

2020 P&C triangles



P&C loss development triangles and reserves as of December 2020

Group Actuarial Department

Disclaimer

Certain statements contained in this presentation and any documents referred herein are forward-looking statements, considered provisional. They are not historical facts and are based on a certain number of data and assumptions (both general and specific), risks and uncertainties that could cause actual results, performance or events to differ materially from those in such statements. Forward-looking statements are typically identified by words or phrases such as, without limitation, "anticipate", "assume", "believe", "continue", "estimate", "expect", "foresee", "intend", "may increase" and "may fluctuate" and similar expressions or by future or conditional verbs such as, without limitations, "will", "should", "would" and "could". Undue reliance should not be placed on such statements, as due to their nature they are subject to known and unknown risks and uncertainties.

SCOR is exposed to significant financial, capital market and other risks, including variations in interest rates, credit spreads, equity prices, currency movements, changes in government or regulatory practices, changes in rating agency policies or practices, and the lowering or loss of financial strength or other ratings. Forward-looking statements were developed in a given economic, competitive and regulatory environment and the Group may be unable to anticipate all the risks and uncertainties and/or other factors that may affect its business and to estimate their potential consequences. Such factors include among others:

- further instability affecting the global financial system and developments related thereto;
- further deterioration in global economic conditions;
- the cyclicity of the reinsurance industry;
- uncertainties in estimating reserves;
- uncertainties in estimating future claims for purposes of financial reporting, particularly with respect to large natural catastrophes, as significant uncertainties may be involved in estimating losses from such events and preliminary estimates may be subject to change as new information becomes available;
- the frequency, severity and development of insured claim events;
- acts of terrorism and acts of war;
- pandemic outbreaks
- extraordinary events affecting the Group's clients and other counterparties, such as bankruptcies, liquidations and other credit-related events;
- current, pending and future legislation and regulation affecting the Group or its ceding companies and the interpretation of legislation or regulations.

The P&C loss development triangles as of December 2020 is provided by SCOR for informational purposes only. SCOR is under no obligation to, and does not intend to, update or revise any of the information included in the excel workbook or referred to in this presentation, whether as a result of new information, future events or other developments, even when any such new information, events or developments have been reflected in any report or other document published by SCOR or any of its business units. Although the information in the excel workbook bears directly on estimating loss reserves, it is not the only basis used by SCOR to establish its reserves.

Covid-19 disclaimer

The full impact of the Covid-19 crisis on SCOR's business and results can still not be accurately assessed at this stage, given the uncertainty related both to the magnitude and duration of the Covid-19 pandemic and to the possible effects of future governmental actions and/or legal developments in this context. This uncertainty follows from the considerable difficulty in working on sound hypothesis on the impact of this crisis due to the lack of comparable events, the ongoing nature of the pandemic and its far-reaching impacts on global economy, on the health of the population and on our customers and counterparties.

These hypotheses include, in particular:

- the duration of the pandemic, its impact on health on the short and long term,
- the availability, efficacy, effectiveness and take-up rate and effect of the vaccines;
- the response of government bodies world-wide (including executive, legislative and regulatory);
- the potential judicial actions or social influences;
- the coverage and interpretation of SCOR's contracts under these circumstances;
- the assessment of the net claim estimate and impact of claim mitigation actions.

Therefore:

- any assessments and resulting figures presented in this document will necessarily be rough estimates based on evolving analysis, and encompass a wide range of theoretical hypothesis, which are still highly evolutive;
- at this stage, none of these scenarios, assessments, impact analysis or figures can be considered as certain or definitive.

P&C loss development triangles and reserves as of December 2020

CONTENTS

1 A robust governance

2 Triangles disclosure

3 SCOR portfolio

4 Appendices

A robust Governance coupled with a prudent reserving philosophy

SCOR overall reserving philosophy can be summarized as follows:



A robust governance insuring independent opinion and free from influence environment



Top of the class actuarial methods coupled with an holistic “four axis approach”



Instant reactivity to indications of potential negative developments



Conservative opening ultimate loss ratios applied on more recent underwriting years where statistical data is scarce



