

Market Risks at Sampo Group Level

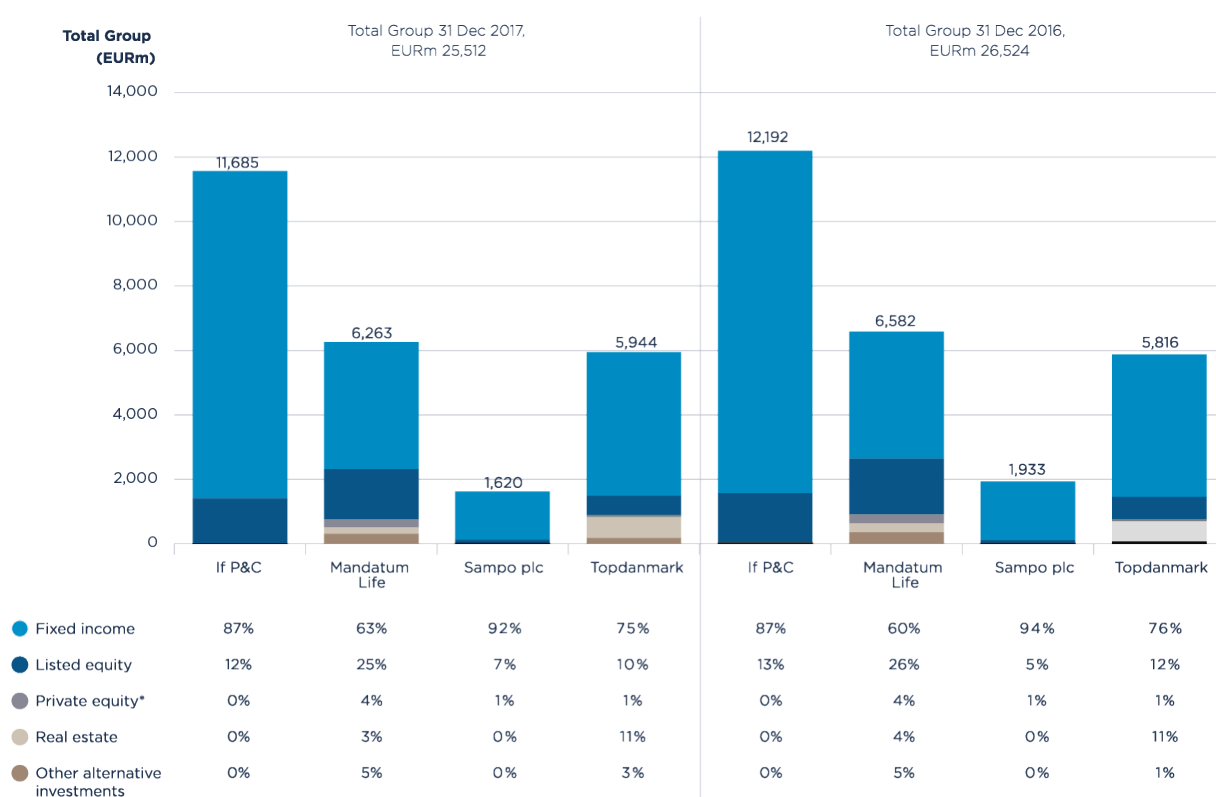
For all subsidiaries, their insurance liabilities and the company specific risk appetite are the starting points for their investment activities. The insurance liabilities including loss absorbing buffers as well as the risk appetite of Mandatum Life, If P&C and Topdanmark differs, and as a result the structures and risks of the investment portfolios and balance sheet of the three companies differ respectively. Companies' average investment returns and volatilities of investment

returns also differ as presented earlier in the Annual Investment Return at Fair Value -tables.

The total amount of Sampo Group's investment assets as at 31 December 2017 was EUR 25,512 million (EUR 26,524 million in 2016) as presented in the below figure. Mandatum Life's and Topdanmark's investment assets presented here do not include assets which cover unit-linked contracts.

Development of Investment Portfolios

If P&C, Mandatum Life, Sampo plc and Topdanmark, 31 December 2017 and 31 December 2016



Sampo plc's figures don't include debt instruments issued by the insurance subsidiaries.

* Private Equity also includes direct holdings in non-listed equities.

