# SCOR's loss development triangles and reserves as of December 2013

# Content

## 1. PURPOSE AND SCOPE

The uncertainty associated with the estimation of the adequate loss reserves amount is one of the most important risks surrounding the balance sheet of property and casualty insurance or reinsurance companies. For this reason SCOR believes that its role is to provide its stakeholders with an appropriate level of information related to this specific topic. We are publishing for the third time, along with our traditional triangles disclosure, a report with detailed information on the reserving classes and underlying data, as well as thorough explanations on how we manage the risks reflected in the disclosed triangles. We believe that this paper will give the readers additional insight into the loss development characteristics of our business as presented in our eight reserving classes.

As for previous years, the data format has not changed: we present gross loss triangles as at December 31, 2013, on an underwriting year reporting basis. Our reserving classes' definition is the same as last year. In order to give a deeper insight of the claims development of motor non proportional and casualty classes we have disclosed, as last year, for these specific classes, 15 years historical experience. All data has been converted to euros using 2013 year end closing exchange rates. In addition to triangles we present premiums, reserves and ultimate loss ratios as at December 31, 2013, corresponding to each class. To ease the comparison between last year and this year ultimate estimations, we also present the 2012 ultimate loss ratios recalculated on the 2013 reserving classes' perimeter and exchange rates. The total reserves are split between case reserves (including Additional Case Reserves - ACR) and reserves for incurred but not reported losses (IBNR reserves).

Although this report will give the reader a better understanding of what lies behind the raw triangle data, it should be recognised that a relevant actuarial analysis cannot be performed using this level of information only. The disclosed triangles represent a high level aggregation of the data we use at SCOR for our internal reserves assessments. Specific loss developments of particular contracts or events can not be correctly projected at this level of aggregation. In addition, projecting ultimate losses directly from the SCOR disclosed triangles could be misleading as these calculations do not take into account critical qualitative information surrounding the reserves. Our reserve modelling includes factors such as pricing and market conditions, changes in the risk profiles, inflation projections and anticipations on legislation trends. In the next paragraphs of this report we provide a detailed description of our reserving processes and methodologies.

# 2. RESERVING PROCESS AND METHODOLOGY

## 2.1. SCOR reserving philosophy

SCOR is required to hold reserves to cover its estimated ultimate liability for losses and loss adjustment expenses with respect to reported and unreported claims, incurred at the end of each accounting period. SCOR's reserves are established both on the basis of information the company receives from its cedant insurance companies, particularly 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, with the concerned insurers and co-insurers, available historical data to anticipate the impact of various factors such as change in laws and regulations, judicial decisions that may tend to affect potential losses amounts, changes in social and political attitudes that may increase exposure to losses and trends in claims development, or evolutions in general economic conditions.

SCOR overall reserving philosophy can be summarized as follows:

- Instant reactivity to indications of potential negative developments
- Conservative 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

## 2.2. Reserving process and controls at SCOR

**Strong governance insuring independency of actuarial opinion**

SCOR has put in place around its P&C reserving risk a strict and robust corporate governance with transparent decision processes and four levels of controls (Local actuarial reviews, Group Actuarial review, External consultants analysis on some entities when required and on demand External Actuarial Audit on specific segments).

Centrally defined and tightly controlled reserving process, strong portfolio diversification, prudent reserving policy, sound reserving tools and, state of the art actuarial methods used by highly skilled professionals together with a high level of transparency, both internally and externally, minimise the risk of inadequate reserves.

The actuarial best estimate is based on the valuation performed annually on the 3$^{rd}$ quarter data and rolled forward with 4$^{th}$ quarter data by local actuaries and Group Actuarial department.