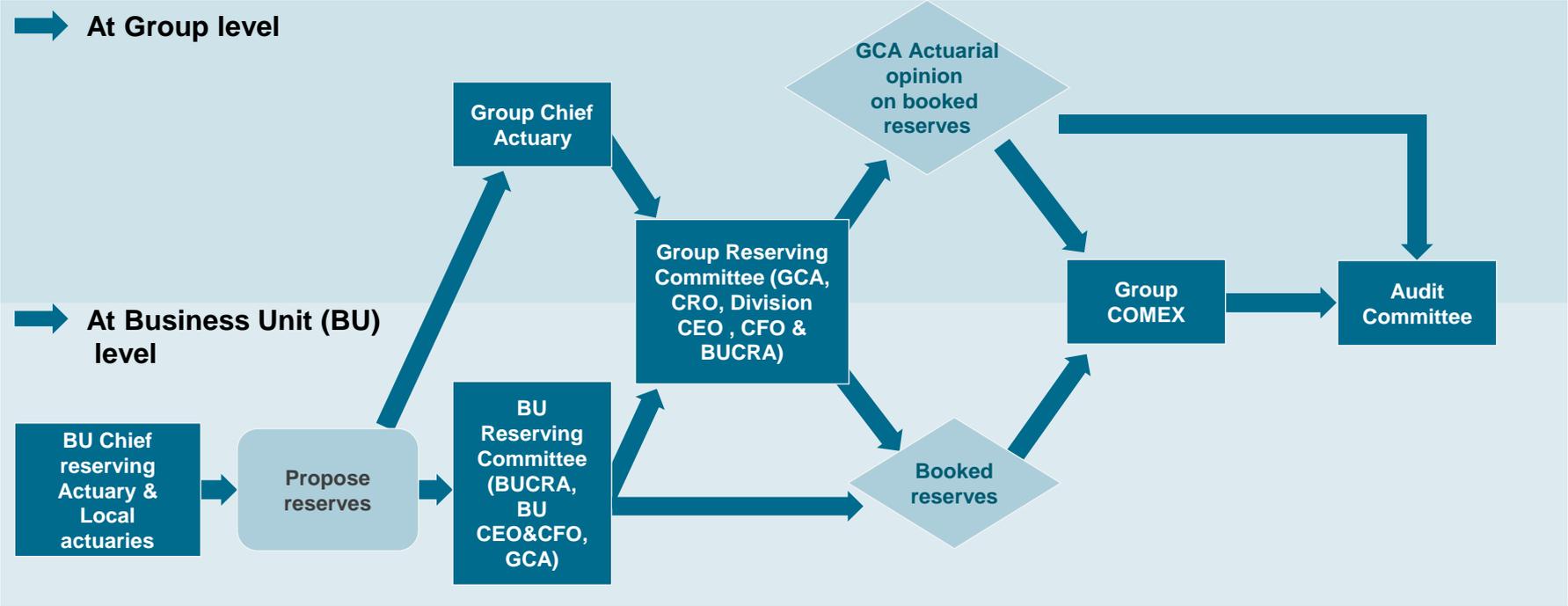
Hypothesis used in pricing systematically challenged and stress tests impact on pricing expected loss ratios taken into account



Extra time allowed to recognise positive run-offs, especially for mid and long tail classes of business

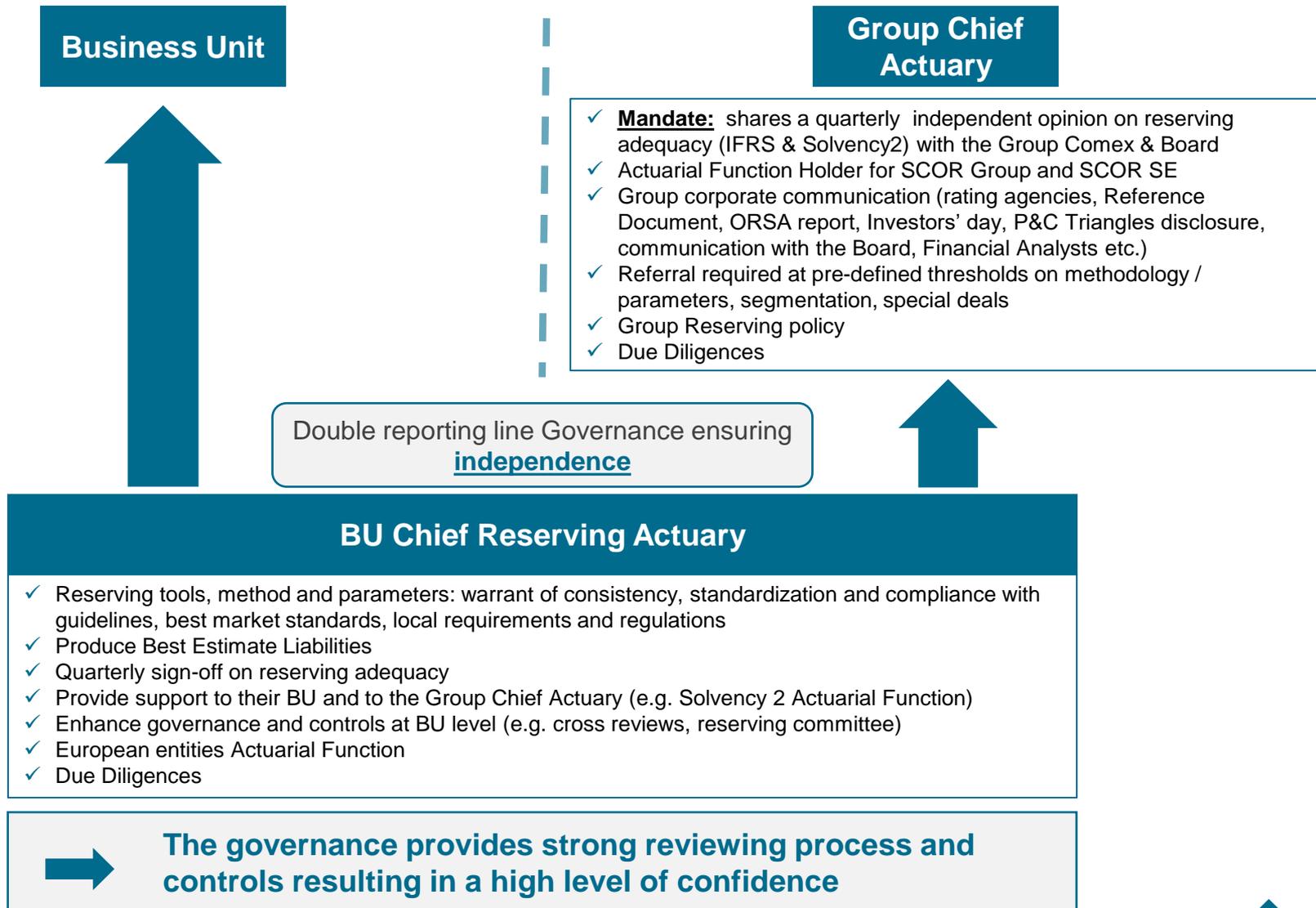
A strong governance with a quarterly process ensuring strong reserving control and independent opinion

