

# **Euler Hermes SA**

# Solvency and Financial Condition Report (SFCR) Fiscal Year 2016

Euler Hermes SA Avenue des Arts 56 1000 Bruxelles, Belgique Tél. + 32 2 289 31 11 www.eulerhermes.com Entreprise d'assurance belge agréée sous le code 418 Immatriculée au Registre des Personnes Morales (Bruxelles) sous le n° 0403 248 596 Branches: 07,09,13,14,15,16 http://www.nbb.be/pub/app/prud/pruddata.aspx?l=fr&id=vo1

# DOCUMENT SUMMARY

Document Name:	Solvency II Solvency and Financial Condition Report of Euler Hermes SA – FY 2016
Version:	1.0
Date:	19 May 2017
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# AUTHORISATION

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1.0	11 May 2017	Management Committee
1.0	26 July 2017	Board of Directors

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# Summary

The Solvency and Financial Condition Report (SFCR) is a reporting requirement implemented as part of Solvency II. This 2016 report is the first SFCR to be published by Euler Hermes SA (EH SA).

The scope of this report covers the following topics in relation to EH SA's business: business and performance, system of governance, risk profile, valuation for solvency purposes and capital management.

#### **Business and performance**

#### <u>Business</u>

EH SA is an insurance company based in Brussels, Belgium that is 100% owned by Euler Hermes Group. EH SA's main line of business is credit and suretyship insurance, which represents over 90% of earned premium in 2016.

EH SA operates 18 branches and has 49 subsidiaries worldwide. The material geographical regions are the DACH region (Germany, Austria and Switzerland), the France region, the Northern region, the Mediterranean countries, Middle East and Africa region (MMEA) and the Asia and Pacific region (APAC).

Several significant events occurred in 2016 for EH SA. A joint-venture with China Pacific Property Insurance Company (CPPIC) has been created to strengthen the development of its credit insurance business in China. Productivity plans in Germany, France and corporate entities resulted in a 29.7 M€ (International Financial Reporting Standards – IFRS) restructuring cost booked at the end of December 2016. The launch of "Cover One" product for medium-term contracts in Northern region expanded EH SA's market for a product covering breach of contract or unpaid invoices. The launch of an innovative insurance offer plugged-in on URICA's online supply chain platform is a step towards innovative digital solutions.

The credit insurance market has been characterized over the last couple of years by a low claims environment, driven by a declining trend in companies' insolvencies. In these circumstances, EH SA will continue its transformation and focus on specialty lines, on digital initiatives and on the execution of the announced restructuring plans.

#### Performance

At the end of December 2016 EH SA's turnover was at 1,641 M€ and decreased by 1.8% compared to 2015. Growth in Europe keeps on following an atonic trend, suffering from both a high pressure on prices and a lack of dynamism on the turnover volumes insured and emerging markets slow down.

Low claims frequency as well as the implementation of the risk action plans at the end of 2015 brought the claims level to 789 M€, down by 3.7% in 2016 compared to 2015. This positive impact was partly offset by some mid-size cases on previous Attachment Year in some emerging countries.

The investment strategy was marked in 2016 by the dividend paid by EH SA to EH Group (700 M€) which assumed cash upstream. In addition, the Exchange Rate (FX) result was less favourable in 2016 compared to 2015 (mostly the Great Britain Pound (GBP) depreciation against the Euro (EUR)). As a result, the total investment income stood at 136 M€ in 2016 compared to 90 M€ previous year.

#### System of governance

For an adequate monitoring of the risks related to its activity, EH SA management is organized around two management bodies, the Board of Directors and the Management Committee.

For internal audits, as of March 23<sup>th</sup> 2017, all recommendations due to be implemented at the end of Q4 2016 have been implemented.

#### Own Risk and Solvency Assessment (ORSA) report

Based on its 2016 ORSA results, EH SA deems its risk profile well monitored and under control, supported by reliable processes and an effective overarching risk management framework.

EH SA's risk management team uses two primary methods to measure and assess its risks, the Top Risk Assessment (TRA) process (including risks which cannot be modelled) and the EH SA's internal capital risk model for risks which can be modelled.

For each top risk identified during the Top Risk Assessment process, risk owners (Management Committee members) have set up both acceptable target risk ratings and appropriate risk mitigation plans. Consequently, no foreseeable additional Risk Capital need was identified based on this assessment.

Moreover, the internal model has been independently reviewed by the Independent Validation Unit (IVU) to ensure its compliance with Solvency II validation standards.

As a result, EH SA is confident that the internal model truly reflects its risk profile and thus that the Risk Capital calculated as of 31.12.2016 fairly reflects the solvency situation. Although the payment of a dividend was decided by the Board of Directors, the Solvency ratio remained in line with the Solvency II (SII) ratio targets defined in the capital management strategy.

The forecast and stress simulations performed on solvency (quarterly and annually) and liquidity (quarterly) demonstrate that EH SA is able to preserve its solvency and liquidity ratios above the targets defined in the risk appetite, even if it were exposed to a large range of financial and business adverse scenarios.

As a result, EH SA is confident in its capacity to sustain a healthy business in the years to come.

#### Risk profile

Information has been provided on EH SA's risk profile in relation to underwriting, market, credit, liquidity and operational risk. In-line with the nature of EH SA's business, market and credit risks are considered to be its two most significant risks, which is reflected by the amount of related Risk Capital.

EH SA diversifies its risk by using different diversification approaches: a Strategic Asset Allocation (SAA), and across investment styles and asset managers for market risk, and by geography and industry for credit risk. Moreover, the use of the reinsurance is the primary risk mitigation tool utilised. There is no foreseeable specific risk concentration over the business planning period.

Stress tests are performed using standard financial scenarios as well as several internally developed scenarios: 2008 financial crisis, hard landing in China and political risk in Italy.

#### Valuation for solvency purposes

Information on EH SA's assets, Technical Provisions and other liabilities has been shared using Market Value Balance Sheet (MVBS) and local Belgian Generally Accepted Accounting Principles (BeGAAP) figures. Below is a description of key figures, changes and other relevant points that have occurred in 2016.

#### <u>Assets</u>

Total assets at the end of 2016 equalled 3,895 M€ on an MVBS basis. There have not been any changes to the recognition and valuation of material classes of assets during the reporting period. Assets have been invested in alignment with the prudent person principle.

#### Technical provisions

Total Technical Provisions at the end of 2016 equalled 1,509 M $\in$  on an MVBS basis. Reinsurance recoverables of nearly 876 M $\in$  (MVBS) are primarily due to claims provisions. The Volatility Adjustment (VA) impact is negligible with only 0.20% deviation between the discounted reserves with VA and without VA.

#### Other liabilities

Total other liabilities at the end of 2016 equalled 1,201 M€ on an MVBS basis. The largest contributors included pension benefit obligations, deferred tax assets and various payables. Total Deferred Tax Liabilities at the end of 2016 equalled 144.5 M€ (MVBS) due to temporary differences on Technical Provisions.

#### **Capital management**

#### <u>Own funds</u>

EH SA own funds are exclusively composed of basic own funds and they are foreseen to stay stable over the three-year planning horizon. A dividend of 700 M€ has been paid out in 2016.

#### Minimum capital ratio (MCR) and solvency capital ratio (SCR)

EH SA is compliant with the minimum capital ratio (MCR) and solvency capital ratio (SCR) requirements. EH SA's capital is rather stable between 2015 and 2016. Based on projections of assets and liabilities, the solvency ratio is expected to stay in line with targets, which means that no specific management actions would be required.

A material change in 2016 regarding capital management is the use of a range of management ratios as opposed to previously focusing on a single management ratio.

EH SA has implemented an internal model approved by the regulator at the end of 2015. The largest driver of difference in the capital between the standard formula and EH SA's internal model is due to a different computation and classification for the premium risk and the use of a specific diversification matrix which takes into account more accurately the international footprint of EH SA. No material data quality deficiencies were identified in the data used for the internal model.

# A. Business and performance

# A.1. Business

# A.1.1. Legal entity, auditor and supervisor

# A.1.1.1. Name and legal form

Euler Hermes SA

Avenue des Arts 56

1000 Brussels, Belgium

www.eurlerhermes.com

Euler Hermes SA is referred to as EH SA throughout this document. EH SA's legal company form is a limited company (société anonyme) with the registration number BCE 0403.248.596.

# A.1.1.2. Supervisor

National Bank of Belgium (NBB)

Boulevard de Berlaimont 14

1000 Brussels, Belgium

# A.1.1.3. Auditor

Klynveld Peat Marwick Goerdeler (KPMG) Belgium

Avenue du Bourgetlaan 40

B-1130 Brussels, Belgium

# A.1.2. Group structure and qualified holdings

EH SA is a part of Euler Hermes Group, located in France. Below is a simplified group structure chart for EH SA, which also details the percent ownership and legal links to its parent entities and its material related undertakings.

# EH Group simplified group structure



EH Group has a 100% ownership interest in EH SA. For EH Group, the following table detail its holders, the proportion of ownership interest held and the proportion of voting rights held.

	Yeare	ended Dec	ember 31, 20	16		
	Shares/The voting rig	oretical ghts <sup>(1)</sup>	<b>Real voting</b>	rights <sup>(2)</sup>		
	Number	%	Number	%		
Allianz Vie <sup>(3)</sup>	0	0	0	0.0%		
Allianz France <sup>(4)</sup>	26,864,230	63.0%	26,864,230	64.0%		
Total Allianz	26,864,230	63.0%	26,864,230	64.0%		
Treasury shares	625,945	1.5%	0	0.0%		
Public	15,151,460	35.5%	15,151,460	36.0%		
TOTAL	42,641,635	100%	42,015,690	100%		
SHARE CAPITAL (IN EUROS)	ARE CAPITAL (IN EUROS) 13,645,323.20					

(1) Including treasury shares.

(2) Excluding treasury shares.

(a) Allianz Vie is no longer a shareholder of the Company since it sold is entire stake in Euler Hermes Group on May 2016
(d) Allianz France is indirectly and utimately wholly owned by Allianz 5E (the shares of which, on December 31, 2016, were held by the public, with the exception of approximately 0.42% intreasury shares).

#### A.1.3. Material lines of business and geographical areas

#### A.1.3.1. **Geographical areas**

EH SA operates 18 branches located in France, Germany, Japan, Singapore, the United Kingdom (UK), Hong Kong, Denmark, the Czech Republic, Hungary, Finland, Romania, Ireland, the Netherlands, Italy, Slovakia, Norway, Switzerland and Sweden.

EH SA additionally has 49 subsidiaries or participations in 32 different countries.

#### A.1.3.2. Lines of Business

EH SA has three main lines of business: credit insurance, bonding and fidelity.

For the purposes of Solvency II reporting, below describes the mapping of each of the EH SA lines of business into two Solvency II lines of business:

- 9. Credit and suretyship insurance
- 12. Miscellaneous financial loss

The credit and suretyship insurance line of business is considered to be the only material line of business as it generates over 90% of EH SA net earned premium.



# A.1.4. Significant events

# Distribution of a dividend

On April 29, 2016 EH SA Board of Directors, following the recommendation of the Management Committee, decided to propose to the shareholder the distribution of a dividend amounting to 700 million euros in 2016. This distribution was subject to the shareholder's decision on May 11, 2016.

On this basis, simulations were performed on the current solvency ratio, and also on the projected and stressed solvency ratios. It shows that the solvency ratios would remain above the Target Ratio in the unstressed projections and above the Minimum Ratio in the business stress projections.

#### Share capital and share ownership

As at December 31, 2016, EH SA's share capital was composed of 2,925,155 shares, including 78,340 own shares.

As at December 31, 2016, EH Group owned 2,846,815 shares out of a total of 2,925,155 shares, corresponding to 97.3% of the share capital of EH SA. Consequently, EH SA is integrated into the EH Group consolidation scope.

# Creation of a joint-venture with CPPIC

In February 2016, Euler Hermes Hong Kong Services Limited signed an agreement with China Pacific Property Insurance Company (CPPIC) to set up a trade credit insurance joint venture in China: CPPIC Euler Hermes Insurance Sales Co., Ltd. This joint venture is for the distribution of insurance products.

CPPIC owns 51% of the shares of the joint-venture; Euler Hermes Hong Kong Services Limited owns 49%. The joint-venture went operational in August 2016.

# Productivity plans

Productivity plans have been announced in Germany, France and Corporate entities, and a cumulated restructuring cost of 29.7 M€ (IFRS) has been booked at the end of December 2016 including a provision for restructuring allowance and consulting fees. The restructuring cost has been mainly booked in Germany and France, and to a lesser extent in corporate entities.

In Germany, as part of the project "Inspire 2020", Euler Hermes Deutschland launched some productivity measures such as a voluntary leaver program (VLP) on April 6, 2016.

In France, an early retirement voluntary program agreement was signed on June 28, 2016 between the entities of UES France (Unité Economique et Sociale) and the trade unions. Under this agreement, employees meeting some eligibility requirements can, on a voluntary basis, be fully exempted of activity for a period of maximum 42 months before the legal age of retirement and receive a replacement allowance paid by the employer.

#### Launch of "Cover One" product for medium-term contracts in Northern Region

After its successful launch in France in 2013, EH Cover One was launched in Northern Europe. This product protects against breach of contract (insolvency of the debtor, import or export license suspension, insurrection, confiscatory-type or fund transfer cancellation decision by a government, etc.) or unpaid invoices by both public and private-sector buyers, particularly for capital goods and services transactions, both domestic and export. It applies to sale contracts with a term of up to 36 months.

#### Launch of an innovative insurance offer plugged-in on URICA's online supply chain platform

On September 19th, 2016, Euler Hermes and Urica, a market leading fintech network, signed a partnership agreement offering French companies a new online financing solution. Based on the sale of invoices through a secure platform, URICA empowers businesses to pay and be paid on the terms they want, releasing cash into the supply chain with zero debt and zero risk. This is a first step towards innovative digital solutions.

# A.2. Underwriting Performance

# A.2.1. Aggregate underwriting performance

#### Turnover

The turnover consists of premium income, comprising earned premiums generated by direct insurance and assumed business, and service revenues, mostly premium-related.

Credit insurance policies are designed to cover the risk of non-payment by the policyholder's customers. Premiums are based mainly on policyholders' sales or their outstanding customer risk, which also depends on their sales.

# Premiums

Credit insurance policies are designed to cover the risk of non-payment by the policyholder's customers. Premiums are based mainly on policyholders' sales or their outstanding customer risk, which also depends on their sales.

#### Service revenues

Service revenues consist mainly of two types of service fees: information and collection fees.

- <u>Information fees</u>: these consist of billings for research and analysis carried out to provide policyholders with the required credit insurance cover, and of amounts billed for monitoring the solvency of their customers. All these revenues are directly related to credit insurance business and EH SA does not sell services offering access to business solvency information to third parties that are not policyholders;
- <u>Collection fees</u>: these correspond to the amounts billed for debt collection services provided to policyholders and to companies that are not policyholders

The following table summarises EH SA's Underwriting (UW) performance at an aggregate level:

EH SA addreda	te UW perforr	mance (IFRS)

In k€	2016	2015	Δ	%
Turnover	1,641,811	1,671,077	- 29,265	-1.8%
Claims costs	- 788,662	- 819,117	30,454	-3.7%
Gross operating expenses	- 561,659	- 563,040	1,381	-0.2%
Gross technical result	291,490	288,920	2,570	0.9%
Outward result	- 231,970	- 166,907	- 65,064	39.0%
Technical result	59,519	122,013	- 62,494	-51.2%

At the end of December 2016 EH SA's turnover was at 1,641 M€ and decreased by 1.8% compared to 2015 but was flat at constant FX (-0.2%).

Growth in Europe keeps on following an atonic trend, suffering from both a high pressure on prices and a lack of dynamism on the turnover volumes insured. Nevertheless, France discloses an increase in its turnover growth thanks to the commercialisation of new products and a small recovery of the volumes insured. Emerging markets slow down as many emerging countries have been affected by action plans followed since last year in commercial underwriting and risks underwriting.

In 2016, claims costs were at 789 M€ improving compared to 2015 by 3.7%, while turnover was down -1.8%. Hence the gross loss ratio is slightly improving at 49.0% compared to 49.7% last year. This evolution is the combination of a low claims frequency on the current Attachment Year, partly offset by lower run-offs levels.

Gross claims costs Current Year (CY) were at 927 M€, lower by 8.8% compared to last year thanks to a lower claims activity, and the gross loss ratio current Attachment Year was 57.6% end of 2016, down 4.2 pts compared to 2015.

Part of the decrease is due to the fact that 2015 included a reserve for a large potential claim on a Spanish group; the other part is the result of the risk action plans implemented at the end of 2015 and which brought the claims level down in 2016, especially in emerging countries.

Gross run-offs were positive, decreasing by 30% compared to 2015. The decrease was due to some mid-size cases on previous Attachment Years, hitting EH SA in some emerging countries.

In 2016, outward result were at -232 M€ decreasing by 39% compared to 2015. This is explained by the decrease in ceded claims to EH Group reinsurance entities. In particular, a higher volume of claims was ceded to reinsurance in 2015 due to specific cession. This is partly offset by run-offs booked on a higher proportion on the World Program activity, whose cession rate is one of the highest within EH SA.

Thus, EH SA's net technical result was at 59.5 M€ decreasing by 51.2% compared to 2015.

The table below summarises the aggregate underwriting performance accounted for in Belgium GAAP (BeGAAP).

ln k€	2016
Turnover	1 642 648
Claims costs	- 788 873
Gross operating expenses	- 568 424
Gross technical result	285 351
Outward result	- 227 947
Technical result	57 404

Considering that the difference in the gross technical result between BeGAAP and IFRS is not significant, the studies performed in the section on underwriting performance are performed in IFRS.

# A.2.2. Underwriting performance by material line of business

Per section A.1.3 of this report, the only Solvency II line of business considered material at EH SA is credit and suretyship insurance. The following table summarises EH SA's underwriting performance for this line of business:

Credit and suretyship insurance UW performance (IFRS)

In k€	2016	2015	Δ	%
Turnover	1,536,951	1,571,720	- 34,768	-2.2%
Claims costs	- 736,056	- 767,782	31,727	-4.1%
Gross operating expenses	- 516,099	- 521,934	5,835	-1.1%
Gross technical result	284,797	282,003	2,793	1.0%
Outward result	- 227,373	- 159,344	- 68,029	42.7%
Technical result	57,424	122,660	- 65,236	-53.2%

As shown in the table above, most of EH SA's business is covered by the credit and suretyship insurance line of business. Thus, the analysis performed in Section A.2.1 of this report also applies to this section.

# A.2.3. Underwriting performance by material geographical area

#### **DACH** region

This region includes the direct insurance and assumed reassurance business carried out by the entities operating in Germany, Austria and Switzerland.

In k€		2016		2015		Δ	%
Turnover		573,346		584,825	-	11,478	-2.0%
Claims costs	-	213,539	-	153,186	-	60,353	39.4%
Gross operating expenses	-	174,549	-	177,264		2,715	-1.5%
Gross technical result		185,258		254,375	-	69,117	-27.2%
Outward result	-	112,160	-	147,098		34,939	-23.8%
Technical result		73,098		107,276	-	34,178	-31.9%

DACH region UW performance (IFRS)

In 2016, turnover was at 573 M€ decreasing by 2% compared to 2015, negatively impacted by high competition on prices and no recovery on turnover volumes insured.

Claims costs were at 214 M€ increasing by 39.4% between 2015 and 2016. During 2015 EH SA stated low claims activity and significant positive run-offs from previous years. During 2016, claims activity on current Attachment Year remained at a low level.

Gross operating expenses were at 175 M€ decreasing by 1.5% compared to 2015 while top line was down -2.0%. Gross expenses were penalized by conventional salary increase.

Outward result increased by 23.8% to -112 M€ with the increase of claims costs ceded to the reinsurers.

# **France region**

France region UW performance (IFRS)

In k€		2016		2015		Δ	%
Turnover		318,977		307,938		11,038	3.6%
Claims costs	-	159,696	-	134,486	-	25,210	18.7%
Gross operating expenses	-	99,716	-	92,325	-	7,391	8.0%
Gross technical result		59,565		81,127	-	21,563	-26.6%
Outward result	-	48,061	-	46,266	-	1,795	3.9%
Technical result		11,504		34,862	-	23,358	-67.0%

In 2016, France has experienced growth with a turnover increase of 3.6% amounting to 319M€ thanks to the new products and to a slight recovery of turnover volumes insured.

Claims costs were at 160 M€, increasing by 18.7% compared to 2015 because of a lower positive run-offs level than in 2015.

Gross operating expenses were at 100 M€ increasing by 8% compared to 2015 following the increase of brokerage commissions and increased cost of the information, however the cost ratio remained stable at 29.8% in 2016 compared to 29.9% last year.

Outward result was at -48.0 M€ compared to -46.3 M€ last year. 2016 is impacted by a higher average cession rate on run off and lower reinsurance commission compared to 2015.

Thus the increase of claims costs and gross operating expenses combined with a lower claims cession to reinsurers result in a decrease of the technical result by 67%.

#### Northern region

This region includes the direct insurance and assumed reinsurance business in Northern European countries (Belgium, Netherlands, United Kingdom, Ireland, Finland, Sweden, Denmark and Norway) and in Eastern Europe (Hungary, Czech Republic, Romania, Slovakia, Bulgaria and Russia).

ln k€		2016		2015		Δ	%
Turnover		390,766		429,003	-	38,237	-8.9%
Claims costs	-	152,265	-	264,031		111,766	-42.3%
Gross operating expenses	-	148,895	-	156,680		7,786	-5.0%
Gross technical result		89,606		8,291		81,315	980.7%
Outward result	-	85,843		14,068	-	99,912	-710.2%
Technical result		3,763		22,359	-	18,597	-83.2%

#### Northern region UW performance (IFRS)

In 2016, turnover was at 391 M€ decreasing by 8.9% compared to 2015. At constant FX the turnover decreased by 3.4% due to pressure on prices and no recovery on turnover volumes insured, cancellation of some non-profitable policies, and risk action plans implemented in 2015.

Claims costs were at 152 M€ decreasing by 42.3% compared to 2015. Last year included a reserve for a large potential claim; putting aside this reserve, the claims costs decreased by 26% thanks to the risk actions plans implemented in some countries in 2015.

Gross operating expenses were at 90 M€ decreasing by 5% compared to 2015, which is less than top line decrease. Last year 2015 included some positive one-offs, which partly offset the gross expenses decrease due to costs savings and top line decrease.

Outward result dropped down to -86 M€ versus 14 M€ in 2015. Last year included specific cession on the large case mentioned above, and also higher claims cession in link with the gross claims level.

Thus, the technical result was at 3.8 M€ decreasing by 83.2%.

# Mediterranean countries, Middle East and Africa region (MMEA)

This region includes the direct insurance and assumed reassurance business in Italy, Greece, Morocco, Tunisia, Turkey, the Gulf Countries and South Africa.

ln k€		2016		2015		Δ	%
Turnover		242,589		236,899		5,690	2.4%
Claims costs	-	148,235	-	156,370		8,135	-5.2%
Gross operating expenses	-	85,052	-	81,273	-	3,780	4.7%
Gross technical result		9,301	-	745		10,046	-1348.9%
Outward result	-	19,240	-	15,829	-	3,411	21.5%
Technical result	-	9,939	-	16,574		6,635	-40.0%

MMEA region UW performance (IFRS)

In 2016, turnover was at 243 M€ increasing by 2.4% compared to 2015. Turnover growth slowed down compared to 2015 because of the risk action plans implemented in some countries, and the cancellation of some non-profitable policies.

Claims costs were at 148 M€ decreasing by 5.2% compared to 2015 as a result of the actions plans to reduce claims activity set up mid-2015. However, improvement on current Attachment Year was partly offset by a high level of claims from previous years.

Outward result was at -19 M€ to be compared to -16 M€ last year. The evolution is linked to gross technical evolution, but also to the fact that 2016 included some claims reserves on previous Attachment Years which were ceded with specific reinsurance conditions.

Thus, technical result was at -10 M€ decreasing by 40% compared to 2015.

#### Asia and Pacific region (APAC)

This region includes all the direct insurance and assumed reinsurance activities carried out by branches based in Asia (India, Japan, South Korea, China, Hong Kong, Taiwan and Singapore) and Oceania (Australia and New-Zealand).

ln k€		2016		2015		Δ	%
Turnover		117,307		113,779		3,529	3.1%
Claims costs	-	114,927	-	111,043	-	3,884	3.5%
Gross operating expenses	-	54,620	-	56,864		2,244	-3.9%
Gross technical result	-	52,240	-	54,129		1,889	-3.5%
Outward result		33,334		28,218		5,116	18.1%
Technical result	-	18,906	-	25,911		7,005	-27.0%

APAC region UW performance (IFRS)

In 2016, turnover was at 117 M€ increasing by 3.1% compared to 2015, and +4.1% at constant FX. The growth of the region is lower than previous years because of the action plans that have been implemented since mid-2015.

Claims costs were at 115 M€ increasing by 3.5% compared to 2015. The region suffered from several mid-size claims from previous Attachment Years which partly offset the improved claims trend on the current Attachment Year resulting from the risk action plans.

Outward result was at 33 M€ increasing by 18.1% compared to 2015. This is the result of a higher cession rate on average on claims due to the mix of the lines of business.

Thus, the technical result was at -19 M€ improving by 27% compared to 2015.

# A.3. Investment Performance

# A.3.1. Income and expenses arising from investments

In k€	2016	2015	Δ	%
Current income from Equity	95,952	39,058	56,893	145.7%
Current income from Bond	19,934	30,941	- 11,007	-35.6%
current income Real Estate 3rd party	363	363	0	0.0%
Current income from Cash and Other	954	1,898	- 944	-49.7%
Current investment income	117,202	72,260	44,942	62.2%
FX result (net)	595	4,010	- 3,415	-85.2%
Investment Expenses	- 2,407	- 2,891	484	-16.7%
Interest Expenses	- 3,060	- 3,289	229	-7.0%
Trading - non operating (include LTI )	- 302	- 917	615	-67.0%
Real. G/L, imp. (net) equities	4,173	11,668	- 7,495	-64.2%
Real. G/L, imp. (net) fixd inc	19,380	9,213	10,167	110.4%
Realized gains/losses	23,553	20,880	2,672	12.8%
Total investment income (incl interest expenses)	135,580	90,052	45,528	50.6%

IFRS Figures

The investment strategy was marked in 2016 by the dividend paid by EH SA to EH Group (700M€) which assumed cash upstream:

• From EH subsidiaries to EH SA. In particular the French branch received an exceptional dividend from its subsidiary EH France Recouvrement (65 M€). This explains the relatively high level of income from equity since intragroup dividends are included

• From financial portfolios with a significant decrease of the bonds portfolio, translating into high level of realized gains

In addition, FX result was less favourable in 2016 compared to 2015 (mostly GBP depreciation against EUR), and 2015 also included one-off gains from the liquidation of French equity funds.

As a result, the total investment income stood at 136 M€ in 2016 compared to 90 M€ last year.

The table below summarises the investment performance accounted in BeGAAP:

ln k€	2016
Current income from Equity	88,508
Current income from Bond, Cash and Other	21,559
current income Real Estate 3rd party	363
Current investment income	110,430
FX result (net)	- 6,301
Investment Expenses	- 2,654
Interest Expenses	- 3,060
Trading - non operating (include LTI )	- 216
Real. G/L, imp. (net) equities	4,172
Real. G/L, imp. (net) fixd inc	19,460
Realized gains/losses	23,633
Total investment income (incl interest expenses)	121,831

The difference between BeGAAP and IFRS on the current investment income is related to the dividends received from Business Units (BU) consolidated at equity:

- In BeGAAP the amount of dividends received is recognised
- In IFRS the share of net income which belongs to EH SA is recognised

Regarding the FX result, the change from local accounting to reporting accounting in IFRS is recognised in equity meanwhile in BeGAAP this change is recognised in P&L.

Considering that the overall difference between BeGAAP and IFRS is not significant, the studies performed in the section on investment performance are performed in IFRS.

# A.3.2. Gains and losses recognised directly in equity

The below table shows the gains and losses (G/L) recognised directly in equity on an IFRS basis:

In k€	2016	2015	Δ	%
Real. G/L, imp. (net) equities	4,173	11,668	- 7,495	-64.2%

#### A.3.3. Investments in securitisation

EH SA invested in covered and collateralized securities. The following table summarizes the details of those investments (MVBS).

In M€	Nominal Value	Exposure	Dirty Market Value	MV % of total financial assets	Accrued Interest	Amortized Cost	Net Unrealized Gain/Loss	Modified Duration
Collateralized	41.0	40.9	40.9	2.1%	0.1	40.8	-	5.1
Covered	463.7	500.5	500.5	25.5%	6.9	476.2	17.4	2.8

# A.4. Performance of other activities

Using a threshold of 1 M€ in order to determine materiality, EH SA has identified four sources of material income and expenses in 2016 outside of those from underwriting and investments. These are 1) restructuring expenses, 2) equalisation reserve release, 3) amortisation of goodwill and intangible assets, and 4) interests and similar expenses. Leases are not considered a material income or expense for EH SA in 2016.

#### • <u>Restructuring expenses</u>

In 2016, restructuring expenses are recognised for an amount of 29.7 M€ (IFRS and BeGAAP). In 2015 the amount recognised for restructuring expenses was 1.1 M€.

The modest revenue growth of recent years has highlighted the need to work on productivity and costs. On top of that, the Group has decided to invest in digital, and these investments need to be financed without impacting the cost ratio. Restructuring plans have been announced in 2016 for Germany, France, and the UK. They will be initiated by 2017, and the decrease in the number of Full Time Employees (FTEs) should be visible, even though it will be a bit early to see visible effects on the cost ratio evolution that should remain more or less stable.

#### • Equalisation reserve release

The equalisation reserve has been released by 26.7 M€ (BeGAAP) in 2016 (vs a 4 M€ decrease in 2015) mainly driven by a decrease in net earned premiums. The overall amount is 256 M€ by the end of 2016.

This reserve is only recognised in BeGAAP as a prudential reserve in order to prevent cash-flow depletion in the event of a significant unforeseen Catastrophe (CAT).

# • Amortisation of goodwill and intangible assets

Goodwill and intangible assets are linearly amortised over 5 years in BeGAAP. A -3.6 M€ amortisation has been recognised in 2016, linked to:

• The Romanian policyholder portfolio that has been acquired by EH SA Romanian branch from EH Germany. As of December 2016, this Romanian portfolio is fully amortised

• Commission rights on Allianz insurance policies that been acquired by EH Germany. As of December 2016, these commission rights are fully amortised

Goodwill on UK business linearly amortised. As of December 2016, this goodwill is fully amortised

# Interests and similar expenses

In 2016, the EH SA French branch incurred a 2.5 M€ (IFRS and BeGAAP) expense related to its share in the expenses of SFAC Direct (which is an Economic Interest Grouping between EH French entities which pools all expenses and income between its members).

# A.5. Any other information

There is no other material information regarding EH SA's business and performance to be disclosed.

# B. System of governance

#### B.1. General information on the system of governance

### **B.1.1. Structure of the system of governance**

For an adequate monitoring of the risks related to its activity, EH SA's management is organised around two management bodies:

- The Board of Directors
- The Management Committee

There have not been any material changes in the system of governance over the reporting period.

# B.1.1.1. The Board of Directors

#### Chairmanship of the Board of Directors

The Chairman of the Board of Directors is a non-executive administrator and is responsible for the management of the Board of Directors.

The Board of Directors may assign other responsibilities to the Chairman, except that other duties do not have to make the Chairman an executive administrator.

The Chairman of the Board of Directors establishes the agenda of meetings of the Board of Directors after consultation with the Chairman of the Management Committee and ensures that procedures related to the preparation, deliberations, decisions and their implementation are applied appropriately. The Chairmanship of the Board of Directors ensures that new members attend adequate training enabling them to contribute quickly to the Board of Directors work.

The Chairman of the Board of Directors is Brigitte Bovermann.

# Areas of competence of the Board of Directors

The Board of Directors is the decision-making body of EH SA. All areas of competences of the Board of Directors are executed respecting the collegial principle. However, members share supervision of EH SA activities and functions.

The Board of Directors has the authority to perform all acts necessary or useful to the achievement of EH SA business purposes, except those which the law or the articles reserve to the Annual General Meeting or the Management Committee.

