Appendix 5: Valuation for Solvency Purposes

Sampo Group Solvency II balance sheet is derived from Sampo's consolidated IFRS financial statements, which are adjusted in accordance with Solvency II regulation. The IFRS accounting principles "Summary of significant accounting principles" are presented in Sampo Group's Annual Report/ Financial Statements/Notes to the accounts.

There are no major adjustments to the IFRS numbers necessary for Solvency II purposes. A large majority of Sampo Group's assets are valued at fair value on the IFRS balance sheet based on market values. No significant alternative valuation methods are used. The fair values of financial liabilities and properties are given in the notes to the IFRS accounts.

The determination of the fair values are presented in Sampo Group's Annual Report "Financial Statement/Notes to the accounts/Summary of significant accounting policies/Fair value and Investment property" and also in the notes "Fair values" and "Determination and hierarchy of fair values".

For comparison purposes the values derived from Sampo's consolidated IFRS financial statements are mapped in accordance with the Solvency II balance sheet presentation in the below table Solvency II adjustments, 31 December 2017. Only main rows are presented. The currency used is the group's reporting currency, the euro.

The scope of Sampo Group in the SII framework is the same as the scope used in Sampo Groups's financial statement.

Solvency II Adjustments Sampo Group, 31 December 2017

Assets, EURm	IFRS value*	Solvency II value	Adjustment
Goodwill, intangible assets and deferred acquisition cost	**2,347**	**-**	**-2,347**
Deferred tax assets	**18**	**-**	**-18**
Property, plant & equipment held for own use	**158**	**160**	**1**
Investments (other than unit-linked)	**31,122**	**31,161**	**39**
Property other than for own use	572	611	39
Holdings in related undertakings	7,773	7,773	-
Equities	2,572	2,572	-
Bonds	17,523	17,523	-
Collective investments undertakings	2,119	2,119	-
Derivatives	82	82	-
Deposits other than cash equivalents	480	480	-
Asset held for unit-linked contracts	10,526	10,526	-
Loans and mortgages	419	419	-
Reinsurance recoverables	**297**	**257**	**-39**
Non-life and health similar to non-life	280	241	-39
Life and health similar to life	16	16	0
Insurance and intermediaries receivables	**1,296**	**380**	**-916**
Reinsurance receivables	**12**	**12**	**0**
Receivables (trade, not insurance)	**156**	**39**	**-117**
Own shares (held directly)	**0**	**149**	**149**
Cash and cash equivalents	**2,711**	**2,711**	**-**
Any other assets	**236**	**174**	**-62**
Total assets	**49,300**	**45,988**	**-3,311**
Liabilities, EURm	**IFRS value**	**Solvency II value**	**Adjustment**
Technical provisions – non-life	8,339	6,860	-1,479
Technical provisions – life	10,717	10,394	-323
Technical provisions – unit-linked	11,101	10,564	-537
Provisions other than technical provisions, Pension benefit obligations	104	104	-
Deferred tax liabilities	638	491	-147
Derivatives	91	91	-

Financial liabilities other than owned to credit institutions	3,182	3,265	83
Insurance and intermediaries payables	276	276	-
Reinsurance payables	33	30	-4
Payables (trade, not insurance)	440	324	-116
Subordinated liabilities	377	368	-9
Any other liabilities, not elsewhere shown	492	450	-42
Total liabilities	**35,792**	**33,217**	**-2,575**
Excess of assets over liabilities	**13,508**	**12,771**	**-737**

*In IFRS Sampo's financial assets consist of equity and debt instruments available for sale and fair value through profit/loss, derivatives and loans and receivables. Financial liabilities in IFRS consist of derivatives and other liabilities eg. subordinated liabilities and other debt securities in issue.

According to the Solvency II balance sheet the excess of assets over liabilities for the Group per 31.12.2017 was EUR 737 million less than the respective IFRS figure. On the asset side the main differences are due to the different treatment of intangible assets and inclusion of future undue premium receivables in technical provisions instead of assets. On the liability side there are material differences related to technical provisions due to different classification of some items and valuation principles. These differences are discussed in the next sections.

