in economic growth or recessions in the major markets may lead households and companies to take out less insurance, to suspend certain premium payments, or to terminate the insurance policies underlying the existing P&C and Life treaties earlier than anticipated. Similarly, the risk of social and political instability is particularly significant in emerging markets, in which both divisions operate. These risks could lead to significantly reduced business growth in these target markets. See Section 3.2 – Strategic risks for further details.

SCOR is also exposed to insurance risks in its investment portfolio either through publicly traded securities (e.g. CAT bonds), or Over-The-Counter (OTC) contracts (e.g. collateralized reinsurance). Such investments could be impacted by the occurrence of underwriting risks as described in the above paragraphs (e.g. natural catastrophe, mortality etc.) that could significantly result in changes in value, or even the full loss of the amount invested. In the case of publicly traded securities, these risks could also have a significant impact on the liquidity of these instruments.

3.3.3.2. MANAGEMENT OF INTERDEPENDENCE AND ACCUMULATION RISKS BETWEEN SCOR'S AREAS OF BUSINESS

The Group aims at diversifying its business and monitors its main accumulation risks and areas of dependencies across its business through regular risk monitoring and reporting mechanisms, including via its internal model.

SCOR manages its exposure to catastrophes through selective underwriting practices, especially by limiting its exposure to certain events in certain geographic areas, by monitoring risk accumulation on a geographic basis and by retroceding a portion of those risks to other selectively chosen reinsurers.

3.3.4. RISKS RELATED TO RESERVES

3.3.4.1. SCOR'S RISKS RELATED TO RESERVES

The SCOR Group is required to maintain reserves to cover its estimated ultimate liability for losses and loss adjustment expenses with respect to reported and unreported claims, incurred as at the end of each accounting period, net of estimated related recoveries. Its reserves are established based on the information it receives from its cedent insurance companies, including their own reserving levels, as well as on the basis of its knowledge of the risks, the studies it conducts and the trends it observes on a regular basis. As part of the reserving process, SCOR reviews available historical data and tries to anticipate the impact of various factors, such as changes in laws and regulations, judicial decisions, social and political attitudes and trends in mortality and morbidity, and changes in general economic conditions.

If some information were incorrect and/or incomplete, this could have an adverse effect on the Group. Despite the audits it carries out on the companies with which it does business the Group is still dependent on their reserves assessment.

As is the case for all other reinsurers, the inherent uncertainties in estimating reserves are compounded by the significant periods of time that often elapse between the occurrence of an insured loss, the reporting of the loss to the primary insurer and ultimately to SCOR.

Another factor of uncertainty resides in the fact that some of SCOR's activities are long-tail in nature, such as long-term care, whole Life products, longevity, worker's compensation, general liability or medical malpractice, etc. It has, in the past, been necessary for SCOR to revise estimated potential loss exposure on such lines of business.

See Section 3.3.1.1 – P&C long-tail reserve deterioration for further details.

3.3.4.2. MANAGEMENT OF RESERVING RISKS

The adequacy of P&C and Life reserves is checked on a quarterly basis by internal actuaries at division level as well as at the Group level by the Group Chief Actuary who signs off on the adequacy of reserves and reports to the Executive Committee and the Audit Committee.

External consulting firms are mandated to review certain aspects of the reserves calculation and thereby support the internal analysis and validation.

The Chief Reserving Actuaries of the divisions are responsible for overseeing the reserves of their respective divisions, to assure appropriateness in the reserving methods and parameters used and to enhance reserving governance. The Group Chief Actuary is in charge of the independent validation and testing of reserving tools, workflows, assumptions and processes.

A centrally defined and tightly controlled reserving process, strong portfolio diversification, prudent reserving, sound reserving tools and, actuarial methods used by highly skilled professionals and a high level of transparency, both internally and externally, all tend to minimize the risk of inadequate reserves.

P&C business

Within SCOR's P&C division, in order to ensure an adequate and efficient monitoring of the reserves, a report is established on a yearly basis by the Group Actuarial Department, where the Group Chief Actuary, reporting to the Group Chief Risk Officer, gives his opinion on the year-end booked reserves' adequacy. The main objective of this report is to provide SCOR's Executive Committee and Audit Committee with an overall opinion on the adequacy of the P&C division's reserves but also to highlight the inherent uncertainties surrounding this assessment. The monitoring of the reserves by the division's and Group's Actuarial Department is centered on three mechanisms:

- ◆ a quarterly follow-up of the claims activity and review of reserves for each segment through adequate reporting procedures;
- ◆ an annual internal actuarial analysis, including a review of all segments together with a full analysis of the segments that may have a substantial impact on SCOR's balance sheet. This analysis is performed by the P&C division's reserving actuaries and reviewed by the Group Actuarial Department which performs as well its own full analysis. These analyses are recorded in an annual actuarial report;
- ◆ regular external reviews of the P&C division's reserves adequacy are performed including those required by local regulators (Canada, South Africa, Argentina, India, China and SCOR's Lloyd's syndicate).

SCOR regularly reviews its methods for determining outstanding claims reserves and IBNR reserves. However, it is difficult to accurately value the amount of reserves required, especially in view of changes in the legal environment, which could have an impact on reserves development.

When a claim is reported to the ceding company, its claims department establishes a reserve corresponding to the estimated amount of the ultimate settlement for the claim. The estimate is based on the cedent's own evaluation methods. The ceding company reports the claim and its suggested reserve amount to the Group entity with which it concluded its reinsurance contract. The Group records the ceding company's suggested reserve and is free to establish greater or smaller reserves based on the review and analysis by P&C's claims team. Greater or smaller potential reserves are based upon the consideration of many factors, including the level of the commitments, seriousness of the claims and the P&C division's assessment of the ceding company's claims' management.

03 RISK FACTORS AND RISK MANAGEMENT MECHANISMS

Underwriting risks related to the P&C and Life reinsurance businesses

In compliance with applicable regulatory requirements and in accordance with industry practices, the Group maintains IBNR reserves in addition to outstanding claims reserves. These reserves represent:

- ◆ the estimated final amount that may be paid by the Group on losses or events that have occurred, but are not yet reported to the ceding company or to the SCOR entity concerned; and
- ◆ the estimated cost variation on claims already reported to the Group.

In determining the amount of its reserves, the Group generally uses actuarial techniques that take into account quantitative loss experience data, together with qualitative factors, where appropriate. The reserves are also adjusted to reflect reinsurance treaty terms and conditions, and any changes in claims processing that may potentially affect the Group's commitment over time.

A table showing historical changes in reserves for P&C claims is provided in Section 4.6 – Notes to the consolidated financial statements, Note 15 – Net contract liabilities.

The Group continues to pursue the active commutations policy of its portfolios initiated in 2003, the main goals being to reduce the volatility of claims reserves and administrative costs, particularly of the oldest reserves, and to allow the reallocation of capital. This policy will be continued by focusing efforts on the US run-off activities and on some treaties written by the former Convenirum company acquired by SCOR in 2007.