The Board of Directors is particularly in charge of defining the Global Policy of the company (Global Policy) and of exercising effective supervision over its administration by the Management Committee. The Board of Directors delegates powers to the Management Committee in the fullest extent permitted by the law unless otherwise decided.

The Global Policy includes the definition of the main lines of the insurance company's strategy, adoption of plans and budgets, major reforms of structure, and the definition of the relationship between the insurance company and its shareholders.

The Board of Directors is also responsible for the appointment of members of the Management Committee, their dismissal, their remuneration, their terms' duration, and the operation model of this committee.

#### Special committees depending on the Board of Directors

The Board of Directors may decide to set up special committees, the composition and powers of which it determines, to carry out specific duties under its responsibility. Appointment or revocation terms as well as remuneration, terms' duration, and the duties are decided by the Board of Directors.

Following committees have been set up by the Board of Directors

- The Audit, Risk and Compliance Committee
- The Nomination and Remuneration Committee

**The Audit, Risk and Compliance Committee** has at least three members, all of them nonexecutive members of the Board of Directors. Members of this committee have financial or accounting skills. This committee assists the Board of Directors in ensuring the accuracy and fairness of the company, the quality of internal controls, and information provided to shareholders and to the market.

The Audit, Risk and Compliance committee is in charge of the following:

• Monitoring the financial information preparation and reporting processes, and more specifically financial statements production process

- Monitoring the financial policy
- Monitoring the effectiveness of the internal control and risk management system
- Monitoring the internal audit activities and effectiveness

• Monitoring of the Statutory Auditor's work including questions, findings and recommendations

• Monitoring the selection of Statutory Auditors and the execution of their engagements

 Ensuring that the Statutory Auditors' other engagements are not likely to affect their independence

• Supporting and approving the annual audit planning, controlling the audit effectiveness, verifying the implementation of the company's internal control framework

**The Nomination and Remuneration Committee** has only non-executive members, a majority of whom are appointed by the Board of Directors as these members have a set of skills related to remuneration and key executives' appointments.

The Nomination and Remuneration committee has an information and advisory role. The main duties of this committee are:

• Establishing the succession plan of key executives

• Making recommendations concerning compensations, pension and employee benefit schemes, benefits in kind and other financial entitlements to members of the Board of Directors

• Ensure the application of Solvency II policies

# B.1.1.2. The Management Committee

#### Skills and roles

The Management Committee is invested with the most extensive powers to manage autonomously the company according to the Global Policy defined by the Board of Directors and under its supervision. The Management Committee is responsible for the management and the development of EH SA governance system.

Furthermore, the Management Committee established an internal control system which ensures the reliability of the financial statements' reporting and guarantees that annual accounts are compliant with applicable laws and regulations.

The main roles and responsibilities of the Management Committee are listed below:

- General management of the Company
- Implementation of internal controls

• Delivery to the Board of Directors of the complete and reliable financial statement prepared according to EH SA standards and Global policy

• Adequate communication of EH SA financial statements and other significant financial and non-financial information

• Delivery to the Board of Directors of an objective and understandable assessment of EH SA financial situation

• Supply to the Board of Directors, as needed, all the information required to allow its members to make decisions knowingly

• Control of the management and of the respect of skills and responsibilities assigned to management teams in place in each area

• Accountability and report to the Board of Directors on its performance

The Management Committee reports to the NBB and the EH SA Statutory auditors over:

- The financial situation
- The structure and the organisation of the governance system
- The internal control and the independent control functions

#### Special committees depending on the Management Committee

The Management Committee has adopted and implemented the Internal Rules of Procedure of special committees. All the special committees listed below report and account directly to the Management Committee for the achievement of their assignments.

The Financial Investment Committee establishes the assets allocation based on:

- The structure of EH SA's assets and liabilities
- The capital requirement by category of assets
- The cash requirements
- The capital markets' development
- EH Group recommendations

The following transactions (sell and buy) require the preliminary authorisation of the Investment committee:

• Transactions that differ from the target allocation by category of assets defined once a year (equity and bonds included)

- Derivatives
- Private equity
- Real estate transactions

The Financial Investment Committee choses and names independent internal and external asset managers.

#### The Reinsurance Committee:

• Analyses the reinsurance structures and conditions proposed by the internal reinsurance Group entity

• Makes sure that the reinsurance conditions are compliant to the market practices, given EH SA's economic environment

• Validates the daily management rules to be followed by the different EH SA departments in order to make sure that the underwritten risks are covered by the reinsurance treaties

#### The Engagement Committee:

• Is responsible for the establishment of procedures, structures and management tools of engagements within EH SA

- Defines the quality standards and manages the exposure portfolio
- Makes sure that the limits and major engagement guidelines are respected

#### The Risk Committee:

• Supervises the rules, procedures and actions dedicated to the identification, assessment and control of present and future risks within the company, in order to guarantee the respect of the risk strategy adopted by the Management Committee

• Reviews and discusses quarterly the risk policy as well as the associated capital management, and issues recommendations to the Management Committee

• Participates to the dissemination of an adapted risk culture across the Company

#### The Loss and Reserve Committee:

It determines on an IFRS basis the EH SA reserves for loss payments, loss adjustment expenses and salvages and subrogations needed for the closure of each calendar quarter.

Its objectives are:

• Maintain adequate carried reserves for EH SA

• Take notice of EH SA Regions'/branches' reserves and if necessary ask for further explanations and/or changes

• Provide rationale for any change in carried reserves and ensure that approved changes are well understood and communicated to the Regions/Branches

#### The Sales & Marketing Committee:

• Informs the Sales Managers in the regions about the decisions of the Management Committee and monitors their implementation

• Acts as an exchange platform for sales, marketing and distribution best practices across the regions and the Group's branches

- Discusses the growth opportunities
- Reviews the sales objectives if the provisional budget is achieved

• Discusses about the sales Information Technology (IT) tools common to all regions and branches

• Circulates commercial information from the regions to the Management Committee

#### The Project Committee

It arbitrates all investments of the company, in all projects, IT or not, whose amount exceed 100.000€ or 100 working days.

#### The Compensation Committee:

- Supervises the decisions related to employees remuneration
- Makes sure that the remuneration practices are coherent within the company and all its legal entities, and that they comply with the legal and regulatory obligations
- Checks that the remuneration decisions are justified and documented, that they follow market practices as well as the principle of meritocracy
  - Issues the compensation policies

#### The Integrity Committee:

• Is responsible of the prevention and the detection of fraud, corruption and guilty behaviour risks, as well as of whistleblowing

• Establishes the integrity standards within EH SA

• Coordinates the Compliance, Legal, Risk, Communication and Human Resources functions, for its areas of competence

- Promotes ethics to employees
- Coordinates whistleblowing
- Follows and remediates fraud cases / identified risks
- Circulates information with the Group Compliance function

• Makes sure that, if needed, the adequate measures are taken by Human Resources (HR)

# B.1.1.3. Key functions

EH SA has the following independent key functions:

- Head of internal audit
- Head of compliance
- Head of risk management
- Head of Actuarial Function

Internally, there are two additional key functions that EH SA has assigned, which are for Accounting & Reporting and Legal.

Regarding Solvency II regulation, compliance, actuarial function and internal audit operate within the risk management framework which is composed of three lines of defence. The first line of defence is composed of risk taking units and involves the Risk Underwriting Function, the Reinsurance Function, the Investment Function and the Market Management, Marketing, Commercial and Distribution Function (MMCD). The second line of defence involves the Compliance Function, the Risk Management Function and the Actuarial Function. Finally the third line of defence involves the Internal Audit Function. A chart disclosed in Section B.3.1.5 of this report discloses further details on the objectives of the three lines of function governance.

Thanks to the implementation of the risk management framework, policies, processes in place, the key functions as well as the outsourced key functions are deemed as well-defined and appropriate in having the necessary authority, resources and operational independence to carry out their tasks.

# B.1.1.3.1 Internal audit

#### Independence

Internal audit function is performed independently because it reports directly to EH Chief Executive Officer (CEO) and to the Audit, Risk and Compliance Committee. No auditor is performing an operational function.

To ensure the independence of their judgment, internal audit function representatives do not receive any incentives based on the profit and loss account of EH SA but on qualitative Key Performance Indicators (KPIs).

Auditors are hierarchically and organisationally segregated from operating activities they are in charge to control. Once a year the head of internal audit establishes a declaration of independence in which he testifies that he performs his activity independently and does not report to any operating function but exclusively and directly to the chairman of EH SA Management Committee.

Audit missions results are validated by auditees and sent to the chairman of the Board of Directors, to the director of the department to which the mission was assigned, and to the Audit, Risk and Compliance Committee.

#### **Roles and responsibilities**

Internal audit service is competent to investigate and assess the appropriateness and effectiveness of both the internal control and the way the responsibilities assigned are assumed. In particular, he checks:

- Policies respect
- Risks control
- The reliability of financial information
- IT systems continuity and reliability
- The working of different services

In general, EH internal audit team acts on five kinds of audit which cover all of the activity fields and IT of EH:

- Local audits : limited to audits required by local regulation
- Transversal audits: audit missions on one process for different entities
- Sovereign audits: audits which cover all of the processes of one entity

- Ad hoc audits: non-scheduled audits asked by Board of Directors
- Vertical audits: audits of all processes of one function within one entity

#### B.1.1.3.2 Compliance

In accordance with operational and functional structure of EH SA, compliance falls within the area of expertise of the Chief Finance Officer.

Internal audit function independently and objectively checks the appropriateness and effectiveness of the compliance.

The compliance function ensures that EH SA and its employees conduct their business activity with complete integrity and in compliance with the professional, legal and regulatory rules for the insurance profession in general and in particular credit insurer.

Thus, its mission is to assist in warning EH SA and its employees against risks resulting from violation of the laws, circulars issued by the prudential authorities, rules of EH SA as well as ethical standards in use in the insurance profession.

Following areas, while managed and implemented by other, are also reviewed by the compliance function:

- Outsourcing
- Incompatibility of offices, Fit & Proper
- Laws on market practices and consumer protection
- Laws on insurance intermediation
- Solvency II policies for the subsidiaries in question

Thus, the scope of the Compliance function at EH SA is focused, but not only, on following areas:

- Data privacy
- Respect of laws on privacy protection
- Prevention of insider trading and market manipulation
- Prevention of money laundering and the financing of terrorism
- Adherence to economic sanctions rules
- Prevention of fraud and corruption
- Antitrust
- Identification and management of conflicts of interest

#### B.1.1.3.3 Risk management

#### Independence

The Risk Management Function falls in 2016 within the competence field of the member of the Management Committee in charge of Finance.

The Risk Management Function is a key function which has the main objectives of supporting the first line-of-defence by:

• Helping employees at all levels of the company to be aware of the risks related to their business activities and how to properly respond to them

• Supporting the Management Committee with development of a risk strategy and risk appetite

• Monitoring of the risk profile to ensure it remains within the approved risk appetite and following up on instances of any risk appetite breaches

The Risk Management Function has a standing within the EH SA's organisational structure that ensures to maintain the necessary independence from first line of defence functions. Necessary independence means that no undue influence is exercised over the Risk Management Function, for instance in terms of reporting, objectives, target setting, and compensation or by any other means. The Risk Management Function shall have the right to communicate with any employee and obtain access to any information, records or data necessary to carry out its responsibilities, to the extent legally permitted. Notwithstanding, information access can be restricted to dedicated risk personnel contingent upon prior agreement with the Chief Risk Officer.

The Chief Risk Officer possesses the qualification, experience and knowledge required to manage the risks relative to the responsibilities of its role.

The head of the risk management department (Chief Risk Officer) to which the Risk Management Function has been assigned is the relevant key function holder.

#### **Risk principles**

#### (a)Board of Directors is responsible for the risk strategy and appetite

The risk strategy reflects the general approach towards the management of all material risks arising from the conduct of business and the pursuit of business objectives. The risk appetite elaborates on the risk strategy through the establishment of the specific level of risk tolerance for all material quantified and non-quantified risks, and thereby the desired level of confidence, in relation to clearly defined risk and performance criteria, taking into account shareholders' expectations and requirements imposed by regulators and rating agencies. The risk strategy and appetite are reviewed at least once a year and, if deemed necessary, adjusted and communicated to all impacted parties.

#### (b) Risk Capital as a key risk indicator

The Risk Capital is the central parameter used to define risk appetite as part of the Solvency Assessment. It serves as key indicator in the decision-making and risk management process with respect to capital allocation and limits. Capital is to be understood as risk-bearing capacity or available financial resources.

Additional stress testing and scenario analyses are performed as part of the Solvency Assessment in order to ensure that adequate capital exists to protect against unexpected, extreme economic loss-es.

#### (c) Clear definition of the organisational structure and risk process

An organisational structure is established, inclusive of the roles and responsibilities of all persons involved in the Risk process, which is clearly defined and which covers all risk categories. The structure is documented and communicated in a clear and complete manner to all relevant addresses.

#### (d)Measurement and evaluation of risks

All material risks, including both single risks and risk concentrations across one or more risk categories, are measured using consistent quantitative and qualitative methods. Quantified risks are covered within the scope of the Risk Capital framework, which applies consistent quantitative methods which are based on its Internal Model.

#### (e) Development of limit systems

A consistent limit system is in place to support adherence to the risk appetite and to manage concentration risk exposure and, where appropriate, assist with capital allocation. The limit system is based on relevant Risk measures where applicable and further complemented by steering limits based on accounting or position information, and is regularly reviewed by the Board of Directors against the background of the defined risk strategy.

#### (f) Mitigation of risks exceeding the risk appetite

Appropriate risk mitigation techniques are employed to address instances where identified risks exceed, or otherwise breach, the established risk appetite (e.g. limit breaches). Where such cases occur, clear courses of action designed to resolve the breach are initiated, such as the adjustment of the risk appetite following a business review, the purchase of (re-)insurance, the strengthening of the control environment, or a reduction in, or hedging against, the underlying asset or liability giving rise to the risk.

Risk mitigation techniques are only considered in the Risk Capital calculation to the extent they lead to an economically and legally effective transfer of risks.

#### (g)Consistent and efficient monitoring

The risk strategy and corresponding risk appetite are transferred into standardised limit management processes covering all quantified risks and taking into account the effects of risk diversification and risk concentration. A clearly defined and strict limit breach reporting and escalation process ensures that risk tolerance limits and target ratings for top risks are adhered to and that, as appropriate, remediation activities are taken immediately if limits are exceeded.

#### (h) Consistent risk reporting and risk communication

The risk management function generates internal risk reports at both predefined regular intervals and on an ad hoc basis that contain relevant, risk-related information in a clear and concise form.

#### (i) Integration of risk management into business processes

Risk management processes are embedded wherever possible directly within business processes, including processes involving strategic and tactical decisions as well as day to day business processes that impact the risk profile. This approach ensures that risk management exists foremost as a forward looking mechanism to steer risk and only secondarily as a reactionary process.

#### (j) Comprehensive and timely documentation of risk related decisions

All business decisions with potential to materially impact the risk profile, including both regularly recurring and ad-hoc decisions and all decisions taken by the Management Committee, are documented timely and in a manner that clearly reflects consideration of all material risk implications.

# **B.1.1.3.4 Actuarial Function**

In accordance with operational and governance structure of EH SA, Actuary falls within the competence field of the Board of Directors member in charge of functions related to Accounting, Management Control, Actuarial Function, Tax Office, Capital Management, Risk Management, Legal & Compliance.

Persons responsible for the actuarial function possess an actuarial knowledge as well as financial mathematics.

Actuarial function realises, but not only, an EH SA independent oversight by performing the following tasks:

• Monitors the appropriate setup, by EH SA, of minimal standards regarding data quality, actuarial assumptions, methodologies and processes for the calculation of Technical Provisions and make sure of the overall level of EH SA Technical Provisions. Moreover, it reports quarterly about Technical Provisions level to the Loss Reserve Committee, statues on its appropriateness, and gets Board of Directors approval regarding the level of those Technical Provisions

• It monitors the setup, by regions, of the reserve risk model and validates the capital level related to EH SA Technical Provisions. It also contributes to the setup of an effective risk management system

• It is implied in the overall underwriting and pricing policy as well as in the set of reinsurance agreements

At least once a year the Chief Actuarial Officer establishes:

 An actuarial function report which testifies the appropriateness of EH SA Technical Provisions

• A report on reserving risk in which he testifies the appropriateness of Risk Capital amount related to EH SA Technical Provisions

• An opinion on underwriting policy and reinsurance agreements

When he establishes a report, the Chief Actuarial Officer produces and signs an independent opinion on the actuarial processes and on the calculation stemmed from them.

EH SA's system of governance remained stable over the reporting period.

# **B.1.2.** Remuneration policy

# **B.1.2.1.** Remuneration policy and practices

The Company has put in place a remuneration policy aligned with the business strategy, risk profiles, targets and risk management practices, including the interest and long-term results of the Company.

The remuneration policy promotes sound and efficient risk management and does not encourage the taking of risk beyond the risk tolerance of the Company.

# **B.1.2.1.1** Composition of the remuneration

#### **B.1.2.1.1.1 Remuneration of directors**

The remuneration of directors includes the following components:

- Fixed compensation:
  - The non-executive directors are entitled to an annual compensation of 10,000 EUR, paid in the form of an attendance fee of 2,500 EUR per meeting.
  - The chairmanship of the Board of Directors is also remunerated in the amount of 10,000 EUR per annum, in the form of an attendance fee of 2,500 EUR per meeting.
- Variable Compensation: no variable compensation (whether in cash or in the form of stock options, shares, etc.) is allocated to the directors for their mandates.

#### **B.1.2.1.1.2** Remuneration of the Management Committee members

The members of the Management Committee are compensated on an overall basis by Euler Hermes Group, the group's holding company, for all their mandates related to the group. They receive no specific additional remuneration for their mandates as members of the Management Committee within the Company.

#### B.1.2.1.1.3 Remuneration of key functions

The remuneration of other key functions (heads of independent control functions and member of employees considered as Risk Takers) is composed of two elements:

• An annual fixed part, representing a target of 50-80 % of the total remuneration; and

• A variable part, representing a target of 20-50% of the total remuneration which, is divided into two or three equal components:

• An annual variable bonus;

• Mid-term bonus ("MTB") The MTB is subject to a sustainability assessment on pay-out based on performance indicators.

• Long-term incentive ("LTI") (payable after four years): As part of a long-term bonus system for Executive managers, key functions benefit from RSUs (Restricted Stock Units).

The performance of Risk Takers is subject to an assessment based on 50% of financial targets and on 50% of individual targets. Heads of independent control functions are not subject to any financial targets, in order to allow them to exercise their functions independently from the financial performance of the Company.

#### 50% financial targets

Financial targets are assessed on the basis of ((i) three financial criteria for all Risk Takers: Group operating profit, Group net income, and Group turnover and (ii) other criteria specific to each of them and defined according to their responsibilities.

The measurement for financial results will be in the range of 0-200%.

#### 50% individual targets

Individual targets are 25% quantitative targets and 25% qualitative targets specific to the duties and responsibilities of each Risk Takers.

Individual quantitative targets are personal priorities which are quantifiable and objectively measurable – WHAT targets.

Individual qualitative targets are based on meritocracy principles consisting of the four following attributes and underlying behaviours – HOW targets:

- Customer and Market Excellence
- Collaborative Leadership
- Entrepreneurship
- Trust.

#### Multi-Rater on HOW targets

Behaviours and observations may be collected from other relevant colleagues via a so-called "multi rater" input, which results are an additional but optional mean available to the Supervisory Board to calibrate individual performance assessments of the Risk Takers on their HOW targets.

#### Absence of payment in case of breach of Compliance / Risk / Financial Requirements

Any payout can be reduced partially or in full in the case of a breach of the code of conduct, risk limits, compliance requirements or comparable criteria deemed relevant.

#### Conditions for payment of the variable compensation when a person leaves the Company

The payment of variable compensation is subject to whether the person was considered as a bad leaver or a good leaver.

A person is a "bad leaver" if he/she leaves his/her function upon his/her own initiative or if the Company terminates his/her function for just cause. As a "bad leaver", the person will cease to be entitled to any annual or mid-term bonus, subject to applicable laws and regulations and any RSU already granted will immediately lapse and no further RSU will be granted.

A person who is not a "bad leaver" is considered to be a "good leaver" (e.g. if the person leaves his/her function because of ill health or disability, death, regular or early retirement, revocation of appointment, business transfer or any other reason, if the Company so decides in general or in any particular case).

#### Pension plan

Heads of independent control functions and Risk Takers are not eligible for a supplementary pension plan (top hat scheme or "retraite chapeau"). They are eligible for a supplementary definedcontribution pension plan subject to the country's local pension system, of which are predominantly Belgian and French regimes.

i. Belgium

Heads of independent control functions and Risk Takers, who hold a Belgian contract that commenced before 2012, benefit from a group insurance plan called "goal to be achieved", whereby the amount of supplementary pension plan (which would be available at retirement age) is calculated on the basis of the worker's salary and the number of years during which the worker entered into the plan. The monthly contributions are therefore not fixed. The persons, of which hold a Belgian contract that commenced after 2012, benefit from a group insurance plan called "fixed contribution", whereby the monthly contributions are determined on the basis of the salary and paid into a pension plan which will be made available to workers at retirement age. ii. France

Heads of independent control functions and Risk Takers, who hold a French benefit from a supplementary pension plan to the legal regime: two mandatory schemes (basic pension managed by the CNAV and supplementary pension AGRIC/ARRCO managed by B2V); two supplementary and optional schemes managed by AG2R la Mondiale (Article 83 or Pension Fund and PERCO).

Depending on the year of birth and in implementing provisions known today, the cumulative conditions for entry into retirement are: year of birth + legal retirement age + number of quarters required. The basic pension is the first retirement regime in France. It is based on the principle of distribution among the generations.

# **B.1.3.** Material transactions

EH SA paid a dividend of 700M€. Additional information can be found in Section A.1.4 of this report.

# **B.2.** Fit and proper requirements

#### B.2.1. Description of requirements for « fit & proper »

The application of the Solvency II Law requires a high Fit and Proper standard for Senior Management and Key Function Holders across the company. For these positions, a policy establishes the core principles (general principles, fitness and propriety) and processes necessary to ensure sufficient knowledge, experience and professional qualifications as well as the necessary integrity and soundness of judgment.

#### B.2.1.1. Scope

**Senior Management** is defined as the persons effectively running the Company i.e.:

• Members of the Management Committee;

• Heads (or "CEOs") of the branches of EH SA in states other than the state of EH's headquarter.

The **Key Function Holders** are the persons responsible for carrying out the independent the following key control functions, "Key Functions":

- Compliance;
- Risk Management;
- Actuarial
- Internal Audit

They are the heads of the respective departments with a direct reporting line to the Management Committee. For each Key Function there is one Key Function Holder. The Key Function Staff comprises further persons working within Key Functions, including those with a direct reporting line to the Key Function Holders and, in addition, experts with independent decision rights.

# B.2.1.2. Definitions

#### <u>Fitness</u>

A person is considered **fit (Fitness)** if his/her professional qualifications, knowledge and experience are adequate to enable sound and prudent fulfilment of his/her role. This includes leadership experience and management skills, as well as the relevant qualifications, knowledge and experience for the specific role.

The qualifications, knowledge and experience required depend on the position.

The **members of the Board of Directors** shall collectively possess qualification, knowledge and expertise about:

• Credit Insurance, asset management and financial markets, i.e. an understanding of the business, economic and market environment in which EH SA operates;

• The business strategy and business model of EH SA;

• EH SA 's system of governance, i.e. an understanding of the risks EH SA is facing and the capability of managing them and of assessing the capacity of EH SA to deliver effective governance, oversight and controls;

• Financial and actuarial analysis, i.e. the ability to interpret EH SA's financial and actuarial information, identify key issues, put in place appropriate controls and take necessary measures based on this information; and

• Regulatory framework and requirements, i.e. an understanding of the regulatory framework in which EH SA operates and the capacity to adapt to changes to it, in particular the Circular NBB\_2013\_02 of 17 June 2013 regarding the fit & proper standards and the chapter 2 of the Circular 2016-31 of 5 July 2016 regarding the prudential expectations of the NBB regarding governance systems for the insurance and reinsurance sector.

Appropriate diversity of qualifications, knowledge and experience within the Management Committee shall be ensured and the collective fitness shall be maintained at all times when changes occur within the Management Committee.

While each individual member of the Management Committee is not expected to possess expert knowledge, competence and experience within all areas of the Company, he must possess the qualification, experience and knowledge which is necessary for carrying out the specific responsibilities within the Management Committee assigned to him.

Members of the **Senior Management other than members of the Management Committee** must possess the qualification, experience and knowledge as outlined with regard to the Management Committee to the extent they are relevant for their responsibility. This depends on the degree of autonomy within the overall organization of EH SA which the branch, organizational unit or regional business division has for the business.

Each **Key Function Holder** must possess the Fitness required to fulfill the tasks assigned to him by the policy of the respective Key Function, if any, and applicable law. In cases where a Key Function is outsourced according to the EH SA Outsourcing policy, the Fitness requirements for the person are identical to those applying to the respective Key Function Holder himself.

#### **Propriety**

A person is considered **proper (Propriety**) if he/she is of good repute and integrity, depending on his/her character, personal behavior and business conduct, including criminal, financial and supervisory aspects. A proper person is able to provide for the honesty and financial soundness required for him to fulfil his/her position in a sound and prudent manner.

Whereas certain requirements must be positively fulfilled for a person to be considered Fit, in respect of Propriety there are no such positive criteria, but rather negative circumstances, which are hints that a person may not be Proper. Thus the Propriety assessment does not consist, like the Fitness assessment, in the verification that requirements are fulfilled, but in the consideration of any hint which may cast a doubt on a person's Propriety.

Such hints are:

• Any occupational prohibitions referred to in Article 41 of the Solvency II Law;

• Any previous conviction, or current procedure possibly leading to a conviction, of a criminal offence, in particular offences under any financial services legislation (e.g. laws on money laundering, market manipulation or insider dealing, fraud and financial crime), breaches of companies, insolvency and consumer protection laws;

• Any previous conviction, or current procedure possibly leading to a conviction, of a relevant disciplinary or administrative offence;

• Any administrative sanctions for non-compliance with any financial services legislation and any current investigation or enforcement action by any regulatory or professional body;

• Any relevant inconsistency with regard to a candidate's education or professional experience; and

• Any further circumstance resulting in the risk of financial crime, non-compliance with law or the jeopardizing of the sound and prudent management of EH SA business.

#### **B.2.2.** Description of processes and procedures in place

The Fit & Proper checklist was reviewed and communicated to every Heads of Human resources. It can be found in annex of the Fit & Proper policy and defined more precisely the controls to be performed for all employee levels and in all situations.

The human resources function strictly follows this guide to guarantee the reputation and professional expertise of each person coming within the scope of the Fit & Proper.

Besides, the process of the Bank's regulatory reporting and pre-approval obligations is detailed in the policy application note to EH SA. This process is carried out in coordination between human resources and the leg al department.

At the same time, EH Group SA's Fit & Proper policy is applied to all legal entities within the scope of control of EH Group SA. As a result, the CEOs of the subsidiaries and sub-subsidiaries of EH Group SA are subject to Fit & Proper assessment. EH SA's subsidiaries as well as its branches are thus also covered by this procedure.

# **B.2.2.1.** Processes for ensuring Fitness and Propriety at recruitment

EH SA ensures that, during the recruiting process of any member of the Senior Management or of a Key Function Holder, whether internal or external to the EH Group, their Fitness and Propriety are assessed. An employment or service contract may only be entered into after the successful completion of a recruiting process as described below.

#### (a) Job descriptions / Fitness requirements for the position

Job descriptions are used to fill open positions for members of Senior Management other than members of the Management Committee and for Key Function Holders, both internally and externally. The HR department ensures that the job descriptions for open positions are in place, in line with corporate communication requirements and local laws and regulations, including anti-discrimination regulations. Each job description specifies the job role and the tasks and key responsibilities associated with it, as well as the Fitness required to perform the job role in a sound and prudent manner.

As regards the members of the Management Committee, candidates are assessed in accordance with the Fitness requirements described above as well as further criteria defined by the Board of Directors.

# (b) Curriculum vitae; background checks

# i. External candidates

All candidates must submit a current curriculum vitae at the beginning of the recruiting process. The final candidate for a position within the Senior Management or as Key Function Holder must be subject to a background check, comprising of:

• The submission by the candidate of copies of his required qualifications;

• The submission by the candidate of a proof of good reputation and of no previous bankruptcy, including a certificate of good conduct or adequate documents (e.g. criminal records check, police clearance certificate), presented not later than three months after the date of issue; and

• A reference check and a public media search conducted by the recruiting HR department, subject to applicable privacy laws and regulations.

Each respective Key Function Holder shall determine for which Key Function Staff positions the final candidates shall be subject to a (partial) background check. In doing so the Key Function Holder shall consider the positions' level of responsibility, e.g. direct reporting line to the Key Function Holder.

In the event that any of the documents to be submitted by the candidate for the background check is not available, the HR department, responsible for the recruitment, decides on the adequate measure (e.g. request for a statutory self-declaration to serve as proof).

# ii. Internal candidates

When candidates have been employed by EH SA for less than four years, or uncertain justified cases, it must be secured that their curriculum vitae is available. Besides they shall be subject to background checks as described above.

Irrespective of their tenure within EH SA, internal candidates applying to assume an executive position for the first time must undertake a global assessment, including:

- An interview with a professional interviewer;
- References from the candidate's superiors, peers, direct reports and other stakeholders; and

• Psychometrics to assess the candidate's leadership styles and the organizational climate he creates (optional).

#### (c) Interviews

For head positions the candidates have an interview with three members of the Management Committee and a HR professional.

All other candidates for Executives positions (including key function holders) have an interview with the responsible member of the Management Committee and, if applicable, with the functional member of the Management Committee as well as a HR professional.

#### (d) Assessment by NBB

Prior to the nomination of the candidate to her/his role, the candidate must be vetted by NBB.

As a consequence, an assessment file is submitted to NBB and if necessary, an interview with NBB is organized.

# B.2.2.2. Processes for ensuring ongoing Fitness and Propriety

A person's Fitness and Propriety shall be assessed on a regular basis, to ensure ongoing Fitness and Propriety of the person for his position, for instance, as part of annual performance reviews or Career Development Conferences.

Ad-hoc reviews are required in certain extraordinary situations which give rise to questions regarding a person's Fitness or Propriety, e.g. in case of:

• Relevant breach of the EH SA Code of Conduct;

• Failure to submit required self-disclosure statements, e.g. statements of accountability or disclosure of security trading;

• Investigation or any other procedure possibly leading to a conviction of a criminal, disciplinary or administrative offence (in the case of an administrative or disciplinary offence, the relevance to the EH SA business and the person's position shall be taken into account), or to administrative sanctions for non-compliance with any financial services legislation; and

• Substantiated complaint within the EH SA (e.g. whistle-blowing) or from supervisors.

# B.2.2.3. Outsourcing of a Key Function

In cases where a Key Function is outsourced according to the EH SA Outsourcing Policy, the due diligence of the Provider by the Business Owner comprises a description of the process used by the Provider to ensure the Fitness and Propriety of its personal and a written confirmation that the Provider's personal working within the outsourced Key Function is Fit & Proper.

At the date of the writing of the narrative report, no key function is outsourced.

# B.2.2.4. Assessment results

Based on the information gathered during recruiting, a regular or ad-hoc review or an outsourcing due diligence, each case must be assessed individually, considering the following:

• As regards Fitness, if it appears that a member of the Senior Management, a Key Function Holder or a candidate to such a position suffers from a specific lack of knowledge, competencies or skills, it shall be considered whether this lack is curable through specific professional training and if so, the person must be provided with such training; • Regarding Propriety, whereas any hint of a possible lack of Propriety must be taken into account for the assessment, factors such as the type of misconduct or conviction, the severity of the case, the level of appeal (definitive vs. non-definitive conviction), the lapse of time since and the person's subsequent conduct are also taken into account, as well as the person's level of responsibility within EH SA and the relevance of the finding for the respective position (i.e. the position's exposure to integrity and fraud risks). Furthermore, any finding with respect to a person's Propriety must be shared with the compliance department, as well as the legal department where adequate. At the date of the writing of the narrative report, all members of senior management and all key function holders have been approved by NBB as fit & proper.

