EIOPA Insurance stress test 2014

Contents

I.   Executive summary

A.   Background

1.   The 2014 Stress Test is the second such exercise to be carried out by EIOPA and represents a significant step forward in terms of technical specifications and methodology. It also represents a cooperative effort involving insurance undertakings, national supervisory authorities, EIOPA and the ESRB/ECB.

2.   The exercise has two elements involving two different samples:

   a. A Core Stress module focussed on group results covering asset price stresses, a set of insurance specific stresses and a qualitative assessment of entities' responses to stress; and

   b. A Low Yield module run entirely at individual level and focusing specifically on the impact of low interest rates as a follow-up to the EIOPA Opinion on the supervisory response to a prolonged period of low interest rates published in 2012.

3.   In terms of technical specifications, it has been possible to use technical specifications that are closer to the final specifications that will be implemented in 2016, e.g. the Long Term Guarantee (LTG) package agreed in November 2013. While the technical specification used represents a considerable development over previous exercises, it is not the final specification that will be implemented when Solvency II goes live at the beginning of 2016. As indicated when the exercise was launched, the latest specifications[1] available at that time were used.

4.   Individual participant results are not presented in the current report in line with the purpose of the exercise of assessing from an aggregate macro-prudential point of view the resilience of the European insurance market in the case of severely stressed financial markets.

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[1] https://eiopa.europa.eu/publications/technical-specifications/index.html

1. Participation, data quality and interpretation

5.   The underlying data, and the analysis based on that data, is sufficiently representative and robust to be able to draw clear inferences that can inform supervisory action.

6.   Participation in the exercise was sufficiently representative to be able to draw inferences of a systemic nature. A total of 167 insurance groups and individual undertakings[2] representing 55% of Gross Written Premium for the EU market participated in the Core Stress Test Module. A total of 225 undertakings representing 60% of Gross Technical provisions participated in the Low Yield Module.

7.   As with any exercise of this nature, the results have been interpreted with a degree of care that reflects how they were calculated. The estimates were made on a 'best efforts' basis by undertakings that are still preparing for Solvency II, where a number of simplifying assumptions were allowed in the calculations and where results had to be calculated using the Standard Formula, rather than Internal Models and without making use of the Undertaking Specific Parameters (USP).

8.   Significant effort was put into the process of ensuring the consistent interpretation of the specifications used by participants to produce the results, as well as the correctness of the data which has been validated by participants, NCAs and centrally at EIOPA.

2. A Note on Long Term Guarantee (LTG) Measures

9.   The LTG measures that are now included in the Solvency II technical specifications represent a significant development in the context of carrying out stress tests. The LTG measures are designed to mitigate procyclicality in the Solvency II framework and so have an important impact on calculation of the impact of stress scenarios.

10.   As expected, the LTG measures operate in the direction and manner intended. In line with the provisions in legislation on the transparency of the LTG measures, the impact of the measures is highlighted in the report.

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[2] Less than 10% of the gross written premium corresponds to individual undertakings which took part in the core module together with the insurance groups in order to ensure minimum 50% market coverage in every EIOPA member's jurisdiction. Further details on core sample are in section III.B. It includes 29 members of the so-called 'Top-30' group which are listed in Annex I.

B.   Core Module

11.   The Core Module comprises the following elements:

   a. Scenario CA1 – an asset market shock scenario originating in the equity market;

   b. Scenario CA2 – an asset market shock scenario originating in the corporate bond market;

   c. Analysis of Response to Stress – a qualitative analysis of how undertakings would respond to Scenario CA2; and

   d. Insurance Specific Stresses – a set of single factor insurance stresses;

12.   The adverse market scenarios were developed in cooperation with the European Systemic Risk Board (ESRB) and utilise statistical modelling of the inter-relationships and contagion processes across asset markets.

13.   Each element of the Core Module is dealt with in turn below, but the starting point for all of the elements is a baseline, pre-stress evaluation of undertakings balance sheets, available assets and liabilities, eligible own funds and SCR cover. This evaluation is based on balance sheet values as at end-2013.

1.   Baseline /Pre-Stress Situation

14.   In aggregate terms, the overall surplus (i.e. own funds minus SCR) for the sample was reported as €234.7 billion, which represents a €637 billion excess of assets over liabilities in absolute figures and a ratio of assets over liabilities ratio of 110.1%.

15.   In aggregate terms, the capitalisation levels of the sample of undertakings are solid, especially looking at the largest European insurers. There is, however, a significant minority of undertakings that do not meet the requirements of Solvency II in the baseline case.

16.   In total, 86% of the Core Module participants (96% of the Top 30 subsample) reported a Solvency Capital Requirement (SCR) ratio of 100% or better at year end 2013. More than 25% of the core module participants have a very strong starting position (SCR ratio > 200%) – see charts below.

17.   The 14% of participants that did not reach the 100% threshold represent only 3% of total sample assets. For the Top 30 participants, only one falls below the 100% SCR ratio in the baseline scenario. More

significantly, almost 8% of participants in the Core Module reported that they would not meet the MCR threshold.
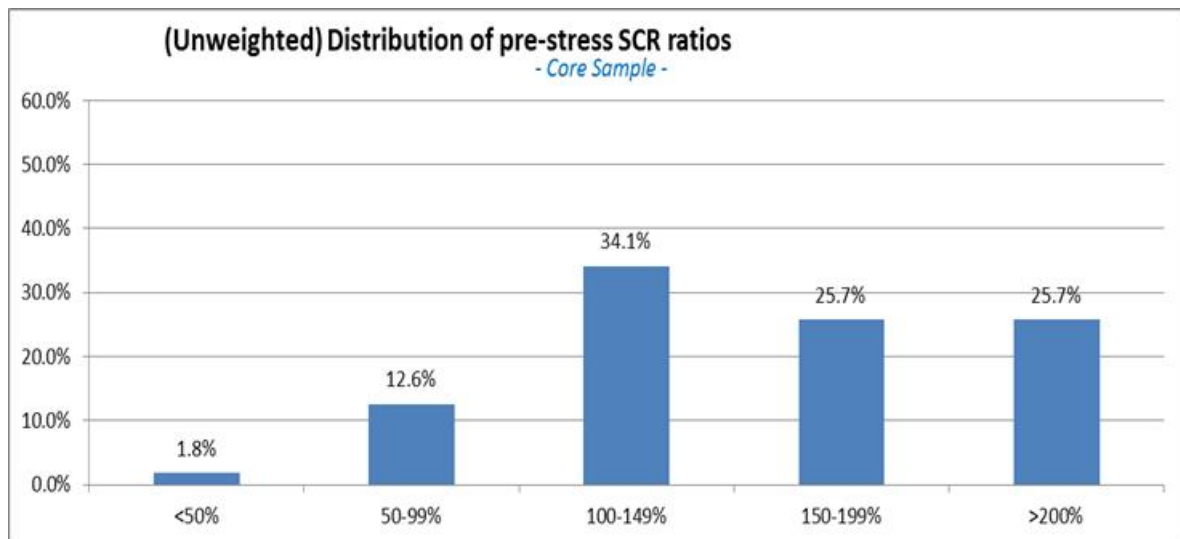
Figure 1: Core: (Unweighted) Distribution of pre-stress SCR ratios
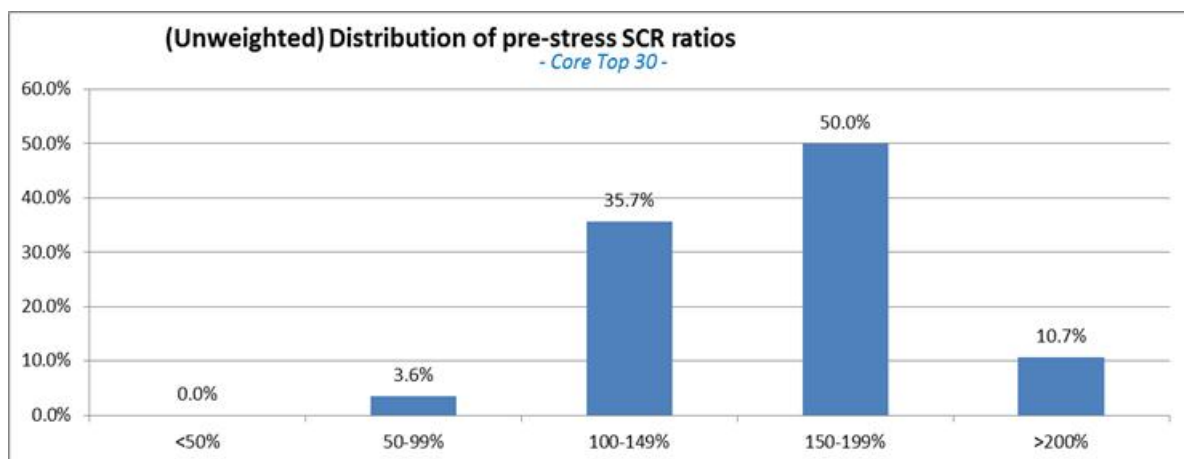
Figure 2: Core Top 30: (Unweighted) Distribution of pre-stress SCR ratios

18.   The use of LTG measures has the expected positive effect on SCR ratios. Exclusion of the impact of LTG measures shifts the distribution of SCR ratios to the left and increases the proportion of entities with SCR cover below the threshold to 19% of the sample.

19.   There is also a notable difference in the utilisation of the LTG measures across the sample, with larger and presumably more sophisticated entities making greater use of the LTG measures (79% of Top 30 entities) than the smaller entities (36% of Non-Top 30 entities).

20.   In systemic terms, the share of assets of these undertakings is small. In supervisory terms, though, in a Solvency II environment, such breaches would require supervisory action in accordance with EU law.

2.   Scenario CA1 – Description and Results

a)   Description

21.   In the Core Stress Module CA1, the EU equity market as a whole is assumed to be the source of market shocks. The shock to equity markets is assumed to affect other market segments, including corporate bond markets and government bond markets. The main stress impacts are:

   a. Relative price downward shock of 41% for investments in equity;

   b. Significant decrease of interest rates across all maturities;

   c. Very significant spread widening for Corporates with non-investment grade rating;

   d. Significant spread widening for Sovereign bonds (i.e. especially for periphery countries); and

   e. Relative downward shock of 49% for commercial property and 17% for residential property.

22.   The scenario is designed to be severe in an historical context and is calibrated on the basis of a sample window for the underlying data covering the period from 2009-2013. This sample window included several episodes of market volatility and this is reflected in the scenario.[3]

23.   The CA1-stresses were applied instantaneously and the resulting impact on Available Assets and post-stress Eligible Own Funds (EOF) was estimated. In order to draw clearer inferences about vulnerability to the shock scenario, the resulting post-stress EOF was then compared with the pre-CA1 Standard Formula SCR.

b)   Results

24.   In the CA1 scenario, the impact of the stress was to lower the excess of asset over liabilities by 42% and to move the assets over liability ratio 4 percentage points down to 106% for the whole sample. This was also reflected in Eligible Own Funds (EOF), which fell by 39% – see graph below. Little differential in impact across larger and smaller entities was detected.

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[3] For a precise specification: see Annex II

25.   Considering the impact in terms of SCR coverage, 44% of the participants had an SCR coverage ratio below 100% after stress. This reflects the severity and widespread nature of the stress scenario across asset classes. 47% of non-Top 30 participants' had a post-stress SCR coverage ratio below 100%, compared to 31% of Top 30 entities.

26.   Without the application of the LTG measures in the CA1 scenario, the excess of assets over liabilities decreased by 66% for the full sample. This is directly reflected in the distribution of the post-stress SCR ratio.

27.   An important factor in interpreting post-stress SCR coverage is the static nature of the SCR in the test. As a simplifying measure, the SCR was held at the pre-stress level on the assumption that it would not move significantly as a result of the stress. A subset of entities carried out an SCR reassessment, which generated an increase in the SCR. Consequently, the post-stress SCR measure should be considered with caution in both the CA1 and CA2 scenarios.
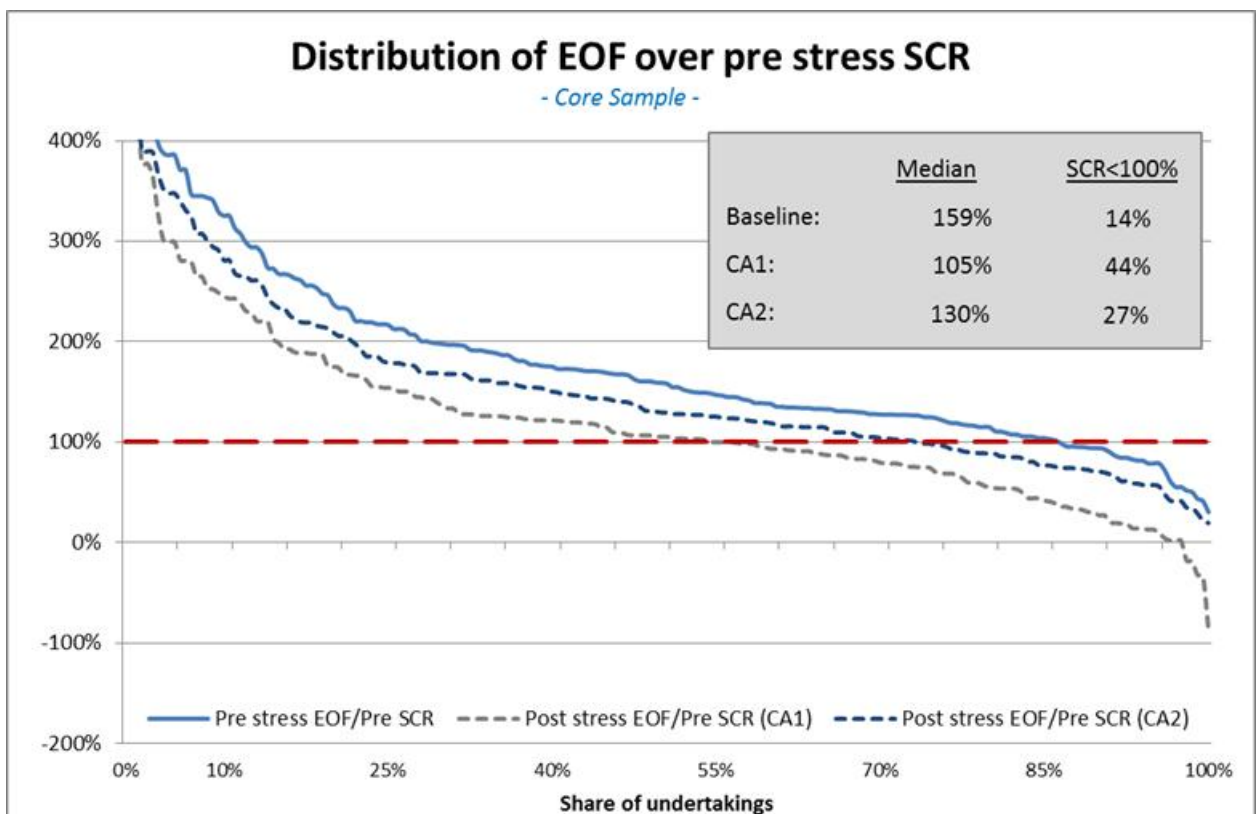
Figure 3: Core: Distribution of Eligible Own Funds over pre-stress SCR

3.   Scenario CA2 – Description and Results

a)   Description

28.   In the CA2 module the non-financial corporate bond market is assumed to be the source of the shock. The shock can be interpreted as a correction of the currently observed low levels of corporate bond spreads. The shock is assumed to affect other market segments, including sovereign bond and bank bond markets. The main stress impacts are:

  a. Inverse interest rate shock (curve twists for maturities above 7 years and becomes slightly 'positive' in the long-end, i.e. is mitigating);

  b. Relative price downward shock of 21% for investments in equity;

  c. Very significant spread widening for Corporates with investment grade rating;

  d. Significant spread widening for Sovereign bonds (i.e. especially for some Nordic- and east European countries); and

  e. Relative downward shock of 18% for commercial property and 15% for residential property.

29.   The scenario is designed to be severe in an historical context and is calibrated on the basis of a sample window for the underlying data covering the period from 2007-2013. This sample window included several episodes of market volatility and this is reflected in the scenario.[4]

30.   Again the stresses were applied instantaneously and the resulting impact on Available Assets and post-stress Eligible Own Funds (EOF) was estimated. In order to draw clearer inferences about vulnerability to the shock scenario, the resulting post-stress EOF was then compared with the pre-CA2 Standard Formula SCR

b)   Results

31.   Compared to the CA1 Scenario, the changes in assets and liabilities in the CA2 scenario are somewhat milder with a decrease in the assets over liabilities ratio of 1.4 percentage points to 108.7%. The excess of

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[4] For a precise specification see Annex II.

asset over liabilities decreased by 21% and would decrease by 31% if the LTG measures were taken out. Eligible Own Funds also decline by a similar order of magnitude.

32.   Considering the impact in terms of the EOF after the stress relative to the pre-stress SCR, 27% of the participants had an SCR coverage ratio below 100% (see Figure 3). In the case of the non-Top 30 participants, 30% had a post-stress SCR coverage ratio below 100% compared to 15% for the Top30 sub-sample.

33.   Exclusion of the impact of LTG measures made a similar impact under the CA2 scenario, to that under the CA1 scenario. This buffer effect was further enhanced by the loss absorbing capacity in Technical Provisions and Deferred Taxes (LAC). Taken together these effects increased the resilience of undertakings to the hypothesised shocks.

34.   Analysis of the change in the excess of assets over liabilities' within each scenario showed that these buffers absorbed more than 60% of the shock to the excess of assets over liabilities caused by the CA1 and CA2[5] scenarios. For the CA1 scenario, the excess of assets over liabilities would decrease by 97% without both the LTG measures and the LACs, compared to the 37% decrease when taking them into account. For the CA2 scenario the excess of assets over liabilities would decrease by 51% without both LTG measures and LACs, compared to 17% when they are both taken into account.

35.   Although these estimations are approximate, they shed light on the significant loss absorbing capacities inherent in the Solvency II framework.

4.   Qualitative Analysis of the Response to the CA2 Scenario

a)   Details of the Questionnaire

36.   The CA2 Scenario was complemented by a set of questions regarding insurers' likely responses to the scenario.[6] The purpose of the exercise was to identify potential behaviour on the part of undertakings that could have a financial stability impact. Examples include firesales or

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[5] See Table 7 and Table 8 in the relevant sections.
[6] https://eiopa.europa.eu/fileadmin/tx_dam/files/activities/financial_stability/ insurance_stress_test_2014/ Note_on_qualitative_questionnaire_on_one_of_the_market_adverse_scenarios_ of_2014_EIOPA_stress_test.pdf

herd behaviour. The responses to the questionnaire also provide useful insights that can be used in the context of supervisory interactions with undertakings. The questionnaire was developed in close cooperation with the ESRB.

37.   The questions addressed undertakings' likely actions after the stress scenario:

>   a. to restore capital shortfalls; and
>
>   b. to maintain profitability.

38.   The Questionnaire also collected data on

>   a. whether undertakings' sales of assets following the stresses might move the market; and
>
>   b. undertakings' assessments of policyholder behaviour in a sustained, adverse economic environment.

b)   Results

39.   The responses to the questionnaire were interesting in that a proportion of undertakings that were still healthy after the stresses saw a need to take action.

40.   A need for immediate restructuring was seen by 66% of participants after the Core module CA2 stresses, which can be considered the main source of contagion. This restructuring would be attained through an increase of capital (40%), a change of the investment portfolio (30%) and other measures (30%).

41.   A notable point is the commonality of envisaged actions that can be taken, especially in relation to capital raising and/or asset sales. Taken in isolation these are rational assumptions to make, but when viewed in a systemic context they need to be considered more carefully. The feasibility of such actions by all the affected entities in a stress scenario bears consideration.

42.   In terms of the need for preserving profitability, again participants saw a need for action. This most popular actions being proposed were cost control (20%), change in asset composition (18%) and change in product mix (15%).

43.   In order to assess how asset sales might impact markets, participants were asked about which markets their presence would be large enough to move the market if positions were unwound over a 6

month period. The majority of entities indicated that they are not significant enough to move the market in this way.

44. Last, entities were questioned about their perception of how lapses, policy demand and competition would be affected by the CA2 scenario. In general companies would not expect such a scenario to have a significant impact.

5. Post Single-Factor Insurance Stresses (SFIS)

a) Details

45. A total of 15 single factor insurance stress test scenarios were also prescribed as part of the test.7 These individual sensitivity tests were applied separately to the Core Scenarios, as for the most part these risks are considered to be statistically independent from the market risk scenarios.

46. These Insurance-specific Stresses comprised the following:

a. 7 NatCat scenarios

- 5 pre-defined NatCat scenarios (North European Windstorm, US hurricane, Turkey earthquake, Central & Eastern European flood, Airport Crash event);

- 2 NatCat scenarios (with PMLs of 1/100 and 1/200) to be defined by each participant);

b. 2 Non-Life provisioning deficiency stress scenarios (+1% and +3%),

c. 4 Life insurance risk scenarios

- 2 Longevity stresses (10% and 18%)

- 2 Mortality stresses (+2/1000 and +0.6/1000)

d. 2 Mass lapse events (20% and 35%)

b) Results

47. The table below provides a summary of the outcome of the most severe insurance specific stresses tested.

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[7] For the precise specification: see Annex 2.

Scenario	Loss as % EOF (gross)	Loss as % EOF (net of RI)	Loss as % EOF (net of RI & LAC)	Reinsurance rate	Initial sample size
Non-Life stress scenarios					
Nat Cat event (1-in-200)	10.9%	4.3%	3.7%	60%	105
Provision deficiency (+3%)	13.4%	10.0%	9.0%	25%	107
Life stress scenarios					
Longevity (18% uplift)	12.3%	11.4%	9.4%	8%	96
Mass Lapse (35%)	15.9%	15.9%	6.7%	0%	103

Table 1: Summary of most severe single factor insurance stresses

48.   The most severe scenarios, in terms of net impact on Eligible Own Funds (EOF), are a provision deficiency stress of 3% on non-life provisions, a longevity uplift of 18% and a 35% mass lapse event. On average, none of these scenarios results in a decrease of EOF of more than 10% after Reinsurance and LAC.

49.   The fifth column from the left side in the table above shows the relevance of reinsurance for the core participants to cope with the most severe single factor insurance stresses for non-life. However, the conclusions on how those stresses would hit the reinsurers would require a treaty by treaty analysis which was not the aim of this exercise.

50.   The majority of the sample is not very heavily exposed to net losses from Nat Cat events, not even from customised 1-in-200 year events (defined by each participant individually). The weighted average net impact of the latter scenario on EOF is below 4% for the entire sample. A reason for this might be that because of the 99.5% SCR (= 1/200) calculation of SII, a lot of firms have adapted their reinsurance program in order to minimize their net exposure (= capital requirements) after such an event.

51.   Nevertheless, a minority of the sample undertakings mainly located in smaller southern European countries shows very heavy exposure to Nat Cat events on a gross and net basis.

Core Module – Key Findings for Follow-up Action

1. A significant minority of undertakings reported that they would not meet the SCR threshold in the Baseline case, while a smaller subset indicated that they would not meet the MCR. After 1 January 2016, the Solvency II legislation would require direct supervisory action in both cases. Adequate preparation for Solvency II would suggest a need for supervisory intervention at an earlier stage.

2. The stress scenarios demonstrate that a generalised, severe reversal in markets would have a significant impact on the capitalisation of the sector. Solvency II provides measures to deal with such events in terms of the submission of Recovery Plans and the Pillar 2 Dampener. These are clear areas for supervisory focus over the next 14 months.

3. The qualitative assessment of the response to a stress scenario suggests that a key element in considering Recovery Plans is to consider them in a systemic context.

4. Smaller entities were shown to be more vulnerable to the stress scenarios and did not appear to take full advantage of the mitigation provided by the LTG measures. This suggests two areas for supervisory focus:

   a. Increased supervisory scrutiny of ALM and Risk Management at smaller entities; and
   b. Preparation for use of LTG measures and increased interactions with smaller entities to ensure they are prepared to utilise LTG measures.

C.   Low Yield Module Description and Results

1.   Description

52.   Two scenarios were specified in the Low Yield module:

   a. A 'Japanese-like scenario' embodying a persistent low interest rate environment; and

   b. An 'Inverse scenario' with an atypical change in the shape of the yield curve.

53.   Unstressed and stressed cash-flows were analysed along with structural features of the sample undertakings, such as duration and return mismatches, to assess vulnerability to the risks posed in the scenarios. In addition, the resulting post-stress Available Assets and Eligible Own Funds (EOF) were compared to the pre-stress Standard Formula SCR to allow inferences on the vulnerability of the undertaking to the stress scenarios to be drawn.

54.   Structural variables, such as duration and cashflows, were also evaluated after the stress to examine the impact of the scenarios on the underlying vulnerability of the sample undertakings.

2.   Baseline/Pre-Stress Scenario

55.   In structural terms, the analysis of the duration and internal rate of return (IRR) mismatches, gives a clear picture of which jurisdictions have a significant proportion of undertakings in the sample that are vulnerable.

Mismatch	IRR (IRR liab - IRR Assets)			Durations (Dur. liab - Dur.Assets)			Source: CF Analysis
Country	BL	LYA	LYB	BL	LYA	LYB	
AT	-0.86	-1.82	-1.53	10.09	11.33	10.35	Section IV of the EIOPA stress test report
BE	-0.07	-0.17	-0.17	1.37	1.78	1.49	provides detailed information on the
BG	-0.55	-0.18	-0.26	3.27	3.77	3.59	methodology applied in the cash flow
CY	-0.41	-1.21	-0.34	6.20	7.07	6.18	analysis used as a basis to generate
CZ	-1.02	-0.57	-0.50	1.63	1.18	1.05	this table.
DE	0.43	0.33	0.24	10.70	11.32	10.87	
DK	-0.08	-0.37	-0.32	4.74	5.42	5.21	Note:
EE	0.09	-0.35	-0.10	4.98	5.75	5.20	Mismatches in this table are calculated
ES	-1.13	-1.20	-1.21	0.75	0.89	0.82	as the difference between the internal
FI	-1.44	-1.02	-0.04	5.36	5.24	3.89	rate of return (IRR) and the durations of
FR	0.56	0.42	0.34	4.82	5.58	5.12	liabilities minus those of assets. Therefore
GB	0.07	0.20	0.07	-1.05	-0.44	-0.30	negative mismatch implies higher IRR or
GR	-1.55	-1.80	-1.72	1.98	2.47	2.20	duration for assets than for liabilities
HR	0.55	0.27	0.19	5.89	5.88	5.74	based on the cash flow reported by the
HU	0.43	0.23	0.23	3.03	3.08	2.98	participants in the low yield module on
IE	-1.31	-1.50	-1.40	-0.63	-0.80	-0.69	a country basis.
IT	-0.55	-1.00	-0.97	0.81	1.16	1.29	
LT	-1.55	-1.70	-1.86	10.55	10.85	10.58	
LU	-0.01	0.05	-0.10	5.47	5.20	5.29	Notation:
MT	1.41	2.98	1.61	7.56	7.39	7.38	IRR: internal rate of return
NL	-0.22	-0.57	-0.47	5.43	6.16	5.72	Dur. Duration
PL	0.33	-1.30	-0.97	3.44	4.55	3.95	Liab. : liabilities
PT	-1.27	-1.61	-1.13	1.32	1.55	1.38	Avg.: Average
RO	-1.15	-0.99	-0.96	0.81	0.61	0.66	Std: Standard deviation
SE	0.49	0.13	-0.28	10.54	11.78	11.25	BL: Baseline
SI	-0.69	-1.36	-0.97	8.34	8.98	8.56	LYA: Low Yield scenario A
SK	-0.82	-1.07	-0.99	-0.72	-0.07	1.08	LYB: Low Yield scenario B
Average	-0.28	-0.44	-0.54	4.21	4.63	4.38	Colour code:
Std.	0.86	1.08	0.96	3.62	3.83	3.58	mismatch > (Avg+ 1.5*std)
Avg + 1.5*std	1.02	1.18	0.90	9.65	10.38	9.75	(Avg + 1.5*std) > mismatch > (Avg + 1*std)
Avg+1*std	0.59	0.64	0.42	7.84	8.46	7.96	(Avg + 1*std) > mismatch > (Avg - 1*std)
Avg-1*std	-1.14	-1.52	-1.50	0.59	0.80	0.80	mismatch < (Avg - 1*std)

Table 2: Mismatches in IRR and Durations of assets and liabilities.

56. The size of duration mismatches between assets and liabilities as well as mismatches in internal rate of return of assets and liabilities are considered the main drivers for the severity of an interest rate stress.

57. The table above provides an overview of the mismatches in duration and internal rate of return between assets and liabilities on a country basis through the initial situation in columns under the label "BL" (Baseline) and the two scenarios tested in the low yield module in columns under the label "LYA" and "LYB" respectively. The coloured cells indicate outlying values and provide a signal of vulnerability to a decline in shift in interest rates a fundamental mismatch.

58. In most outlying cases, there is only a mismatch in one indicator meaning that there is either exposure to a shift in interest rates or an underlying mismatch in cashflow rates.

59.   The analysis of the cash flows in the pre stress situation shows negative net cash flows around the 8-11 year mark in a number of cases, supporting the analysis of mismatches in duration and IRR.
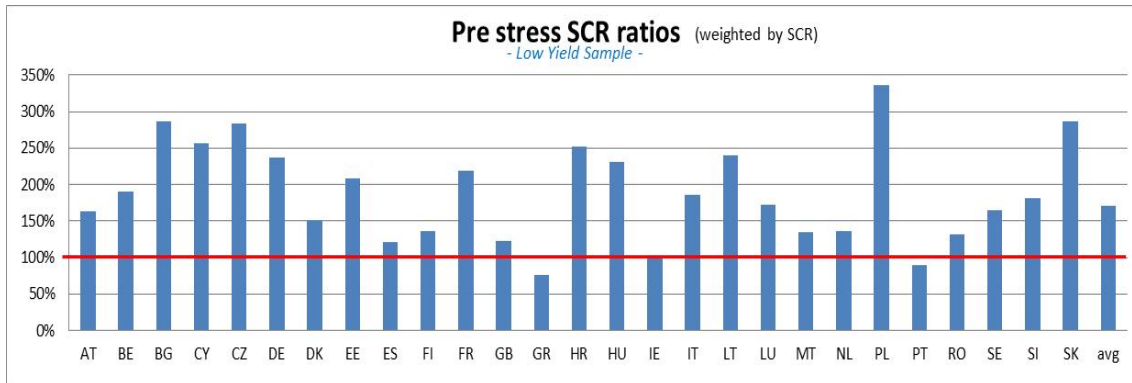

Figure 4: LY: Pre stress SCR ratios

60.   Overall the capitalisation of the undertakings in the sample is solid with 84% of the participants meeting the 100% SCR threshold. As with the Core Module, however, a significant minority do not report comply with the threshold.

61.   About 16% of the participating undertakings did not reach an SCR ratio of 100% or higher at year end 2013, representing a share of about 8% of total sample assets. Although the impact appears moderate on an aggregated basis, the distribution across jurisdictions reveals a somewhat different picture with clustering of the impact in particular jurisdictions.

62.   Figure 4 above shows a clear picture of the capitalisation level per country by taking into account the weighted contribution of the participants to the overall SCR calculated for each jurisdiction. However, the chart does not give a clear picture of the distribution of results within each national sample, in particular the number and significance of those that are below the 100% SCR threshold. Comparison of the weighted and unweighted averages allows the influence of larger entities on the average to be identified. For example, in the cases of DK, IE, IT, LU, PT, RO, SI and MT, the weighted average ratio is well below the unweighted average (at least 25 percentage points), suggesting that larger contributors in terms of SCR have a coverage ratio well below the others within the national sample.

63.   In terms of overall significance, the proportion of entities with SCR ratios under 100% in national samples can be examined. Alternatively, the share in total sample and national sample assets can be analysed for those entities with SCR ratios below 100%. Care needs to be taken in analysing these indicators since national samples, in particular, may be very small.

64.   Looking at the first measure, i.e. the proportion of entities with SCR ratios under 100% in national samples, a range of 0% to more than 50% can be observed, with AT, CY, ES, FI, GB, GR, IE, IT, NL, PT and RO recording rates of greater than 10% of entities falling into this category where only one country exceeds 50%. Looking at shares in total and national sample assets adds further information. Jurisdictional shares in total sample assets of entities with SCR ratios below 100% ranges from 0% to 2.2%. In terms of total sample assets: ES, FR, GB, IE, IT and NL show higher shares in total sample asset (i.e. above 0.5%) for entities with SCR ratios below the threshold.
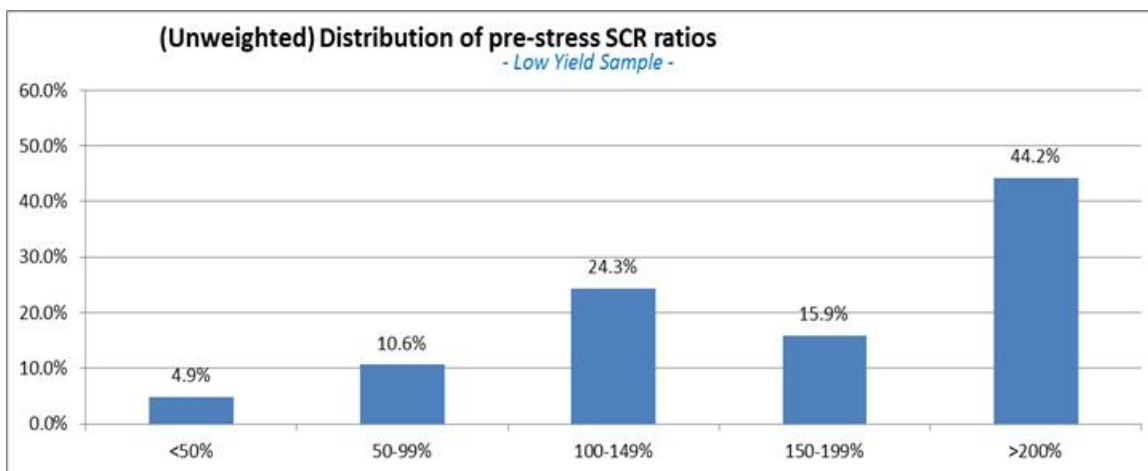

Figure 5: LY: Unweighted distribution of pre-stress SCR ratios.

65.   In terms of absolute numbers of entities, 35 low yield participants did not reach the 100% SCR ratio threshold in the Baseline, while 13 did not meet the MCR threshold.

3.   Results of the Low Yield Module

66.   The Figure below shows the distribution of Eligible Own Funds following the two scenarios of the low yield module expressed relative to the pre-stress SCR. This is a proxy for the post-stress SCR based on the assumption of static SCRs and is subject to the same caveat as in the Core Module.

67.   The proportion of companies not meeting the 100% SCR ratio following the Japanese-like scenario (LYA) i.e. 24 %, is bigger than the number of companies not meeting this criteria in the Inverse scenario (LYB) i.e. 20%.

68.   Although the differences are not extreme, the results suggest marginally more vulnerability of the European insurance sector to a Japanese scenario compared to an inverse curve scenario.
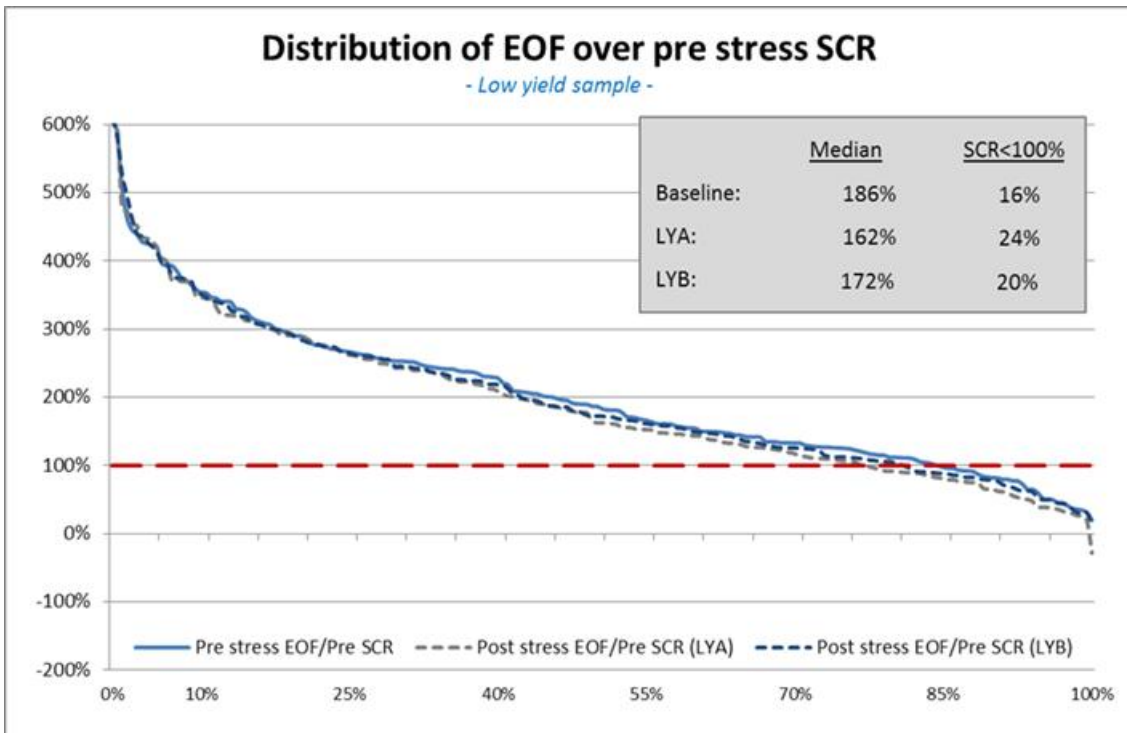
Figure 6: Distribution of EOF over pre stress SCR

69.   Looking at the relationship between EOF over the pre stress SCR across jurisdictions it can be seen that there is a wide variety in terms of starting level which is not correlated with the impact of the two scenarios.
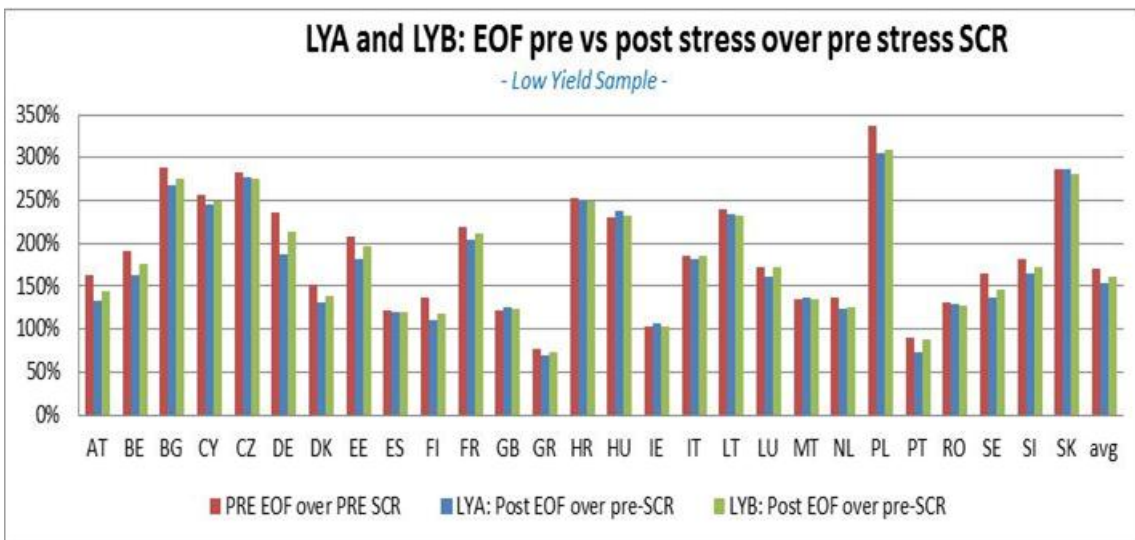

Figure 7: LYA and LYB: EOF pre versus post stress over pre stress SCR

70.   When looking at Figure 8 below which shows average changes in own funds weighted by the own funds of the participants across jurisdictions, the same trend can be spotted as in Figure 6, namely, the Japanese scenario is the more severe scenario of the two.
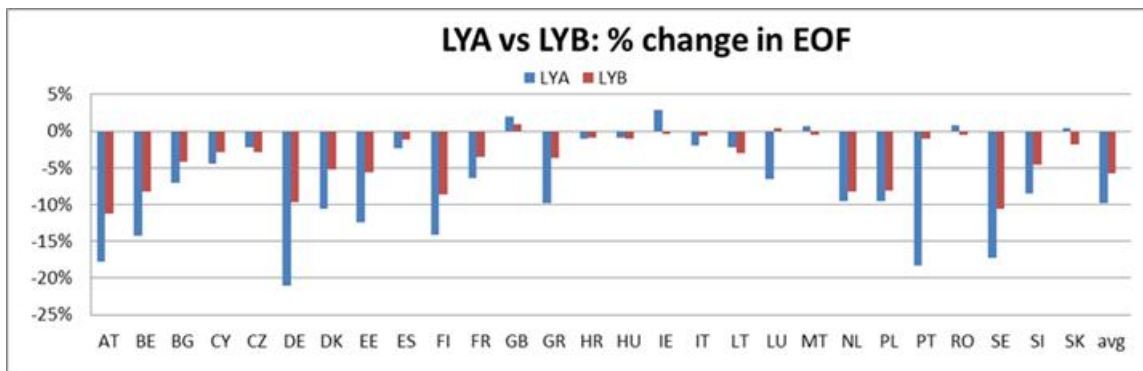
Figure 8: LYA and LYB: % change in EOF

71.   Depending on the particular ALM structure of the different participants, there are important differences amongst countries. Participants from some countries are more vulnerable to an inverse scenario compared to a Japanese-like one, e.g. HU, IE, MT, RO, SK, LT and CZ.