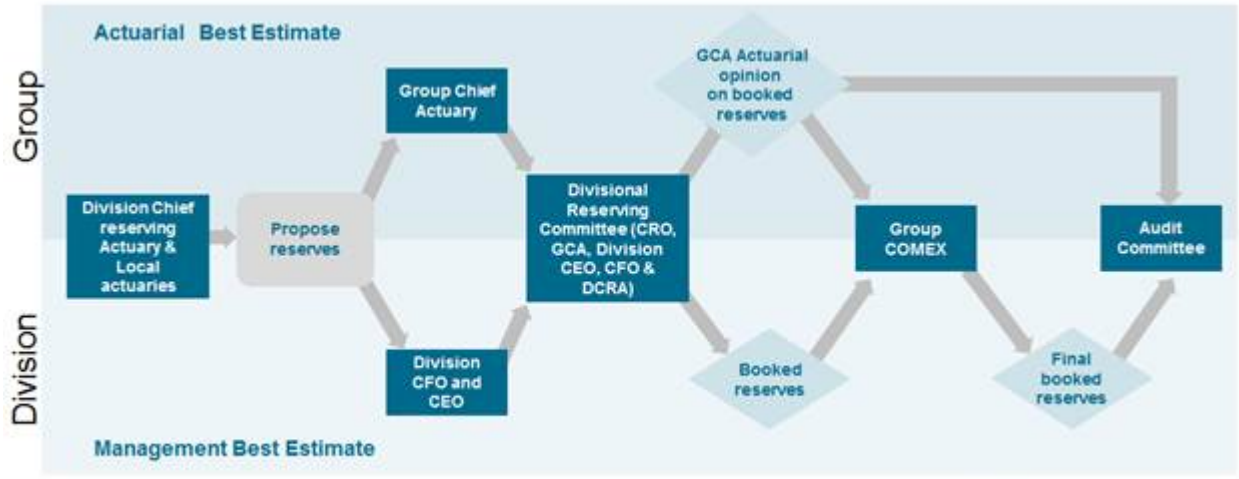
**Independency of actuarial opinion**

As presented in the following chart, an initial booked reserves position is proposed by the division based on division chief reserving actuary and local actuaries' opinions and a first opinion on IFRS Best estimate position is formed by the Group Chief Actuary based on local and Group Actuarial analyses.

Both are compared in the Group P&C Reserving Committee (Group Chief Actuary, Group Chief Risk Officer, SCOR P&C Chief Executive Officer, SCOR P&C Chief Financial Officer and SCOR P&C Chief Reserving Actuary). The different views on claims and the main issues are discussed and can result to a review of the different positions.

The final actuarial best estimate position is then presented to the Group Executive Committee who validates the booked reserves.

Actuarial IFRS Best Estimate position and reserving adequacy is then shared by the Group Chief Actuary with Board Audit Committee as detailed in the following chart:




*Internal Control System:*

SCOR reserving governance framework is defined by three processes which meet SCOR Internal Control Standards, namely:

- P&C reserving adequacy report
- Quarterly management of P&C reserves
- Reserving data input in the internal model

These processes are validated and completed by reserving internal control procedures implemented since the last eight years. The main procedures address the relevance of the actuarial ultimate loss estimation, the validation of new reserving methods, the verification of their appropriate application and the actuarial segmentation homogeneity.

*Reserving Guidelines:*

The purpose is to ensure a consistent approach to our best estimate liability assessment, patterns and portfolio volatility. The framework and scope define who is responsible for what (local versus group, scope of perimeter) and the escalation process to seek approval when deviating in material aspects (tools, methodologies, standards). The reserving rules apply for all liabilities of SCOR Global P&C and focus on the external assumed business. Overall our approach is to provide a global framework while still allowing for local specificities. The idea is to support quality & minimize systematic risk while not hinder from operational work.

*Peer Reviews:*

As explained above, the overall process is based on bottom-up approach and the 4 eyes principle. Actuarial best estimates are controlled via reviews/peer-reviews done by the Group Actuarial Department, but also by periodic reviews of external Actuarial Consultants:

- Annual peer review done by SCOR's approved Auditors
- External review done on the overall P&C claims reserves performed at least once every three years.
- Lloyd's: Each Lloyd's Syndicate has to provide a SAO (Statement of Actuarial Opinion) signed by external actuaries to Lloyd's
- GAUM: Annual review of gross and net reserves by Milliman for its pool members
- Hong-Kong and Beijing: annual sign-off of the reserves by S. Yu and Partners Ltd.
- Australia: annual sign-off of the reserves by KPMG Actuaries Pty Ltd
- Canada: review of the reserves every three years by J.S. Cheng and Partners
- Argentina: review of the reserves by PWC on a quarterly basis
- South Africa: review by Deloitte of the methodologies used to compute the IBNR in 2013

*Commutations:*

The Group continues to pursue the active commutations policy of its portfolios started in 2003, the main goals being to reduce the volatility of claims reserves, to reduce the administrative costs and to allow for capital optimization. This policy will be continued by focusing efforts on the U.S. run-off activities, business exposed to Asbestos and Pollution risks, and some treaties written by the former Converium company acquired by SCOR.