- As presented in the following chart, an initial booked reserves position is proposed by the Business Unit (BU) based on Business Unit Chief Reserving Actuary’s opinion. An opinion on IFRS point estimate is formed by the Group Chief Actuary based on Business Unit and Group Actuarial analyses.
- The final Group Chief Actuary view on the level of reserves is then presented to the Group Executive Committee who validates the booked reserves.
- The Group Chief Actuary opinion on the reserving adequacy is then shared by the Group Chief Actuary with Board Audit Committee as detailed in the following chart:



1) GCA : Group Chief Actuary
 2) BUCRA: BU Chief Reserving Actuary

A strong governance in a free from influence environment



Top of the class Actuarial methods

Assessment of IBNR reserves and the variability of the overall reserves

- To assess IBNR reserves and the variability of the overall reserves, SCOR generally uses actuarial techniques which take into account quantitative loss experience data, together with qualitative factors, where appropriate.
- This exercise is performed on homogenous groups of contracts, called actuarial segments having similar development pattern and a required statistical mass.
- The reserves are also adjusted to reflect reinsurance treaty terms and conditions, and the variety of claims processing which may potentially affect SCOR's commitment over time.

Methods used by SCOR

- SCOR uses among others:
 - Deterministic methods (e.g. Chain Ladder, Bornhuetter-Ferguson, Average cost per claim or Loss ratio methods) for Best Estimate assessment
 - Stochastic approaches (e.g. Mack model, Bootstrap) for reserves' volatility estimates
 - Tailor made solutions like annuity projection by victim, generalized linear models, machine learning such as neural networks

Top of the class Actuarial methods

Example of actuarial method Chain-Ladder

- Chain-Ladder is a deterministic method which consists in the analysis of the behavior of losses using historical data in order to estimate a development pattern
- The estimated pattern is applied to the latest diagonal of the triangle in order to project the ultimate loss

UWY	Dvpt					Ultimate
	1	2	3	4	5	
1	$C_{1,1}$	$C_{1,2}$	$C_{1,3}$	$C_{1,4}$	$C_{1,5}$	$\hat{C}_{1,I}$
2	$C_{2,1}$	$C_{2,2}$	$C_{2,3}$	$C_{2,4}$		$\hat{C}_{2,I}$
3	$C_{3,1}$	$C_{3,2}$	$C_{3,3}$			$\hat{C}_{3,I}$
4	$C_{4,1}$	$C_{4,2}$				$\hat{C}_{4,I}$
5	$C_{5,1}$					$\hat{C}_{5,I}$

$$\hat{f}_k = \frac{\sum_{j=1}^{I-k} C_{j,k+1}}{\sum_{j=1}^{I-k} C_{j,k}}, 1 \leq k \leq I-1$$

$$\hat{\sigma}_k^2 = \frac{1}{I-k-1} \sum_{i=1}^{I-k} C_{i,k} \left(\frac{C_{i,k+1}}{C_{i,k}} - \hat{f}_k \right)^2 \text{ for } 1 \leq k \leq I-2$$

Example of actuarial method Mack model

- Mack is a stochastic model whose structure is based on the Chain-Ladder method
- It is distribution free and provides a measure of variability of the reserves

Reserves

$$\hat{R}_j = \hat{C}_{j,I} - C_{j,I-j+1}$$

Best Estimate

$$\sum_{j=1}^I \hat{C}_{j,I} = \sum_{j=1}^I C_{j,I-j+1} \prod_{k=I-j+1}^I \hat{f}_k$$