Life business

Within SCOR's Life division, in order to ensure an adequate and efficient monitoring of the reserves, a report is established on a yearly basis by the Group Actuarial Department where the Group Chief Actuary gives his opinion on the year-end booked reserves' adequacy. The main objective of this report is to provide SCOR's Executive Committee and Audit Committee with an overall opinion on the adequacy of the Life division's reserves but also to highlight the inherent uncertainties surrounding this assessment.

The monitoring of the reserves by the division's and Group's Actuarial Department is centered on three mechanisms:

- ◆ a quarterly follow-up of the claims activity and review of reserves for each segment through adequate reporting procedures;
- ◆ an annual internal actuarial analysis, including a review of all segments together with a full analysis of the segments that may have a substantial impact on SCOR's balance sheet.

This analysis is performed by the Life division's reserving actuaries and reviewed by the Group Actuarial Department which also performs its own full analysis. These analyses are recorded in an annual actuarial report;

- ◆ regular external reviews of the Life division's reserves adequacy are performed including those required by local regulators.

The Group Actuarial Department does not intend to provide an alternative best estimate but verifies the adequacy of the assumptions and methods and processes used by the teams of the Life division to determine the reserves. In some cases, the Group Actuarial Department applies a global approach and calculates a confidence range in order to check that the reserves booked are within said confidence range.

For its Life business, SCOR is required to maintain adequate reserves to reflect the liability for future claims and benefit payments resulting from Life reinsurance treaties, mainly mathematical reserves and claim reserves.

The mathematical reserves are generally calculated as the present value of projected future payments to cedents less the present value of projected premiums still payable by cedents. The calculation includes assumptions relating to mortality, morbidity, disability, lapses and expected future interest rates.

The mathematical reserves are established on initial recognition of a contract on the basis of best estimate assumptions and allow for an adequate safety margin for the risks of change, error and random fluctuation. They are subject to a liability adequacy test.

In determining its best estimates, the Group takes into consideration its past experience, current internal data, external market indices and benchmarks and other relevant information. The contracts' liabilities established by the Group with respect to individual risks or classes of business may be greater or less than those established by ceding companies due to the use of different mortality tables or other assumptions.

Claim reserves for losses are recognized for payment obligations from reinsurance losses that have occurred but have not yet been settled. They are recognized under reserves for reinsurance losses reported before the reporting date and IBNR. SCOR regularly reviews and updates its methods for determining outstanding claims reserves and IBNR Reserves.

A table showing changes in the mathematical reserves in Life reinsurance is provided in Section 4.6 – Notes to the consolidated financial statements, Note 15 – Net contract liabilities.

3.3.5. RETROCESSION AND OTHER RISK MITIGATION TECHNIQUES

Reinsurers typically purchase reinsurance to cover their own risk exposures. Reinsurance of a reinsurer's business is called retrocession. SCOR remains primarily liable to the direct insurer on all risks reinsured although the retrocessionaire is liable to the Group to the extent of the cover limits purchased.

The level of retrocession is selected each year to ensure that SCOR's retained risk profile respects the specific Group risk appetite framework and to help the Group achieve its return on capital and solvency objectives.

SCOR aims to diversify its retrocession and risk mitigation instruments as well as counterparties in order to take advantage of all different sources of capacities on the market. This enables the retrocession and risk mitigation program to be constructed with complementary mitigation effects offering optimal efficiency and also to avoid overdependence on a limited number of counterparties.

Beyond traditional retrocession, purchased for all main lines of business, SCOR has implemented a Capital Shield Strategy, which combines the following solutions:

- ◆ traditional retrocession (proportional or non-proportional);
- ◆ capital markets solutions and alternative risk transfer solutions (collateralized retrocession, Insurance-Linked Securities including catastrophe bonds);
- ◆ solvency buffer; SCOR has set out a solvency scale with clear and well-defined buffers safeguarding the Group's franchise;
- ◆ contingent capital facilities, designed as tools of last resort, to partially replenish the Group's capital base in case of very remote pre-defined events. The current contingent capital guaranteed equity line is providing the Group with EUR 300 million coverage. It is innovative in that it protects the Group against both natural catastrophes and extreme mortality events.

For information on the Atlas Special Purpose Vehicles, used as capital markets solutions and alternative risk transfer solutions in the capital shield policy, see Section 4.6 – Notes to the consolidated financial statements, Note 2 – Scope of consolidation. For information on the contingent capital used in the capital shield policy, see Section 4.6 – Notes to the consolidated financial statements, Note 12 – Information on share capital, capital management, regulatory framework and consolidated reserves.

Retrocession procedures are centralized within the retrocession teams of the P&C and Life divisions:

- ◆ within the P&C division, the Underwriting Management and Retrocession Department establishes and implements the external retrocession plan for P&C business. This department is responsible for proper application of the plan, for monitoring the solvency of the retrocessionaires, the related counterparty risks and, when necessary, recovery of balances due;
- ◆ within the Life division, scenarios are established within the Actuarial & Risk department in order to define the need for retrocession coverage. The retention and the retrocession structure are revised every year.

The availability and efficiency of SCOR's retrocession and risk mitigation program is monitored at Group level on a regular basis in order to ensure that the Group's overall exposure remains within pre-defined risk tolerances.

For further information on how counterparty default risk related to retrocessionaires is managed, see Section 3.5 – Credit risks.

An analysis of the share of retrocessionaires in contract liabilities by rating of the retrocessionaires and collateral from retrocessionaires in favor of SCOR at December 31, 2018 and 2017 is presented in Section 4.6 – Notes to the consolidated financial statements, Note 15 – Net contract liabilities and Note 19 – Net retrocession result.

3.4. MARKET RISKS

3.4.1. OVERVIEW OF MARKET RISKS

Market risk is the risk that the fair value or future cash flows of a financial instrument fluctuates because of changes in market prices or macro-economic variables. This includes interest rate risk and currency risk, further described below, as well as equity risk and real estate risk, to which SCOR is exposed through its investments. Market risk also includes credit spread risk on these invested assets. For further information on credit risk (counterparty default), see Section 3.5 – Credit risks.

3.4.1.1. INTEREST RATE RISKS

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument fluctuates because of changes in interest rates. Interest rate fluctuations have direct consequences on both the market value and the return on SCOR's investments as the level of unrealized capital gains or losses and the return on securities held in its portfolio both depend on the level of interest rates. Floating-rate instruments expose the Group to cash flow interest rate risk, whereas fixed interest rate instruments expose the Group to fair value interest rate risk.

Interest rates are very sensitive to a number of external factors, including monetary and budgetary policies, the national and international economic and political environment, and the risk aversion of economic actors.

During periods of declining interest rates, income from investments is likely to fall due to investment of net cash flows and reinvestments of redemptions at rates lower than those of the existing portfolio (dilutive effect of new investments). During such periods, there is therefore a risk that SCOR's return on equity objectives are not met. For callable bonds for which the issuer has an option to redeem earlier than the ultimate maturity, the probability of having to reinvest the early proceeds at lower interest rates is increased.