Investment activities and market risk taking are arranged pro-actively in such a way that there is virtually no overlap between the wholly-owned subsidiaries' single-name risks except with regards to Nordic banks where companies have their extra funds in forms of the short-term money market assets and cash. From asset side diversification perspective Topdanmark is a positive factor, because the role of Danish assets is dominant in portfolios and especially the role of Danish covered bonds is central. In Sampo Group's other insurance companies' portfolios the weight of Danish

investments has been immaterial.

When Market risks of three operative insurance sub-groups and respective figures of parent company Sampo are compared to each other by their SCRs the following things can be seen at Sampo Group level.

Market Risk SCRs of Sub-groups and Sampo plc 31 December 2017

Market risk	If P&C	Topdanmark	Mandatum Life	Sampo Plc	Diversified Sampo Group	Sum of the parts	Delta
Interest rate / down shock	174	56	145	0	375	375	0
Equity	432	323	851	44	1,646	1,650	-4
Property	5	170	46	1	221	221	0
Spread	406	328	269	4	1,006	1,006	0
Concentration/Group Level	54	20	14	47	0	135	-135
Currency/Group Level	511	7	221	427	1,153	1,166	-13
Market risk gross	1,582	904	1,545	522	4,401	4,553	-152
Diversification	-433	-136	-282	-78	-1,018	-929	-90
Market risk net	1,150	768	1,263	444	3,383	3,624	-242

Mandatum Life takes the largest market risks both in absolute and relative terms and currently equity risk is its dominant risk contributor. In If P&C currency and spread risks are the main risk contributors and there is relatively larger diversification effect than in Mandatum Life because of more evenly spread risk profile. Topdanmark is matching its liabilities with assets and hence the role of interest rate risk and currency risk is minor and equity, spread and property

risks are main contributors of market risk SCR. In all companies there is some concentration risk, but at Sampo Group level it does not exist, because the sub-groups' largest concentrations are not in same single names.

In the next paragraphs concentrations by homogenous risk groups and by single names are presented first and then balance sheet level risks are discussed shortly.

Holdings by Industry, Geographical Area and Asset Class

In regards to **Fixed Income and Equity Exposures** Financial Institutions and covered bonds have material weight in group-wide portfolios whereas the role of public sector investments is quite limited. Most of these assets are issued by Nordic corporates and institutions. Most corporate issuers,

although being based in Nordic countries, are operating at global markets and hence their performance is not that dependent on Nordic markets. This together with steadily growing portion of non-Nordic names in portfolios, is decreasing the concentration risk related to Nordics.

Exposures by Sector, Asset Class and Rating Sampo Group excluding Topdanmark, 31 December 2017

EURm	AAA	AA+ - AA-	A+ - A-	BBB+ - BBB-	BB+ - C	D	Non-rated	Fixed income total	Listed equities	Other	Counterparty risk	Total	Change 31 Dec 2016
Basic Industry	0	0	44	66	25	0	113	248	104	0	0	351	-78
Capital Goods	0	0	127	63	0	0	131	321	682	0	0	1,002	32
Consumer Products	0	131	326	380	30	0	109	976	549	0	0	1,525	-28
Energy	0	68	30	0	53	0	172	323	13	0	0	336	-165
Financial Institutions	0	2,100	3,258	930	46	0	26	6,360	118	1	9	6,489	-428
Governments	92	0	0	0	0	0	0	92	0	0	0	92	-49
Government Guaranteed	43	77	0	0	0	0	0	120	0	0	0	120	-36
Health Care	7	39	50	50	42	0	65	253	113	0	0	383	-55
Insurance	0	0	41	115	27	0	5	206	3	25	60	277	-19
Media	0	0	14	0	0	0	38	52	0	0	0	52	-25
Packaging	0	0	0	0	19	0	14	33	1	0	0	33	-40
Public Sector, Other	674	192	42	0	0	0	0	908	0	0	0	908	-114
Real Estate	0	6	92	112	8	0	526	744	0	207	0	951	35
Services	0	0	0	85	72	0	155	312	122	0	0	434	-15
Technology and Electronics	23	0	79	0	27	0	45	175	123	0	0	298	-37
Telecommunications	0	0	0	165	8	0	65	238	92	0	0	331	12