Assets

In the group Solvency II balance sheet goodwill, intangible assets and deferred acquisition costs are valued at zero.

While recognition of deferred taxes is consistent with the IFRS accounts, SII adjustments affect the carrying values in the SII balance sheet and thus give rise to additional deferred tax effects. Solvency II valuation decreased deferred tax assets by EUR 18 million and deferred tax liabilities by EUR 147 million. The difference is mainly due to elimination of certain assets (intangible assets, etc) and differences in the calculation of technical provisions.

There are no anticipated effects on the carrying amounts of Sampo's investment assets except for properties. In solvency II balance sheet properties are valued at fair value according to SII valuation rules. This increases the value of properties by EUR 40 million.

Loans and mortgages are valued at amortized cost, which is not in line with the treatment for financial assets in Solvency II. Sampo, however, considers the IFRS value to be substantially commensurate with the fair value of the loans.

Participations are reported in Sampo's SII consolidated balance sheet using the adjusted equity method, or where applicable, the IFRS equity method. Participations refers to undertakings in which Sampo Group directly or indirectly has significant influence, which is normally the case when the shareholding amounts to a minimum of 20 per cent of the capital or voting rights for all shares in the company.

Reinsurance recoverables represent the reinsurers' share of the best estimate, less expected counterparty default. Consistently with technical provisions, these amounts are calculated in line with the SII requirements.

Under Solvency II the technical provisions should fully take into account all cash inflows and outflows. Therefore, in regard to the policies in force, the future premiums expected but not yet due are not recognized as receivables. Instead they are included in the premium provision based on a best estimate, which differs from the treatment under the IFRS, where premium receivables are recognized in the balance sheet. Thus receivables of EUR 916 million were reclassified from premium receivables to insurance liabilities. Receivables in Solvency II relate only to the amounts due for payments by policyholders, insurers, and others linked to insurance business.

The adjustment of receivables (trade receivables, not insurance receivables) relates to netting of receivable amounts in relation to the Finnish medical malpractice pool ("MMP"), public sector, which are treated as part of the SII best estimate technical provisions, whereas in Sampo Group's consolidated accounts the MMP provision public sector is recognized as other assets / liabilities. Receivables of EUR 112 million are reclassified from trade receivables to the insurance obligation.

In Solvency II Own Shares EUR 149 million are recognized on balance sheet whereas in IFRS Own Shares are deducted from Equity.

Technical Provisions According to Solvency II in Sampo Group

In Solvency II, the value of technical provisions is equal to the sum of a best estimate and a risk margin.

The **Best Estimate** is determined as follows:

- First, all expected future insurance liability cash flows and cash flows related to the management and claims handling costs of insurance liabilities are estimated by the company at best effort basis based on recognized actuarial and statistical techniques.
- Second, all of these cash flows are discounted by the risk

free interest rate term structure as defined and published by EIOPA.

The best estimate is calculated separately on a gross basis, without deduction of the amounts recoverable from reinsurance contracts, and on a net basis by taking into account the ceded amount representing amounts recoverable from reinsurance contracts.

The above calculations of the best estimate are done separately for each currency the company has insurance liabilities in and the currency specific discount curve as defined by EIOPA is used. This risk free term structure is based on market rates that are adjusted by credit risk adjustment and by volatility adjustment. The use of volatility adjustment is optional. This routine is followed up to the last liquid point of market rates as defined by EIOPA and it is defined separately for different currencies. The last liquid point is for example 20 years for the euro and 10 years for the Swedish krona. From the last liquid point and ahead, being the last point on the curve based on market rates, the risk free term structure is affected by the Ultimate Forward Rate (UFR) as defined by EIOPA.