On the other hand, an increase in interest rates could lead to a fall in the market value of fixed income securities that SCOR holds. In the case of a need for cash, SCOR may be obliged to sell fixed income securities, possibly resulting in capital losses.

SCOR's reinsurance business may also be exposed to interest rate risk. The Group has certain Life insurance contracts which are sensitive to fluctuations in interest rates. However, for most discounted Life liabilities there is no accounting impact from a 100 basis point change in the interest rate because valuation interest rates are typically locked-in.

Finally, the interest rate risk depends on the duration mismatch between assets and liabilities. As such, changes in interest rates can affect the shareholders' equity and the solvency ratio of the Group.

For further information on the sensitivity of the Group's consolidated income and consolidated equity to interest rate risk, see Section 3.4.3 – Sensitivity analysis to market risks.

3.4.1.2. CURRENCY RISKS

Currency risk is the risk of loss arising due to adverse changes in or volatility of foreign exchange rates. This would impact the value of SCOR's assets (e.g. through direct investments in assets denominated in various currencies) and liabilities (e.g. reinsurance treaties with liabilities denominated in specific currencies).

The following types of currency risk have been identified by SCOR:

Transaction risk

Fluctuations in exchange rates can have consequences on SCOR's reported net income because of the conversion results of transactions expressed in foreign currencies, the settlement of balances denominated in foreign currencies and the lack of perfect matching between monetary assets and liabilities in foreign currencies. In this case, and to reduce the impact of imperfect matching, SCOR uses derivative financial instruments in order to hedge against currency fluctuations on sensitive currencies, particularly in times of greater volatility on the capital markets. Nevertheless, a perfect matching of monetary assets and liabilities can never be achieved and a potential profit or loss impact due to fluctuations in exchange rates can arise.

Translation risk

SCOR publishes its consolidated financial statements in Euros, but a significant part of its income and expenses, as well as of its assets and liabilities, are denominated in currencies other than the Euro. Consequently, fluctuations in the exchange rates used to convert these currencies into Euros may have a significant impact on its reported net income and net equity from year to year.

SCOR's main non-French legal entities are located in Ireland, Switzerland, North America, the UK and Asia. The shareholders' equity of these entities is denominated mainly in Euros, US dollars, British pounds and Canadian dollars.

As a result, changes in the exchange rates used to convert foreign currencies into Euros, particularly the fluctuation of the US dollar against the Euro, have had and may have in the future, an adverse effect on the Group's consolidated shareholders' equity. SCOR does not fully hedge its exposure to this risk. The impact of the fluctuation in the exchange rates used to translate foreign currencies into Euros on its consolidated shareholders' equity is described in Section 4.5 – Consolidated statements of changes in shareholders' equity.

SCOR has issued debt instruments in currencies other than the Euro, currently Swiss Francs, and to the extent that these are not used as a hedge against foreign currency investments, it may be similarly exposed to fluctuations in exchange rates. Most debts are fully hedged. For more information on the forward sales and purchases and swaps of currencies used to hedge these risks see Section 4.6 – Notes to the consolidated financial statements,

Note 7 – Insurance business investments. For more information on debts issued in different currencies, see Section 4.6 – Notes to the consolidated financial statements, Note 13 – Financial liabilities.

Some events, such as catastrophes, can have an impact on the matching of assets and liabilities in a currency, which can generate a temporary unmatched position which is not covered by currency contracts or hedges.

For further information on the sensitivity of the Group's consolidated income and consolidated equity to currency risk, see Section 3.4.3 – Sensitivity analysis to market risks.

3.4.1.3. CREDIT SPREAD RISKS

Credit spread risk on invested assets is the risk of incurring a financial loss arising from the change in the market assessment of the counterparty risk of financial instruments or counterparties. Credit spread variations could have a direct impact on the market value of the fixed-income securities and loans, and as a consequence, on the unrealized capital gains or losses of the fixed-income securities held in the portfolio.

3.4.1.4. EQUITY RISKS

Equity prices are likely to be affected by risks which affect the market as a whole (uncertainty on economic conditions in general, such as anticipated changes in growth, inflation, interest rate fluctuations, sovereign risk, etc.) and/or by risks which influence a single asset or a small number of assets (specific or idiosyncratic risk). This may lead to a decrease in prices of the equity held by SCOR and may impact its unrealized gains and losses. A material or long-lasting decline in the prices of SCOR's equity holdings may also result in the impairment of its equity portfolio which would affect its net income.

3.4.2. MANAGEMENT OF MARKET RISKS

The Group's investment strategy is prudent, with the majority of assets held in cash and fixed income securities. It is defined in line with the Group's risk appetite and its risk tolerance limits and considers the economic and market environment, and the ALM process.

Investment Guidelines at Group and local levels outline the investment universe and limits, including concentration limits, in line with the objectives of the strategic plan. They are approved by the Group Board/local Board or Executive management.

SCOR has outsourced the implementation of its investment strategy to its asset management company "SCOR Investment Partners SE" and to external asset managers. They are provided with the Investment Guidelines.

Exposures to major risks are monitored on a weekly basis and stress tests measure the impact of parametric or footprint scenarios on the invested assets portfolio. These scenarios cover changes in interest rates, inflation, equities, credit spreads and real estate market. Portfolio sensitivity analysis to major risks is an important management tool which is used when making portfolio reallocation or hedging decisions.

In currency and geographic terms, SCOR is mainly exposed to the US and especially to US government or government assimilated bonds.

The Group's exposure to the equity market results from direct purchases of stocks or investments in equity funds and in convex equity strategies such as convertible bonds.

For further information on the sensitivity of the Group's consolidated income and consolidated equity to currency risk, see Section 3.4.3 – Sensitivity analysis to market risks.

3.4.1.5. REAL ESTATE RISKS

Real estate risks, either for properties owned directly or through funds, are risks arising from a variation in the real estate market valuation or a change in rental market conditions, the two being closely linked.

Rental income from the property portfolio is exposed to the variation in the indices on which the rents are indexed (for instance, the Construction Cost Index in France) as well as risks related to the rental market (changes in supply and demand, changes in vacancy rates, impact on market rental values or rent renewals) and lessee default. On the other hand, the indexation may provide an attractive hedge against inflation.

The value of property assets is exposed to the risk of regulatory obsolescence of properties (regulatory developments related to the accessibility of buildings for people with a disability, on the reduction of energy consumption and the production of carbon dioxide, etc.) which would lead to losses of value in the event of a sale of the assets or to additional expenditure to restore the value of the property.

3.4.2.1. MANAGEMENT OF INTEREST RATE RISKS

The Group's aim is to maintain an appropriate mix of fixed and variable rate instruments. It also manages the maturities of interest bearing financial assets.

Interest rate risk is managed within the Group primarily at two levels. At the level of each entity, the Group takes account of regulatory and accounting constraints. At the Group level, SCOR reviews its consolidated investment portfolios in order to identify the overall level of risk and return. It uses analytical tools which guide both its strategic allocation and local distribution of assets. Sensitivity to changes in interest rates is analyzed on a weekly basis.