72.   In addition to Figure 8 above, comparison of the weighted and unweighted averages allows the influence of larger entities on the average to be identified. For example, in countries like DK, PL and PT the weighted average impact is at least 5 percentage points more negative than the unweighted average, suggesting that larger contributors in terms of EOF suffered a more negative impact due to the LYA scenario than the others within the national sample. That feature remains true only for PT under the LYB scenario.

73.   On the other side of the spectrum are countries like BG, EE, ES, LT, MT and SI, where the weighted average impact is at least 5 percentage points less negative than the unweighted average, suggesting that larger contributors in terms of EOF experienced a less negative impact due to the LYA scenario than the others within the national sample. That feature remains true only for ES under the LYB scenario

74.   In addition, the pattern of impacts is consistent with the picture shown by the analysis of duration and IRR mismatches. There is consistency across the analysis, with those identified as being more at risk showing a greater impact of the stress scenarios. These include AT, DE, MT and SE.

75.   The analysis of the cash flows in the pre-stress situation shows negative net cash flows in ca. 8-11 years in Austria, Germany, Netherlands and Sweden. This supports the analysis of mismatches in duration and IRR.

76.   As with the Core Module (see paragraph 34), the dampening effects of both the LTG measures and the loss absorbing capacities of

Technical Provisions and Deferred Taxes (LAC) are evaluated under the two low yield scenarios[8]. The impacts are more difficult to identify in this case since the impacted asset values tend to increase thereby neutralising the potential LAC buffer. Under the Low Yield scenarios the use of LTG measures and LAC reduce the decline in available assets by roughly 75%.

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[8] See Table 7 and Table 8 in the relevant section

Low Yield Module – Key Findings for Follow-up

1. Analysis of available assets and capitalisation, suggests that the impact of the low yield scenarios is not as severe as the CA1 Scenario. Nevertheless, the case remains for increased supervisory focus on recovery planning and the preparedness of the sector to fully utilize all elements of Solvency II.

2. The structural analysis of sample participants reveals duration mismatches and IRR mismatches across several jurisdictions. Taken together with the underlying cashflow analysis, this suggests that a cluster of jurisdictions are vulnerable to a period of prolonged low interest rates – a pattern confirmed by the balance sheet analysis. There is a clear case for the National Authorities concerned to continue and possibly strengthen their supervisory intervention, again with the support of EIOPA.

3. In terms of timing, the challenges posed by the low yield environment are immediate, notwithstanding the outcome of the cashflow analysis that reveals a shift to net cash outflows in some jurisdictions after 8-11 years. Again, this supports immediate action on the part of EIOPA and National Supervisory Authorities.

4. As with the Core Module, the significant minority of undertakings not meeting the SCR and MCR thresholds requires supervisory intervention in advance of Solvency II implementation.

5. In terms of follow-up to the Opinion on low yields, the scale of the challenges posed by low yields is moderate overall, but there are serious challenges concentrated in a number of jurisdictions. EIOPA will support the coordination of supervisory measures across these jurisdictions.

D. Next Steps

77. The results of the core stress test and the low yield module merit a consistent and coordinated response on the part of European supervisors. One of EIOPA's key responsibilities is to facilitate and coordinate such a consistent response. In this specific case, Article 21 of the EIOPA Regulation empowers it to issue recommendations for action to National Competent Authorities in response to the results of stress testing. The EIOPA Board of Supervisors having considered the results of the stress testing exercise has agreed a two-step approach to the follow-up actions that will be taken.

78. The first step will be issuance of a set of general, overarching recommendations addressing the follow-up actions set out in this report. These recommendations will be published separately, in the appropriate legal form, at the same time as this report. These recommendations will reflect the fact that undertakings and national supervisory authorities are in the preparatory phase for Solvency II. They will aim to support that preparation but also to promote preparation to deal with adverse developments that could threaten the stability of the insurance sector.

79. The second step will be bilateral engagement with national supervisory authorities, in particular those with the greatest identified vulnerabilities. This could extend to the issuance of specific recommendations addressed to the national supervisory authority concerned.

80. The results of the stress test exercises will also form an important input into EIOPA's participation in supervisory colleges. In this context, the results will be a useful input into understanding a group's risk profile and vulnerabilities, as benchmarked against the stress test samples.

81. EIOPA will also use the overall stress test results to inform its participation in the ESRB and other relevant bodies where systemic risks are considered and discussed.

82. Last, the completion of the stress test exercise also provides an opportunity for reflection on the experience with exercise. EIOPA and national supervisory authorities, as well as other stakeholders, will be able to use this opportunity to consider how to improve the stress testing process. For example, how better to design scenarios or how to improve data collection and validation. The data collected as part of the stress test exercises will also be utilised to explore the development of so-called "desk top" or "top down" tools that will provide EIOPA with a tool to strengthen the challenge process in future exercises.

II.   Framework, outcomes and disclaimer

A.   Framework: objectives, approach and scope

1.   Objectives

83.   The European Insurance and Occupational Pensions Authority (EIOPA) launched an EU-wide stress test for the insurance sector in 2014. In line with the EIOPA Regulation, the overall objective of the EU-wide stress test is to assess the resilience of insurance undertakings in the EU to adverse market developments and assess the potential for systemic risk to increase in situations of stress. For this purpose a series of single-factor insurance stresses and market stress scenarios have been tested. Furthermore, the 2014 EIOPA's exercise also addresses low interest rates environment which constitutes a direct follow up measure to the 'EIOPA Opinion on a Prolonged Low Interest Rate Environment[9]'. Its results provide a clear vision of the resilience of the insurance sector to different shocks and identify issues that require further supervisory response.

84.   The EIOPA stress test is primarily a micro prudential supervisory tool, albeit yielding synergies for micro-prudential supervision. Specifically this means that the EIOPA Stress Test may be performed at varying levels of aggregation, ranging from a single stress parameter on an institutional scale to a pan-European scale.   However, as a macro stress test EIOPA's focal point of interest centres around measuring aggregated impacts. Therefore the analysis and publication of results is limited to the national, branch (e.g. life insurance) and pan-European insurance industry level. No institution-specific results will be published.

85.   To establish such an aggregated level of analysis the application of a consistent stress test methodology is essential. The establishment of such a consistent stress test methodology is also direct requirement of the EIOPA regulation[10]. The EIOPA regulation states that one of its duties is 'ensuring that a consistent methodology is applied at the national level to such [stress] tests'. There are three main elements to consistency in the stress test context: (1) a common valuation framework that forms the basis for a consistent assessment of stress test impacts; (2) a

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[9]
https://eiopa.europa.eu/fileadmin/tx_dam/files/publications/opinions/EIOPA_Opinion_on_a_prolonged_low_interest_rate_environment.pdf
[10] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:331:0048:0083:EN:PDF

common set of stress parameters; and (3) a common approach to calibrating and applying those stress parameters.

86.   Regarding (1), the finalisation of the Omnibus II Directive in 2013 and EIOPA's initiative to develop Technical Specifications and reporting templates for the Solvency II preparatory phase have facilitated the process for EIOPA's 2014 Insurance Stress Test. The technical basis of the stress test was the new insurance regulatory regime Solvency II, which will apply as of 1 January 2016. Simultaneous with the launch of the exercise, EIOPA published the Solvency II Technical Specifications for the preparatory phase that provided a ground for undertakings to value assets and liabilities and to calculate solvency/minimum capital requirements and own funds.

87.   Regarding (2) and (3), the development of consistent stress scenarios and parameters allows EIOPA not only to test the European insurance sector's resilience against a variety of risks but, in addition, to identify possible concentration and contagion risks. In this way it is a complementary supervisory mechanism, to national- and institutional-specific, e.g. reverse stress tests, exercises. To measure and compare the impacts of the different stresses on solvency and capital positions will serve as a benchmark. Hence the focus of the assessment is on capital adequacy under adverse financial conditions in order to support a comprehensive understanding of system-wide vulnerabilities of the European insurance industry.

88.   The 2014 EIOPA exercise includes stress tests for different risk types including market, credit, insurance and macro-economic risk. Depending on the underlying stress scenarios and parameters for the different risk types, as well as the scope of the analysis, the exercise can be broadly divided into two modules. The Core Module of the exercise focuses on measuring resilience of insurance undertakings to adverse developments centred on the market, credit and insurance risk components. The second, Low Yield module measures the scope and scale of risks from a prolonged low interest rate environment and hence focuses on the potential impact of interest rate movements. Within this module the current extraordinarily low interest rates in some EU member states receive special attention. Compared to the core module the low yield module should be seen as a special topic and singular assessment of the EIOPA Stress Test 2014.

89.   EIOPA's 2014 exercise was run in close cooperation with national supervisory authorities (NSAs). The NSAs collected data from undertakings in July 2014 and validated the information before it was aggregated at the EU level. To improve consistency in the calculations,

during August and September 2014, EIOPA in cooperation with NSAs conducted an EU-wide validation of the data received.

2. Approach: Testing vulnerabilities (Resilience of insurance undertakings to adverse market developments)

90. The core module includes two adverse market scenarios, covering financial asset stresses (i.e. sovereigns, corporate bonds and equities) as well, as shocks to real estate assets prices' and interest rates stresses. Within these market scenarios the asset related stress parameters are applied simultaneously. These adverse market scenarios have been developed in cooperation with the European Systemic Risk Board (ESRB). The adverse market scenarios are complemented by a set of independent insurance-specific shocks covering mortality, longevity, insufficient reserves and catastrophe shocks. A table with a detailed overview of the respective stress levels per stress parameter is included in Annex I. For more detailed information on the underlying calibration of the stresses the technical specification for the 2014 stress test should be consulted[11].

I.   The adverse market scenarios:

91. To assess the main exposures of the EU insurance market as identified by EIOPA/ESRB, two distinct scenarios were tested. Each scenario is characterized by a different shock-originating source, while the overall results for each scenario account for spill-overs across financial markets. In line with the shock-originating principle, the two scenarios are assumed to start from an exogenous shock to the respective shock originating markets, with the whole range of market factors being projected in a consistent fashion in response to the originating set of shocks. The latter are propagated and in some cases amplified across financial markets, notably for sovereign bonds and financial institutions bonds. Even countries that have not suffered high sovereign bond spreads in the recent past see some impact. The term structure of "safe" interest rates is affected modestly.

92. Specifically, the following adverse market scenarios were chosen for the EIOPA stress test 2014 and calibrated with an ECB methodology:

> a) Adverse 1 (CA1): The EU equity market as a whole is
>   assumed to be the source of distress. The shock to equity

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[11]   https://eiopa.europa.eu/activities/financial-stability/insurance-stress-test-2014/stress-test-specifications/index.html

markets exerts significant spill over effects to other market segments, including corporate bond markets and government bond markets. The main stress impacts are[12]:

    a. Significant decrease of interest rates across all maturities

    b. Relative price downward shock of 41% for investments in equity

    c. Very significant spread widening for Corporates with non-investment grade rating

    d. Significant spread widening for Sovereign bonds (i.e. especially for periphery countries)

    e. Relative downward shock of 49% for commercial property and 17% for residential property.

93.   These stresses are considered very severe. However, the overall exposure of the European insurance market was expected to be rather limited based on respective investment reporting (e.g. EIOPA Quarterly Fast Track Reporting, which suggests a limited exposure to equity and property investments as well in non-investment grade corporates).

    b) Adverse 2 (CA2): The non-financial corporate bond market is assumed to be the source of distress. The event can be interpreted as a correction of the currently observed low levels of corporate bond spreads. Significant spill-over effects can be observed for other market segments, including sovereign bond and bank bond markets. The main stress impacts are (for actual values see Appendix 1):

        a. Inverse interest rate shock (curve twists for maturities above 7 years and becomes slightly „positive" in the long-end, i.e. is mitigating)

        b. Relative price downward shock of 21% for investments in equity

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[12] For actual values see Annex 2, where it is also explained the "double hit" concept applied regarding the interest rate and spread shocks (letters: a, b and c).

    c. Very significant spread widening for Corporates with investment grade rating

    d. Significant spread widening for Sovereign bonds (i.e. especially for some Nordic- and east European countries)

    e. Relative downward shock of 18% for commercial property and 15% for residential property.

94. These stresses are considered milder than in the adverse scenario 1. However, the overall exposure of the European insurance market was expected to be very high based on respective investments reporting (e.g. EIOPA Quarterly Fast Track Reporting).

95. The underlying joint scenario probability at EU level for both scenarios has been calibrated so as to correspond to a 1-in-100-years event (1%). Importantly, these probability measures shall be understood as reflecting market dynamics and joint dependences as observed throughout the January 2009 – December 2013 period. Moreover, these probability measures refer to the EU as a whole; the marginal (country spread to government debt, and market-individual, e.g. equity,) shock probabilities range approximately between 5% and 15%. It is important not to confuse these probability levels with the 1 in 200 year calibration of Solvency II, which refers to the probability of entity being able to maintain its SCR in 99.5% of circumstances rather than the probability of some specific market event occurring. The market and insurance stresses are assumed to be essentially uncorrelated and so no insurance stresses were included in the adverse scenarios. Additionally, given the severity of the market scenarios, the addition of insurance stresses would serve to give extremely severe scenarios. The separate analysis also reduces the risk of overestimating correlation effects between market and insurance stresses. Nevertheless for illustrative purposes, a measurement of combined effects, i.e. market with insurance stresses, has been performed post-hoc based on the assumption that insurance shocks take place independently but simultaneously with the respective market scenario and results are shown in appendix VII.

II. The single-factor insurance stresses (SFIS):

96. In the 2014 EIOPA's exercise the impact of the insurance stresses were measured in isolation from the market stresses. To capture a range of stress impacts each of the single-factor insurance stresses were

calibrated on two levels of severity, usually corresponding to a 1-in-100-year and 1-in-200-year event respectively.

97.   The set of insurance stresses can be divided between specifically addressing typical life and non-life risks. In the non-life insurance stress section the shocks originated out of firm-specific and pre-described catastrophe events (i.e. natural or man-made), claims reserve deficiencies as well as mass lapse scenarios. The firm specific scenario, provides useful information on the key risks for individual firms, but does not allow for identifying the potential concentration of risks in the European insurance industry and does not enable easy communication of the drivers of the results to external observers. In EIOPA's 2014 exercise the addition of a set of defined scenarios overcomes these problems.

98.   Specifically, undertakings had to calculate their sensitivity to the following defined catastrophe events: (1) Northern European Windstorms; (2) US Hurricane; (3) Turkish (Istanbul) Earthquake; (4) Central and Eastern European Flood and; (5) Airport Crash Event. The defined catastrophe events were calibrated so that, in aggregate, the severity of the events would be, for an insurer writing global, catastrophe exposed, insurance business, a stress roughly equivalent to a 1-in-200 year event.

99.   In the life insurance stress section the shocks originated out of increases in longevity, mortality and mass lapse rates.

100.   The 2014 EIOPA exercise also includes a specific module dedicated to the macro-economic risk of a prolonged low interest rate environment. The module consists of a scenario-based impact assessment of two different interest rate environments characterized by particular low interest. In this module interest rates levels are the sole source of stress and their impacts are assessed on a stand-alone basis. More detailed information on the low yield module can be found in section IV below.

3.   Scope of the core and the low yield modules

101.   The 2014 EIOPA stress test covers at least a 50% share of the insurance market in each European member. Additionally, Norway, Iceland and Switzerland participated in the exercise[13]. Most of the applied stresses allow for an assessment on a solo as well as a group level.

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[13] Participants from Iceland and Switzerland only took part in the core exercise. Additionally, Lichtenstein FMA provided EIOPA with a summary of the responses to the qualitative questions reported to them by companies in their market.

However, the scenario-based analysis of the impact of a prolonged period of low interest required a solo only analysis and is limited to particularly exposed insurance business.

102.   Specifically, the core module of the 2014 stress test exercise is conducted at the highest level of insurance consolidation. This means that where participating groups and undertakings are part of a financial conglomerate only the insurance balance sheet is stressed.

103.   In terms of scope, in the core module the market coverage rate was based on statutory gross written premiums by year-end 2013[14] per country in EU/EEA member states, both for the life and non-life segments. Participation of undertakings was on solo and group level.

104.   For the specific low yield module the market coverage rate was based on gross technical provisions by year-end 2013 in each member state, and is focused on the most important life and other relevant (i.e., from a low yield perspective) insurance business (i.e., undertakings offering guarantee products). In order to meet the requirements above, the selection of industry participants for this low yield module was different from the core stress test participants. Whereas the core stress test was conducted at group level, it was felt that the best results for the low yield module could be obtained when conducted at solo level.

More detailed information and analysis on the type of selected participants and overall coverage ratios is provided on section III and IV.

B.   Outcomes of the ST

105.   Given that the Solvency II framework is in its preparatory phase EIOPA refrains from making strong recommendations as a result of the 2014 Stress Test. However, EIOPA is making observations which should be considered carefully by relevant stakeholders and also will be discussed in the affected colleges of supervisors.

106.   The low interest rate environment is a particular vulnerability which has already been identified for those countries where there is an unbalanced proportion between the long lasting obligations including relatively high interest rate guarantees compared with the duration of the assets and their returns. The necessity of addressing such vulnerability by those countries where this issue has already materialised, although

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[14] When year-end 2013 data is not available to NSAs for the purpose of selecting the stress test participants, then the latest reported data to the NSA shall be used indicating the reference date at which it refers to.

not fully evidenced by the Solvency I regime, is stressed because of the current developments in interest rates and the outlooks of further prolonged low interest rate environment. It is EIOPA's recommendation to all NCAs to further investigate the profitability and solvency situation of the undertakings within their jurisdictions, especially those undertakings that rank below the acceptable benchmarks for the indicators used in this report. These investigations should be based on a forward looking and market consistent assessment.

C. Disclaimer

107. Throughout the report the SCR ratios are weighted (by the SCR) unless otherwise stated. For example, for graphs on distributions no weighting has been applied.

1. Impact on participating entities' solvency position

108. It should be noted that the entire reporting for the 2014 Stress Test exercise is based on the preliminary Solvency II requirements. Therefore elements of the valuation framework are currently in a preparatory phase, i.e. participants in the exercise might not yet have fully prepared their balance sheets to comply fully with the latest Solvency II framework requirements, e.g. application of the so-called contract boundaries. As a consequence the conclusions on the solvency situation of the market overall or parts of the market might not fully reflect the reality that we would see if Solvency II was in place already. Preparation of the stress test reporting was also impeded as the most recent technical specifications applicable for the stress test were launched simultaneously with the respective exercise.

109. Furthermore, during the preparatory phase for Solvency II the application of certain elements of the framework are restricted. These limitations were fully acknowledged in the stress test exercise. These limitations are mainly due to the fact that the use of certain elements of the Solvency II framework requires supervisory approval by NSAs. For this reason, together with the absence at this stage of the official methods to be used to derive Undertaking Specific Parameters (USP) in the technical specifications for the preparatory phase for Solvency II, the use of USP is not possible in the preparatory phase and, hence, also not for the EIOPA Stress Test.

110. Similarly, in order not to pre-empt the ongoing approval processes for Internal Models (IM), the exercise did require all participants to provide Standard Formula (SF) results as a default. It was optional for

participants to provide IM results alongside SF results. However, not all participants aiming at internal model approvals have provided IM data. Overall, the number of participants that provided pre-stress information or even performed recalculations based on IMs was too marginal to provide a reliable analysis on the respective results.

111.   The application of the Long-term Guarantee (LTG) measures was also optional for the stress test participants. Member States may require prior approval by supervisory authorities for insurance and reinsurance undertakings to apply some LTG measures. In this case, where an undertaking applies the LTG measure for the purposes of the stress test, this shall in no way be taken to pre-empt the supervisor's decision as to whether to grant approval. Given the early preparation stage of the LTG implementation, participants in the stress test only made limited use of these. Additionally those measures were based on the assumptions made for practicality reasons during the preparatory phase only and should not be seen as an indication of the final approach to be implemented under Solvency II.

112.   A series of simplifications have also been added for the purposes of stress test. For instance, it was not required of participants to reassess the SCR or MCR and Risk Margin post stress. Therefore, conclusions based on post-stress solvency ratios were not in the focus of this stress test exercise, but rather the vulnerabilities of the participants' balance sheets, e.g. assets and liabilities, impact on own funds, etc. Where participants have optionally provided reassessed SCR figures, the results of those have been taken into account where appropriate.

113.   The simplification stated in the paragraph above was considered appropriate for the EIOPA 2014 exercise for the following reasons:

    a. on the one hand these simplifications directly should reduce the complexity of the expected valuations;
    b. on the other hand, stresses have been generally calibrated in such a way as to assume a simultaneous and instantaneous occurrence;
    c. additionally it was expected that post-stress SCRs would decline compared to pre-stress SCRs.

114.   Hence, from a financial stability perspective, it was considered that an immediate recalculation of the solvency situation post-stress is not strictly necessary and in any case using pre-stress SCRs would be even a conservative alternative over using post-stress SCRs. However, on average these recalculations led to increasing SCRs and hence decreasing coverage levels. Data did not confirm the fact that only those participants with weaker solvency position before stress did undertake the

reassessment of the SCR post stress. Therefore it is an area for further reflection for EIOPA whether future exercises might require a full SCR recalculation as an integral part of the methodology.

115. The above mentioned specifics, simplifications and limitations tailored, when needed, the technical specifications for the preparatory phase of Solvency II in order to better fit the purpose of the stress test. Due to that tailoring an extensive Q&A procedure, including a workshop with stakeholders, was initiated once the exercise was launched in order to ensure a consistent interpretation and implementation of the specification by the participants in the exercise. This Q&A procedure proved to be a key tool for EIOPA to identify most of the ambiguities on the technical specifications for the stress test exercise and being able to provide corrections and clarifications aimed to solve potential inconsistencies. In those cases where despite the EIOPA efforts participants did not fully follow the specifications or did not fully implement any post-launch change to the technical specifications this led to the requirement of re-submissions. Re-submissions were strictly focused and limited to the most relevant data items.

116. Regarding the cash flow analysis in the low yield module, in order to ensure a certain degree of consistency and reliability in the sample, participants were not asked to report those assets without a predictable cash flow pattern. For some assets, such as derivatives, it is not easy to generate cashflow patterns. Therefore the results and conclusions of the cash flow analysis should be interpreted having in mind the existence of those assets.

2. Disclaimer on data quality

117. Given the preparatory phase, the EIOPA 2014 Stress Test was run on a "best efforts" basis. Specifically this means that participants could use approximations whenever these figures would not lead to fundamentally different results.

118. All analysis contained in this report is based on the data provided by Stress Test 2014 participants or directly by NCAs (in case of the coverage data). Data has been validated by participants, NCAs and centrally at EIOPA. In the last step of the process, inconsistencies leading to outliers in the final analysis have been identified by EIOPA's central validation team. This led to requests for further clarifications on how the reported data was generated and if needed re-submissions were also requested.

119. However, given the time constraints, there might still be certain inconsistencies that have not been identified, critical data outliers which

could not always be fully corrected or uncertainties in interpretation which could not be fully clarified by the validators. This might especially be true for the consistent application of the so-called 'double hit'[15], the consistent calculation of effects without LTG measures and the coherent interpretation and generation of the requested cash flow patterns. For these uncertainties, some specific analyses were based on a sub-sample of useable responses and/or data were corrected to the extent possible. It was made certain that, in case sub-samples were used, they are still representative enough for the respective analysis to be performed in a reliable way. Also it should be considered when interpreting the results that some stress hypotheses were simply not challenged during the validation phase of this exercise as for example those hypothesis applied to the behaviour of derivatives during the stresses proposed.

120.   In the low yield module the name of those countries with less than 3 participants are not depicted in the figures or tables. Overall, the information should not be read as reflecting the reality in a particular country as it might not represent the whole market in a proper way, but rather that of the reporting companies in a specific jurisdiction.

121.   If the data source for presented analysis is not given in the caption of the chart or table, the data is based on submissions of participants. All other sources are explicitly stated.

3.   Considerations on the LTG measures

122.   Unless explicitly stated all charts show the results reported by the participants including the LTG measures in line with the specifications.

123.   EIOPA has put increased focus on understanding the dampening effects of LTG measures on post-stress balance sheets in order to be able to assess the "pure" stress effects and compare results across participants (including those not applying any or certain LTG measures). Therefore, EIOPA has asked participants to also provide the impact of stresses on assets and liabilities if LTG measures were not used.

124.   This additional data request (without LTG measures) is not in any way trying to trigger a reopening of the debate about the use of LTG measures, but aims only at ensuring that results are interpreted correctly in this report.

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[15] See Annex II for explanation on the "double hit" concept.

III.   The Core Module

A.   Scenarios

125.   A description of the stress scenarios and single factor insurance stresses used in the EIOPA Stress Test 2014 can be found in section II.A.1. A table with the detailed overview on the respective stress levels per stress parameter is included in Annex II.

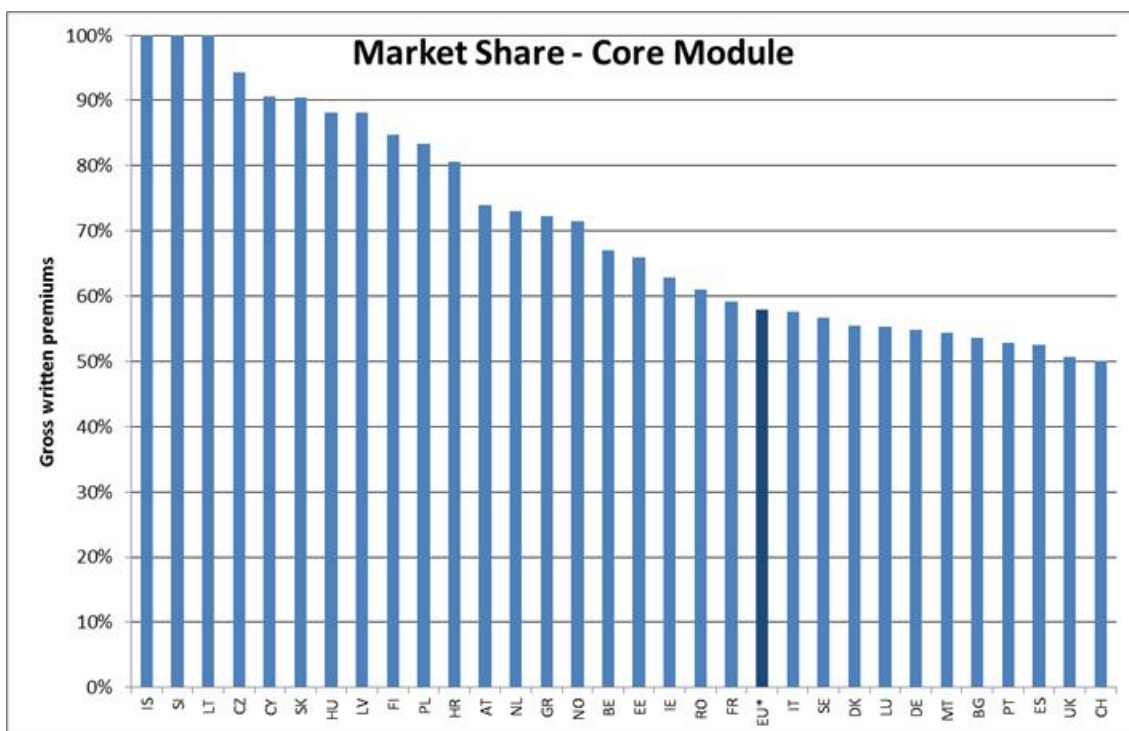### B.   The core sample

126.   Market coverage per country:

Figure 9: Market coverage for the Core Module based on Gross Written Premium *Including CH and IS. (Source: NCA data)

127.   Figure 9 confirms that market coverage of at least 50% share of the insurance market in each European member state was achieved, and for some jurisdictions extensively exceeded, for the 2014 EIOPA stress test.

128.   The Swiss participants were not required to apply the Solvency II framework according to the preparatory guidelines for the EIOPA Stress Test 2014. However, these participants had to apply the stresses of the 2014 EIOPA exercise within the framework of the Swiss Solvency Test (SST). Therefore any analysis based on EU aggregates of solvency ratios does not include the Swiss sample.

129. For some analyses of the exercise certain participants had to be excluded. This was necessary either due to an insufficient level of or invalid form of, reporting. E.g. for the core module some participants did not apply the double-hit correctly. Nevertheless, any observations and conclusions drawn, especially when generalized for the whole European market or some other aggregated subset, are based on the analysis of a sufficiently representative sample size.

130. Figures 10 and 11 below provide further information on the core module sample. Specifically participants have been grouped to organizational or business type. A variety of EIOPA publications (e.g. the Quarterly Risk Dashboard) take a special interest in the largest and internationally active European insurance groups (i.e. Top 30[16]). This is due to the fact that these groups are most relevant from the financial stability perspective of the whole European market. The selection of the EIOPA Stress Test 2014 participants was deliberately not limited to this group of insurers. On the one hand certain risk drivers, especially from the low yield module, require a different level of analysis or a particular focus on specifically exposed business. On the other hand, also analyses with a clear focus on financial stability topics should allow for a comparative measure of effects given different organizational sizes and business types, consequently expanding the scope beyond the so-called 'group of 30'. In this form they are complementary to other EIOPA publications and analyses on financial stability topics. Therefore, whenever observations have been made that are significantly different for a particular subset of the stress test participants this is reported.
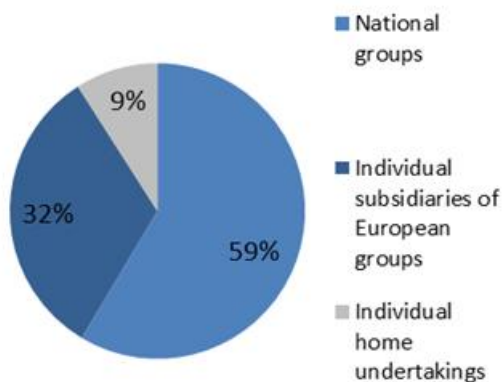
Figure 10: Core: Market coverage per Groups/ Individual based on GWP (source: NCA data)

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[16] The list of Top 30 groups as in September 2014 is included in Annex I.
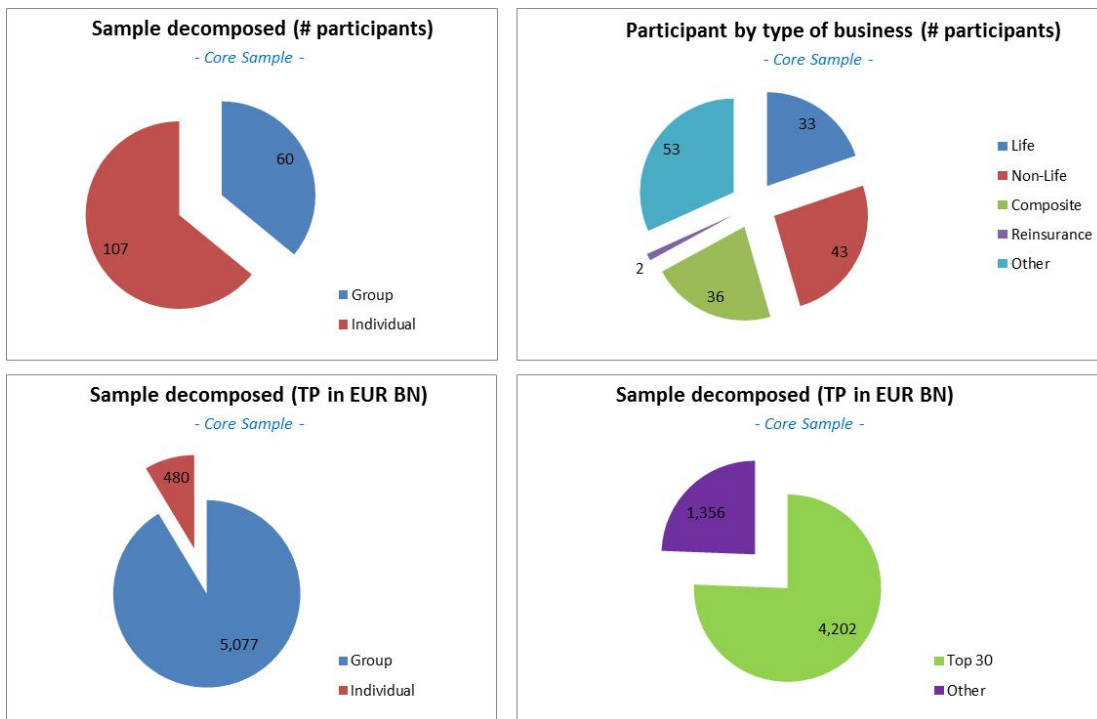
Figure 11: Core participants decomposed into Groups and Individual undertakings (Source: data reported by stress test participants)

C.   Situation before the core stress scenarios

131.   In the following sections a thorough analysis of the pre-stress situation for the core module participants will be presented. This section is split between a comprehensive overview on (1) the asset profile and (2) the liability profile.

1.   Asset profile

132.   The analysis of the asset profile of the core stress test sample confirms (1) the representativeness of the sample for a pan-European analysis as well as (2); the appropriate type and level of stress parameters selected for the 2014 exercise.

a)   Total assets and total investments-

133.   Total assets decomposed:

Proportion of assets by type
- Core Sample -

- Equities
- Bonds
- Investment Funds
- Loans and Mortgages
- Reinsurance Recoverables
- Cash & equivalents
- Property
- Participations
- Index Linked Assets
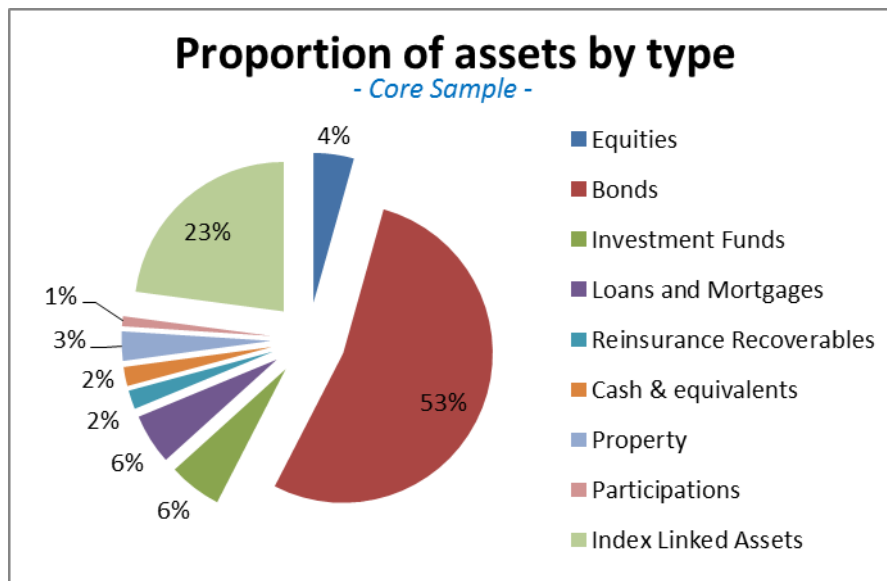
Figure 12: Core: Total assets decomposed (total assets sum to 7 Tn euros)

134.   As Figure 12 shows, the relative share of investments, and hence the exposure, in equity as well as property are rather low for the core sample of participants. These observations can be generalized for the average investment portfolio of European insurers and matches comparable past EIOPA data collections (e.g. EIOPA Financial Stability Report). As this rather limited amount of exposure was expected, the partially extreme stress levels for these asset classes in adverse scenario 1 (see Section II and Annex II) were considered appropriate.

135.   Also as expected the majority of asset investments of the core module participants fall into the categories of fixed income assets. Therefore, especially the impacts of interest and spread sensitive stresses were of focal interest when conceptualizing the two different market stress scenarios.

136.   A more detailed analysis of the pre-stress investment structure will follow. This analysis will link the asset categories to the respective asset stresses of the two market scenarios and hence explain the expected impact.

137.   The chart below displays the decomposition of investments in bond assets for the core sample.

b)   Bond portfolio
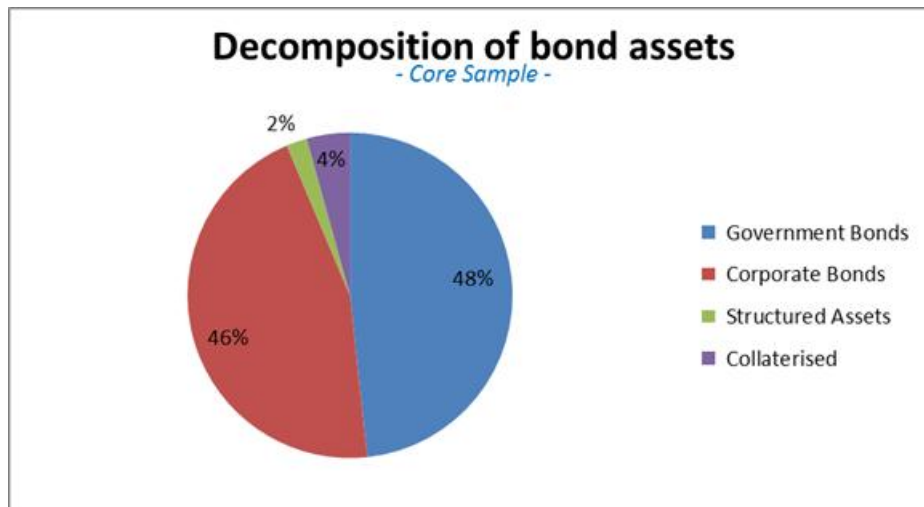
Figure 13: Core: Decomposition of bond assets

138.   The decomposition shows that the majority of investments fall in either the category of government bonds (i.e. 48%) or corporate bonds (i.e. 46%). This is also in line with past observations and expectations, further confirming the representativeness of the 2014 stress test sample. For a distribution of the bond exposure according to the respective categories see Figure 14.
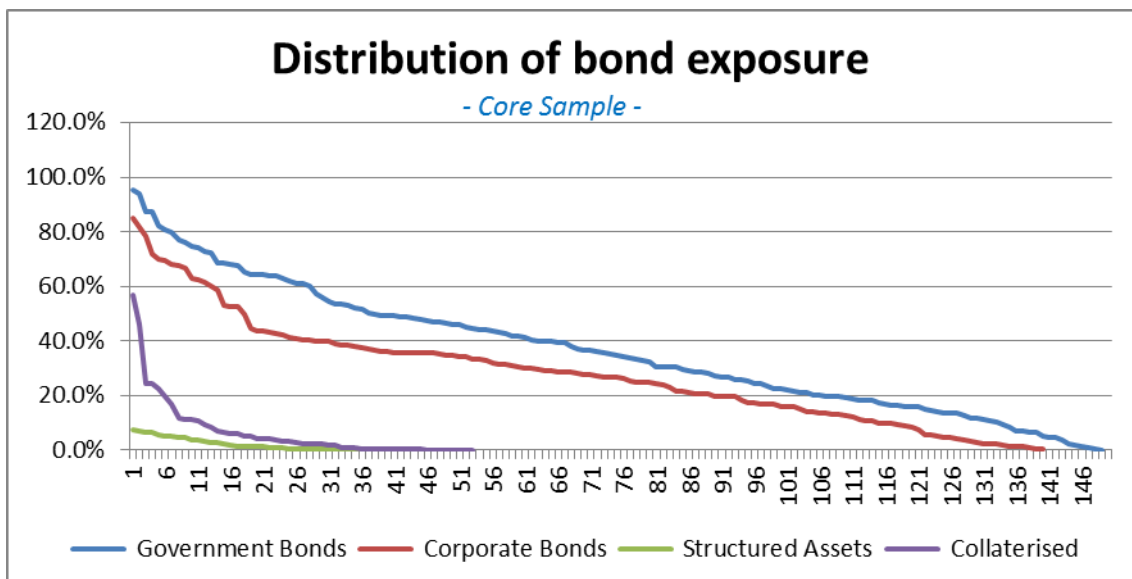
Figure 14: Distribution of bond exposures (% of total investments)

Government bonds

139.   Table 3 below displays the aggregated average investments in government bonds for the total insurance market covered by the sample

per country of origin. Next to this the average duration on these investments is also provided.

140. As the sample of participants for the core module is largely based on group data, no meaningful analysis regarding a 'home bias', i.e. national concentrations, in government bond investments can be made.

141. Nevertheless, the aggregated figures on the government bond exposure given in Table 3 provide some interesting insights. Especially the high concentrations in Italian (22,5%) and French (24,5%) government bonds across the whole sample of participants are worth noting. When interpreting impacts of the government bond spread stresses on an aggregated basis, these concentrations could have a driving effect and therefore should be considered. Also the durations ofn 'higher quality' (i.e. less or limited credit risk according to market sentiment) bonds on average are longer compared to 'lower quality' bonds. This duration pattern seems to suggest a recent flight to quality, i.e. new investments seem to have shifted to safe haven countries.

142. Investments in government bonds outside of the EU are rather limited. Hence, the currency exchange risk exposure can be considered low. As this was expected, no specific currency stress was included in the 2014 exercise, further confirming the appropriateness of selected stress parameters.