The future expected cash flows of insurance activities are always estimates and hence their magnitude and timing are uncertain by their nature. For this uncertainty, and to arrive at a market consistent valuation of the liabilities, a company must take into account the capital allocated for the run-off of the liabilities. **Risk Margin** is the cost of this capital and it is determined as follows.

i. It is assumed that a company is not taking on any excess market risk nor writing any new business. Then all expected future cash flows of insurance activities match exactly with risk free asset cash flows in same currencies as insurance related cash flows.
ii. With the market risk SCR at zero and no new business being written, the company's SCR is related to the insurance risk, reinsurance credit risk and operational risk.
iii. Since no new business is written, the cash flows behind the best estimate will run off. Based on these cash flows, the company calculates the future values of the best estimate and the resulting SCRs until full depletion of all the cash flows behind the best estimate. Hence, as a result, the future values of required capital at different future times have been derived.
iv. All of the resulting future SCR values are discounted to one present value with the risk free-rate as defined by EIOPA.
v. Finally, to get the risk margin, the cost for holding the SCR until full run-off of the best estimate is calculated by multiplying the sum of the future SCRs by 6 per cent – the cost of capital given by EIOPA.

Conceptual Differences between Solvency II and IFRS Technical Provisions

The main conceptual differences between SII and IFRS Technical Provisions affecting Sampo Group are:

1. **In Solvency II a "true best estimate" is defined as the mean of the full range of possible future outcomes of insurance cash flows** without any cash flow add-ons based on prudency. The IFRS provisions may include prudential assumptions when the cash flows are estimated.
2. **In Solvency II, all cash flows are discounted by EIOPAS´s risk free interest rates** whereas within the financial accounting regime not all cash flows are discounted, and when discounting, discount rates based on local regulations are typically used.
3. **The inclusion of future insurance events into Technical Provisions is fundamentally different in SII and in financial accounting.** The following points listed are illustrating these differences, but local financial accounting rules may be different than the ones used as examples here.
   - Following the financial accounting rules, when an insurance company writes a premium, **the full written premium is booked into the reserves at the moment of the writing.** This reserve is called the Unearned Premium Reserve (UPR) and its conceptual purpose is to cover future insurance events on the written contracts. After the initial booking, the reserve is released linearly into earnings during the lifetime of the insurance contract – at the end of the contract period there is no UPR left and if the claims and costs related to the contract turned out to be lower than the written premium, a profit has been recognized.
   - **The corresponding component** in the SII Technical Provisions is called the Premium Provision (PP). **This account estimates all of the future insurance events and the corresponding best estimate cash flows related to contracts in force.**
   - **The PP has a lower value than the UPR account if the written contract is estimated to be profitable.** The higher the estimated profitability, the bigger the difference between the accounts.
   - **Effectively, the PP implicitly recognizes the estimated profit of the contract via the difference between the UPR and the PP already at the inception of the contract.** This means that the younger the contract, the bigger the difference between the UPR and the PP. As time goes by, both accounts decrease in value and the absolute difference between them becomes narrower and eventually diminishes as the contract expires and both accounts reach zero. In reality, neither item never reaches zero in an active insurance company since new business is written continuously. Assuming that a company would write an equal amount of exactly equal business each day, the difference between the items would remain constant

over time.
- When a policy is written but no premiums are due yet, the whole premium is already booked as UPR in financial accounting and a corresponding receivable is booked on the asset side. **In SII, any insurance receivables that are not yet due are netted against the PP account. This effectively means that the balance sheet shrinks in size when going from financial accounting to SII** and that the difference between the UPR and the PP is the biggest when premiums are not yet due.
- In non-life business the valuation difference between the UPR and the PP is the most material difference between the financial accounting and SII Technical Provisions.

4. A risk margin over the Best Estimate is included in the Solvency II Technical provisions.

The nature of technical provisions means that there is always uncertainty associated with the calculations since they inevitably involve assumptions about future events. Main risk factors affecting the reserve risk are described further under "Underwriting Risks".

Sampo Group's insurance companies present the differences between IFRS and Solvency II Technical provisions in the next sections. Calculation methods, made assumptions and other decisions affecting the cash flows are described in more detail.

Technical Provisions According to Solvency II in If P&C

The differences between IFRS and Solvency II technical provisions are summarised in the below table Technical Provisions in IFRS and Solvency II, 31 December 2017.