# B.2.2.5. Training

EH SA ensures that, on an on-going basis, relevant professional training, including eLearning, is available (internally or via external providers) to the Senior Management and Key Function Holders, to enable them to constantly meet the Fitness requirements of their roles.

As regards Propriety, EH SA's compliance department provides regular training on ethical business behavior such as anti-fraud and anti-corruption topics, providing employees with clear rules for proper behavior, both for themselves and their reports.

# B.3. Risk management system including the Own Risk and Solvency Assessment

# B.3.1. Description of risk management system

# B.3.1.1. Risk management framework

Effective risk management is based on a common understanding of risks, clear organisational structures, and comprehensively defined risk management processes. The following principles shall serve as a basic foundation upon which EH SA risk management approach shall be implemented and conducted.

The key elements of the EH SA risk management framework are:

- Promotion of a strong risk management culture supported by a robust risk governance framework
- Consistent application of an integrated Risk Capital framework across EH SA to protect the capital and support effective capital management
- Integration of risk considerations and capital needs into management and decisionmaking processes through the attribution of risk and allocation of capital

**EH SA Management Committee is responsible for the risk strategy and appetite**. The risk strategy reflects the general approach towards the management of all material risks arising from the conduct of business and the pursuit of business objectives. The risk appetite elaborates on the risk strategy through the establishment of the specific level of risk tolerance for all material quantified and non-quantified risks, and thereby the desired level of confidence, in relation to clearly defined risk and performance criteria, taking into account shareholders' expectations and requirements imposed by regulators and rating agencies. Five core elements define EH SA's risk appetite:

- Setting target ratings for top risks
- Monitoring the capitalisation level and solvency ratios
- Managing liquidity to ensure flexibility
- Defining quantitative financial limits
- Defining policies, standards and functional rules

# B.3.1.2. Risk management processes

EH SA has established for all material quantified and non-quantified risks a comprehensive risk management process which incorporates (i) Risk identification, (ii) Risk assessment, (iii) Risk response and control activities, (iv) Risk monitoring, and (v) Risk reporting. The process should be implemented and conducted within the confines of a clearly defined risk strategy and risk appetite and periodically assessed for adequacy.
At a minimum, EH SA follows to the hereunder quantitative and qualitative risk management process requirements:

• **Solvency Assessment**, a comprehensive assessment of all risks inherent to the business in order to determine whether current and future capital will be sufficient to ensure ongoing solvency against these risks. The Solvency Assessment constitutes the "Own Risk and Solvency Assessment (ORSA)". EH SA Management Committee shall discuss the Solvency Assessment, take appropriate actions based on the findings and report the outcome to their local Supervisor

 Risk Capital calculation, EH SA shall calculate their Risk Capital with respect to all material risks of the Risk Categories Market, Credit, Business and Operational Risk (using Risk and Control Self Assessment (RCSA) and Scenario Analysis (ScA), further details can be found in Section C.5.1), as well as Underwriting Risk on a quarterly basis

• **Top Risk Assessment (TRA)**, a periodic analysis of all material quantified and nonquantified risks to identify and remediate significant threats to financial results, operational viability or the delivery of key strategic objectives. The TRA shall cover the eight Risk Categories as well as Risk Concentrations. EH SA shall perform a TRA on a regular, at least annual basis and report their results to Group Risk

• Further risk management processes, in addition to the TRA, EH SA shall manage all material risks of all Risk Categories through the application of specific risk management processes

## B.3.1.3. Risk management implementation

**The Board of Directors** of the Company is responsible for determining the Company's level of risk appetite and overall tolerance limits for all of its activities.

**The Audit, Risk and Compliance Committee** monitors the risk strategy and the functioning of the risk management function as further elaborated here-above.

**The Management Committee** is responsible for sound organisational and operational structures and procedures to ensure compliance with the risk management policy. More specifically, the responsibilities are:

• Implementing EH SA Risk Policy into EH SA system of governance and in particular EH SA corporate rules as appropriate to EH SA business and risks

• Establishing a Risk Management Function responsible for the independent risk oversight under the responsibility in 2016 of EH SA Member of the Management Committee in charge of Finance and from 2017 onwards, under the responsibility of the Chairman of the Management Committee in charge of Internal Audit, Human Resources and Communications

• Implementing the risk management process, including the Solvency Assessment; and

- Approving and adapting the Internal Model to ensure its adequateness for the use by  $\mathsf{EH}\:\mathsf{SA}$ 

Risk Management Function responsibilities are the operational execution of:

- Proposing the risk strategy and appetite to the Management Committee
- Overseeing the execution of the risk management processes

• Monitoring and reporting EH SA risk profile including the calculation and reporting of the Risk Capital

• Supporting the Management Committee through the analysis and communication of risk management related information and by facilitating the communication and implementation of its decisions

• Escalation to the Management Committee in case of material and unexpected increases of risk exposure

• Reporting the Solvency Assessment as well as any further material risk management related information to Group Risk

• Developing and implementing the internal model, in particular its local components, including validation and suitability assessments

The Risk Committee (RiCo) is responsible for:

• Preparing and proposing to the Management Committee the risk strategy, risk appetite and limits

• Operational execution of the risk limit framework and overseeing the risk management system

• Preparing and proposing to the Management Committee the Solvency Assessment

• Defining and operationalising group-wide risk standards (including the corporate rules of the Risk Policy Framework)

The Finance Committee (FiCo) is responsible for approving individual investment transactions in line with Risk Capital considerations.

## B.3.1.4. Risk Policy Framework

The Risk Policy Framework (RPF) is a set of policies, standards and guidelines overarching the Risk Management System of EH SA. It defines all the risk-related principles to embed in the different processes and describes the core elements of the Enterprise Risk Management (ERM) framework as minimum requirements to apply.

The capacity of having this framework being applied and respected within the company represents a risk foundation. Hence, it is properly monitored by the Risk and Capital Management (R&CM) team.

The objective is to ensure an ongoing update and validation of the Risk Policy Framework by performing an annual review of the implementation of the policies, standards and guidelines of the framework.

At the time of the production of this report, EH SA had 30 documents applicable and monitored.

## B.3.1.5. Three Lines of Defence

As required by Solvency II, EH SA adopted a "3 lines of defence" model for risk governance, with clear responsibilities between the different organisational functions as described hereafter:



## **B.3.2.** Governance of the internal model

## B.3.2.1. Governance of the internal model

**The Management Committee** is responsible for approving the application to use the internal model to calculate the Solvency Capital Requirement.

The approval is required within the scope of the initial Internal Model Approval Process (IMAP). In addition, the Management Committee is responsible for confirming the ongoing appropriateness of the internal model at least annually by signing off the Annual Validation Report.

## A. EH SA Chief Risk Officer (CRO)

The EH SA CRO is responsible for ensuring compliance with the Allianz Standards on Model Governance (ASMG) at the local level. Responsibilities of the EH SA CRO include:

• Ensuring model validation is performed and documented in accordance with the ASMG, i.e. adequate independence and skills of model reviewers

• Ensuring that the persons providing expert judgment possess adequate skills and experience

• Ensuring that all relevant documentation in the Model Inventory and the IMAP documentation repository is kept complete and up-to-date in particular after a model change and that the documentation standards are fulfilled

### **B. Specific roles**

The following roles, consisting of either an individual or group of individuals, shall be established in order to facilitate adherence with the requirements of EH SA's standards:

1. Model approvers are responsible for:

• Initial approval of the models they are responsible for

• Deciding on a remediation plan if the validation results for models they are responsible for indicate findings that have to be addressed

#### 2. **Model owners** are responsible for:

- Ensuring the existence of adequate model documentation
- Model development in accordance with the established design requirements.
- Overseeing the implementation of model controls
- Carrying through activities to assess the appropriateness of the results of the model
- Assess the data quality and define appropriate data update cycles
- Sign-off of expert judgment

EH SA model owners are responsible for local model components and for assessing the suitability of central model components for local application.

3. **Independent reviewers** may be independent internal or external parties and are responsible for independent validation of models and reporting of the results according to the specifications in the Guideline for Model Validation.

#### 4. The EH SA model governance coordinator shall support the EH SA CRO by:

- Gaining approval of the validation plan by the local RiCo
- Coordinating the Annual Model Validation plan within the relevant legal entity

Collecting suitability assessment results from model owners and documenting these in the relevant template for EH SA

• Gathering independent validation results of local model components and documenting these in the Local Annual Validation Report for EH SA

• Following-up the status of the local remediation plans and disclose a status of open and closed findings in the local Annual Validation Report

• Regularly communicating the status of local validation plan to the model governance coordinator at Group level

In addition, the local model governance coordinator is responsible for the preparation of the Annual Model Validation Report at EH SA level.

### 5. EH SA Actuarial Function

The Actuarial Function is involved in risk modelling topics affecting their area of their expertise, including dependencies with other risks.

## B.3.2.2. Committee and interaction with the Management Committee

#### **Risk Committee**

• Make a recommendation to the Management Committee (MC) for the approval of the initial application for using an internal model

• Assess the ongoing appropriateness of the internal model, decide on remediation action for identified weaknesses and make a recommendation to MC for the confirmation of the ongoing appropriateness of the internal model

### Internal Model Approval

The use of the internal model is subject to approval by the Management Committee for initial model approval and for ongoing confirmation of the appropriateness of the internal model.

Local model components are classified into one of the three Tiers on local level according to their contribution on the local SCR and Group Technical Provisions.

The local Risk Committee has the option to re-assign the Tiering of the model depending on the qualitative assessment. This should consider but not be limited to the result of the Annual Validation Report which comprises quantitative and qualitative validation, as well as other feedback from the business use of the internal model.

A new model validation and approval process cycle shall be triggered by any model change resulting from rejection by the approver.

In case of conflicting approval decisions at the local entity and Group level, a consensus shall be negotiated between all stakeholders.

#### Internal Approval - Local Internal Model

The EH SA Risk Committee assesses the overall appropriateness of the internal model as it applies to the legal entity and submits a recommendation to the Management Committee for confirmation.

If the assessment of the internal model results in a material weakness, the EH SA Risk Committee must inform the Management Committee, ensure a remediation plan is in place and initiate immediate action aiming to restore the appropriateness of the model. This may trigger out of cycle model changes relating to the key findings and recommendations of the assessment.

## B.3.2.3. Governance of Trade Credit Insurance & Surety Model

As EH SA core business is trade credit insurance and that a specific internal model has been developed dedicated to this risk, the following refers to the governance of this model.

EH SA CRO is responsible for ensuring and supporting an adequate Trade Credit Insurance and Surety Risk Capital process from the data collection to the review of results. It covers:

Reliable and timely data input for the Credit Insurance Risk model to meet deadlines

- High standard of quality level according to criteria
- Evidence of checks of data and data delivery sign off

• An audit track document covering the data preparation, storage of data and analysis of impact as an important component of the data input.

• The organisation of a Parameters & Assumptions Approval Committee (PAAC)

• At the end of the process, EH SA CRO gives a statement of accountability to EH Risk & Capital Management (R&CM)

• EH SA CRO ensures that all parameters changes are made according to expert judgment with measure for the impact of such change

• EH SA CRO ensures that a proper validation process is in place in the BU

If the requested scope of data requirements or data quality standards is not fulfilled in a certain delivery, EH SA CRO is in charge of initiating issue fixing and tracking.

A PAAC is organised every quarter with the Risk Information and Claims (RIC) teams in order to reinforce the expert judgment and validate the parameters.

The name of participants and the minutes of the committee must be addressed to EH R&CM with the data input. These minutes must include a presentation of the parameters and the expert judgment used to define them so they can be used for the EH Group PAAC to justify the entity position.

## B.3.2.4. Material changes to the internal model governance

In 2016, four main updates of model governance have been achieved on group level.

### Update of model validation guidelines

The goal was to ensure alignment of this guideline with the validation results, the concept of model uncertainty and the corresponding thresholds

## Process of minor and immaterial model changes

A new process for minor immaterial model changes was introduced which includes the Group eligibility approval, integrates the approval or decision of CRO and the Chief Actuary (CA), and the final milestone of notification of regulators at x+10.

#### **Tiering concept and Tiering results**

An interpretation of the model Tiering process including the Tiering of the entire internal model has been provided to all entities in scope and to the central model owners.

## Update of the Model Inventory

The minor and immaterial model change process and the Tiering concept are currently being implemented. With respect to local model governance updates, EH SA has started to report on all model changes on a quarterly basis to NBB as requested.

No other changes in EH SA's model governance framework occurred during 2016.

## B.3.2.5. Description of the validation process

#### Validation plan

The validation plan addresses the issue of sequencing the model validation activities and cycles as appropriate. The Validation Coordinator (VAC) together with the Model Owner (MO) will define a validation plan based on:

- The model lifecycle of all models to be validated (what is the current stage of the model and when will the next request for validation be)
- The size of the validation, which depends on the model complexity and the validation type

- The validation capacity
- The requests from supervisors
- The materiality of the risk which is measured

The VAC and MO will submit the planning to the CRO for sign-off and subsequently inform the Model and Approval Adjustment Committee (MAAC). Post MAAC, the VAC will engage with the necessary model stakeholders to identify and define their expected level of engagement.

## Validation results

The validation report containing the findings and proposed recommendations is ultimately reviewed by the MAAC and signed-off by the MC.

It lists and classifies the findings identified during the model review taking into account the materiality of the finding and/or potential issues

Every finding is assigned a recommendation by the independent validator in order to mitigate the model risk associated to it.

A remediation plan is developed by the responsible model owner for every finding coming from the independent validator, including mitigating actions required for affected model uses.

Remediation plans have to be agreed upon with the independent reviewer and communicated to the MAAC for approval.

Once agreed every validation finding (irrespective of its materiality) together with its recommendation and remediation action (or justification for low severity findings where applicable) will be documented and assigned to the model owner for action.

Once a remediation action is completed, the model owner will submit a closure report to the independent validator for review and approval.

## Validation recommendations follow-up

Planned remediation activities shall be regularly tracked by the independent validator in order to ensure their timely closure. A progress status report is presented to the MAAC on a quarterly basis.

After the model owner submitted a closure report, the independent validator will review:

• Whether the provided evidences are complete as per the remediation plan

• If complete, the independent validator will proceed, with the review and validation of the provided closure evidences. Conclusions will state whether the recommendations are closed, extended or opened

Upon completion of its recommendations' validation, the independent validator will consolidate all recommendations statuses into one validation report which will summarise:

- The validation status and conclusion for each recommendation
- The assessment of possible model risk and impact on model uses for "Extended" and "Open" recommendations as well as new deadlines for their complete resolution

• The overall assessment of the model adequacy reflecting the remaining "Extended" and/or "Open" recommendations

The report will be shared with the model owner(s) and subsequently, the independent validator will submit the validation report to the MAAC.

Finally, the independent validator will provide in the annual validation report for MC approval, a status of all recommendations processed throughout the calendar year together with their impact assessment both on Risk Capital and model uses.

## **Escalation Procedure**

The escalation procedure is necessary in case of disagreement on the validation outcome. In particular, it occurs in the two following situations. The escalation procedure starts with a notice of escalation submitted by the MO to the Validation (VAL) with which there is a disagreement. The notice of escalation includes a concise summary of the concern/issue. The notice must be communicated as promptly as possible and substantiated with the necessary evidences against the validation outcome.

• The VAC will discuss the issue with the MO and necessary model stakeholders. This can result in two possibilities:

 $\circ$   $\,$  Firstly, the issue is resolved, in which case the validation report can be send to the MAAC  $\,$ 

• Secondly, the issue is not resolved and will be escalated to the CRO who will either arbitrate the issue if it is line with his/her delegated authority and subsequently inform the MAAC or directly request MAAC opinion and approval where necessary

•The final decision is ultimately taken by the MAAC

## **B.3.3. Description of ORSA process**

The ORSA draws upon the whole risk management system in order to conclude on the risk profile adequacy to the risk appetite over time and different scenarios.

Risks and capital needs are hence considered as an integral part of the business decision making processes of the company. So as to be exhaustive, all kinds of risks (quantitative and qualitative) are thus taken into account.

The ORSA has to be considered as being performed on an ongoing basis during normal execution of the risk management framework. This ongoing performance is complemented by a regular comprehensive annual assessment and report, as well as non-regular (i.e. ad-hoc) assessment following significant changes in the risk profile.

The report includes the decisions of the Management Committee and then is validated by the BoD of EH SA.

#### Macro process ORSA

**ORSA Macro process** 



The ORSA Process is driven through five main steps:



1. Update and alignment of the risk appetite and risk limits with the business strategy and check of the alignment with EH Group's requirements.

2. Identification of all risks and controls to be considered, quantifiable and non-quantifiable, by performing several approaches.

3. Assessment of all risks based on the internal model and additional risk assessment methods for risks not covered by the internal model. Moreover, projections of own funds, Risk Capital and solvency ratio under base case and stress scenarios.



4. Steering of the overall solvency needs in quantitative terms with a qualitative description of all material risks. Then, demonstration of the compliance of future business with the risk strategy.

5. Reporting of the performed results and analysis by filling the ORSA report and diffusing it to all relevant stakeholders.

### **ORSA** governance

- A. The Board of Directors is responsible for signing-off the final report
- B. The Management Committee (MC) is actively :
  - Ensuring proper implementation of its standard
  - Challenging the outcome of the ORSA and doing a pre-approval signing of the report.
  - Instructing on any follow-up actions to be taken

#### C. The Risk Committee is responsible for:

- Overseeing the ORSA process
- Reviewing and pre-approving the ORSA results prior to submission to the MC
- Monitoring quarterly all the ORSA components and the execution of any follow-up actions

• Requesting performance of a non-regular ORSA if any events potentially altering the last overall ORSA conclusions occur

#### D. The Chief Risk Officer is responsible for:

Coordinating the ORSA process, the various contributors and preparing the ORSA Report

 Annually assessing the compliance of the ORSA report/ process with regulatory requirements

• Providing the RiCo with insight on the ORSA results and distributing them to all key stakeholders related to business strategy, risk strategy and Risk and Capital Management

• Advising the MC regarding the ORSA results

• Reporting the ORSA results to the Risk Committee and distributing them/it to all key stakeholders related to business strategy, risk strategy and Risk and Capital Management

- Ensure the follow-up of the instructions coming from the MC.
- Providing the ORSA results report to the MC
- Communicating with supervisory authorities

#### **ORSA** report review process

EH SA's ORSA report is reviewed once a year.

This review process is the last step before the presentation of the ORSA report to the administrative management of EH SA (Management Committee).

The review process ideally occurs according to the following timeline, subject to availability of each validator.

- <u>Step 1</u> Review by R&CM
- <u>Step 2</u> Review and approval by EH contributors and stakeholders (including LEs)
- <u>Step 3</u> Review and approval by Allianz (AZ)
- <u>Step 4</u> Final review and approval by CFO

EH SA determines its own solvency needs using both an Internal Model (IM) for modelled risks and a Top Risk Assessment (TRA) for non-modelled risks

#### Capital management strategy

To meet Solvency II requirements in an efficient manner, EH SA has set in place target capitalisation ratios and limits to fulfil any regulatory and financial obligations it could have but also to support its own strategy as well as to secure its business worldwide.

In accordance with the standards and guidelines coming from EH Group, EH SA updated its capital management policy in 2016, willing to have an even more precise capital management. EH SA thereby put in place an additional set of limits, to supplement the previous minimum ratios and target ratios.

The current capital management strategy, dividend policy and limits are defined as follows:

- EH SA targets to stay within the capital management range of the "Action Barrier" and the "Upper Bound" in the normal course of business
- The bounds of the capital management range are defined in line with the capital management ratio as defined in the group risk appetite
- In case of a breach of the capital management range in any of the two dimensions, the Management Committee will evaluate the situation in their next regular Board meeting and evaluate any potential countermeasures to get back within the capital management range. In particular, any capital held in excess of the upper bound is deemed excess capital. This excess capital shall be made available to EH Group as early as possible over the plan horizon.
- If EH SA drops below the alert barrier, it is expected to submit a contingency plan to conserve its solvency to the Management Committee within due time.
- If EH SA falls below the action barrier during the course of the year but stays above the minimum capital ratio, it is still expected to pay out the planned dividend while any adjustments will be considered to the planned dividends over the remaining plan horizon.
- If EH SA falls below the minimum capital ratio the Management Committee will take measures to re-establish the minimum capital ratios in due time.

## B.4. Internal control system

#### B.4.1. Description of internal control system

#### Internal control framework

The internal control framework is laid out in EH SA'S Governance and Controls Policy, as approved by the Management Committee.

The EH SA internal control system has the following objectives:

• To safeguard EH SA ability to operate as a going concern and the continuity of its business

• To create a solid control environment, by ensuring that every member of personnel is aware of the importance of internal control and the role that they must play in the internal control system

• To perform control procedures that are commensurate with the risks carried by EH SA's activities and processes

• To provide relevant information to the management bodies as part of their decisionmaking processes

• To ensure compliance with the applicable laws and regulations

With respect to the areas of control, activities and reporting aspects, the controls are performed within EH SA in accordance with requirements regarding independence.

They are incorporated into EH SA operational and organisational configuration and subject to continual review. When needed, internationally recognised control frameworks such as the COSO framework (the Committee of Sponsoring Organisations of the Treadway Commission's Internal Control - Integrated Framework) and the COBIT framework (Control Objectives for Information and Related Technologies) may be used.

The internal controls hence describe all the activities undertaken by and within Euler Hermes to achieve specific control objectives, such that the controls are put in place and applied across all segments and sectors of activity. These controls ensure a permanent assessment of the effectiveness of relevant processes and procedures (including those pertaining to operations and reporting), their coherence and their proportional nature within the Company, as well as the potential actions that may be taken to rapidly address any deficiencies.

The EH SA Internal Audit function is part of the Compliance function and works with Risk & Capital Management to identify any material errors in the Company's consolidated financial statements and management reports.

The internal control system encompasses different control concepts.

In addition to general aspects related to control activities, specific controls are also performed, notably with respect to levels relating to legal entities, financial reporting, IT, venture capital calculation, underwriting (including products and distribution) and investments. Alongside these controls, reports are submitted to management.

#### General control elements

The following key principles govern the processes and the manner in which governance and controls are organised at EH SA:

• Central, regional and local roles and responsibilities must be strictly defined.

• It is important to safeguard the separation of tasks to avoid excessive risk-taking and potential conflicts of interest.

• Important decisions must be taken by at least two representatives of the operational entity under review, even if, under local regulations, the company may be represented by a single person (four-eyes principle).

• In the interests of sound commercial judgement, the decision-making processes must be applied at all management levels that hold relevant information, notably through impartial access to necessary information.

• To facilitate communication throughout the company, English is the common language used at Euler Hermes.

• Steps must be taken to ensure that all members of personnel are aware of the importance of internal controls through the clear definition and communication of roles and responsibilities and the provision of suitable training

• It is important to maintain structured, documented processes for which key controls are in place and function effectively.

• The COSO framework and part of the COBIT model shall apply to the financial reporting process.

According to the COSO description, there are five components of internal control:

- Control environment (awareness among personnel of the need for internal control);
- Risk assessment (factors that may have a bearing on the achievement of objectives);
- Control activities (notably the application of standards and procedures);
- Information and communication of data required to manage and control activity;
- Monitoring of control systems.

EH SA applies the three-lines-of-defence internal control model, with graded control responsibilities:

The first line of defence is implicated in the day-to-day management of activities and in the management of risks and controls.

The second line of defence entails performing independent controls and challenging the day-to-day management of activities and controls carried out by the first line.

The third line of defence provides independent assurance with respect to the first and second lines of defence in the form of periodic assessments (internal audit).

The "Governance & Control" policy clearly states what is expected of each line of defence and each control function. It also determines how controls should be organised across the central, regional and local functions.

Each corporate rule must be approved as part of a documented procedure. This rule framework is made available to all members of personnel via intranet and, where applicable, in the languages of all the countries in which the company operates. It must also comply with the applicable regulatory requirements.

### Specific elements

i. Internal Control Over Financial Reporting (ICOFR)

Euler Hermes has introduced controls over its financial reporting (ICOFR) in order to identify and mitigate the risk of material error in its consolidated financial statements and management reports.

These controls seek to encompass all relevant financial reporting components, notably:

- The processes relating to financial reporting
- The policies, procedures and controls that need to be applied in order to prepare reliable financial statements

• Accounting data that provides a true picture of the transactions entered into and the measures taken to prepare the financial statements;

- Assurance that income and expenses have been duly authorised;
- Assurance as to the prevention or timely detection of non-authorised transactions that might have a significant bearing on the financial statements.

The ICOFR process hinges on a structured approach, as shown in the following diagram:



## ii. IT controls

The IT security and control framework is described in another section of this memorandum.

## iii. Controls over the Solvency Capital Requirement

Specific controls are also in place to gain assurance as to the relevance of the internal model.

iv. Controls over the underwriting of insurance risks

The conventional underwriting process at EH SA contains two parts: (a) signature of the policy; and (b) underwriting of the credit limits requested by the policyholder in the case of commercial credit insurance and / or issuance of individual bonds as part of a bonding contract.

### v. Controls over investments

As part of the general approach to investment management, the company applies a series of controls to its investments.

EHSA investments are subject to the general risk management framework, encompassing the risk strategy and corresponding risk appetite (e.g. limits). The investment limits based on risk appetite are incorporated into the investment strategy, which comprises a clearly-defined Strategic Asset Allocation (SAA).

### **B.4.2.** Implementation of compliance function

In compliance with Article 55 of the Solvency II Law, Circular NBB\_2016\_31 of 5 July 2016 regarding the prudential expectations of the NBB regarding governance systems for the insurance and reinsurance sector defines the compliance function as a key function for the management of an insurance company and the protection of its integrity. The function is "responsible for ensuring compliance with the legal and/or regulatory integrity and conduct requirements that apply to institutions". The compliance function must perform its work on an ongoing basis and cover all the activities carried out by the business.

## B.4.2.1. Duties

The scope of the Compliance function at EH SA is focused, albeit not exclusively, on the following areas:

- Protecting personal data
- Complying with privacy laws
- Preventing any form of insider trading and market manipulation
- Preventing money laundering and terrorist financing
- Complying with economic sanctions
- Preventing fraud and corruption
- Preventing any infringement of competition laws
- Identifying and managing conflicts of interest

The following areas, although they are managed and implemented by other departments (e.g. Risk & Capital Management, Human Resources, Purchasing, and Market Management, Commercial & Distribution), are also reviewed by the Compliance function:

- Subcontracting
- Incompatible offices, Fit & Proper process
- Laws on market practices and consumer protection
- Laws on insurance intermediation
- Implementing Solvency II policies

## B.4.2.2. Internal organisation

The Company always has a Compliance Officer, Regional Compliance Officers and, where appropriate, Local Compliance Officers for each branch and subsidiary.

These Local Compliance Officers are therefore responsible for the Compliance function's involvement at local level.

Compliance Officers are chosen based on their skill set and experience. They attend regular training sessions that have been approved or organised by the industry. They are also chosen based on their integrity, which is investigated by way of background checks. Moreover, in accordance with the Company's operational and functional structure, compliance comes under the remit of the Management Committee member responsible for functions relating to finance, capital management, risk control, legal oversight and compliance. Local Compliance Officers report to the Head of Finance of their respective branch or subsidiary as their line manager, but also to their Regional Compliance Officer. Similarly, Regional Compliance Officers tend to report to the Head of Finance of their respective region as their line manager, but also to the Company's Compliance Officer.

EH SA's Chief Compliance Officer acts as the primary liaison between the Euler Hermes Group and the compliance team at parent company Allianz. She is responsible for adapting compliance programmes issued by Allianz or drawing up compliance programmes to be applied across the Euler Hermes Group.

She also chairs the Integrity Committee and sits on the Risk Committee.

The Internal Audit function independently and objectively verifies the suitability and effectiveness of the Chief Compliance Officer.

The Compliance function ensures that EH SA and its employees carry out their professional activity with complete integrity and in compliance with the professional, legal and regulatory requirements incumbent upon insurers in general, and credit insurers in particular.

Its aim is therefore to help protect EH and its employees against the risks arising from violating laws, circulars issued by the prudential regulator, EH Group and Allianz rules, and insurance standards of ethics.

With regard to the scopes defined above, the Compliance Officer is responsible for:

Cross-disciplinary management:

• Managing and organising the EH compliance network at the head office, the branches and the subsidiaries (with the help of the Regional and Local Compliance Officers)

• Producing a report on compliance risk and implementing appropriate measures

• Prevention, advice and support:

 $_{\odot}$   $\,$  Monitoring and assessing the risks involved in the Company's compliance procedures

- Designing new procedures
- Defining and implementing quality standards
- Detection, acknowledgement and communication of compliance problems and rules:

 $_{\odot}$   $\,$  Overseeing adherence to compliance rules in order to detect any infringements

• Using communication and training initiatives to raise awareness of current compliance procedures within EH, its branches and its subsidiaries

## B.4.2.3. Functioning

Compliance at EH SA is basically structured around the following three pillars:

• Management: tangible and genuine involvement of managers and executives (tone at the top)

• The Compliance function itself: based on the analysis of compliance risks, it structures, evaluates and reports on the effectiveness of the control system for all subjects (exhaustive-ness and robustness tests)

• Compliance function representatives inside the business lines and support functions: these representatives act as go-betweens, providing feedback on operations and helping to disseminate compliance-related messages

The primary activities of the Compliance function are:

• Identifying and assessing compliance risk, and drawing up a plan of action accordingly. Compliance risk is the risk that the Company and/or its employees are hit with legal, adminis-

trative or regulatory sanctions for a failure to comply with legal and regulatory integrity and conduct rules that results in reputational damage and possibly financial harm. This reputational damage may also arise from failing to adhere to internal policy and the Company's own values and rules of conduct as regards the integrity of its activities. A loss of reputation may damage the credibility of the Company and its employees

• Risks are analysed annually so as to define the scope and priorities of the Compliance function. This analysis is based on more detailed studies that may have been carried out elsewhere (e.g. on the risk of fraud and corruption).

In this way, based on the risk assessment, a Compliance Plan is drawn up every year and validated by management. The Plan contains not only the measures to be taken but also an estimate of how many employees will be required to implement them. The necessary resources are thus seconded (Principle 10) to ensure the Compliance function runs properly. The plan of action is sent to the internal audit team for information purposes.

The EH SA Compliance Plan is drawn up and monitored pursuant to point 3.2.5 of the 2012 Circular on internal control: "The compliance function draws up a written plan of action. This plan provides a sufficiently detailed description of the nature and frequency of the missions to be carried out by the compliance function over a specific period (one or several years). The plan is based on a risk-based approach, the principles of which are established in writing and evaluated regularly. Risk assessment comprises all the institution's activities and entities, and takes into account all relevant data obtained during previous compliance activities. The analysis also covers expected changes and developments."

Monitoring expected changes (laws, systems, markets):

- The Compliance function works with the Legal Affairs function to monitor regulatory changes, offer advice and help draw up directives on regulatory compliance. It helps management to organise compliance training for employees and works with operational teams to ensure that employees are aware of compliance risk, as well as acting as a point of contact for employees;
- The Compliance function uses a matrix to divide its work into 10 key areas of compliance. Each area is allocated to a subject head, who is responsible for monitoring legislative and regulatory developments in that area and reporting back to the team. These 10 areas are:
  - Anti-corruption
  - Anti-fraud
  - Anti-money laundering
  - Economic sanctions
  - Code of conduct and conflicts of interest
  - Data protection
  - o Antitrust
  - o Solvency II
  - Training and disclosure
  - Compliance reviews
  - o Internal control

The aim of the matrix is to ensure that the team deals with the aforementioned areas in real time and on an ongoing basis.

## B.5. Internal audit function

## B.5.1. Internal audit function implementation within Euler Hermes S.A

The internal audit function is common to the Euler Hermes Group. This function is performed independently so that it reports to the CEO and to the Audit and Risk Committee.

Audit is organised by function:

- Risk / HR
- Market Management / Commercial Underwriting/Distribution
- Finance / Accounting
- Operations and Corporate Governance

It has to be noted that regional correspondents have been put in place.

An annual program of audit assignments is defined every year, including global audits of the subsidiaries (sovereign audits), transversal audits of processes performed simultaneously in the main subsidiaries, and vertical audits of all the processes of a given function within a subsidiary. It is subject to both a discussion and a validation process with operational staff, General Management and the Audit Committees.