### 2.3. Methodologies

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 cedant's own evaluation method. The ceding company reports the claim and its suggested reserve amount to SCOR. SCOR records the ceding company's suggested reserve and is free to establish greater or smaller reserves (ACR) based on the review and analysis performed by SCOR's claims division and internal actuaries. Such 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 SCOR's assessment of the ceding company's claims' management. Our policy regarding the ceding company's suggested reserves is to be very proactive. As a consequence, SCOR's claims department regularly performs many in-depth claims audits, which could lead to the constitution of ACR. Some claims audits can also be performed, on behalf of SCOR, by external claims experts.

Conforming to applicable regulatory requirements and in accordance with industry practices, SCOR maintains in addition to case reserves and ACR, IBNR Reserves (Incurred But Not Reported). These reserves are meant to cover two types of claims: IBNYR, claims Incurred But Not Yet Reported to the ceding company or to SCOR, and IBNER, claims Incurred But Not Enough Reserved, i.e. on which the estimated final cost reported to SCOR can differ.

To assess these 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 (similar development pattern, 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.

SCOR uses among others:

- Deterministic methods (e.g. Chain Ladder, Bornhuetter-Ferguson and Loss ratio methods) for Best Estimate assessment as well as stochastic approaches (e.g. Mack model, Bootstrap) for reserves' volatility estimates.
- Experts judgments (e.g. exogenous a priori loss ratios based on P&C pricing or underwriters' departments, market benchmark such as RAA[1] patterns)
- Tailor made solutions for non-standard segments

| Deterministic Methods | Description |
|---|---|
| Development Factor Method | Variations on "Chain-ladder" or "Link Ratio" methods, extended by curve fitting (to predict tail development and for smoothing of development ratios), including extensive graphical visualization and powerful diagnostics. Use of market benchmark can complement SCOR data if not sufficient. |
| Bornhuetter Ferguson | A simple method for blending exposure-based estimates (usually from SCOR pricing database) with experience-based estimates (usually Chain Ladder estimates). This technique is used mainly on the most recent underwriting years when the development factors based methods are not appropriate. |
| Loss Ratio | The loss ratio method is used on most recent underwriting years when the information given by the data is not sufficient and therefore the Chain Ladder and Bornhuetter Ferguson methods are too volatile or when there are no claims data and the methods based on development factors fail. |
| Berquist and Sherman Adjustments | The Settlement Rate Adjustment method adjusts a triangle of paid claims in reference to settlement rates. The Case Reserve Adequacy Adjustment method adjusts a triangle of case reserves (and hence incurred claims), by modelling the adequacy of case reserves. In each case, the aim is to end up with a triangle without inherent trends so that the Development Factor Method can be applied without bias. |
| Latent Claims Specific Methods | The evaluation of reserves for latent claims is usually done through frequency / severity methods using the Manville pattern (for Asbestos claims only), the S-Curves method or Survival Ratio methods. |

[1] Reinsurance Association of America

| Stochastic Methods | Description |
|---|---|
| Mack Method | Estimate of the standard deviation in a closed formula with assumptions in line with the Chain Ladder method. |
| Bootstrap Method | A model free method of estimating variability based on stochastic techniques applied to development factor models. This method produces full probability distributions of reserve estimates. |

| Specific Methods | Description |
|---|---|
| French motor Non Proportional | Due to change in the underlying portfolio (damage awards in capital and not anymore in annuities), legislation changes (interest rates, mortality tables) and re-underwriting of the risks, it is not possible to use directly the standard methods on this portfolio. The model incorporates qualitative factors and exogenous expert judgments on a claim by claim basis in order to be more accurate. |
| French Medical Malpractice | Given changes in the underlying risk (notification attachment against occurrence since 1996) and the legislation changes (last one being "Rambur" ruling), the modelling needs to incorporate qualitative feedbacks and scenarios from claims experts. The modelling is also done from ground up to avoid any reporting delay issue. |
| UK Medical Malpractice | Contrary to most of SCOR portfolio, this is an insurance portfolio for which we have claim by claim detail. One key uncertainty is linked to whether or not a given doctor will be declared liable. This needs to be modelled separately. |