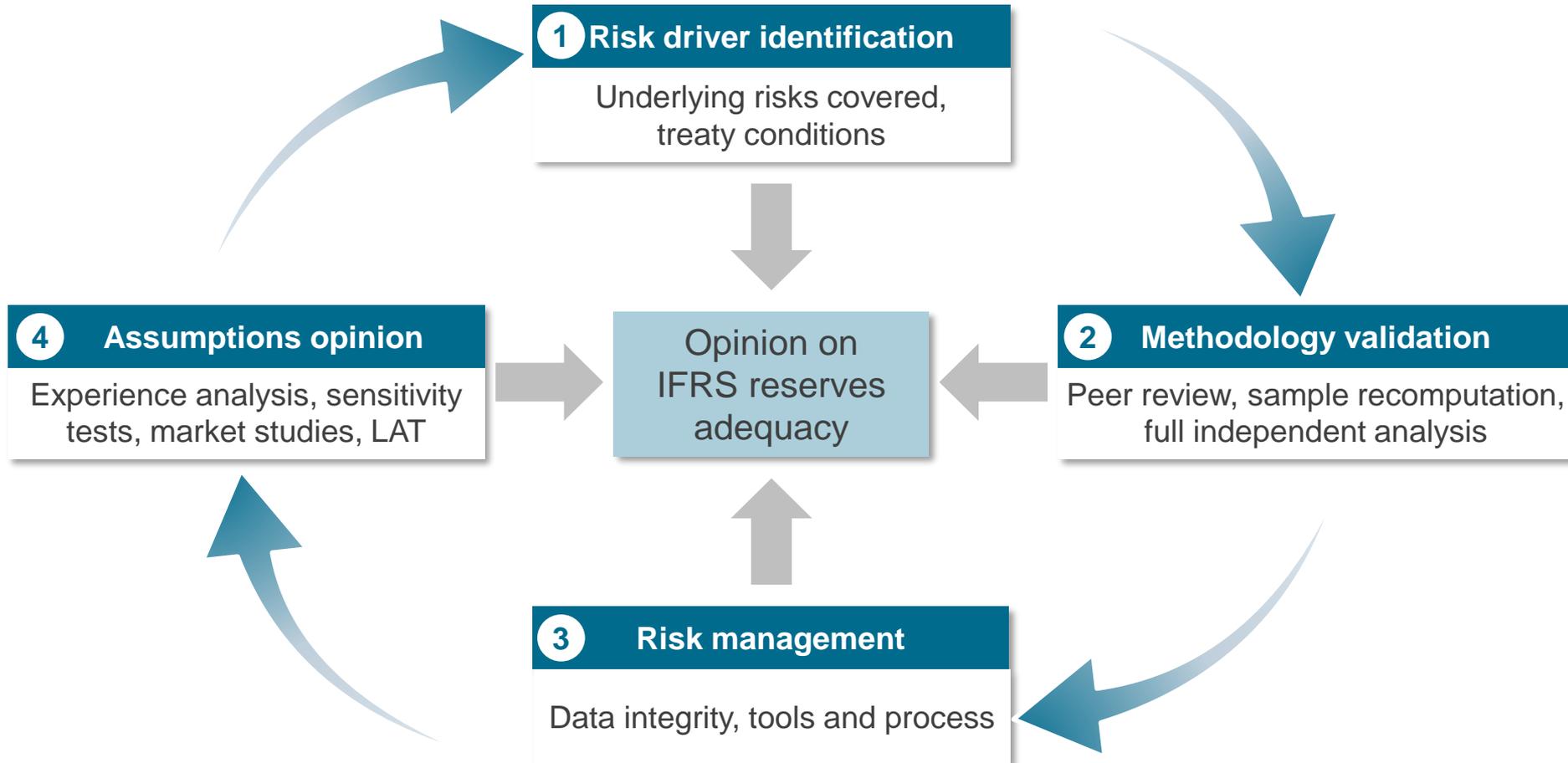
Mean square error

$$mse\left(\sum_{i=2}^I \hat{R}_i\right) = \sum_{i=2}^I \left(mse(\hat{R}_i) + \hat{C}_{i,I} \left(\sum_{j=i+1}^I \hat{C}_{j,I} \right) \sum_{k=I+1-i}^{I-1} \frac{2\hat{\sigma}_k^2 / \hat{f}_k^2}{\sum_{n=1}^{I-k} C_{nk}} \right)$$

with

$$mse(\hat{R}_i) = \hat{C}_{i,I}^2 \sum_{k=I+1-i}^{I-1} \frac{\hat{\sigma}_k^2}{\hat{f}_k^2} \left(\frac{1}{\hat{C}_{i,k}} + \frac{1}{\sum_{n=1}^{I-k} C_{nk}} \right)$$

A holistic “four axis approach”



P&C loss development triangles and reserves as of December 2020

CONTENTS

- 1 A robust governance
- 2 Triangles disclosure**
- 3 SCOR portfolio
- 4 Appendices

Scope



- In SCOR, the actuarial analysis axis is the actuarial segment which groups together homogeneous contracts based on a variety of criteria (proportional basis or not, underlying risks typology, geography...).
- The eight reserving classes disclosed are aggregations of these actuarial segments.



- Data which is not included in the triangles:
 - Lloyd's portfolio as the RITC scheme (Reinsurance To Close – Lloyd's accounting scheme) does not allow displaying entire triangles
 - Run-off portfolios are not disclosed as their claims development profile does not match the actual development of the ongoing portfolio
 - Direct business segments (including MGA US) are also excluded from triangles as this is pure primary insurance
 - Fronting contracts from a major French aviation insurer
 - Proportional business in South America due to incomplete diagonals for older years following M&A
 - Significant quota-shares in China because of their specificities (large sliding scales)



- These triangles and reserves disclosure covers almost 90% of gross P&C IFRS booked reserves for the corresponding UWYs.



- Triangles data are reconciled with financial statements which have been audited by the external auditors. Triangles are also reviewed in the framework of the agreed upon procedures exercise performed by external auditors.