In addition, SCOR has entered into interest rates swaps to cover its exposure to financial liabilities with variable interest rates. For further details on these swaps, see Section 4.6 – Notes to the consolidated financial statements, Note 7.9 – Derivative instruments.

For further information on the sensitivity of the Group's consolidated income and consolidated equity to interest rate risk, see Section 3.4.3 – Sensitivity analysis to market risks.

3.4.2.2. MANAGEMENT OF CURRENCY RISKS

SCOR has a balance sheet hedging approach whereby there is an objective to match monetary assets and liabilities in each foreign currency so that the fluctuation in the exchange rate has no material impact on the reported net income. The policy is to closely monitor the net monetary currency positions and, where appropriate, execute either cash arbitrages or forward hedges.

The Group has one net investment hedge in place to reduce its exposure to variations in the net assets of a USD functional currency subsidiary.

3.4.2.3. MANAGEMENT OF CREDIT SPREAD RISKS

SCOR applies strict limits in terms of asset concentration by asset class but also within a single asset class and actively diversifies its portfolio (by type of investment, by issuer, by country and by sector). The application of these limits also helps to mitigate the counterparty default risk arising from investments, as described in the Section 3.5.2 – Management of credit risks.

For information on the ratings of the debt securities owned by SCOR, see Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments.

3.4.2.4. MANAGEMENT OF EQUITY RISKS

With regards to equity investments, the Group's objective is to develop and manage a high-quality diversified portfolio.

The Group's equity selection is predominantly based on a bottom-up fundamental analysis with the goal to develop a diversified portfolio of stocks and convertible bonds directly or through mutual funds. Due to the inherent volatility of equities, this asset class (direct positions and mutual funds) is monitored on a daily basis, facilitating quick arbitrage or portfolio re-allocation decisions. On a Group level, the equity exposure is set and reviewed at least quarterly by the Group Investment Committee. Equity risk is also monitored by establishing maximum exposures per stock or mutual fund and is reviewed regularly (e.g. exposure to large-cap stocks will generally be greater than exposure to mid-cap stocks). The holding's ratios on mutual funds are also reviewed regularly, based on the mutual fund's portfolio.

3.4.2.5. MANAGEMENT OF REAL ESTATE RISKS

SCOR has adopted an active strategy to select core buildings and takes environmental quality into account during the decision making process.

3.4.3. SENSITIVITY TO MARKET RISKS

The following table summarizes the accounting sensitivity of the Group's consolidated income and consolidated equity to market risks based on reasonably possible movements in key variables with all other variables held constant. The assumptions included are:

Interest rate risks

The interest rate sensitivities for shareholders' equity presented in the table below include movements on the bond portfolio, cash and cash equivalents, structured notes, the impact of changes in interest rates on variable rate financial liabilities and the Guaranteed Minimum Death Benefit business.

The interest rate sensitivities of income presented in the table below show the impact of changes in fair value of financial assets at fair value through income held at closing date, and changes in income on variable rate financial assets held at the closing date, following an increase/decrease in interest rates of 100 basis points. An estimate of the impact on the future income following a change of 100 basis points is therefore included. However, SCOR does not include in this analysis the potential impact of change in interest rates on the reinvestment of future cash flows, as future cash flows of SCOR business are difficult to predict and asset allocations might change over time.

Equity price risks

SCOR conducted an analysis of the sensitivity of net income and shareholders' equity to the price of equity securities. The analysis considers the impact on both equities at fair value through the income statement and on equities classified as available for sale. For equities classified as available for sale, the impact on impairment is computed by applying the accounting policy and application guidance set out in Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments, to theoretical future market value changes. SCOR estimates that, excluding any impairment arising from duration, a further uniform decline of 10% from December 31, 2018 market values would generate no further impairment of equity securities (2017: EUR 0 million; 2016: EUR 0 million). It should be noted that, the potential further impairment should not be scaled up or down as the impairment rules are not a linear function of market value. For example, a scenario with a market value decline of 20% would not double the potential further equity impairment.

Both Life and P&C businesses have minimal sensitivity to equity price movements.

The market sensitivities of the Group are estimated as follows:

In EUR millions	December 31, 2018		December 31, 2017		December 31, 2016	
	Income ⁽²⁾⁽³⁾	Equity ⁽²⁾⁽³⁾	Income ⁽²⁾⁽³⁾	Equity ⁽²⁾⁽³⁾	Income ⁽²⁾⁽³⁾	Equity ⁽²⁾⁽³⁾
Interest +100 basis point	19	(522)	16	(508)	20	(468)
% of Equity	0.3%	(9.0)%	0.3%	(8.2)%	0.3%	(7.0)%
Interest – 100 basis points	(20)	501	(17)	478	(20)	402
% of Equity	(0.3)%	8.6%	(0.3)%	7.7%	(0.3)%	6.0%
Equity markets +10% ⁽¹⁾	5	21	9	42	6	34
% of Equity	0.1%	0.4%	0.1%	0.7%	0.1%	0.5%
Equity markets -10% ⁽¹⁾	(4)	(18)	(8)	(37)	(6)	(34)
% of Equity	(0.1)%	(0.3)%	(0.1)%	(0.6)%	(0.1)%	(0.5)%

(1) Excludes investments in hedge funds which normally do not have a uniform correlation to equity markets and securities where SCOR has a strategic investment including where the Group has a substantial shareholding but does not meet the "significant influence" criteria in IAS 28.

(2) The reduction in equity represents the estimated net asset impact including the additional impairment recognized in the income statement.

(3) Net of tax at an estimated average rate of 21% in 2018 (23% in 2017 and 27% in 2016).

Currency risks

The Group recognized a net foreign exchange loss of EUR 13 million for the year ended December 31, 2018 (2017: loss of EUR 27 million and 2016: gain of EUR 11 million).

For currency translation risk, the following sensitivity analysis⁽¹⁾ considers the impact on equity of a 10% movement in the exchange rates of the Group's two largest translation risk currency exposures, USD and GBP relative to the EUR.

In EUR millions	Currency movement	Equity impact		
		2018	2017	2016
USD/EUR	10%	357	326	365
% of equity		6.2%	5.3%	5.5%
USD/EUR	(10)%	(357)	(326)	(365)
% of equity		(6.2)%	(5.3)%	(5.5)%
GBP/EUR	10%	25	26	30
% of equity		0.4%	0.4%	0.4%
GBP/EUR	(10)%	(25)	(26)	(30)
% of equity		(0.4)%	(0.4)%	(0.4)%

(1) This analysis excludes the impact of hedging activity.

3.5. CREDIT RISKS

3.5.1. OVERVIEW OF CREDIT RISKS

Credit risk is the risk of incurring a loss as a result of an unexpected change in the financial situation of a counterparty.