	Issuer	Issuer govts exposure/ Total govts exposure	Avg duration
AT	Austria	3.72%	9.4
BE	Belgium	7.60%	8.9
BGN	Bulgaria	0.02%	4.5
CHF	Switzerland	0.91%	8.5
CY	Cyprus	0.01%	2.9
CZK	Czech Rep	0.82%	5.3
DE	Germay	8.64%	8.4
DKK	Denmark	0.61%	7.4
EE	Estonia	0.00%	0.6
ES	Spain	5.96%	8.6
FI	Finland	0.89%	7.7
FR	France	24.53%	8.8
GBP	UK	4.43%	10.0
GR	Greece	0.04%	7.5
HRK	Croatia	0.20%	4.0
HUF	Hungary	0.21%	3.4
IE	Ireland	0.95%	5.3
ISK	Iceland	0.02%	6.0
IT	Italy	22.52%	6.9
JPY	Japan	1.63%	11.5
LIT	Lituania	0.06%	3.7
LU	Luxemburg	0.64%	6.7
LVL	Latvia	0.01%	3.4
MT	Malta	0.04%	7.2
NL	Netherlands	3.67%	8.2
NOK	Norway	0.49%	3.0
PLN	Poland	1.77%	5.1
PT	Portugal	0.67%	4.8
RON	Romania	0.12%	3.6
SEK	Sweden	2.15%	5.4
SI	Slovenia	0.23%	5.0
SK	Slovakia	0.55%	7.4
USD	USA	2.63%	5.9
Others	Others	3.27%	
Total	Total	100.00%	8.0

Table 3: Core: Average investment and duration of Government bonds investments per issuer[17]

Corporate bonds

[17] Table is based on market values.

143. Figures 15 to 17 below display the distribution of the core sample corporate bond exposures across credit quality classes for the total sample, the Top 30 groups and the non-Top 30 groups. The steep drop after the third credit quality step it is remarkable.
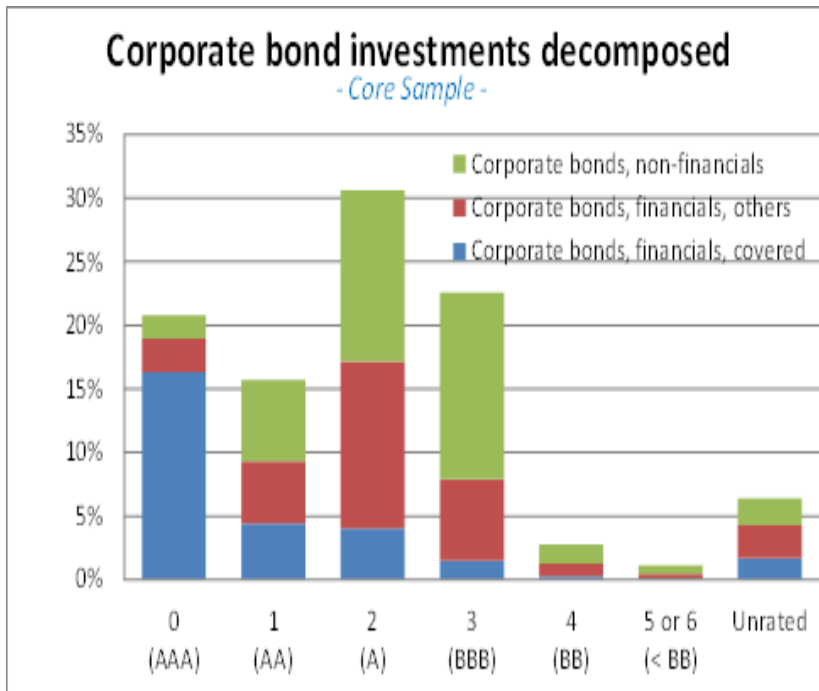
Figure 15: Core: Corporate bond exposures by credit quality and type of exposures
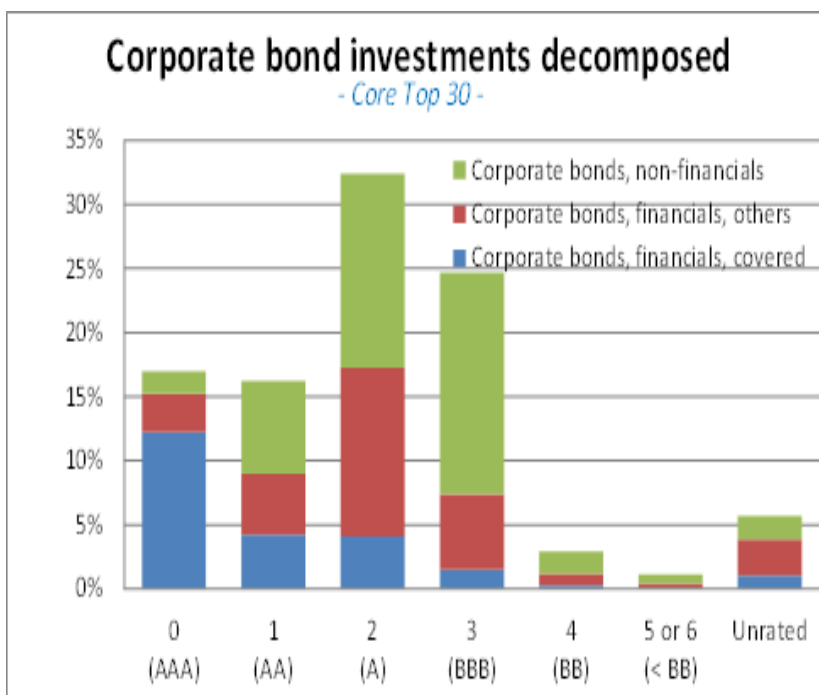
Figure 16: Core top 30: Corporate bond exposures by credit quality and type of exposures
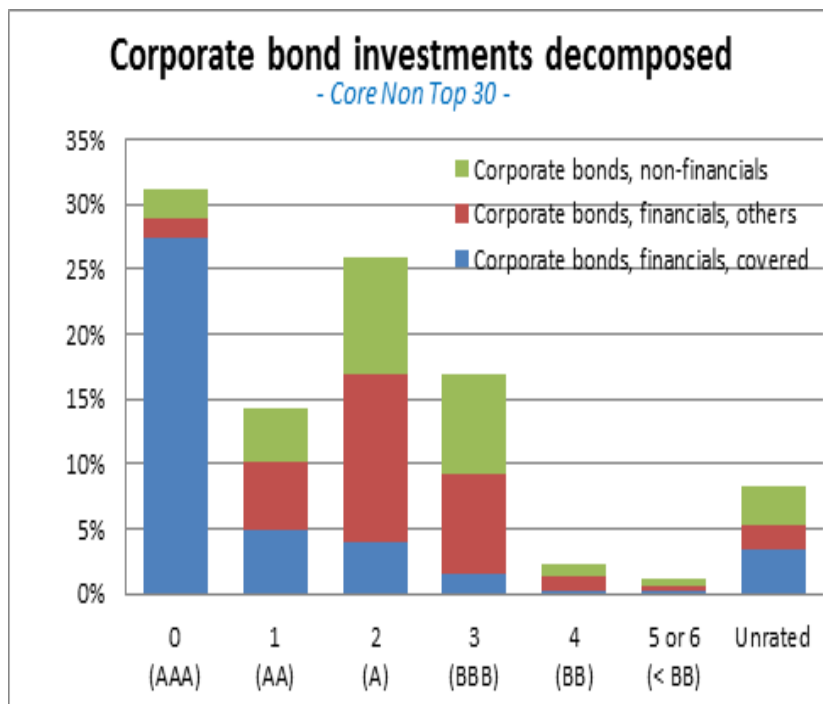
Figure 17: Core non top 30: Corporate bond exposures by credit quality and type of exposures

144.   As expected the majority of investments in corporate bonds are of high quality and fall within the investment grade category. However, one can observe some interesting and significant differences between larger sample participants, i.e. Top 30, and smaller undertakings when comparing their respective corporate bond portfolio structure. First of all, smaller undertakings concentrate their investments significantly more in bonds of the highest quality with respect to rating classes. Secondly, this group also allocates significantly more of their investments to covered bonds. In comparison the Top 30 groups are significantly more exposed to corporate bonds from the non-financial sector.

145.   A duration analysis shows that the investments in corporate bonds are often of much shorter duration than the investments in government bonds. Also, the durations in higher quality corporate, i.e. according to rating classes, are of longer duration compared to investments of lower quality. Albeit the fact that the short durations in low quality or higher risk bonds are positive from a default risk perspective, the rather short durations in corporate bonds portfolios are more conductive to significant duration mismatches in case of a liability side characterized by long durations.

Credit quality step	0	1	2	3	4	5 o 6	Unrated	Total
Corp_finan_covered	5.3	5.3	4.6	5.1	4.2	5.1	5.3	5.2
Corp_finan_uncovered	4.2	4.7	4.5	4.0	3.3	3.1	4.0	4.3
Corp_non_finan	5.4	6.2	6.2	5.4	3.9	3.2	4.2	5.6
Total	5.1	5.7	5.3	5.0	3.8	3.4	4.5	5.2
Average modified duration	**5.1**	**5.6**	**5.3**	**5.0**	**3.8**	**3.3**	**4.4**	**5.1**

Table 4: Core: Average durations of corporate bonds held

a)   *Property portfolio*
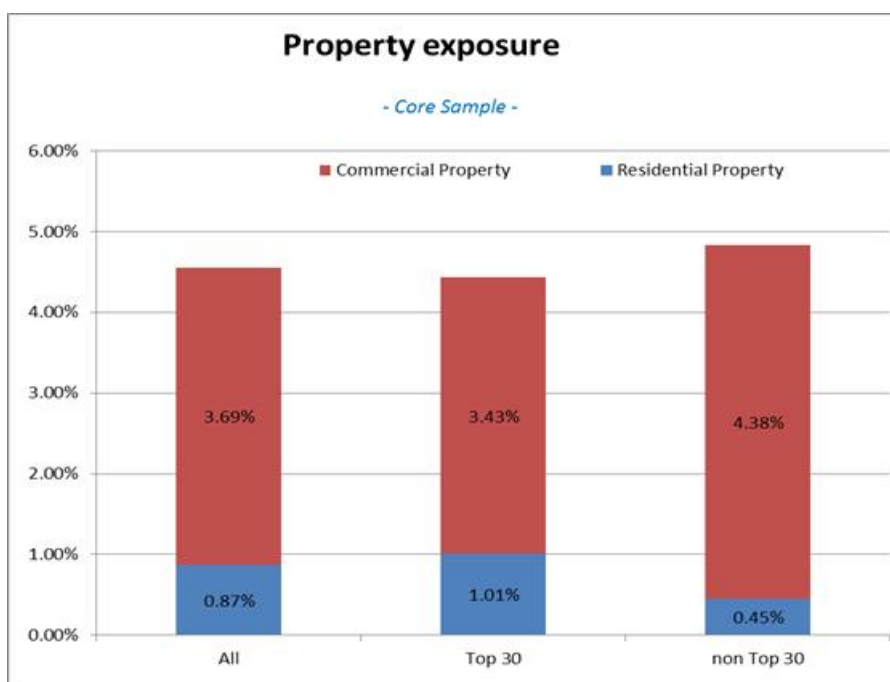
Figure 18: Relative share of property investments to total investments (excluding UL)

146.   As stated above the relative share of total investments in property for the core sample is rather small. The differences between the total sample and Top 30 groups are rather negligible here. However, as in the EIOPA exercise specific stresses need to be applied for residential and commercial property respectively, it is worth noting that the average investment in commercial property is significantly higher. This difference becomes more material when comparing larger participants (i.e. Top 30) to smaller undertakings (i.e. non Top 30). But even though the stress levels on commercial property are higher, especially within the adverse market scenario 1, the rather limited exposure should not heavily impact the aggregated scenario results.

b)   *Equity portfolio*
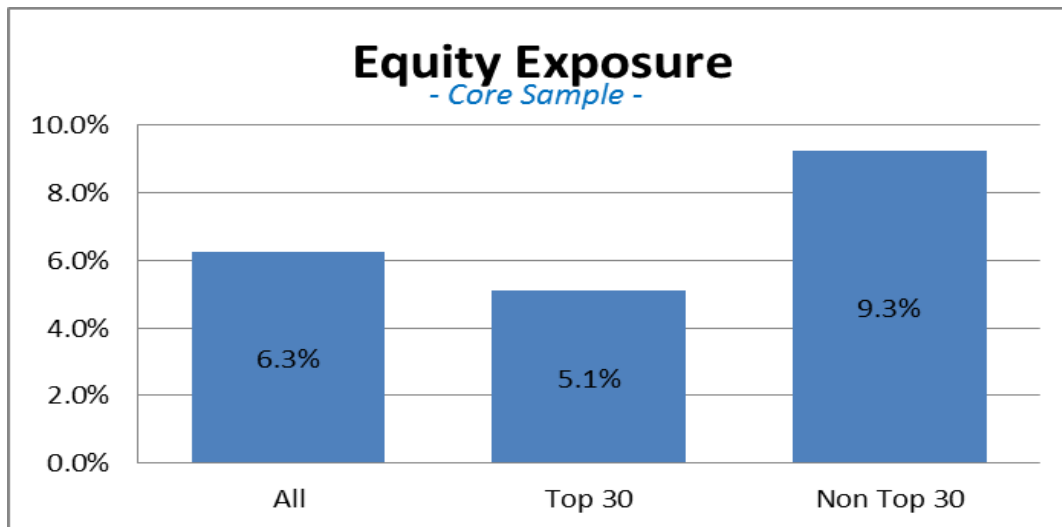
Figure 19: Relative share of equity investments to total investments

147.   Also the relative share of total investments in equity for the core sample is rather small, but Figure 19 suggests that the equity exposure again differs with respect to the general size of the participant. On average smaller participants i.e. non Top 30 groups and solo core participants, are more exposed to equity than larger participants.

2.   Liability profile
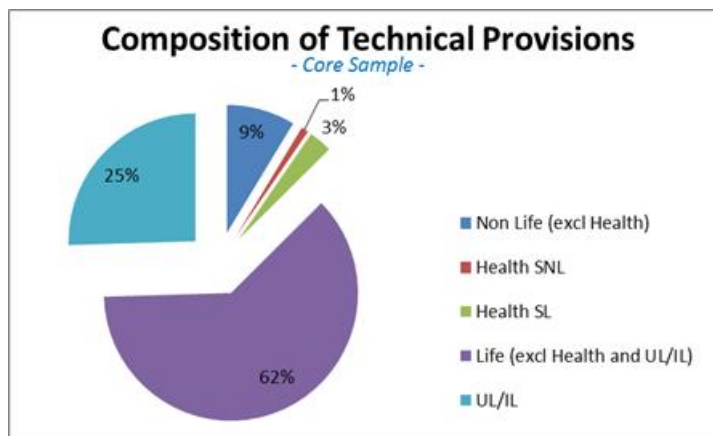
Figure 20: Composition of technical provisions

148.   The major part of the technical provision (TP) in the core sample is represented by the life technical provisions i.e. 62%.

3.   Own funds and SCR profile

149.   In addition to analysing the possible exposure of the stress test participants based on their asset profile, a detailed analysis of their loss absorbing capacity is crucial. Therefore, to measure and compare the impacts of the different stresses performed changes in solvency and

capital positions can serve as a benchmark. The following section provides an overview of the SCR-coverage before stress. As the calculation of post-SCR figures was optional (also see disclaimer section), the pre-stress SCR will serve as a key benchmark figure. Next, these impacts will also be measured based on own fund changes. The pre-stress own funds of the core sample therefore also received particular attention. Lastly, any effects of the LTG-measures are also important from a financial stability perspective when drawing conclusions on possible stress impacts. Therefore, analysis of capital adequacy should be complemented with a detailed impact assessment of the respective LTG-measures which is not the aim at this exercise given the preparatory stage of Solvency II.

a. Own funds

150. The figures below should help to judge the solvency coverage ratios in comparison to the composition and hence quality of the underlying own funds. The chart below displays the average composition of own funds of the core sample:
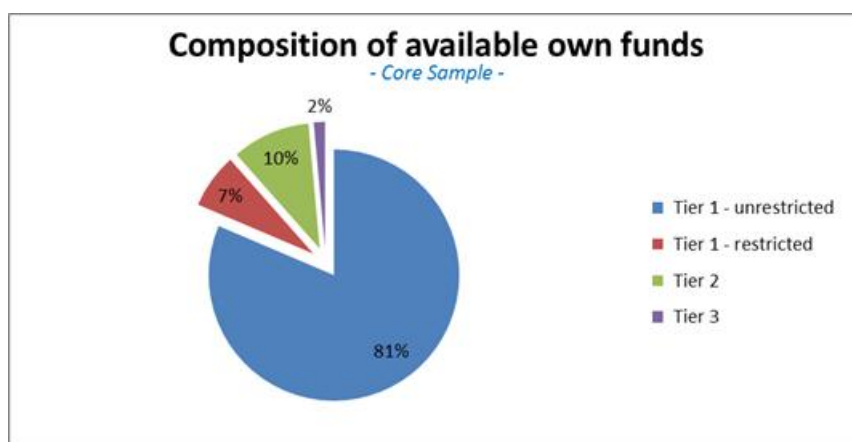
Figure 21: Composition of available Own Funds

151. As Figure 21 shows, own funds of the core sample are sufficiently based on unrestricted tier 1 capital. The capitalisation is therefore on average of high quality and hence indicates a good loss absorbing capacity. Figure 22 shows the composition of the unrestricted Tier 1 capital, which is also uncontroversial.
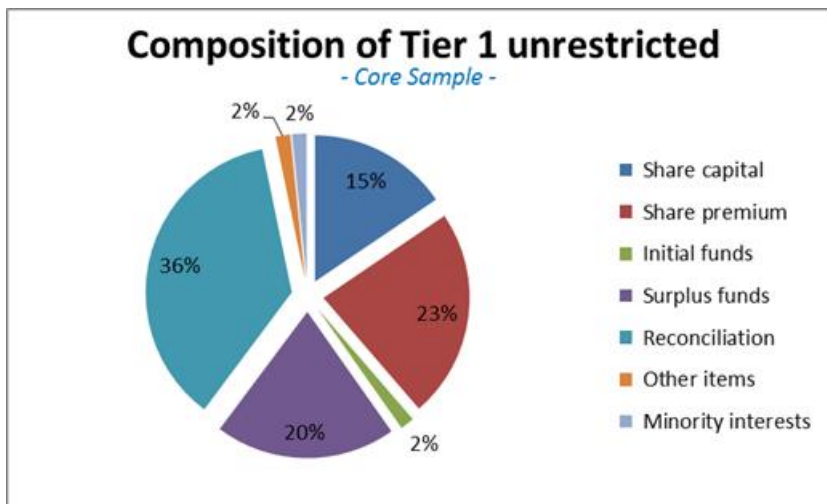
Figure 22: Composition of Tier 1 unrestricted

b. SCR

152.   The following analysis on SCR ratios is based on Standard Formula (SF) SCR calculations – the default approach chosen for this Stress Test exercise. Only a very limited number of participants made use of the option to provide SCR ratios based on Internal Models. Therefore no representative analysis on this subset was included in the report.

153.   Figure 23 below shows that most participants meet the pre-stress SCR coverage. Specifically, according to Figure 23 more than 25% of the core module participants have a comfortable starting position (SCR ratio > 200%). However, Figure 23 also shows that ca. 14% of the total core sample does not meet the SCR requirements pre-stress. This subset even includes one Top 30 undertaking (indicated by grey crosses in Figure 23). Given the still early preparatory phase of the undertakings to Solvency II and the limited use of LTG-measures, the insufficient levels of pre-stress SCR for some participants should not be overestimated.
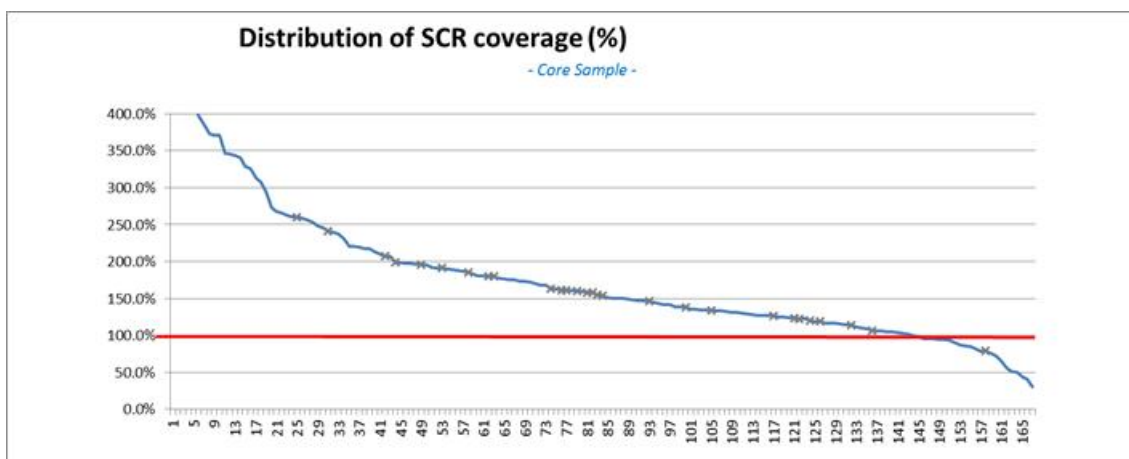
Figure 23: Distribution of SCR ratios (full core sample; grey crosses mark top 30)

154.   Figure 24 and Figure 25 below clearly support the expected effect on the SCR coverage ratios due to the LTG-measures. Without the use of LTG-measures approximately 18% of the Top 30 participants do not meet the SCR coverage. However, with LTG-measures, less than 4% of the Top 30 participants do not have a SCR ratio above 100% and more than 60% get to a ratio above 150%. It needs to be noted that no participant used the LTG-measures to their full extent and some participants did not use any LTG-measure. A more detailed analysis on the LTG-measures used by the participants and the respective impact is given further below. Figure 24 also suggests that smaller undertakings (i.e. non Top 30) on average maintain higher solvency capital buffers when applying the LTG measures, although they made less use of such measures than the larger groups as it is reflected in Table 5 below.
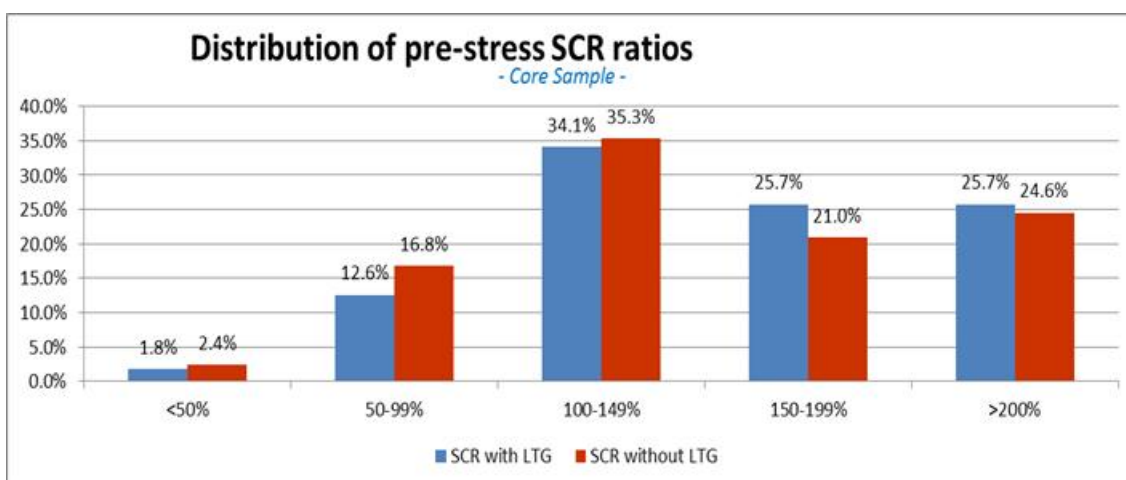
Figure 24: Core: Distribution of pre-stress unweighted SCR ratios with and without LTG measures
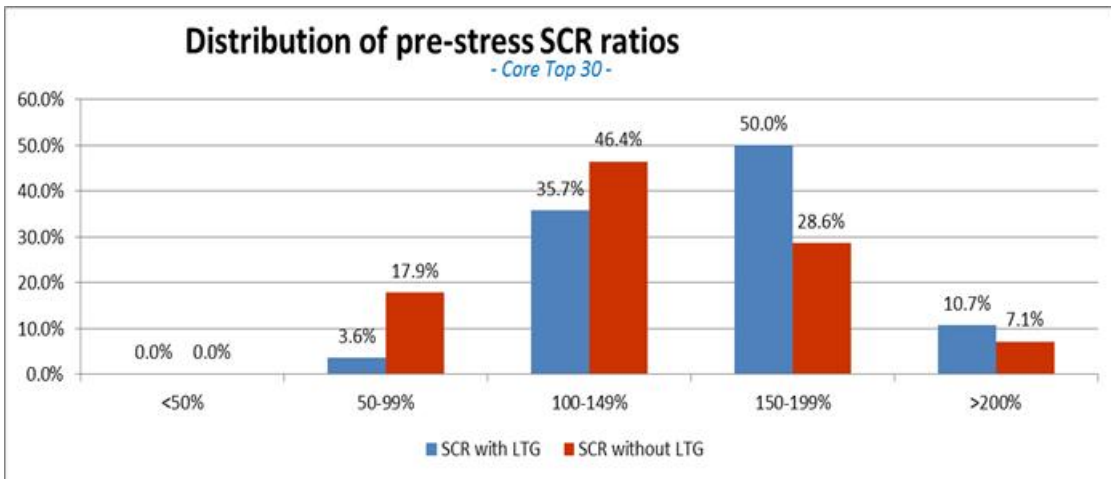
Figure 25: Core Top 30: Distribution of pre-stress unweighted SCR ratios with and without LTG measures
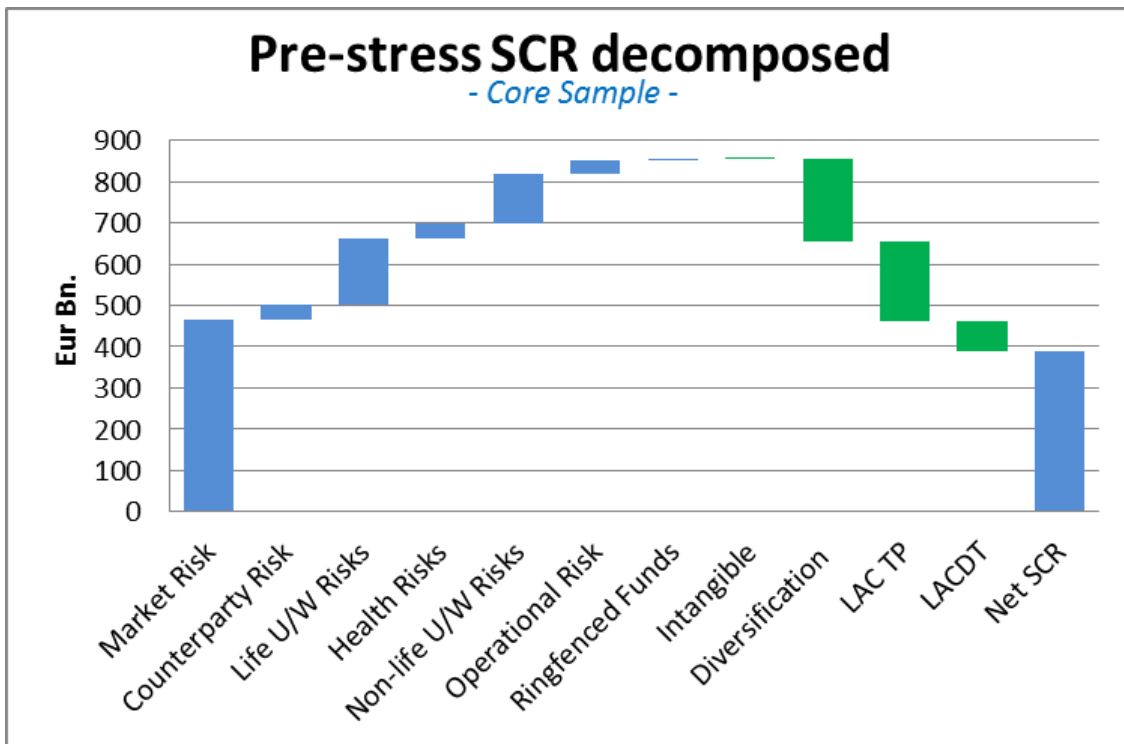
Figure 26: Pre stress SCR decomposed

155.   As the technical provisions (TP) of the core sample are dominated by classic life insurance business, market risk is the main driver of the SCR. The non-life underwriting risk is rather low, suggesting only a minor post-stress impact of the respective stresses for the given sample.
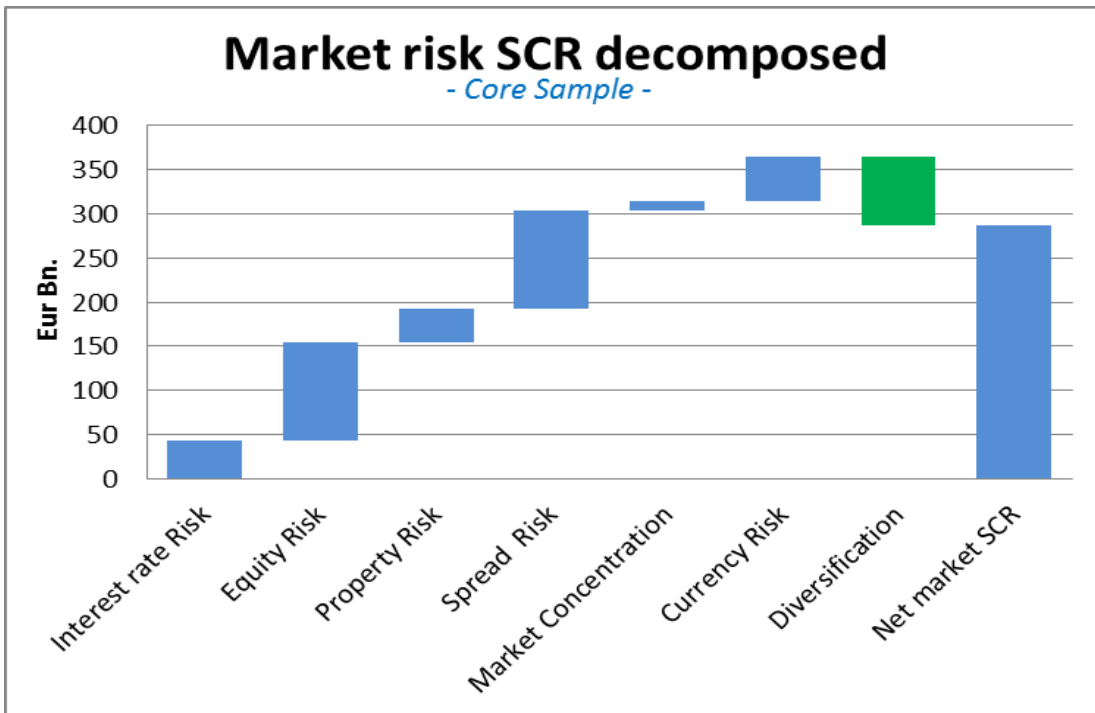
Figure 27: Market risk decomposed

156. Within the market risk module the equity and spread risk have the biggest impact on the SCR. Hence, it can be expected that the respective asset stresses of the adverse market scenarios of the 2014 exercise will drive the overall impact.

4. LTG measure application

157. In this section a more comprehensive analysis on the effect of the LTG-measures takes place. As tables 4 and 5 show, only a limited amount of participants made use of the LTG-measures. Smaller undertakings in particular did not make use of this possibility to its full extent. Overall, the Volatility Adjustment was the most commonly applied LTG-measure by participants in the EIOPA Stress Test 2014.

LTG measure	Used by % of sample
Matching Adjustment	7.2%
Volatility Adjustment	31.1%
Transitional on RFR	1.8%
Transitional on TP	4.8%
Transitional on equity	10.2%
Transitional on own funds	7.8%
Any LTG measure	35.9%

Table 5: Relative share of LTG-measures used by core sample

LTG measure	Used by % of sample
Matching Adjustment	35.7%
Volatility Adjustment	67.9%
Transitional on RFR	3.6%
Transitional on TP	17.9%
Transitional on equity	17.9%
Transitional on own funds	25.0%
Any LTG measure	78.6%

Table 6: Relative share of LTG-measures used by Top 30
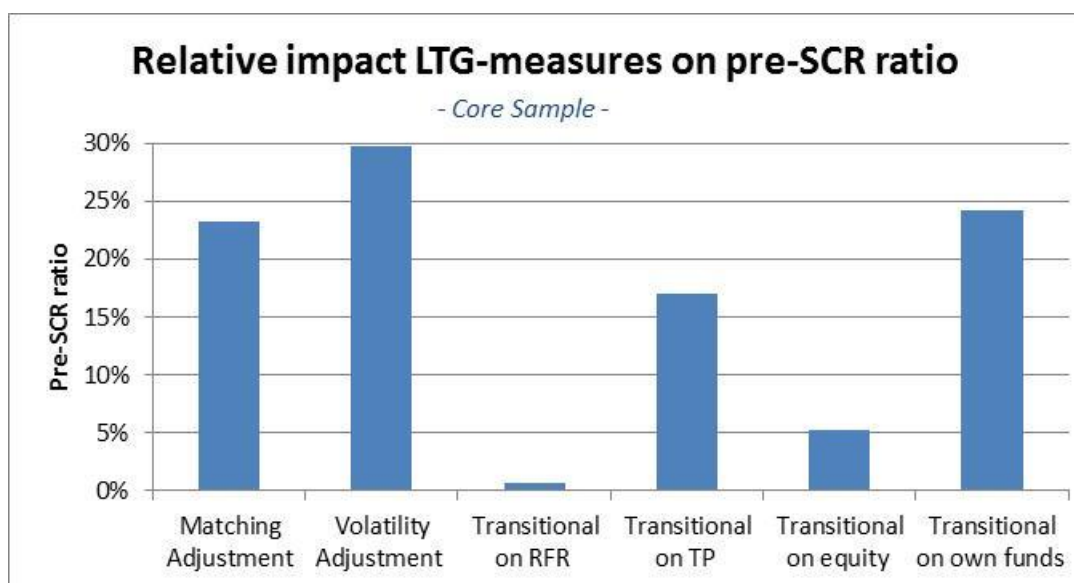
Figure 28: Core: Relative impact of LTG-measure on pre-stress SCR ratios

158.   Figure 28 illustrates the impact the respective LTG-measures had when applied. As expected, a combination of several LTG-measures has a very considerable impact on SCR coverage ratios. This is especially true for those participants that combined the use of the Volatility Adjustment with either the transitional on own funds or technical provisions.

D.   Evolution under a possible global market stress emanating from a decline in the equity markets (CA1)

1.   The stress assumptions

159.   This market scenario and the second one have been set up in a new way compared to the 2011 EIOPA stress-test exercise. The scenario reflects the current view of both EIOPA and ESRB regarding the prevailing systemic risks.

160.   The EU equity market as a whole was assumed to be the source of distress. The shock to government and corporate bond spreads apply to all maturities and are to be translated into falls in bond prices.

161.   The magnitude of this stress has been set up with the help of the ESRB and the ECB. It consists of a decline of the equity market and their occurrence probability is estimated to be approximately equal to 1%. This scenario is supposed to be cross-sectorially consistent.

162.   The variables and parameters at stake for this stress can be found in paragraph 11 of the 'EIOPA Stress test 2014' document.

163.   LTG-measures were authorised in the stress test framework if they were aligned with the Solvency 2 preparatory guidelines.

164.   The transitional measures coming from the risk-free interest rates and on technical provisions had to be calculated in the pre-stress scenario and then be kept constant in the post-stress situation[18].

165.   The total yields (spreads plus basic risk free rate) were considered constant so that the spread could increase after the stress. Besides this particular application, for the corporate and sovereign bonds, the spreads should have been shocked separately.

166.   With respect to the central validation work, the large majority of the Stress Test participants applied the core module specifications adequately. A few participants did not apply the double hit approach in a coherent manner.

2.   The stress simulated results

167.   Undertakings had the option to reassess their post-stress SCR but the vast majority of them did not choose to do so. As a consequence the analyses were mainly focused on the variation of the excess of assets over liabilities or of the own funds.

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[18] If undertakings were to use transitionals according to the stable regulatory framework they should reassess their adjustment post-stress in accordance with their supervisors' approval.

CA1: Excess A/L and EOF pre and post stress
- Core Sample, CA1 -
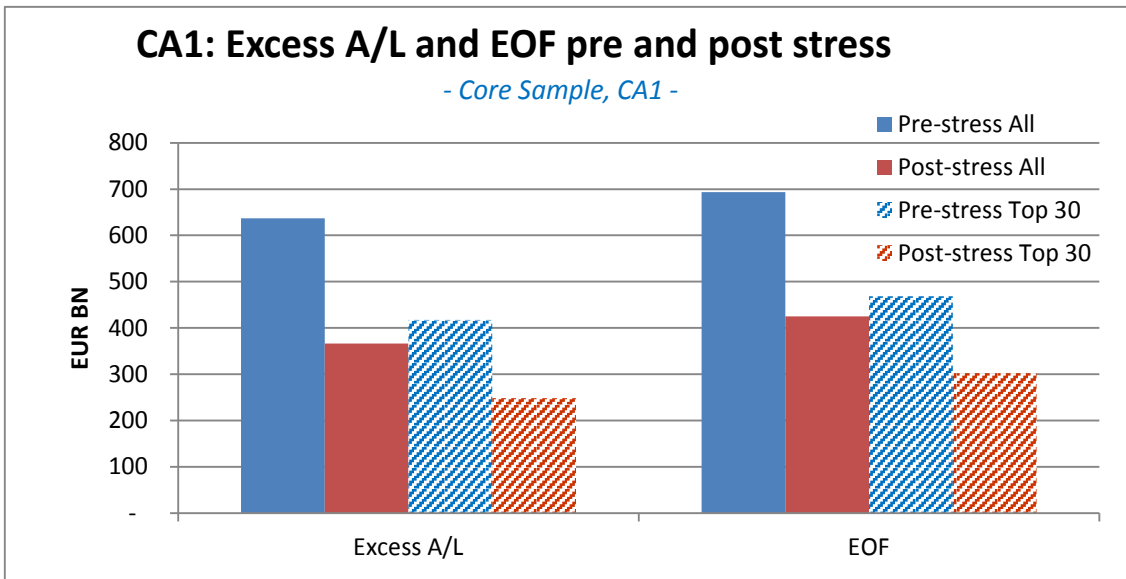
Percentage change		
	All	Top 30
Excess A/L	-42%	-40%
EOF	-39%	-36%

Figure 29: Move of excess of assets over liabilities and eligible own funds for all the participants and top 30

168.   As can be seen in Figure 29 of the CA1 scenario, the whole sample lost approximately one third of the total excess of assets over liabilities. A parallel move can be seen for the top 30 undertakings: this smaller sample is a little bit more resilient than the whole sample. The same characterisation can be observed for aggregate own funds: Top 30 entities account for more than two thirds of the aggregate own funds and display a similar parallel move to all the participants. As a first order approximation, they can be considered as the main driver of the different exposure.

a) *Relative decrease*
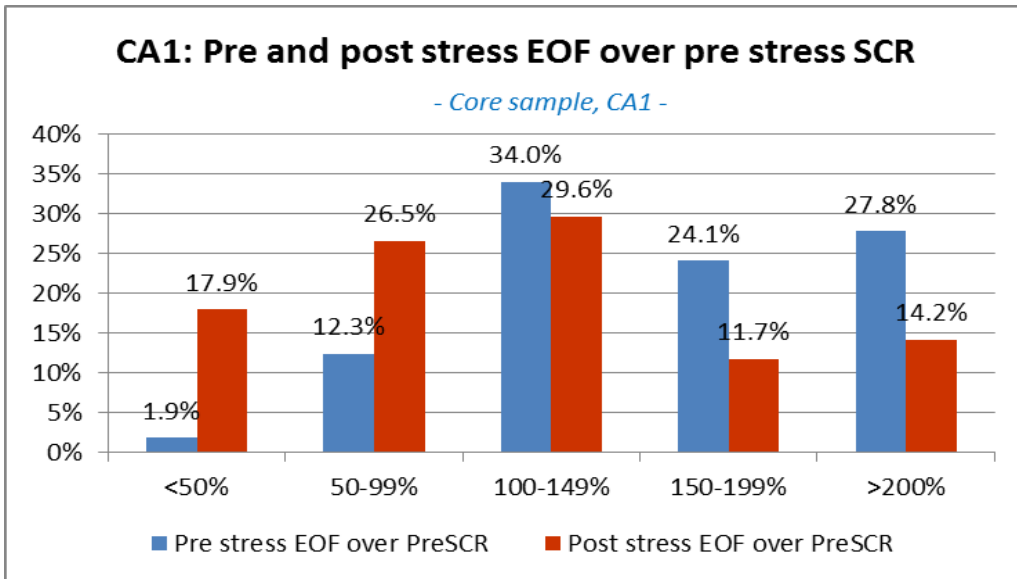
Figure 30: SCR coverage pre and post stress for all the participants
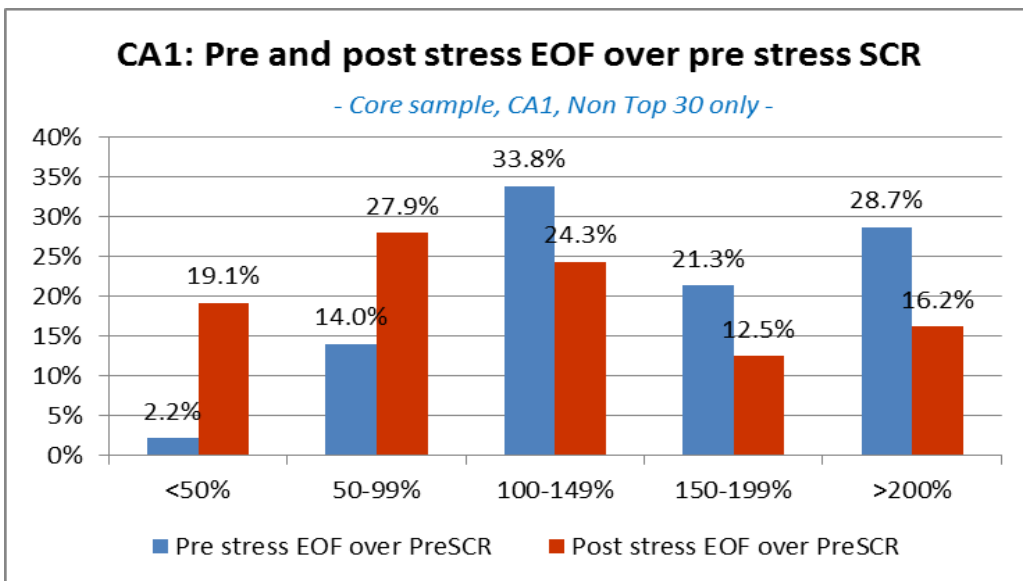
Figure 31: SCR coverage pre and post stress only for non top 30.
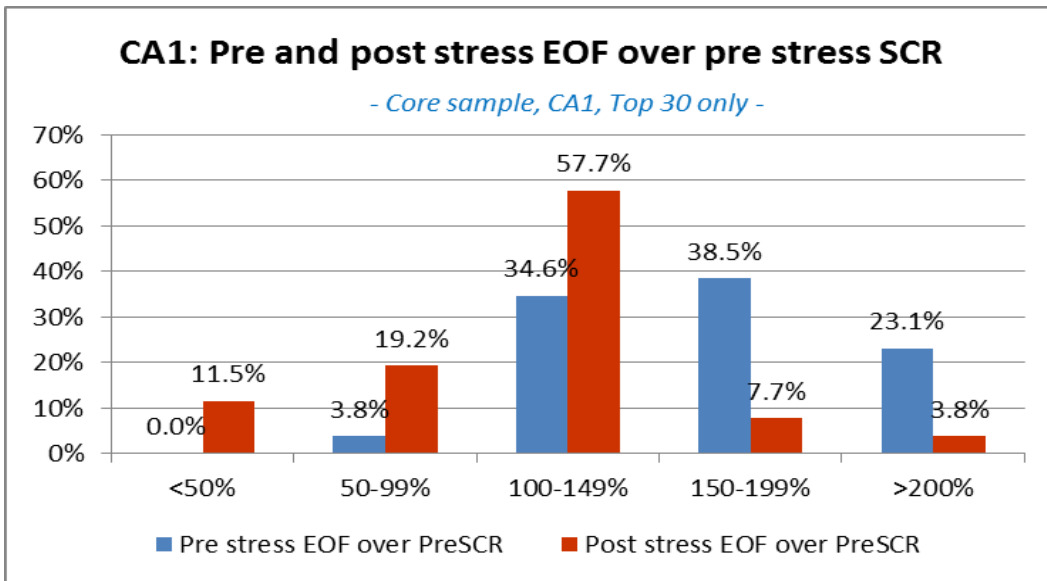
Figure 32: SCR coverage pre and post stress only for top 30.