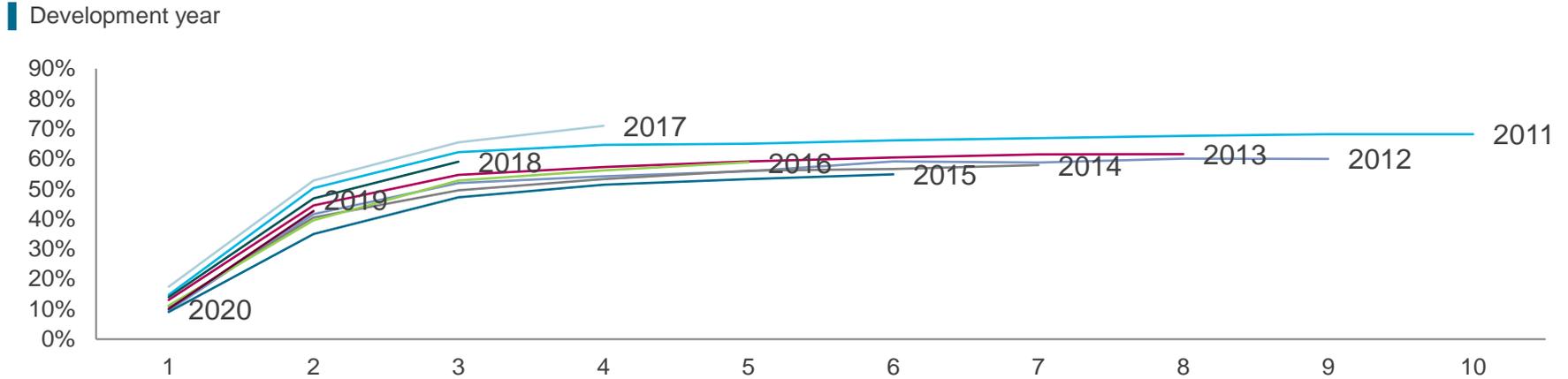
Total loss development triangle

Total Triangle

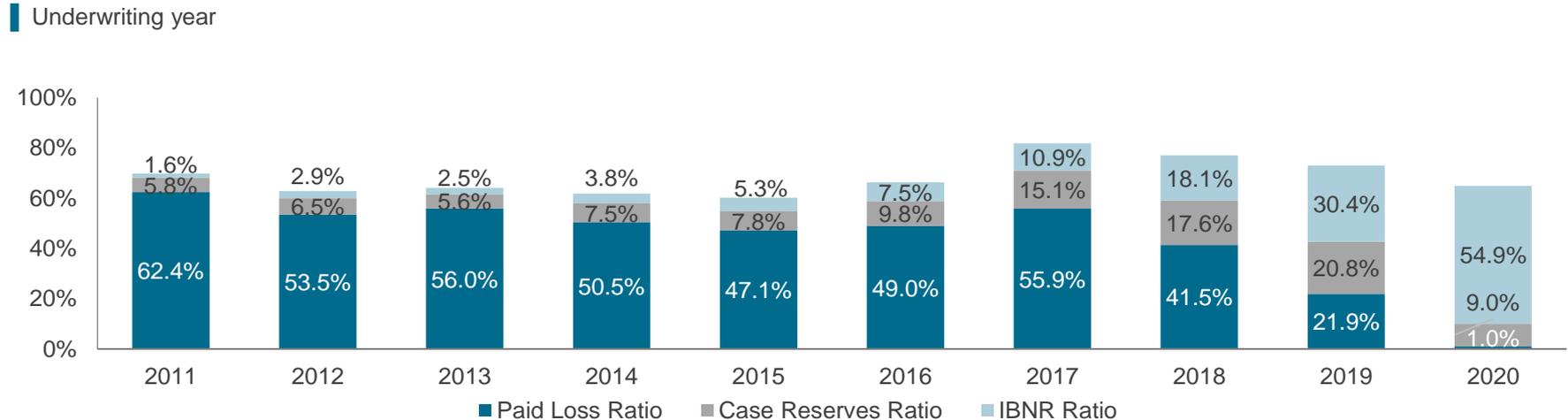
Under writing Year	Ultimate Premium (€m)	Development Year										Ultimate Loss Ratio 2020	Ultimate Loss Ratio 2019 - as if 2020	Paid Loss Ratio	Case Reserves Ratio	IBNR Ratio
		1	2	3	4	5	6	7	8	9	10					
2011	3,109	14.8%	50.3%	62.2%	64.6%	65.0%	66.2%	66.9%	67.7%	68.2%	68.2%	69.8%	70.3%	62.4%	5.8%	1.6%
2012	3,413	9.6%	41.6%	52.0%	54.2%	55.9%	59.1%	58.8%	60.1%	60.0%		62.9%	63.4%	53.5%	6.5%	2.9%
2013	3,327	13.1%	44.5%	54.7%	57.3%	59.2%	60.5%	61.4%	61.6%			64.1%	65.0%	56.0%	5.6%	2.5%
2014	3,504	10.9%	40.5%	49.6%	53.3%	56.0%	56.7%	58.0%				61.8%	62.2%	50.5%	7.5%	3.8%
2015	3,700	9.1%	35.0%	47.2%	51.4%	53.3%	54.9%					60.2%	60.9%	47.1%	7.8%	5.3%
2016	3,867	11.2%	39.6%	52.8%	56.2%	58.8%						66.3%	66.9%	49.0%	9.8%	7.5%
2017	4,142	17.5%	52.8%	65.5%	71.0%							81.9%	80.5%	55.9%	15.1%	10.9%
2018	4,819	14.0%	46.8%	59.0%								77.1%	74.8%	41.5%	17.6%	18.1%
2019	5,460	10.1%	42.7%									73.1%	73.0%	21.9%	20.8%	30.4%
2020	5,268	10.1%										65.0%		1.0%	9.0%	54.9%