The last stage of the validation of the audit program is the presentation to the Audit and Risk Committee for approval in the fourth quarter. The audit program is consistent with achieving a five-year risk cover while at the same time providing short-term cover of the most sensitive risks.

The audit activity is governed by an audit charter. The latest version was updated in June 2014 and approved by the Audit and Risk Committee in November 2016. It sets out in details the missions and organisation of the various control levels within the Group and its subsidiaries. It is supplemented by the development of audit standards and procedures at local and Group levels.

As third-line-of-defence, execution of regular controls, e.g. for distribution networks, is not in scope of the Internal Audit Function.

#### B.5.2. Internal audit framework

#### Audit Universe and Audit Plan

An audit universe, including outsourced and co-sourced functions, is defined and revised annually based on a risk-based approach driven by structured risk-ratings that have been assigned to audit areas after a rigorous risk-assessment has been completed. The audit universe covers the complete system of Governance. It takes into account scope and frequency. This risk-based utilises the application of risk-rating factors categorised by risk type.

Internal Audit must engage adequate capacity to ensure that there is satisfactory coverage of the risk-universe within a 5-yearaudit plan. Consequently, each year, audit resources are allocated to audit areas according to the risk measures and the risk-universe must be (re)assessed on a rolling basis. This annual audit plan must be approved by the EH CEO and the Audit Committee

#### Performance of internal audits

Internal Audit works are evidenced through documented and structured working papers.

#### Audit reports

EH SA Internal Audit issues an audit report for each audit which includes detailed results and appropriate recommendations based on facts and professional judgment. The audit report also summarises the most important results including an overall assessment of the auditee's risk and internal control status.

Management is responsible for implementing related corrective actions and for remediating identified audit findings. EH Internal Audit must be informed of the actual implementation of recommendations and must perform follow-up actions and must implement escalation steps.

#### **Providing advice**

In addition to auditing activities, EH SA management may seek the advice of Internal Audit on internal control related topics. The advisory function of Audit may not jeopardise its core audit activities and the fulfilment of its audit plan and thus the Head of Internal Audit of EH SA must confirm to the EH CEO (and Audit Committee), at least annually, the independence of the internal audit activity.

## B.5.3. Independence and objectivity of the internal audit function

In order to ensure the objectivity and the independence of the Internal Audit function, the following specific requirements have been set:

#### Independence

The Internal Audit Function must have a standing within the EH organisational structure that ensures to maintain the necessary independence. Necessary independence means that no undue influence is exercised over the Internal Audit Function, and Internal Audit must avoid conflicts of interest in fact or appearance.

Internal Auditors and the Internal Audit function have the authority to express assessment and recommendations but cannot give orders (except in cases of suspicion of illegal activities/fraud).

#### **Reporting Lines**

Head of EH Internal Audit reports directly to the CEO and to the Audit Committee. The Head of EH Internal Audit must regularly have direct interaction with the CEO and the Chair of the Audit Committee. EH Internal Audit department also reports functionally to AZ Group Audit and is subject to the oversight of AZ Group Audit.

#### Unrestricted information access

EH Internal Audit has the right to communicate with any employee and obtain information, records or data necessary to carry out its responsibilities, to the extent legally permitted. EH Internal Audit has the responsibility and the right to review activities, procedures and processes in all areas of the EH Group, without limitation. EH Internal Audit has the unlimited right to obtain information and management must inform Internal Audit of serious deficiencies and major changes in internal control systems This information must be handled with discretion and confidentiality.

#### **Fitness and Propriety**

Internal auditors must possess analytical skills, knowledge in the field of finance, accounting and IT as well as an understanding of the organisation of insurance and/or finance companies. In order to achieve and maintain the required professional skill level, continuing training is necessary. Skills in effective communication are also important.

Enhancing independence and objectivity, and avoiding potential conflicts of interest, tenure of internal audit key function holders is limited to eight years.

The Head of Internal Audit must possess the qualification, experience and knowledge required to evaluate the adequacy and effectiveness of the system of governance, issue recommendations, in particular as to deficiencies with regard to the internal control system and the compliance with the corporate rules, and verify the compliance with decisions taken as a consequence thereof. He or she must be familiar with all Internal Audit relevant standards, publications and practices.

The Head of the Internal Audit must share characteristics of (i) honesty, integrity and reputation, (ii) competence and capability, and (iii) financial soundness. The Euler Hermes Fit and Proper Policy applies.

#### **Outsourcing of Internal Audit tasks**

In general, EH Internal Audit should be exercised with EH Group internal resources. If EH Internal Audit lacks certain knowledge, skills or competencies, resources can be sought from third parties. In cases of outsourcing, as permitted by law and supervisory bodies, EH Internal Audit management remains responsible for achieving all required audit standards defined by this Policy and other applicable standards.

Complete outsourcing of an Audit function to external providers is not permitted. No exception is allowed.

## **B.6.** Actuarial Function

## **B.6.1.** Implementation of the Actuarial Function

## Responsibilities

The Actuarial Function is part of the EH SA Internal Control System as outlined in the Euler Hermes Governance and Control Policy. The role of actuarial includes the following responsibilities:

• Coordinating the calculation of Technical Provisions so as to ensure the appropriateness of methodologies, underlying models and assumptions used to calculate Technical Provisions

• In addition to the duties in the calculation of Technical Provisions, the Actuarial Function assumes the following tasks in the reporting of EH SA's annual accounts:

- Verifies that the amounts of the Technical Provisions are adequately reflected
- Monitors the compliance of the Technical Provisions with the requirements of Articles 126-139 of the Solvency II Act of 13 March 2016 and the Royal Decree of 17 November 1994

• Assessing the sufficiency and quality of the data used in the calculation of Technical Provisions

• Comparing best estimates against experience

• Informing the Management Committee and Board of Directors in regards to the reliability and adequacy of the calculation of Technical Provisions

Overseeing calculation of Technical Provisions covered by Solvency II

## Reporting

The Actuarial Function reports regularly (at a minimum once annually) to the Board of Directors, either directly or via the Risk Committee, informing its members on the status of its activities. Specifically, the report must summarise the work completed and explain the corresponding results, identifying and recommending any areas for improvement.

Ad hoc reports are submitted upon the occurrence of the following events:

- The launch or modification of a product
- The conclusion of a new reinsurance treaty

• When actuarial is required to give its formal opinion regarding any updates or revisions to the underwriting policies and pricing, to the adequacy of the reinsurance arrangements (whether internal or external) and to the rebates and bonus-malus systems (or any similar system)(impact on the best estimate)

The Actuarial Function is responsible to ensure that all regulatory reporting is completed, validated and submitted as required by the NBB – at least annually, and on an ad hoc basis as requested.

The Actuarial Function must inform the Management Committee and the Board of Directors of any detected change of the risks that could possibly affect the company and its reputation.

## Independence

As a key function, actuarial serves a role that is independent of EH SA's operational activities.

The appointment of the head of the Actuarial Function is subject to prior approval and an evaluation of its expertise and professional reputation by the National Bank of Belgium ("NBB").

The head of the Actuarial Function reports hierarchically to a member of the Management Committee to ensure that there are no conflicts of interest in carrying out its responsibilities.

The dismissal of the Actuarial Function is upon decision of the EH SA Board of Directors and must be communicated to the NBB without delay.

#### B.6.2. Governance

#### EH SA Management Committee

The EH SA Management Committee is responsible for sound organisational and operational structures and procedures to ensure compliance with the Actuarial Policy. It establishes and maintains an appropriate and effective Actuarial Function, in proportion to EH SA's risk exposure. The MC is free to decide on the concrete organisational set-up of the Actuarial Function subject to strict compliance with the EH Group Actuarial Policy principles, tasks and processes.

The EH SA MC decides on and clearly assigns the relevant tasks for the Actuarial Function. The Actuarial Function Holder is approved by the EH SA Management Committee.

#### **Actuarial Function**

The Actuarial Function Holder is defined as the Head of Corporate Actuaries. The nomination of the EH SA Actuarial Function Holder is pre-aligned with the EH Group Actuarial Function Holder.

The EH SA Actuarial Function Holder is responsible for the implementation of the EH Group's Actuarial Function principles and procedures and is empowered by the management to fulfil this task.

The Head of the EH SA Actuarial Function has a direct reporting line to the EH SA Management Committee

#### Committees

An appropriate committee structure or comparable management meetings have to be set up in order to enable the Actuarial Function to fulfil its roles and responsibilities.

The Actuarial Function Holder is a member of the Reserve Committee.

#### B.6.3. Interfaces

The Actuarial Function has intense interfaces and a close cooperation with other functions. In line with regulatory requirements, reciprocal oversight shall be exercised amongst the functions mentioned below. The relationship of the Actuarial Function with the Risk & Capital Management, Compliance and Internal Audit functions is as follows:

#### **Relationship with the Risk & Capital Management Function**

The Actuarial Function is co-operating closely in many areas, in particular the Actuarial Function is:

• Providing input and advice regarding the amount, structure and uncertainty of the Technical Provisions. This includes close interaction with respect to methodologies, models and assumptions commonly used for the calculation of Technical Provisions as well as for Risk Capital

• Contributing to methodologies, models and assumptions used for the assessment of Risk in the area of expertise of the Actuarial Function

• Contributing to the overall risk management process for its area of expertise

#### **Relationship with the Compliance Function**

The compliance oversight covers the adequate set-up of the Actuarial Function.

## **Relationship with the Internal Audit Function**

The Actuarial Function (as a 2nd line of defence function) and the Internal Audit Function (3rd line of defence) shall be separated with no reporting of one function into the other. However, this does not exclude to jointly exercise specific tasks in the course of investigations.

Actuarial tasks are included in the audit program and methodology of the Internal Audit Function, including a periodic assessment of the adequacy and effectiveness of the Actuarial Function. The

head of the Internal Audit Function should keep the Actuarial Function Holder informed of any audit findings relating to actuarial tasks – and vice versa.

Upon request, the Euler Hermes Internal Audit Function Holder can attend the Reserve Committee at his/her own discretion especially in order to test the operational effectiveness of the committee.

## **B.7. Outsourcing**

EH SA has adopted the Euler Hermes Global Outsourcing Policy within its Risk Management Framework.

This Policy outlines the minimum standards of EH SA outsourcing framework, and in particular, establishes the core principles and processes for the outsourcing of Functions and Services by EH SA.

## B.7.1. Implementation of the outsourcing policy

#### **Definition of outsourcing**

The outsourcing policy is applicable to the outsourcing of Functions or Services provided by a third party (intercompany provider or external provider). EH SA shall follow two steps to determine whether this Policy applies:

• Determine whether the Function or Service qualifies as outsourcing in the meaning of this Policy

• Determine whether the outsourced Function or Service concerns a Key Function, is critical or important, or a simple outsourcing

#### Functions and Services

In the context of this Policy, a Function is defined as an internal capacity to undertake practical tasks within a system of governance, including the Key Functions (Risk & Capital Management, Internal Audit, Compliance, Actuarial, and two additional key functions within EH SA which are Legal and Accounting & Reporting).

In the context of this Policy, a Service is defined as an activity, which specifically relates to conducting the core business.

### **Critical or Important Functions or Services (CIFS)**

A Function or Service is critical or important if it is essential to the operation of the Outsourcing entity as it would be unable to deliver its services to customers (e.g. policy holders) without the Function/Service (CIFS).

Where Functions or Services are only partially outsourced, it is relevant whether these outsourced parts are per se critical or important. Whether this is the case is assessed using a risk-based approach taking into account qualitative as well as quantitative criteria.

If the outsourced Function or Service is performed by more than one Provider (e.g. claims settling by various intermediaries), an overall assessment of the entire outsourced Function/Service performed by the entirety of Providers is carried out in order to assess criticality and importance.

#### Outsourcing processes

The outsourcing processes laid out in *the Euler Hermes Global Outsourcing Policy* consist of the following phases:

#### 1. Decision phase (Business plan and risk assessment)

The decision phase involves the business and risk assessment as to whether the Function or Service should and may be outsourced (make or buy decision). This requires, in particular, the following tasks to be performed by the designated Business Owner for all kinds of outsourcing:

• Assessing whether the contemplated performance of a Function/Service by a third party qualifies as Outsourcing under this policy, and if so, whether the outsourced Function/Service is simple, CIFS or Key Function

• Establishing a business plan which outlines the rationale for as well as the economic and operational benefits in either scale, scope or skill/quality of the envisaged Outsourcing

• Conducting a Risk Assessment

• If identical Functions/Services are outsourced to a multitude of Providers based on identical terms (e.g. standard underwriting authority to intermediaries)

### 2. Implementation Phase – Provider selection and outsourcing agreement

- a) <u>Requirements for all Kinds of Outsourcing</u>
  - a. Provider Selection/Due Diligence

• EH SA has to conduct Due Diligence in order to ensure that the Provider has the ability to perform the Functions or Services to be outsourced according to EH SA's documented objectives, standards (e.g. data protection/security) and specifications

### b. Outsourcing Agreement

EH SA has to enter into a written Outsourcing agreement with the Provider. Such Outsourcing agreement must at least provide for the following:

• Description of Services, responsibilities, quality / security standards, standards of care and where appropriate service levels and / or KPIs to measure performance as well as feasible mitigation measures and key controls to be performed by the Provider to address risks identified in the Risk Assessment / Due Diligence

• Provider's obligations

• The need for prior approval by EH SA for any Sub-Outsourcing and the fact that the Provider's duties and responsibilities remain unaffected thereby

• EH SA's right to request information about the outsourced Function or Service and their performance

• Appropriate termination rights and notice periods to assure business continuity

• EH SA's right to request changes to the Outsourcing agreement or withdraw from the agreement if required by the supervisory authority

## b) Additional Requirements for Outsourcing CIFS

In case the Outsourcing relates to CIFS, the following requirements have to be met in addition to the ones listed above:

#### a. Provider Selection/Due Diligence

As part of the Due Diligence, EH SA shall additionally:

• Ensure that relevant aspects of the Provider's risk management and internal control systems are adequate

• Verify that all staff of the Provider who will be involved in providing the outsourced Function or Service are sufficiently qualified and reliable

• Ensure that the Provider has adequate contingency plans in place to deal with emergency situations (e.g. data leakages) or business disruptions and periodically tests backup facilities where necessary

#### b. Outsourcing Agreement

In addition to requirements for all kinds of outsourcing for outsourcing agreement found above, an Outsourcing agreement concerning CIFS also has to provide for the following:

• Provider's obligation to:

Assure and maintain the elements listed in the additional requirements for outsourcing

 Integrate the outsourced Function or Service into his risk management and internal control systems

• Comply with EH SA's guidelines and policies

 $\circ$   $\,$  Follow the same provisions on the security and confidentiality that are applicable to EH SA  $\,$ 

 $\circ$   $\,$  Avoid any conflict of interest in relation to EH SA and a duty to notify to EH SA any threatened conflict of interest

• Right to carry out on-site inspections of the business premises of the Provider either by EH SA or its external auditors in order to get effective access to all information relating to the outsourced Function/Service

### c. Notification to Supervisory Authority

- EH SA has to notify in writing of any Outsourcing of CIFS to the NBB:
  - A description of the scope and rationale for the Outsourcing and the Provider's name

 In a timely manner prior to implementing the Outsourcing, affording the supervisory authority sufficient time to examine the Outsourcing and its compliance with supervisory law before it comes into force

- Material developments that are relevant for supervisory purposes
- Adherence to more detailed provisions due to Local laws

#### c) Further requirements for Outsourcing of Key Functions

In case the Outsourcing concerns a Key Function, the following requirements have to be met in addition to the ones listed above:

• The Due Diligence has to comprise the Fit & Proper Test for all persons performing the outsourced Key Function at the Provider

• The notification to the supervisory authority should also include the name of the person responsible for the outsourced Function/Service at the Provider. Upon request of the supervisory authority, EH SA has to be able to demonstrate that this person has passed the Fit & Proper Test

#### 3. Operational Phase (monitoring & steering)

EH SA must maintain a process for regularly monitoring the Provider's performance and compliance with the Outsourcing agreement. Monitoring activities may include:

- Requesting and reviewing performance
- Back-up or data security testing reports from the Provider
- Holding status meetings with the Provider
- Assessing service delivery against agreed KPIs or service levels
- In specific cases conducting on-site inspections of Provider's premises

#### 4. Exit Phase

If EH SA decides to terminate the Outsourcing, it needs to ensure that it has the necessary capabilities and capacities to insource the outsourced Function/Service or to outsource it to a different Provider (business continuity), before it effectively terminates the Outsourcing agreement.

# B.7.2. Roles and responsibilities

Management committee	<ul> <li>Adopting the EH SA Outsourcing Policy, adjusted as necessary in order to comply with local regulatory requirements</li> <li>Deploying the policy to all local branches</li> <li>Ensuring compliance with the EH SA Outsourcing Policy at all times within EH SA</li> </ul>	
Outsourcing function	<ul> <li>Drafting and updating supplementary rules regarding details of the Outsourcing Process in line with this Policy, where necessary</li> <li>Ensuring EH SA implementation, including the setting-up and mainte- nance of an inventory of all Outsourcing agreements by the Local Out- sourcing Function</li> <li>Monitoring adherence to this policy</li> <li>Collecting relevant information to fulfill applicable regulatory reporting obligations</li> <li>Supporting the Business Owner in performing the tasks under this Policy</li> </ul>	
Compliance	<ul> <li>Drafting and reviewing this Policy</li> <li>Interpreting this Policy and resolving conflicts with law, in coordination with the Head of Legal</li> <li>In coordination with the Head of Legal, notifications/applications to supervisory authority, if required by law</li> </ul>	
Legal	<ul> <li>Monitoring and interpreting regulatory requirements relating to Out- sourcing</li> <li>Ensuring adoption of the EH SA Outsourcing Policy by the MC</li> </ul>	
Business Owner	<ul> <li>Classifying the outsourcing according to this Policy</li> <li>Setting-up the necessary Business Plan and Risk Assessment, including the screening of any Outsourcing against the criteria of this Policy</li> <li>Undertaking the Due Diligence with regard to the Provider, with the support of the Procurement function, as necessary</li> <li>Monitoring the Outsourcing and making amendments to the Outsourcing where necessary</li> <li>Taking the appropriate measures in case of any adverse event or termination of the Outsourcing, involving the relevant departments (legal, compliance, procurement, etc.)</li> <li>Adequately documenting each individual step of the Outsourcing process and ensuring the correct storage of the documentation in the Euler Hermes Contract Database</li> </ul>	
Risk	<ul> <li>Monitoring operational risk related to Outsourcing</li> <li>Ensuring an adequate reflection of outsourced Functions and Services in EH SA Outsourcing's risk management and internal control system;</li> <li>Coordinating the support to the Business Owners in the performance of the Risk Assessment and Due Diligence process</li> </ul>	

## B.7.3. Outsourcing of any critical or important operational functions

Four CIFS have been outsourced outside Euler Hermes and are mainly IT related services. The outsourced service providers are exclusively located in France.

Other CIFS of EH SA have been outsourced inside the Euler Hermes or Allianz Group. Provider's jurisdictions are mainly European countries. Hong Kong and Singapore branches also outsource management services to its subsidiaries within the same jurisdiction.

Three Key Functions have been outsourced:

• Support in Fidelity and Bonding Underwriting, Fidelity Claims, Controlling, Broker Commissions, Investment Accounting, General Accounting – Germany

- All tax related services for EH Deutschland AG, EH AG, Rating Germany
- Tax advice UK

## **B.8.** Any other information

EH SA's system of governance is considered adequate and there is no additional material information to disclose regarding its system of governance.

## C. Risk profile

## C.1. Underwriting risk

## C.1.1. Description of the measures used

EH SA's risk management team measures and assesses its risks using EH SA's internal Risk Capital model. Further details on the methodologies used within the internal model for underwriting risk can be found in Section E.4.2.1.

The internal model reflects the risk profile of EH SA and is used to measure the solvability through the Risk Capital. The model has to be used in both strategic and tactical decisions to ensure that a sufficient risk tolerance is respected. Following that, Internal Model should be appropriate for all the different decisions that can be taken in the company and that have an impact on the risk profile and be appropriate for the use.

## C.1.2. Description of the risk exposure

Property & Casualty (P&C) underwriting risk is the main component of EH SA's underwriting risk, which is composed by:

a. Premiums risk for fidelity lines of business: the risk of loss because of an unexpected high loss volume resulting in an insufficient coverage of premiums. Premium risk is subdivided in Catastrophe risk (CAT risk) and Non-Catastrophe risk (Non-CAT risk)

b. Reserve risk: the risk of loss resulting from deviations between payments for incurred losses that have not yet been definitively settled and the reserves set up to cover these payments, or the use of an insufficient basis for the calculation of reserves

The standalone Risk Capital (RC) calculated for the P&C (Property and Casualty) underwriting risk amounts to 159 M€, increasing by 2% compared to 2015. This development is deemed non material.

## C.1.3. Description of assets investment

Please refer to Section C.2.3 of this report for information regarding how assets have been invested in accordance with the "prudent person principle" so that EH SA's risks have been properly managed.

## C.1.4. Risk concentration

Please refer to Section C.3.4 of this report for a description of the material risk concentrations to which EH SA is exposed.

## C.1.5. Risk mitigation

EH SA purchased reinsurance coverage, including both proportional and non-proportional treaties, and cedes a significant amount of premium from credit insurance within quota share/ excess of loss reinsurance. Reinsurance is the only risk mitigation technique implemented by EH SA that is considered to be material. In particular, EH SA does not use any Special Purpose Vehicles (SPVs).

## Effectiveness of Reinsurance Arrangements

To form its opinion the EH SA Actuarial Function participates on a regular basis to the reinsurance committee meetings organised by EH Re AG where the profitability of assumed business and potential changes on the internal and external reinsurance cessions are discussed. Moreover, the EH SA Actuarial Function conducts the quarterly Loss Reserve Meetings for EH Re AG, where the estimated cessions of EH SA to EH Re AG are monitored.

## C.1.6. Expected Profit Included in Future Premiums (EPIFP)

Please refer to Section C.2.6 of this report for information on the total amount of the Expected Profit Included in Future Premiums.

## C.1.7. Risk sensitivity

Information on relevant stress tests and scenario analysis, as well as the underlying methods and main assumptions, can be found in Section C.2.7 of this report.

## C.2. Market risk

## C.2.1. Description of the measures used

EH SA's risk management team measures and assesses its risks using EH SA's internal Risk Capital model. Further details on the methodologies used within the internal model for market risk can be found in Section E.4.2.1.

The table below summarises 2016 model changes which had an impact on market risk assessment:

Model Change Short Name	Affected Module	Model Change Areas
Credit Spread Model	Market Risk	Spread modelling
		Adverse historical shocks
		Term structure
		High yield risk charges
		Rating hierarchy
		Time series
		Scaling factors
Pensions IAS19	Market Risk/LNMR	Base SCR calculations on International Accounting Standards (IAS) 19 values
		Transfer rate
ESG (new in- terest rate para- metrisation)	Market Risk	Model volatility function

## C.2.2. Description of the risk exposure

Within EH SA, market risk is composed of the following risks:

- Interest rate risk: the risk of loss which can arise due to changes in market interest rates
- e.g. if future interest income is above or below a fixed or guaranteed interest rate applicable to reserves
- <u>Equity risk</u>: the risk of loss based on market changes in the value of an equity or a participation portfolio
  - Equity Volatility risk: it measures an adverse move in implied volatilities of equity options

• <u>Property (Real Estate) risk</u>: the risk of loss arising from changes in the market price for property investments

• <u>Spread Risk</u>: the risk due to exposure to some spread. It often arises with a long-short position or with derivatives

• <u>Foreign Exchange, Currency risk</u>: the risk of loss arising from changes in foreign currency exchange rates

• <u>Market risk concentrations:</u> The standalone Market RC amounts to 351.9 M€, decreasing by -22.2 M€ (-6%) compared to 2015

As required by the Directive, the calculations of these sub-risks are mainly based on the assets market values and market conditions.

The evolution of the sub-risk components has to be analysed by correlation with the underlying assets and thus giving somehow a risk-oriented vision of the EH SA MVBS assets values.

#### Interest rate sub-risk

The decrease of the interest rate risk (IR) risk (-17%) is mainly driven by the decrease of the technical provision of the German pension fund.

#### Credit spread sub-risk

The decrease of the Credit Spread (CS) risk (-12%) is mainly coming from small movements on liability side (especially on technical provision) and from the reduction of the exposures.

#### Exchange rate sub-risk

This decrease of the exchange rate (FX) Risk Capital (-20%) is mainly driven by portfolio changes, partially offset by market conditions. Indeed, the net exposure in non-EUR currencies decreased by about 30%.

#### Inflation sub-risk

The decrease of Inflation (INFL) Risk (-1%) is mainly explained by a decrease in technical provision.

#### Equity sub-risk

The decrease of the Equity (EQ) risk (less than -1%) can be explained by small changes in the market conditions.

#### Real estate sub-risk

The evolution of the real estate (RE) risk (+6%) is partially explained by the increase of the market value of the property. As well, it can be explained by the increase of portfolio exposure mainly on assets mapped to a low volatility index for which exposure increased. The main increase is on the Organisme de Placement Collective en Immobilier (OPCI) EH Real Estate.

#### C.2.3. Description of assets invested

EH SA actively manages its investment portfolio and is actively taking investment risks in a controlled and limited manner. This is based on the firm belief that by taking risks on the investment side additional value can be generated on a mid to long-term basis, i.e. that the additional return on investments overcompensates the additional cost of capital in the mid to long-run.

This approach results in a mid to long-term focused investment policy with an emphasis on Strategic Asset Allocation and the goal of realising the long-term risk premium of asset classes.

Tactical Asset Allocation (AA) is used on a limited basis as an enhancement to the Strategic Asset Allocation in order to profit from market opportunities. The investment activities follow the general principles of a congruent Asset Liability Management (ALM) with a sufficient duration and currency matching within prescribed limits. All technical reserves shall be supported by investments made by Investment and Treasury Group (ITG) in respect with local regulation.

EH SA's investment strategy aims for a positive global mid to long-term (3-5 years) risk adjusted after tax investment return considering:

• Local as well as group-wide external and internal regulations, and policies

- Risk-bearing capacity and risk tolerance of EH SA's and its shareholders
- General principles of a congruent Asset-Liability-Management
- Return objectives, expectations, and risk tolerance of the shareholders
- Expectations of external parties (e.g. regulators, rating agencies, clients)

While pursuing the investment philosophy and objectives outlined, investment management and risk controlling at EH SA is based on a common understanding of the investment and ALM related risks and comprehensively defined risk management and controlling processes embedded in clear and transparent organisational and governance structures, whereby the following principles apply.

#### Principle 1: Prudent Person Principle (refers to the Solvency II European Union (EU) Directive)

EH SA only invests in assets and instruments whose risks can be properly measured, managed and controlled, taking into account the assessment of its overall solvency needs.

All assets are invested in such a manner as to ensure the security, quality, liquidity and profitability of the portfolio as a whole.

Assets held to cover the Technical Provisions shall also be invested in a manner appropriate to the nature and duration of the insurance and reinsurance liabilities. Those assets shall be invested in the best interest of policyholders and beneficiaries.

In the case of a conflict of interest, EH SA ensures that the investment is made in the best interest of policyholders and beneficiaries.

The use of derivative instruments shall be possible insofar as they contribute to a reduction of risks or facilitate efficient portfolio management.

#### Principle 2: Focus on liquid, high quality, low risk assets

The predominant portion of the portfolio shall be invested in cash and liquid, tradable, high quality securities, mainly: developed market treasuries, government related bonds and covered bonds. Further diversification in credit investments (e.g. corporate bonds, asset backed securities, mortgage backed securities, Emerging Market Bonds) are allowed within pre-defined risk limits. Main technical reserves shall be supported by investments in cash and fixed income securities. Parts of the reserves and the economic net asset value might be invested in equity and real estate within pre-defined risk limits. The investment universe shall encompass:

- Fixed Income Instruments
  - o Cash
  - Treasuries / Government related bonds
  - Securitised and collateralised bonds
  - Corporate bonds
- Equity
- Real estate
- Alternative : Private equity and derivatives (for hedging purposes only)

• Strategic investments in the group subsidiaries and other related companies are excluded from the scope of Asset Management (AM) as they are managed according to specific rules (Joint Venture for example)

Other alternative asset classes are currently not part of the investment universe, but might be included in the light of risk diversification in a very limited way. The introduction of new asset classes and investment products/mandates is subject to approval.

#### Principle 3: Asset-Liability-Management (ALM)

The investment activities follow the general principles of a congruent ALM with a sufficient duration and currency matching within prescribed limits. The duration differences between assets and liabilities and the net foreign currency exposure will be regularly monitored and appropriate actions and hedges will be executed.

### Principle 4: Diversification

On the basis of the requirement that insurance technical liabilities are to be covered or secured at all times with investment portfolios showing low volatility, the diversification of risk within the portfolios is of special importance. Diversification is a central part of the Investment Policy and is to be pursued:

- Across asset classes (Strategic Asset Allocation)
- Within asset classes (e.g. geographic and industry diversification)
- At the securities level (e.g. the number and weighting of the counterparties)
- Across investment styles
- · Across asset managers for mandates with a dedicated alpha focus

#### Principle 5: Avoiding investments that threaten EH SA's reputation

EH SA voluntarily restricts its investments beyond legal requirements in order to minimise its reputational risk. On the investment side a decline in reputation can be caused by direct or indirect holdings of companies engaged in activities despised by EH SA's stakeholders and/or the public at large, e.g. investments in the area of defence.

### C.2.4. Risk concentration

On the basis of the requirement that insurance technical liabilities are to be covered or secured at all times with investment portfolios showing low volatility, the diversification of risk within the portfolios is of special importance. Diversification is a central part of the Investment Policy and is to be pursued:

- Across asset classes (Strategic Asset Allocation)
- Within asset classes (e.g. geographic and industry diversification)
- At the securities level (e.g. the number and weighting of the counterparties)
- Across investment styles
- Across asset managers for mandates with a dedicated alpha focus

EH SA diversifies its risk across geographical areas and does not over rely on one specific country or economy.



### Assets geographical allocation

EH SA diversifies its portfolio across counterparties and does not rely on one specific issuer whatever its credit quality. The largest counterparty of EH SA asset portfolio represents 15% of the total assets, with the remaining part of the portfolio fully diversified.

Moreover, EH SA does not expect any foreseeable specific risk concentration over the business planning period.

## C.2.5. Risk mitigation

Market risk mitigation is performed by applying investment strategies to mitigate high volatility assets as well as a regular monitoring of the investments.

EH SA defines a Strategic Asset Allocation (SAA) in order to set up how the assets should be invested. Risk Capital is one of the key factors that is taken into account when defining the SAA. Quarterly, Finance Committee (FiCo) reviews the SAA so it reflects the risk appetite defined within EH SA. The FiCo also discuss every decision concerning investment strategy. This way EH SA can effectively monitor investment risks.

EH SA has also in place monthly monitoring by realizing monthly financial reporting and closing on investment performance.

The daily use of Bloomberg allows EH SA to perform a day-to-day monitoring of its assets.

Finally EH SA has Over-The-Counter (OTC) puts on equity to mitigate risk issued from the assets which are more volatile. The main goal of this strategy is to avoid the recognition of any impairment. Regarding current market situation, protection on equity can be provided at low cost.

The quantitative financial limits are one of the components of the Risk Appetite defined in the Risk Strategy. They include different kinds of limits.

#### Asset Allocation limits

The Strategic Asset Allocation (SAA) is a target Asset Allocation set yearly by the Finance Committee (FiCo) in order to ensure a balance between the assets yields and the related Risk Capital. The Asset Allocation (AA) is monitored every month to ensure it stays within the leeways defined in the risk appetite.

As for 2017, an SAA will be defined at EH SA level and the SAA will be monitored accordingly.

#### C.2.6. Expected Profit Included in Future Premiums

EH SA's expected profits included in future premiums (EPIFP) amount to 33.7 M€.

#### C.2.7. Risk sensitivity

EH SA has designed and implemented a firm-wide program covering stress testing, reverse stress testing and scenario analysis.

