

## Sampo Group's **Annual Report 2013**

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Non-life Insurance Underwriting Risks Non-life Insurance Underwriting Risks

# **Non-life Insurance Underwriting Risks**

Underwriting risk is the risk of loss or of adverse changes in the value of insurance liabilities, due to inadequate pricing and provisioning assumptions.

## **Non-life Insurance Underwriting Risks**

Natural disasters, catastrophes, tech  
business cyc

Changes in the timing, frequency o  
severity of fires, motor accidents,  
windstorms, floods, thefts etc.

## **Premium and catastrophe risks**

- Size and/or frequency of future claims related to unexpired contracts being greater than expected
- Timing of future claims payments relat unexpired contracts differs from expect

## **Premium Risk and Catastrophe Risk**

Premium risk is the risk of loss or of adverse changes in the value of insurance liabilities, resulting from fluctuations in the timing, frequency and severity of insured events which have not occurred by the balance sheet date.

Catastrophe risk is the risk of loss or of adverse changes in the value of insurance liabilities, resulting from significant uncertainty of pricing and provisioning assumptions related to extreme or exceptional events.

### **Premium Risk and Catastrophe Risk Management and Control**

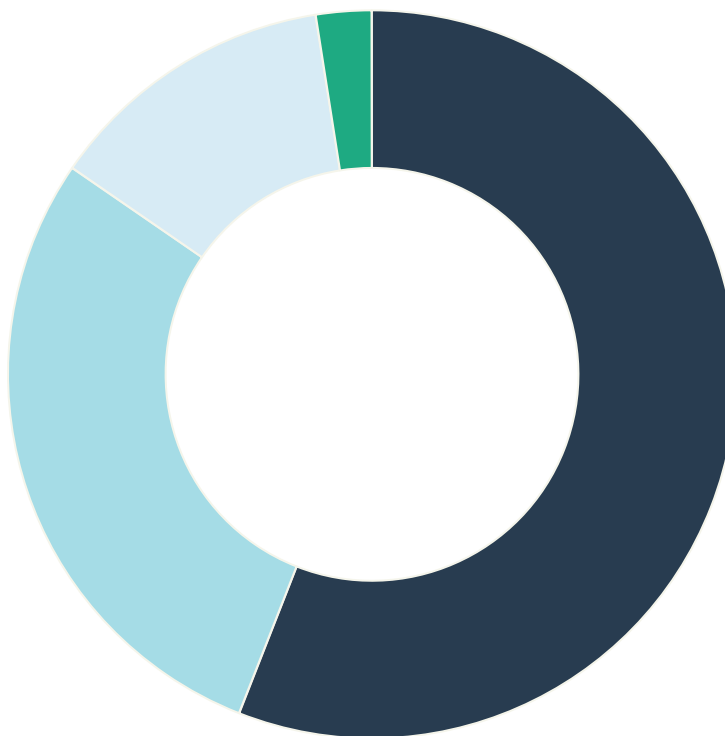
The Underwriting Policy (UW Policy) is the principal document for underwriting, and sets general principles, restrictions and directions for the underwriting activities. The Board of Directors of If P&C approves the UW Policy at least once a year.

The UW Policy is supplemented with guidelines outlining in greater detail how to conduct underwriting within each business area. These guidelines cover areas such as tariff and rating models for pricing, guidelines in respect of standard conditions and manuscript wordings, as well as authorities and limits. In accordance with the Instructions for the Underwriting Committee, the Committee is responsible for monitoring compliance with the established underwriting principles.

The business areas manage the underwriting risk on a day-to-day basis. A crucial factor affecting the profitability and risk of non-life insurance operations is the ability to accurately estimate future claims and expenses and thereby correctly price insurance contracts. The premiums within the Private business area and the premiums for smaller risks within the Commercial business area are set through tariffs. The underwriting of risks in the Industrial business area and of more complex risks within Commercial is based to a greater extent on principles and individual underwriting than on strict tariffs. In general, pricing is based on statistical analyses of historical claims data and assessments of the future development of claims frequency and claims inflation.