Transportation	0	72	11	55	11	0	203	353	34	0	0	387	-55
Utilities	0	2	32	359	70	0	44	506	0	0	0	506	-101
Others	0	26	0	0	4	0	15	45	0	36	0	82	-14
Asset-backed Securities	0	0	0	0	0	0	0	0	0	0	0	0	0
Covered Bonds	3,161	75	0	10	0	0	0	3,247	0	0	0	3,247	102
Funds	0	0	0	0	0	0	142	142	1,187	521	0	1,850	-96
Clearing House	0	0	0	0	0	0	0	0	0	0	17	17	13
Total, Excluding Topdanmark	4,000	2,788	4,146	2,391	443	0	1,885	15,653	3,140	790	87	19,670	-1,163
Change 31 Dec 2016	-38	-1,198	641	163	-362	0	71	-722	-210	-182	-48	-1,163	

Most of the financial institutions and covered bonds are in the Nordic countries as can be seen in the table Fixed Income

Investments in Financial Sector, Sampo Group excluding Topdanmark, 31 December 2017.

Fixed Income Investments in Financial Sector Sampo Group excluding Topdanmark, 31 December 2017

EURm	Covered bonds	Cash and money market securities	Long-term senior debt	Long-term subordinated debt	Total	%
Sweden	2,092	42	721	365	3,221	33.6%
Finland	108	1,584	243	6	1,942	20.3%
Norway	670		324	291	1,285	13.4%
United States			670		670	7.0%
Denmark	204	3	277	142	626	6.5%
United Kingdom	12	517	68	18	615	6.4%
France	21	179	58		258	2.7%
Netherlands			226	18	244	2.5%
Canada	111		113		224	2.3%
Switzerland			147		147	1.5%
Australia	17		92		109	1.1%
Iceland			91		91	1.0%
Germany			50	0	50	0.5%
Guernsey			25		25	0.3%
Estonia		22			22	0.2%
New Zealand			19		19	0.2%
Luxembourg	10				10	0.1%
Bermuda				10	10	0.1%
Cayman Islands			5		5	0.0%
Total	3,247	2,348	3,129	852	9,576	100.0%

The public sector exposure includes government bonds, government guaranteed bonds and other public sector investments as shown in the table Fixed Income Investments in Public Sector, Sampo Group excluding Topdanmark, 31 December 2017. The public sector has had a relatively minor

role in Sampo Group's portfolios and these exposures have been mainly in the Nordic countries. In Topdanmark's portfolios AAA-rated government bonds and covered bonds have a material role.

Fixed Income Investments in Public Sector Sampo Group excluding Topdanmark, 31 December 2017

EURm	Governments	Government guaranteed	Public sector, other	Total market value
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Sweden	92	592	684
Norway		211	211
Finland	77	88	165
Germany	33		33
Japan		17	17
Denmark	10		10
Total	92	120	908
			1,120

The exposures in fixed income instruments issued by non-investment grade issuers are significant, because a relatively small number of Nordic companies are rated. Further, many of the rated companies have a rating lower than triple-B (high yield) rating.

The listed equity investments of Sampo Group totaled EUR 3,934 million at the end of year 2017 (EUR 4,113 million). At the end of year 2017, the listed equity exposure of If P&C was EUR 1,448 million (EUR 1,527 million). The proportion of listed equities in If P&C's investment portfolio was 12.4 per cent. In Mandatum Life, the listed equity exposure was EUR 1,578 million at the end of year 2017 (EUR 1,737 million) and the proportion of listed equities was 25.2 per cent of the investment portfolio. In Topdanmark Group, the listed equity exposure was EUR 793 million at the end of year 2017 (EUR 761 million). Within Topdanmark Group, the allocation to

listed equity is higher in the life company.

The geographical core of Sampo Group's equity investments is in the Nordic companies. The proportion of Nordic companies' equities corresponds to 46 per cent of the total equity portfolio. This is in line with Sampo Group's investment strategy of focusing on Nordic companies. However, these Nordic companies are mainly competing in global markets: only a few are purely domestic companies. Hence, the ultimate risk is not highly dependent on the Nordic economies. In the long run the proportion of investments outside of the Nordic countries has gradually increased, because the amount of companies issuing securities in the Nordic countries is limited and from a strategic point of view other geographical areas have recently provided interesting investment opportunities. A breakdown of the listed equity exposures of Sampo Group is shown in the figure Breakdown of Listed Equity Investments by Geographical Regions, Sampo Group 31.12.2017.