The validation of the methods is assessed using residual and stability analysis techniques. All these methods are documented in SCOR Reserving Best Practice Manual. This document has been developed with contributions from many actuarial sources, and is a living document on SCOR intranet as SCOR regularly reviews and updates its methods for determining IBNR Reserves. The related guidelines developed are in accordance with the ERM framework. Only methods approved by the Group Chief Actuary can be used.

In addition to pure mathematical stochastic methods, reserves' variability is also tested through deterministic methods: stress tests on key risks factors along with shock *scenarii* enabling us to assess the risks surrounding the reserves. These techniques allow building what we call a "reserving heat map" ranking majors portfolios in terms of risks and potential impact on the bottom line.

## 3. DATA DESCRIPTION

SCOR has an unique technical datacenter “Omega” (the Company’s technical and accounting IT system since 1998) and all the actuarial data comes from this data source. The same data is used for the technical closings and for SCOR financial accounts. The data entries process is not only audited internally but also by SCOR statutory auditors around the world. This ensures a global quality and consistency thanks to an unique system and global processes.

The data in the triangles represents gross losses reported or paid as at December 31, 2013. All data has been converted to euros using 2013 year end closing exchange rates. The rates applied are the same for every accounting year. As a consequence historical fluctuations of exchange rates do not distort triangles claims developments.

Triangulation statistics by class of business are directly created from the technical accounting entries in Omega. Triangles are built by cumulating accounting data from each accounting year for every underwriting year. Under this construction, each diagonal represents an accounting year. It is worth mentioning that by “accounting year” we mean SCOR accounting year, not the accounting year of the ceding companies. For example, if a claim is recorded by the ceding company in year 2012 and is reported to SCOR only in year 2013, then this claim will appear in accounting year 2013 in SCOR triangles. Under this presentation, diagonals do not change from one disclosure year to another (only exchange rates changes and closed claims can explain the variations – see the part 5). The only exception to this rule is our UK medical malpractice portfolio where the last diagonal represents the last accounting year as of end of the third quarter only, and is therefore updated with the 4$^{th}$ quarter in the following year (this business is part of the worldwide casualty proportional class).

The underwriting years reporting basis used in this disclosure is also used for our internal analyses. This is the case for most reinsurance companies, whereas, for insurance companies, the reporting basis is almost always the accident year. This is due to the fact that reinsurers do not have access to the accident year information: the issue is relevant mainly when the reinsurance contract is proportional, meaning that the reinsurer is advised of losses on an aggregate basis (no details on individual losses is provided) regarding a specific underwriting year without details on the accident year.

Payments and reserves of closed or commuted contracts are not included in the statistics. These contracts are excluded in our analysis in order not to bias the loss development factors selection, as they would tend to skew the curves. SCOR has put in place dedicated procedures to close contracts, based on objective criteria. These criteria depend on the nature, the line of business of the contract and accounting position of claims reserves. Very few contracts need to be reopened (due to claims movements) after they have been closed.

Incurred (or reported) claims include paid claims, case reserves as reported by the ceding company, but also, ACR that SCOR’s claim management team can set up when they consider it necessary, on a claim by claim basis.

This triangles and reserves disclosure addresses 85% of gross carried property and casualty reserves. Lloyd's portfolio data is not disclosed as the RITC scheme (Reinsurance To Close – Lloyd's accounting scheme) does not allow displaying entire triangles[2]. Run-off portfolios are not disclosed either as their claims development profile does not really match the actual development of the ongoing portfolio. Direct business segments have also been excluded from triangles as this is pure primary insurance, not reinsurance.