For stress tests, EH SA usually follows standards shocks in line with European Insurance and Occupational Pensions Authority (EIOPA) recommendations. For scenario analysis and reverse stress tests, a dedicated process is run by the Enterprise Stress Testing Group (ESTG) which is a panel made of risk, business and economic experts who meet on an annual basis to identify up to 5 most relevant stress scenarios for the year to come. These scenarios are subsequently proposed to the EH SA Risk Committee (RiCo) for review and selection.

#### C.2.7.1. Standard Financial Stress Scenarios

EH SA's solvency position is challenged on an annual basis against a set of different financial stress scenarios in line with the EIOPA recommendations. In 2016, the following scenario effects were analysed:

- Equity drop : -30% in market values of all equity investments
- Interest rates up: +100 basis points (bps) in interest rate
- Interest rates down: -100 bps in interest rate

- Credit spread: +100 bps in credit spread on corporate and asset-backed security bonds
- Combined scenario: -30% in market values of all equity investments and -100 bps interest rate

The following graph shows their impacts on EH SA Solvency II ratios.



Regulatory Solvency II ratio under stress tests

 Impact estimated on basis of approximations, stress applied to risk bearing funds

However, the results still give a good indication on the impact of the stress scenarios on the solvency ratios. In particular, it shows that no scenario causes a major decrease of Solvency II ratios.

## C.2.7.2. Reverse stress tests

Taking into account its core business and its RC breakdown, EH SA has opted for using its local credit insurance model component for identifying its reverse stress test scenarios. In that respect, EH SA has looked at the tail of its gross loss distribution simulated by its model, before any reinsurance effect, and identified the first scenario above the 99.5% quantile which would breach its capital position and threaten its survival. This scenario represents of gross loss of 1.6 B€ and a net loss of 0.55 B€.

From this scenario, EH SA ESTG has subsequently identified the macroeconomic and business environment that could lead to such a situation as well as its likelihood. To that respect, the analysis was based on a set of aggregated indicators and statistics out of the scenarios, e.g. top 20 countries' default rates, top 20 industry sectors' default rates, top 50 counterparties' loss amounts, etc. From there, a set of risk drivers affecting the global economy as well as the industry sectors were identified and their aggregated impact assessed.

As a result of this analysis, the following key features were identified as the most likely ground to the chosen tail scenario:

• Eurozone would likely collapse with countries returning to their national currencies, leading to hyperinflation and massive currency depreciation

• A wave of protectionist policies would spike in the EU with borders shutdown, leading to global confidence crisis and world trade meltdown

• Financial market would crash in the United States (US) with contagion to China

• An oil crisis would spike with supply shock, rise in prices (+200\$/barrel) and hike in input prices The conclusion reached from this analysis is that a combination of the above macro events would be very unlikely even in a severe situation. The analysis made use of historical statistics up to 2007 per country and revealed that compared to the 2008 financial crisis, the above scenario in terms of frequency would be 2 to 3 times more severe. As a result of that, the only common denominator to such an unlikely macro situation has been identified as being a CAT event.

## C.2.7.3. Scenario analysis

To complete the analysis about the resilience of its solvency positions, EH SA has developed additional scenario analysis.

EH SA ESTG has identified and proposed to the EH SA RiCo a set of relevant 'business' scenarios for analysis. From the 2016 exercise, the following scenarios have been approved for analysis:

• 2008 financial crisis: The financial crisis is designed to be a recurrent scenario as it serves as a benchmark given its severity level since the events of 1929

• Hard landing in China: This scenario is identified as the most relevant macro-driven scenario to EH SA risk profile

• Political risk in Italy: This scenario is designed to capture the effects of the current sovereign debt situation and banking sector worsening in Italy

## "2008 / 2009 financial crisis" scenario analysis

The scenario consists of replicating the macroeconomic and financial market shocks observed on EH SA's risk profile during the financial crisis over 2008 and 2009.

The 2008/2009 crisis is considered to be an extreme event with a frequency of occurrence of 1 in 80 years.

The main characteristics of the 2008/2009 crisis on EH SA are replicated on the following basis:

- Decrease in the value of the equities listed by 50%
- Decrease in the value of insurance companies by 15%
- Increase of the loss ratio to reflect an increase of the frequency, but not the severity, of claims

EH SA did not observe the following effects on its financials:

- Decrease in the value of its real estate
- Decrease in the value of its participation in service companies
- Downgrade of the average rating of its reinsurers panel

• Increase of the volatility of its policy retention rate even if more policies were not renewed as a consequence of the underwriting actions either on premium rates or granted exposure

• Unusual variations up or down on FX rates

The translation of this scenario into stressed parameters is described hereafter.

In parameterising and running this scenario analysis, EH SA has used the following key assumptions:

a. Decrease in equity market value by 50% with the following effects:

i. Negative impact on own funds due to decrease in equity and UK pension funds values

ii. Positive impact on equity risk SCR due to decrease in market value while equity volatility remains constant

iii. Positive impact due to a decrease of UK pension funds value (via capital addon related to it)

- b. Decrease of insurance companies' market value by 15%:
  - i. Negative impact on own funds due to decrease in market value
  - ii. Positive impact on equity risk SCR due to decrease in market value while equity volatility remains constant

- c. Increase in credit spread risk by 50% with the following effects:
  - i. No impact on own funds

ii. Increase in credit spread risk, also on UK pension funds and therefore in the related capital add-on

Loss rates of Q4 2016 have been increased by the increase observed during 2008/2009 crisis leading to an overall increase of the loss ratio by 38%. A scenario contagion assumed to be 1/3 impact on Current Year and 2/3 impact the next year. The choice of the 1/3 - 2/3 split reflects the length of a crisis (6 to 9 months) and the time needed by EH SA to understand that EH SA is in a crisis mode.

d. Increase of the loss ratio on Current Year leads to:

i. A decrease in own funds due to an increase in technical reserves after tax and in Risk Margin

ii. An increase in Current Year reserve risk while constant volatility of reserves assumed as observed from historical data

e. Increase of the loss ratio on future years leads to an increase in credit insurance risk replicating 2008/2009 effects (per country) with the following effects:

i. Decrease in own funds due to the decrease of future profits after tax and the increase of Risk Margin

ii. Increase the capital add-on following the increase of trade credit insurance risk SCR

f. The diversification is considered as stable

g. The tax relief impact is due to the reduction in net Deferred Tax Liabilities as a consequence of market value changes in the balance sheet and due to an increase in the SCR

h. No impact on credit risk SCR for reinsurance is considered as it is considered immaterial

i. Foreseeable dividends are put to 0

Under a scenario similar to the 2008 financial crisis, EH SA's solvency position at the end of 2016 would remain above regulatory requirements with an SCR ratio standing at 119% as shown in the table below:

	Own Funds (M€)	Risk Capital (M€)	Solvency Ratio
Base case	1,073	598	179%
Stress scenario	883	742	119%

While EH SA would not enter any recovery zone following such a scenario, it would be slightly below the action barrier set by its Management Committee for capital management purposes. As a consequence, EH SA would need to take corrective actions.

Finally, the above results confirm that the current target ratio set by EH SA's Management Committee at 159% is appropriate to fully absorb the impact of such a scenario without breaching regulatory capital requirements.

## "Hard landing in China" scenario analysis

This scenario consists of reflecting the consequences of a hard landing of the Chinese economy on EH SA's risk profile. EH SA's ESTG has identified that in such situation the following effects would be observed:

- Rise in domestic insolvency index at a range between 30 to 40%
- Impact on countries exporting to China e.g. APAC (primarily Australia), Latin America and Africa
  - Default events within the commodity market on major players
  - Impact on maritime transport with increased insolvencies on major players

The next section describes how the above effects have been translated into stressed risk parameters, both on credit and market risk sides.

In order to reflect the increase in insolvencies on Chinese buyers, the probability of defaults of all the Chinese buyers has been increased by a factor of 1.3.

Further to that and in order to reflect the contagion effect on countries identified as directly affected by this rise, the probability of defaults of all buyers within APAC, Latin America and African countries has been increased by a factor of 1.1.

Finally, to reflect the defaults of major players within the industry sectors identified as directly affected (maritime transport and commodities), the probability of defaults of the top 10 buyers by exposure amount within these sectors has been floored to 20% so as to force at least 2 major defaults across these buyers.

With respect to market risk effects, it has been identified that such a scenario would impact the following market risk factors as described below:

EMU	Shock
10y yield "risk-free" (Swap)	-30 bps
European Covered Bond spreads	+10 bps
Investment grade credit spreads	+100 bps
High Yield credit spreads (BB / B only)	+250 bps
MSCI EMU	-10.00%
EUR/USD (in value, not shock)	1.05
10y yield "risk-free" sovereign (Treasuries)	-50 bps
Investment grade credit spreads	+130 bps
MSCI USA: total return p.a. in EUR	-7.00%
ΔEM Currency	-20.00%
MSCI EM: total return p.a. in EUR	-15.00%
Inflation	-100 bps
Real Estate	0.00%

In addition, the above market risk effects were assumed to impact (after tax) the own funds through the decrease of asset values owned by EH SA and this was reflected in the calculation. Lastly, no impact was assumed on the UK Pension fund.

Under a scenario of a hard landing of the Chinese economy, EH SA's solvency position at end of 2016 would remain well above regulatory requirements with an SCR ratio standing at 164% as shown in the table below:

	Own Funds (M€)	Risk Capital (M€)	Solvency Ratio
Base case	1,073	598	179%
Stress scenario	1,006	613	164%

Under such scenario, EH SA would not need to take any measure, neither for regulatory capital purposes nor for capital management purposes, as the stress ratio is still above the target management ratio of 159%.

### "Political risk in Italy" scenario analysis

This scenario consists of reflecting the effects of a deteriorated sovereign debt situation and the worsening of the banking sector in Italy, leading the government to take measures and creating political risk on EH SA's exposures in Italy.

EH SA's ESTG has identified that the trigger for such an event would be the default of a mediumsize Italian bank. For that purpose, it has selected the case of Monte Paschi bank given its financial distress situation and its long standing experience in financing small and medium enterprises and therefore its direct potential effects on EH SA exposures.

Given the complexity to identify the direct exposures that could be affected and the contagion effect of such default across EH SA exposures, it was decided to adopt for the credit risk parametrisation a simple but yet severe approach by applying a factor of 3 on the probability of defaults of all Italian exposures.

For the market risk effect of such a scenario, the parameterisation of the market risk factors was set by applying the shocks shown below:

Market risk factors	Shock
10y yield "risk-free" (Swap)	+50 bps
European Covered Bond spreads	+30 bps
Investment grade credit spreads	+150 bps
High Yield credit spreads (BB / B only)	+400 bps
MSCI EMU	-7.00%
EUR/USD (in value, not shock)	1
10y yield "risk-free" sovereign (Treasuries)	-15 bps
Investment grade credit spreads	+50 bps
MSCI USA: total return p.a. in EUR	5.00%
ΔEM Currency	-5.00%
MSCI EM: total return p.a. in EUR	-5.00%
Inflation	-50 bps
Real Estate	-5.00%

In addition, the above market risk effects were assumed to impact (after tax) the own funds through the decrease of asset values owned by EH SA and this was reflected in the calculation.

Under an approximated scenario of political risk in Italy, EH SA's solvency position at end of 2016 would remain well above regulatory requirements with a Solvency ratio standing at 147% as shown in the table below:

	Own Funds (M€)	Risk Capital (M€)	Solvency Ratio
Base case	1,073	598	179%
Stress scenario	974	662	147%

Under such a scenario, EH SA would not need to take any measure, neither for regulatory capital purposes nor for capital management purposes, as the stress ratio is still well above the action barrier.

## C.3. Credit risk

## C.3.1. Description of the measures used

EH SA's risk management team measures and assesses its risks using EH SA's internal Risk Capital model. Further details on the methodologies used within the internal model for credit risk can be found in Section E.4.2.1.

The table below summarises model changes which had an impact on credit risk assessment:

Model Change Short Name	Affected Module	Model Change Areas
Correlation module	Local Credit Insurance model	Correlation matrix and factor Bonding specific correlation matrix and factors
Contagion mechanism	Local Credit Insurance model	Modelling default conta- gion/propagation process

## C.3.2. Description of the risk exposure

Within EH SA, Credit Risk is composed of the following risks:

• <u>Counterparty default risk:</u> the risk of loss due to default of the counterparty within the context of transactions e.g. derivative, reinsurance, loans etc.

• <u>Credit risk attached to credit & surety</u>: credit risk that can arise either from the risk of loss in the economic value of credit exposures because of deterioration in the credit quality of counterparties (migration risk) including their defaults, or non-performance of instruments. Default occurs as the result of the inability or unwillingness to fulfil contractual obligations

• <u>Country transfer risk:</u> the risk of loss arising from cross-border transactions as a result of transfer and convertibility risks (e.g. the risk of a country not being able to make payments due, freeze on deposits or limitations on foreign currency transfers)

• <u>Issuer/Investment credit risk:</u> the risk of loss arising from an unexpected change in the creditworthiness (migration or default) or collateral of a debtor. Default occurs as the result of the inability or unwillingness to fulfil contractual obligations

• <u>Settlement risk:</u> the risk of loss arising from trading activities when there is a mutual undertaking to deliver on a progressive basis, for example when the trading centres fall within different time zones, and the counterparty does not fulfil its contractual obligations, despite the fact that the other party to the contract has already performed its duties

The Credit Risk Portfolio is subdivided in 4 different risk categories: credit insurance, investment, reinsurance and pension funds. As shown hereunder, the Credit Insurance Risk is the most important in terms of capital need. The total standalone Credit Risk Capital decreased by 12.6 M€ between 2015 and 2016 and the insurance portfolio represents more than 90% of the global Credit Risk Capital.

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## Credit Risk Capital per activities (in M€)

Credit Risk on	Q4 2016 RC	Q4 2015 RC	Δ
Investment portfolio	6	14	-8.1
Reinsurance portfolio	22	24	-2.9
Insurance portfolio	319	320	-1.6
Internal Model	309	314	-5.1
Scaling	10	6	3.5
Pension funds	5	5	0.1
Total Standalone	352	364	-12.6
Total Diversified	338	347	-8.4

The Credit Risk is an aggregation of the Credit Risks on Insurance portfolio, Reinsurance portfolio and Investment portfolio. As shown above, the overall result is stable.

#### Credit Risk on Reinsurance portfolio

Reinsurance portfolio Risk Capital is calculated through the Allianz tool MKMV (Moody's KMV model).

The credit risk on the reinsurance portfolio decreased compared to Q4 2015. This decrease is the combination of a decrease in credit risk on the investment side and a slighter decrease on reinsurance exposure.

#### Credit risk on Investment portfolio

Investment portfolio Risk Capital is calculated through the Allianz tool MKMV.

The credit risk on investment portfolio decreased compared to Q4 2015. This decrease is mainly driven by an important decrease in the bonds and loans exposures (-700 M $\in$ ) to be able to pay the dividend payment.

#### Pension Funds

The Pension Funds represent 1.4% of the global credit RC, therefore it is deemed non material.

#### Insurance portfolio

The Risk Capital related to Insurance portfolio has decreased by -5.1M€ for the modelled part and increased by 3.5 M€ for the scaling part over 2016. Hereafter are explained the main reasons:
The calibration of the parameters Probability of Default (PD), collection rates and usage given default (UGD) within the Trade Credit Insurance & Suretyship (TCI&S) model execution has been reviewed in the EH Group PAAC of 2 DEC 2016

• A new reinsurance structure has been modelled and implemented, leading to a decrease between 4Q2015 and 4Q2016

• The exposure increase in some region (Mainly France) with some changes in parameters and portfolio movement as well

• The increase of the scaling part for non-modelled entities/ Lines of Business (LoBs) is mainly due to the addition of a prudency correction

LoB	Q4 2016	Q4 2015	Δ
Credit insurance	295,518,821	298,786,893	- 3,268,071
Bonding	18,466,208	25,642,085	- 7,175,876
Others	4,573,936	- 4,278,391	8,852,327
Total	318,558,966	320,150,587	-1,591,621

Insurance portfolio Risk Capital per LoB (in M€)

The credit insurance LoB represents about 93% of the insurance portfolio while the bonding LoB represents about 6%.

## C.3.3. Description of assets investment

Please refer to Section C.2.3 for information regarding how assets have been invested in accordance with the "prudent person principle" so that EH SA's risks have been properly managed.

## C.3.4. Risk concentration

Trade credit insurance is the core business of EH SA. Thus, a sharp and overarching credit limit system has been put in place to closely monitor the exposure of the company.

EH SA has succeeded in allocating its exposure in a well-proportioned manner and thus limiting the risk that may arise from a trade sector dependency or from a certain category of buyers or countries. Both the most sensitive buyers and the most sensitive countries are closely monitored. Indeed, these two are key elements in the given credit rating for each EH SA policyholder.

#### Exposure distribution

EH SA had an overall exposure of 662,610,037,360 EUR in 2016 which is distributed among different grades of buyers worldwide. Hence, EH SA has steered its business in a way of attributing the largest part of its exposure to the least risky grades of buyers. It is noticeable that 62% of buyers are concentrated on the upper grades.

#### Exposure by trade sector

As the graph below clearly shows, EH SA has a well-diversified portfolio, avoiding any dependency from a particular trade sector.



There are three sectors over 10% of the overall exposure which are monitored closely on a regional scale, however based on the EH Economic Research recent publications there is no particular risk to be pointed out.

#### Sensitive Buyer: Buyer with critical grade above limit threshold

EH SA has defined thresholds for weakest grades, with buyers exceeding those thresholds are subject to a closer monthly monitoring and are included into a list of sensitive buyers.

## Sensitive Countries

"Sensitive risk" countries are those with a serious risk of payment disruption while "high risk" countries are those with a higher risk of payment disruption. These countries are thus listed within the "master list countries" and monitored more specifically.

#### C.3.5. Risk mitigation

For credit risk, refer to Section C.1.5 of this report for information regarding relevant risk mitigation techniques.

#### C.3.6. Expected Profit Included in Future Premiums

Please refer to Section C.2.6 of this report for information on the total amount of the Expected Profit Included in Future Premiums.

#### C.3.7. Risk sensitivity

Please refer to section C.2.7 of this report for information on relevant stress tests and scenario analysis, as well as the underlying methods and main assumptions.

# C.4. Liquidity risk

## C.4.1. Description of the measures used

The liquidity risk is the risk that EH SA would not be able to meet its short-term current or future payment obligations as and when they fall due. This comprises insufficient liquidity resources to meet payment obligations under current (base case scenario) as well as potential future conditions (stress scenarios).

Liquidity risk management is a component of EH SA risk appetite and is a core part of the financial planning, taking into account the cash flow schedule as well as capital allocation process.

In accordance with the Liquidity Risk Management policy currently being implemented, an analysis is performed on a quarterly basis to identify accurately the resources and needs of liquidity and to simulate the evolution of EH SA liquidity ratio on different time horizons and in different conditions.

In this approach, we consider the liquidity ratio as being the fraction of needs of liquidity over resources of liquidity.

Liquidity resources mainly come from premiums, reinsurance receivables, investment inflow, planned sale of assets, funding inflow and derivative inflow. These inflows are mainly used to pay policyholder benefits, claims and claims expenses, reinsurance payables, operating expenses, dividends, planned purchase or re-purchase of assets, outflow due to debt capital, derivative and other off-balance outflow.

The liquidity risk management framework is built on a regular liquidity risk assessment and supervision, made by regular monitoring of liquidity positions.

To this end, EH SA monitors quarterly the market values of its assets and their classification in terms of liquidity.

This monitoring especially aims at gauging the liquid assets that EH SA could sell in a short period of time in case the liquidity ratio raises over 100%. Such asset sales are part of the "countermeasures" considered in the quarterly liquidity analysis.

## C.4.2. Description of the risk exposure

The table below shows that 40% of the assets are highly liquid; around 19% are liquid while 34% are illiquid.



Classification of assets per type of liquidity

There have been no material changes to liquidity risk in 2016. Liquidity risk is not a material risk but it is part of EH SA's risk profile.

## C.4.3. Description of assets investment

Please refer to Section C.2.3 of this report for information regarding how assets have been invested in accordance with the "prudent person principle" so that EH SA's risks have been properly managed.

## C.4.4. Risk concentration

EH SA is not exposed to any material risk concentration regarding liquidity risk.

#### C.4.5. Risk mitigation

EH SA does not enter into specific risk mitigation techniques for liquidity risk.

#### C.4.6. Expected Profit Included in Future Premiums

Please refer to Section C.2.6 of this report for information on the total amount of the Expected Profit Included in Future Premiums.

#### C.4.7. Risk sensitivity

Stressed conditions are applied with a calibration so as to reflect extreme circumstances, and include financial markets stress, large claims simulations, disruption in premium collection, etc. As for business stress scenarios, EH SA identified many liquidity stress scenarios and did choose to perform the one which appeared to be the most relevant for 2016.

The scenario selected for 2016 was a deterioration of the market conditions leading to an economic crisis, a recession event which implies an increase of the claim frequency for credit insurers. Thus, a combination of a market stress scenario and a recession scenario (reserve risk + credit risk) was simulated.



#### Market stress and recession scenario impacts on liquidity risk

Nevertheless in this scenario, the liquidity ratio never goes up to more than 75% within 12 months as EH SA could succeed in keeping a level of liquidity sources far above the level of liquidity needs, thanks to the use of numerous possible countermeasures identified.

The possible countermeasures are mainly the sale of financial assets, the cancellation of the planned purchase of assets, the suspension of dividend payments to shareholder or the use of committed bank lines.

# C.5. Operational risk

## C.5.1. Description of the measures used

EH SA has an own internal model to compute the loss distribution attached to the operational risk.

The computation is based mainly on four elements:

- Operational losses registered
- Top Risk Assessment (TRA)
- Risk and Control Self Assessment (RSCA)
- Scenario Analysis (ScA)

Operational risk is managed by many processes which are also taken into account in the operational Risk Capital computation process:



• The Risk and Control Self-Assessment (RCSA) process aims at mapping and evaluating the process-level risks and controls. This "in-depth" assessment is performed on a yearly basis and reviewed on a quarterly basis

• The Operational Risk Event Capture (OREC) is an ongoing process aiming at identifying operational risks through: The identification and assessment of operational events and losses, the feeding of an operational losses database. This process is also a process leading to continuous improvement of business performance

## 1. The Risk and Control Self-Assessment (RCSA)

This process aims at mapping and evaluating the process-level risks and controls. This "in-depth" assessment is performed on a yearly basis and reviewed on a quarterly basis

## 2. The Operational Risk Event Capture (OREC)

This is an ongoing process aiming at identifying operational risks through: The identification and assessment of operational events and losses, the feeding of an operational losses database. This process is also a process leading to continuous improvement of business performance

#### 3. The Top Risk Assessment Process (TRA)

This is a structured and systematic process implemented at EH SA level as well as at regional level. Its objective is to identify and remediate significant threats to financial results, operational viability and the delivery of key strategic objectives, regardless of whether they can be quantified or not.

The TRA scope covers all risk categories defined in the Group Risk Policy (i.e. market, credit, underwriting, business, operational, reputational, liquidity and strategic risk) as well as concentration and emerging risks. For each of the (major) top risks, respective EH SA's Board Members are defined as risk owners and define a target score.

The target ratings of all top risks are part of the overall risk appetite, which is formally approved by the MC. If the actual risk rating is higher than the target risk rating, the risk owner is responsible for ensuring that a documented risk mitigation plan is in place.

The TRA process is based on a quarterly review and monitoring, with a full run exercise once per year.

EH SA TRA most recent full run was carried out in Q4 2016. Top risks identified are classified by order of magnitude based on their "actual scores"; these actual scores result from the assessment of the frequency and impact being the highest score between the economic impact and the reputational impact.

All these processes can lead to action plans which tend to reduce risks.

Each year, "Scenario Analysis" workshops are organised with Euler Hermes SA experts in order to set the internal model parameters to be used to calculate the operational Risk Capital.

The inputs for these workshops are the results and assessments of the operational risk management processes described above, aiming at helping an appropriate calibration of the parameters.

## C.5.2. Description of the risk exposure

Below is EH SA's definition of operational risk, as well as several sub-categories of this risk:

• <u>Operational risk:</u> the risk of loss resulting from inadequacies or failures in processes or controls due to people, process, systems and external events or factors

• <u>Legal risk:</u> The risk of loss caused by non-compliance with existing or new legislation or supervisory regulations, disadvantageous changes to existing laws or supervisory regulations, as well as the risk of a loss resulting from material litigation or regulatory proceedings, in particular through disadvantageous interpretations of laws by courts. Furthermore, legal risk includes losses due to ambiguity of laws or unfavourable contract clauses. Legal risk does not constitute a separate risk category, as it is captured by business risk (via operational risk)

• <u>Financial misstatement risk:</u> The risk of loss caused by issuing external financial reports which are not fairly stated in all material respects. Financial misstatement risk is partially covered by the business risk category (via operational risk)

EH SA's standalone operational Risk Capital decreased by 3% from Q4 2015 to Q4 2016 and amounts to 33 M€.

#### C.5.3. Description of assets investment

Please refer to Section C.2.3 for information regarding how assets have been invested in accordance with the "prudent person principle" so that EH SA's risks have been properly managed.

## C.5.4. Risk concentration

EH SA is not exposed to any material risk concentration regarding operational risk.

#### C.5.5. Risk mitigation

EH SA does not enter into specific risk mitigation techniques for operational risk.

## C.5.6. Expected Profit Included in Future Premiums

Please refer to Section C.2.6 for information on the total amount of the Expected Profit Included in Future Premiums.

## C.5.7. Risk sensitivity

Please refer to section C.2.7 of this report for information on relevant stress tests and scenario analysis, as well as the underlying methods and main assumptions.

## C.6. Other material risks

EH SA is not concerned by any other material risks.

## C.7. Any other information

EH SA does not have any additional information to disclose regarding its risk profile.

# D. Valuation for solvency purposes

# D.1. Assets

# D.1.1. Valuation of assets

The following table summarises the amounts for EH SA assets, classified by asset classes as disclosed in the Quarterly Reporting Templates (QRT), for both MVBS valuation and BeGAAP valuation.

ln€	MVBS	BEGAAP	Main explanations
Goodwill	0	0	
Deferred acquisition costs	0	-20 586 928	DAC not recognized in MVBS
Intangible assets	0	79 426 866	Intangible assets not recognized in MVBS
Deferred tax assets	6 672 000	6	Deferred taxes not recognized in BEGAAP
Pension benefit surplus	0	0	
Property, plant & equipment held for own use	30 553 920	13 422 254	MVBS is revaluated at fair value
Investments (other than assets held for index-linked and unit-linked contracts)	2 057 980 050	1 782 649 043	
Property (other than for own use)	4 894 060	666 223	MVBS is revaluated at fair value
Holdings in related undertakings, including participations	831 065 990	630 846 364	MVBS is revaluated at fair value : 162M€ Investment in non consolidated JV and associated enterprise are valued at cost in BEGAAP : 21M€ Depreciation on many subsidiaries in BEGAAP: 17M€
Equities	2 486 000	35 089 813	BEGAAP valued at amortized cost vs fair value in MVBS
Equities - listed	0	34 649 312	
Equities - unlisted	2 486 000	440 501	
Bonds	1 059 475 000	965 563 549	
Government Bonds	264 322 000	255 294 965	BEGAAP valued at amortized cost vs fair value in MVBS
Corporate Bonds	795 153 000	710 268 584	AFS corporate and covered bonds are valued at amortized cost in BEGAAP versus fair value in MVBS Reclassification from loan to banks for 253M€
Structured notes	0	0	
Collateralised securities	0	0	
Collective Investments Undertakings	93 499 000	84 969 285	BEGAAP valued at amortized cost vs fair value in MVBS
Derivatives	3 313 000	2 166 616	
Deposits other than cash equivalents	48 254 000	48 353 214	
Other investments	14 993 000	14 993 979	
Assets held for index-linked and unit-linked contracts	0	0	
Loans and mortgages	86 554 000	150 252 785	Reclassification to covered bonds for 253M€
Loans on policies	0	0	
Loans and mortgages to individuals	0	0	
Other loans and mortgages	86 554 000	150 252 785	
Reinsurance recoverables from:	875 986 040	1 007 854 887	
Non-life and health similar to non-life	875 986 040	1 007 854 887	
Non-life excluding health	875 986 040	1 007 854 887	No discounting in BEGAAP
Health similar to non-life	0	0	
Life and health similar to life, excluding health and index-linked and unit-linked	0	0	
Health similar to life	0	0	
Life excluding health and index-linked and unit-linked	0	0	
Life index-linked and unit-linked	0	0	
Deposits to cedants	4 068 000	4 068 579	
Insurance and intermediaries receivables	426 442 300	320 370 956	Some assets are netted with liabilities in BEGAAP. IN MVBS, assets have to be un-netted. No discounting in BEGAAP
Reinsurance receivables	64 209 000	43 092 170	Some assets are netted with liabilities in BEGAAP. IN MVBS, assets have to be un-netted. No discounting in BEGAAP
Receivables (trade, not insurance)	183 472 260	181 764 582	
Own shares (held directly)	30 886 380	0	
Amounts due in respect of own fund items or initial fund called up but not yet paid in	0	0	
Cash and cash equivalents	126 608 000	126 607 987	
Any other assets, not elsewhere shown	1 098 000	1 011 013	
TOTAL ASSETS	3 894 529 950	3 689 934 200	

The following table summarises the different valuation methods used classified by class of assets. More detailed information on valuation of assets using alternative valuation methods is provided in Section D.4 of this report.

MVBS asset	Valuation method	Specificities when alternative valuation method	MVBS value
Cash and deposits	Alternative valuation methods	Valuated at purchase price	126,607,694
Collective Investment Undertakings	Quoted market price in active markets for the same assets		80,074,787
Collective Investment Undertakings	Alternative valuation methods	Method provided by external asset manager	13,425,546
Corporate Bonds	Quoted market price in active markets for the same assets		449,798,866
Corporate Bonds	Alternative valuation methods	Special italian debt securities valuated at purchase price	1,914
Corporate Bonds	Alternative valuation methods	Bank deposits >1 year valuated at purchase price	76,286,765
Corporate Bonds	Alternative valuation methods	German registered bonds	258,253,156
Deposits other than cash equivalent	Alternative valuation methods	Valuated at purchase price	48,253,782
Deposits to cedants	Alternative valuation methods	Valuated at purchase price	4,074,000
Equities - unlisted	Alternative valuation methods	Common equity valuated at purchase price	80,539
Equities - unlisted	Alternative valuation methods	Common equity valuated at ?	2,406,063
Government Bonds	Alternative valuation methods	German registered bonds	6,009,208
Government Bonds	Quoted market price in active markets for the same assets		255,055,563
Loans and Mortgages	Alternative valuation methods	Internal EH loans valuated at purchase price	3,092,590
Loans and Mortgages	Alternative valuation methods	Mortgages which valuation is provided by external asset manager	40,867,616
Loans and Mortgages	Alternative valuation methods	Other loans not revaluated. SII amounts can be different because it includes accrued interest	9,465,794
Loans and Mortgages	Alternative valuation methods	Receivables from cashpooling not revaluated. SII amounts can be different because it includes accrued interest	33,128,000
Other Investments	Alternative valuation methods	Not revaluated	14,811,764
Participations and related undertakings	Adjusted equity methods (applicable for the valuation of participations)		798,439,954
Participations and related undertakings	IFRS equity methods (applicable for the valuation of participations)		32,625,185
Property (other than for own use)	Alternative valuation methods	real estate is revaluated at least once a year by an independent expert	4,893,915
Property, plant & equipment held for own use	Alternative valuation methods	real estate is revaluated at least once a year by an independent expert	30,553,920
Derivatives	Alternative valuation methods		3,312,483

Below is an overview of valuation and recognition bases applied in MVBS as well as the differences with BeGAAP.

#### <u>Goodwill</u>

Goodwill is not recognisable in MVBS. In BeGAAP, goodwill is recorded if the acquisition cost of an insurance portfolio, an activity or a company is higher than the net value of the company; it is generally depreciated over five years.

#### Intangible assets

Intangible assets other than goodwill should be valued at zero unless the intangible asset can be sold separately and the undertaking can demonstrate that there is a value for the same or similar asset that has been derived from quoted market prices in active markets. Then, the market value for this intangible asset should be booked on account.