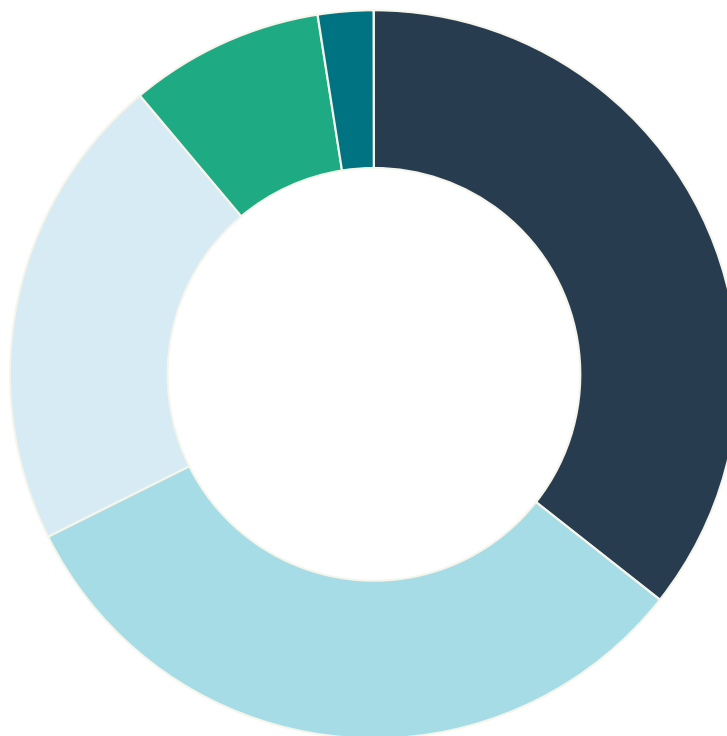
The insurance portfolio is well diversified, given the fact that If P&C has a large customer base and the business is underwritten in different geographical areas and across several lines of businesses. The degree of diversification is shown in the figure Breakdown of Gross Written Premiums by Business Area, Country and Line of Business, If P&C, 2013.

**Breakdown of Gross Written Premiums by Business Area**  
*If P&C, 2013, total 4,768 EURm*



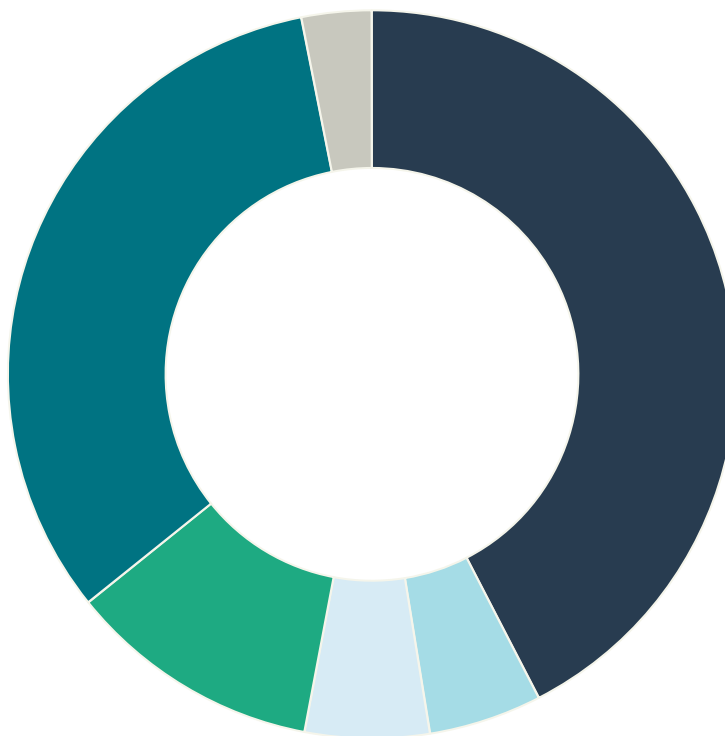
Private **2,653**  
Commercial **1,358**  
Industrial **613**  
Baltic **117**

**Breakdown of Gross Written Premiums by Country**  
*If P&C, 2013, total 4,768 EURm*



Norway **1,689**  
Sweden **1,518**  
Finland **1,006**  
Denmark **410**  
Baltic **117**

**Breakdown of Gross Written Premiums by Line of Business**  
**If P&C, 2013, total 4,768 EURm**



Motor and Motor third party liability **2,022**

Workers' compensation **240**

Liability **263**

Accident **536**

Property **1,557**

Marine, aviation, transport **148**

The item Other (including group eliminations) is not shown in the breakdowns above but it is included in total gross written premiums.