This includes Credit default risk which is the risk that one party to a financial instrument or other asset will cause a financial loss to the other party by unexpectedly failing to discharge, either partially or fully, an obligation. Credit risk also includes Credit migration risk, which is the risk of incurring a financial loss due to a change in the value of a contractual agreement following unexpected changes in the credit quality of our counterparties.

SCOR is mainly exposed to the following credit risks or the accumulation of such risks in a single counterparty, in the same sector of activity or the same country: from bond and loan portfolios, liabilities retroceded also called share of retrocessionaires in contract liabilities, deposits with cedents, future cash-flows from Life reinsurance treaties, cash deposits at banks and default of members of pools which SCOR is a member of. SCOR may also be exposed to credit risk through its Credit and Surety reinsurance portfolio.

Credit risk is actively monitored and managed. The processes for managing the respective credit risks and the methods used to measure these risks are further described below.

3.5.1.1. CREDIT RISKS RELATED TO CASH AND INVESTED ASSETS

Credit risk related to bond and loan portfolios

A deterioration in the financial situation of an issuer (sovereign, public or private) or borrower can, for example, lead to its insolvency and to the partial or total loss of coupons and of the principal invested or lead to a loss in value.

This risk applies also to loan transactions in which the Group invests. The borrower's solvency deterioration may lead to a partial or total loss of the coupons and the nominal invested by SCOR.

For information on the debt securities portfolio, see Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investment.

Credit risk related to cash deposits at banks

SCOR is exposed to the risk of losing all or part of any cash deposited with banks in the event that such a bank is no longer able, due to insolvency, to honor its commitments (e.g. following liquidation). The current main risk for the Group is the significant concentration of deposits in a small number of banks. This risk is a direct result of the selection of the most stable banks.

3.5.1.2. CREDIT RISKS RELATED TO REINSURANCE CONTRACTS

Credit risk related to future cash flows of Life reinsurance treaties

Under most of its Life reinsurance contracts, SCOR expects to receive premiums from its cedents over several years. These often exceed expected future payments for claims, commissions, etc., meaning that SCOR expects to receive positive future cash flows.

Credit risk on future cash flows from Life reinsurance policies arises from two risk factors:

- ◆ the payment of future cash flows expected under Life reinsurance contracts requires that the cedent is financially sound. Therefore, SCOR risks a reduction in the value of its portfolio of Life contracts in the event of a deterioration in the financial strength of the cedent. This may lead to the impairment of SCOR's intangible assets, i.e. the value of business acquired (VOBA) and deferred acquisition costs (DAC);
- ◆ a reduction in the value of future cash flows could arise from material unexpected lapsation of policies following a deterioration of the cedent's credit rating or standing or an event which has a negative effect on the cedent's reputation.

Credit risk related to retroceded liabilities

SCOR transfers part of its risks to retrocessionaires via retrocession programs in exchange for the payment of premiums. The retrocessionaires then assume the losses related to claims covered by the retrocession contracts. If a retrocessionaire defaulted, or its financial situation deteriorated, SCOR could lose part or all of the coverage provided by its retrocessionaire whereas it would retain its liability towards the cedent for the payment of all claims covered under the reinsurance contract.

SCOR could also lose receivables from the defaulting retrocessionaire (receivables are due to a timing difference between statement accounts received and real payment due for positive balances of retrocessionaire accounts).

The retrocessionaires' share in the reserves broken down by retrocessionaires' credit rating is included in Section 4.6 – Notes to the consolidated financial statements, Note 15 – Net contract liabilities.

Credit risk related to deposits with cedents

SCOR may be exposed to credit risk in relation to amounts deposited with ceding companies in respect of reinsurance reserves which cover its liabilities.

However, depositing these amounts does not a priori discharge the Group of its liability towards the cedent in cases where it is not able to recover all or part of these amounts in the event of a cedent default or a deterioration in the financial situation of that cedent. Hence, it is at least in principle, possible that the Group may remain liable for paying claims due under the reinsurance treaty without being able to offset all or part of the corresponding deposits.

3.5.1.3. OTHER CREDIT RISKS

For special, highly-technical risk categories such as terrorism, nuclear, aviation or pollution, SCOR chooses to participate in various market dedicated groups of insurers and reinsurers ("pools") aimed at pooling the relevant risks among the members of each group pools which offer best available expertise and risk sharing at market level. In the event of a total or partial default by one of the members of a group, it could be required to assume, in the event of joint liability of the members, all or part of the liabilities of the defaulting member.

3.5.2. MANAGEMENT OF CREDIT RISKS

3.5.2.1. MANAGEMENT OF CREDIT RISKS RELATED TO CASH AND INVESTED ASSETS

Management of credit risk related to bond and loan portfolios

SCOR mitigates the credit risk related to bond and loan portfolios by careful analysis and selection of issuers, and by a policy of geographic sector diversification. SCOR maintains its investment policy in high-quality assets and in countries with the lowest sovereign risk.

Exposure analyses are performed on a regular basis (sector, geographical area, counterparty and rating) and enables critical risks to be identified and evaluated in order to take appropriate actions.

For details on the debt securities portfolio, see Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments.

Management of credit risk related to cash deposits at banks

SCOR selects bank counterparties according to their rating and credit quality. Concentration risk from cash deposits at banks is mitigated by setting counterparty exposure limits. SCOR takes into consideration the public assistance (e.g., loans, guarantees of deposits, nationalizations) which certain banks may benefit from during a financial crisis, as they are important in the economy of their respective country.

For further information on how risks related to invested assets are managed, see Section 3.4.2 – Management of market risks.

3.5.2.2. MANAGEMENT OF CREDIT RISKS RELATED TO REINSURANCE CONTRACTS

Management of credit risk related to future cash flows of Life reinsurance treaties

SCOR monitors the development of its cedents financial situation through regular contact, which enables SCOR to take appropriate action when deemed necessary. In addition, credit risk on future cash flows from Life reinsurance policies is mitigated by industry-wide protection solutions in several countries, such as "Protektor" in Germany.

For more details on the impact of the valuation of intangible assets, see Section 3.2.5 – The valuation of SCOR's intangible assets and deferred tax assets may significantly affect its shareholders' equity and the price of its securities, and Section 4.6 – Notes to the consolidated financial statements, Note 6 – Value of business acquired.

Management of credit risk related to retroceded liabilities

SCOR selects retrocessionaires carefully, taking into account their financial strength, and regularly monitors the Group's exposure to retrocessionaires taking into account all relevant accounting balances (estimated and actual claims, premiums, reserves, deposits and pledges). SCOR typically requires that unrated retrocessionaires pledge assets or provide other forms of collateral (cash deposits or letters of credit) to the value of their maximum potential contract liability, even though the actual retrocessionaire liability to SCOR in the balance sheet is lower.

The retrocessionaires' share in the reserves broken down by retrocessionaires' credit rating is included in Section 4.6, Note 15 – Net contract liabilities.