*Segmentation:*

The actuarial reporting axis is the actuarial segment (also referred to as actuarial class) which groups together homogeneous contracts based on a variety of criteria (proportional basis or not, underlying risks typology, geography...). At group level there are 392 active reserving segments (still carrying reserves) at 2013 year end.

The actuarial segmentation is the first step of the reserving exercise. Each actuarial segment must bring together data with similar development pattern. Furthermore, statistical mass is required in order to apply actuarial methods. There are strict Group's rules to create actuarial segments. The segmentation is fixed for each calendar year. Each Local Actuary has a defined user profile with permission or not to modify segmentation. The rights to modify segmentation are defined by the SCOR Global P&C Chief Reserving Actuary and provided to IT department for acting. When a subsidiary wants to adapt its segmentation due, for example, to a change of underwriting policy, the new segmentation and its consequences in terms of level of IBNR are proposed during the 1st quarter to the Division P&C Chief Reserving Actuary, which validates it and decides or not its implementation. Referral to the Group Chief Actuary has been set-up for material segmentation changes. The segmentation is then frozen for a given calendar year. Exceptions can occur during the year if a large new contract is signed / commuted / transferred / novated.

The eight reserving classes that we disclose are aggregations of these actuarial segments.

*Reconciliation:*

SCOR puts a great emphasis in the reconciliation process to ensure full consistency of the actuarial triangles and the financial accounts. SCOR has put in place since 2005 a specific reconciliation procedure between the triangles and the technical accounting system. The reconciliation is done at group level as well as in the local reserving annual report. This ensures a consistency between the published claims reserves and the actuarial data used to derive our estimates.

[2] Three years after the beginning of an underwriting year, a RITC (Reinsurance To Close) is purchased to bring finality to the result for that closing underwriting year, allowing a profit calculation and a distribution to take place. The RITC is a payment to transfer liabilities from one syndicate year of account to another. It can be thought of as a 100% quota share reinsurance of year of account, where the n-2 open year of account "reinsures" the previous years of account which are closed.

# 4. TRIANGLES' CLASS DETAILS

## 4.1. Preliminary comments on types of reinsurance

In **facultative reinsurance**, the ceding company cedes and the reinsurer assumes all or part of the risk 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.

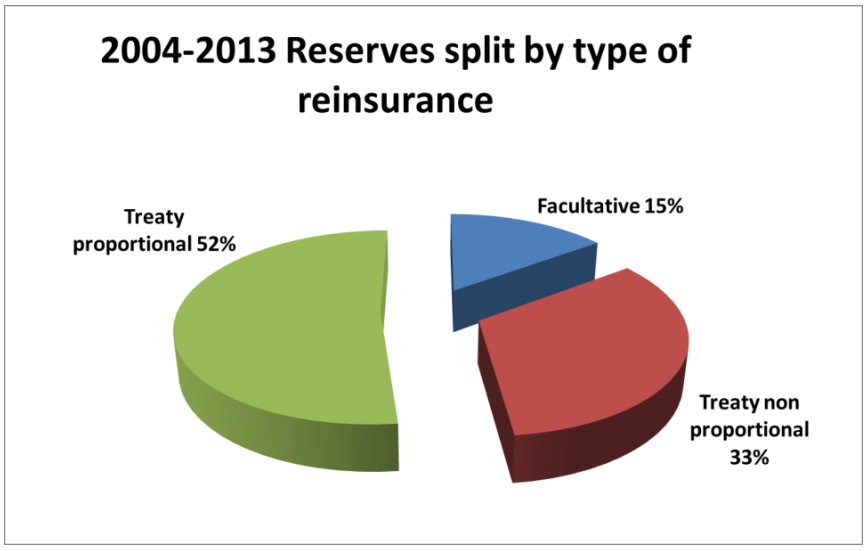
In **treaty reinsurance**, the ceding company has a contractual obligation to cede and the reinsurer to accept, a specified portion of a type or category of risks insured by the ceding company. Reinsurers issuing the treaties, as done by SCOR, do not separately evaluate each of the individual risks assumed under the treaty. As a result, after reviewing the ceding company's underwriting practices, SCOR's treaties depend on the coverage decisions made originally by the policy writers of the ceding company.