Technical Provisions in IFRS and Solvency II
If P&C, 31 December 2017

Type of technical provisions	SOLVENCY II					STATUTORY			
	Best estimate	Risk Margin	Provision Gross	Reinsurance share	Technical Provision	Provision Gross	Reinsurancers Share	Technical Provision	SII of Statutory
Total, EURm	**7,341**	**324**	**7,665**	**190**	**7,475**	**9,120**	**218**	**8,902**	**84%**
Health similar to life	**1,036**	**32**	**1,068**	**0**	**1,068**	**1,080**	**0**	**1,080**	**99%**
Income protection insurance (annuities)	18	1	19	0	19	19	0	19	100%
Medical expense insurance (annuities)	2	0	2	0	2	2	0	2	100%
Workers' compensation insurance (annuities)	1,016	31	1,047	0	1,047	1,059	0	1,059	99%
Health similar to non-life	**1,330**	**92**	**1,422**	**30**	**1,392**	**1,549**	**32**	**1,517**	**92%**
Income protection insurance	584	29	613	1	612	750	1	749	82%
Medical expense insurance	118	6	124	0	124	158	0	158	78%
Workers' compensation insurance	628	57	685	29	656	641	31	610	108%
Life excluding health	**1,048**	**24**	**1,072**	**0**	**1,072**	**1,137**	**0**	**1,137**	**94%**
Fire and other damage to property insurance (annuities)	5	0	5	0	5	5	0	5	100%
Life insurance	11	0	11	0	11	20	0	20	55%
Motor vehicle liability insurance (annuities)	0	0	0	0	0	0	0	0	100%
General liability insurance (annuities)	1,014	23	1,037	0	1,037	1,093	0	1,093	95%
Other motor insurance (annuities)	18	1	19	0	19	19	0	19	100%
Non-life excluding health	**3,927**	**176**	**4,103**	**160**	**3,943**	**5,354**	**186**	**5,168**	**76%**
Fire and other damage to property insurance	914	47	961	56	905	1,287	66	1,221	74%

Marine, aviation and transport insurance	102	9	111	16	95	122	18	104	91%
Other motor insurance	416	13	429	1	428	951	2	949	45%
Motor vehicle liability insurance	1,858	78	1,936	1	1,935	2,291	1	2,290	84%
General liability insurance	633	29	662	86	576	697	99	598	96%
Assistance	4	0	4	0	4	6	0	6	67%

Different principles are used for calculating the technical provisions in Solvency II and in the IFRS financial statements:

- The largest revaluation effect is due to netting of expected premiums not yet due and amounts to EUR 913 million, affecting both the asset and liability side of the balance sheet to the same degree.
- The introduction of the risk margin increases the technical provisions by EUR 324 million.
- Other revaluation effects amounting to EUR 838 million include cash flow revaluation effects mainly on premium provisions as well as discounting effects. If P&C, under IFRS, only discounts claims provision reserves for annuities and the annuity IBNR provision in Finland. The basic risk free rates used in the Solvency II balance sheet are derived for currencies DKK, EUR, GBP, NOK, SEK and USD, which cover more than 99 per cent of the technical provisions. For other currencies, either EUR or USD rates are used.
- If P&C uses the risk free rates without volatility adjustment.

In the IFRS consolidated accounts, recognition of a liability as an insurance contract would be dependent on the existence of significant insurance (underwriting) risk (refer IFRS 4). Based on If P&C's assessment that there is no material degree of insurance risk prevalent, the Medical Malpractice Pool (MMP) public sector is not recognized as an insurance contract in the consolidated accounts, but is treated as a service contract with its components recognized in other assets and other liabilities. Accordingly, a difference occurs with the Solvency II treatment where the liability should be recognized within the insurance obligations.

Therefore, under Solvency II treatment, all receivables and liabilities related to the MMP public sector are reclassified as forming a part of the Solvency II best estimate technical provisions. Under this treatment the receivables balances are netted against the liabilities in the technical provisions, as they are considered to be premium cash in-flows and thus included in the technical provisions.

Further discussion regarding the reinsurance recoverables can be found under "Counterparty Default Risks".

If P&C does not apply transitional measures on the risk-free interest term structure or to the technical provisions.