03 RISK FACTORS AND RISK MANAGEMENT MECHANISMS

Credit risks

Management of credit risk related to deposits with cedents

SCOR favors deposit arrangements with the ability to offset liabilities against deposits with high legal certainty.

Deposits with cedents are monitored through a quarterly analysis of exposure and associated risks. Actions aiming at reducing or limiting the exposure (e.g. ad-hoc legal opinions, introduction of offset clauses) can be implemented where needed.

3.5.2.3. MANAGEMENT OF OTHER CREDIT RISKS

In the event of joint liability of the members in pools to which SCOR participates, the risk of default of other pool members is carefully monitored by SCOR:

- ◆ through its appointment as director and via the participation of its senior management in dedicated committees such as Audit and Risk Committees and Technical Committees, for the pools in which SCOR's participation is the most significant; and
- ◆ via the careful consideration of the financial situation of other pool members. This contributes to the application of sound and robust governance.

3.5.2.4. AGING OF ASSETS

The following table provides an overall analysis of the aging of financial assets and receivables as at December 31, 2018:

<i>In EUR millions</i>	Current	1-12 months	12-24 months	24-36 months	> 36 months	Total
Available-for-sale financial assets	17,611	-	-	-	-	17,611
Financial assets at fair value through income	1,245	-	-	-	-	1,245
Derivative instruments	67	-	-	-	-	67
Loans and receivables	8,978	-	-	-	-	8,978
Insurance receivables	5,833	651	91	12	32	6,619
Tax receivables	188	-	-	-	-	188
Miscellaneous assets – others	216	2	-	-	-	218
Cash and cash equivalents	1,175	-	-	-	-	1,175
TOTAL	35,313	653	91	12	32	36,101

The following table provides an overall analysis of the aging of financial assets and receivables as at December 31, 2017:

<i>In EUR millions</i>	Current	1-12 months	12-24 months	24-36 months	> 36 months	Total
Available-for-sale financial assets	17,089	-	-	-	-	17,089
Financial assets at fair value through income	1,157	-	-	-	-	1,157
Derivative instruments	114	-	-	-	-	114
Loans and receivables	9,299	-	-	-	-	9,299
Insurance receivables	5,619	339	20	9	34	6,021
Tax receivables	193	-	-	-	-	193
Miscellaneous assets – others	305	4	-	-	-	309
Cash and cash equivalents	1,001	-	-	-	-	1,001
TOTAL	34,777	343	20	9	34	35,183

Assets have been categorized within the above aging analysis according to their original due date. The due date for each of these instruments may vary depending on the type of asset. Insurance and reinsurance receivables business credit terms are typically based on normal terms of trade, as specified within contracts. Insurance and reinsurance receivables include estimates, which are presented as current. The available-for-sale investments and fair value through income categories presented above include fixed income securities and equity securities. For fixed income securities, amounts are only presented as non-current if the security has not been redeemed on the date of maturity and therefore the amount receivable is past due. For equity securities, due to the absence of

a contractual date of redemption, these instruments are presented as current. Other assets presented in the above aging analysis, including derivative instruments, loans and receivables, cash and cash equivalents and other accounts receivable, are presented in a similar manner as those instruments described above, depending on the existence of a redemption date.

Impairment information relating to financial assets is included in Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments, Note 8 – Accounts receivable from and payable on assumed and ceded insurance and reinsurance transactions and Note 18 – Investment income.

3.6. LIQUIDITY RISKS

3.6.1. OVERVIEW OF LIQUIDITY RISKS

Liquidity risk arises when available liquidity is not sufficient to meet liquidity needs. Liquidity risk can result either from:

- ◆ a deviation from planned liquidity needs over either the short term, or the medium/long term;
- ◆ a deviation from estimated liquidity capacities, e.g. due to adverse business conditions.

3.6.1.1. LIQUIDITY NEEDS

SCOR needs liquidity to pay claims, operating expenses, interest payments and redemptions on its debts and declared dividends on its share capital. Without sufficient liquidity, the Group may be forced to curtail its operations, and business will suffer. In the case of catastrophe claims, in particular, it may need to settle amounts which exceed the amount of available liquidity in a reduced timeframe. SCOR's liquidity needs to cover catastrophe exposures is calibrated using the Group's gross (before retrocession) Nat Cat annual loss distributions, on top of other regular liquidity needs as listed above.

Liquidity needs may also arise from increased collateral requirements. Some facilities SCOR uses to grant letters of credit to cedents require 100% collateral in case of non-compliance with financial covenants or in case of a decrease in the Group's financial strength rating, which would result in a deterioration of the Group's liquidity level. Collateral arrangements are also used by SCOR when operating business in jurisdictions that demand a higher level of reserves than under IFRS in other jurisdictions. This is especially the case in the US for business falling under the NAIC Model Regulation XXX or Valuation of Life Insurance Policies Model Regulation, commonly referred to as Regulation XXX (or Triple X). Letters of Credit carry the risk of a duration mismatch, i.e. that short-term Letters of Credit are covering long-term business and might have to be renewed as less favorable conditions, creating additional cost.

Information on SCOR's letter of credit facilities, including related financial covenants, is included in Section 4.6 – Notes to the consolidated financial statements, Note 23 – Commitments received and granted.

3.6.1.2. SOURCES OF LIQUIDITY

The principal internal sources of the Group's liquidity are reinsurance premiums, cash flows from its investment portfolio and other assets, consisting mainly of cash or assets that are readily convertible into cash.

External sources of liquidity in normal markets include a variety of short and long-term instruments, such as repurchase agreements, commercial paper, medium and long-term debt, junior subordinated debt securities, capital securities and raising additional funds in the equity markets. For further information on SCOR's debt, including related financial covenants, see Section 4.6 – Notes to the consolidated financial statements, Note 13 – Financial liabilities.

SCOR's ability to access external sources of liquidity may be subject to adverse capital and credit market conditions.

Liquidity risks are increased when capital and credit markets experience extreme volatility or disruption, as SCOR may need to sell a significant portion of its assets quickly and on unfavorable terms, particularly if current internal resources do not satisfy its liquidity needs.

This risk may be increased due to the characteristics of certain assets held by SCOR, whose liquidity may be limited due to contractual or regulatory constraints (e.g. investments in corporate, real estate or infrastructure loans).

The availability of additional financing will depend on a variety of factors. These notably include market conditions, the general availability of credit, the volume of trading activities, the overall availability of credit to the financial services industry, SCOR's credit ratings and credit capacity, as well as the possibility that customers or lenders could develop a negative perception of SCOR's long- or short-term financial prospects if the Group incurs large investment losses or if the level of SCOR's business activity decreases due to a market downturn. Similarly, access to funds may be impaired if regulatory authorities or rating agencies take negative action that could penalize SCOR. The liquidity of several asset classes owned by SCOR may also be negatively impacted by changes to regulations or by non-conventional monetary policies. If so, these factors could prevent SCOR from successfully obtaining additional financing on favorable terms.

3.6.2. MANAGEMENT OF LIQUIDITY RISKS

Timing and transferability

SCOR's liquidity position is closely monitored from two points of view: timing and transferability.