169. Considering more specifically the impact on own funds compared to the pre-stress SCR (cf. Figure 30 and Figure 32), the effect of the stress test appears to be more severe for the Top 30 sample. However, in the post-stress case, 69.2% of the Top 30 sample still has an SCR ratio higher than 100%, compared to 53% of the non-Top 30 sample.
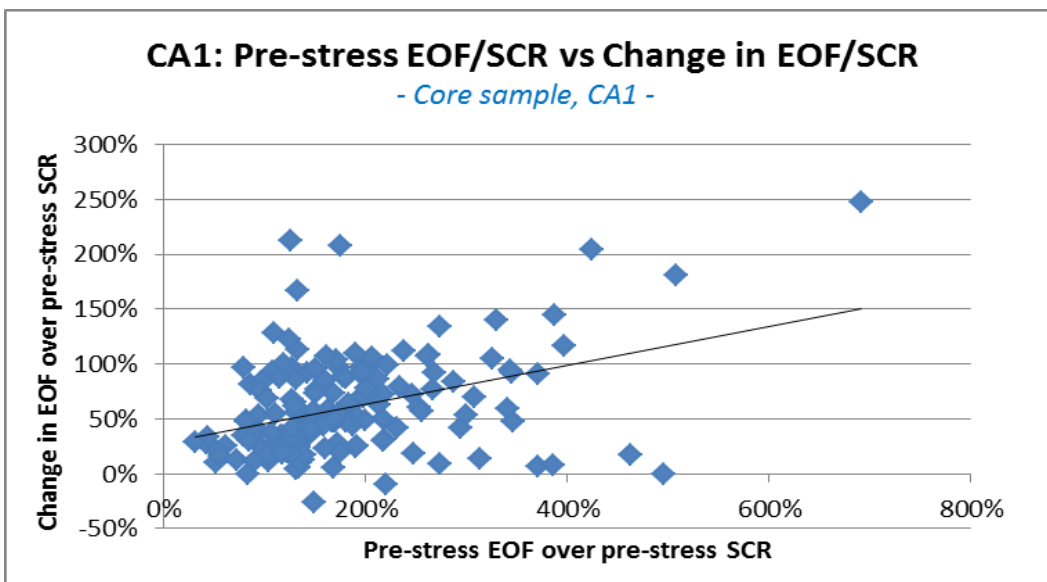
Figure 33: Scatter plot "pre stress EOF/pre SCR" vs. "Change in EOF/pre stress SCR

170. Considering Figure 30 the SCR coverage turns out to be, a useful indicator to predict the resilience of undertakings within the CA1 scenario. The Figure above indicates a visually identifiable correlation structure where the higher the coverage ratio, the more the undertakings resist the shock. However, this correlation structure is less clear for CA1 than for the CA2 (see Figure 48) and the reliability of this indicator

cannot be taken for granted since major exceptions arise from this exercise. Indeed, we can observe in Figure 33 some outliers far away from the interpolated line whereas there should not if this indicators were 100% predictive.
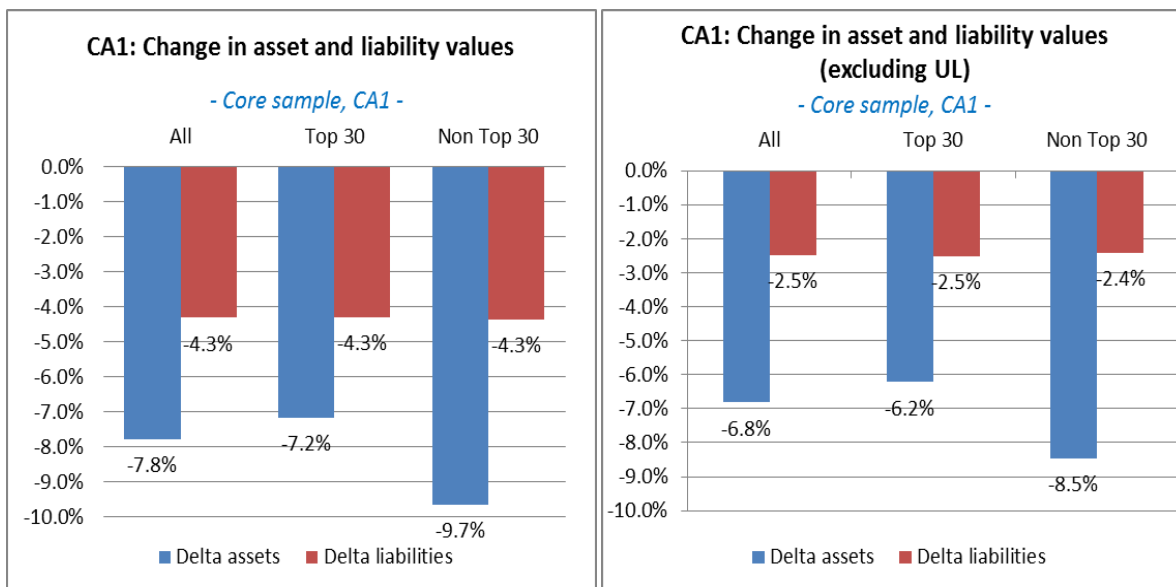
b) *Change in assets and liabilities*

Figure 34 CA1: Change in assets and liability values with or without Unit linked

171. Top 30 account for approximately 75% of assets (and 76% liabilities) of the Core Adverse 1 sample, but only for 69% of the ~543 BN EUR change in assets values associated with this scenario. For the liability side, the impact for Top 30 insurance groups does not differ significantly from those of other participants. The total change in liabilities associated with the CA1 scenario amounts to ~273 BN EUR.

172. When removing the Unit Linked assets and liabilities, average impacts of the scenario are reduced. The decrease in asset values amounts to ~374 BN EUR, Top 30 accounting for 67% of that. And the decrease in liability values amounts to ~122 BN EUR, with the Top 30 accounting for 75% of this.

173. Figure 32 shows, that out of the Top 30 sample significantly more participants do not meet the SCR coverage if reassessed post-stress (i.e. ca. 30% compared to 4% pre-stress). Also only one of the Top 30 participants, out of 5 that recalculated the SCR after the stress, ended up with a comfortable post-stress SCR coverage (SCR ratio > 200%) compared to 23% pre-stress.

CA1: Distribution of change in assets and liabilities

- Core sample, CA1 -

Change in asset values
Change in liability values
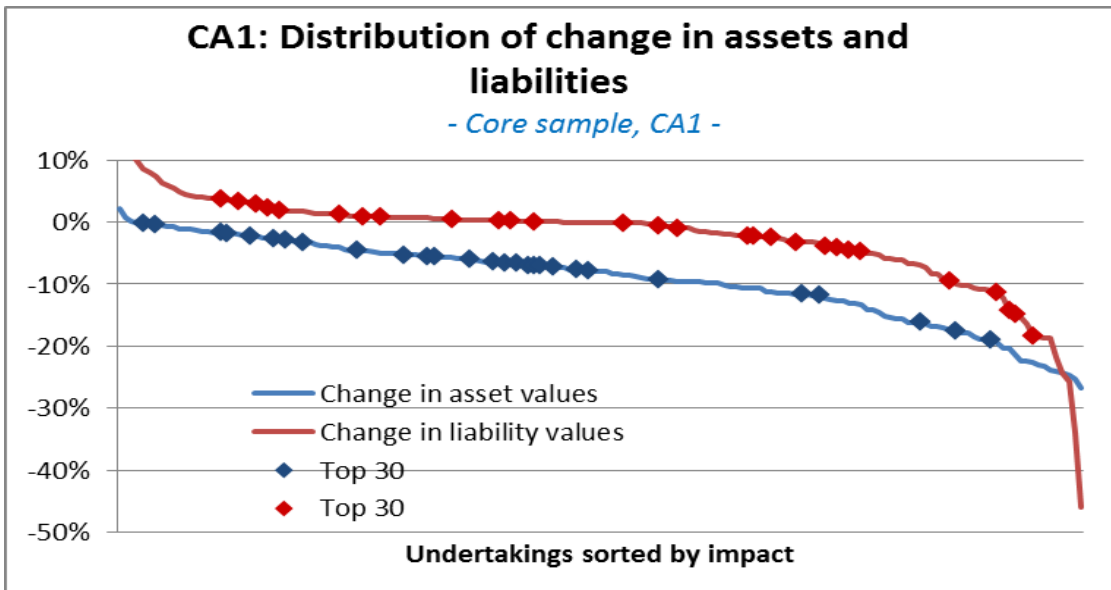Top 30
Top 30

Undertakings sorted by impact

Figure 35 CA1: Distribution of change in assets and liabilities

174. Regarding the distribution of the change in assets, a parallel evolution can be remarked for the whole sample. Few participants underwent a loss in assets that would have impeded the coverage of their liabilities (cf. Figure 35).
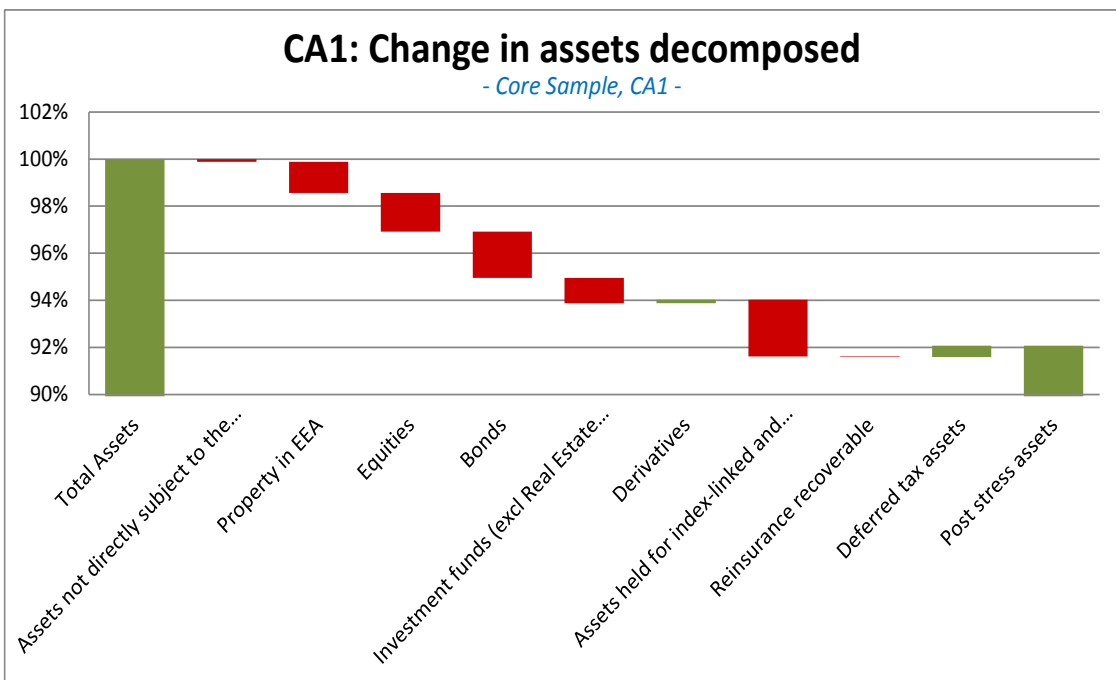

CA1: Change in assets decomposed

- Core Sample, CA1 -

Total Assets
Assets not directly subject to the...
Property in EEA
Equities
Bonds
Investment funds (excl Real Estate...
Derivatives
Assets held for index-linked and...
Reinsurance recoverable
Deferred tax assets
Post stress assets

Figure 36: Decomposition of the change in assets

175. In the CA1 scenario the stress-test shocked the assets in the way it were supposed to: equities, bonds, and properties were the most impacted (cf. Figure 36).

176. According to this data collection, derivatives seem to be gaining from this stress test hypothesis despite the different losses of the

underlying. There may be plausible explanations, some were given by the NCAs for those gains (e.g. negative correlation with the value of the underlying), however checking those was not a key point during the validation of the stress test results and so further investigations to validate those behaviours should not be discarded in the future.
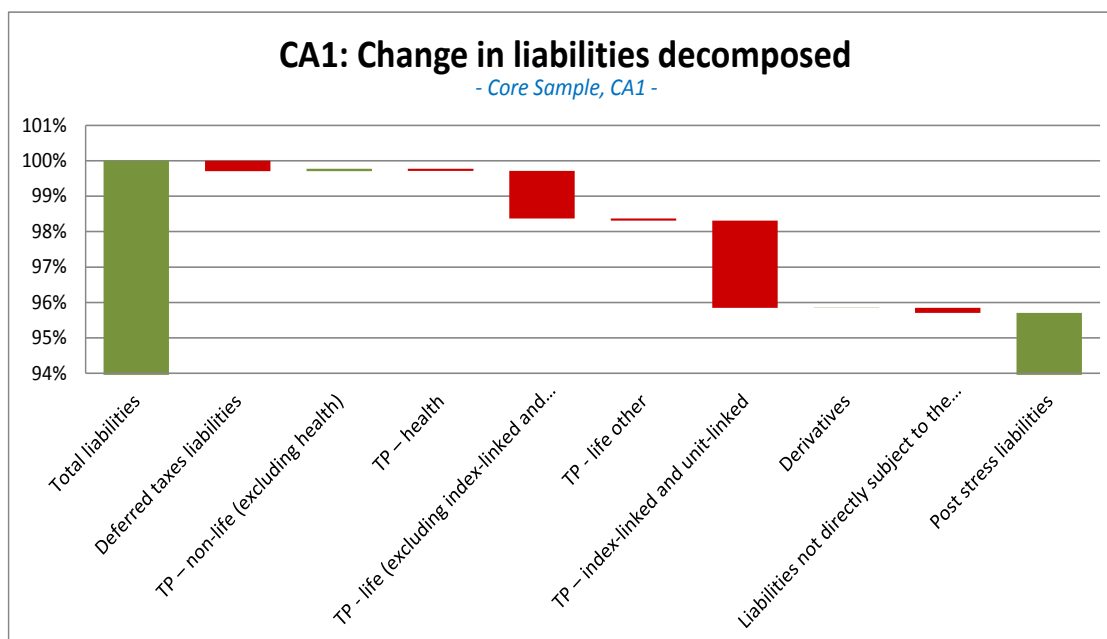

CA1: Change in liabilities decomposed
- Core Sample, CA1 -

Figure 37: Decomposition of the change in liabilities

Change in assets over liabilities

	With LTG	Without LTG*
After LAC (TP & DT)	36.9%	67.6%
Before LAC (TP & DT)	66.0%	97.4% **

*Sample contains only companies that reported change without LTG measures

** Before LAC of TP only

Table 7: CA1: Change in Excess of Assets over liabilities with and without LAC and LTG

177.   The change of assets over liabilities is used in the current report as a tool for measuring the stress test impacts. As can be seen above in Table 7, loss absorption capacities (TP & DT) and LTG measures increase the resilience of the companies to the stress test impacts significantly. As shown in Figure 34, although the adverse market scenarios aim to stress both the asset and the liability side of insurers, the liabilities actually

decreased following the stress due to the more than compensating impact of LAC and LTG.
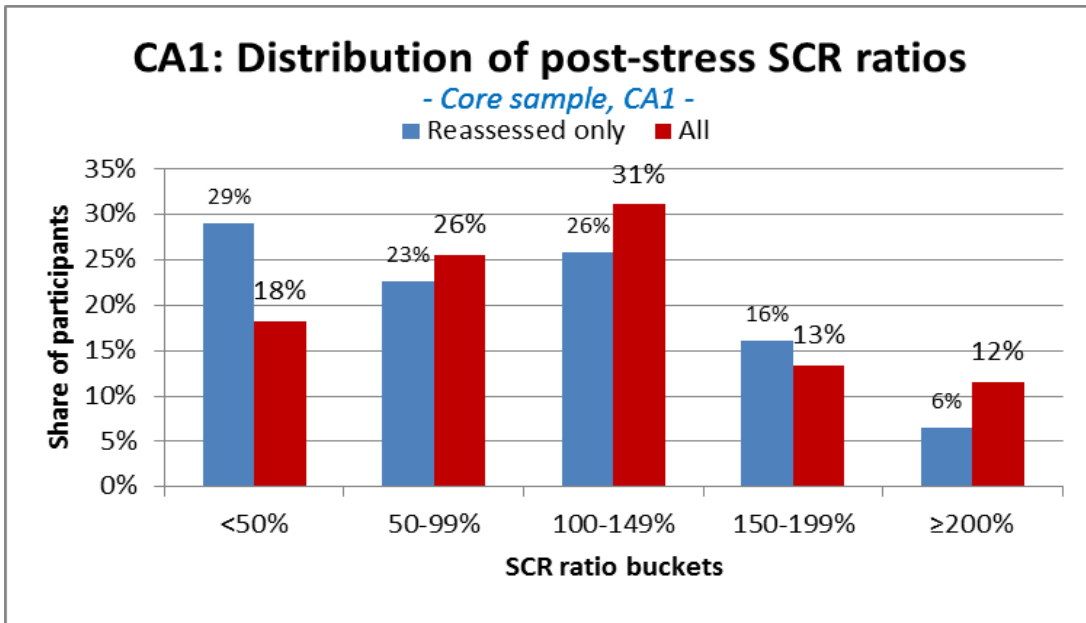
c)   Change in EOF & SCR ratios

Figure 38: CA1 Distribution of post-stress SCR ratios for all and those undertakings which have reassessed the SCR post stress (sample size 30)
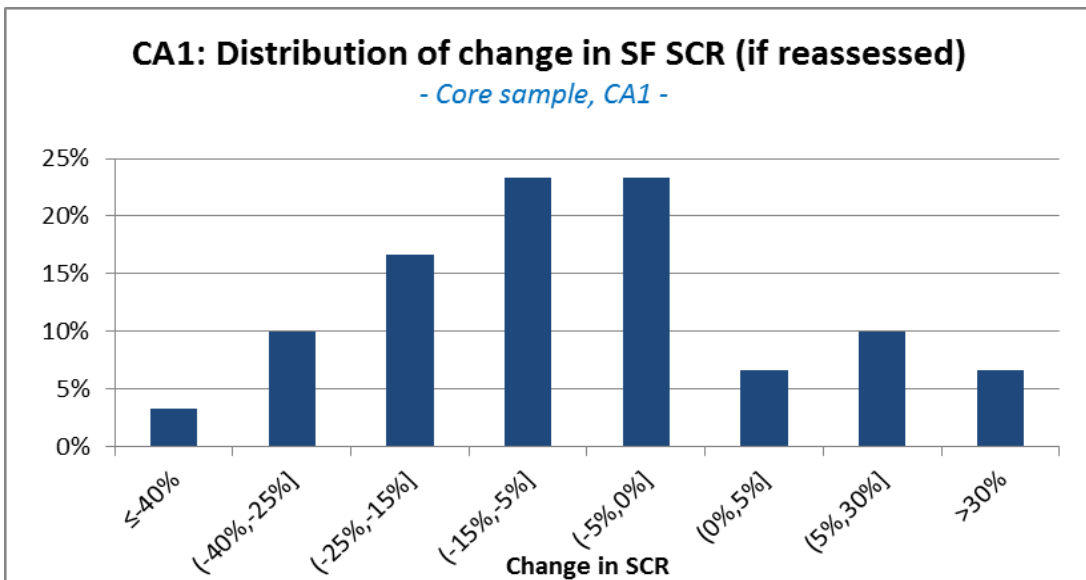

Figure 39: Change in SCR for the undertakings which have reassessed the SCR post stress (sample size 30)

178.   Despite the difference in the sample size, Figure 38 illustrates the shift in distribution of post stress SCR for those which reassessed their capital requirement after the stress (i.e. 30 undertakings) when compared to the distribution for all participants in the core sample. Figure

39 shows how the capital charge decreases on average but some participants charges increase if SCR is reassessed. This observation does not confirm the assumption made that the value of the SCR after the stress was assumed to be lower than before the CA1. This should be taken into account for the next stress-test exercises whether for the design of the scenario or for the analysis.

E. Evolution under a possible global market stress emanating from spreads widening on the corporate bond markets (CA2)

1. The stress assumptions

179. The framework for CA2 was shaped in the same fashion as for the CA1 stress, especially in terms of collaboration with the ESRB.

180. In this specific case, the source of distress was focused only on the non-financial corporate bond market. However, spill-over effects could be observed for other market segments, for example for the sovereign bond or the bank bond markets.

181. Comments regarding the approach to analyses (change in assets and liabilities or own funds rather than SCR ratios) still apply for this scenario.

2. The stress simulated results
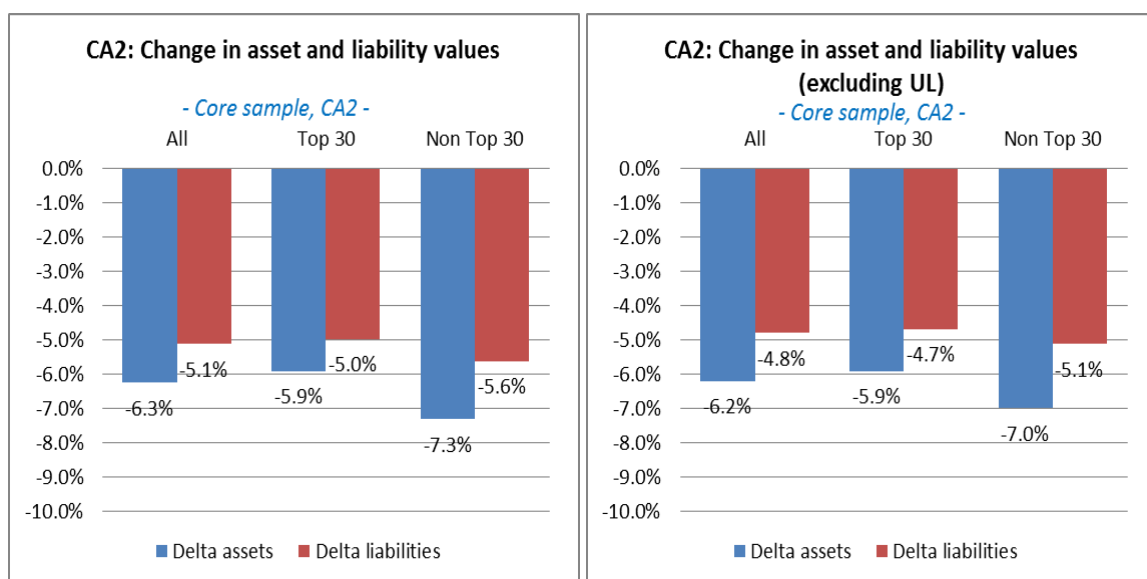
a) Change in assets and liabilities

Figure 40: CA2: Change in assets and liability values with or without Unit linked

182.   Compared to CA1, the changes in asset and liabilities for CA2 are somewhat milder. Specifically, the value of assets decrease by ca. 6%, compared to ca. 7%, and liabilities decrease by ca. 5%, compared to ca. 2.5%. So, although the exposure to the CA2 stresses is on average higher for the core sample, the slightly less severe stress levels of CA2 overall establishes it as the milder adverse scenario. When comparing the impacts according to size of the participants, one can observe that smaller (non-Top 30) participants are somewhat more exposed than larger participants (Top 30).
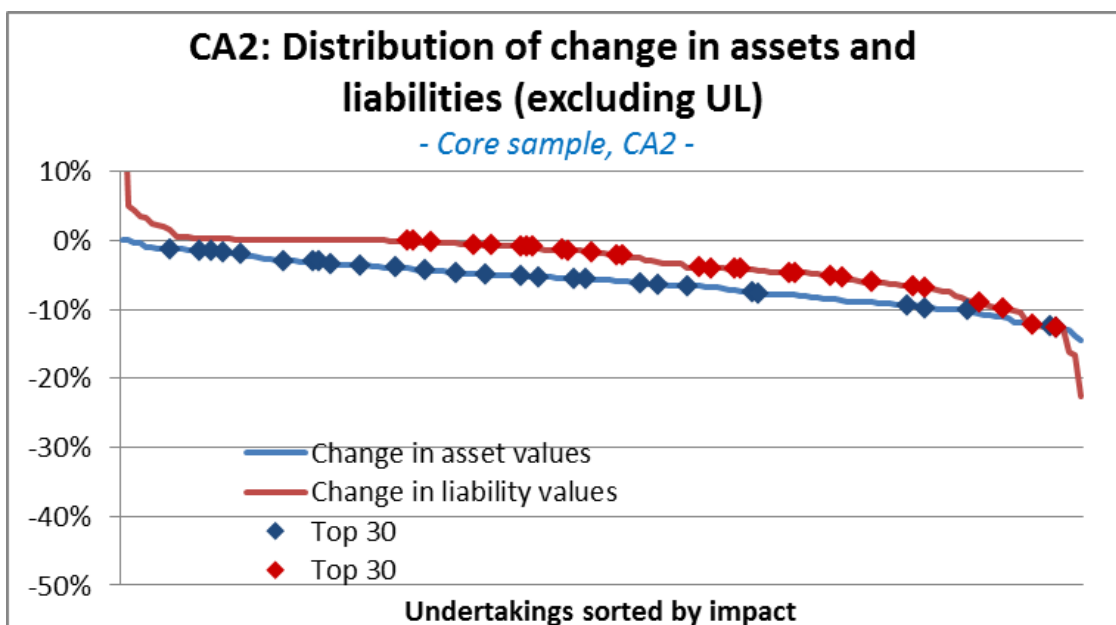
Figure 41: Distribution of change in A/L considering the core module participants

183.   As in the CA1 scenario, only a few participants were put in a situation where their assets did not undergo a parallel move to their liabilities, leading to potential mismatch in their assets over liabilities coverage or a severe depreciation of their own funds.
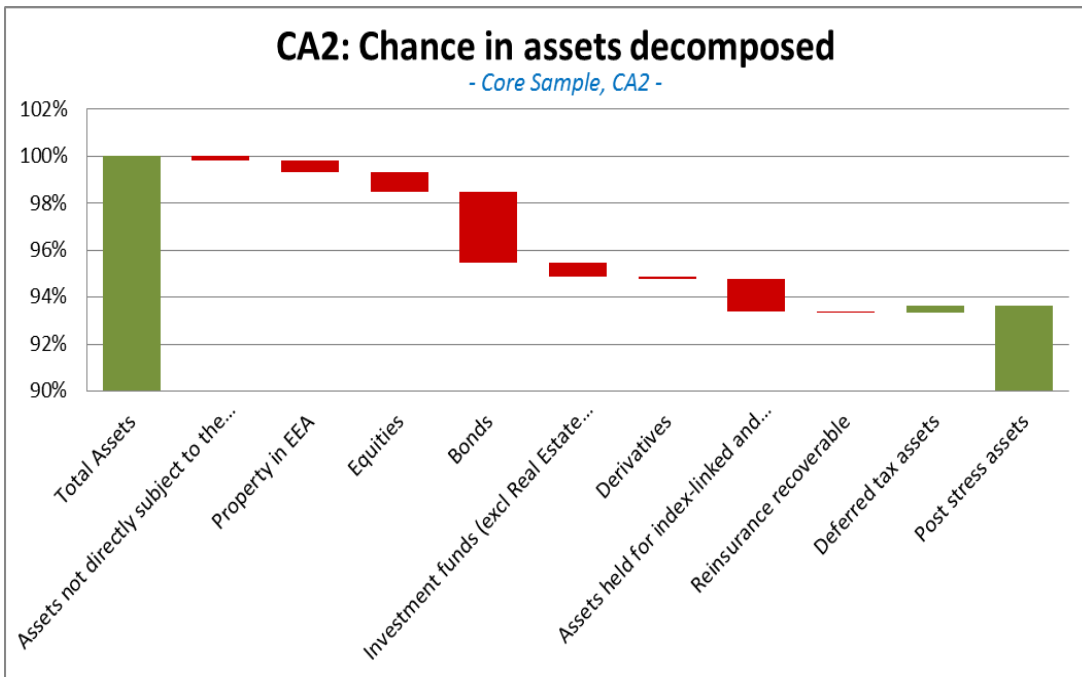
Figure 42: Change in assets decomposed

184. As expected with the stress hypotheses, "Bonds" is the assets category most impacted by this scenario. Even if in this scenario Derivatives seem to generate some loss; its level was not subject to specific investigation during the validation phase of this exercise with the purpose to check how the stress hypotheses were interpreted for this category of assets.
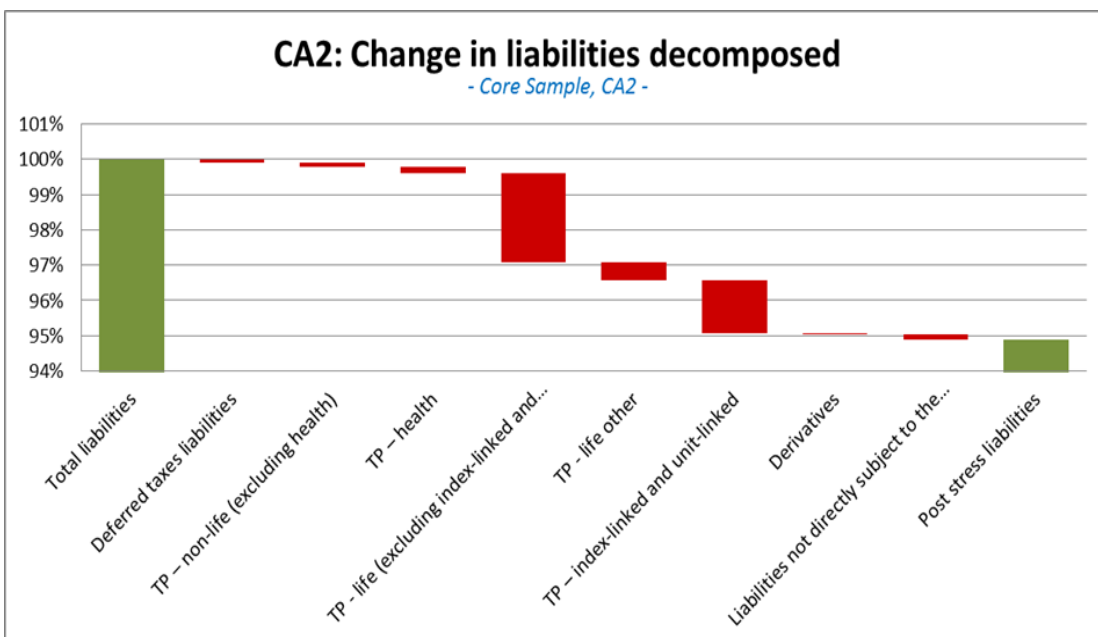

Figure 43: Change in liabilities decomposed

185. Liabilities were also significantly impacted by this scenario. Contrary to CA1, the Life technical provisions excluding index-linked and unit linked underwent the strongest fall.

Change in assets over liabilities	With LTG	Without LTG*
After LAC (TP & DT)	16.8%	31.2%
Before LAC (TP & DT)	30.9%	50.7% **

*Sample contains only companies that reported change without LTG measures

**Before LAC of TP only

Table 8: CA2: Change in excess of assets over liabilities with and without LTG and LAC

186. Evolution of assets over liabilities is used in the current report as a tool for measuring the stress test impacts. As can be seen above in Table 8, loss absorption capacities- Technical Provisions and Deferred Taxes (LAC) and LTG measures increase the resilience of the companies to the stress test impacts significantly. As shown in Figure 34, although the adverse market scenarios aim to stress both the asset and the liability side of insurers, the value of the liabilities actually decreased following the stress due to the more than compensating impact of LAC and LTG.
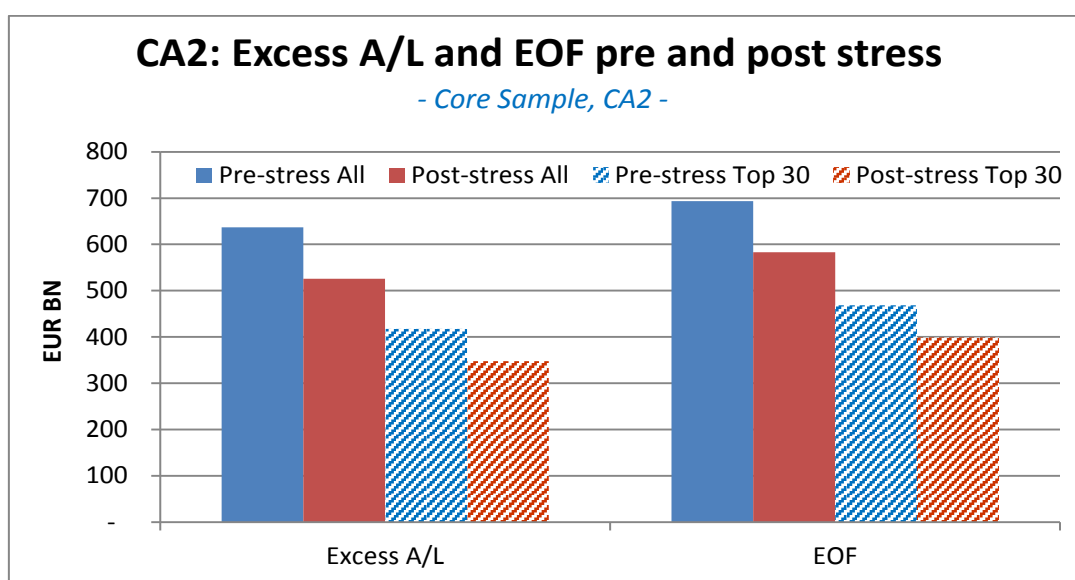
b)   Change in EOF and SCR ratios

CA2: Excess A/L and EOF pre and post stress
- Core Sample, CA2 -

Figure 44: Move of excess of assets over liabilities and eligible own funds for all the participants and top 30

187. In CA2, the main driver of both the decrease of the excess of assets over liabilities and the eligible own funds was the 'non-top 30'

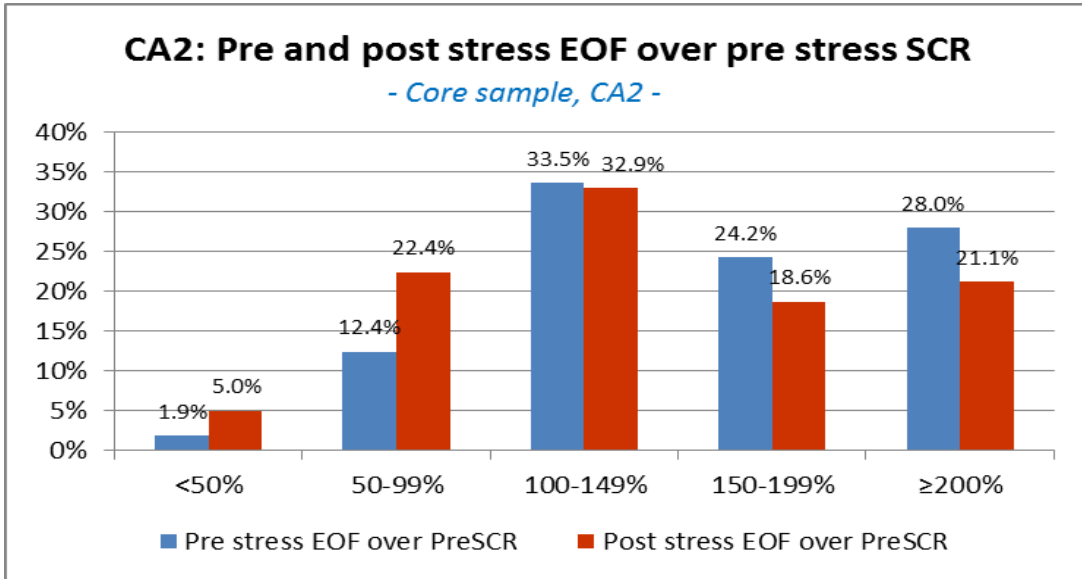sample. This stylised fact differs from what was observed in the CA1 scenario.