Total loss development triangle

Incurring loss development in loss ratios



Paid loss, case reserves and IBNR ratios



A reserving approach leading to a high confidence in reserving adequacy

SCOR's strong reserving process reveals high level of confidence

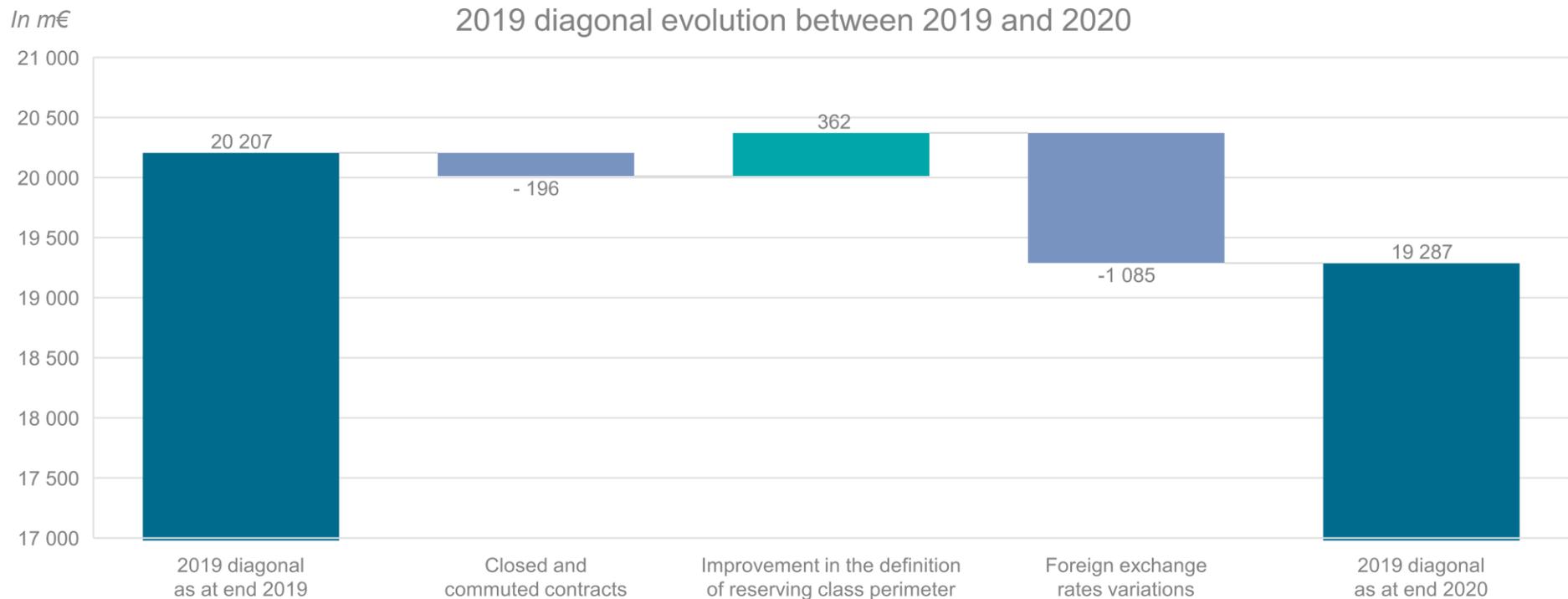
Underwriting Year	Ultimate Premium € billion	1 Ultimate Loss Ratio 2019 as if 2020	2 Ultimate Loss Ratio 2020	Difference
2011	3.1	70.3%	69.8%	-0.4%
2012	3.4	63.4%	62.9%	-0.5%
2013	3.3	65.0%	64.1%	-0.9%
2014	3.5	62.2%	61.8%	-0.4%
2015	3.7	60.9%	60.2%	-0.7%
2016	3.9	66.9%	66.3%	-0.6%
2017	4.1	80.5%	81.9%	1.5%
2018	4.8	74.8%	77.1%	2.3%
2019	5.5	73.0%	73.1%	0.0%
2020	5.3		65.0%	

- The table reads as:
 - 1 Ultimate Loss Ratios (ULRs) 2019 on 2020 perimeter and Exchange rates
 - 2 2020 ULRs on 2020 perimeter
- Globally, ULRs develop positively from 2019 to 2020 calendar year except for UWY 2017 and 2018 which were impacted by some new/deterioration of large losses.
- The ULR for UWY 2017, 2018 & 2019 are higher than historical average due to Cat losses.

Reconciliation to prior triangles

Reconciliation between 2019 diagonal as at end 2019 and 2020

- The following graph provides reconciliation between the amount of incurred claims disclosed at year-end 2019 and year-end 2020 taking into account all available information at reserving class level. The main changes come from the foreign exchange rates variations (decrease of EUR1,085m) and from the improvement in the definition of reserving class perimeter (increase of EUR362m).