Computer software tailored to the needs of the undertaking and "off the shelf" software licenses that cannot be sold to another user shall be valued at zero.

In BeGAAP, Intangible assets other than Goodwill are recorded at:

- Their acquisition value or contribution value ; or
- Production value (limit: prudent estimation of their value in use or their future profit contribution)

Intangible assets are depreciated based on the valuation rules of the company (restricted to useful life to the company). Currently, the following rules are applicable:

• Other intangible fixed assets, study costs and internally developed IT expenses (i.e. software): linearly at 12.5% per year

- Study costs and externally developed IT expenses: linearly at 12.5% per year
- Study costs and Micro-IT (Software) development expenses: linearly at 33.3% per year

• Depreciation charge is calculated "prorata temporis". Revaluation is not permitted. Generally, when an asset is sold, the gain or loss is calculated as the difference between the selling price minus the book-value (purchase price minus accumulated depreciation) at the first of January of the year of the sale

The following expenses may not be capitalised:

- Expenditures on research phase, such as:
  - Conceptual development
  - Design, evaluation and final selection of potential alternatives
- Post-implementation expenditures, such as:
  - Operations, maintenance and administration
  - Data migration
  - Training of employees

The following expenses should be capitalised:

- Expenditures on development phase, such as:
  - Application development

 $\circ$   $\,$  Documentation of the local requirements, the organisational structure of the software

- Design of the program specifications
- Wages and other staff related expenses of own employees directly involved in the development
- Upgrade expenditures (which aim at adding functionalities, improve performance)

## Deferred tax assets (DTA)

## Temporary concept

Deferred taxes – except deferred tax assets arising from the carry forward of unused tax losses or unused tax credits – shall be valued on the basis of the difference between:

- The values ascribed to assets recognised and valued in accordance with the EU Directive on Solvency II and
  - The values ascribed to assets as recognised and valued for tax purposes

Deferred taxes shall be recognised and valued in relation to all assets that are recognised for Solvency II or for tax purposes.

## Balance sheet item concept

Temporary differences between the Solvency II value of the assets and its corresponding tax base should be assessed on a single asset basis. The deferred tax calculations should take into account the tax regulations specific to particular assets in the applicable tax regimes.

Deferred tax assets should not be discounted.

In cases where assets are included with zero value or are not recognised in the MVBS, a temporary difference might, nevertheless, arise if their tax value is not nil.

## **Participations**

In case of revaluations IFRS/MVBS with respect to participations (fully consolidated subsidiaries), no Deferred Taxs (DT) on those revaluations are allowed to be booked in MVBS.

#### Special funds/ tax transparent entities

In most jurisdictions it is not the special fund which is taxable with its income but the respective owner of the special fund (for tax purposes the special fund is "transparent"). In the MVBS of the regulated parent entity has to include all taxes which refer to the respective regulated entity itself. Therefore, no reporting of "service" deferred taxes is allowed in the MVBS data submission of special funds and other tax transparent entities. In consequence, "service" deferred taxes in IFRS at the level of the special funds or other tax transparent entities have to be eliminated in the MVBS of these entities. The insurance parent company itself will recognise in its MVBS the respective deferred taxes and potential additional deferred taxes as a reaction of the IFRS-MVBS revaluation of the investment in the special funds or other tax transparent entity.

#### Deferred tax netting

Deferred taxes of one taxable entity have to be netted in case the respective offsetting criteria are. Under MVBS the legal entity (solo view) has to ensure that deferred tax netting between different Consolidated Units belonging to the same solo view already takes place at solo level. In BeGAAP, deferred taxes are recognised on:

- Deferred taxes on realised gains on intangible assets, tangible assets and securities issued by the Belgian public sector, whereas the taxation of such gains is deferred; and
  - Foreign deferred taxes of the same nature as those mentioned in the above

## Property, plant & equipment held for own use

In MVBS, property plant and equipment are measured at fair value.

The method selected for the valuation of property for own use should be the most representative estimate of the amount for which the assets could be exchanged between knowledgeable willing parties in an arm's length transaction. Such methods should be based on the following:

• Current prices in an active market for properties of a different nature, condition or location or subject to different lease or other contractual terms, adjusted to reflect those differences

• Recent prices of similar properties on less active markets, with adjustments to reflect any changes in economic conditions since the date of the transactions that occurred at those prices

• Discounted cash flow projections based on reliable estimates of future cash flows, supported by the terms of any existing lease and other contracts and, when possible, by external evidence such as current market rents for similar properties in the same location and condition and using discount rates that reflect current market assessments of the uncertainty in the amount and timing of the cash flows

In determining the valuation of the property, the undertaking should take into account a market participant's ability to generate economic benefits by using the assets in its highest and best use, or by selling it to another market participant that would use the asset in its highest and best use. If, in some cases, the various inputs to the applicable approaches suggest different valuations of a property, the reasons for those differences need to be considered in order to determine the most representative valuation estimate within a range.

In BeGAAP, they are recorded at their historical value. Investment properties are depreciated each year while no depreciation charge is recorded on the lands. At EH SA, investment properties are depreciated over 33 years.

Revaluation is permitted where the value of the assets permanently exceeds its book value and is justified by the profitability of the company. Assets suffering a permanent diminution in value should be written down with the charge taken to profit and loss. When a permanent impairment is no longer justified the write-down should be reversed via extraordinary income. Generally, when an asset is sold, the gain or loss is calculated as the difference between the selling price minus the book-value at the first of January of the year of the sale.

## Property (other than for own use)

In MVBS, property (other than for own use) are measured at fair value.

When determining the fair value of property other than own use, the valuation approaches as described in the above section on property, plant and equipment held for own use have to be considered.

In BeGAAP, property (other than for own use) recognition and valuation follows the same rules as property, plant and equipment held for own use.

#### Participations and related undertakings

In MVBS, participations and related undertakings shall be valued at a quoted market price in an active market, if available. If there is no quoted market price, then participations in insurance undertakings shall be valued using the Adjusted Equity Method (AEM). Participations in non-insurance undertakings shall be valued by using the AEM or the adjusted IFRS equity method (EM). • AEM: the value of the participation is the proportionate share of the net asset value of the undertaking's MVBS

• EM: The value of the participation is the proportionate share of the net asset value of the undertaking's IFRS balance sheet, where goodwill and other intangibles (including software) are valued at zero and hence are deducted from the participation value

This approach is required for subsidiaries for which "book value deduction" as described in Level 1 Article 229 (Group level) or "exclusion from Group supervision" as described in Level 1 Article 214 (2) (a) is applied. The zero valuation for such participations in MVBS of the respective parent undertaking follows Level 2 Article 13 2 (b). Subsidiaries for which "book-value deduction" or "exclusion from Group supervision" applies are earmarked with the MVBS Treatment "No data submission (Exclusion)".

In BeGAAP, participations (also called investments in subsidiaries and affiliates) are recorded at their acquisition value. Impairment tests are performed at each closing dates.

### Equities

The line item "Equities" includes the sum of listed and unlisted equities. (Un-)listed equities represent shares in corporations' capital, (not) negotiated on a regulated market or on a multilateral trading facility. It shall exclude holdings in related undertakings, e.g. participations.

Both listed and unlisted equities are valued at fair value in MVBS.

In exceptional cases, IAS 39 allows available-for-sale equities not to be measured at fair value but at cost. This is the case if the equity's fair value cannot be measured reliably. The exemption is only applicable to unquoted equity instruments when there is significant variability in the range of reasonable fair value estimates and the probabilities of the various estimates within the range cannot be assessed reasonably (IAS 39.46(c)).

Since a fair value is not available for these assets and cannot be determined, it was decided to include these items with their IFRS value in the Solvency II balance sheet. Therefore, the accounts should be posted with the same value in the IFRS and the MVBS Ledger.

In BeGAAP, investments (equities included) are recorded at their amortised cost. Impairments are recorded for each share for which the market value, individually, is lower than 20% of the acquisition value over 6 months. Impairment is equivalent to the difference between the individual market value and the acquisition value decreased by 20%. Impairments are also recorded for each share for which the market value, individually, is lower than 80% of the acquisition value. After application of this individual rule, if the market value of the total portfolio is below its acquisition value net of individual downward value adjustments, an additional depreciation is recorded for the amount up to the difference of these values.

## <u>Bonds</u>

The line item "Bonds" includes the sum of government bonds, corporate bonds, structured notes and collateralised securities.

All Bonds items are valued at fair value in MVBS.

In BeGAAP, investments (bonds included) are recorded at their amortised cost. Impairments are recorded in case of risks relating to the bond or loan commitments, such as: capital reimbursement is (partially) uncertain or doubtful, interests payment is uncertain or delayed, adverse change of the security or loan terms and conditions.

Impairments are recorded for each security for which the market value, individually, is lower than 20% of the acquisition value over 6 months. Impairment is equivalent to the difference between the individual market value and the acquisition value decreased by 20%.

Impairments are also recorded for each bond/loan for which the amortised cost, individually, is lower than 80% of the acquisition value. After application of this individual rule, if the market value of the total portfolio is below its acquisition value net of individual downward value adjustments, an additional depreciation is recorded for the amount up to the difference of these values. Differences between acquisition cost and the final reimbursement value are accounted for in profit and losses account on a prorata temporis basis.

#### **Collective Investments Undertakings**

The interests in Collective Investments Undertakings are measured at fair value in MVBS.

In BeGAAP, Collective Investments Undertakings follow the same rules as for bonds.

#### Derivatives

Derivatives are measured at fair value in MVBS.

In BeGAAP, Derivatives follow the same rules as for bonds.

## Deposits other than cash equivalents

Due to the short-term nature of the deposits, we consider the IFRS value to be a good proxy of the fair value of the deposits. Although the IFRS value might not differ from the fair value for those items, the fair value should be posted on the statistical account since for IFRS purposes the fair values are collected on statistical accounts which will then be mapped from the IFRS Ledger to the MVBS Ledger.

In BeGAAP, Deposits other than cash equivalents are recorded at their amortised cost.

## Other investments

Other investments include investments not covered by positions of investments indicated above. They are measured at fair value in MVBS

In BeGAAP, Other investments follow the same rules than for bonds.

## Loans and mortgages - other loans and mortgages

Loans and mortgages are measured at fair value in MVBS.

In BeGAAP, Other investments follow the same rules than for bonds.

## Reinsurance recoverables from Non-life excluding Health

The calculation of reinsurance recoverables leads either to the recognition of reinsurance recoverables calculated as a whole or the best estimate for the reinsurance recoverable. No Risk Margin should be reported in the section of the reinsurance recoverable as the Risk Margin recognised within the Technical Provisions is already net of reinsurance. However, a credit default adjustment (CDA) has to be calculated. The best estimate of Technical Provisions has to be calculated gross.

The time difference between recoveries and direct payments should be taken into account when calculating the reinsurance recoverables and recoverables from special purpose vehicles (SPVs). The amounts recoverable from special purpose vehicles, from finite reinsurance contracts and from other reinsurance contracts should each be calculated separately.

For the purpose of calculating the amounts recoverable from reinsurance contracts and special purpose vehicles, the cash-flows shall only include payments in relation to compensation of insurance events and unsettled insurance claims. Payments in relation to other events or settled insurance claims shall be accounted for outside the amounts recoverable from reinsurance contracts and special purpose vehicles and other elements of the Technical Provisions. Where a deposit has been made for the cash flows, the amounts recoverable shall be adjusted accordingly to avoid a double counting of the assets and liabilities relating to the deposit. For the probability-weighted average of future cash flows of recoverables from reinsurance contracts and special purpose vehicles relating to Non-Life, the following cash inflows and cash outflows should be taken into account:

• Cash inflows include, e.g., recoverables for claims payments or benefits and for related expenses and revenue from reinsurance commission and from shares in profit from technical sources relevant to individual reinsurance contracts

• Cash outflows include, e.g., future premiums

The amounts recoverable from reinsurance contracts and special purpose vehicles for non-life insurance obligations shall be calculated separately for premium provisions and for provisions for claims outstanding. Therefore, the cash flows relating to the provisions for claims outstanding should include those compensation payments that relate to the claims accounted for in the ceding entity's gross provisions for claims outstanding. The cash flows relating to premium provisions shall include all other payments.

The CDA should be calculated as the expected present value of the change in cash flows underlying the amounts recoverable from that counterparty that arises if the counterparty defaults (including defaults as a result of insolvency or dispute) at a certain point in time. For that purpose, the change in cash flows shall not take into account the effect of any measures that mitigate the credit risk of the counterparty, other than risk mitigating techniques based on collateral holdings. The risk mitigating techniques that are not taken into account shall be separately recognised without increasing the amount recoverable from reinsurance contracts and special purpose vehicles. The calculation should take account of possible default events over the lifetime of the reinsurance contract or arrangement with the special purpose vehicle and whether the probability of default varies over time, and how when it does vary. It shall be carried out separately by each counterparty and for each line of business. In non-life insurance, it shall also be carried out separately for premium provisions and provisions for claims outstanding.

In BeGAAP, the reinsurance share of reserves is calculated based on the Technical Provisions and the applicable cession rates agreed in the reinsurance treaties: reinsurance share in unearned premium provisions; claims provisions; provision for bonus and rebates.

## Deposits to cedants

Deposits to cedants include deposits relating to reinsurance accepted. In MVBS, Deposits to cedants are valued at fair value.

Under BeGAAP, deposits given to the reinsurers are recorded on this account. The deposits cannot be offset by other receivables or payables towards the reinsurer.

## Insurance and intermediaries receivables

Due to the short term nature of the receivables, we generally consider the amortised cost value to be fair value. However, since valuation allowances have to be eliminated in the MVBS, the fair value of the receivables might deviate from the amortised cost value. In these cases, a revaluation adjustment is necessary.

In BeGAAP, Insurance receivables are recorded at their nominal value:

- Receivables due from the policyholders (premiums to receive, ...)
- Receivables due from the brokers
- Other insurance receivables

 Salvage and subrogation/provisions for salvage and subrogation: salvage and subrogation on settled claims files or claims files to be settled are estimated on a total basis (actuarial estimation). This method takes into account the historical observations and is based upon statistical information wherein the expenses for future salvage and subrogation are included

- Current accounts between insurance companies
- o Other

#### **Reinsurance receivables**

Due to the short term nature of the receivables we consider amortised cost value to be fair value. However, since valuation allowances have to be eliminated in the MVBS, the receivables might have to be adjusted.

In BeGAAP, Reinsurance recoverable is recorded at their nominal value:

- Secured debts (confirmed in writing)
- Other

#### Receivables (trade, not insurance)

Due to the short term nature of the receivables we consider amortised cost value to be fair value. However, since valuation allowances have to be eliminated in the MVBS, the receivables might have to be adjusted.

In BeGAAP, Other receivables are recorded at their nominal value:

- Current accounts (head office)
- Securities given in cash
- Other (tax recoverable, ...)

#### Own shares

In MVBS, own shares have to be reported on the asset side with their fair value

In BeGAAP, own shares are valued at their acquisition cost.

## Cash and cash equivalents

Bank accounts shall not be netted off, thus only positive accounts shall be recognised in MVBS. Bank overdrafts are to be shown within liabilities unless where both, legal right of offset and demonstrable intention to settle net exist. Cash and cash equivalents are measured at fair value.

In BeGAAP, cash and cash equivalents are measured at nominal value. Negative bank balances have to be reclassified to the short term financial liabilities in the annual accounts (per financial institution).

#### Any other assets, not elsewhere shown

"Any Other Assets, not Elsewhere Shown" includes any assets that are not included in any of the other MVBS line items. Due to the miscellaneous character of this category, the following accounts were allocated to this line item:

• Deferred charges: due to the short-term nature of these items, the carrying amount is considered to be the fair value. However, if the carrying amount is considered not to be the fair value, the difference between the fair value and the carrying amount should be posted on the separate revaluation account. In BeGAAP, Accrued interests and rents are recorded at their nominal value.

• Held to sale assets: In MVBS, assets and disposal groups classified and measured in their original asset categories. In BeGAAP, these assets are recorded at amortised cost, in their respective asset category.

• Other: depending on the nature of these other assets, they are generally recorded at their nominal value in BeGAAP and a revaluation to market value is required in MVBS

In general, there has not been any significant change in the valuation of the inputs.

#### D.1.2. Material intangible assets

Under MVBS, intangible assets have been valued at zero because there is usually no active market for intangible assets, prices are not available to the public, or the intangible asset is unique.

#### D.1.3. Changes to the recognition and valuation bases used or to estimations

There have not been any changes to the recognition and valuation of material classes of assets during the reporting period.

# D.1.4. Assumptions and judgments on the future and other major sources of estimation uncertainty

There are no specific assumptions or judgments about future and other major sources of estimation uncertainty.

#### D.1.5. Material financial assets

Criteria for active markets are those defined in IFRS. In case those criteria are not met alternative valuation methods are used. The valuation techniques include the use of recent transactions under normal competitive conditions between consenting and informed parties, reference to the current fair value of another instrument that is identical in substance, the analysis of discounted cash flows and option valuation models. The unlisted financial assets are mainly German mortgage bonds.

# D.1.6. Related undertakings not valued using quoted market prices or the Adjusted Equity Method

All related undertakings have been valued either with Adjusted Equity Methods or IFRS equity methods.

## D.1.7. Financial and operating leases

#### Lessee: Assets and Liabilities

EH SA only agrees to lease operating leases from lessors. The only material asset class for leases is for real estate. The below table shows the current real estate lease contracts as well as the duration of these contracts in IFRS:

ln k€	UK	Northern Europe	Germany	France	Asia	Others
Less than 1 year	2,294	2,716	1,270	10,683	3,153	236
Between 1 and 5 years	6,140	7,018	1,353	42,768	6,378	803
More than 5 years	430	-	18	61,085	-	379
Total	8,864	9,734	2,641	114,537	9,531	1,418

Under an operating lease, the lessee does not recognise any lease asset or liability in the IFRS and in the Solvency II balance sheet.

EH Group has a rental contract for its First Tower headquarter in La Défense. The rental contract has been renewed for a duration of 10.5 years from July 1st 2016, for an annual amount of 9,815 K€ net of rent reduction.

#### D.1.8. Material deferred tax assets

On 31 December 2016, the total deferred tax assets equalled 6.7 M€ (Solvency II value). They are due to activated tax losses in Belgium and they have unlimited expiry period. There are some unused tax losses in the foreign branches of EH SA (mainly in Asia) for which no deferred tax asset is recognised in the balance sheet due to a low visibility on the recoverability of these tax losses.

Moreover, applicable tax rates have not changed from 2015 to 2016.

## D.1.9. Aggregating class of assets

Asset classes are in line with QRT requirements.

# **D.2. Technical provisions**

## D.2.1. Valuation of Technical Provisions for solvency purposes

The table below summarises the Technical Provisions amounts by SII LoB (MVBS).

In €	Credit and suretyship insurance	Miscellaneous financial loss	Total Non-Life obliga- tion
Total Best estimate - gross	1,300,924,580	171,863,470	1,472,788,050
Risk Margin	35,993,580	-	35,993,580
Technical provisions - total	1,336,918,160	171,863,470	1,508,781,630

The calculation of technical provisions is composed of the calculation of the following elements:

## 1) Undiscounted Claims Provisions

Claims Provisions methodologies are specific to each region. Hereunder is a description of the main methodologies used for the different regions.

## a) DACH

## *i.* Methodology for the Main LoBs of EH-DACH

## Large Loss Extraction

In order to increase the reliability of the Quantitative reserves actuaries allow for the extraction of single claims respectively a specific group of claims that are not representing the "normal" claims development of the LoB or single claims with high claims amount that would significantly increase the inhomogeneity of data triangles. The remaining portfolio after extraction of these claims is defined as "attritional losses".

For the other kind of large loss separation, extraction due to claim's size, EH-DACH actuaries defined individual threshold for each line of business.

#### Attritional Losses and Salvages

Actuarial analyses for attritional losses as well as for salvages are derived based on a twostep approach:

- Define the LoB-specific averaged claims/salvages development based on historical (and homogenous) data
- Apply this development to the current situation for claims respectively salvages. For this purpose EH-DACH actuaries use the standard methods that are mainly Chain Ladder (CL) and Bornhuetter-Ferguson (BF) on paid losses as well as on incurred losses respectively based on received salvages

Generally in EH-DACH the BF-method is applied for the CY as well as for the 2-3 youngest prior years, while for all other years the CL-method is used. Actuaries derive an appropriate averaged claims/salvages development for the future payments in the way that the historical data is manipulated by excluding single anomalous payment–ratio factors (so called "link ratios") in order to exclude unrepresentative developments. Afterwards a couple of different (weighted) averages for each link ratio are available and the reserving actuary has to decide, which one is most appropriate.

## Loss Adjustment Expenses

The loss adjustment expenses are classified either as Allocated Loss Adjustment Expenses (ALAE) or Unallocated Loss Adjustment Expenses (ULAE). In EH-DACH the corresponding ULAE reserves are calculated by Paid-to-Paid method. This is a factor based approach applied to the quantitative loss reserves of a calendar year.

For the calculation of the ULAE reserves, the attritional loss reserves only are used.

## Speciality of Bonding (DE)

The Bonding business in German-branch is characterised by mainly small and medium-sized claims. In the event of a large claim the Incurred But Not Reported (IBNR) set up for that purpose can be transferred to cover (or party cover) the Large Loss (LL) case reserve. In case, no large loss > 10M€ occurred in CY these IBNR reserve will be released in the quarter following the year end.

## Fidelity (DE)

EH DACH actuaries allow for LL-IBNR in this LoB for CY as well as for the youngest 7 prior years. All large losses which have occurred within this 7 years period are covered by the LL-IBNR per AY until it is totally exhausted.

## Speciality of Credit (CH)

The general methodology as described above also applies to the Credit business of Swiss-branch. But given the claims system, there is no distinction between losses, salvages and ALAE possible. Hence, EH-DACH actuaries analyse the aggregation of these components.

## Speciality of World Policy (DE & CH)

The general methodology as described above also applies to the World Policy analysis: World Policy LoB in both branches, Germany (DE) and Switzerland (CH).

## *ii.* Methodology for the Small LoBs of EH-DACH

## World Agency (WA): Transaction Cover (TCU) / Excess of Loss (XoL) : DE + CH

These lines of business are almost new and hence, their portfolio (in terms of policies, Gross Earned Premiums (GEP) and claims) is rather small. Here EH-DACH actuaries generally follow the expectations from the WA claims committee.

## Assumed business (DE)

The assumed business of EH Germany is split into three categories:

- **EH Assumed Internal:** internally assumed business from other EH entities, currently facultative assumed business for the Lobs Fidelity and Bonding. On a monthly basis the cedents technical data are booked
- Allianz Assumed Internal: internally assumed business from AZ entities. On a quarterly basis the technical data is provided by the cedent and booked
- **Assumed External:** externally assumed business from entities where EH holds a 50% share (or less) of the business, or from totally external entities to EH

## Bonding (CH)

In this LoB there has been no claim recorded in history.

## Fidelity (CH)

The Fidelity business in Swiss-branch in general is very small. Nevertheless, also large claims might happen. Hence, IFRS reserves are strictly following the local GAAP case based reserves.

#### b) France

#### **Commercial Credit**

As for DACH Attritional losses, a combination of CL method and BF method is used. A split is performed between Domestic and Export businesses The only large claim event from the data has been excluded because the nature of this claim would distort the estimates produced using our chosen methods.

A specific calculation is done for non-SFR expenses to estimate the total Ultimate Administrative Expenses. This is a factor based approach applied to the Actuarial Best Estimate (ABE) Loss ultimates before LAEs and Subrogation & Salvages (S&S).

Administrative Expenses Ratio is validated during the Parameter Committees. This ratio is based on a historical average and only applied to the 2 latest AY.

The calculation of Salvages & Subrogations is implemented with a Development Factor Method (DFM) and a BF method.

## **Bonding**

Bonding line of Business has begun in 2008 for EH France. At end of year 2016, this LoB has a lack of claims. Thus case reserves have been booked on this Line of Business. Those case reserves correspond to two types of situation:

- When the bond is called we book 100% of the exposure
- When the covered company is insolvent we booked 100% of the exposure.

## **Fidelity**

Launch in January 2015, this Line of business is still in infancy.

## World Program

Every quarter is performed a benchmark of the Ratio Growth (RG) method results send by group actuarial team with EH France estimation.

## TCU and XoL

An Expected Loss Ratio (ELR) method has been used based on experience and given quarterly by the World Agency team.

## **Assumed Business**

The assumed business of EH France is split into two categories:

- EH Assumed Internal
  - $_{\odot}$  Non-World Program: On a monthly basis the cedents technical data are booked with a one month delay.

 $_{\odot}$   $\,$  World Program: Monthly data, quarterly Case and IBNR reserves are booked as delivered.

• Assumed External: Data is received with a delay and booked.

#### c) MMEA

#### **Commercial Credit**

The Ultimate Loss Ratio estimation is composed by the Ultimate Loss Ratio before Salvages, and the Ultimate Salvages Ratio, that are separately estimated.

A combination of CL method and BF method is used.

As the number of Large Claims is small, no dedicated estimation is done; however, the "exceptional" claims are excluded from the Attritional data triangles because the nature of these claims would distort the estimates produced .

The Ultimate expected losses are added on top to the Quantitative Best Estimate related to Attritional Loss.

Other large claim events were not excluded from triangulation.

No specific ALAE triangle is built.

The Ultimate ULAE are split by AY and added on top to the Ultimate Loss.

IBNR reserve represents the additional amount set up to cover the cost for future unreported claims (Incurred But Not Yet Reported – IBNYR), plus any anticipated deficiency in Case Reserve for reported claims (Incurred But Not Enough Reported – IBNER).

Salvages & Subrogations (S&S) are projected in separate cumulative triangles.

## World Program

For CY, local estimation are based on RG method and on BF method with Initial Expected Loss Ratio (IELR) selected considering the AY with similar characteristics, in terms of economic scenario exposure, premiums.

For Previous Year (PY) local estimation are generally based on DFM method.

As the number of Large Claims is small, no dedicated estimation is done. However, one "exceptional" Claim is excluded from the Attritional data triangles

The EH Group Actuarial team provides Ultimate Loss Ratio (ULR) estimation, based on RG method applied to a benchmark portfolio.

#### Transactional cover

For TCU, an IBNR reserve is set according to the instructions communicated quarterly by the World Agency Group

#### Assumed business

The assumed business of EH MMEA is split into three categories:

EH Assumed Internal

 $_{\odot}$   $\,$  WA business: Monthly data, quarterly Case and IBNR reserves are booked as delivered.

 $\circ$   $\,$  Non WA business: On a monthly basis the cedent technical data are booked with one month delay.

• AZ Assumed Internal: On a quarterly basis the technical data are provided by the cedent to the accounting department and booked.

• External:

 $_{\odot}$   $\,$  WA business: on a monthly basis, the technical data are booked in the assumed accounts.

• Non WA business

• Fronters: on a quarterly basis the technical data are provided by the cedent.

 $\hfill \ensuremath{\,^\circ}$  Co-Insurers: on a monthly basis the data are communicated by the co-insurers

## **Bonding**

The Bonding business split into two categories:

- The old portfolio, in run-off from 2005,
- The new portfolio, started half 2014.

Bonding ULR estimation related to the new portfolio, follows the harmonised guidelines issued by EH Group, considering a total ULR deriving from a separate estimation for Attritional and for Large Losses.

The claims are booked by Occurring Year.

#### d) Northern region and APAC

#### **Commercial Credit**

The Ultimate Loss Ratio estimation is composed by the Ultimate Loss Ratio before Salvages, and the Ultimate Salvages Ratio, that are separately estimated.

As for DACH Attritional losses, a combination of CL method and BF method is used.

Certain large or extraordinary claim events have been excluded from the data because the nature of these claims would distort the estimates produced using the chosen methods. The determination and exclusion of LL are based on day to day judgment and exchanges with respective branches, keeping in mind the Group indication for which the large losses threshold or selection for exclusion should be examined in such a way that it leads to not more than a handful of large losses in a 10-year triangle.

The incurred amount related to the Large Loss events are added to the actuarial Best Estimate.

ALAE are computed by each local branch using their own methods.

ULAE paid are computed and booked at Group level, based on general expenses allocation criteria agreed locally. A monitoring and analysis of the results are performed during the loss reserving exercise by the Actuarial team. There are not ULAE reserves for APAC region.

IBNR reserve represents the additional amount set up to cover the cost of future unreported claims, plus any anticipated deficiency in Case Reserve. IBNR Reserve contains the ALAE Reserve

## **Bonding**

The Bonding portfolio of EH Northern Region is located in 5 countries and shows volatile incurred LR over the past years, so that we tend to set conservative best estimate assumptions in general.

In APAC, the Bonding activity was launched at the end of 2014, so the activity is not sufficiently developed (only premium, no claims) to perform real actuarial. However, this activity is followed like other ones.

Over the year is computed IBNR quantitative reserves of Bonding based on historical data and LR known.

## World Program

A complete monitoring based on World Agency triangle is performed using same methods than for Credit insurance line of business.

For the Northern Region, this control is carried out on the regional level (excluding Poland) and not at branch level to have a consistent triangles basis for the regional computation. As no sensitive deviations were noticed between both methods, the RG results were booked for the Northern Region.

For APAC region, the WA monitoring is performed on branch level. The final reserves bookings are fixed by analysis of both results (RG method and follow-up).

## EH Assumed business

The assumed business of both EH Northern region and EH APAC is split into three categories:

- EH Assumed Internal

  - $\circ$   $\,$  Non WP business: On a monthly basis the cedents technical data are checked and confirmed by accounting and booked.
    - For APAC region, Japan assumed business is EH Internal.

• AZ Assumed Internal: On a quarterly basis the technical data is provided by the cedent to the BE accounting department and booked.

• External: The main part is located in APAC. Global IBNR reserves of APAC assumed business are submitted at same actuarial methods for computation and tools than for Credit insurance business. No reserves are out of actuarial scope.

#### <u>Retail</u>

This line of business is a run off activity located only in Belgium. The reserves are only Salvages reserves based on the still existing debt portfolio and potential case reserves linked to contract still alive. To estimate those salvages of reserves, the Mack actuarial method is used based on historical salvages triangles. This line is not material.

#### TCU and XoL

For Both Excess of Loss and TCU Lines of Business the triangle history available is empty so in fact not sufficient to perform a reliable analysis. Hence we used an Expected Loss Ratio Method based on experience.

## e) Assumptions

This section detailed assumptions that are taken and that are applicable to every sections detailed in the above.

#### Selection of Initial Expected Ratios

Where an IELR has been used, the risk environment has been taken into account, considering external information that are not contained in the triangle data.

## Future inflation

Other than in the choice of the IER, those methods do not make an explicit assumption for future claims inflation. Where historical development profiles are extrapolated into the future, these projection methods have made an implicit assumption that historic trends in inflation will persist in the future.

## Valuation Date

There is a two-step approach to calculate the booked figures as at 31 December 2016:

- The figures presented and agreed upon in the Loss Reserve Committee (LRC) are based on calculations and projections on data as at 30 November 2016
- For the calculation of the figures to be booked as at 31 December 2016, the real payments and the new ultimate estimated premiums are available

For each AY, based on the resulting estimation of Ultimate Loss, an ULR is derived, on the basis of the new Ultimate estimated premium at the end of the year.

#### Quantifying uncertainty – Ranges

In addition to producing the actuarial best estimate for the statement of actuarial opinion, the potential variability around that best estimate has been investigated. These calculations were performed on the aggregated data triangle at a gross of reinsurance level and specifically exclude the large losses previously identified. The range estimates do not consider any potential impact of the estimate of gross premium varying.

#### Netting down for reinsurance

For Loss reserve committee, the net reserves have to be estimated based on the gross reserves amounts defined and agreed during LRC. For this objective, we estimate based, on the last period closing net figures and cession rate, the cession figures related to closing. Those net figures estimated for the closing are added to net amounts already booked to give the global net reserves amounts at the end of the period.

#### f) Investment Management Expenses (IME)

Additionally, IME need to be included according to Article 31 of the delegated act. The total IME is determined as 1.5 bp of the Net Best Estimate Technical Provisions (BE TP) which is then split into two parts related to gross claims resp. gross premium provisions based on the share of those in the net best estimate (without Future Premium (FP)). IME is not ceded.