Despite the diversified portfolio, risk concentrations and thereby severe claims may arise through, for example, exposures to natural catastrophes such as storms and floods. The geographical areas most exposed to such events are Denmark, Norway and Sweden. In addition, single large claims could have an impact on the insurance operations' result. The economic impact of natural disasters and single large claims is managed using reinsurance and through diversification.

If P&C's Reinsurance Policy stipulates guidelines for the purchase of reinsurance. The need and optimal choice of reinsurance is analyzed based on statistical models for single large claims, while If P&C cooperates with external advisors for the evaluation of the exposure to natural catastrophes and the probability of occurrence of catastrophe losses. The analysis relies on If P&C's Internal Model, including catastrophe models in which catastrophes are simulated based on historical meteorological data, supplemented by statistical models as well as internal and external expert opinions. Different reinsurance structures are evaluated by looking at the expected costs versus the benefits of reinsurance, their impact on result volatility and decreased capital requirement.

A group wide reinsurance program has been in place in If P&C since 2003. In 2013, retention levels were between SEK 100 million (approximately EUR 11.3 million) and SEK 250 million (approximately EUR 28.2 million) per risk and SEK 200 million (approximately EUR 22.6 million) per event.

Sensitivity of underwriting result and hence underwriting risk is presented by changes in certain key figures in the table Sensitivity Test of Underwriting Result, If P&C, 31 December 2013 and 31 December 2012.

**Sensitivity Test of Underwriting Result**  
*If P&C, 31 December 2013 and 31 December 2012*

Key figure	Current level (2013)	Change in current level	Effect on pretax profit, EURm	
			2013	2012
Combined ratio, business area Private	87.8%	+/- 1 percentage point	+/- 26	+/- 25
Combined ratio, business area Commercial	88.6%	+/- 1 percentage point	+/- 13	+/- 13
Combined ratio, business area Industrial	91.5%	+/- 1 percentage point	+/- 5	+/- 4
Combined ratio, business area Baltics	88.4%	+/- 1 percentage point	+/- 1	+/- 1
Net premiums earned	4,505	+/- 1 per cent	+/- 45	+/- 44
Net claims incurred	3,215	+/- 1 per cent	+/- 32	+/- 31
Ceded written premiums	208	+/- 10 per cent	+/- 21	+/- 26

## Reserve Risk

Reserve risk is the risk of loss, or of adverse change in the value of insurance liabilities, resulting from fluctuations in the timing and amount of claim settlements for events which have occurred at or prior to the balance sheet date.

As part of the claims provisions are annuities, If P&C is exposed to revision risk, which is defined as the risk of loss, or of adverse change in the value of insurance and reinsurance liabilities, resulting from fluctuations in the level, trend, or volatility of revision rates applied to annuities, due to changes in the legal environment or in the state of health of the person insured. Revision risk is part of reserve risk.

The technical provisions for unearned premiums is intended to cover anticipated claims costs and operating expenses during the remaining term of insurance contracts in force. Since claims are paid after they have occurred, it is necessary to set provisions for claims outstanding. The technical provisions are the sum of provisions for unearned premiums and provisions for claims outstanding.

Technical provisions always include a degree of uncertainty as the provisions are based on estimates of the size and the frequency of future claim payments. The uncertainty of technical provisions is normally greater for new portfolios for which complete run-off statistics are not yet available, and for portfolios including claims that take a long time to settle. Workers' Compensation (WC), Motor Third Party Liability (MTPL), Personal Accident and Liability insurance, are products with the latter characteristics.