Both treaty and facultative reinsurance can be underwritten on a proportional (or quota share) basis, or non-proportional (excess loss or stop loss) basis.

With respect to **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.

In case of reinsurance written on a **non-proportional**, or excess of loss or stop loss basis, 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.

Presented below is the split of SCOR's reserves with respect to these categories:



Although the losses under a quota share reinsurance treaty are greater in number than under an excess of loss contract, it is generally easier to predict these losses on a quota share basis and the terms and conditions of the contract can be drafted to limit the total coverage offered under the contract. A quota share reinsurance treaty therefore does not necessarily require that a reinsurance company assume greater risk exposure than on an excess of loss contract. In addition, the predictability of the loss experience may better enable underwriters and actuaries to price such business more accurately in light of the risk assumed, therefore reducing the volatility of results.

Excess of loss reinsurance are often written in layers. One or a group of reinsurers accepts the risk just above the ceding company's retention up to a specified amount, at which point another reinsurer or a group of reinsurers accepts the excess liability up to a higher specified amount or such liability reverts to the ceding company. The reinsurer taking on the risk just above the ceding company's retention layer is said to write working layer or low layer excess of loss reinsurance. A loss that reaches just beyond the ceding company's retention will typically 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 that in higher layers due to a greater historical frequency, and therefore, like quota share reinsurance, enables underwriters and actuaries to more accurately price the underlying risks.

### 4.2. Overall description of classes

For the period from 2004 to 2013, the major class of business in terms of premiums and reserves (case and IBNR reserves) is the property fire class. The casualty proportional, casualty non proportional and facultative and motor non proportional and facultative classes have also an important weight in terms of reserves.

*in €M, as of 2013 year end*

| Reserving class | 2013 ultimate premiums | 2004-2013 reserves (on an ultimate premium basis) |
|---|---|---|
| Worldwide casualty non proportional and facultative - including PA, WC, IDI and Medical Malpractice | 184 | 1,045 |
| Worldwide casualty proportional - including PA, WC, IDI and Medical Malpractice | 175 | 1,180 |
| Worldwide credit & surety all natures | 225 | 534 |
| Worldwide engineering all natures | 217 | 710 |
| Worldwide marine, transport, aviation all natures | 323 | 718 |
| Worldwide motor non proportional and facultative | 154 | 1,046 |
| Worldwide motor proportional | 263 | 507 |
| Worldwide property fire all natures including Nat Cat | 2,099 | 2,932 |
| **Total** | **3,641** | **8,672** |

### 4.3. Worldwide engineering all natures

Engineering insurance 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. The risks covered are both short and long term risks. As a result the development length is medium tail (5-7 years).

A large part of the portfolio risks is located in South Europe (including France) and Middle East. It is worth mentioning that Asia represents around 25% of the premiums and reserves.

The contracts are mostly proportional contracts (2 out of 3) the remainder being contracts written on a facultative basis.

### 4.4. Property fire all natures including Nat Cat

The property insurance is a short-term business with a 2 or 3 years claims development. The risks covered are classically fire, agriculture, machinery breakdown, and theft for private individuals, commercial or industrial risks (fire being the major part of the premium (over 90%)).

This class also includes CAT risks which have a very short term development pattern.

Almost half of the premiums and reserves are related to proportional business, around 30% are related to non-proportional business and 20% to facultative business. Around 15% of premiums and 10% of reserves are related to risks underwritten in the Americas (Canada, US and Latin America).

### 4.5. Worldwide casualty proportional - including PA, WC, IDI and Medical Malpractice

This class gathers all the treaty proportional business of third party liability (except motor liability). The premiums and reserves of this class are predominantly derived from our UK medical malpractice portfolio (long-term risks). The premiums represent 40% of the total of the class while the reserves represent around 60%.

A significant part of this class is IDI business (Inherent Defect Insurance) in France and Spain (15% of premiums and 15% of reserves). 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 material exposure).

### 4.6. Worldwide casualty non proportional and facultative - including PA, WC, IDI and Medical Malpractice

This class contains the same underlying liabilities as the proportional class but on a non-proportional and facultative basis. The split is however different: IDI represents around 25% of premiums and reserves of the class (France and Spain mainly) while medical malpractice (mainly France) represents around 5% of premiums and 10% of reserves.