#### 2) Undiscounted Premium Provisions

In general the premium provisions are defined as the present value of all future outflows less inflows from future events post the evaluation date that will be incurred under the insurer's existing policies that have not yet expired.

In general the Future Premium (FP) is calculated by analysing the relevant information

For multi-year policies the recognition of profits is limited to a maximum of 1 year if writing profitable business. In case of a loss making portfolio of contracts the full duration is recognised.

Contract lapses are taken into account, i.e. if a contract is cancelled it should not be projected within the FP calculation. Furthermore it is up to the local actuaries to decide about any average lapse/cancelation rates to be taken into account.

Referring to contract boundaries it is to note that EH can unilaterally terminate or amend credit lines related to the risks covered in its contracts at any time (for CI/WP lines of business). Following a strict interpretation of article 18 of the SII Delegated Acts EH must consider the scenario of cancelling all limits (where applicable, i.e. if policy wording allows for limit cancelling and if premium depends from limit/covered amount) when calculating the future premium (as part of premium provisions).

The ceded premium provisions can be calculated analogously to the gross premium provisions..

#### 3) Discounting of Claims and Premium Provisions

The main input for the calculation of the discounting is the cash flows. The absolute cash flows indicate which amounts of the respective reserves are paid out in which future period (independently from Accident Year (AY)):

## Claims provisions:

The claims provisions cash flow follows the payments of claims and can be directly calculated using triangles.

## Premium provisions:

In General Premium Provisions can be split into a claims/expenses related part, i.e. (Combined Ratio (CR) - Acquisition Expenses (AE)) \* (Premium Received (PR) + FP)), and a premium related part, i.e. (– FP + Recover Rate (RR)).

The premium provisions cover risk exposure where the insurer is bound to business by in force policies with exposure in the future. Hence the claims behind have not happened yet. But in general the claims/expenses related part of premium provisions covers future claims. Therefore the cash flow behaviour of the claims/expenses related part should be similar to the cash flow behaviour of the claims provisions. The only difference is that the premium provisions are mainly related to claims attached to the next future period/year. Hence their cash flow behaves like a cash flow of the ultimate claims costs. So for estimating the cash flow of the claims/expenses related part of the premium provisions the ultimate cash flow (pattern) is used.

The premium related part is expected to be paid in/out within the next year and hence do not have the same maturity than the claims/expenses related part of the premium provisions. Therefore the absolute cash flow is calculated by multiplying (CR - AE) \* (PR + FP) with the ultimate cash flow pattern and adding the premium related amount to the first year of the cash flow.

As quota shares are the main contributors to the reinsurance portfolio it is considered as appropriate using the assumption of having the same cash flow patterns for gross and ceded reserves.

As described above the main task is to calculate the cash flows of the claims provisions and the premium provisions and the respective discount effect. For this purpose the following cash flow patterns are calculated on a yearly basis:

• The ultimate cash flow pattern indicates which share of the ultimate claims costs is paid out in which development period. This pattern starts with the AY as first development year.

• The reserves cash flow pattern indicates which share of the (total) reserves is paid out in which future period.

The cash flow patterns are calculated using annual triangles and standard actuarial methods (e.g. DFM).

Finally the cash flow patterns are applied to the undiscounted claims provisions resp. premium provisions to calculate undiscounted cash flows. To allow for a currency specific discounting the undiscounted cash flows / reserves are split into the main settlement currencies.

The cash flows are then multiplied with discount factors to come up with discounted cash flows. The sum of the discounted cash flows results in the discounted reserves.

The discount factors are calculated for each relevant currency by using the respective currency related risk free rate including the volatility adjustment.

## 4) Risk Margin

The market value of liabilities is defined as the discounted best estimate reserve plus a Risk Margin (RM, also known as Market Value Margin or MVM), representing the cost of capital to run off the business until final settlement. In other words, the Risk Margin is the cost of holding the necessary capital in excess of the best-estimate of the liabilities. Hence, the Risk Margin is integral part of the market value of liabilities and links the calculation of liabilities to risk models.

The calculation of the Risk Margin is based on the assumption that the whole portfolio of (re)insurance obligations, including any related reinsurance contracts is transferred to another (re)insurance undertaking – called reference undertaking - immediately (i.e. t=0). The transfer scenario is defined such that only non hedgeable risks need to be considered. Especially it is assumed that the transfer of insurance and reinsurance obligations includes any reinsurance contracts relating to these obligations and that the reference undertaking is assumed not to have any (re)insurance obligations and any own funds before the transfer takes place. Only after the transfer of the portfolio the reference undertaking would raise eligible own funds, these assets should be considered to be selected in such a way that they minimise the SCR for market risk that the reference undertaking is a result of the above 'transfer' assumptions.

The risk categories to be captured are:

• Underwriting risk with respect to the transferred business: premium reserve RC and claims reserve RC. (The premium Risk Capital is adjusted to reflect the legally bound future premium only, called premium reserve Risk Capital.)

• Credit risk with respect to reinsurance contracts, SPVs, intermediaries and any other material exposures

- Business risk (Cost and Lapse risk)
- Operational risk

EH SA bases the calculation of Risk Margin on the internal model SCR. For the Risk Margin calculation one of the main inputs is the Risk Capital.

For Reserve Risk and Premium Reserve Risk a roll-forward approach is used which is in line with the usual approach for those risks. Hence, Previous Year Model results are used.

## 5) Counterparty Default Adjustment (CDA)

In order to separate the individual risks as specified under Solvency II, a Counterparty Default Adjustment (CDA) has to be calculated. In the calculation, the risk mitigation effect of reinsurance is taken into account even though the risk of the counterparties' default remains. This has to be considered separately and an adjustment is made to the reinsurance recoveries in form of the CDA.

The following (simplified) version of the CDA (=AdjCD) is calculated:

$$Adj_{CD} = -\max\left((1-RR) \cdot \frac{PD}{1-PD} \cdot Dur_{mod} \cdot BE_{rec}; 0\right)$$

where:

- RR = Recovery Rate = the possible % of retrieval even after a Reinsurer defaults
- PD = Probability of Default of the counterparty within the next 12 months.
- Durmod = modified Duration of the (ceded) recoverables
- BErec = Best-Estimate of the (ceded) recoverables, i.e. the total ceded reserves

Motivation of the formula: (a) the formula is a time-discrete simplification of the time-continuous formula with "In(1-PD)" inside, i.e. the 1st order Taylor-Approx. (b) The CDA is like the Expected Loss for ceded recoverables with a duration of "Durmod" years.

#### D.2.2. Level of uncertainty

In this section we are showing both the uncertainty of undiscounted claims reserves estimations (i.e. stochastic reserve analysis) as well as the sensitivity of Technical Provisions (TP) on certain input parameters.

#### Stochastic Reserving

Stochastic simulations ("Mack-Bootstrapping") are conducted on the IFRS claims reserves by all regions for the main lines of business in order to provide reserve distributions around the quantitative best estimate reserves. Furthermore, the EH Group Actuarial Function conducts a range calculation based on aggregated yearly triangle data and scales it to the current reserve levels of EH Group.

As per the regional Actuarial Reports we list the below spread of quantitative best estimate and company best estimate results:

		Quantitative	Quantitative +
		Reserves	Qualitative Reserves
France	CI	46%	50%
DACH	CI	51%	51%
Italy	Cl-dom	51%	51%
UK	CI	51%	51%
EH Group	all lines	50%	74%

\*DACH excludes Bonding w.r.t. distorted simulation.

It can be noticed that for the qualitative reserves there are two outliers: Northern region and subsequently the EH Group. As the claims assessment is going forward, many qualitative reserves were transformed into (quantitative) case reserves.

Given the rather low volatility of reserve distributions compared to industry benchmarks, the moderate qualitative reserves but even more the extraordinary effect above are pushing the total reserve levels to some quite high quantiles.

#### **Sensitivity Studies on Technical Provisions**

In the following we analysed the sensitivity of TPs in relation to three different risk drivers that were discussed in the past by some local regulators. Our below results demonstrate the robustness of our approach to estimate both discounted claims reserves and premiums reserves with respect to scenarios a) and b), but it also turns out that the Combined Ratio is a quite sensitive parameter for the premium provision calculation.

#### a) Separate Cash Flow Pattern for S&S

As recommended by local regulators, a dedicated Cash Flow Pattern (CFP) for S&S should be used instead of an overall CFP for (paid claims + claims costs – S&S).

## b) Combined Ratio Analysis

The premium reserves reflect the present value of all future outflows less inflows from future events post the valuation date that will be incurred under the insurer's existing policies that have not yet expired.

Hence, future outflows (i.e. future claims and administrative costs) and future inflows (i.e. future premiums) are taken into account in the premium reserves estimation. The future outflows are estimated via an adjusted combined ratio. As this parameter is a key driver of the premium reserves level, the sensitivity of (undiscounted) premium provisions on changing CRs has been tested and is quite significant:

In k€	Base case	-2% CR	+2% CR
EH SA: Gross	140,020	123,701	156,339
EH SA: Net	110,476	104,880	116,071

MVBS Figures

Furthermore, the impact of a 5% change in the Unearned Premium Reserve (UPR) (Cash) on the premium reserves level has been tested. Results are displayed in the tables below (MVBS):

ln k€	Base case	-5% UPR	+5% UPR
EH SA: Gross	140,020	131,141	148,900
EH SA: Net	110,476	106,562	114,389

**MVBSFigures** 

## D.2.3. Material changes in calculation assumptions for Technical Provisions

The four following material changes in the relevant assumptions in the calculation of Technical Provisions have been required by the NBB.

- 1. Tacit renewals
- 2. Minimum premium approach
- 3. Rebate ratio
- 4. UPR

#### D.2.4. Differences with Technical Provisions in financial statements

In MVBS, Technical Provisions amount as of Q4 2016 was at 1,509 M€. Given that the credit and suretyship insurance line of business represents most of EH SA's business, these TPs figures are being presented for the aggregate business. In BeGAAP the amount was at 2,014 M€. This difference is explained by the three following reasons:

1. Technical provisions are not discounted in BeGAAP. This difference has a negative impact on BeGAAP valuation of 285 M€

2. No equalisation reserve is recognised in MVBS. This difference has a negative impact on BeGAAP of 256 M€

3. No Risk Margin is recognised in BeGAAP. This difference has a positive impact in BeGAAP of 36 M€

In BeGAAP, the calculation is based on an actuarial method (Bornhuetter, Ferguson & Chain ladder) which takes into account the amount of unpaid outstanding claims payments and the evolution of the historical payments of compensated (paid) claims.

#### Unearned premium provisions

Unearned premium provisions are calculated based on the recorded premiums, depending on the duration of the underlying risks and the type of insurance policy contracts.

#### Claim provisions

Claims provisions include the estimate of the claim costs, the estimate of the claim expenses, the I.B.N.R. provision (incurred but not reported) and an estimate of the claim handling costs.

These provisions are calculated as follows:

- 1) An actuarial method, mainly but not exclusively Bornhuetter, Ferguson & Chain ladder
- 2) They are set up on a case by case basis and are updated regularly

3) They are set up based on the data obtained from the ceding parties for assumed reinsurance activities

#### Provision for bonus and rebates

Provision depends on the incurred result of the underlying insurance policies for which bonus (according to their claims) has been foreseen.

## **Equalisation provision**

Equalisation provision in credit insurance companies is calculated based on Addendum to the ministerial decree dated the 1st August 1994. An equalisation provision is not recognised in MVBS.

#### D.2.5. Matching adjustment

EH SA does not apply a matching adjustment.

## D.2.6. Volatility Adjustment

In accordance with the technical guidance provided by EIOPA, the discount effect is currently calculated by taking into account the Volatility Adjustment (VA) inside the risk-free SWAP (yield) curves. Doing a sensitivity study on SWAP curves only (i.e. without VA) results in almost the same discounted reserves:

The impact of the Volatility Adjustment is negligible (only 0.20% deviation between the discounted reserves with VA and without VA).

#### D.2.7. Transitional risk-free interest rate-term structure

EH SA does not apply the transitional risk-free interest rate-term structure referred to in Article 308c of Directive 2009/138/EC.

#### D.2.8. Transitional deduction

EH SA does not apply the transitional deduction referred to in Article 308d of Directive 2009/138/EC.

#### D.2.9. Recoverable from mitigation techniques

In 2016, EH SA had reinsurance recoverables of nearly 876 M€. The recoverables are coming from non-life excluding health, which includes the credit and surety insurance and miscellaneous lines of business. Of these recoverables, 96.8% come from claims provisions, with the remaining due to premium provisions.

There were no recoverables from special purpose vehicles.

## D.3. Other liabilities

The following table summarises the amounts for EH SA other liabilities, classified by other liabilities classes as disclosed in the QRT, for both MVBS valuation and BeGAAP valuation.

ln€	MVBS	BEGAAP	Main explanations
Contingent liabilities	22 939 680	0	UK contingent liabilities and receivable impairment not
			recognized in BEGAAP
Provisions other than technical provisions	71 210 000	70 126 535	Provisions for stock based compensation GEI : Historical
			BEGAAP booking
Pension benefit obligations	189 052 000	189 045 964	
Deposits from reinsurers	13 394 000	13 395 060	
Deferred tax liabilities	144 456 380	105 262 181	Deferred tax not recognized in BEGAAP except Tax debt
			related to the equalization reserve write-down in the
			German branch (booked on a deferred tax account in
			BeGAAP only)
Derivatives	0	0	
Debts owed to credit institutions	0	0	
Financial liabilities other than debts owed to credit institutions	58 848 000	58 848 992	
Insurance & intermediaries payables	185 245 000	149 328 555	Some liabilities are netted with assets in BEGAAP. In
			MVBS liabilities have to be un-netted
			No discounting in BEGAAP
Reinsurance payables	270 818 000	40 157 363	Some liabilities are netted with assets in BEGAAP. In
			MVBS liabilities have to be un-netted
			No discounting in BEGAAP
Payables (trade, not insurance)	107 852 000	108 753 175	
Subordinated liabilities	0	-1	
Subordinated liabilities not in BOF	0	-1	
Subordinated liabilities in BOF	0	0	
Any other liabilities, not elsewhere shown	137 474 970	179 195 035	Some liabilities are netted with assets in BEGAAP. In
			MVBS liabilities have to be un-netted
OTHER LIABILITIES	1 201 290 030	914 112 858	

#### **Provisions other than Technical Provisions**

Provisions other than Technical Provisions refer to liabilities of uncertain timing or amount, excluding the ones reported under "Pension benefit obligations". They include, e.g., provisions for legal expenses as well as deferred income reserves.

In BeGAAP, provisions are recorded to cover all planned or expected risks and charges.

#### Pension Benefit Obligations

Pension benefit obligations are the total net obligations related to the employees' pension scheme. IAS 19 is considered a reasonable approach in valuing pension liabilities for Solvency II purposes.

In BeGAAP, a company should record a provision for a pension plan in the statutory accounts only if the assets of the plan are lower than the minimum reserves as defined under the Belgian law.

For EH SA, the minimum pension reserves for its engagements must comply with local law.

According to Belgian law (only applicable for engagements in Belgium), the funding of pension plans must at least cover the vested rights, as defined by the applicable legislation. Consequently, in case the coverage of the vested rights by the mathematical reserves or plan assets is insufficient (i.e. the level of assets has become insufficient to cover the existing obligations), the employer must record a provision for defined contribution plans, for Defined-Benefit Plans (DBP) financed through insurance contracts, and for Defined-Benefit Plans financed through pension funds.

These minimum legal requirements may be superseded by more stringent contractual conditions as stipulated in the plan rules.

In addition to that, EH SA decided to record the provisions for pensions based on IAS 19R.

#### Deposits from reinsurers

Deposits from reinsurers include amounts (e.g. cash) received from a reinsurer or deducted by the reinsurer according to the reinsurance contract.

In MVBS, Deposits from reinsurers are recorded at fair value.

#### Deferred Tax Liabilities (DTL)

#### Temporary concept:

Deferred taxes shall be valued on the basis of the difference between:

- The values ascribed to liabilities recognised and valued in accordance with the EU Directive on SII and
  - The values ascribed to liabilities as recognised and valued for tax purposes.

Deferred taxes shall be recognised and valued in relation to all assets that are recognised for Solvency II or for tax purposes.

#### Balance sheet item concept:

Temporary differences between the Solvency II value of the liabilities and its corresponding tax base should be assessed on a single liability basis. The deferred tax calculations should take into account the tax regulations specific to particular liabilities in the applicable tax regimes.

Deferred Tax Liabilities should not be discounted.

#### Participations

In case of revaluations IFRS/MVBS with respect to participations (fully consolidated subsidiaries), no DT on those revaluations are allowed to be booked in MVBS

#### Special funds/ tax transparent entities

In most jurisdictions it is not the special fund which is taxable with its income but the respective owner of the special fund (for tax purposes the special fund is "transparent"). In the MVBS of the regulated parent entity has to include all taxes which refer to the respective regulated entity itself. Therefore, no reporting of "service" deferred taxes is allowed in the MVBS data submission of special funds and other tax transparent entities.

#### Deferred tax netting

Deferred taxes of one taxable entity have to be netted in case the respective offsetting criteria are. Under MVBS the legal entity (solo view) has to ensure that deferred tax netting between different Consolidated Units belonging to the same solo view already takes place at solo level.

In BeGAAP, deferred taxes are recognised on:

- Deferred taxes on realised gains on intangible assets, tangible assets and securities issued by the Belgian public sector, whereas the taxation of such gains is deferred; and
  - Foreign deferred taxes of the same nature as those mentioned in the above

#### Financial liabilities other than debts owed to credit institutions

The MVBS line item "Financial Liabilities Other than Debts owed to Credit Institutions" includes bonds issued by the entity (whether they are held by credit institutions or not), mortgages and loans due to other entities than credit institutions (sister insurance company, holding, etc.) and structured notes issued by the entity itself (not by SPV). Subordinated liabilities should not be included in this MVBS line item.

In MVBS, financial liabilities other than debts owed to credit institutions are recorded at fair value.

#### Credit spread

The benchmark rate is increased by the credit spread, which is determined by the risk profile associated with the underlying debt instrument, including its final maturity.

The basis for the determination of the credit spread is given by:

- Spreads as observed in the secondary market (or, if available recent primary market levels) of directly comparable transactions
- and/or comparable credit default swap (CDS) levels
- and/or relevant indices provided by agencies

#### Insurance & intermediaries payables

Insurance and intermediaries payables refer to amounts past due to policyholders, insurers, and other business linked to insurance, but that are not Technical Provisions. They include amounts past due to (re)insurance intermediaries, e.g. commissions due to intermediaries but not yet paid by the entity. They exclude loans and mortgages due to other insurance companies if they are only related to financing such as loans and mortgages rather than being linked to insurance business.

In BeGAAP, insurance and intermediaries payables are recorded at their nominal value.

#### Reinsurance payables

Reinsurance payables are amounts past due to reinsurers (especially current accounts) other than deposits that are linked to reinsurance business, but that are not included in reinsurance recoverables. They include payables to reinsurers that relate to ceded premiums.

In BeGAAP, reinsurance payables are recorded at their nominal value.

## Payables (Trade, not Insurance)

Payables (trade, not insurance) include amounts due to employees, suppliers, public entities, etc. and are not insurance-related (cf. corresponding receivables [trade, not insurance] on the asset side).

Payables are generally recognised at the amounts actually due on repayment (i.e., their settlement amount). Due to their short-term nature, the settlement amount is considered to be a good proxy of the fair value for MVBS. However, there might be instances where the settlement amount differs from the fair value.

In BeGAAP, trade payables are recorded at their nominal value. They are composed of fiscal and social debts.

#### Any Other Liabilities, not Elsewhere Shown

"Any Other Liabilities, not Elsewhere Shown" include any liabilities not included in the other balance sheet items and, thus, represent a miscellaneous category. Fee payables include accounts payables resulting from investment fund management and distribution.

#### D.3.1. Leasing arrangements

Refer to Section D.1.7 for information regarding leasing arrangements.

## D.3.2. Deferred Tax Liabilities

On 31 December 2016, the total deferred tax assets equalled 144.5 M€ (Solvency II value). Deferred Tax Liabilities are mainly due to temporary differences on Technical Provisions, provisions for pension obligations and revaluation of available for sales investments.

## D.3.3. Economic benefits

Economic benefits could be generated for example by a growth in Gross Domestic Product (GDP) with economy which could have an impact on the exposure. However, this is taken into account when defining the assumptions to assess the outflows generated by the insurance business.

## D.3.4. Employee benefits

In accordance with the regulatory environment and collective agreements, the Group has established defined-contribution and defined benefit pension plans (company or multi-employer) in favour of employees.

#### **Defined-contribution plans**

Defined-contribution plans are funded through independent pension funds or similar organisations. Contributions fixed in advance (e.g. based on salary) are paid to these institutions and the beneficiary's right to benefits exists against the pension fund. The employer has no obligation beyond payment of the contributions.

During the year ended December 31, 2016, the Group recognised expenses for defined-contribution plans of 7.3 M $\in$  (2015: 8.0 M $\in$ ). Additionally, the Group paid contributions for state pension schemes of 25.8 M $\in$  in 2016 (2015: 21.9 M $\in$ ).

## Defined-Benefit Plans (DBP)

There exist multiple DBP within EH SA which are described below:

• Retirement indemnities (France): the rights in respect of retirement indemnities are defined by the insurance companies' collective agreement. This plan is financed partly by a policy taken out with an insurance company

 PSAD (France): this is a supplementary retirement benefit plan that was closed in 1978 and covers executives of Euler Hermes France. Contributions are paid by Euler Hermes France to beneficiaries or their surviving spouse (reversion) until their death. The plan is managed by the Bureau Commun d'Assurance des Collectives (BCAC), which informs Euler Hermes France quarterly of the contributions to be paid

• Cardif (France): this is a supplementary retirement benefit plan that was closed in 2006 and covers members of the Group Management Board and/or corporate officers of Euler Hermes Group and Euler Hermes France. The contributions are paid by Cardif to the beneficiaries or their surviving spouse (reversion) until their death

• Euler Hermes SA (Italy branch): TFR (Trattamento di Fine Rapporto) is a pension plan established by Italian legislation that is similar to a defined-benefit pension plan. It is valued in accordance with IAS 19 by an independent actuary

The following items were taken into account when measuring the commitment at the year-end:

• The retirement age was taken as 62 years for women and 66 years for men

• The probability of leaving the Italy branch within the next five years for employees under 42 years of age has been determined based on historical data

• The average life expectancy has been determined based on current statistics

• The probability of an early request for TFR has also been calculated using historical data available within the company

• Euler Hermes SA (Italy branch) has no dedicated hedging instrument that covers the actuarial liability

Within the DBP in which the Group is involved in Germany, the assumptions for determining the outflows have been updated. The plan has been split into 2 items: on one hand the engagement to pay a fixed annuity to employees, engagement covered by an insurance contract and on the other hand the engagement to pay a compensation for the inflation.

As a result, the analysis leads to the conclusion that the engagement to pay the fixed annuity was already fully covered in the absence of profit participation and could be evaluated at the fair value of plan asset. The second part is still valued according to the projected unit credit method as required by IAS 19.

The following tables (IFRS) show respectively the breakdown of the employee benefits by the nature of the liability and the breakdown of the employee benefits by nature of the assets.

In k€		Amount
Actuarial obligation - total - Opening	-	800,670
Current period service cost	-	12,846
Interest on obligation	-	20,452
Employee contributions	-	3,128
Plan amendment		-
Acquisitions/disposals of subsidiaries		-
Plan curtailments		94
Plan settlements		-
Actuarial gains (losses) due to a change in assumptions	-	83,423
Actuarial gains (losses) due to a change in experience		3,822
Benefits paid		22,782
Currency translation difference		32,296
Other	-	5,035
Removal of the discretionary clause		-
Actuarial obligation - Total - Closing	-	866,560
Fair value of plan assets - Total - Opening		622,648
Interest income on plan assets		16,820
Actuarial gains (losses) due to a change in experience		41,976
Employee contributions		3,128
Employer contributions		13,152
Acquisitions/disposals of subsidiaries		-
Plan curtailments	-	51
Plan settlements		-
Benefits paid	-	17,591
Currency translation difference	-	32,965
Other		3,379
Fair value of plan assets - Total - Closing		650,496
Net commitments <0	-	216,064

The following table summarises the actuarial assumptions used in the calculation of the employee benefits.

	Franc	ce & Greec	e		United			Nothorian	Scandinavia	
Actuarial assumptions (1)	Retirement indemnities	PSAD	Cardif	Italy	Kingdom	Germany	Belgium	ds	FTP	VITAL
Discounting rates used	0.90%	0.90%	0.90%	1.50%	2.80%	1.80%	1.40%	1.30%	2.80%	2.10%
Inflation rate used	1.80%	1.80%	1.80%	1.50%	2.40%	1.50%	-	-	2.00%	2.10%
Expected rate of salary increase	2.00%	2.00%	2.00%	1,50%/0.50% (4)	-	2.10%	2.50%	2.00%	3.00%	2.30%
Expected rate of increase of medical costs	-	-	-	-	-	-	-	-	-	-
Rate of increase of benefit used by plan	1.80%	1.80%	1.80%	-	3.20%	-	-	-	2.00%	2.00%
Plan retirement age	60	60	60	62 and 66 (3)	65	63	60	67	65	67
Plan residual service period	-	-	-	-	-	15	11	16	-	-
Other significant actuarial assumption used	-	-	-	-	-	-	-	-	-	-
Structure of plan assets (2)										
Equities	-	-	-	-	46.10%	9.30%	-	-	5.00%	6.70%
Bonds	-	-	100.00%	-	23.60%	55.40%	-	-	87.00%	43.90%
Real estate	100.00%	-	-	-	7.80%	3.30%	-	-	8.00%	7.40%
Other instruments	-	-	-	-	22.50%	32.00%	100.00%	100.00%	-	42.00%

As far as the Germany scope is concerned (76% of Group net commitments for the defined-benefit retirement plans), an increase of the discount rate by 50 bps would decrease the defined-benefit obligation by 36 M€. A decrease of 50 bps would lead to an increase of 41 M€. An increase or a decrease of the salary by 25 bps would have no material effect on the defined-benefit obligation.

The table below (IFRS) presents the estimated future benefit payments that will be met mainly to the benefit of the employee of the German entities, by the pension funds or by the Group:

ln k€	Pension benefits
2016	13,115
2017	13,240
2018	14,012
2019	14,529
2020	14,856
2021	15,620
2022-2026	82,267

#### D.3.5. Contingent liabilities

EH SA recognises contingent liabilities for 22.9 M€.

EH SA holds 100% of EH Services UK which operates a DBP that covers all employees who had joined the Company by December 31, 2001.

At 31.12.2016, the DBP shows a deficit of 22.96 M€ and the Net Equity of EH Services UK is negative by approximately 59 M€. EH SA has given a guarantee to the trustees to cover for the obligation of EH Services UK towards the employees, if EH Services UK would not be able to do so.

In MVBS, EH Services UK is not modelled so we do not have its liabilities and the target value of this participation in the MVBS of EH SA is reported as 0 in the MVBS (even if the Net Equity is negative). That is why in order to have the correct level of Net Asset Value in EH SA MVBS, a contingent liabilities is reported. The value of the contingent liability is the value of the deficit of the DBP at end of December in line with the actuarial valuation.

## D.4. Alternative methods for valuation

For every class of assets, alternative valuation method is used if the asset class price is not quoted on active markets for the same assets. The following table summarises the asset classes that are valuated using alternative valuation methods.

MVBS asset	Valuation method	Specificities when alternative valuation method	MVBS value
Cash and deposits	Alternative valuation methods	Valuated at purchase price	126,607,694
Collective Investment Undertakings	Alternative valuation methods	Method provided by external asset manager	13,425,546
Corporate Bonds	Alternative valuation methods	Special italian debt securities valuated at purchase price	1,914
Corporate Bonds	Alternative valuation methods	Bank deposits >1 year valuated at purchase price	76,286,765
Corporate Bonds	Alternative valuation methods	German registered bonds	258,253,156
Deposits other than cash equivalent	Alternative valuation methods	Valuated at purchase price	48,253,782
Deposits to cedants	Alternative valuation methods	Valuated at purchase price	4,074,000
Equities - unlisted	Alternative valuation methods	Common equity valuated at purchase price	80,539
Equities - unlisted	Alternative valuation methods	Common equity valuated at ?	2,406,063
Government Bonds	Alternative valuation methods	German registered bonds	6,009,208
Loans and Mortgages	Alternative valuation methods	Internal EH loans valuated at purchase price	3,092,590
Loans and Mortgages	Alternative valuation methods	Mortgages which valuation is provided by external asset manager	40,867,616
Loans and Mortgages	Alternative valuation methods	Other loans not revaluated. SII amounts can be different because it includes accrued interest	9,465,794
Loans and Mortgages	Alternative valuation methods	Receivables from cashpooling not revaluated. SII amounts can be different because it includes accrued interest	33,128,000
Other Investments	Alternative valuation methods	Not revaluated	14,811,764
Property (other than for own use)	Alternative valuation methods	real estate is revaluated at least once a year by an independent expert	4,893,915
Property, plant & equipment held for own use	Alternative valuation methods	real estate is revaluated at least once a year by an independent expert	30,553,920
Derivatives	Alternative valuation methods		3,312,483
		Total alternative valuation method	675.524.749

The calculation of German registered bonds is based on a monthly provided market yield value for each bond and each possible value of RLZ (period from calculation date to final maturity of security in years). The formula used is as follows:

$$MW = KR \times \frac{\left(1 + \frac{MR}{100}\right)^{RLZ} - 1}{\left(1 + \frac{MR}{100}\right)^{RLZ} \times \left[\left(1 + \frac{MR}{100}\right) - 1\right]} + 100 \times \frac{1}{\left(1 + \frac{MR}{100}\right)^{RLZ}}$$

Where:

- MW is the security price in %
- KR is the nominal coupon of the security
- MR is the current market yield (interest rate from interest rate table)
- RLZ is the period from calculation date to final maturity of security in years

# D.5. Any other information

There is no other information to disclose with regards to valuation for solvency purposes.

# E. Capital Management

## E.1. Own funds

## E.1.1. Information on the own funds

## E.1.1.1. Management of the own funds

Capital poses the central resource for EH SA to support its multiple activities. It ties to the EH SA risk strategy, which defines the relevant risk appetite with regard to the risk bearing capacity including EH SA's capital and solvency targets as well as risk limits, thus implementing EH SA's business strategy. Capital management describes the set of activities undertaken by EH SA to ensure its adequate capitalisation. The following principles are applied:

1. Capital management protects the Group's capital base and supports effective capital management on Group level in line with the Group Risk Policy. It allocates capital to the underlying risk drivers under the budget limited by the risk strategy and with the target of optimising the expected return under this constraint. Risk considerations and capital needs are integrated into management and decision-making processes. This is done by attribution of risk and allocation of capital to the various segments, lines of business and investments

2. EH SA facilitates the fungibility of capital from a group-wide perspective by pooling / upstreaming available excess capital to EH Group while at the same time ensuring a sufficient level of capital is held at the local level. This includes a consideration of a buffer above the Minimum Capital Ratio to take into account potential market volatility

3. EH SA ensures to comply with regulatory minimum capital requirements.

4. To ensure competiveness, EH SA however is committed to a top quartile capitalisation and rating relative to its peers

5. Capital is centrally managed in accordance with Group-wide rules and allocated to the benefit of the Group and its shareholders

6. EH SA capitalisation is managed using adequate buffers above minimum regulatory and where applicable rating agency requirements. Excess capital not required for business purposes over the (three year) plan horizon will be up-streamed by EH SA

7. Capital management seeks to add economic value over our cost of capital

8. EH SA management is committed to have shareholders participate in the economic development of the Group through dividend payments

9. The capital allocation for steering the business is based on the internal Risk Capital model also taking into account other constraints (such as rating and liquidity)

10. Risk Capital is allocated economically top down to the LEs, businesses or products earning the highest returns and shall be embedded into pricing

## Capital management strategy

To meet Solvency II requirements in an efficient manner, EH SA has set in place target capitalisation ratios and limits to fulfil any regulatory and financial obligations it could have but also to support its own strategy as well as to secure its business worldwide.

In accordance with the standards and guidelines coming from EH Group, EH SA updated its capital management policy in 2016 to have an even more precise capital management. EH SA thereby put in place an additional set of limits to supplement the previous minimum ratios and target ratios.