Timing

SCOR assesses liquidity risks arising from both short-term and long-term liquidity needs. SCOR manages these risks via different mechanisms which consider:

- ◆ actions to be taken by the insurance or reinsurance business areas to take into account both short term and long-term liquidity risk (see maturity profiles in Section 3.6.3 – Maturity profiles); and
- ◆ the appropriateness of the composition of the assets in terms of their nature, duration and liquidity in order to meet the obligations as they fall due.

Short-term liquidity, or cash management, includes the day-to-day cash requirements under normal business conditions.

Liquidity considerations over the long-term are assessed in a way which takes into consideration the possibility of various unexpected and potentially adverse business conditions where

assets may not be sold for current market values. SCOR estimates the level of its immediately tradable assets (i.e. non-pledged assets) which could be sold within a reasonable timeframe.

Transferability

In addition, SCOR monitors the level of transferability of immediately tradable assets between entities, depending on local and regulatory constraints.

The Group has also been granted credit facilities from several banks to support the reinsurance activities of various subsidiaries. The Group regularly adapts and renews these facilities to support its business needs.

Additional information on the timing of repayments and liquidity risk is included in Section 3.6.3 – Maturity profiles. For further information on liquid assets of SCOR Group, see Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments.

Additional information on SCOR's letter of credit facilities is included in Section 4.6 – Notes to the financial statement, Note 23 – Commitments received and granted.

3.6.3. MATURITY PROFILES

3.6.3.1. SCOR GLOBAL P&C (NON-LIFE)

The table below includes the estimated maturity profiles of the Non-Life insurance liabilities based on payment patterns derived from historical data.

P&C insurance contract liabilities					
<i>In EUR millions</i>	0-1 year	1-3 years	3-7 years	> 7 years	Total
AS AT DECEMBER 31, 2018	4,488	4,804	3,437	2,582	15,311
As at December 31, 2017	4,035	4,569	3,363	2,621	14,588

The analysis of the balance sheet reserve movements, including net paid losses, is included in Section 4.6 – Notes to the consolidated financial statements, Note 15 – Net contract liabilities.

3.6.3.2. SCOR GLOBAL LIFE

The estimated maturity profile of the assumed contract liabilities for long-term Life reinsurance represents benefit payments that are typically settled net of premiums (for treaties with periodic premium payments). Where contract liabilities require to deposit cash to the cedent as collateral, the settlement normally also

includes certain other account items, primarily the release of the deposits. For contracts where funds withheld are used to offset the amounts settled between SCOR and its cedents, funds withheld to cover the life insurance contract liabilities in the table below mature at the same date as the respective Life insurance contract liabilities.

The table below reflects gross cash outflows:

Life insurance contract liabilities					
<i>In EUR millions</i>	< 1 year	1-5 years	6-10 years	> 10 years	Total
AS AT DECEMBER 31, 2018	2,773	725	1,097	10,033	14,628
As at December 31, 2017	2,344	382	1,443	9,994	14,163

3.6.4. FINANCIAL LIABILITIES

Maturity profiles have been based on undiscounted contractual maturities and include contractual interest payments (including those from cross-currency and interest rate swaps). In the case of perpetual debt, or debt which is subject to multiple optional

reimbursement dates, the analysis below has been prepared based on the assumption that the Company does not make use of any of the early optional reimbursement dates. Perpetual debts are classified in the column "Over 5 years" (no maturity date).

As at December 31, 2018 <i>In EUR millions</i>	Debt maturity profiles				
	Interest rate ranges	< 1 year	1-5 years	> 5 years*	Total**
Subordinated debt	2.98%-5.25%	87	704	3,584	4,375
Real estate debt	0.79%-4.34%	48	242	277	567
Other financial debt	0.07%-0.80%	5	1	37	43
TOTAL		140	947	3,898	4,985

As at December 31, 2017 <i>In EUR millions</i>	Debt maturity profiles				
	Interest rate ranges	< 1 year	1-5 years	> 5 years*	Total**
Subordinated debt	2.98%-5.25%	80	300	3,573	3,953
Real estate debt	0.77%-4.34%	177	260	69	506
Other financial debt	0.07%-0.80%	9	2	2	13
TOTAL		266	562	3,644	4,472

* Accrued interest on perpetual debt as at December 31, 2018 of EUR 12 million (2017: EUR 12 million).

** Of the amounts above, EUR 15 million (2017: EUR 16 million) relate to variable rate debt. These amounts exclude debt which has been swapped from a variable interest rate to a fixed interest rate.

Details on financial liabilities are presented in Section 4.6 – Notes to the consolidated financial statements, Note 13 – Financial liabilities.

Maturity analyses of financial assets that are held for managing liquidity risk are presented within Section 4.6 – Notes to the consolidated financial statements, Note 7 – Insurance business investments.

Various entities in the Group rent their office headquarters. The minimum payments relating to these operating leases are presented within Section 4.6 – Notes to the consolidated financial statements, Note 9 – Miscellaneous Assets (Tangible assets and related commitments).

3.7. OPERATIONAL RISKS

3.7.1. OVERVIEW OF OPERATIONAL RISKS

Operational risks are inherent to all businesses including SCOR's. Operational risks may be split into four broad categories further described below: risks related to staff, systems or facilities, processes or external events.

3.7.1.1. RISKS RELATED TO SYSTEMS OR FACILITIES

Risks related to systems or facilities can arise as follows:

- ◆ a malfunction or a major breakdown in SCOR's IT systems, outages, disruptions due to viruses, attacks by hackers and thefts or data breaches. This can occur within SCOR's own environment or to a third party providing services or data to SCOR;
- ◆ interruption of any of SCOR's IT systems leading to loss of data, delays in service or in a loss of efficiency of teams, which could lead to remediation costs, loss of contracts or damage to the Group's reputation. In addition, these incidents could increase other operational risks such as external fraud or human error (e.g. delay in the recognition of adverse business development). The interruption of these systems could damage commercial activities including underwriting, pricing, reserving, premium and claims payment, commercial support, and asset management;
- ◆ in addition, the facilities in which SCOR operates might be impacted by natural or man-made perils. The offices might need to be closed for a period of time potentially resulting in a loss of productivity and business opportunity, as well as remediation costs.

3.7.1.2. RISKS RELATED TO STAFF

Risks related to staff can arise as follows:

- ◆ incidents due to mistakes or non-compliance with instructions, guidelines or policies;
- ◆ internal staff mandated by SCOR having authorized access to SCOR's offices or systems taking advantage of SCOR's assets for personal gain e.g. through misappropriation of assets, intentional mismarking of positions or bribery;
- ◆ the failure to attract or retain key personnel or the loss of crucial information/skills concentrated in a single person, or of a whole team;
- ◆ intentional damage to SCOR's assets (including data) required to perform its operations by internal or external staff, which could lead to significant remediation costs (including to rebuild databases or systems).