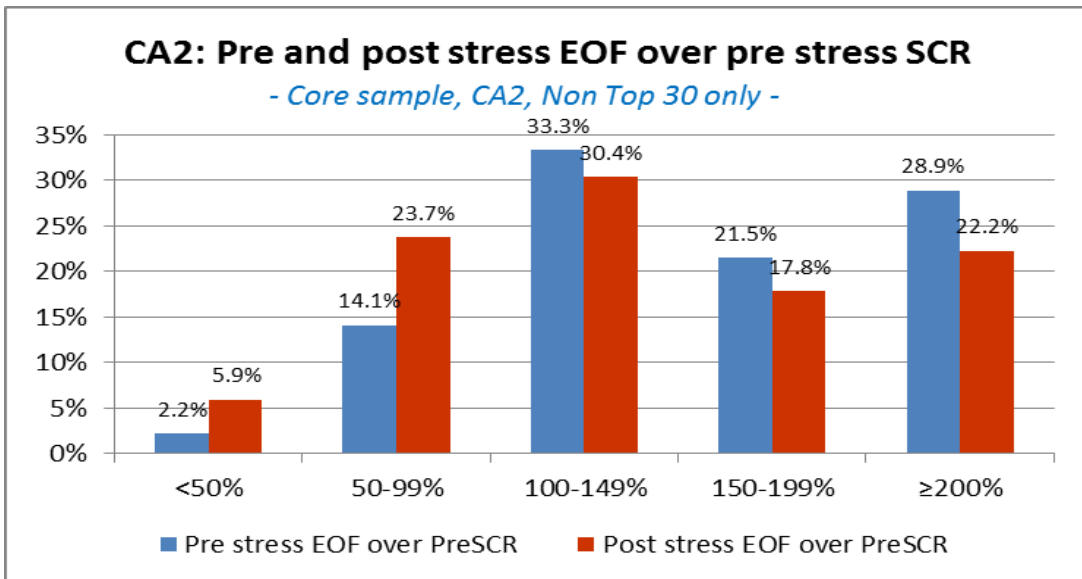**Figure 45: Distribution of eligible own funds for all the participants**

Figure 46: Distributions of eligible own funds for non top 30 only
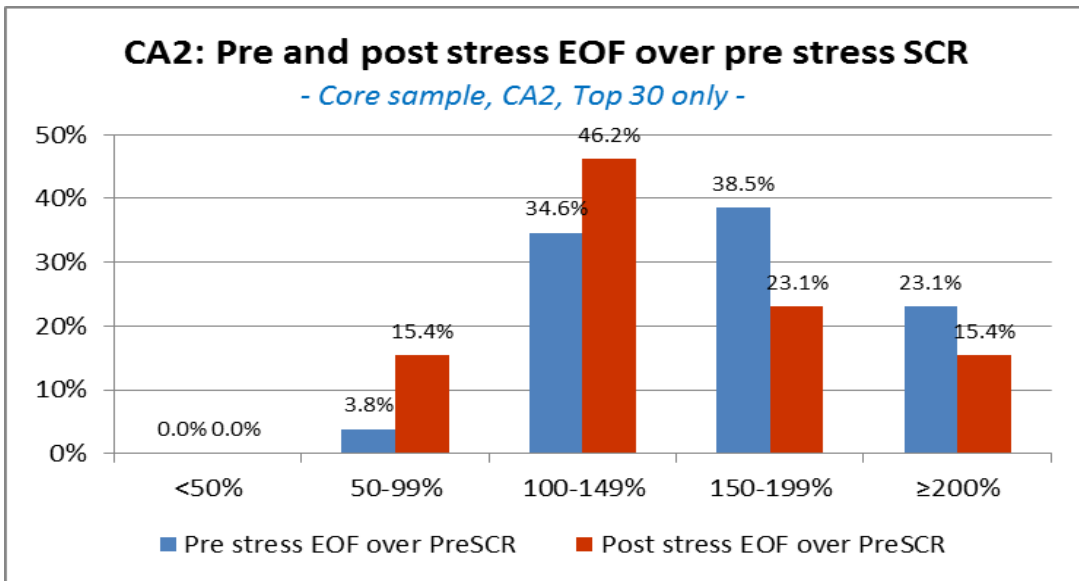
Figure 47: Distributions of eligible own funds for top 30 only

188. As remarked in Figure 44, the Top 30 sample was not an appropriate proxy for this scenario. More precisely, Figures 45 to 47 show a significant difference in the distribution of the own funds between non-Top 30 and Top 30 samples. This could indicate a larger exposure to non-financial corporate bonds for the non-Top 30 groups or better use of the risk mitigation tools provided by the regulatory framework for the Top 30.
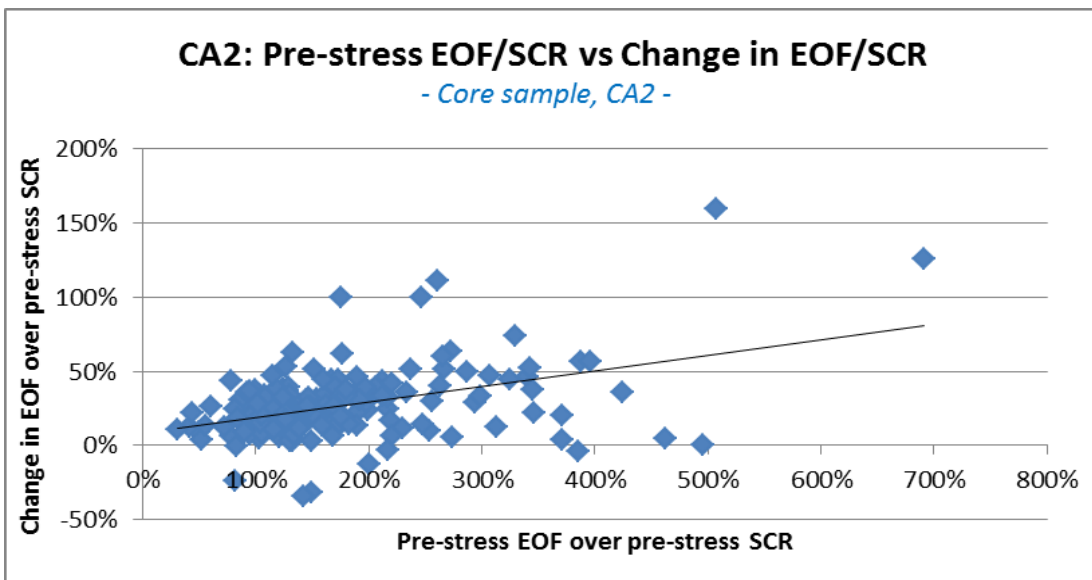

Figure 48: Scatter plot "pre stress EOF/pre SCR" vs. "Change in EOF/pre stress SCR

189. The correlation between SCR coverage and undertakings ability to withstand the stress test, as introduced in the CA1 section (see paragraph 170) is even clearer in the CA2 scenario. Still, the SCR coverage can be used as an early indicator to measure the fragility of an

undertaking. As a matter of fact, this scenario was less severe, it was thus not unexpected that this indicator would be less able to capture non-linear effects than the first one. Indeed, this is exactly what can be observed in Figure 48.
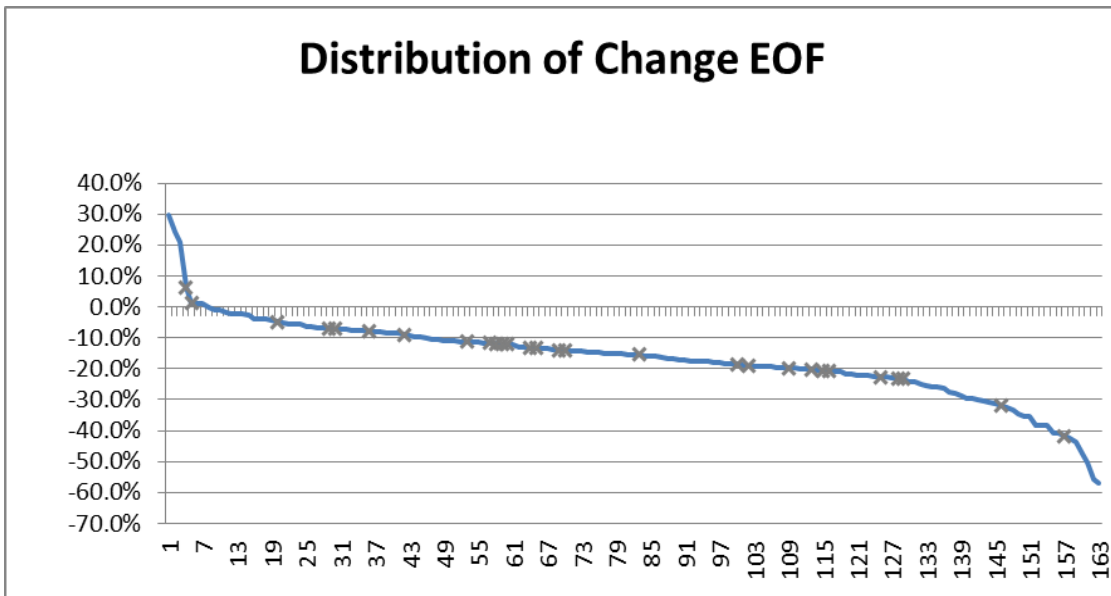

Figure 49: Distribution of eligibile own funds evolution for CA2

190.   CA2 scenario presents a distribution of the change in EOF which looks quite scattered between some firms that benefit from the scenario and others that can lose more than half of their own fund. This might indicate differences in use of the loss absorption capacities that enhance protection of the own funds within the scenario.
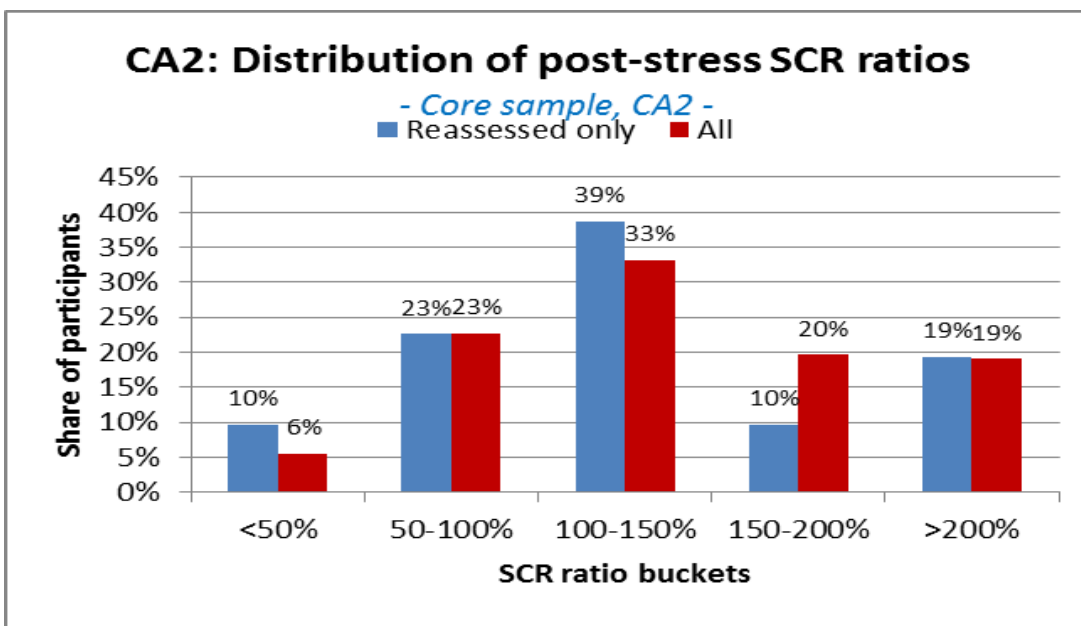
Figure 50: CA2: Distribution of post stress SCR ratios for all and those undertakings which have reassessed the SCR post stress (sample size 30).
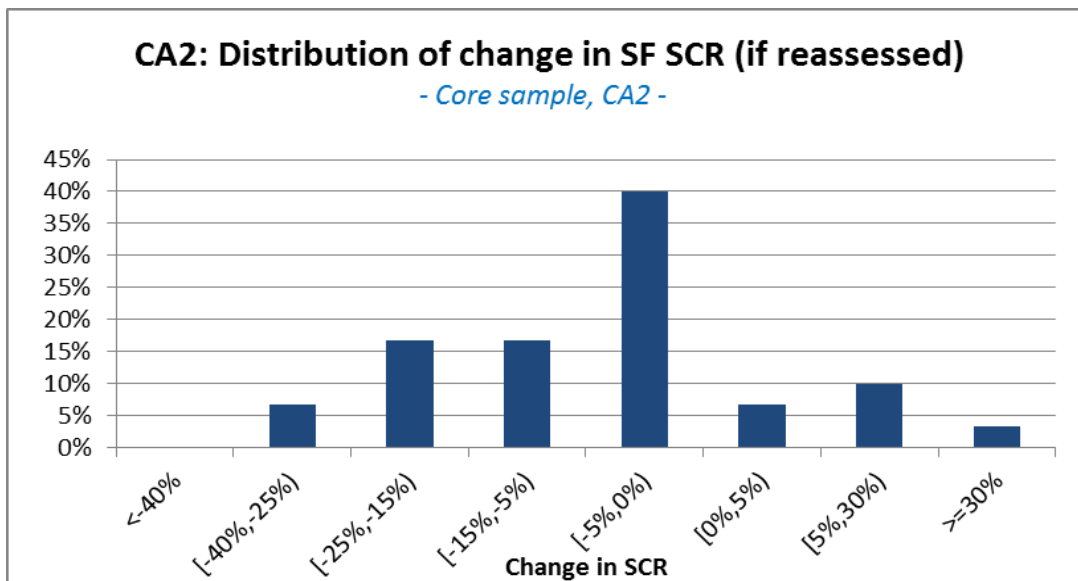

Figure 51 Distribution of change in SCR for all the participants, those who reassessed (sample size 30).

191.   Similar to what was explained in paragraph 187, Figure 50 illustrates the shift in distribution of post stress SCR when comparing all participants which those which reassessed their capital requirement. In the same manner as for the CA1 scenario, the reassessing cohort underwent a stronger depreciation of their SCR. Figure 51 shows how the capital charge decreases on average but still some participants charges increase. As a consequence, the stress test framework should take this feature into account for the next exercises and consider discontinuity capital requirement right before and after the stress. All the participants might be asked to recalculate their SCR in the next test to address this.

3.   Qualitative questionnaire analyses

a)   Introduction

192.   The financial crisis has shown that the way financial institutions respond to shocks can hugely amplify the underlying shock that hit the financial system. Despite their importance these so-called 'second round' effects may not get picked up in stress tests. This is because – in particular for large exercises like this stress test – the interactions between financial institutions and the markets in which they operate are too complex to be able to model a dynamic reaction of the institutions' balance sheets. Many stress tests – including this one – are therefore based on the assumption that insurers cannot take actions they would consider remedial in the face of stress. The macro-prudential importance of second round effect means that they should not be ignored because of modelling constraints.

193.   Therefore the EIOPA 2014 stress test has been complemented by a set of qualitative questions regarding insurers' likely dynamic responses to one of the adverse financial market scenarios[19]. A qualitative understanding of how individual institutions might respond to a particular stress may help to identify potential macro-prudential risk. For example, while selling of assets may be a rational response to a stress for an individual insurer, such a strategy – if pursued by many – could amplify the original stress and lead to a vicious spiral.

b) Participation

194.   The vast majority of participants in the core module of the EIOPA stress test replied to this questionnaire. Out of the 167 insurance companies that took part in the core stress test, 166 companies replied. They represent Euro 6.1 tn. assets.

c) Restoring capital shortfalls

195.   Insurance companies were asked about their most likely actions to restore any capital shortfall. In particular they were asked the following question: "Assuming the shocks in the adverse financial market scenario originated by the non-financial corporate bond market prove sustainable, how would you react in order to restore a capital shortfall relative to SCR or to your own capital position target within 6 months?"

196.   The majority of companies have no capital shortfall after applying the relevant scenario (see section III E.2 for the overview of impacts due to CA2 scenario).

197.   55 Insurance companies replied that they would not take any action at all, mostly because their capital levels remain above their SCR. (see section III.D.2). These companies represent 3.0 tn Euro of assets, i.e. half of the assets of insurance companies which have participated in this questionnaire. Hence, these are mostly the larger companies.

198.   The 111 companies that reported to take action represent Euro 3.2 tn. of assets. Two thirds of the companies that have reported actions show a capital surplus after the shock. These companies thus consider the shocks in the scenario severe enough for short term action – possibly

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[19]

https://eiopa.europa.eu/fileadmin/tx_dam/files/activities/financial_stability/insurance_stress_test_2014/Note_on_qualitative_questionnaire_on_one_of_the_market_adverse_scenarios_of_2014_EIOPA_stress_test.pdf

because these companies missed their internal voluntary capital targets - even though they would still meet their SCR.

199. Companies reported on average 3 actions. These actions differ across companies, with no single, dominant action. Equity and/or subordinated debt issuance, dividend retention and reduction of equity investments are the most prominent actions. One forth of the companies have reported to sell corporate bonds (financial and non-financial), but only to a small extent. Given the small differences between weighted and unweighted averages of the replies, there is not much difference between the actions of small and large companies. The results are summarised in Table 9 and Figure 52 below.
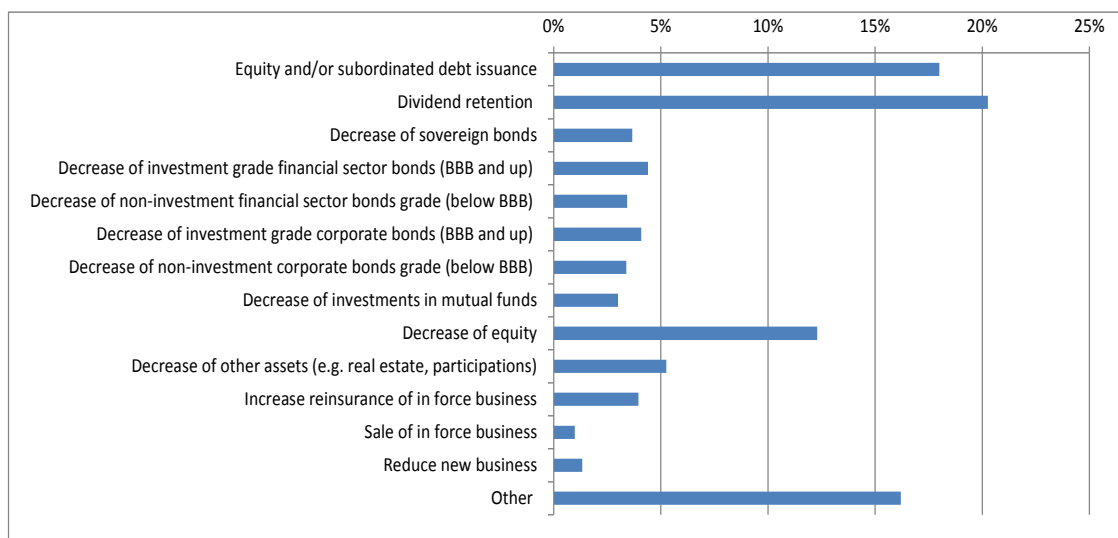

Figure 52: Share of actions reported by insurance companies after Core Adverse scenario2 (unweighted; only those companies that reported to take action, i.e. 111 companies)

	Action	Number of companies that mentioned this action	Average share of the action (unweighted)	Average share of the action (weighted in terms of total assets)	Eur mln for companies with shortfall
	Increase in capital levels of which:				
1	Equity and/or subordinated debt issuance	45	18%	18%	5448
2	Dividend retention	46	20%	22%	1161
	Reduce risk at the asset side by the sale of:				
3	Sovereign bonds	12	4%	1%	590

	Financial sector bonds of which				
4	Investment grade financial sector bonds (BBB and up)	29	4%	5%	1335
5	Non-investment financial sector bonds grade (below BBB)	27	3%	1%	145
	Non-financial corporate bonds of which				
6	Investment grade corporate bonds (BBB and up)	24	4%	5%	1785
7	Non-investment corporate bonds grade (below BBB)	25	3%	3%	220
8	Investments in mutual funds	17	3%	1%	82
9	Equity	48	12%	11%	2798
10	Other assets (e.g. real estate, participations; please specify below)	24	5%	2%	1823
	Reduce liabilities of which:				
11	Increase reinsurance of in force business	22	4%	5%	2148
12	Sale of in force business	7	1%	2%	1117
13	Reduce new business	13	1%	1%	720
14	Other (please specify below)	24	16%	24%	1767
	Sum	363	100%	100%	21150

Table 9: Actions reported by insurance companies after stress test scenario 2 (only those companies that have reported to take action, i.e. 111 companies)

200. Under the category 'other' insurance companies noted the following actions: move to safe haven assets, de-risk in general, reduce asset/liability gap, optimise group capital positions, diversify deposits, merge subsidiaries within the same group, increase hedging, move to more government bonds, reduce duration of bond investment and reduce discretionary benefits.

201. Despite insurance companies' claim that they would 'derisk their assets' and 'move to quality' they did not report to sell more non-investment grade bonds than investment grade bonds.

202. Those companies that show a capital shortfall after stress reported to mostly close the gap by issuing capital or subordinated debt (1/4 of the gap), selling corporate bonds (1/6), reducing equity holdings (1/8), or increasing reinsurance (1/10). This would lead to capital issuance of 5.5 bn Euro a sale of 3.5 bn Euro corporate bonds (both financial and non-financial) and a sale of 2.8 bn Euro equities. These amounts should

be considered as the lower bound, since they do not include those actions of insurance companies that have no capital shortfall, but nonetheless react to the shocks in the scenario.

d)   *Maintaining profitability*

203.   Insurance companies were also asked how they would try to maintain profitability given the adverse scenario. The following question has been asked: 'Assuming the macro-economic environment in the adverse financial market scenario originated by the non-financial corporate bond market proves sustainable, how would you try to maintain profitability over the medium term?'

204.   Out of 166 companies 119 reported actions. 47 companies replied not to take any actions, because they did not believe that such action would be warranted based on the impact on their profitability in the assumed scenario and because they applied a long term strategy, which would not be adapted after the shocks in the scenario.

205.   Companies reported to take on average 4 different actions. Both in terms of number of replies and the average share of the action, the following reactions rank among the most prominent to this scenario: reduction of costs, change of product mix, change of asset composition and increase of underwriting margins. 35 companies out of 119 replied to increase to some extent their investment in higher yielding assets. There is not much difference between small and large companies, except that smaller companies seem more inclined to change their assets mix, whereas larger companies are more inclined to change their product mix.
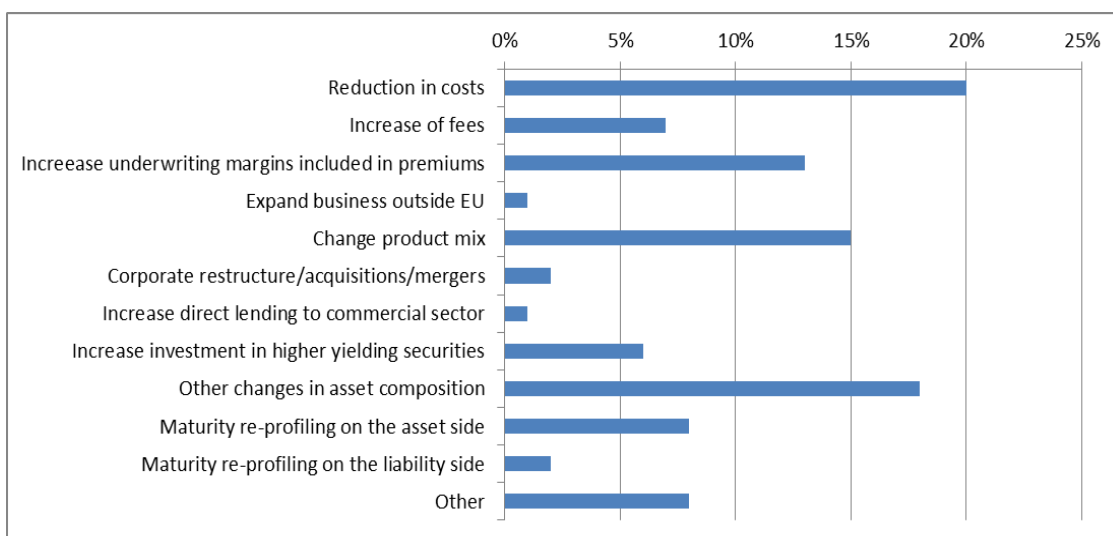

Figure 53: Share of actions reported by insurance companies after Core Adverse scenario 2 (unweighted; only those companies that have reported to take action, i.e. 119 companies)

Action	Replies	Average share of the action (unweighted)	Average share of the action (weighted by total assets)
Reduction in costs	79	20%	16%
Increase revenue of which			
Fees	40	7%	5%
Underwriting margins included in premiums	55	13%	15%
Change of business model of which			
Expand business outside EU	8	1%	3%
Change product mix	64	15%	22%
Corporate restructure/acquisitions/mergers	14	2%	1%
Change asset composition of which			
Increased direct lending to commercial sector	9	1%	2%
Increased investment in higher yielding securities	35	6%	3%
Other changes in asset composition	62	18%	9%
Maturity re-profiling			
On the asset side	38	8%	4%
On the liability side	15	2%	1%
Other	16	8%	20%
Sum	435	100%	100%

Table 10: Actions reported by insurance companies after stress test scenario 2 (only those companies that have reported to take action, i.e. 119 companies).

206. In the category 'other' the following actions have been reported: Change in profit participation rates, move to more unit-linked policies, reduce guarantee and increase of retentions.

e)   Moving the market

207. In order to assess how sales of assets might impact asset markets, following the shocks in the assumed scenario, insurance companies have been asked the following question: 'In which security or security markets

(type of security, country, etc.) is your presence so large that you would move the market (i.e. substantially move prices) if you had to unwind your positions within 6 months (e.g. in case lapses forces you to do so)?' and: 'In which of these markets would you reduce your assets (as replied in Q1)?'

208.   The majority of the 143 companies which replied to this question stated that they individually do not constitute such a presence in any market in order for them to be able to move it. This is because of the size of the investment portfolio relative to the different markets, the high degree of diversification and the liquidity of assets, which insurance companies hold.

209.   A number of exceptions were mentioned: single investment holdings with low market liquidity (e.g. tailor-made structured products, issues with low amount outstanding), national government bonds of smaller countries (e.g. Croatia, Latvia, Malta), national government bonds of larger countries (e.g. Belgium, France, Italy and Portugal), regional government bonds, the Great Britain corporate bond market, Danish mortgage and index bonds, Vietnamese government bonds, , the Nasdaq OMX Nordic market, covered bonds in Iceland, EUR swaps and swaptions, local commercial and rural real estate investments and Norwegian securities markets.

210.   However, companies with this market presence firmly state that, under the assumed scenario, they would not be forced into selling such assets which could materially move the market.

f)   Impact on the insurance markets.

211.   In order to assess the impact of the adverse scenario, insurance companies' expectations as regards lapses, demand for policies and impact on competition were asked. The question to companies was: Assuming the economic environment in the adverse financial market scenario proves sustainable, what would be your expectations for policyholders' behaviour? Specifically: What are your projections for the impact of the scenario on lapse rates? Would you expect demand for insurance products to change (both in terms of level and in terms of product mix)? How would you assess the competition among insurers within a stressed environment and what strategies would you adopt to preserve your market share?

212.   148 companies replied to these questions. In general companies do not expect major changes following the adverse scenario, although the replies are mixed.

213.   Only 1/7 foresees a significant increase of lapses. The others point at the rigid contracts, unfavourable consequences of lapses for policy holders and historic stable lapse rates.

214.   Companies do not expect overall demand to change significantly (with the exception of some non-life markets), but the demand for different types of insurance product will change. Consumers will increase their demand for low cost, flexible, secure saving/investment products, preferable with guaranteed returns attached. Most of the companies expect competition to remain fierce.

F.   Sensitivity to insurance specific stresses (SFIS) and combination with market scenarios

215.   The stress test exercise tested a total of 15 single factor insurance stress scenarios including

> a. 7 scenarios relating to Nat Cat risks (2 customised scenarios to be defined by participants and 5 predefined scenarios),
>
> b. 2 scenarios relating to Non-Life provision risk, and
>
> c. 6 scenarios relating to life insurance risks.

216.   The table below provides a summary of the outcome of the scenarios tested.

Scenario	Loss as % EOF (gross)	Loss as % EOF (net of RI)	Loss as % EOF (net of RI & LAC of TP and DT)	Reinsurance rate	Initial sample size
Customised NatCat scenarios					
PML 1/200	10.9%	4.3%	3.7%	60%	105
PML 1/100	7.3%	3.1%	2.7%	58%	103
Predefined NatCat scenarios					
North European Windstorm	4.7%	2.0%	1.6%	58%	46
US Hurricane	2.1%	1.4%	1.1%	34%	25
Turkey Earthquake	2.8%	1.5%	1.2%	47%	27
Central & Eastern European Flood	1.8%	1.0%	0.9%	47%	28
Airport Crash Event	1.5%	0.8%	0.6%	48%	26
Non-Life Provisioning risk scenarios					
Deficiency (+1%)	4.2%	3.4%	3.0%	20%	107
Deficiency (+3%)	13.4%	10.0%	9.0%	25%	107
Life insurance risk scenarios					
Longevity (10% uplift)	7.0%	6.5%	5.2%	8%	96
Longevity (18% uplift)	12.3%	11.4%	9.4%	8%	96
Mortality (+2/1000)	5.2%	4.4%	3.5%	15%	110
Mortality (+0.6/1000)	1.8%	1.6%	1.1%	15%	110
Mass Lapse (20%)	9.5%	9.3%	3.8%	1%	103
Mass Lapse (35%)	15.9%	15.9%	6.7%	0%	103

Table 11 Summary of the outcome of the insurance specific stresses

a. Customised NatCat scenarios

217.   A total of 105 respectively 103 out of the 167 participants of the core module have provided results of the customised NatCat events (probable maximum loss events) to be defined by (re)insurers themselves. The two scenarios were to be calibrated to a 1-in-200 and a 1-in-100 probability respectively for the net loss. [20]

218.   Average results of the two scenarios show that the gross exposure of the sample lies at 10.9% respectively 7.3% of EOF. However, around 60% of this exposure can be mitigated via reinsurance and around 6% via loss absorbing mechanisms. Therefore, the net exposures lie respectively at only 3.7% and 2.7% of EOF.

[20] Please note that some participants have defined the event based on the gross rather than net loss.

219. It should be noted though that smaller parts of the sample (mainly located in smaller southern European countries) are very heavily exposed to the Nat Cat events tested with gross or even net losses exceeding the EOF.

b. Market predefined NatCat scenarios

220. Overall, the results show that the majority of the Stress Test sample is either not affected or relatively immune to the tested Nat Cat scenarios. Weighted average net losses in Own Funds resulting from these scenarios range between 0.6% and 1.6% of EOF for those companies affected by the respective risk. Those insurers exposed to the risks are usually mitigating significant shares of the risk via reinsurance.

c. Non-Life provisioning risk scenarios

221. A total of 107 out of the 167 participants of the core module have provided results of the provision deficiency stresses. Results show that potential net losses stemming from insufficient provisioning for non-life contracts, e.g. a 3% annual increase above expected inflation, could lead to an average net loss of 9% of EOF. Only 25% of the gross loss could be mitigated via reinsurance in this case.

d. Life insurance risk scenarios

222. The most severe single factor insurance scenarios tested are those related to life insurance risk, especially for longevity and lapse risk. A longevity uplift of 18% would result in an average net loss of 9.4% of EOF for the sample – the highest impact amongst the tested stresses. The strongest impact of that stress could be observed for (re)insurers located in central and northern Europe.

223. The reinsurance coverage for those life insurance risks is generally low. However, insurers exposed to those risks have reported that the Loss Absorbing Capacity of Technical Provisions has been applied to mitigate the gross losses, especially for the mass lapse scenarios (where gross losses are brought down by ~60%). It should be noted that whenever LAC of TP is used to mitigate losses, it of course raises the question over the attractiveness of the products to remaining policyholders post the stress event and thus the viability of the business in question.

224. On the other hand, the stresses were defined in a very strict manner, e.g. the lapses would only affect the contracts with options "in the money", i.e. contracts where the (re)insurers would make losses rather than gains from lapses.

IV. The Low Yield Module

A. Background and introduction

225. According to its latest Financial Stability Reports EIOPA rates the risk stemming from a prolonged period of low interest rates to be the single most important risk insurers and occupational pensions are facing, both in terms of likelihood and impact on the market.

226. On 28 February 2013, EIOPA published an "Opinion on Supervisory Response to a Prolonged Low Interest Rate Environment" (EIOPA-BoS-12/110).

227. As a follow-up action it was agreed that EIOPA would develop a quantitative exercise in order to capture the scale, scope, and timing of the risks arising from a prolonged low interest rate environment. Against this background, EIOPA decided to incorporate a low yield module into the 2014 stress test exercise.

B. The framework

1. Low yield module design

228. The low yield module, as developed for the 2014 EIOPA stress test exercise, is a bottom-up stress test exercise implying calculations performed by insurance undertakings aiming at capturing the impact of several low interest rate scenarios.

229. The respective scenarios within the low yield module differ only with respect to prescribed interest rate term structures. To this end, two different interest rate term structures were developed, each reflecting historic and hypothetical developments possible in the context of a prolonged period of low interest rates. This resulted in two stress scenarios i.e. a Japanese-type scenario and an inverse curve scenario. The stressed term structures, one for each currency, were provided by EIOPA. It was decided to stress all currencies that are part of the EEA and strongly related developed economies i.e. USD, JPY and CHF.

2. Assumptions and data coverage

230. In order to capture the potential financial consequences of the different low yield scenarios, different impacts of each of these scenarios will be analysed:

- The impact on the balance sheet (e.g. SCR, own funds, asset & liability values);

- The impact on the interest rate exposure (e.g. durations, cash flow matching); and

- The impact on profitability (e.g. internal rates of return).

231.   In addition to requiring a Solvency 2 balance sheet set-up according to the latest technical specifications (in a situation before and after stress), related cash flow projections over a time horizon of 60 years were required in order to provide extra information on the scope, scale and timing of the low yield challenge. These cash-flow projections were required on a best effort basis under a going-concern assumption, without the inclusion of new business written and without any reinvestment assumptions.   Furthermore, these projections had to be within the scope of the contract boundaries defined by the technical specifications of Solvency 2, aspect to which remain particularly valid the observations made in section II. C 3 of this report.

232.   As a consequence, the low yield module sample covers, at a minimum, 50% market share (on solo level), expressed in terms of gross technical provisions by year-end 2013 in each member state. The scope chosen by the supervisors should furthermore have included the most important life and other relevant (from a low yield impact perspective) insurance undertakings.

233.   The decision on which types of business are relevant from a low yield impact perspective ultimately lay with the NCAs, who are best placed to judge the characteristics of the business conducted in their respective home markets. Typically, NCA's were expected to include the following types of products:

- Life insurance products which offer fixed interest rate guarantees and/or which offer some type of (fixed) 'profit participation' to the insured.

- All types of annuity-products (life, non-life, health, workmen's compensation).

- Insurance products which tariff is calculated already taking into account a certain financial income on the outstanding reserves.

a)   *Methodology of CF analysis*

234.   Participants have been requested to report the market value of those assets covering all types of technical provisions where the features of the asset allow a sufficiently predictable pattern of cash flows. Specifically, participants had to allocate the investment cash flows

according to the following categories: government bonds, corporate bonds, structured notes, collateralized securitizations, other unrated fixed-income assets, loans including mortgages, and other assets. The information was requested without differentiating the assets according to the type of insurance and reinsurance business covered with the assets. The increase of this granularity is a necessary step forward for the implementation of Solvency II (assets reported by type of insurance and reinsurance business they are covering, in particular those applying any adjustment to market consistent discount rates).

235. Furthermore, the vectors of future cash flows derived from the aforementioned assets had to be reported for a period of projection of 60 years (from 61 years onwards the sum of all discounted future cash flows was also reported).

236. Participants also had to report the best estimate of their (re)insurance obligations and the vector of future cash flows derived from such obligations. The information is disclosed for five types of business: non-life, health, life with participation benefits features, life without such features, and unit/index linked portfolios. Within each type of business five vectors have been broken down: benefits (guaranteed versus future discretionary benefits), expenses, premiums and other inflows. Participants were asked to adjust on the liability side the cash flow projections calculated with stochastic interest rates or on a risk neutral basis in order to reduce any distortions in the results when discounted with a deterministic interest rate. Despite those adjustments the possibility of remaining distortions should be acknowledged, but it is still considered acceptable for the conclusions stated in this report".

237. This information has been analysed from different perspectives, mainly:

- Relative composition of market values (assets) and relative composition of best estimates (insurance and reinsurance obligations);

- Relative composition of the cash flow vectors;

- Mismatch among cash inflows and cash outflows vectors; and

- Internal return rates (IRR) and durations:

  a. IRR for assets is calculated as the rate that equals the actual value of the cash flows derived from those assets with the value reported as current value in the cash flow template. IRR for liabilities is calculated as

the rate that equals the actual value of the cash flows derived from insurance and reinsurance obligations with the value reported as current value in the cash flow template. It is important to note that the 'internal return rate' of a (re)insurance obligation does not necessarily correspond with a financial guarantee of minimum interest (i.e. such return also reflects the return proceeding from future discretionary benefits). Another challenge refers to the cash flows of obligations with optionality, where the average of cash flows is not the best statistic to capture the current value of the obligations of the undertaking.

b. Durations have been calculated using weighted average maturity of CF (Macaulay duration formula).

238. Regarding these two metrics (i.e. IRR and durations), the coexistence of positive and negative cash flows needs to be considered for an appropriate understanding of the results. In the case of insurance and reinsurance obligations, positive cash flows during the first years of projection reduce the duration. It is necessary to complete this metric with the analysis of the cash flow vectors as shown in Section IV.D, E and F and in Annex IV. Such analysis provides an assessment of whether there is an exposure to mismatches and its timing and magnitude.

239. As a side remark, it is stressed that the different outputs of the bottom-up low yield module will be used as a starting point for EIOPA's own top-down analysis in the future. This top-down approach complements the bottom-up approach, and yields a quantification and analysis of the risks under a variety of assumptions about interest rate behaviour, etc., both over time and across insurance undertakings. The top-down results, while requiring more abstract, simplifying and homogenizing assumptions, should be useful in assessing sensitivities, checking the reported results received from undertakings, and simulating unanticipated events. Development of top-down techniques will be helpful in verifying and extending the future EIOPA stress testing framework in general.

3.   Scenarios

240. As already mentioned above, two different interest rate scenarios were developed and a short qualitative description of each of these scenarios can be found below.

a) *Japanese-like scenario (persistent low yield scenario)*

241.   This first scenario can be described as a Japanese-like scenario aiming at capturing the impact of a long-lasting low yield scenario characterized by low rates for all maturities. This scenario was mainly developed in order to assess the potential adverse impact and the vulnerability to such a scenario of the traditional life insurance business with high fixed guarantees and/or material amounts of profit sharing. Such traditional business, although confronted with declining business volumes in some countries, is still underwritten in large parts of the European insurance sector, making some parts of it particularly vulnerable to such a long-lasting low yield environment. A more quantitative description of the different options investigated and the final curve chosen can be found below.[21]

b) *Inverse scenario (the atypical change in the shape of the yield curve)*

242.   The second scenario of the low yield module aims at capturing the impact of an atypical reverse-shocked interest rate curve i.e. an upwards shock for short-term maturities combined with a downwards shock for mid- to long-term maturities. Such an atypical instantaneous shift/pivoting was constructed in order to assess the potential unanticipated effects on asset & liability values and cash flows. As it is often the case for life insurance companies, the duration of the assets is shorter than the duration of the liabilities, which could yield a double adverse impact for several of these insurance companies under this scenario i.e. the upward shock on the short-term maturities negatively impacting net asset value due to the excess of assets over liabilities for these maturities combined with the downward shock on the longer-term maturities negatively impacting the net asset value due to the existence of unmatched liabilities for these maturities. A more quantitative description of the different options investigated and the final curve chosen can be found below.[22]

C.   The low yield sample

243.   Participation in the low yield module is remarkable with a market coverage in terms of gross technical provisions for the EU which reached 60% and is above the minimum threshold of 50% in almost all countries.

244.   Number of participants: 219 in LYA and 218 in LYB.

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[21] See Section IV.E.1
[22] See Section IV.F.1
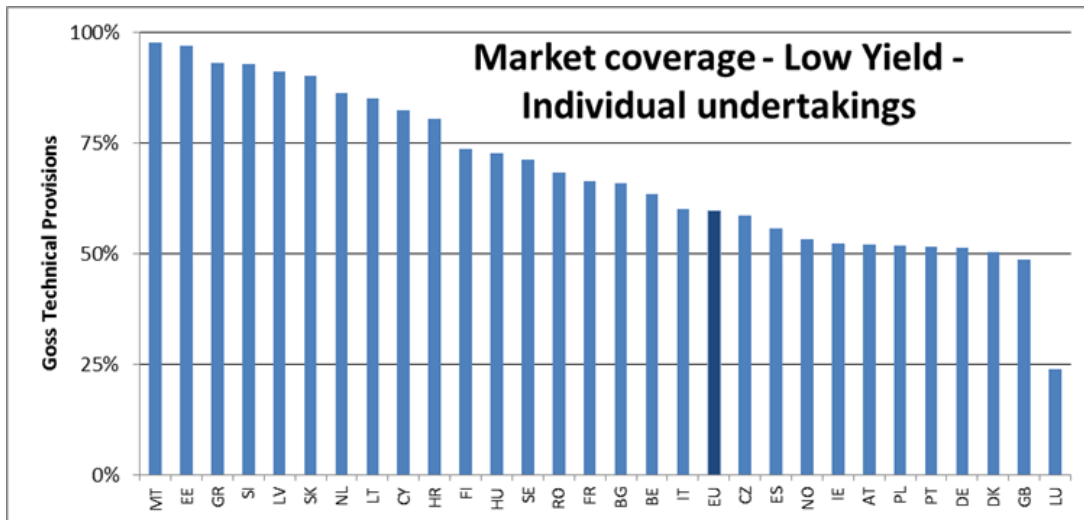
Figure 54: Market coverage for the Low yield Module based on Gross Technical Provisions (source: NCA data) [23]

245. As explained above, the aim on the low yield module was to capture, as a minimum, 50% market share of the 'relevant' technical provisions in each home country insurance market. In general, NCAs were asked to capture, as much as possible, insurance business potentially vulnerable to a low yield environment. Such business might typically include life insurance products with guarantees and/or profit sharing, annuity business, workmen's compensation business etc… The 50% market share was attained for almost all markets.