Please refer to Section B.3.3 for further details on the capital management strategy.

## E.1.1.2. Description of the own funds

Under Solvency II, Own Funds are distinguished into Basic Own Funds and Ancillary Own Funds. Basic Own Funds are defined as the excess of assets over liabilities plus any qualifying subordinated liabilities. Ancillary Own Funds are defined as any capital resources other than Basic Own Funds that could be called up in order to absorb losses. Ancillary Own Funds are off-balance sheet and require regulatory approval in order to qualify.
EH SA own funds are exclusively composed of basic own funds. The table below summarises EH SA own funds composition:

Composition of own funds (MVBS)

In m€	Total	Tier 1 Unrestricted	Tier 3
Ordinary share capital (gross of own shares)	229.4	229.4	-
Share premium account related to ordinary share capital	179.8	179.8	-
Reconciliation reserve	657.7	657.7	-
An amount equal to the value of net deferred tax assets	6.7	-	6.7
Total basic own funds after deductions	1,073.6	1,066.9	6.7

MVBS figures

The Own funds have decreased by -6.1% as the total of assets has decreased by -10.8% and the total of liabilities has increased by 7.7%.

Solvency II Own Funds (in €)	Q4 2016	Q4 2015	Δ
Total assets	4,085,829,570	4,578,306,157	-492,476,587
Total liabilities	-2,816,987,010	-2,615,980,314	-201,006,696
Excess of asset over liabilities	1,268,842,478	1,962,325,844	-693,483,366
- correction OPCI	-82,237,808	-69,284,157	-12,953,651
- Dividends	-80,000,000	-700,000,000	620,000,000
- Own Shares	-30,886,380	-50,648,000	19,761,620
SII Own funds	1,073,280,458	1,142,393,686	-69,113,229

# **Evolution of Own funds**

The table here above (MVBS) shows that the SII Own Funds decreased by -6.1% as the excess of asset over liabilities decreased by -35.3%. The main explications are given hereafter:

1. It can be noted that a dividend of 700M€ has been voted. This explained the difference in the excess of asset over liabilities as well as the difference in dividends figures. This dividend refers to the year 2015 but has been recognised during the year 2016.

2. Moreover, there was a negative impact due to the UK pension fund which can be explained by the decrease of the discount rate net of tax and by a correction of the past

3. Lastly, there were less future profits mainly due to a reduction of the future premiums because of a change in methodology (contract boundaries)

In order to meet SII requirements, EH SA has defined its Own Funds as the excess of assets over liabilities, reduced by the amount of own shares (held directly and indirectly) and the foreseeable dividends. The Own Funds are composed of Tier1 unrestricted for more than 99.5% and of Tier 3 for the rest. The available Own Funds were used for all calculations in this report.

# E.1.1.3. SCR and MCR covers

Tier 3 capital is only composed of net deferred tax assets. There is no specific restriction regarding those own funds which are composed of more than 99.5% of Tier 1 unrestricted. The table below summarises available and eligible amounts of own funds to cover both SCR and MCR.

Available and eligible own funds to meet SCR and MCR (MVBS
--

In M€	Total	Tier 1 - unrestricted	Tier 3
Total available own funds to meet the SCR	1,073.6	1,066.9	6.7
Total available own funds to meet the MCR	1,066.9	1,066.9	-
Total eligible own funds to meet the SCR	1,073.6	1,066.9	6.7
Total eligible own funds to meet the MCR	1,066.9	1,066.9	-

# E.1.1.4. Differences between valuation in financial statements and for solvency purposes

Evaluated from IFRS balance sheet, MVBS aims at showing an economic valuation of all assets and liabilities. Nevertheless, there are some differences between the two valuation methods which are under control. The figures hereunder intend to show the main differences.

Bridge IFRS/ MVBS\*



\*Note: There is a slight difference in the bridge figures as compared to the QRT due to rounding differences

The eligible SII own funds value are 1 073.3 M€ instead of 1 105.5 M€ in IFRS.

# E.1.1.5. Description of items deducted from own funds

EH SA does not have any ring-fenced or matching adjustment portfolio.

EH SA does not have any item deducted from own funds.

#### E.1.2. Additional ratios

EH SA does not disclose any other additional ratios.

#### E.1.3. Loss absorbency mechanism

EH SA does not have any own funds item to which Article 71 (1)(e) of the Delegated Regulation applies.

# E.1.4. Reconciliation reserve

The following table summarises the calculation of reconciliation reserve.

Breakdown of the reconciliation reserve (MVBS)

In M€	Value
Excess of assets over liabilities	1,184.5
Own shares (held directly and indirectly)	30.9
Foreseeable dividends, distributions and charges	80.0
Other basic own fund items	415.9
Reconciliation reserve	657.7

# E.2. Solvency Capital Requirement and Minimum Capital Requirement

# E.2.1. Amount of SCR and MCR

The table below shows the evolution of the Risk Capital components between 2015 and 2016:

In m€	Q4 2016	Q4 2015	Δ	%
Market risk	352	374	-22	-6%
Credit risk	338	347	-8	-2%
P/C Underwriting risks	159	156	4	2%
L/H Underwriting risks	18	29	-11	-37%
Business Risk	18	22	-4	-17%
Operational Risk	33	34	-1	-3%
Total Standalone RC	919	962	-42	-4%
Diversification effect	370	408	-38	-9%
Total Diversified RC	549	554	-4	-1%
Capital Add-on	129	126	3	n/a
Tax impact	-79	-77	-2	3%
SCR	600	603	-4	-1%

#### Breakdown of the SCR

As the SCR is calculated using the internal model, it is subject to supervisory assessment.

In 2016, the amount accounted for EH SA's MCR is 217.5 M€. It has decreased by -6.7% since 2015 where the MCR amount was 233.1M€.

On 31th December, SCR is still subject to supervisory assessment as the Risk Capital is calculated through an internal model.

# E.2.2. Standard formula

EH SA has nothing to disclose regarding the regulatory points related to the standard formula.

# E.2.3. Use of USPs

EH SA does not use Undertaking Specific Parameters (USP) as it uses its own Internal Model.

# E.2.4. Inputs to calculate the MCR

The Minimum Capital Ratio for EH SA based on internal and standard model is shown below for Q4 2016. For the standard model, the MCR equals the floor of 25% of the SCR, whereas for the internal model, the MCR equals the linear MCR. The calculation approach is explained below the table.

IM/SM	MCR	AMCR	SCR	MCR linear	45% SCR	25% SCR	MCR combined
SM	217,498,547	3,700,000	869,994,187	166,703,578	391,497,384	217,498,547	217,498,54
IM	166,703,578	3,700,000	597,999,809	166,703,578	269,099,914	149,499,952	166,703,57

MCR calculation (In M€)

The main inputs that enter into the calculation of EH SA's MCR are summarised in the table below: Main inputs for MCR calculation

	Segment (SII LoB)	Factor for technical provisions	Factor for premiums written
9	Credit and surety insurance and proportional reinsurance	17.7%	11.3%
12	Miscellaneous financial loss insurance and proportional reinsurance	18.6%	12.2%

# E.2.5. Material changes to SCR and MCR

There were no material changes to EH SA's SCR and MCR in 2016.

# E.3. Use of the duration-based equity risk sub-module in the calculation of the Solvency Capital Requirement

EH SA does not use the duration-based equity risk sub-module in the calculation of its SCR as it is not applicable to its business.

# E.4. Differences between the standard formula and any internal model used

# E.4.1. Description of the internal model

#### Purposes for using an internal model

EH SA has implemented an internal model for the computation of the SCR attached to the Credit and Surety portfolio.

The standard formula for the representation of the credit and surety premiums risk has a certain number of flaws which, for a pure credit and surety insurance company, leads to have some doubts on the SCR deriving from the standard formula. As these flaws can be dealt with by modelling the credit and surety premiums risk using a credit risk model, EH SA has decided to opt for an internal model.

The following elements are considered to be flaws attached to the SCR computation on credit and surety premiums risk:

• Separation of the SCR premiums and SCR Cat Risk

• Application of reinsurance treaties in the standard formula leading to either under and over estimation of the SCR

• Overestimation of the SCR premiums by integrating in the net earned premiums paid to reinsurers for non-proportional treaties

• Underestimation of nonlinear risk mitigation features present in the policies

• Backward looking values representing the effect of risk mitigation measures implemented in the policy

• Computation based on the premiums which is not the most adequate measure of the risk

The credit insurance business of EH SA is to take a share of the credit risk borne by the policyholder on its buyer. The classical credit risk modelling approaches, in particular those used in the banking world, are fully applicable to EH SA's situation in order to simulate a loss distribution representing the expected loss with a one year time horizon.

# Structure of the internal model

A credit risk modelling is essentially a two steps approach:

• Simulation of the exposure which are defaulting leading to define the Exposure at Default (EAD)

• Application of the mitigation factors either present in policies, in the reinsurance treaties or other mitigation clauses leading to define the Ultimate Loss (UL) borne by the insurance company

This modelling framework allows addressing all the issues stated in the point above.

- Production of one loss distribution covering all kind of loss scenarios and loss events
- Risk mitigation features (either present in policy or a reinsurance treaty) can be modelled the way they are functioning and not estimated

• Risk mitigation features attached to the policies are representing the current status of the portfolio

• The model is based on exposure which is key metrics of the risk taken

• The parameters are defined in order to represent the risk borne by EH SA on a one year time horizon

# Scope of internal model

The Euler Hermes SA internal Risk Capital model covers:

- All of its major insurance operations through its Trade Credit Insurance and Surety (TCI&S), grading, underwriting (P&C UW & Business) and operational risk models
  - Its investment portfolio through its market risk and credit risk models
  - Its pension funds through its cash-flow and life non market risk (LNM) models

The chart below depicts the scope and structure of the Internal Model:



# E.4.2. Methodologies

#### E.4.2.1. Process within the internal model

EH SA uses a full internal model to calculate its Risk Capital. The main methodologies and assumptions used in its internal model are detailed in the following sections.

### E.4.2.1.1 Market Risk

#### Definition of the measurement of the risk

Value at Risk (VaR): Quantifies the change in economic value as the minimum amount of capital required to ensure economic solvency for shock scenarios calibrated to a one year period with a given probability level. A probability level of 99.5% is retained for the Risk Capital and a level of 99.93% is retained for the economic capital.

The modelling approach within market risk has the four following generic components:

- The definition of risk factors and of their impacts
- The distributional assumptions
- The calibration of the risk factors
- Valuation of positions

#### Change of economic capital

The approximation is the assumption that the underlying portfolio remains unchanged while being valued, so that risk factors are applied to the current portfolio positions, instantaneously at the as-of-date.

#### **Distributional assumptions**

All risk factors reflecting market risk have either a lognormal or normal distribution.

#### Calibration of risk factor distribution and to Measurement period

EH SA calibrates the distribution of risk factors on historical observation of weekly time series. This means the distribution of risk factors needs to be scaled to reflect this longer horizon.

#### Scenario based aggregation and its advantages

By means of Monte Carlo simulations, i.e. generation of independent samples of scenarios, EH SA generates a set of random scenarios, sufficiently large to estimate statistical quantities.

#### E.4.2.1.2 Reserve risk

#### **Reserving Uncertainty**

Loss reserving is the process of forecasting unpaid liabilities. In order to measure the uncertainty embedded with forecasting, it is needed to obtain a predictive distribution of the unpaid liabilities and the associated cash flows. For most stochastic reserving models discussed in the actuarial literature it is not easy or rather impossible to obtain a predictive distribution analytically. Therefore, a simulation approach was adopted: bootstrapping.

#### **Cash flow Estimation for Reserve Risk**

Where a paid bootstrap has been used to estimate reserve uncertainty in a LoB, the projected cash flow for that LoB is already available as defined by the bootstrap.

Where either an incurred bootstrap or a lognormal simulation of the reserve has been used a cash flow estimate is required in order to obtain an estimation of the paid claims over the first future time period.

#### Dependencies

A rank normal correlation is applied within the ultimate gross loss distributions of the reserving LoBs.

#### The emergence pattern methodology

The evaluation of risk as it manifests over the first calendar year of development is based on a methodology using emergence patterns (EP). These are patterns which describe the loss recognition over time of both premium and reserve risk.

# **Risk Capital**

Even though the SCR is defined using the Value at Risk at the confidence level of 99.5%, EH SA uses the term Ultimate Reserve Risk Capital for the difference between the VaR at the 99.93 percentile of the ultimate loss distribution at the horizon date and the mean of the ultimate loss distribution at the as-of-date. For a profit distribution this is the difference between the 0.07 percentile and the mean.

The Risk Margin is calculated according to the method prescribed by the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) for Solvency II.

#### Loss Reserve Risk Margin Calculation

The Risk Margin by LoB is calculated for the Loss Reserves. First, the net risk profile by LoB is mapped to the Solvency II LoBs. Next, the Risk Capital is calculated and then used to generate the Risk Margin.

# Premium Reserve Risk Margin Calculation

The methodology for calculating the Risk Margin for the premium reserve is identical to that used for the loss reserves for all calendar years except the first. Using the net risk profile from the emergence pattern model section, the capital required for the Premium Risk is calculated.

#### E.4.2.1.3 Credit risk

EH decided to manage credit risk calculation with the combined use of two different models:

MKMV Risk Frontier which stands for reinsurance and investments portfolios

• EH Internal Model (EH IM) which is a specific model developed for credit insurance portfolio

Credit Risk Capital is calculated at first separately for each sub-type of credit risk prior to be consolidated across credit risks.

MKMV Risk Frontier is a Moody's solution for Reinsurance and Investment modelling.

EH IM is an internal model developed by EH in order to capture specificities of credit insurance business (buyer focused risk assessment and default definition, policy features and reinsurance structure).

# E.4.2.1.3.1 Credit risk for reinsurance and investment modelling

Credit risk is measured as a change in market value of the portfolio over a certain time horizon, due to defaults and credit quality migrations.

Risk Capital calculation is done through internal models based on a Value-at-Risk ("VaR") approach. Following this approach, the loss in the portfolio value of businesses is assessed within a one year timeframe for a large number of shock scenarios with a probability of occurrence up to 99.5% for Risk Capital calculation and 99.93% for economic capital calculation. This loss distribution provides Credit Value at Risk (CVAR) and Expected Losses (EL).

The required internal Risk Capital is defined as the difference between the portfolio value under best estimate conditions and the portfolio value under the adverse conditions associated with the desired confidence level. The loss distribution is then derived.

For investment portfolio, Exposure at Default (EAD) and Loss Given Default (LGD) are estimated following a linear model derived from a statistical analysis of historic data by asset classes.

# E.4.2.1.3.2 Credit risk for trade credit insurance & surety

The Exposure at Default (EaD) is defined as the exposure of the buyer at the time of the default or for Euler Hermes the claims declared before application of any loss mitigation techniques.

EH is using a Merton-type approach as a basis to build its default process using a Gaussian copula framework.

The Loss Given Default (LGD) is obtained by applying to the EaD all possible loss reduction features. Then the simulation is based on Monte Carlo numerical method based on correlated Gaussian path.

#### A model based on a static approach of the risk underwriting policy

EH SA chose to integrate management actions that are foreseen for the next year.

EH SA has opted for the use of a simulation approach to determine its loss distribution. It is the natural approach in presence of non-homogeneous portfolios in high dimension.

For Solvency II purposes, the Risk Capital is then measured from the simulated loss distribution as follows:

CVAR99.5% = 99.5% quantile loss – expected loss (EL).



This choice has also the advantage of allowing the simulation of "extreme scenarios", in particular the increase in frequency of claims (multiple loss events) and the occurring of large losses (single loss events). Those events are covered by the man-made risk component of the standard formula.

#### A model distinguishing the systemic risk and the idiosyncratic risk

In the case of trade credit insurance, a particular limit/exposure is triggered if an invoice sent by the policyholder is not paid by the buyer. In general a default event leading potentially to a loss is triggered as a reported insured claim.

The central element of the model is to determine in a particular scenario:

- Whether or not a claim is to be expected on a counterpart
- Whether or not the triggered claim will lead to an indemnification by EH SA
- Whether or not EH SA can recover part of the indemnified amount later on to be indemnified

The capacity of the buyers/counterparties to fulfil their commitments (e.g. to pay the received invoices) can depend either on its own actions but also on the economic environment. As a consequence, EH SA judged that the commonly used credit factor modelling that distinguishes an idiosyncratic risk and a systemic risk is considered as the most adequate for the simulation of losses in the Trade Credit Insurance and Surety portfolio.

# A point-in-time framework

The calibration of the parameter reflects the situation of the coming 12 months period.

# E.4.2.1.4 Aggregation and diversification

Value at Risk (VaR) quantifies the change in economic value as the minimum amount of capital required to ensure economic solvency for shock scenarios calibrated to one year period with a given probability. The Required Internal Risk Capital is defined as the difference between the portfolio value under best estimate conditions and the portfolio value under the adverse conditions associated with the desired confidence level.

The aggregation method for the EH SA internal model is based on an integrated Monte-Carlo simulation for market risk taking marginal risk distributions for non-market risk into account by modelling dependencies via a Gaussian Copula approach and taken into account diversification effects across sources of risk.

# E.4.2.2. Difference between standard model and internal model

#### E.4.2.2.1 Market risk

Note: The scopes of IM & Standard Model (SM) computations are identical for the market risk. It covers the EH SA investment portfolio and the investments attached to the German defined benefit pension funds). There are however some differences in risk as some risks covered in the market risk of the SM are covered in the credit risk of the IM.

The main differences between IM and SM for Credit spread risk are:

• <u>For Covered and Other Bond:</u> lower shocks are applied in the Internal model compared to the Standard Model

• <u>Intra-Risk Diversification</u>: The SM approach does not allow for any diversification when aggregating all the values of shocked instruments when the IM approach allows for a significant diversification between the asset classes.

Other differences come from difference in granularity/calibration between the two models.

Note also that European Economic Area (EEA) sovereign bonds, AAA and AA rated non-EEA sovereign bonds, supranational, and mortgage loans on residential property are not exempt from spread risk in the internal model.

1. The difference of capital requirements between standard model and internal model for foreign exchange risk comes from two main effects:

- Intra-Risk Diversification: the Standard model does not allow for diversification in the sub-module which is not the case in the IM
- Level of Shocks: While a single level of shock of 25% is defined in the SM approach, a specific level of shock is used in the IM

2. The difference of capital requirements between IM and SM for interest rates risk comes from the following effects:

- In the Standard Model, up and down stresses % changing the yield curve varies by term to maturity. A minimum is defined for IR up stress
- In the Internal Model, changes in the yield curve like twists are considered, shifts for long-term are set. In addition, volatility stress is applied to yield curves
- In the Internal Model, there is diversification of Interest Rates risk
- 3. Equity risk

The average shock level for Equity type 1 and Equity type 2 are slightly higher in IM than SM.

4. Property risk

The average shock level for property risk is lower in IM than in SM.

# E.4.2.2.2 Credit risk

The Internal Model credit risk covers some component of the Standard Model market risk and of the non-life underwriting risk. The SM counterparty default risk components are all covered by the IM SM credit risk.

The IM credit risk covers risks which are not covered in the SM (counterparty risk on European State bonds and counterparty risk on the SCR equivalent losses ceded to reinsurers).

As a consequence, these differences added to the differences in classification/granularity and calibration between the models and the differences in modelling (discrete approach for SM vs stochastic approach for IM) explain the differences in credit risk.

# E.4.2.2.3 Life Risks

This life risk bears only on the German defined benefit pension fund. For the SM, EH SA has taken the decision not to model this risk in application of the EIOPA rules.

# E.4.2.2.4 Non-Life Risks

Both models capture the same types of risks EH SA is facing but following different classification and methods.

Both models cover:

- The premium, reserve and business risk due to cancellation of policies
- The ordinary claims level and the extraordinary claims level (recession, single loss events)

The classification is different between the two models. All risks (premium, reserve and business) are under non-life risk for the SM while the equivalent of the premium risk of the Trade Credit Insurance and Surety business is classified under credit risk for the IM and the lapse risk is under business risk. This has a double impact representation and diversification.

On components classified both under the non-life risks, the main difference lies in:

- The methodology (discrete approach for the SM vs stochastic approach for the IM)
- The calibration (across the industry for the SM vs own calibration for the IM)

• The introduction of a diversification between "sub" lines of business (I.e. different products classified under credit and surety for EIOPA) of EH SA and a diversification between countries

• The diversification approach (diversification limited to non-life risk in the SM while extended to all risk in the IM)

The relative weights of these various components contribute all significantly to the difference between IM and SM.

On the Trade Credit Insurance and Surety portfolio, EH SA has developed its own model which has been classified as credit risk.

This IM presents the following significant differences with the SM:

• Computation at the level of the risk: buyer level (i.e. client of the insured which must pay its invoice)

• Random scenario generation to simulate the loss distribution allowing to cover different extreme scenario which are embedded in the premium risk and not captured in parallel

The results of the IM and its comparison to the SM shows that the difference is due to the level of calibration of the recession risk by EIOPA and the fact that the calibration of the premium risk by EI-OPA is not in line with our own experience (EIOPA is roughly +50% higher than EH own calibration using EIOPA method) while the contribution of the large/single losses to the SCR are equivalent.

# E.4.2.2.5 Business Risks

Both models try to capture the deterioration of future earnings following a shock in terms of commercial activity. In the internal model, the business risk has 2 components:

• One not comparable with the standard model (the new production risk – SCR equal to the fixed cost attached to the new production)

• One which is partially comparable with the standard model (retention risk – loss of operating profit to due to a less performant than anticipated renewal campaign)

The standard model covers only this second risk.

However, on the component which philosophy is similar, the calibration is not comparable and therefore the results are not directly comparable:

- Internal model loss of operating profit on 100% of the portfolio
- Standard model loss of operating profit on the profitable portfolio

# E.4.2.2.6 Operational risk

The SM and IM approaches are significantly different. The IM is based on own expert scenarios of operational risk while the SM is based on a across the industry calibration. As a consequence, EH SA will not comment on the difference between the two models.

### E.4.2.3. Diversification

The diversification mechanisms are significantly different due to:

- All differences reported in the components of the pre diversified SCR (classification of risk, calibration of risk...)
- Calibration factors which are different (in particular for the operational risk which is diversified in the IM and not in the SM)
- The nature of the SM (discrete approach) and the nature of the IM (stochastic modelling)

As a consequence, EH notes that the diversification ratio is similar, recognises that both approaches have been adequately computed and understands both results but cannot comment on this similarity of results.

#### E.4.2.3.1 Tax relief

The tax relief methodology is identical between SM and IM computation.

Both methodologies calculate per branch the minimum of:

- The tax rate multiplied by the Risk Capital (if necessary splitting the Risk Capital per tax rate category)
  - The DTL in the MVBS

The difference in tax relief comes from the fact that in the IM, the tax relief is equal to tax rate multiplied by Risk Capital while in the standard model, it is a mix between the two components (tax rate applied to SCR and DTL in MVBS).

### E.4.3. Data quality

EH SA has implemented a data quality framework across the whole company in accordance with the Solvency II expectations. Thus, EH SA has produced all necessary deliverables with roles and responsibilities for each of them adding to an overall data governance organisation.

Hence, the EH SA data quality framework has set in place specific committees at levels (the Group Data Quality council at strategic level and the Data Committee at operational level) and a clear definition of the stakeholders' roles and responsibilities with validated attributions.

Moreover, in order to monitor the quality of data, KPIs have been implemented, are monitored and reported to the various committees through data quality dashboards. This consolidation and reporting towards data committees are executed in such a way to be aligned to the EH SA quarterly Risk Capital closing process.

These KPIs are reported separately: KPIs per risk type on one side and IT KPIs on the other side.

Here under is the data quality dashboard at Q4 2016 showing that the quality of the data used to calculate the RC is totally under control and therefore calculations are accurate.

	Accuracy		Comple	teness Conformity		Consistency Duplic		lication Integrity			Timeliness		Total			
	KPI #	ко	KPI #	ко	KPI #	ко	KPI #	ко	KPI #	ко	KPI #	ко	KPI #	ко	KPI #	КО
Business Risk	1	0%	0	0%	0	0%	1	0%	0	0%	0	0%	1	0%	3	0%
Credit Insurance Risk	0	0%	192	1%	0	0%	356	3%	35	0%	139	4%	61	0%	783	2%
Credit Risk	5	0%	2	0%	0	0%	3	0%	0	0%	0	0%	1	0%	11	0%
IT System Risk	0	0%	62	0%	62	0%	0	0%	62	0%	0	0%	124	0%	310	0%
Market Risk	1	0%	10	10%	7	43%	2	0%	0	0%	0	0%	1	0%	21	19%
Operational Risk	1	0%	0	0%	0	0%	1	0%	0	0%	0	0%	1	0%	3	0%
Premium Risk	2	0%	0	0%	0	0%	1	0%	0	0%	0	0%	3	0%	6	0%
Reserve Risk	2	0%	0	0%	0	0%	1	0%	0	0%	0	0%	3	0%	6	0%
Tax Risk	3	0%	0	0%	0	0%	1	0%	0	0%	0	0%	3	0%	7	0%
Total	15	0%	266	1%	69	4%	366	3%	97	0%	139	4%	198	0%	1150	2%

#### **Data Quality Steering Dashboard**

On the basis of the above-mentioned internal control processes and assessments, no material deficiencies were identified that could significantly impact the effectiveness of the EH SA internal control system and its adequacy with regulatory requirements.

# E.4.4. Risks not covered by standard formula but covered by internal model

Please refer to Section E.4.2 of this report for differences in the risks and methodologies used between the SM and the IM, in particular the differences in business risk described in Section E.4.2.2.5.

# E.5. Non-compliance with the Minimum Capital Requirement and non-compliance with the Solvency Capital Requirement

# E.5.1. Non-compliance with the Minimum Capital Requirement

EH SA is compliant with the Minimum Capital Requirement.

# E.5.2. Non-compliance with the Solvency Capital Requirement

EH SA is compliant with the Solvency Capital Requirement.

# E.6. Any other information

EH SA does not have any additional disclosures regarding its capital management.

Terms / Abbrevia- tions	Description
AA	Asset Allocation
ABE	Actuarial Best Estimate
ABS	Asset Backed Securities
AE	Acquisition Expenses
AEM	Adjusted Equity Method
ALAE	Allocated Loss Adjustment Expenses
ALM	Asset Liability Management
AM	Asset management
APAC	Asia and Pacific
ARR	Anticipated Recovery Reserve
ASMG	Allianz Standards on Model Governance
AY	Attachment Year
AZ	Allianz
BCAC	Bureau Commun d'Assurance des Collectives
BE	Best Estimate
BeGAAP	Belgian Generally Accepted Accounting Principles
BErec	Best Estimate of the (ceded) recoverables
BF	Bornhuetter-Ferguson
BU	Business Unit
CA	Chief Actuary
CAT	Catastrophe
CDA	Counterparty Default Adjustment
CEIOPS	Committee of European Insurance and Occupational Pensions Supervisors
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFP	Cash Flow Pattern
CG	Country Grade
СН	Switzerland
CI	Credit Insurance
CIFS	Critical or Important Functions or Services
CL	Chain-Ladder
CNY	Chinese Yuan
CPPIC	China Pacific Property Insurance Company
CR	Combined Ratio
CRI	Cyclical Risk Indicator
CRL	Country Risk Level
CRO	Chief Risk Officer
CS	Credit spread
CVAR	Credit Value at Risk
CY	Current Year
DACH	Germany, Austria and Switzerland
DBP	Defined-Benefit Plans
DE	Germany
DFM	Development Factor Method
DT	Deferred taxes

# Appendix 1: Key terms and abbreviations

DTA	Deferred tax assets
DTL	Deferred Tax Liabilities
EAD	Exposure at Default
EEA	European Economic Area
EH RE	Euler Hermes Reinsurance
EH SA	Euler Hermes SA
EIOPA	European Insurance and Occupational Pensions Authority
EL	Expected Loss
ELR	Expected Loss Ratio
EM	Equity Method
EP	Emergence Patterns
EPIFP	Expected Profit Included in Future Premiums
EQ	Equity
ERM	Enterprise Risk Management
ESG	Economic Scenario Generator
ESTG	Enterprise Stress Testing Group
EU	European Union
EUR	Euro
FFI	Financing Flows Indicator
FiCo	Finance Committee
FP	Future Premiums
FTE	Full Time Employee
FX	Exchange rate
GBP	Great Britain Pound
GDP	Gross Domestic Product
GEP	Gross Earned Premiums
GWP	Gross Written Premiums
HKD	Hong Kong Dollar
HR	Human Resource
IAS	International Accounting Standards
IBNER	Incurred But Not Enough Reported
IBNR	Incurred But Not Reported
IBNYR	Incurred But Not Yet Reported
IELR	Initial Expected Loss Ratio
IFRS	International Financial Reporting Standards
IM	Internal Model
IMAP	Internal Model Approval Process
IME	Investment Management Expenses
INFL	Inflation
IR	Interest Rate
IR	Initial Ratio
IT	Information Technology
ITG	Investment and Treasury Group
IVU	Independent Validation Unit
JPY	Japanese Yen
KPI	Key Performance Indicator
LAE	Loss Adjustment Expenses
LE	Legal Entity

LGD	Loss Given Default
LL	Large Loss
LNM	Life Non-Market
LNMR	Life Non-Market Risk
LoB	Line of Business
LR	Loss Ratio
LRC	Loss Reserve Committee
MAAC	Model and Approval Adjustment Committee
MC	Management Committee
MCR	Minimum Capital Ratio
ME	Macroeconomic Risk Rating
MGE	Maximum Global Exposure
MKMV	Moody's KMV model
MMCD	Market Management, Commercial and Distribution Function
MMEA	Mediterranean countries, Middle East and Africa
МО	Model Owner
MSCI EM	Morgan Stanley Capital International Emerging Markets Index
MSCI EMU	Morgan Stanley Capital International European Economic and Monetary Union Index
MSCI USA	Morgan Stanley Capital International United State of America Index
MVBS	Market Value Balance Sheet
MVM	Market Value Margin
NBB	National Bank of Belgium
OPCI	Organisme de Placement Collective en Immobilier
OREC	Operational Risk Even Capture
ORSA	Own Risk and Solvency Assessment
OTC	Over-The-Counter
Р	Political Risk Rating
P&C	Property & Casualty
PAAC	Parameters & Assumptions Approval Committee
PD	Probability of Default
PR	Premium Received
PY	Previous Years
QRT	Quantitative Reporting Templates
R&CM	Risk & Capital Management
RC	Risk Capital
RCSA	Risk and Control Self Assessment
RE	Real estate
RG	Ratio Growth
RIC	Risk Information and Claims
RiCo	Risk Committee
RM	Risk Margin
RPF	Risk Policy Framework
RR	Recovery Rate
S&S	Subrogation & Salvages
SAA	Strategic Asset Allocation
SBE	Structural Business Environment Rating
ScA	Scenario Analysis

SCR	Solvency Capital Ratio
SFCR	Solvency and Financial Condition Report
SFR	Expenses regarding salvages and subrogation
SII	Solvency II
SL	Stop Loss
SM	Standard Model
SPV	Special Purpose Vehicle
ST	Short term Alert
TCI&S	Trade Credit Insurance & Suretyship
TCU	Transaction Cover
TFR	Trattemento di Fine Rapporto
TP	Technical Provisions
TRA	Top Risk Assessment
UES	Unité Economique et Sociale
UGD	Usage Given Default
UK	United Kingdom
UL	Ultimate Loss
ULAE	Unallocated Loss Adjustment Expenses
ULR	Ultimate Loss Ratio
UPR	Unearned Premium Reserve
US	United States
USA	United States of America
USD	United States Dollar
USP	Undertaking Specific Parameter
UW	Underwriting
VA	Volatility Adjustment
VAC	Validation Coordinator
VLP	Voluntary Leaver Program
WA	World Agency
WP	World Program
XOL	Excess of Loss

# Appendix 2: Publically disclosed QRTs

Publically disclosed quantitative reporting templates (QRTs) can be found on the Euler Hermes Group main website: <u>http://www.eulerhermes.com/</u>

# **Appendix 3: Disclaimer**

To the best of the Company's knowledge, the information contained herein is accurate and reliable as of the date of publication. However the Company does not assume any liability whatsoever for the accuracy and completeness of the information contained herein.