The other major risks in this class are professional and manufacturing liabilities (heavy industry, food producers). Workers compensation business is also included (mainly in the US, non-material exposure).

Please note that some financial institutions and pharmaceutical risks have been underwritten in the past but are now in run-off.

### 4.7. Worldwide marine, transport, aviation all natures

This class is dominated by the aviation risks with around 50% of premiums and 50% of reserves, of which around 40% of premiums and 25% of reserves for the aviation risks pool. Almost 30% of this pool reserves is product liability, which is a long-term risk. Aviation risks also include hull and liabilities for airlines, general aviation and satellite risks, these latter being shorter term risks.

Marine and transport are basically insurance of hull and liabilities for merchant ships. This business represents approximately 25% of premiums and 30% of reserves. Finally the class also comprises offshore insurance (e.g. offshore oil rigs).

### 4.8. Worldwide credit & surety all natures

This class mainly contains proportional business (90% of premium and 80% of reserves). The surety business (around 40% of premiums and reserves) is mainly performance bonds. The rest of the portfolio is credit insurance. Both are mid-term business (in case of litigation, the indemnification occurs only when the litigation is over). For credit insurance the underlying risks are companies only, for which the insurance contract is meant to secure the payment of their invoices. It is worth mentioning that the insurer can unilaterally terminate the contract whenever he wants. Europe accounts for 65% of the reserves and 65% of premiums.

### 4.9. Worldwide motor non proportional and facultative

The main risk covered is auto liability. Bodily injuries represent the largest part of both premiums and reserves of this class.

It is worth mentioning that the underlying risks are long term business. 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. This can create a significant lag between the time when the loss occurs and the time when its cost reaches the threshold. As these claims are the most expensive they are also more complex and the medical and legal procedure that leads to the final cost is longer and more uncertain than for smaller claims. There are also sometimes payments in annuities (against lump sums) that can increase the duration. In case of inflation, part of the additional cost would be shared between the cedents and SCOR thanks to the contractual indexation clauses.

An important part of this class is motor third party liability on French market: around 25% premiums and 40% of reserves. The second largest part is motor third party liability on UK market: 20% premiums and 15% reserves. There is almost no Facultative business in this class.

### 4.10. Worldwide motor proportional

Property damages represent around 15% of premiums and 5% of reserves, the other part being bodily injuries. 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). Some treaties are also covered by ROJA contracts (Reinsurance On Joint Account protection) capping the claims development.

Europe represents almost 65% of premiums and 60% of reserves.

## 5. RECONCILIATION TO PRIOR TRIANGLES

The following table provides a reconciliation between the amount of incurred claims disclosed last year and this year.

Figures in column (1) represent the 2012 diagonal published last year (excluding UWY 1998 for long tail segments and excluding UWY 2003 for short-medium tail segments), whereas figures in column (6) represent the 2012 diagonal published one year later i.e. in 2013.

*in €M, as of 2013 year end*

| Reserving class | 2012 diagonal as at end 2012 (1) | Closed and commuted contracts (2) | Improvement in the definition of reserving class perimeter (3) | Foreign exchange rates variations (4) | Misc. (5) | 2012 diagonal as at end 2013 (6) |
|---|---|---|---|---|---|---|
| Worldwide engineering all natures | 582 | -0 | -1 | -28 | -0 | 553 |
| Worldwide Property fire all natures including Nat Cat | 6,823 | -80 | -124 | -395 | 1 | 6,224 |
| Worldwide Casualty proportional - including PA, WC, IDI and Medical Malpractice | 1,943 | -9 | 0 | -50 | -1 | 1,883 |
| Worldwide Casualty non proportional and facultative - including PA, WC, IDI and Medical Malpractice | 1,153 | -10 | -17 | -44 | -1 | 1,081 |
| Worldwide marine, transport , aviation all natures including GAUM | 1,442 | -3 | -0 | -79 | 0 | 1,360 |
| Worldwide credit & surety all natures | 535 | -5 | 0 | -13 | 0 | 517 |
| Worldwide motor proportional | 1,468 | -5 | 0 | -49 | -0 | 1,414 |
| Worldwide motor non proportional and facultative | 1,541 | -14 | 0 | -32 | 1 | 1,496 |
| **TOTAL disclosed** | **15,486** | **-126** | **-142** | **-691** | **0** | **14,527** |

## 6. 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.

These figures, gross of retrocession, are based on the disclosed perimeter only; in particular closed contracts are not included. Only losses amounts exceeding €15m (on the disclosed perimeter) are taken into account. As such these figures could be different from SCOR previously published estimations.