Breakdown of Listed Equity Investments by Geographical Regions Sampo Group, 31 December 2017 and 31 December 2016

Sampo Group	2017		2016	
	%	EURm	%	EURm
Denmark	4%	167	5%	185
Norway	4%	157	5%	202
Sweden	24%	945	23%	953
Finland	14%	549	17%	700
Western Europe	25%	977	21%	861
East Europe	1%	20	0%	19
North America	20%	776	23%	929
Latin America	1%	28	1%	25
Far East	8%	313	6%	239
Japan	0%	0	0%	0
Total		3,934		4,113

Largest Holdings by Single Name

The largest exposures by individual issuers and counterparties are presented in the table Largest Individual Exposures by Issuer and by Asset Class, Sampo Group

excluding Topdanmark, 31 December 2017. The largest single name investments in Topdanmark's portfolios are in AAA-rated Danish covered bonds.

Largest Individual Exposures by Issuer and by Asset Class Sampo Group excluding Topdanmark, 31 December 2017

EURm Counterparty	Total fair value	% of total investment assets	Cash & short- term fixed income	Long- term fixed income, total	Long-term fixed income: Government guaranteed	Long- term fixed income: Covered bonds	Long- term fixed income: Senior bonds	Long- term fixed income: Tier 1 and Tier 2	Equities	Uncollateralized derivatives
Nordea Bank	1,606	8%	562	1,039	0	601	138	299	0	4
Danske Bank	1,134	6%	785	347	0	99	218	30	0	3
BNP Paribas	735	4%	698	37	0	0	37	0	0	0
Skandinaviska Enskilda Banken	675	3%	276	398	0	248	137	13	0	0
Svenska Handelsbanken	669	3%	-1	669	0	616	39	14	0	0
DnB	536	3%	0	536	0	226	205	105	0	0
Sweden	519	3%	0	519	0	0	519	0	0	0
Swedbank	516	3%	-1	517	0	352	154	11	0	0
Norway	320	2%	0	320	0	0	218	102	0	0
Volvo	256	1%	0	103	0	0	68	36	153	0
Total Top 10 Exposures	6,965	36%	2,319	4,485	0	2,143	1,733	609	153	8
Other	12,408	64%								
Total investment assets	19,372	100%								

The largest high-yield and non-rated fixed income investment single-name exposures are presented in the table Ten Largest Direct High Yield and Non-rated Fixed Income Investments, Sampo Group excluding Topdanmark, 31

December 2017. Furthermore, the largest direct listed equity exposures are presented in the table Ten Largest Direct Listed Equity Investments, Sampo Group, 31 December 2017.

Ten Largest Direct High Yield and Non-rated Fixed Income Investments and Direct Listed Equity Investments Sampo Group excluding Topdanmark, 31 December 2017

Largest direct high yield and non-rated fixed income investments	Rating	Total fair value, EURm	% of total direct fixed income investments
High Street Shopping	NR	117	0.8%
Sponda	NR	89	0.6%
Teollisuuden Voima	BB+	80	0.5%
SkandiaBanken	NR	76	0.5%
IVG Polar	NR	57	0.4%
Ellevio	NR	52	0.3%
YIT	NR	46	0.3%
Grönlandet Södra	NR	44	0.3%
Aker BP	BB	44	0.3%
Nets	BB	40	0.3%
Total top 10 exposures		646	4.2%
Other direct fixed income investments		14,630	95.8%
Total direct fixed income investments		15,276	100.0%

Top 10 listed equity investments	Total fair value, EURm	% of total direct equity investments
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Volvo	153	7.8%
Nobia	125	6.4%
Amer Sports	100	5.1%
ABB	90	4.6%
Veidekke	87	4.4%
Asiakastieto	70	3.6%
Sectra	66	3.4%
Husqvarna	64	3.3%
Hennes & Mauritz	61	3.1%
TeliaSonera	60	3.1%
Total top 10 exposures	875	44.9%
Other direct equity investments	1,076	55.1%
Total direct equity investments	1,952	100.0%

Balance Sheet Concentrations

In general Sampo Group is structurally dependent on the performance of Nordic economies as already described earlier. Sampo Group is also economically exposed to the low level of interest rates. The lower the rates and the “flatter” the yield curve, the more challenging the environment is for the current business models especially when duration of insurance liabilities is longer than asset duration in If P&C and Mandatum Life. In Topdanmark interest rate risk of balance sheet is minor and hence Topdanmark is not

increasing interest rate risk at group level.

Sampo Group would benefit materially in case interest rates would rise, because economic value of insurance liabilities would decrease more than value of assets backing them. At the same time net interest income of Nordea should increase as well. During 2017 interest rates have continued their slow rise that started at the end of Q3/16.