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[23] Note: For PT - total technical provisions is used;   For LU the market share based on NET technical provisions is 54%; For GB the market coverage is slightly under the 50% mark due to an undertaking being withdrawn at the mid-point for not being prepared to participate in the low yield module as agreed by the PRA. Additionally, participants from the Great Britain Overseas territories which submitted results to EIOPA as per the participants list in Annex I are considered in the overall calculations however such results are not displayed separately nor included within the GB figures.
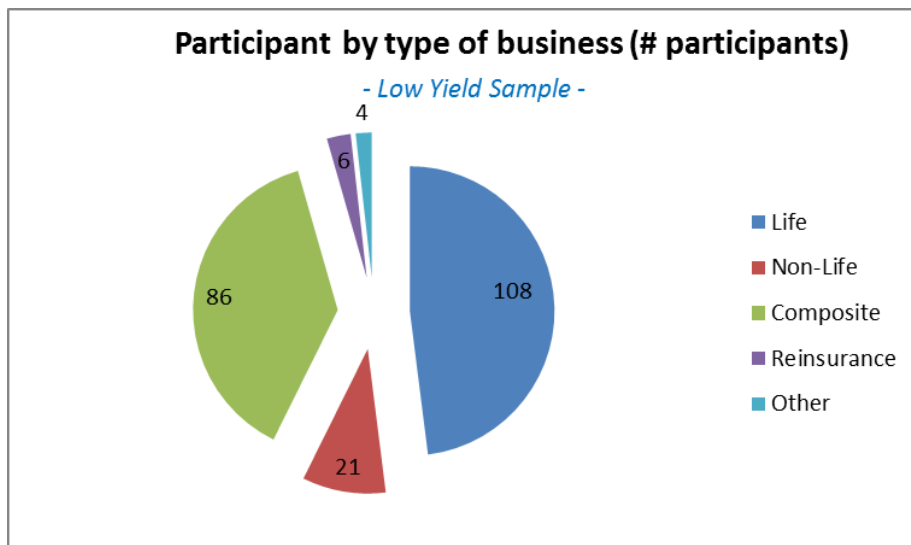
Figure 55: Low yield participants by type of business[24]

246.   Given the definition of 'relevant' business described above, it should be no surprise that more than 86% of the low yield sample is made of life and composite undertakings, which are particularly affected by a low interest rate environment as an important part of their business is in the life domain. In addition to that, 24 non-life companies (around 10%) and 6 reinsurers also participated in the exercise.

D.   Situation before the low yield stress scenarios

1. Asset profile

247.   The Figure below gives an insight into the decomposition of the asset portfolios of the low yield participants. A little more than half of their asset portfolio is formed by bond holdings (51%). Together with the investment funds (7%), loans & mortgages (6%), equities (5%) and property (3%) they represent near to 74% of the total asset portfolio. Next to these main investment categories, 16% of the asset portfolio is represented by assets used to cover unit or index linked type of business.

248.   In the scope of the low yield module, it is expected that the bond portfolio and the loans & mortgages are the asset categories which are most sensitive to movements in the low yield curve.

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[24] Other stands for Pension and Captives.

Proportion of assets by type
- Low Yield Sample -
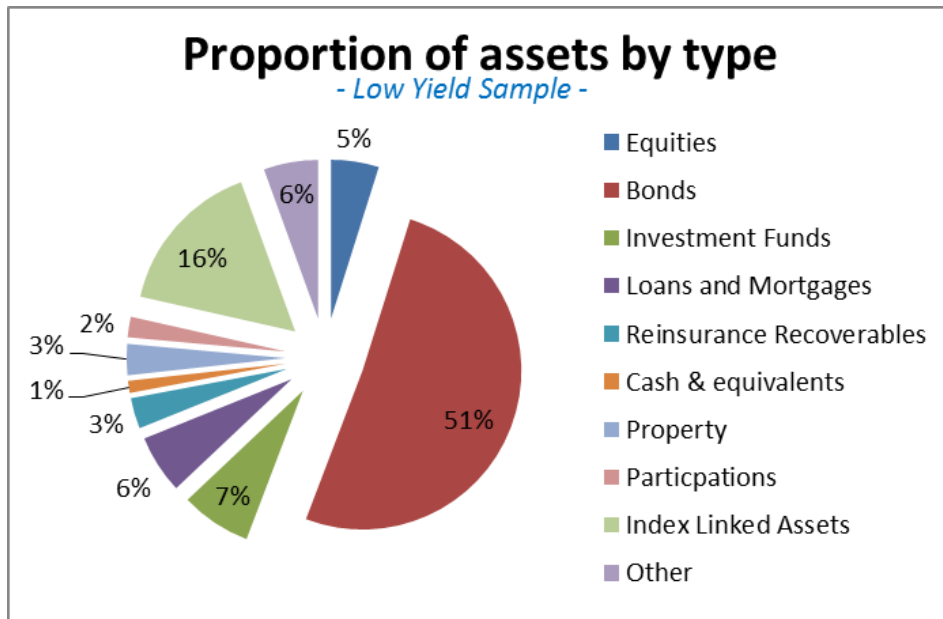
Figure 56: Total assets decomposed by asset type

a)   *Bond portfolio*

Decomposition of bond assets
- Low Yield Sample -
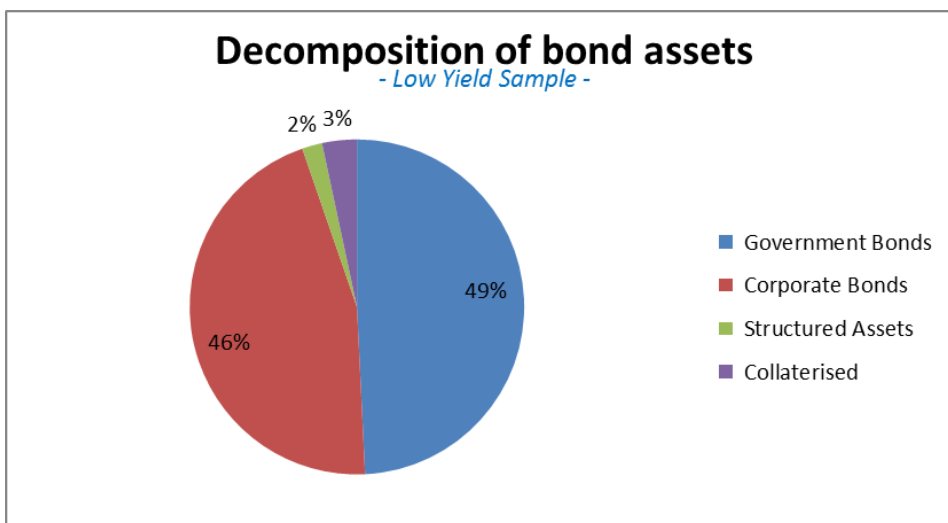
Figure 57: decomposition of bond portfolio

249.   One of the most important asset categories for the European insurance market is still the bond portfolio. A decomposition of the average bond portfolio for the low yield participants shows that 49% of the portfolio investments are held in government bonds, 46% in corporate bonds. (The structured notes and collateralised securities represent only a minor part of the bond portfolio. These observations are more or less in line with the sample of core stress test participants.

85
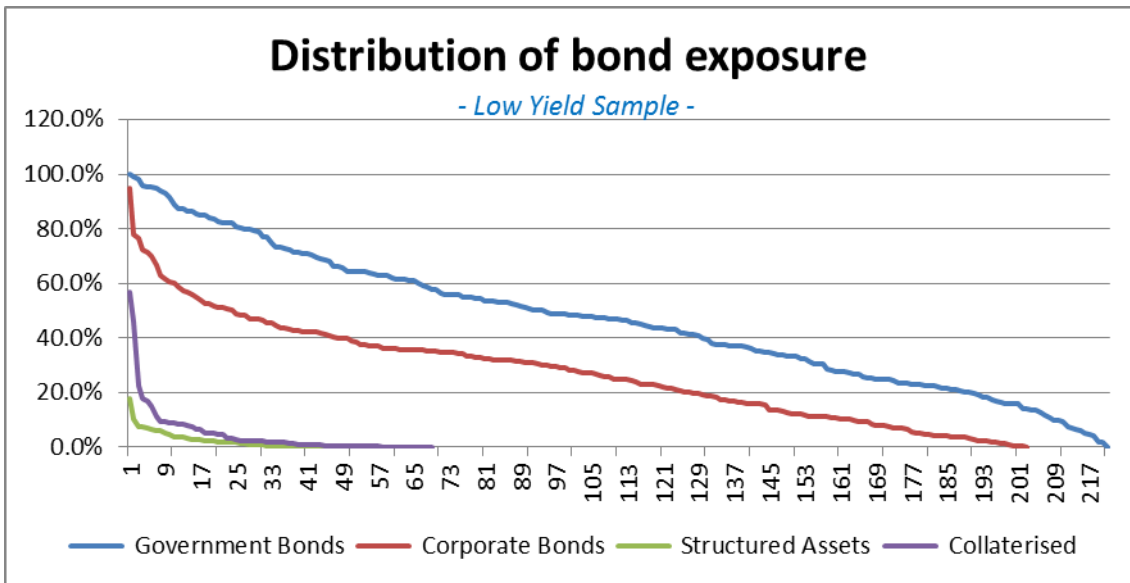
Figure 58: Distribution of bond exposures (% of total investments)

250.   Based on the figures provided in the graph above, there seems to be a general equitable distribution between corporate and government bonds across all low yield participants.
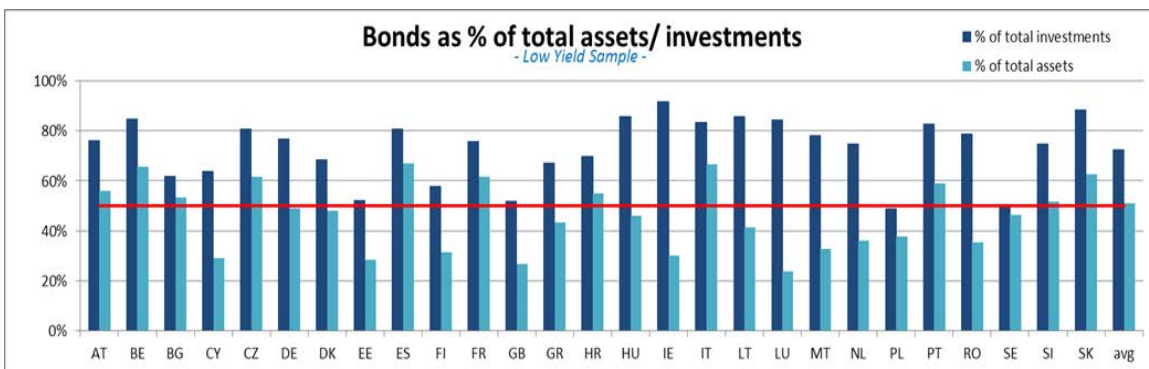
Figure 59: Bond as percentage of total assets / total investments

251.   When looking at the country split, one can observe important differences in the relative importance of the bond portfolio in the overall asset/investment portfolio of the low yield participants. For some countries (BE, CZ, ES, HU, IE, IT, LT, LU, PT, SK) the bond portfolio represents more than 80% of the total investments. For some of these countries, this also represents more than 60% of total assets (BE, CZ, ES, FR, IT, SK). For other countries the bond portfolio is very close or even lower to 50% of the investments portfolio (EE, GB, PL, SE).

Country	Avg duration Governments	Avg duration Corporates
Austria	7.9	5.2
Belgium	8.5	3.8
Bulgaria	5.4	5.4
Croatia	4.2	3.1
Cyprus	4.7	4.9
Czech Rep.	7.5	3.2
Denmark	7.5	4.5
Estonia	4.4	4.4
Finland	4.3	2.7
France	8.4	4.8
Germany	9.5	6.9
Greece	5.9	4.8
Hungary	3.6	4.3
Ireland	6.8	6.5
Italy	6.6	4.8
Lithuania	5.6	3.9
Luxemburg	6.8	4.9
Malta	6.1	6.3
Netherlands	12.4	4.9
Poland	5.6	1.7
Portugal	3.6	2.2
Romania	3.0	3.5
Slovakia	6.6	6.2
Slovenia	4.8	4.3
Spain	10.1	5.5
Sweden	5.5	2.8
United Kingdom	13.3	9.1
Grand Total	8.6	5.4

Table 12: Average duration Corporate and Government bonds by country – LY[25]

252.   On average the duration of the government bonds is longer than the duration of the corporate bonds which corresponds to our intuition (more long term government bonds available). The longest bond duration can be found in AT, BE, FR, DE, NL, ES and GB. Often these countries also have the longest liability durations (see Figure 79 further below). To this extent this corresponds to an effort of the low yield participants to match, as good as possible, long term liabilities with long term assets.

[25] The first column in the table identifies the market whose participants are holding the assets. Table is based on market values.

Home bias: % of home government bonds in investments
(only those denominated in home currency)
- Low Yield Sample -
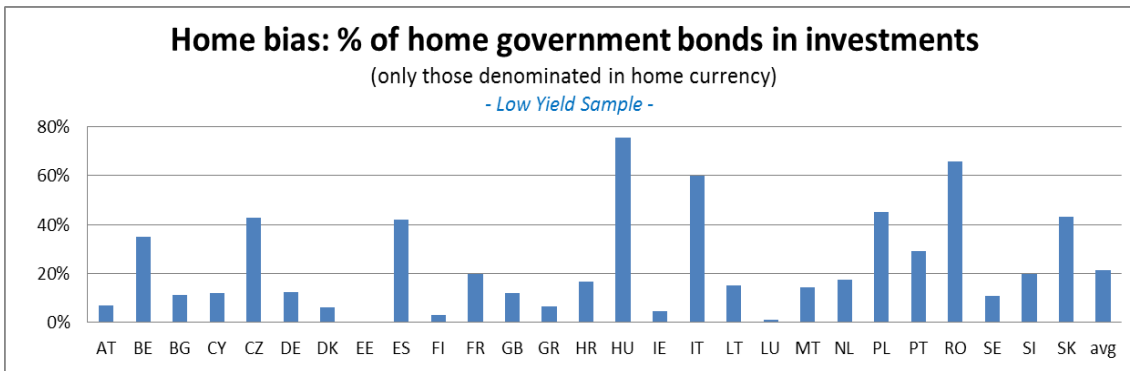
Figure 60: Home bias in country government bond holdings

253. For most participants government bonds of national origin represent the biggest share on the total investments of that asset class. From an aggregated country-perspective the share of these home based government bond holdings can lead to concentrations of at least 20% of the total investments made by national insurers e.g. BE, CZ, ES, HU, IT, PL, PT, RO and SK.

	Issuer	Issuer govts exposure/ Total govts exposure	Avg duration
AT	Austria	3.9%	9.7
BE	Belgium	8.8%	8.3
BGN	Bulgaria	0.0%	4.3
CHF	Switzerland	0.1%	6.9
CY	Cyprus	0.0%	2.6
CZK	Czech Rep	0.4%	7.0
DE	Germay	10.0%	9.5
DKK	Denmark	0.7%	8.2
EE	Estonia	0.0%	6.1
ES	Spain	7.0%	9.5
FI	Finland	0.8%	8.5
FR	France	27.0%	9.2
GBP	UK	4.0%	12.6
GR	Greece	0.0%	6.5
HRK	Croatia	0.2%	4.0
HUF	Hungary	0.3%	3.7
IE	Ireland	1.0%	5.3
ISK	Iceland	0.0%	2.9
IT	Italy	22.0%	7.3
JPY	Japan	0.1%	10.9
LIT	Lituania	0.0%	4.2
LU	Luxemburg	0.8%	6.1
LVL	Latvia	0.0%	3.7
MT	Malta	0.0%	7.3
NL	Netherlands	3.7%	9.5
NOK	Norway	0.5%	3.3
PLN	Poland	1.5%	6.1
PT	Portugal	0.9%	4.3
RON	Romania	0.1%	3.4
SEK	Sweden	2.2%	5.8
SI	Slovenia	0.2%	5.4
SK	Slovakia	0.5%	7.2
USD	USA	1.5%	6.9
Others	Others	1.5%	
Total	Total	100.0%	8.5

Table 13: Average duration and proportion of Government bonds by issuer – LY[26]

254. Especially the materiality of the proportional share of FR (27%) and IT (22%) is remarkable (see also a similar observation in the core module).

[26] Table based on market values.

255. The chart below displays the distribution of the Low Yield sample corporate bond exposures across credit quality classes.
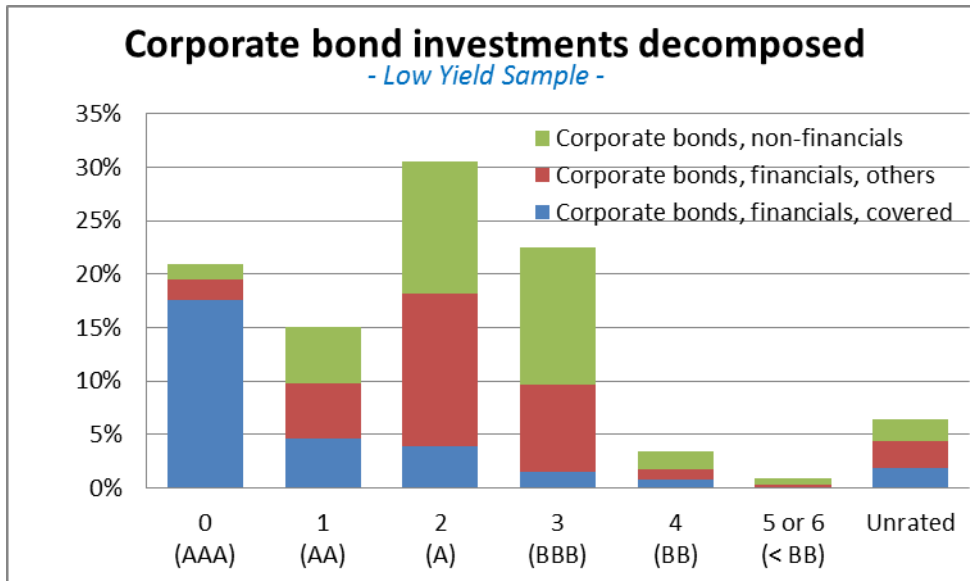
Figure 61: Decomposition of corporate bond investment

256. The Figure above shows that within the corporate bonds portfolio of the low yield participants, the covered bonds are on average better rated than others. Approximately 4.5% of the corporate bonds portfolio is rated below investment grade category (i.e. BB, or lower) and 6.4% is unrated which might already be a warning sign against a potential 'search for yield' phenomenon which could have taken place during the recent period of low yields. Another observation is the lower relevance of non-financials bonds, in particular in the first three credit quality steps when compared to the financial bonds.

Credit quality step	0	1	2	3	4	5 o 6	Unrated	Total
Corp_finan_covered	5.7	6.6	4.4	4.8	2.6	3.6	6.0	5.5
Corp_finan_uncovered	6.0	5.2	4.9	4.6	4.9	3.8	4.1	4.9
Corp_non_finan	6.3	5.9	6.6	5.6	4.4	3.6	4.4	5.8
Total	5.7	5.9	5.5	5.3	4.2	3.6	4.9	5.5
Average modified duration	**5.7**	**5.9**	**5.5**	**5.2**	**4.2**	**3.6**	**4.8**	**5.4**

Table 14: Average modified duration for corporate by credit quality step of LY sample

257. As already highlighted above, the average duration of the corporate bonds is lower than the government bonds. When comparing rating and duration of the corporate bond holdings, one can notice that the higher rated bonds often show higher durations.

2. Liability profile
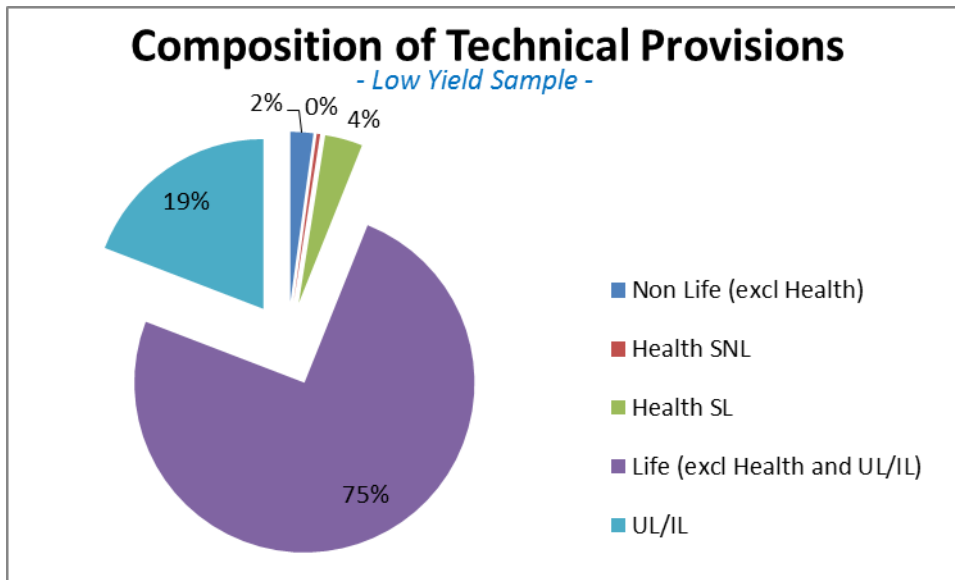
Figure 62: Decomposition of total technical provisions

258. The major part of the technical provisions in the low yield sample is represented by life technical provisions at 75%. This was expected based on the selection criteria of the participants, as well as the overall importance of life technical provisions in the balance sheet compared to non-life.
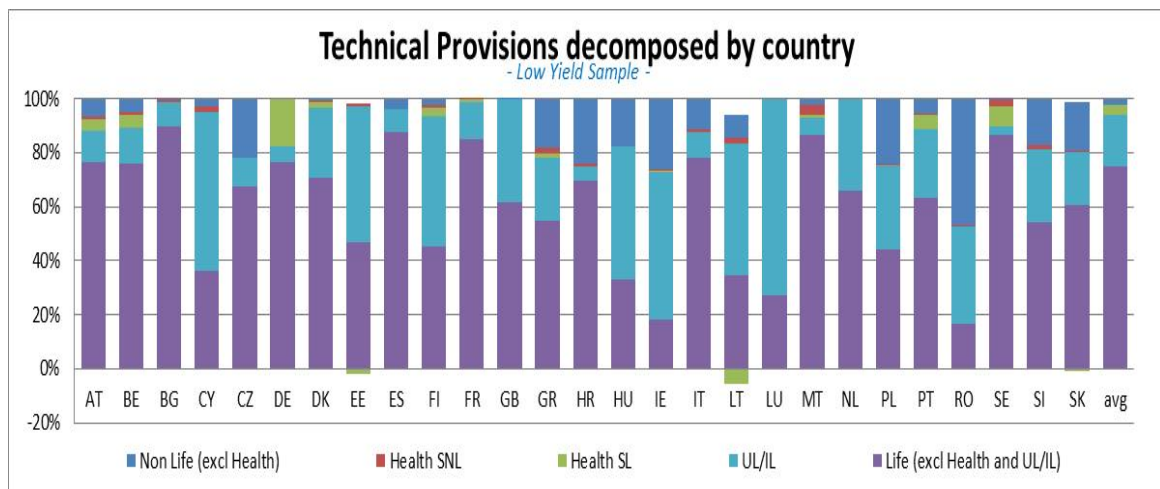
Figure 63: Composition of technical provisions

259. Important differences can be observed between the samples representing the different countries. For instance, in Figure 63 above, participating countries could be classified as those dominated by 'more traditional life insurance like AT, BE, BG, CZ, DE, DK, ES, FR, GB, HR, IT, MT, NL, PT, SE, SI and SK. Other countries are characterized by a relatively important unit-linked and index-linked portfolio such as CY, EE, FI, HU, IE, LT, LU, PL and RO. While DE is furthermore characterised by a significant health portfolio.

260. In terms of the representativeness of the sample considered for this analysis, it should be noted that the number of responses provided on the relevant questions is less abundant than in other elements of the low yield module. It should be noted as well that results in the two figures below are provided for the products in the portfolio which were chosen by the participants according to the specifications (i.e. bucketing of guaranteed products) and therefore it is not necessarily representative for the total market of a single country.
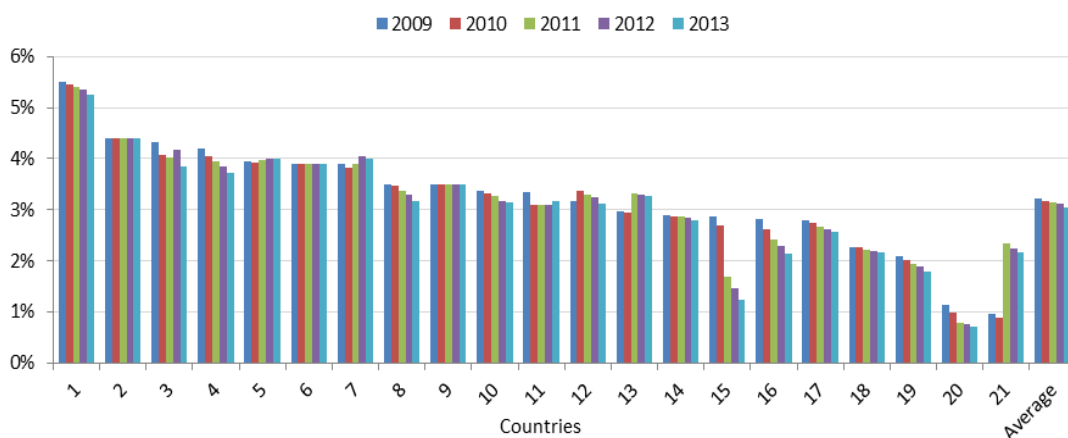
Figure 64: Weighted average guaranteed rate Life insurance, except UL and IL (with options & guarantees with surrenders) [27]

261. In general, average guaranteed rates on life insurance business, excluding unit-linked and index linked business, taking into account options and guarantees and surrenders, are between 2% and 4%. A few exceptions exist on this general observation. Often, these exceptions exist because of rates offered which are lower than 2%, while a few countries show average rates above 4%.

262. Over the last 5 years, a general decreasing trend in these average guaranteed rates offered can be observed. However, some countries show increasing trends or a more non-linear pattern in the guaranteed rates offered.

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[27] In line with the approach on disclosure for this exercise the country name is not displayed in this Figure given the limited number of national samples with three or more responses considered in the analysis.
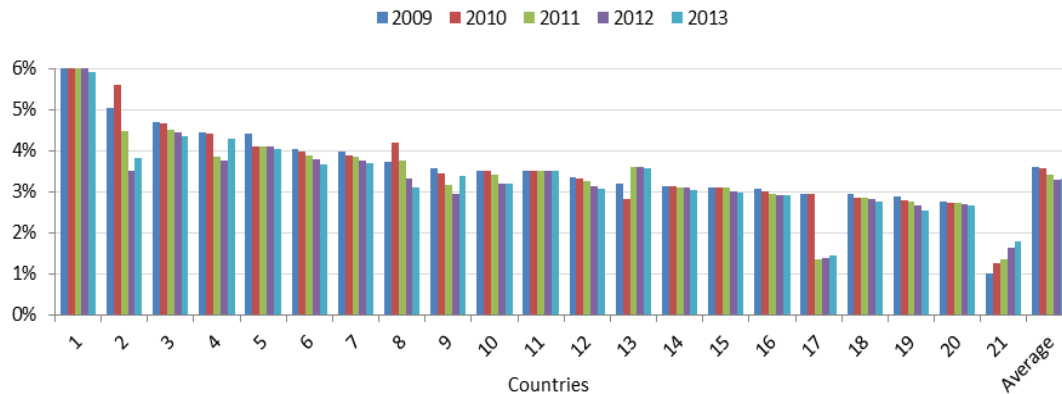
Figure 65: Weighted average guaranteed rate Life insurance, except UL and IL (with options & guarantees without surrenders) [28]

263.   When we consider the average guaranteed rates of life insurance products taking into account options and guarantees but not taking into account surrenders, the general observation made above still stands. The average rate is generally situated between 2% and 4%. Often, the rates depicted here are higher than those depicted in the previous Figure 64, although some exceptions can be noticed. Similar to Figure 64, Figure 65 shows a general decreasing trend in average rates offered.

[28] In line with the approach on disclosure for this exercise the country name is not displayed in this Figure given the limited number of national samples with three or more responses considered in the analysis.

3. Own funds and SCR profile

a. Own funds

264.   The two Figures below provide information about the composition of the own funds reported by the low yield participants indicating 94% of the own funds being allocated among those of maximum quality (i.e. tier 1). However the best effort basis for this exercise needs to be taken into account when assessing the correct splitting of own funds which might still need some work in the future.

Composition of available own funds
- Low Yield Sample -

- Tier 1 - unrestricted
- Tier 1 - restricted
- Tier 2
- Tier 3

3%, 5%, 1%, 91%
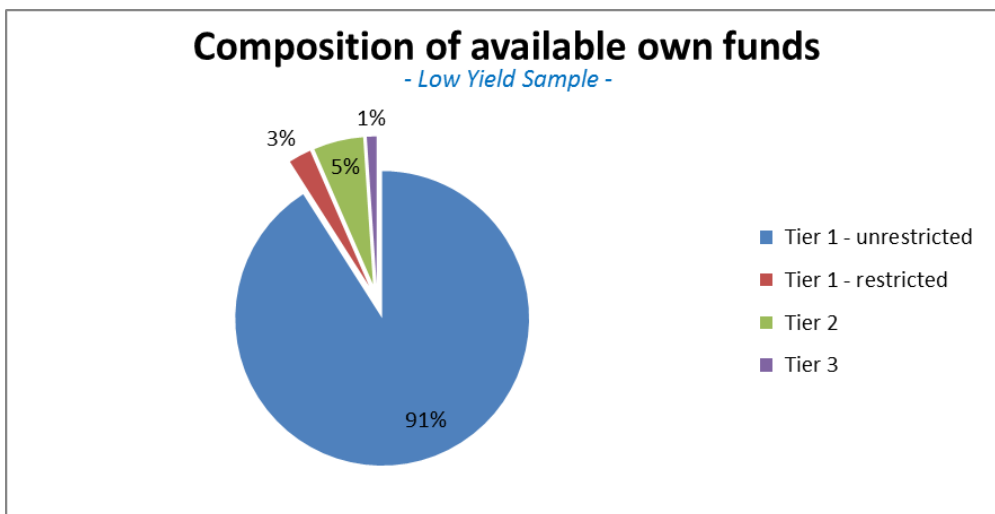
Figure 66: Decomposition of Own Funds

265.   Figure 64 above shows that 91% of own funds of the low yield participants is of very good quality without any restriction (unrestricted tier 1).

Composition of Tier 1 unrestricted
- Low Yield Sample -

- Share capital
- Share premium
- Initial funds
- Surplus funds
- Reconciliation
- Other items
- Minority interests

2%, 0%, 13%, 10%, 1%, 44%, 30%
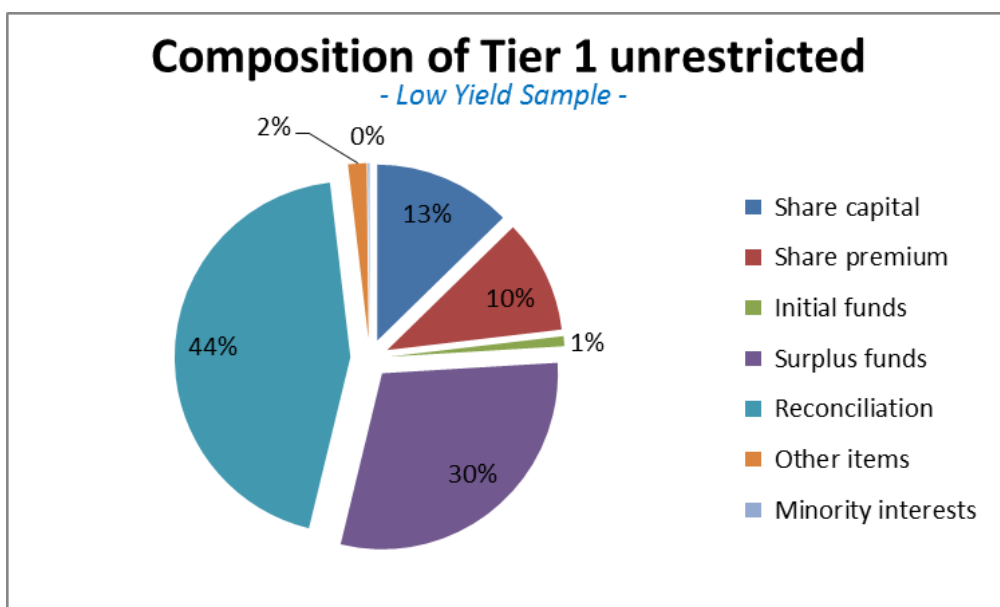
Figure 67: Decomposition of Tier 1 unrestricted LY sample

266. Reconciliation reserve (44%) is the most significant part of the OF – tier 1 items, followed very closely by the Surplus Funds (30%).

b. SCR

267. The distribution of SCR ratios, shown below, is fully based on Standard Formula (SF) SCR calculations – the default approach chosen for this Stress Test exercise.
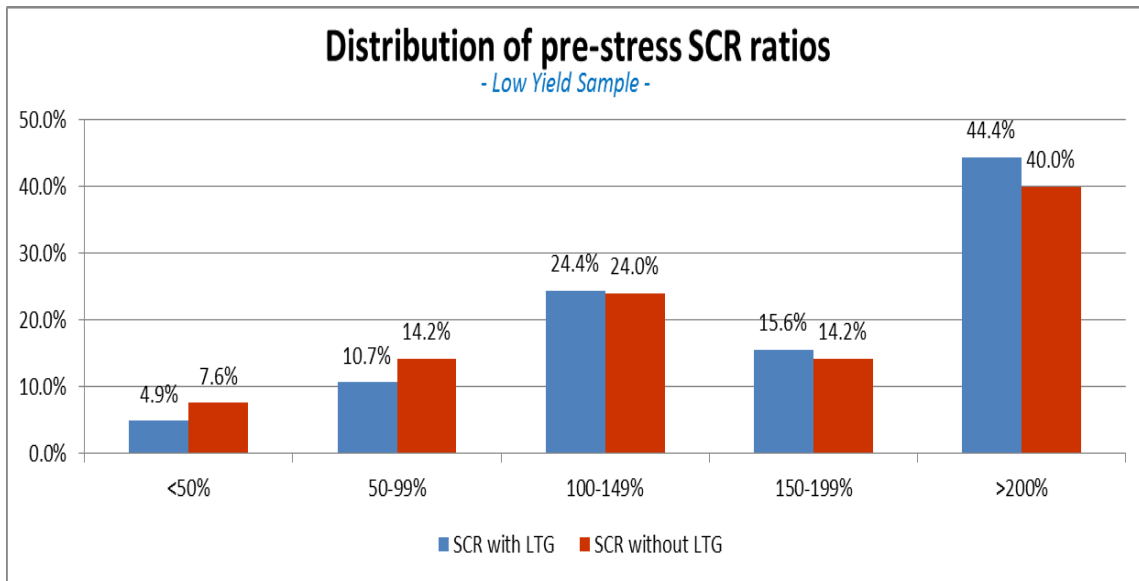
Figure 68: Distribution of pre-stress SCR ratios

268. An observation that we can make on the overall sample is that more than 44% of the low yield participants have a comfortable starting position (SCR ratio > 200%). More than 15% do not have sufficient own funds to cover the solvency capital requirements. Without the LTG measures this could get close to 22%.
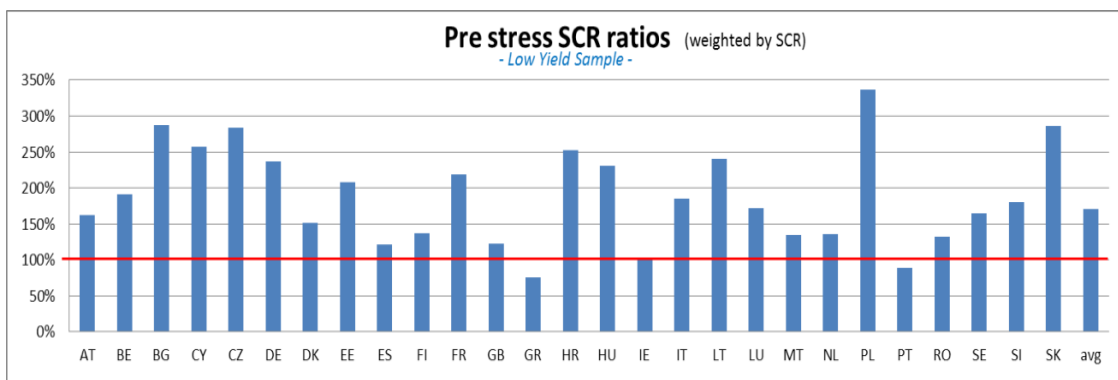
Figure 69: Distribution of SCR coverage

269. The graph above shows a diverse picture of pre-stress SCR ratios across Europe, which is ultimately caused by the difference in asset and liability profiles and influenced by the different applications of the LTG

measures (see more detail below). On average, the low yield participants seem to have a buffer of own funds to cover their SCR ratios (avg. SCR ratio above 150%) on a pre-stress basis.
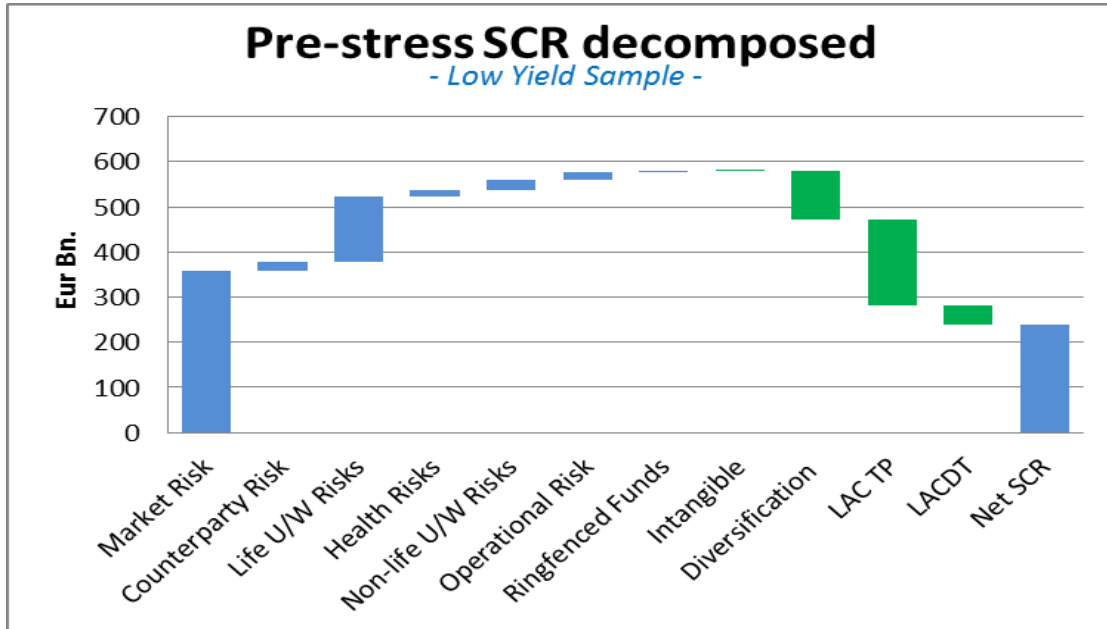
Figure 70: Decomposition Pre-stress net SCR

270. In line with previous observations and the selected sample of low yield participants (mainly life business), the most material SCR components are the market risk component and the life underwriting risk component. Also, the 'loss absorbing capacity' of the technical provisions plays an important role in the long term life business.
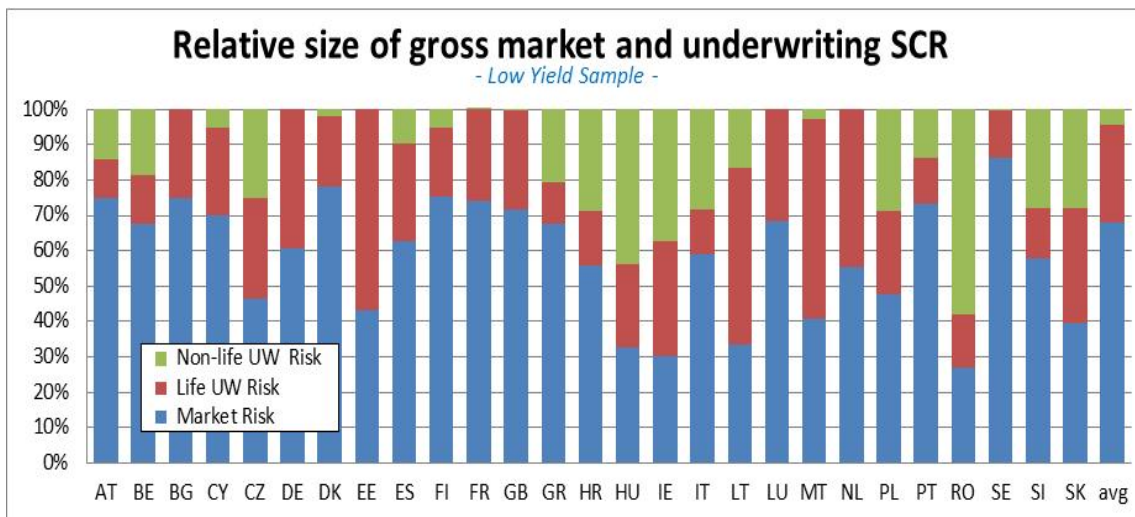
Figure 71: Relative size of Gross market and Underwriting SCR

271. In line with previous observations, for the classic life business, market risk is the most important risk. For some countries, the life underwriting risks are also material in relative terms (longevity, lapse), often these are the same countries which have long duration on their

liability portfolio which makes their liabilities more vulnerable to the typical life underwriting risks.
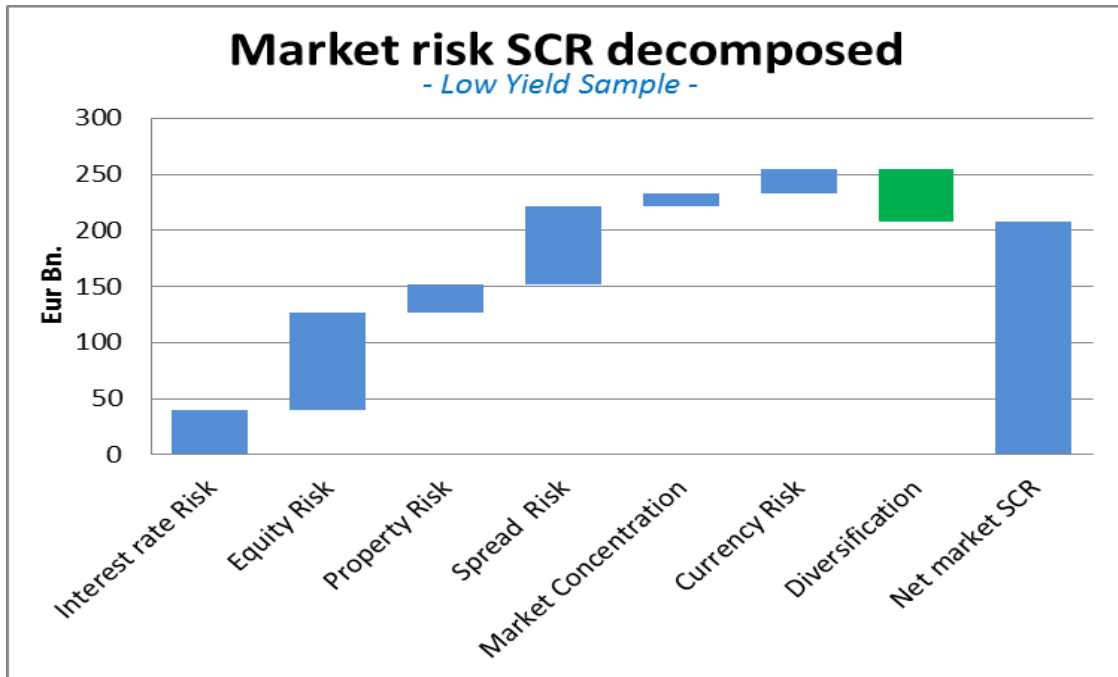
Figure 72: Decomposition Market Risk

272.   The most material market risks are interest rate risk (due to the common duration mismatches between asset & liability portfolios), equity risk (this is rather surprising given only 5% equity holding, however capital requirements for equity are high) and spread risk (driven by the lower-rated corporate bond portfolio).
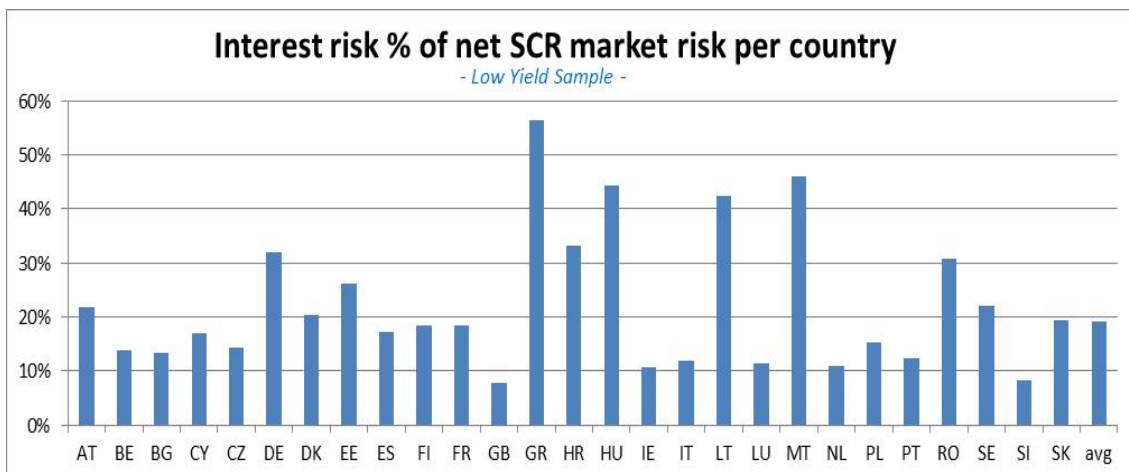
Figure 73: Int. rate risk % of net SCR market risk per country

273.   Based on this observation, Figure 73 shows that the most material asset-liability duration mismatches (either positive or negative) can be found in the following countries: AT, DE, EE, GR, HR, HU, LT, MT, NO, RO, SE (based on SF calculation the Interest rate risk is above 20% of

net SCR market risk). If we look at Table 2, this indeed corresponds to those countries with larger mismatches.