Technical Provisions According to Solvency II in Mandatum Life

To calculate Solvency II technical provision Mandatum Life produces the cash flows of insurance policies by using best estimate parameters and assumptions and stochastic investment market scenarios consistent with Solvency II discount rate. Stochastic market scenarios are particularly needed for the valuation of economic guarantees and policyholder options embedded in insurance contracts. Probability weighted present value of these cash flows is so called best estimate liability. Solvency II technical provision is best estimate liability plus risk margin.

The differences between IFRS and Solvency II technical provisions with transitional measures are summarised in the below table Overall position, technical provisions, 31 December 2017.

Overall Position, Technical Provisions
Mandatum Life, 31 December 2017

EURm	IFRS value	Solvency II value	Differences
Technical provisions – life (excluding unit-linked)	**4,573**	**4,327**	**246**
Best Estimate		4,129	
Risk margin		198	
Technical provisions – unit-linked	**7,066**	**6,549**	**516**
Best Estimate		6,454	
Risk margin		96	

Mandatum Life applies the transitional measures on technical provisions for its Solvency II technical provision in regards to its original pension policies with 3.5 per cent and 4.5 per cent guarantees. Also, a volatility adjustment is applied when technical provisions are calculated. The size of SII liabilities with transitional measures is EUR 10,876 million and EUR 11,403 million without transitional measures. Hence the transitional measures on technical provisions increase the amount of OF after tax by EUR 422 million. Mandatum Life applies standard formula without undertaking-specific parameters or simplified calculations.

Accounting principles of life insurance contracts are presented in Sampo's Annual Report/Financial Statements/ Notes to the accounts/Summary of significant accounting policies/Life insurance business.

Technical Provisions According to Solvency II in Topdanmark

For Topdanmark the principles for calculating the insurance provisions are almost the same for IFRS and Solvency II.

For non-life insurance the calculation of best estimate, risk margin and profit margin (expected profit in future premiums) are the same for IFRS and Solvency II. The only difference is the presentation of the profit margin. In IFRS the profit margin is presented as an insurance provision, while in Solvency II it forms part of the Solvency II own funds deducted for tax liabilities.

For life insurance the calculation of best estimate and profit margin are the same for IFRS and Solvency II. In IFRS the profit margin is presented as an insurance provision, while in Solvency II it forms part of the Solvency II own funds deducted for tax liabilities. The calculation of risk margin applies two different principles. For IFRS the principle is a stress on the biometrical risks. The Solvency II calculation is a 6 per cent cost of capital on insurance risk, counterparty default risk and operational risk in accordance with Solvency II.

All the best estimate insurance liabilities are discounted using the volatility adjusted Solvency II interest rate curve for DKK.

Overall Position, Technical Provisions
Topdanmark, 31 December 2017

EURm		IFRS value	Solvency II value	Difference
Non-life gross	Best Estimate	2,018	2,018	0
	Risk margin	42	51	9
	Profit margin	101	0	-101
Total non-life		**2,161**	**2,069**	**-92**
Life insurance gross	Best Estimate	7,233	7,233	0
	Risk margin	15	17	3
	Profit margin	33	0	-33
Total non-life		**7,280**	**7,250**	**-30**
Total		**9,441**	**9,319**	

Other Liabilities

The effects of Solvency II valuation on Sampo's other liabilities than technical provisions are fairly limited, consisting mainly of the valuation impact on financial liabilities and Payables balances related to the technical provisions.

Other liabilities than technical provisions are valued by discounting future cash flows with the government yield plus calculated spread at inception. This increased the amount of financial liabilities in SII balance sheet by EUR 83 million.

Deferred tax liabilities are discussed above in connection with deferred tax assets.

The reclassification of medical malpractice pool public sector from a service contract to an insurance contract effect also payables balances. Payables of EUR 112 million are reclassified from trade payables to the insurance obligations.

Other provisions than technical provisions and contingent liabilities do not give any additional rise to either new liabilities being recognized for solvency purposes or existing liabilities being recognized differently to their financial statement recognition. Provisions and contingent liabilities as well as pension benefits and operating leases are presented in Sampo Annual Report/Financial Statement/Notes to the accounts. There are no major financial leasing arrangements in Sampo Group.