Reserves for these losses are not based on aggregate development statistics, but rather on ground-up exposure-based assessments reflecting information provided by cedants on a contract-by contract basis. These figures do not include any SCOR IBNR.

*in € 000's as of 2013 year end*

| Underwriting year | Paid claims | Incurred claims | Comments |
|---|---|---|---|
| Property fire all natures including Nat Cat | | | |
| 2004 | 78,483 | 78,570 | Typhoon Songda, Hurricane Ivan |
| 2005 | 222,789 | 224,345 | Hurricanes Wilma and Katrina, Central Europe floods |
| 2007 | 91,645 | 92,142 | Windstorm Kyrill, Australian floods |
| 2008 | 125,263 | 129,743 | Hurricane Ike |
| 2009 | 160,477 | 165,991 | 2010 Chile earthquake, windstorm Klaus, Switzerland and Austria hailstorm |
| 2010 | 428,192 | 501,562 | New Zealand earthquake, Great East Japan earthquake |
| 2011 | 366,080 | 428,600 | Thailand floods, New Zealand earthquake, Heavy rainfall in Denmark |
| 2012 | 161,199 | 263,458 | Hurricane Sandy, Italy earthquake |
| 2013 | 126,522 | 356,706 | Central European Flood, Hailstorm Andreas |
| Worldwide marine, transport , aviation all natures | | | |
| 2005 | 29,784 | 29,823 | Huricanes Rita and Katrina |
| 2011 | 25,539 | 30,527 | Costa Concordia loss, Thailand flood, energy and marine loss |
| 2012 | 26,312 | 31,207 | Hurricane Sandy, Satellite loss, Costa Concordia loss |
| Worldwide casualty non proportional and facultative - including PA, WC, IDI and Medical Malpractice | | | |
| 1999 | 28,707 | 28,862 | Roissy Charles de Gaulle airport: collapse of Terminal 2E (occurred in 2004) |
| 2000 | 13,523 | 17,866 | Pharmaceutical losses (Lipobay and Vioxx) |
| 2001 | 73,574 | 75,419 | Rail derailment North Dakota, Pharmaceutical loss (Lipobay), AZF explosion |
| 2002 | 24,036 | 24,036 | Pharmaceutical loss (Vioxx) |
| 2003 | 157 | 19,605 | Pharmaceutical loss (Vioxx) |
| Worldwide motor non proportional and facultative | | | |
| 1999 | 31,133 | 31,177 | Windstorms Lothar and Martin |

## 7. LIST OF ABBREVIATIONS

| | |
|---|---|
| ACR | Additional Case Reserves |
| D&O | Directors and Officers professional liability insurance |
| GAUM | General Aviation Underwriting Managers |
| IBNR | Incurred But Not Reported = IBNYR + IBNER |
| IBNER | Incurred But Not Enough Reserved |
| IBNYR | Incurred But Not Yet Reported |
| IDI | Inherent Defect Insurance |
| PA | Personal accident |
| RAA | Reinsurance Association of America |
| RITC | Reinsurance To Close |
| ROJA | Reinsurance On Joint Account |
| WC | Workers Compensation |

## 8. TRIANGLES

As for previous years, the data format has not changed: we present gross loss triangles as at December 31, 2013, on an underwriting year reporting basis.

To help the reader better understand and analyse our reserves, we also disclosed:

- paid loss development triangles for each reserving class,
- 15 years loss triangles for the motor non proportional and casualty classes,
- An “Ultimate Loss Ratio 2012 - as if 2013” which is last year’s ultimate loss ratio recomputed with 2013 exchange rates and including the effects described in the reconciliation (closed or commuted contracts).