P&C loss development triangles and reserves as of December 2020

CONTENTS

- 1 A robust governance
- 2 Triangles disclosure
- 3 SCOR portfolio**
- 4 Appendices

Types of reinsurance

Facultative reinsurance

- The ceding company cedes and the reinsurer assumes all or part of the risks covered by a single specific insurance policy
- Facultative reinsurance is negotiated separately for each insurance contract that is reinsured
- Facultative reinsurance normally is 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

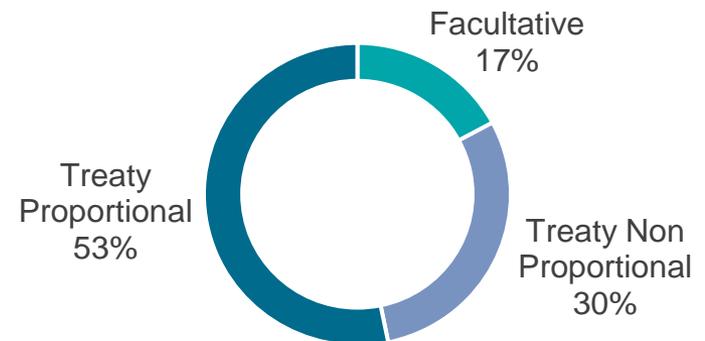
Proportional or quota share reinsurance

- The reinsurer, in return for a predetermined share of the insurance premium charged by the ceding company, indemnifies the ceding company against the same predetermined share of the losses of the ceding company under the covered insurance contracts

Non-proportional, or excess of loss or stop loss reinsurance

- The reinsurer indemnifies the ceding company against all or a specified portion of losses, on a claim by claim basis or with respect to a specific event or a line of business, in excess of a specified amount, known as the ceding company's retention or reinsurer's attachment point, and up to a negotiated reinsurance treaty limit

2011-2020 Reserves split by type of reinsurance



Lines of business description

Engineering

- It provides coverage for the risks inherent in the construction projects (from inception to completion). It covers all types of civil construction risks, plant and machinery breakdown risks as well as delay in start up coverage

Property

- The risks covered are classically fire, agriculture, machinery breakdown, and theft for private individuals, commercial or industrial risks

Proportional casualty

- The premium and reserves of this class are predominantly derived from our UK medical malpractice portfolio (long-term risks). A significant part of this class is also IDI business (Inherent Defect Insurance) in France and Spain. IDI provides coverage for inherent defects that are detected during a period starting at the completion of a construction/installation and expiring up to 10 years after completion of the works. This class also includes professional and personal liabilities but also D&O (Directors and Officers, in run-off) and WC (Workers Compensation mainly in the US)

Non-proportional casualty

- This class contains IDI (France and Spain mainly), medical malpractice (mainly France) and professional and manufacturing liabilities (heavy industry, food producers). Workers compensation business is also included (mainly in the US)

Marine, transport, aviation

- This class is dominated by the aviation risks. Aviation risks include products liability, hull and liabilities for airlines, general aviation and satellite risks. Marine and transport are basically insurance of hull and liabilities for merchant ships

Credit and surety

- This class mainly contains proportional business. The surety business is mainly performance bonds. The rest of the portfolio is credit insurance

Lines of business description

Motor non-proportional

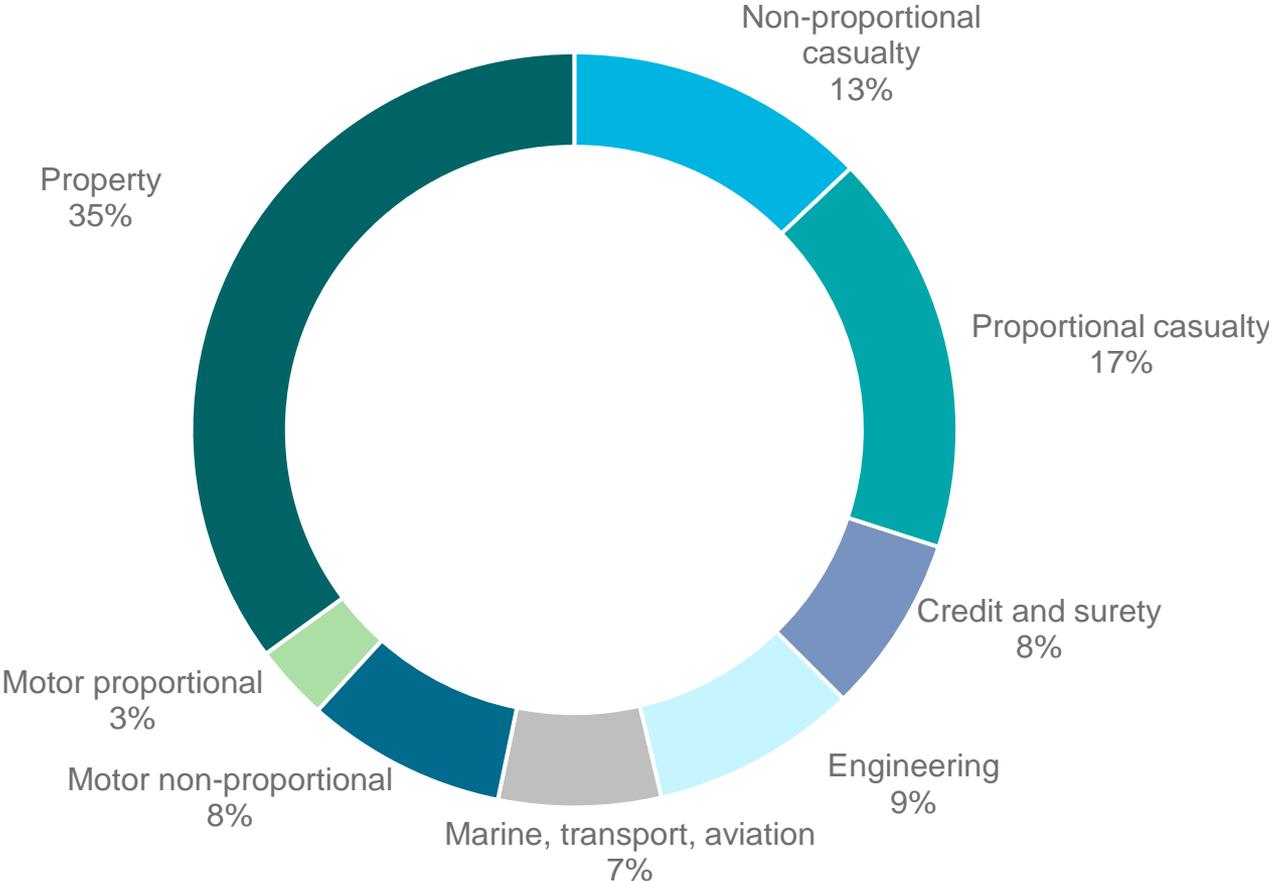
- The main risk covered is auto liability
- The most important part of this class is motor third party liability on French market. The second largest part is motor third party liability on UK market
- Both premium and reserves are mainly related to bodily injury covers
- From a reinsurance point of view, this class is expected to have a longer development length than the motor proportional class, as only claims that overcome the threshold (as defined in the reinsurance contract) are concerned