## Reserve Risk Management and Control

The Board of Directors of If P&C decides on the guidelines governing the calculation of technical provisions. If P&C's Chief Actuary is responsible for developing and presenting guidelines on how the technical provisions are to be calculated and for assessing whether the level of the total provisions is sufficient. At group level the Chief Actuary issues a quarterly report on the adequacy of technical provisions, which is submitted to the Boards of Directors, CEO, CFO and IRC of If P&C.

The Actuarial Committee is a preparatory and advisory board for If P&C's Chief Actuary. The committee makes recommendations concerning guidelines for technical calculations. The committee also monitors technical provisions and provides advice to If P&C's Chief Actuary regarding the adequacy of these provisions.

If P&C's actuaries analyze the uncertainty of technical provisions. The actuaries continuously monitor the level of provisions to ensure that they comply with established guidelines. The actuaries also develop methods and systems to support these processes.

The actuarial estimates are based on historical claims data and existing exposures that are available at the balance sheet date. Factors that are monitored include loss development trends, the level of unpaid claims, changes in legislation, case law and economic conditions. When setting provisions, the Chain Ladder and Bornhuetter-Fergusson methods are generally used, combined with projections of the number of claims and the average claim costs.

The anticipated inflation trend is taken into account when calculating all provisions and is of the utmost importance for claims settled over a long period of time, such as Motor Third Party Liability (MTPL) and Workers' Compensation (WC). The anticipated inflation is based on external assessments of the inflation trend in various areas, such as the consumer price index and payroll index, combined with If P&C's own estimation of cost for various types of claims. For lines of business such as MTPL and WC, legislation differs significantly between countries. Some of the Finnish, Swedish and Danish technical provisions for these lines include annuities that are sensitive to changes in mortality assumptions and discount rates. The proportion of technical provisions that are related to MTPL and WC is 68 per cent.

Technical provisions and the economic durations broken down by line of business and major geographical area is shown in the table Technical Provisions by Line of Business and Major Geographical Area, If P&C, 31 December 2013.

**Technical Provisions by Line of Business and Major Geographical Area**  
*If P&C, 31 December 2013*

	Sweden		Norway		Finland		Denmark		Total	
Total	EURm	Duration	EURm	Duration	EURm	Duration	EURm	Duration	EURm	Duration
Motor other and MTPL	2,606	6.9	738	2.1	916	10.5	141	1.6	4,402	6.6
Workers' compensation	0	0.0	360	5.1	1,085	10.8	251	6.7	1,696	9.1
Liability	294	3.7	162	2.7	127	2.5	76	2.0	659	3.1
Accident	255	4.4	350	2.4	149	2.6	76	1.3	830	2.9
Property	406	1.0	498	0.9	212	1.2	126	0.7	1,242	1.0
Marine, aviation,	27	1.2	41	0.7	6	1.1	15	0.8	89	0.9

transport

<b>Total</b>	<b>3,588</b>	<b>5.6</b>	<b>2,150</b>	<b>2.3</b>	<b>2,496</b>	<b>8.7</b>	<b>684</b>	<b>3.4</b>	<b>8,918</b>	<b>5.6</b>
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The sensitivity of If P&C's technical provisions to an increase in inflation, an increase in life expectancy and a decrease in the discount rate is presented in the table Sensitivities of Technical Provisions, If P&C, 2013.

**Sensitivities of Technical Provisions**  
*If P&C, 2013*

Technical provision item	Risk factor	Change in risk parameter	Country	Effect EURm
Nominal reserves	Inflation increase	Increase by 1%-point	Sweden	185.7
			Denmark	11.0
			Norway	56.5
			Finland	27.7
Annuities	Decrease in mortality	Life expectancy increase by 1 year	Sweden	12.0
			Denmark	0.5
			Finland	31.7
Discounted reserves (annuities and part of Finnish IBNR)	Decrease in discount rate	Decrease by 1%-point	Sweden	64.0
			Denmark	9.1
			Finland	175.6

If P&C's technical provisions are further analyzed by claims years. The outputs of this analysis are illustrated both before and after reinsurance in the claims cost trend tables. These are disclosed in the [Note 27](#) to the Financial Statements.