3.7.1.3. RISKS RELATED TO PROCESSES

SCOR's risk management policies, procedures and controls may not be appropriate or sufficient. In particular, any additional workload to the planned activities could reduce the effectiveness of some processes and controls. For example, the creation of a new entity or development of a new Line of Business may lead to an accumulation of operational risks.

Since SCOR remains responsible for commitments or services contracted, including for outsourced activities, an inappropriate client relationship management or inadequate level of service and/or product quality provided by SCOR to its clients or breach of contract may lead to a loss of profitable business relationships.

In addition, SCOR may be involved in legal and arbitration proceedings due to non-protective terms of a contract, denounced either by third parties or internally which could lead to an unfavorable outcome. For information on this issue, see Section 4.6 – Notes to the consolidated financial statements, Note 25 – Litigation.

Some of SCOR's and SCOR's subsidiaries' processes are partially or fully outsourced. Failed outsourced processes could lead to direct losses and other operational incidents.

3.7.1.4. RISKS RELATED TO EXTERNAL EVENTS

SCOR may be exposed to an unfavorable business environment such as evolving or additional regulatory constraints potentially hindering its business model.

Legal and regulatory risks in SCOR's operating environment

As an international group, SCOR must comply with national and international laws, regulations and applicable accounting standards. This includes all applicable economic sanctions, programs relating to anti-corruption, anti-money laundering, in addition to anti-terrorism laws, and laws and regulations applicable to its operations. Laws and regulations applicable to some of SCOR's operations refer inter alia to the economic trade sanctions laws and regulations administered by the United States Department of the Treasury's Office of Foreign Assets Control (OFAC) and to certain laws administered by the United States Department of State. They also refer to applicable economic trade sanctions laws, regulations and directives of the European Union and its member states. Other directives with which SCOR complies apply to anti-money laundering, corruption, terrorism

financing and insider trading (e.g. the European Regulation of April 2014 on market abuses). Regarding anti-corruption laws and regulations, SCOR must comply with the Foreign Corrupt Practices Act (FCPA) and other laws such as the UK Bribery Act that bar corrupt payments or unreasonable gifts to foreign governments or officials. SCOR must also comply with the provisions of the Sapin II law, which requires large companies (i.e. with revenues exceeding EUR 100 million and with at least 500 employees) to implement programs that prevent corruption, with financial sanctions in case of non-compliance. Additionally, SCOR must comply with regulatory requirements regarding data management (both SCOR's data and that of its clients), in particular the General Data Protection Regulation (GDPR) enacted by the European Union. Any breach to these requirements could lead to regulatory sanctions, including significant fines and expose SCOR to legal proceedings from clients, and reputational damage.

The level of legal, regulatory, tax or accounting requirements depends on several factors, including the type of business (e.g. primary insurance or reinsurance business), the location and the legal structure of SCOR. The large number of different regulatory environments in which SCOR operates, as well as changes in present and future regulations increase the complexity and risks of the related Group processes. Any violation of laws, regulations or accounting requirements could potentially expose SCOR to fines, class actions with compensation payments, accounts reinstatements or business restrictions.

Following Brexit, the direct P&C insurance activities for European Economic Area (EEA) clients currently carried by SCOR UK may need to be carried in the future by a legal entity based in the EEA in case insurers based in the United Kingdom would lose their European passport. In order to prepare for such an event SCOR has created a P&C insurance company in France to serve its continental clients, while maintaining the insurance company SCOR UK for its other clients. Also, SCOR stands ready to ask the Prudential Regulation Authority for any required approvals in order to allow the continuation of the activity of its reinsurance branches in the United Kingdom. For further details on current main regulatory developments which may have an impact on SCOR, see Section 3.2.3 – Risks related to legal and regulatory developments.

Other risks related to external events

SCOR is also exposed to external fraud which is characterized by the theft of certain SCOR assets by third parties. External frauds may be perpetrated by various means including cyber-attacks, and usually target cash or data. Should an act of fraud succeed in bypassing the controls or protection measures in place, this could generate a direct loss for the Group.

SCOR is exposed to cyber-attacks which can be very diverse in their sophistication and execution. The main targets are system functions, data and cash management. Immediate repercussions include:

- ◆ systems could be slowed down, corrupted or stopped potentially resulting in loss of productivity, corrupted data and remediation costs;
- ◆ funds could be stolen through fraudulent wire transfers;
- ◆ data could be stolen, deleted or corrupted, or made public in contradiction with SCOR's regulatory or contractual obligations.

Any of these could generate a reputational risk, give rise to a breach of SCOR's legal responsibility, and may result in regulatory sanctions depending on the level of sensitivity of the data or system that is successfully attacked. The cyberattack could also assist external fraudsters resulting in a financial loss.

03 RISK FACTORS AND RISK MANAGEMENT MECHANISMS

Internal control and risk management procedures

3.7.2. MANAGEMENT OF OPERATIONAL RISKS

The two main principles driving the operational risk management approach are:

- ◆ exhaustiveness: ensure that a complete and exhaustive identification of all risks within the Group is carried out to the extent possible;
- ◆ proportionality: once operational risks are identified, management uses appropriate and proportionate responses, resources and procedures, focusing on key risks.

The process owners are responsible for managing operational risks within the processes. To meet high quality standards, the Group relies on a highly qualified staff to manage processes and the risks within these processes.

In order to support the staff, SCOR has developed Internal Control System (ICS) standards. According to the ICS standards, process owners should be in a position to identify the critical operational risks within the processes assigned to their area of responsibility. The process owners design, implement and operate appropriate key controls and maintain the net risk exposure at or below an acceptable level of possible damage.

At Group level, experienced staff members collect relevant information and analyses on operational risks, on a qualitative and quantitative basis. When relevant, they develop key indicators, with support from Group Risk Management. The Group has also implemented regular risk reporting mechanisms in order to provide an overview of operational risks across the Group.

At legal entity level, depending on local requirements, specific operational risk management processes are implemented, where relevant.

In addition, through its assignments, Group Internal Audit (GIA) contributes to the oversight of operational risk management.

Outsourcing some activities or processes may improve or streamline some aspects of a process, but SCOR is still expected to deliver the same level of service. Principles to properly manage potential operational risks stemming from outsourcing of certain functions are set out in dedicated policies and guidelines.

On risks which may develop rapidly, such as external fraud, SCOR adapts its risk management, for example, by organizing specific training programs and sending regular warnings, and detailed instructions to its employees.

Some of the above operational risks are transferred in whole or in part to direct insurers as follows:

- ◆ the properties and other main physical assets of SCOR and its subsidiaries are covered locally through property damage policies;
- ◆ risks which are mostly covered at Group level include civil liability risks related to the operation of the Company caused by employees and real estate, professional liability risks, civil liability risks of directors and officers, and cyber risks.

Nevertheless, these insurance covers could prove to be insufficient and some losses could fall into the scope of the exclusion clauses (or interpreted as such by the insurance company).

3.8. INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES

Refer to Appendix A – Internal control and risk management procedures.