Motor proportional

- This class contains property damage covers as well as bodily injury covers
- Compared to the motor non-proportional class, this motor proportional class has a shorter development length
- This is explained by the more important weight of damages to property (short term risks) and the nature itself of this class (the claims reporting to the reinsurer is faster for proportional businesses)

Lines of business description

2011-2020 Reserves split by line of business



P&C loss development triangles and reserves as of December 2020

CONTENTS

- 1 A robust governance
- 2 Triangles disclosure
- 3 SCOR portfolio
- 4 Appendices**

Appendix 1: Large losses

- Depending upon which actuarial reserving method is used, the presence or absence of large natural catastrophe and man-made losses and how they are treated may have a significant impact on the estimated ultimate loss amount
- Only loss amounts exceeding €40m by underwriting year for Property and €15m for the other classes of business (on the disclosed perimeter) are shown in the table below. This rule applies as well to Covid-19 claims. Therefore the Covid-19 figure in the table below represents only a part of SCOR total Covid-19 claims amount disclosed by SCOR in its different press releases. Please refer to the Covid-19 disclaimer on slide 3.

Underwriting year	Paid claims	Incurred claims	Main events by UWY
Worldwide Property fire all natures including Nat Cat			
2011	353,300	354,645	Heavy rainfall in Denmark, New Zealand earthquake, Thailand floods
2012	87,791	88,855	Hurricane Sandy
2013	314,514	316,347	Central European Flood, Fire in a China Semiconductor Company, Hailstorm Andreas, Japan Snowstorm, Saint-Jude Storm
2014	90,022	90,396	European hail (Ela)
2016	40,044	42,775	Maria
2017	613,835	698,016	California Wildfire, Harvey, Irma, Maria, Refinery Explosion in Wisconsin
2018	472,432	561,887	Camp California Wildfire, Hurricane Michael, Typhoon Jebi, Typhoon Trami, Refinery Explosion in Germany
2019	435,099	622,207	Typhoon Hagibis, Typhoon Faxai, Hurricane Dorian, Petrochemical plant explosion in Texas
2020	4,705	60,991	Covid-19
Worldwide marine, transport , aviation all natures			
2011	15,707	15,738	Petrojarl Banff FPSO
2014	63,994	65,550	BW offshore explosion, Mexican Petrol Company - Abkatun Platform Fire
2015	29,421	29,608	Failure of turret
2018	27,987	46,380	Falcon Eye 1 launch failure, Ethiopian Boeing B737 Max 8
Worldwide Credit & Surety all natures			
2017	15,177	15,685	Bankruptcy of a Chinese mobile manufacturer
Worldwide Casualty non proportional and facultative - including PA, WC, IDI and Medical Malpractice			
2010	21,887	21,887	Residences damaged by pyrrhotite (Canada)
2012	20,736	20,736	Bayou Corne sinkhole
Worldwide Engineering all natures			
2011	5,325	29,645	Ituango Heavy Rain
2014	2,506	21,725	Kuwait Flood
2018	12,181	17,360	South Alex Fire

Appendix 2: Positive (negative) development vs Reserve release (reinforcement)

Positive (negative) development

- Any movement of the reserves which are fully reflecting the incurred's ones and are not impacting the margin are identified as positive or negative development.

Reserve release (reinforcement)

- Any movement of the reserves which are not fully reflecting the incurred's ones and therefore are impacting the margin are identified as reserves' release or reinforcement.

Appendix 3: External auditors (KPMG and Mazars) statement

- On our request, procedures have been performed in 2021 by SCOR external auditors which has led to a “Statutory auditors’ report of the factual findings of the agreed-upon procedures relating to the loss development triangles and reserves for the year ended December 31, 2020”. The objective was to provide SCOR with their findings regarding the quality and the completeness of the loss development triangles disclosed. These procedures as defined by us covered quality and completeness of data disclosed, correct consolidation of the triangles and controls of process leading to the production of the Ultimate Loss Ratios as well as the “As-if” figures.
- As part of the procedure, SCOR external auditors have found that the disclosed triangles reconcile with the underlying data; the triangles have been consolidated with no exception found, the process leading to the production of the Ultimate Loss Ratios as well as the “As-if” figures did not raise any exception and the document accompanying the triangles is a fair reflection of the way in which the triangles are actually built.