274.   The more positive the duration mismatch (duration liabilities > duration assets), the more vulnerable insurance companies are to negative interest rate shocks (and a low yield environment in general).

4.   CF analysis: initial cash flow pattern assets and liabilities

275.   At a general level, the internal return rates (IRR) and durations calculated for the different types of asset classes based on the cash flow projections reported by the participants are similar. This finding provides evidence of the progress in the quality of data with respect to EIOPA's previous exercises involving similar data collections, although there are still some markets where the data reported suggests that further improvement is needed for the de-risking of cash flows.
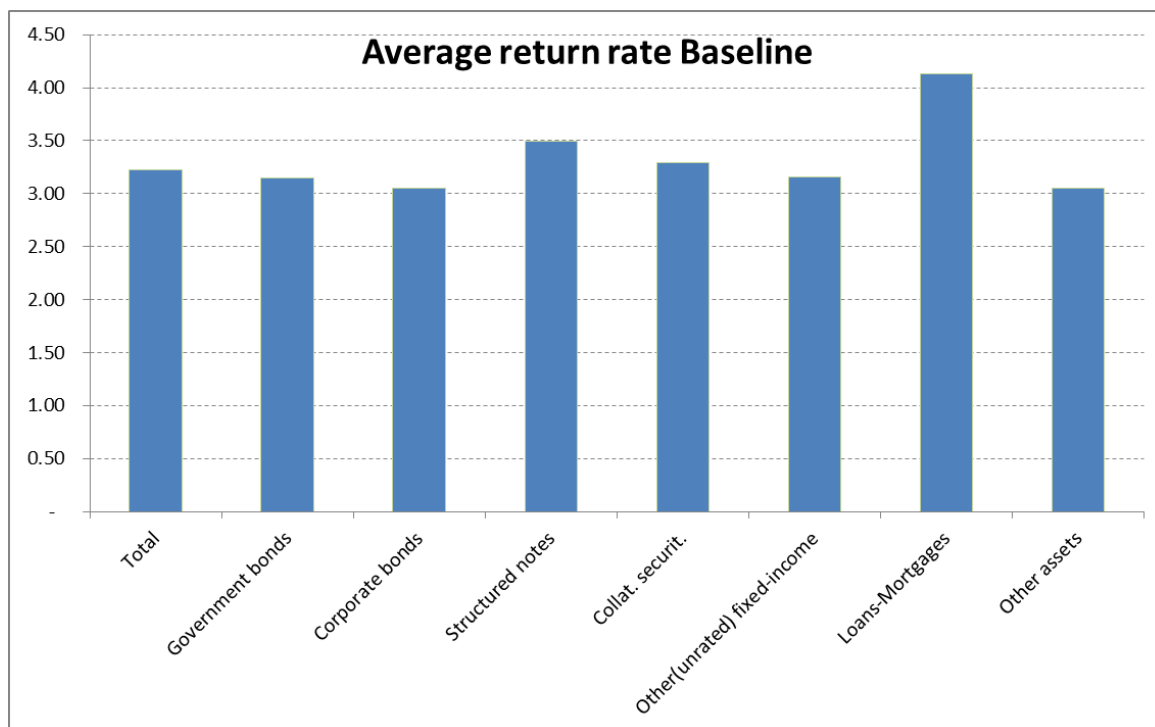
Figure 74: Average return rate for assets in Baseline scenario

276.   Figure 75 below shows on a per country basis the proportion of the total Technical Provisions in the low yield sample of the cash flows used in the analysis. The information available on assets does not differentiate the type of insurance or reinsurance business covered with the assets for which cash flow projection was reported. It is stressed once more that assets without a sufficiently reliable pattern of estimated cash flows are not considered for the purposes of this report which reduces the amount of assets but also reduces the uncertainty in the cash flow projections. These aspects have to be considered for further improvements of the

methodology and also when interpreting the conclusions of the current cash flow analysis[29].
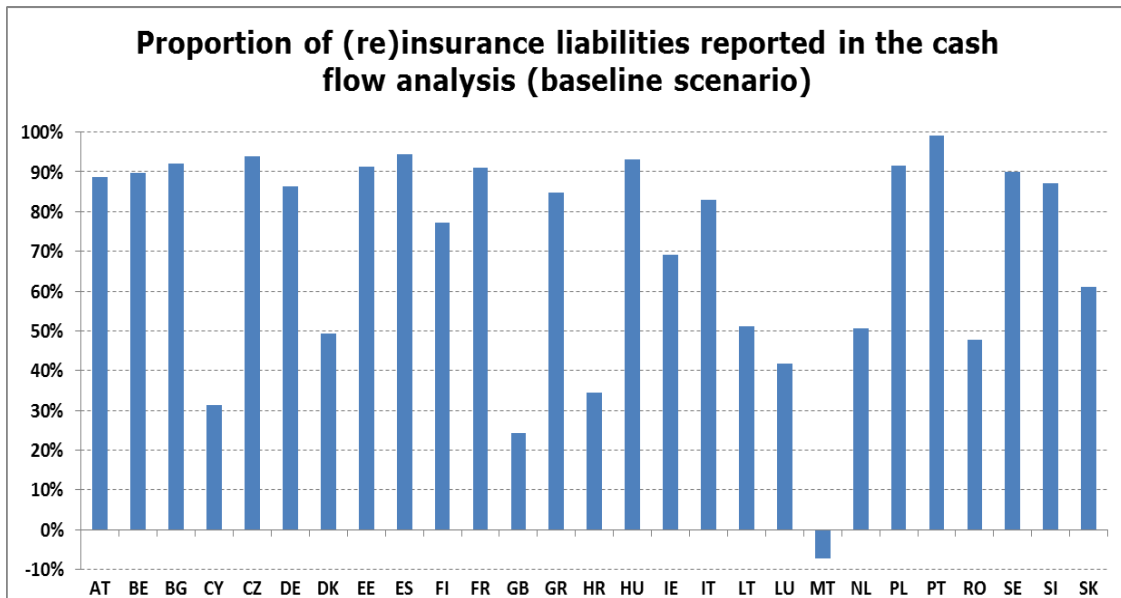
Figure 75: Proportion of technical provisions included in CF analysis (Baseline)

Figure 76 below allows to compare the internal return rate (IRR) observed for the assets considered and the internal return rates obtained when comparing the best estimate of the insurance and reinsurance obligations with the projected cash flow vectors. Markets below the diagonal reflect a higher IRR for assets than for liabilities. Under a market consistent approach for both assets and liabilities such difference among IRRs is implicitly reflected in the reconciliation reserve both at the inception of the (re)insurance contract (and also during its lifetime to the extent of the changes of market interest rates). In the case of Malta the life portfolio without profits for which cash flows have been reported presents a negative best estimate which offset the positive best estimate for other portfolios.

[29] See section IV.B.2.a) for detailed explanation of the methodology used in the CF analysis.
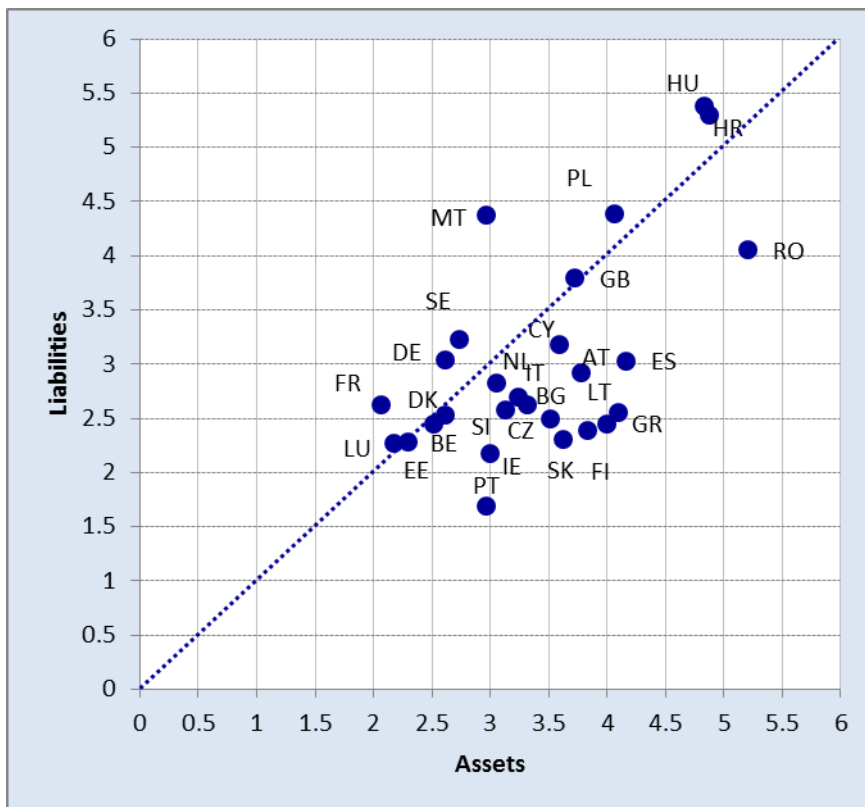
Figure 76: BL : IRR Liabilities versus IRR Assets

277. As could be expected, in the case of markets with comparatively lower levels of yields of assets in general, the IRR of the assets considered in the cash flow analysis does not seem to cover the return rate of liabilities (among others this is the case for DE, FR, LU, SE). The exceptions are AT, NL and GB.

278. As could also be expected, most of the markets with higher levels of yields are below the diagonal (ES, IT, BE). Nevertheless there are also exceptions. The insufficiency of the internal return rate of assets to cover the return rates of liabilities is also identified in some markets with higher interest rates (PL, HR, and HU) slightly above the diagonal. In a number of cases this reflects insurance and reinsurance portfolios marketed during periods with higher guaranteed rates than the ones it is possible to achieve nowadays in financial markets.

279. The chart below shows at once the gap for assets and liabilities among both internal return rates in the X-axis and durations in the Y-axis. In such a manner all markets in the left half, corresponding to the negative X-axis, expect to finance their technical provisions at a rate lower than the yield of the assets covering those technical provisions. It should be reminded that assets without predictable cash flows cannot be included in the cash flow analysis.
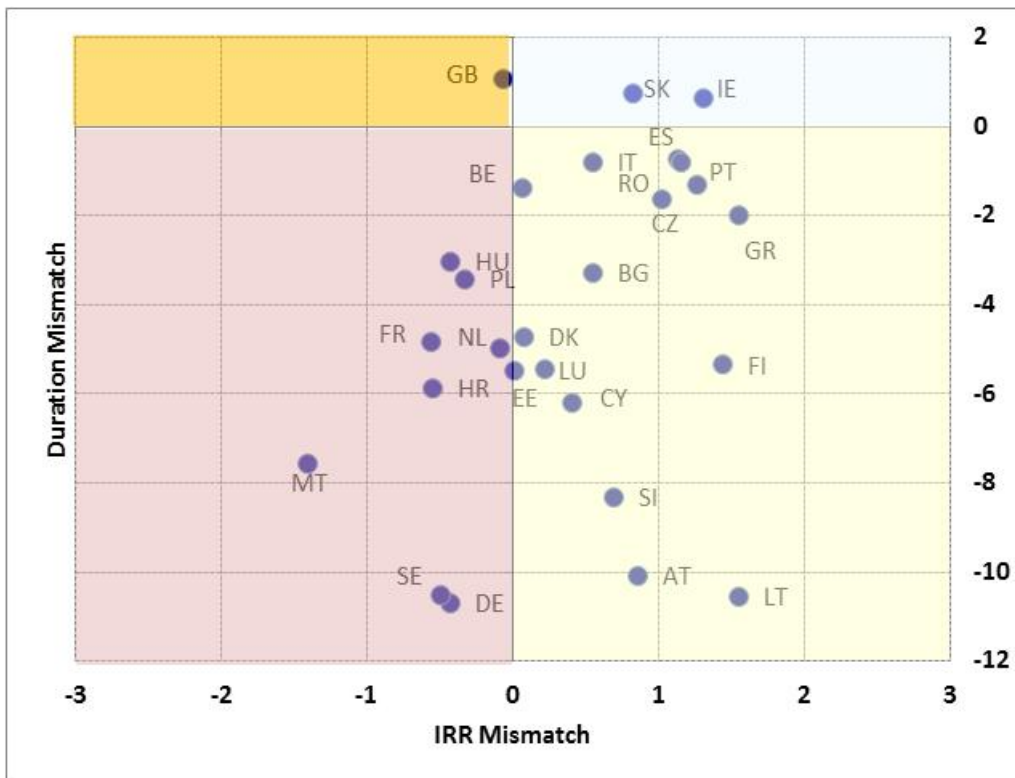
Figure 77: BL: Joint mismatch of IRR and duration. [Assets minus liabilities]

280.   Some countries (GB, SK and IE) show higher internal return rates for assets than for liabilities. This may be due to having low levels of guaranteed interests for insurance and reinsurance obligations. It is also possible that such levels of asset yields are linked to assets with a more limited credit quality. In any case, further progress is necessary to learn the manner by which the cash inflows of such assets are de-risked, since in principle de-risked cash flows should show similar yields.

281.   There is no clear linear correlation between the level of the IRR of the liabilities and the mismatch of durations. Some markets with a high mismatch of durations (liabilities with longer duration than assets) also provide materially high return rates to those liabilities. These markets are those most exposed to a prolonged low yield scenario.

282.   These effects and those markets are clearly identified in the chart of mismatches reflected above, where the mismatching among the duration of assets and liabilities is shown in the Y-axis. In this respect, all markets in the lower half of the chart corresponding to the negative Y-axis, have longer duration for their liabilities compared to their assets. This is the case of all markets with long term guarantees, reflecting the insufficient availability of assets with medium and long term cash flows.

283.   As a consequence those countries plotted in the left-lower quadrant are exposed to a low yield scenario characterised by

constrained interest rates. Most of the countries with a material business providing long-term guarantees have fallen in that quadrant (AT, DE, FI, FR, NL, SE). The further from the central point of the XY-axes the higher mismatch of IRR, durations or both of them.

284. Figure 78 below refers to durations, showing the relationship among the durations of assets and liabilities mirroring the approach of the chart above for IRR. Therefore markets above the diagonal reflect longer duration of liabilities compared to the duration of assets.

285. As a consequence, those markets far above the diagonal are the most exposed to both reinvestment risk, and performance risk (yield and realization) of those assets not considered in this analysis (those whose realization will be necessary to cover shortages in cash flows, such as equities, properties, cash...).
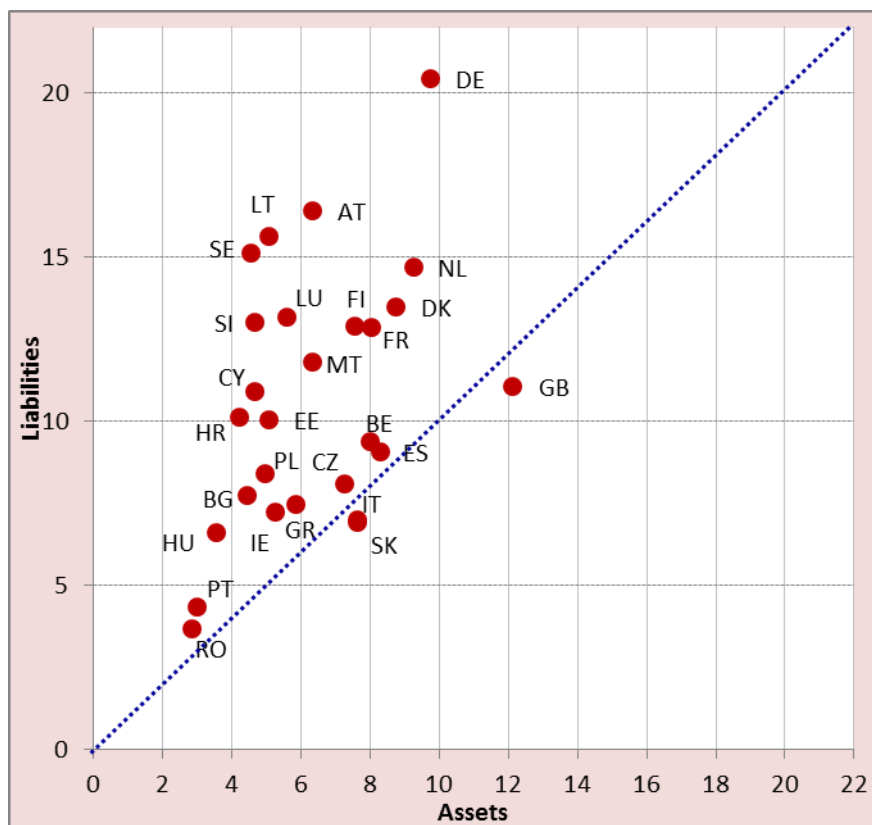
Figure 78: BL: Duration Liabilities versus Duration Assets

286. Obviously, those markets characterised by the longest durations of insurance business are the most affected by the lack of available assets providing cash flows in a long term. Participants from these countries are more vulnerable to a downwards shock of the risk-free yield curve and potentially to a long lasting low yield environment (reinvestment risk).

287. From a monitoring and supervisory point of view, attention should be paid to the fact that those countries with insufficient return rates (IRR assets < IRR liabilities) often have the more material duration mismatch.

288. The lack of markets below the diagonal in the chart above is conspicuous. It is the logical consequence of the long term nature of insurance business.

289. It can be seen in Figure 78 that some countries are really close to the diagonal, mostly those where matching techniques are widely applied (ES, GB) or those where the limited duration of liabilities allows the alignment of the duration of these liabilities with assets, available in the markets, having a similar time horizon (e.g. IT, CZ, IE, RO, PT or BE).

290. The following two charts present the information on the duration and IRR of the liabilities per country and for the three scenarios. This summary presentation allows for a clear comparison of the considerations made above for the different national markets:
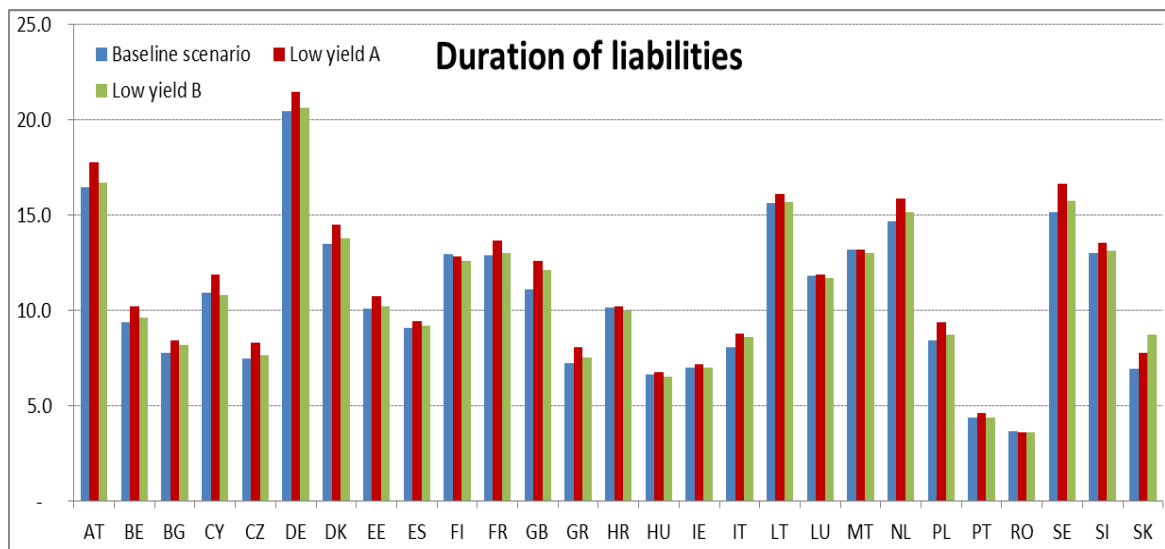
Figure 79: BL/LYA/LYB: Duration of liabilities
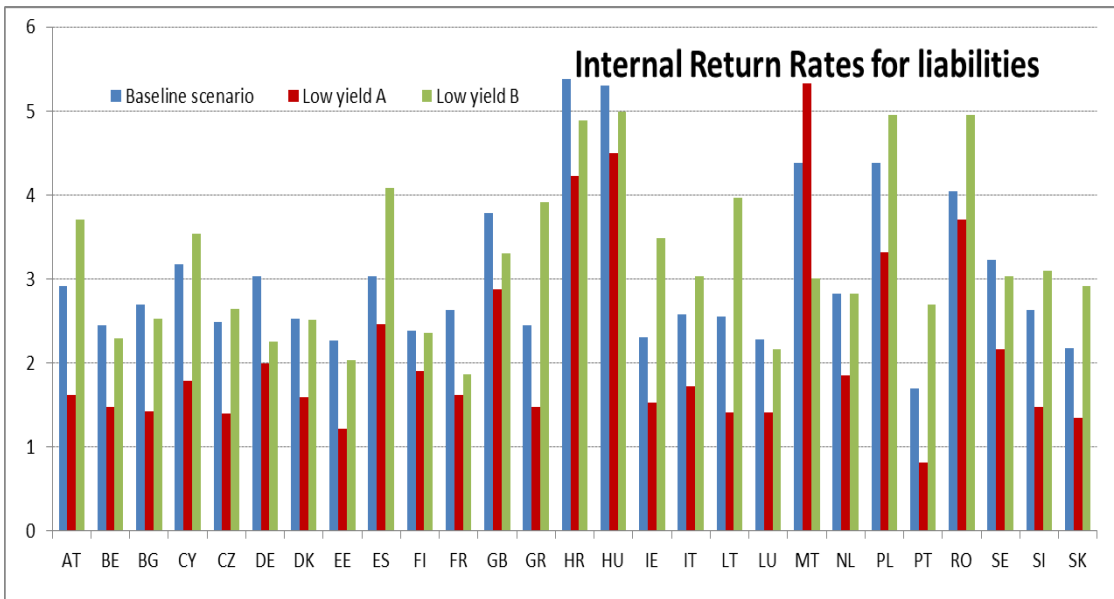
Figure 80: BL/LYA/LYB: Internal return rate (IRR) derived for liabilities

291.   Focusing on the composition of the assets considered in the cash flow analysis, the result is that around 80 per cent are either government bonds or corporate bonds.

292.   The volume measure used in Figure 81 is the market value declared in the cash flows reporting, where the assets without a sufficiently reliable pattern of estimated cash flows were not considered and therefore they are not represented in the chart below.
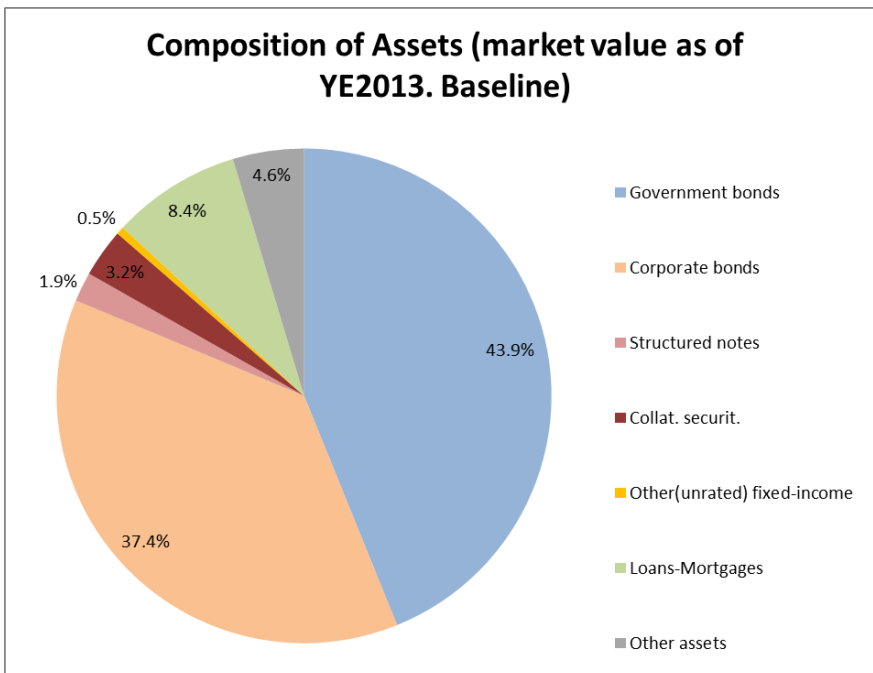

Figure 81: LY: BL - Assets with predictable cash flows reported in the CF analysis.

293.   In Annex IV this information is disclosed for each country, showing the heterogeneous investment strategies among national markets, ranging from markets with a clear percentage of investments materialized in government bonds, to markets where government bonds only represent a minor part of the investments, with corporate bonds (or other type of assets) the predominant type of investment.

294.   The following chart shows the source of long and very long term inflows according to the assets the inflows come from. Following the heterogeneous composition of assets among national markets, the sources of the cash inflows also vary to a great extent among the markets participating in the exercise, as shown in the Annex IV.
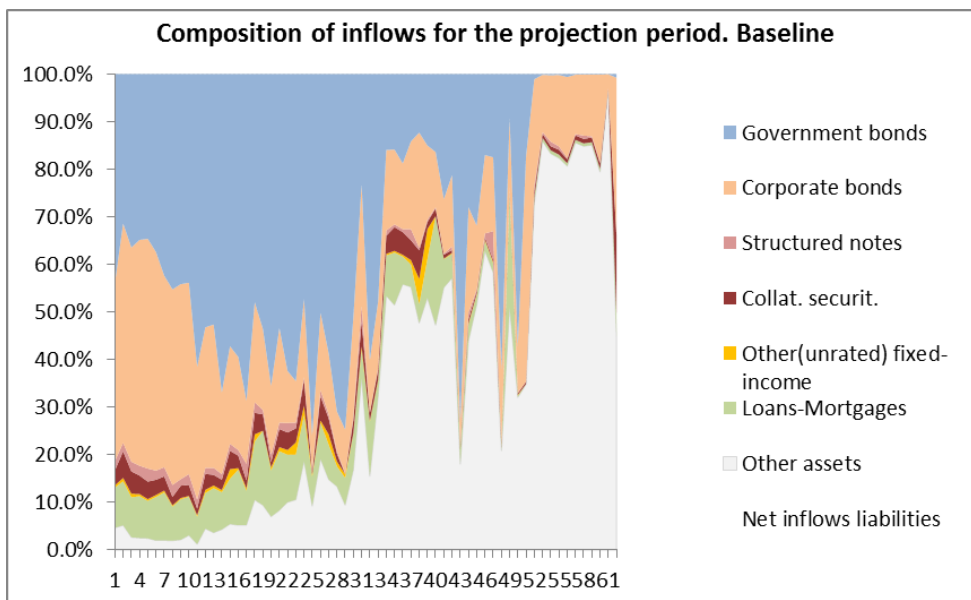
Figure 82: BL: Composition of IN-flows for the projection period

295.   The Figure above is a relative representation. So when considering economic amounts of the cash flows in each year of projection, the cash inflows for long and very long terms are much lower than the cash inflows for the first years of the projection

296.   Taking into account the same disclaimer, Figure 83 below mirrors the previous one but focusses on the source of cash outflows keeping in mind the diversity of insurance guarantees offered in each market. In this manner, some markets show a clear trend towards insurance contracts providing limited guarantees (such as unit and index linked contracts), while other markets reflect the clear demand of policyholders' of products providing long term guarantees.

297.   As could be expected the vast majority of cash outflows come from life insurance portfolios with future discretionary benefits (green area).

Therefore, the capacity of the future discretionary benefits to 'absorb' long lasting low yield scenarios becomes a critical element of the assessment. As is the response of policyholders' to changes in the undertakings' policy for the allocation of benefits to policyholders', because such behavioural changes may generate profit or losses additional to those directly derived from interest rates levels and movements. Both areas require further attention and the development of specific requests of information.
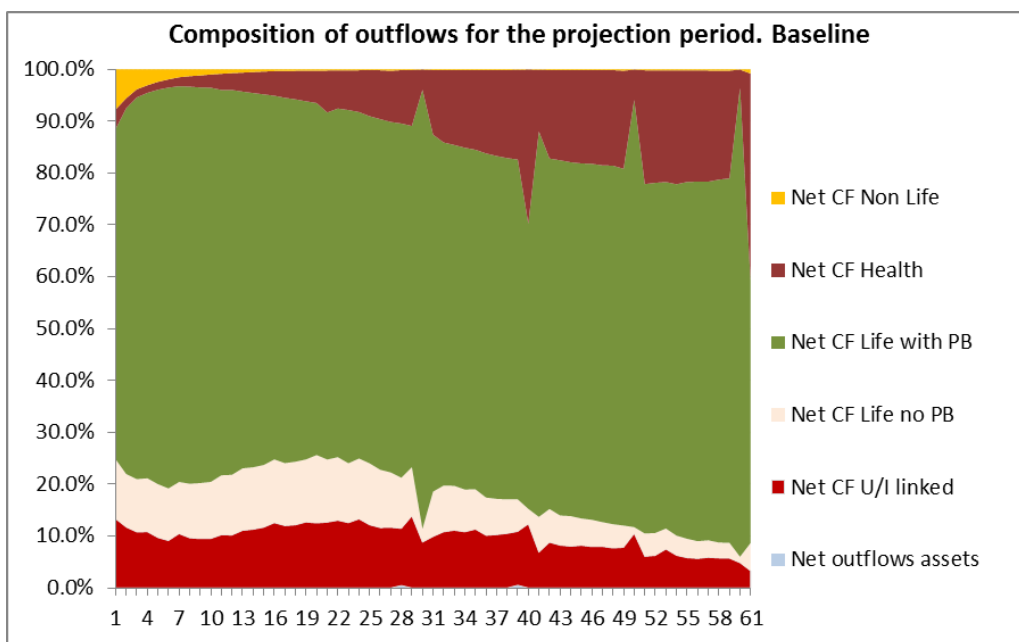
Figure 83: Baseline scenario – All participants. Composition of OUT-flows for the projection period.

298. The Solvency II framework contains provisions on discount rates tailored to allow for undertakings selling different types of long term insurance contracts. It may be a promising exercise to monitor to what extent markets make use of this variety of provisions and whether such variety provides the benefit of both increasing the contribution of insurance sector to long term saving and also reducing the exposure derived from the commercialization of a single family of products.

299. Finally, Figure 84 reflects the three vectors of cash flows (inflows, outflows and mismatch) compiling the data of all participants in the Baseline scenario in one graph.
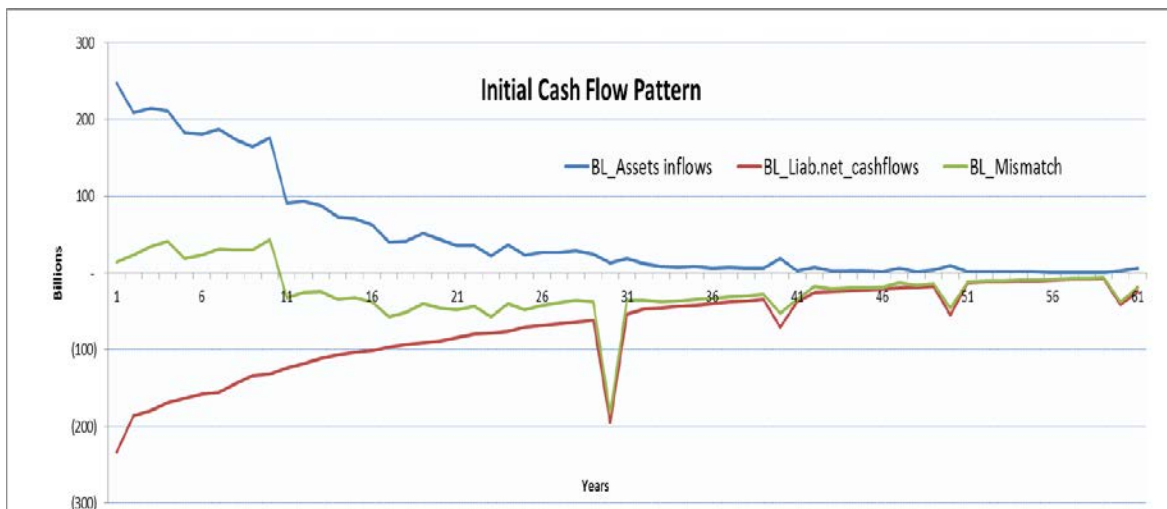
Figure 84: LY: Baseline - initial cash flow pattern

300. In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to:

- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without profit participation features)
- Certain modelling assumptions made by the insurance undertakings.

301. In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity

302. Finally there may be cases of peaks in the medium, long term cash outflows, due to:

a. either the finalization of insurance contracts with lump sum benefits and commercialized to a given fixed date of reimbursement; or

b. to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision at the end of the projection period. This outlier has been retained because it identifies the point where usually the undertakings lack available assets.
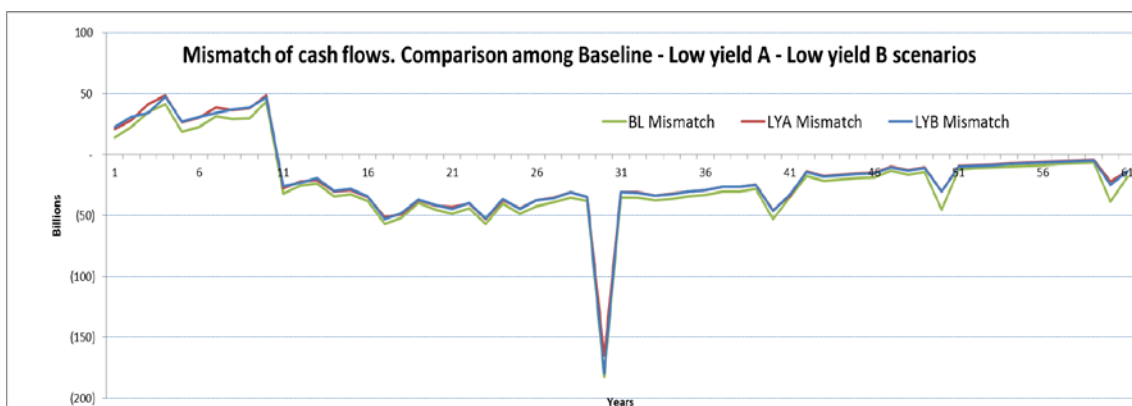
Figure 85: Mismatch of cash flows. Comparison among Baseline scenario - Low yield A - Low yield B scenarios

303.   Once again, it is relevant bearing in mind that those assets, without a predictable cash flow pattern in the long or very long term, are not projected in the graphs above. They may provide potential coverage (at least partially) of the negative mismatches shown in the charts.

304.   This chart is also disclosed for each national market in the Annex IV showing a wide range of situations:

- Markets whose cash flows are limited to the medium term with just negligible cash flows beyond 10-15 years, such as BG, CZ, HR, HU, IE, PL, PT, RO).

- Markets with long term cash flows where cash outflows are matched (mirrored graphically speaking) by the cash inflows, therefore with a low exposure to liquidity risk (considering assets inflows have been de-risked). This is the case of AT, BE, EE, IT, ES, GB.

- Finally markets with the longest durations of liabilities where fixed-income assets are complemented by other assets, are then exposed to the performance risk of the latter (DE, DK, FI, FR, NL, SE).

305.   The rest of the markets present features in the middle of these characteristics.

5.   LTG measure application

306.   It should be noted that for some participants in the low yield module not using the LTG measures would imply an important decline of the SCR ratio.

LTG measure	Used by % of sample
Matching Adjustment	5.8%
Volatility Adjustment	39.1%
Transitional on RFR	1.8%
Transitional on TP	4.4%
Transitional on equity	9.8%
Transitional on own funds	4.9%
Any LTG measure	44.4%

Table 15: LY: Relative share of LTG-measures used by low yield sample

307.   Table 15 above shows that the volatility adjustment is the LTG measure most widely used by the participants in the low yield module followed by the transitional on equity. The limited use of matching adjustment might be probably due to the relatively strict requirements for its application.
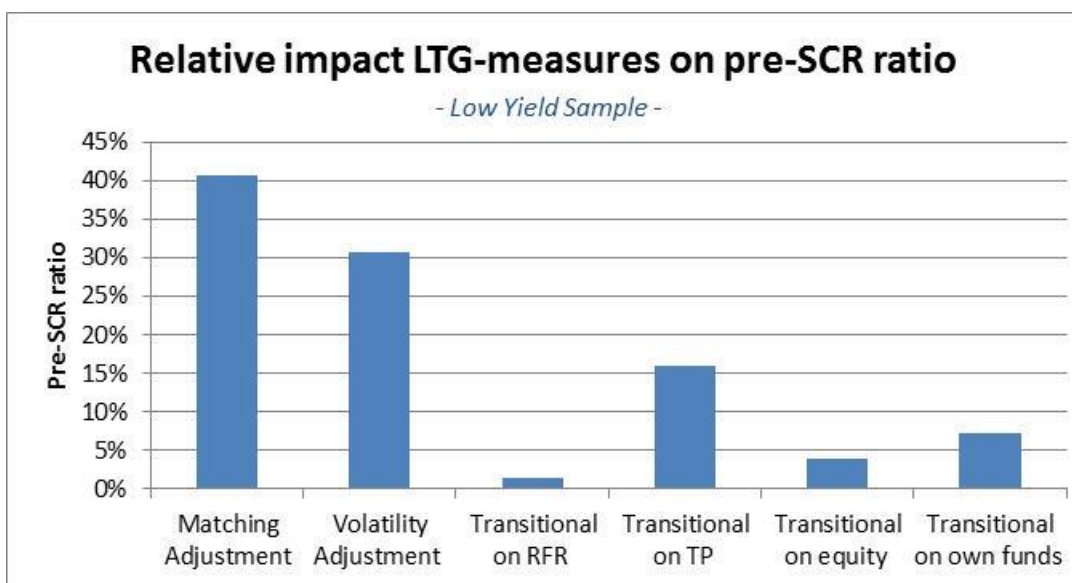
Figure 86: LY: Relative impact of LTG-measure on pre-stress SCR ratios

308.   Figure 86 above shows that on average, the matching adjustment and volatility adjustment followed by the transitional on technical provisions measures seem to have the biggest impact on the pre stress SCR ratio.

6.   Ancillary questionnaire analysis

309.   In the context of the low yield module, EIOPA included an ancillary questionnaire asking companies to provide additional quantitative and qualitative information on different aspects, such as the size of relevant business, the evolution of guaranteed products over the past years, the investment structure of undertakings, the impact on their business and

asset mixes or the main mitigating strategies that could be implemented. The information reported by some of the low yield participants to this questionnaire has been used in EIOPA's Low interest rate environment stock taking exercise 2014. This report is being published in parallel with the stress test report and completes the follow up of EIOPA Opinion on Supervisory Response to a Prolonged Low Interest Rate Environment published on 28 February 2013.

E.   "Japanese-like scenario" (Persistent low yield scenario)

1.   The scenario assumptions

310.   In order to construct the Japanese-like scenario, different historical episodes of the Japanese-like interest rate curves were analysed and investigated i.e. December 2006, June 2008, December 2011 and December 2012. Finally, it was opted to reflect the December 2011 curve to represent the first stressed scenario. A graphical representation of this curve can be found below:
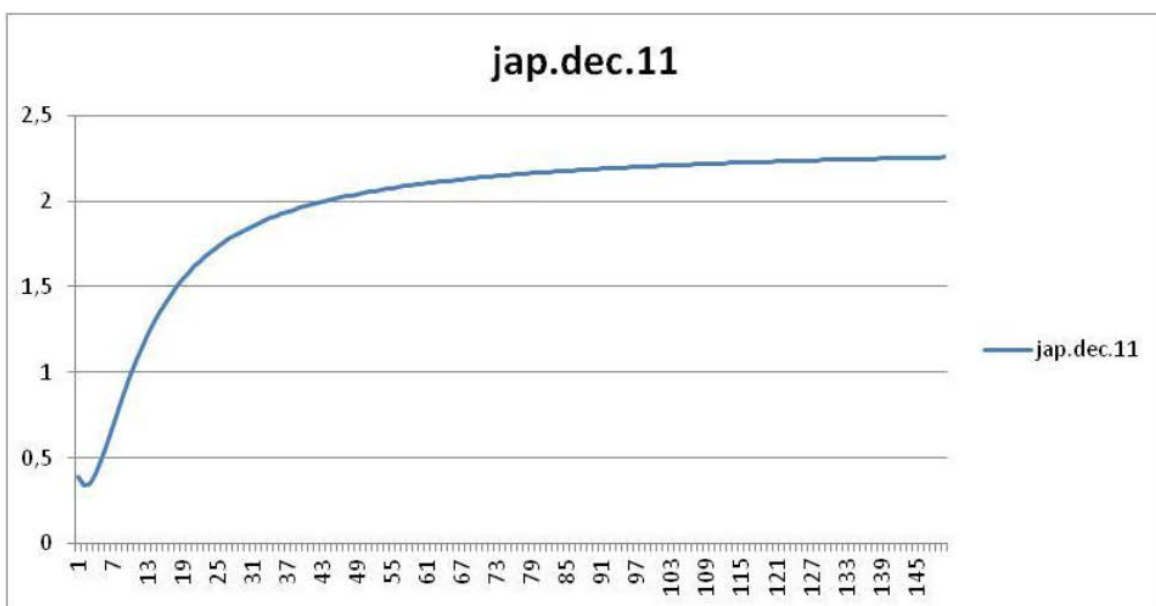
Figure 87: LYA: Japanese-like scenario 2011 IR curve

311.   This curve was, in a first instance, used in order to define the situation after stress for the euro currency area. For other currencies, a 'stressed multiplier' was derived 'in a proportional way' based on the observed shift from the base euro curve to the stressed Japanese curve. The general idea was, indeed, to mirror, for each of the other currencies, the same relative 'shifts' which one would need to apply to get from the euro basic risk free curve to the stressed Japanese curve. The complete

list of stressed curves for this first scenario can be found in the annex published with the specifications[30].
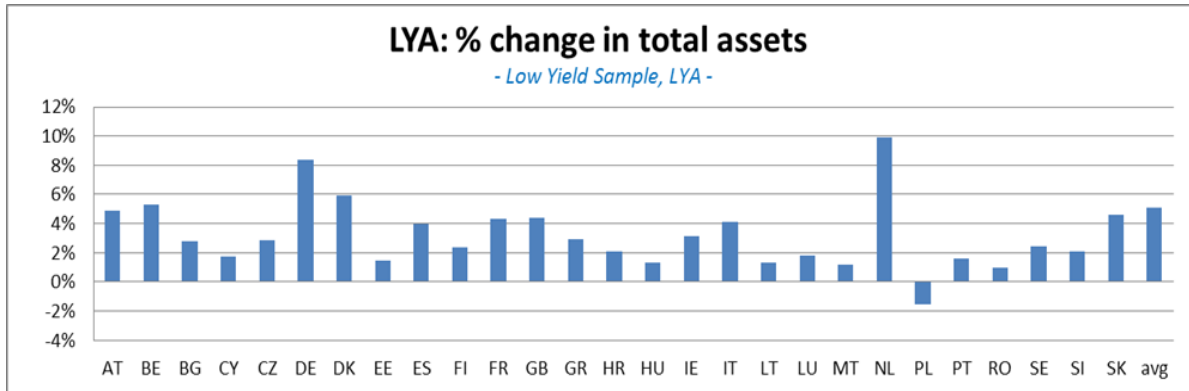
a)   Change in assets

Figure 88: LYA % Change in Total assets

312.   Given the long lasting low yield environment tested in this Japanese scenario, one would expect asset values to move up after such a low yield stress scenario. The longer the duration of the assets the bigger this move. Countries with large asset durations should show as such the biggest impact e.g. DE, GB, DK, AT, BE, ES, FR, NL. In the case of PL the Bond values increased under the scenario and TP decreased in LYA/LYB, RFR BL is lower in first year than in LYA.
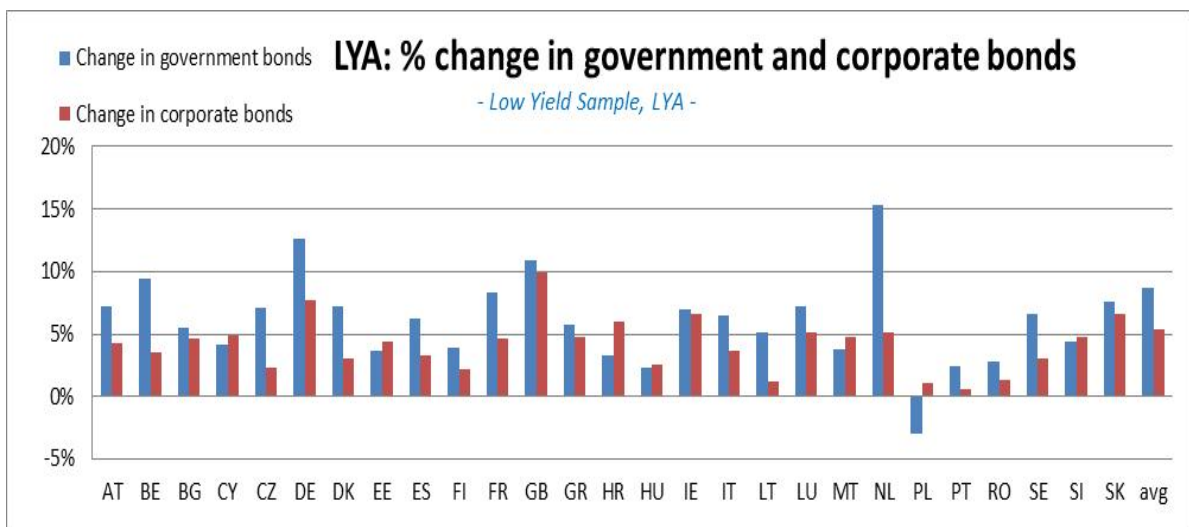
Figure 89: LYA: % change in government and corporate bonds

30

https://eiopa.europa.eu/fileadmin/tx_dam/files/activities/financial_stability/insurance_stress_test_20
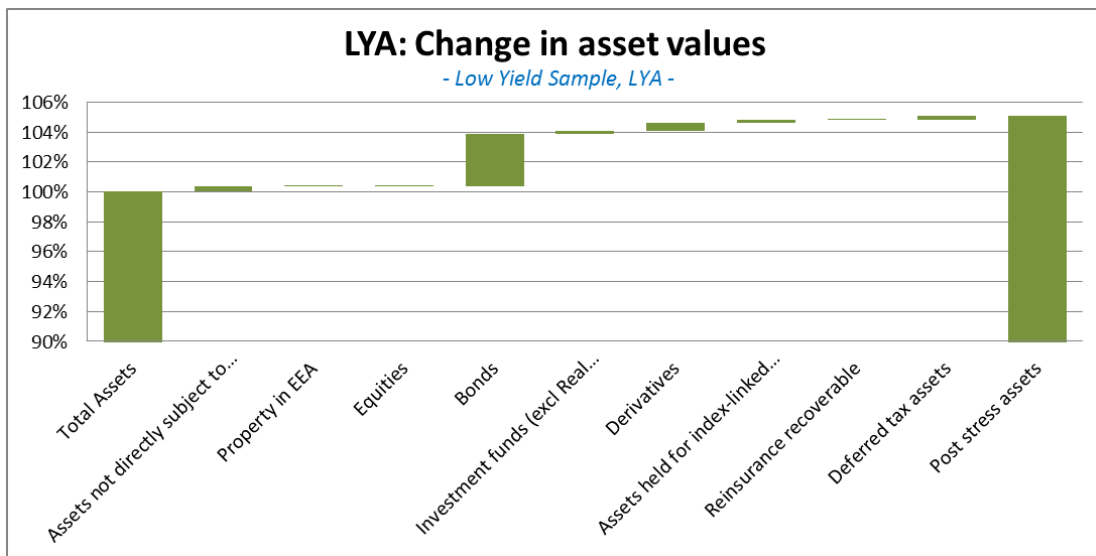14/eiopa-14-217-stress_test_2014_annex_dc1_20140528.xlsx

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LYA: Change in asset values
- Low Yield Sample, LYA -

Figure 90: LYA: Change in assets values

313. The total asset value increases after stress, which is again consistent with intuition. The most material asset move corresponds to the bond portfolio. The move observed in 'assets not directly subject to stress' is explained by the move in loans & mortgages, which were not defined as a separate asset category for this stress test.

b)   Change in liabilities

314. Generally, one would expect the TP to increase in value given the low yield environment tested. For some life products this is not the case e.g. TP life other and TP health portfolios of some countries show a negative change. Often these are highly profitable health and/or death cover products that lose value in case of low yield environment (i.e. less profit). Similar to the assets, participants from countries with longer liability durations often show a bigger impact. Not surprisingly, the TP life with profit is often the most sensitive liability category relative to a low yield environment. In this respect, these Technical Provisions are, on average, the most material liability categories (outliers might be explained due to particular product classification in some countries, see also the graph below).
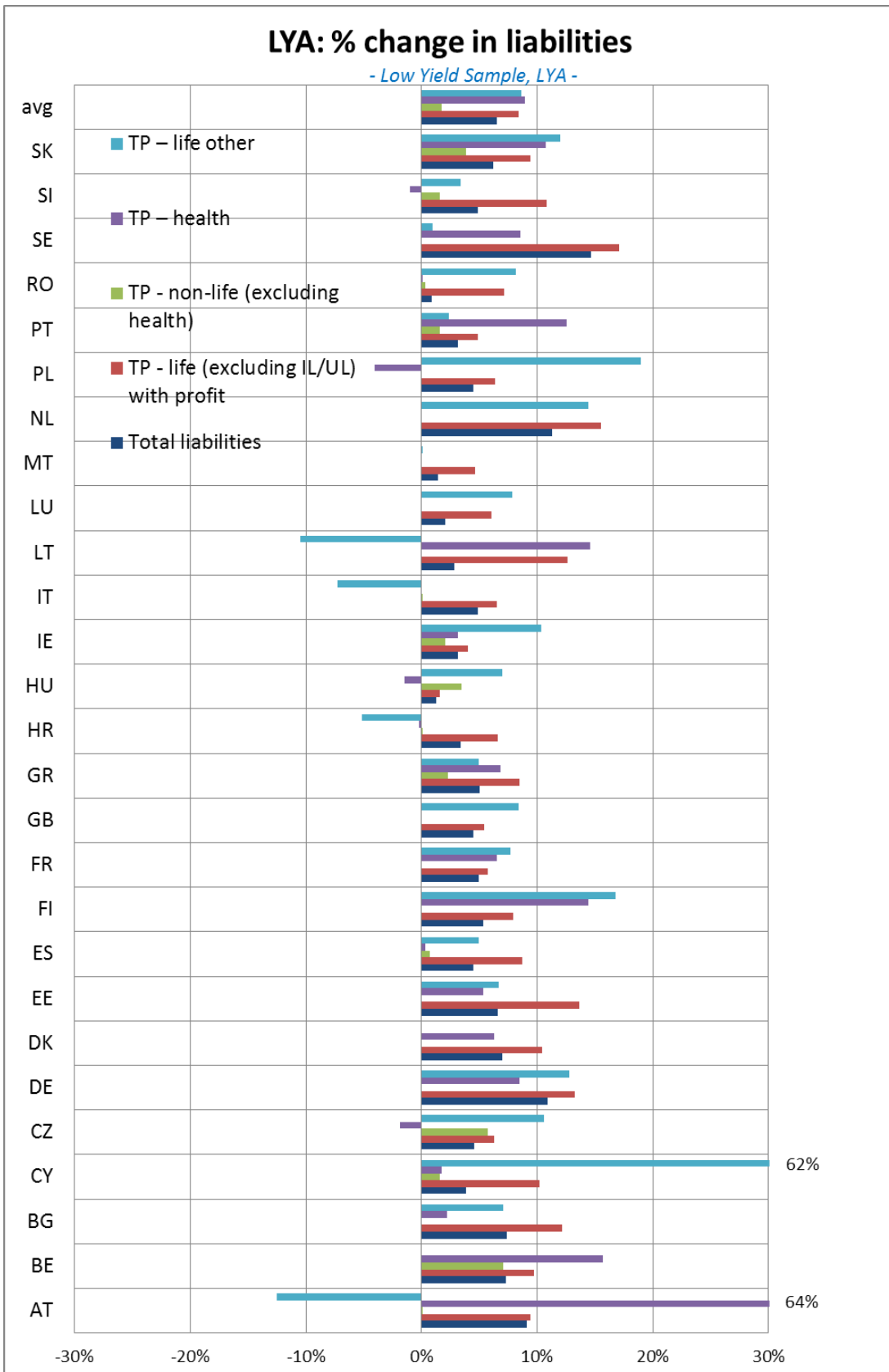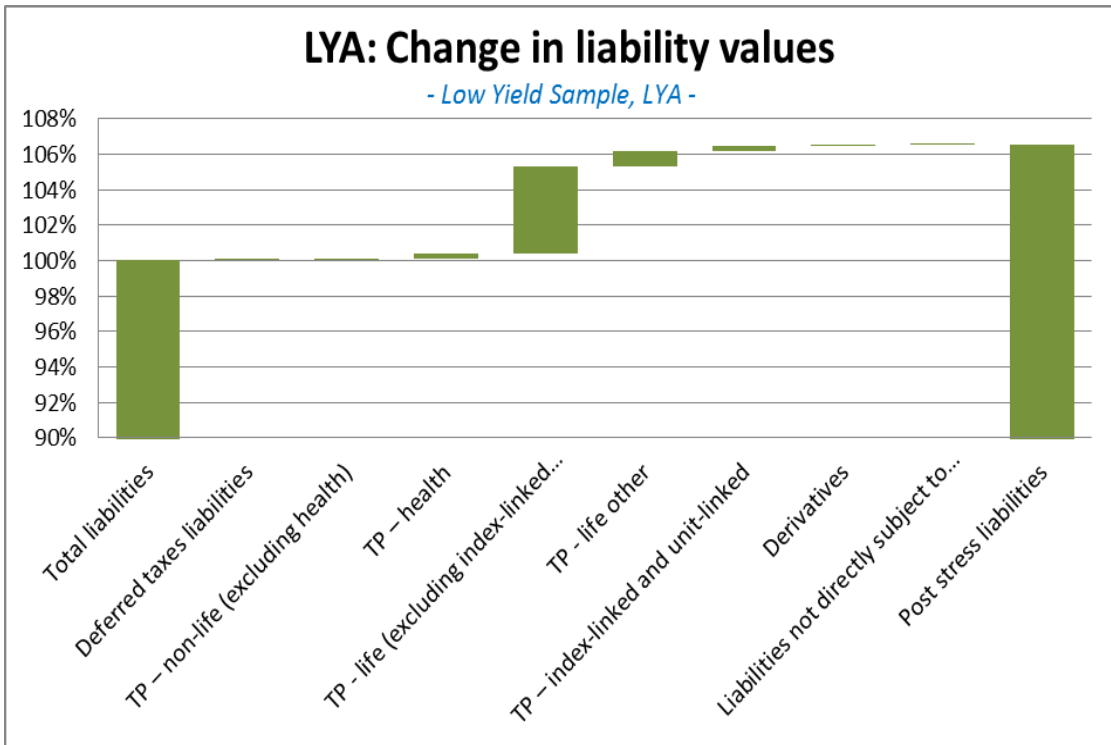
LYA: % change in liabilities

- Low Yield Sample, LYA -

Legend:
- TP – life other
- TP – health
- TP - non-life (excluding health)
- TP - life (excluding IL/UL) with profit
- Total liabilities

Countries (top to bottom): avg, SK, SI, SE, RO, PT, PL, NL, MT, LU, LT, IT, IE, HU, HR, GR, GB, FR, FI, ES, EE, DK, DE, CZ, CY, BG, BE, AT

CY: 62%
AT: 64%

Figure 91: LYA: Change in liability values per country

Figure 92: LYA: Change in liability values decomposed

c)   Change in excess of assets over liabilities
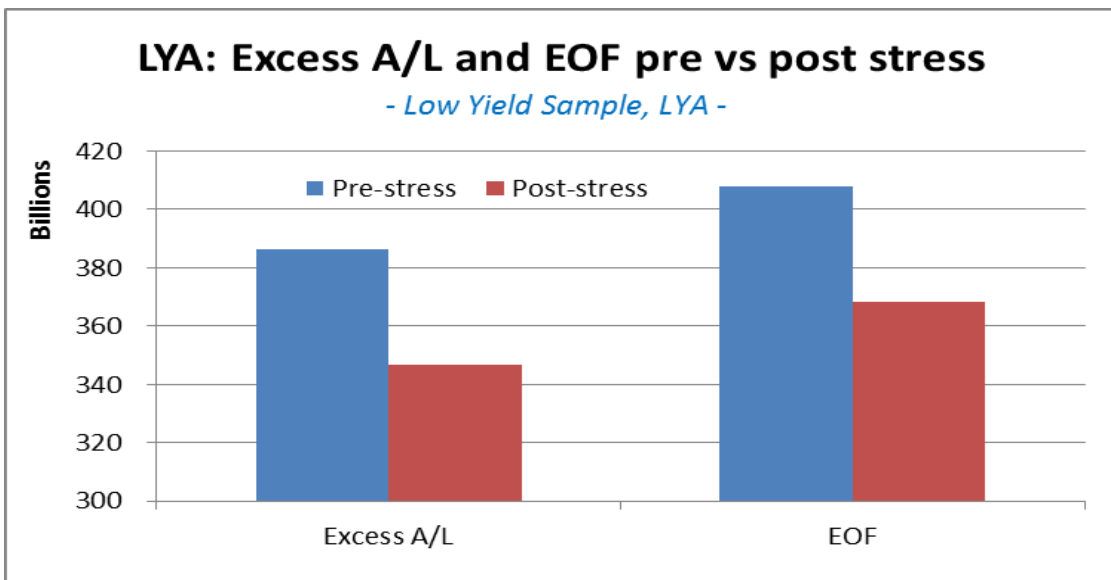
Figure 93: LYA Excess of Assets over Liabilities and EOF pre-vs.-post

315.   On average, the excess of assets over liabilities decreases by approximately 10% in case of the application of the Japanese curve. For the eligible own funds the change is of the same order of magnitude.
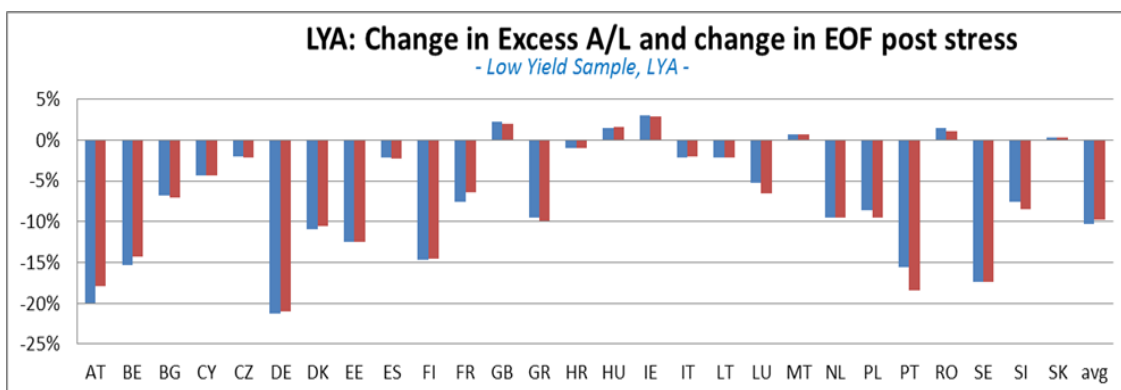
Figure 94: LYA Excess of Assets over Liabilities pre-vs-post per country

316. Countries which are the most materially impacted (impact of at least 10% of own funds) are AT, BE, DE, DK, EE, FI, GR, NL, PT, PL, SE. Some of these countries are characterised by comparatively "larger" duration mismatches as marked in Table 2 and derived from the cash flow analysis. Additionally, the effect on EOF of the low yield scenarios is also determined by the "disappearance" of the UFR compared to the pre-stress situation.

317. For GB the duration mismatch (duration liabilities - duration assets) was negative, which corresponds to a positive impact on own funds. Some countries show a positive impact e.g. HU, IE, MT, RO despite having a positive duration mismatch. Potential reasons for that might be the use of LAC TP or Surrender assumptions which could not be investigated in-depth for this exercise.

Change in assets over liabilities	With LTG	Without LTG*
After LAC (TP & DT)	10.3%	16.9%
Before LAC (TP & DT)	NA	25.2%

Sample contains only companies that reported change without LTG measures

Table 16: LAY: Change in EAOL with-without LAC and LTG measures application

318. Change of assets over liabilities is used in the current report as a tool for measuring the stress test impacts. As can be seen above in Table 16, the loss absorption capacities of Technical Provisions and Deferred Taxes (LAC) and LTG measures increase the resilience of the companies significantly. For the LYA scenario there is no information on the change in assets over liabilities before the LAC and with the LTG.
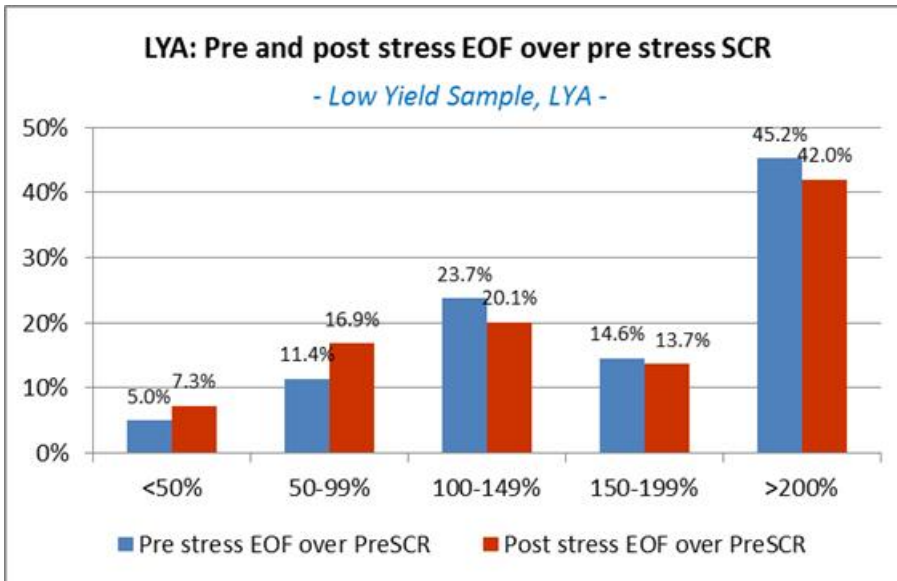
d)   *Change in EOF*

Figure 95: LYA: EOF over Pre SCR pre-vs.-post stress[31]

319.   Based on the starting assumption of SCR figures including the impact of LTG (note: there is no additional impact of LTG after the low yield stresses), around 25% of the participants do not have enough own funds to cover their capital requirements after stress.
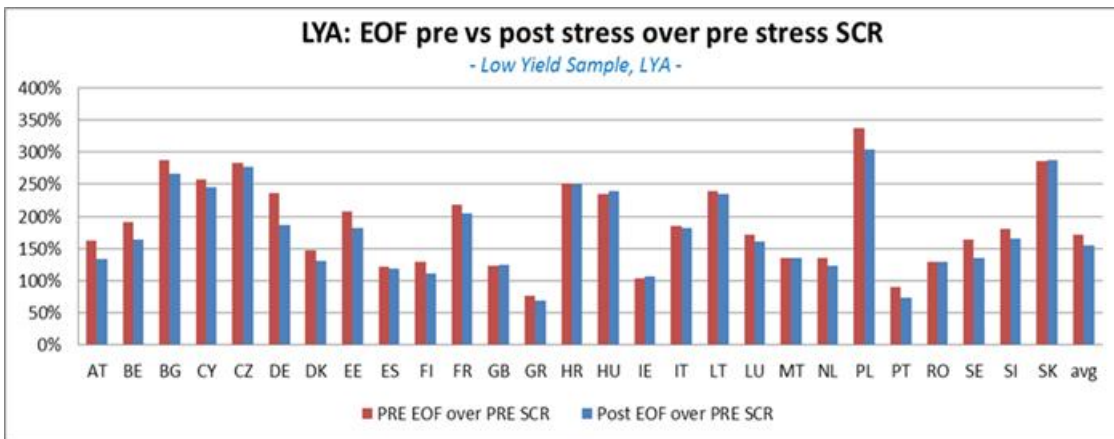

Figure 96: LYA EOF over Pre SCR pre-vs.-post stress[32]

320.   On average, the impact of the own funds over pre- and post-stress SCR figures seems to show only a small impact. For participants from

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[31] Only the EOF are recalculated after stress
[32] Only the EOF are recalculated after stress.

countries with 'lower' starting SCR positions, even a potential smaller impact deserves the necessary attention from the supervisor.

321.   The change in EOF is largely determined by the respective changes in assets and liabilities. For most participants/countries we have seen that the duration of the liabilities is bigger than the duration of the assets. Under such assumptions the Japanese scenario should have caused a large value increase for the liabilities compared to the assets, and, as a result, the EOF to go down. The bigger the discrepancy between asset and liability duration (i.e. the more positive the duration mismatch), the larger the negative impact on EOF. Despite the, sometimes, material impact on own funds, SCR ratios show relative stability after stress.

322.   Participants from countries which were marked in Table 2 with a relatively larger positive duration gap (= duration liabilities - duration assets) e.g. AT, DE, DK, EE, FI, NL and SE often show a more negative impact on EOF. Notice: as duration expresses only a straightforward linear relationship, this can only partly explain the results above.
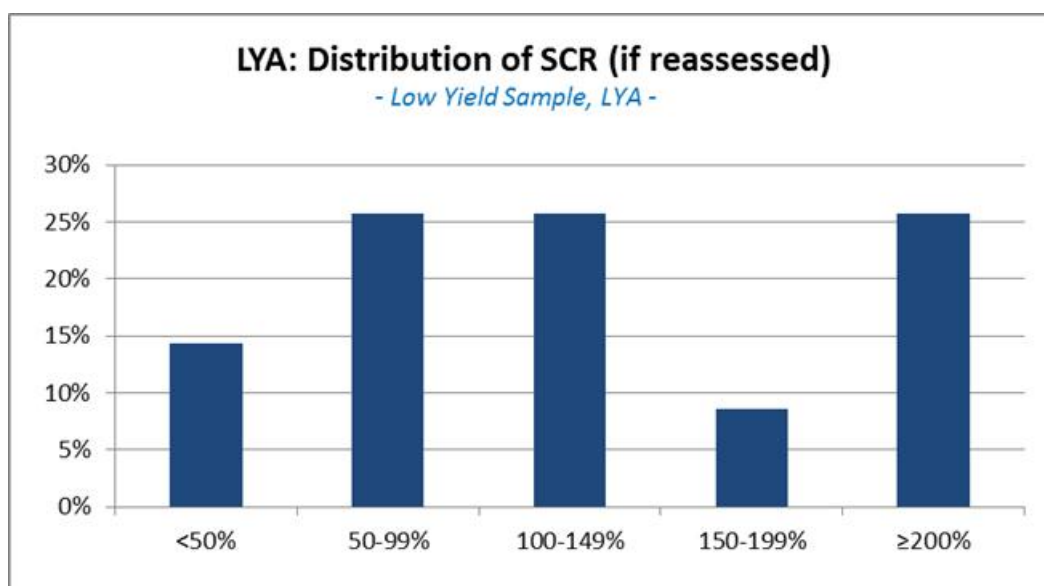

Figure 97: LYA: Distribution of post-stress SCR ratios for those undertakings which reassessed the SCR post stress (sample size 35)
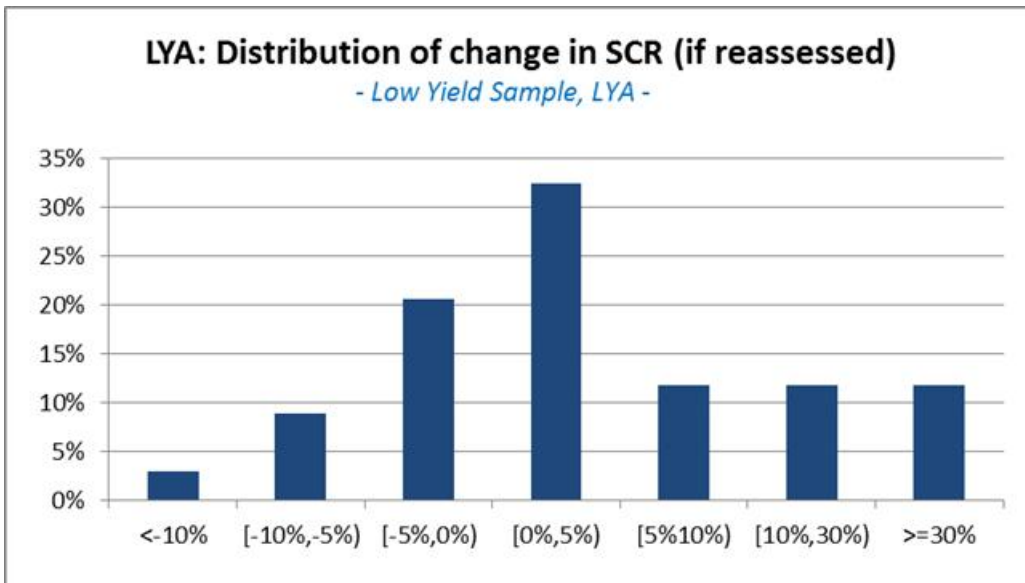
Figure 98: LYA: Distribution of change in post stress SCR for those undertakings which reassessed the SCR post stress (sample size 35)

323. The reassessment of the SCR often had a negative impact on the SCR ratio in case of the low yield stresses (both assets and liabilities often increased in value which increased the SCR). As a consequence, SCR ratios on the basis of reassessed SCR ratios show a less positive picture e.g. +/- 50% of participants who recalculated the SCR show important deficiencies.

e)   Change in Durations and IRR

324. Duration tends to increase after stress (because of the increase in value of TP after stress which outweighs the decrease of the interest rate). The increase in duration is sharper for the first low yield scenario (LYA). As this scenario was characterised by the strongest decrease in interest rates across all maturities this is consistent with intuition.
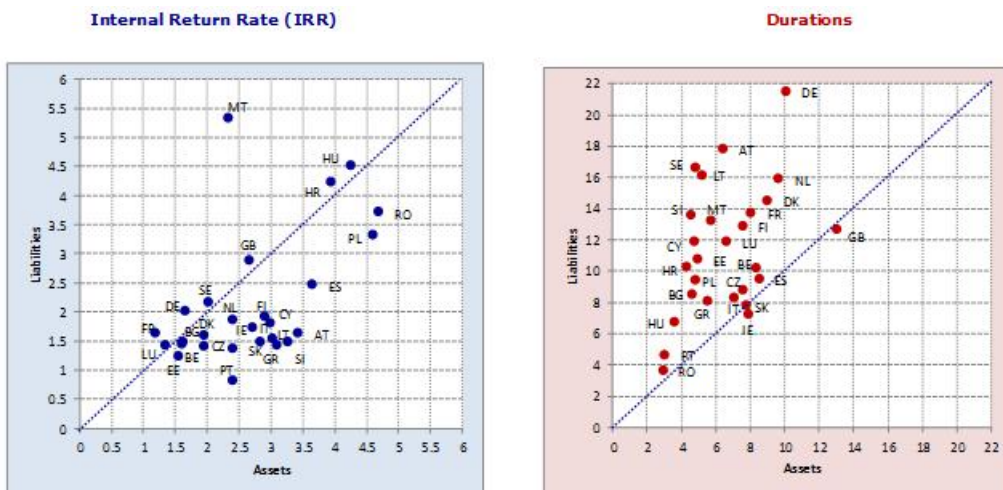

Figure 99: LYA: Durations and IRR Assets and liabilities

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325.   Duration mismatches increase for most countries in case of LYA i.e. a Japanese scenario will cause even sharper duration mismatches and higher reinvestment risk (this confirms expectations).

3.   The new cash flow pattern

326.   The "Japanese-like" scenario is referred in this section as scenario Low yield A. Being a scenario with persistent low yields (therefore lower forward rates and, as a consequence, a shift downwards of the whole risk-free curve), the market value of the assets and the best estimate of liabilities should increase, as confirmed in the following chart:
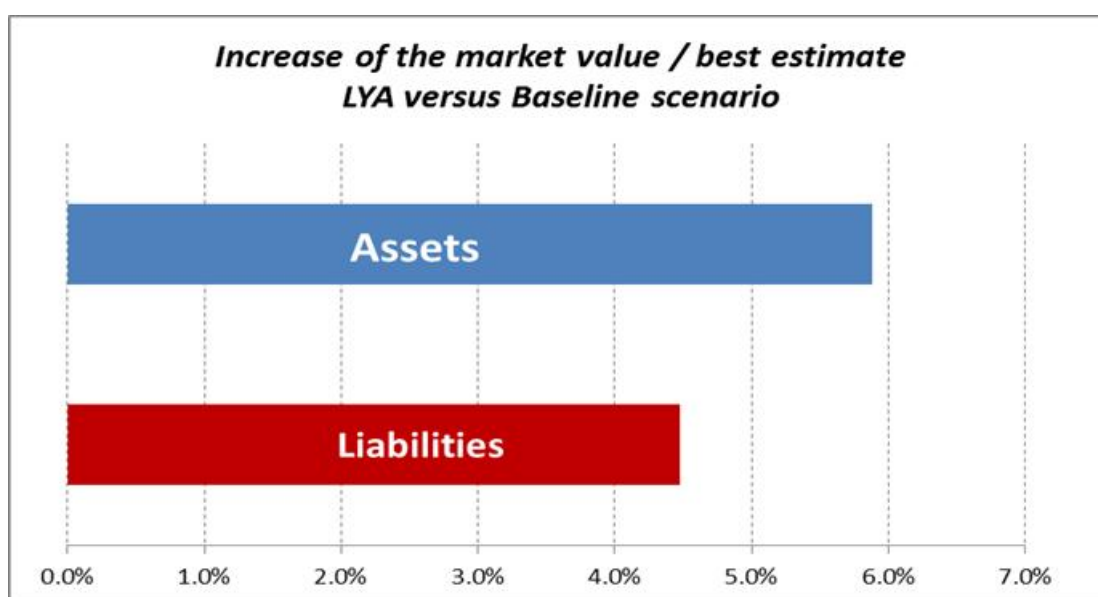

Figure 100:   LYA: Increase of the market value / best estimate LYA versus Baseline scenario

327.   It is necessary to explain why there is a lower increase of liabilities despite their higher duration compared to the duration of assets. Cash flow vectors seem to shed more light on this issue. Both the cash flows of assets and liabilities react to a shift downwards in the risk-free curve.

328.   In the case of the assets, there is a decrease of those cash flows linked to the level of the risk-free rates (such as floating rate notes or bonds with options).

329.   In the case of the liabilities, it is relevant to remind the reader that a vast majority of the cash outflows considered in the analysis proceed from insurance portfolios with participation features. As a consequence, in the case of a downwards shift of the risk-free rate a material decrease of cash flows for the future amount of benefits to be credited, is expected, either on a contractual or a discretionary basis. Additionally, it seems relevant to investigate further the manner in which lapses are modelled in this type of exercise.

330. Data declared confirmed these expectations with an important decrease of the expected cash flows, as shown in the chart below, although it should be noted that, in the scope of this stress, both assumptions were not challenged by the supervisors. Such a challenge might potentially change certain behaviours:

Figure 101: Relative variation of cash flows (LYA vs BL)

331. In light of the Figure 101: Relative variation of cash flows above, an improvement of the mismatch at an overall level is observed, because the capacity of future benefits of insurance contracts to absorb the reduction of future interest rates is stronger than the reduction of the cash flows of assets exposed to the low yield scenario. The consequence is the improvement of the mismatch (as shown in the chart above for the first years of projection).

332. It is not possible to identify concrete rules applicable to specific types of undertakings, because the change of cash flows in the low yield A scenario depends to a great extent on the type of insurance business. The chart below is self-conclusive showing such dependency.
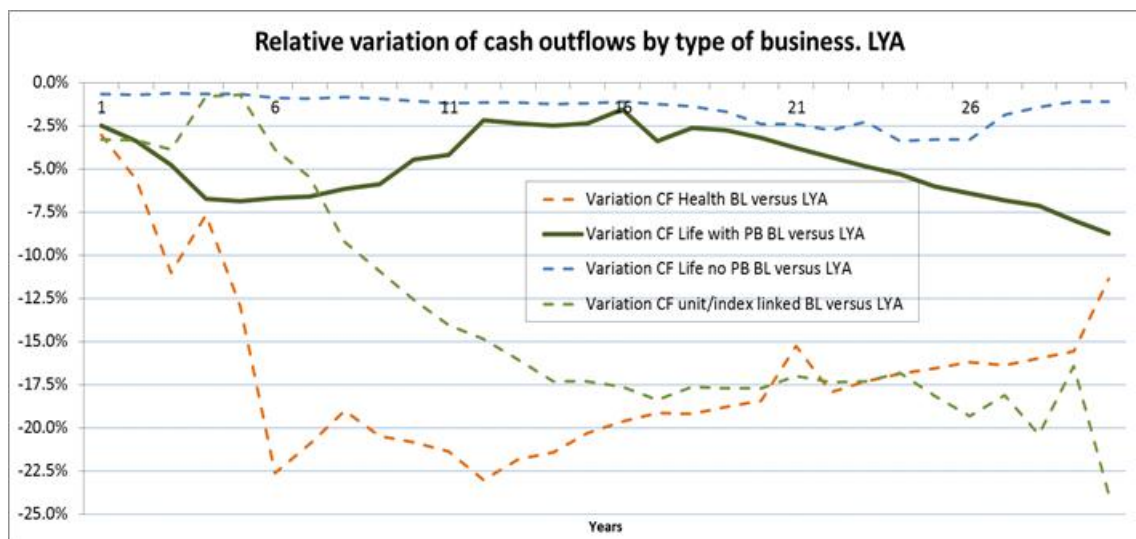

Figure 102: LYA - Relative variation of cash outflows by type of business

333. The line corresponding to the change (Baseline scenario to low yield scenario A) in cash flows of non-life portfolios has not been plotted because it distorts the chart (the cash flows are very low compared to the cash flows of life contracts with profit participation features and hence their variation is much higher and limited to the first years of the projection).

334.   The solid line green line reflects the relative change of cash flows of the major type of business reported in the cash flow analysis: life with profit participation features. The chart shows on average a reduction of the cash flows around 7.5 per cent, being the main trend explaining why in the previous chart the red line is clearly below the blue line (i.e. cash flow of liabilities decrease in relative terms in low yield A scenario more than cash flows of assets).

335.   Figure 103 below compares the duration of assets and liabilities with the same presentation already explained in the item referred to the Baseline scenario.
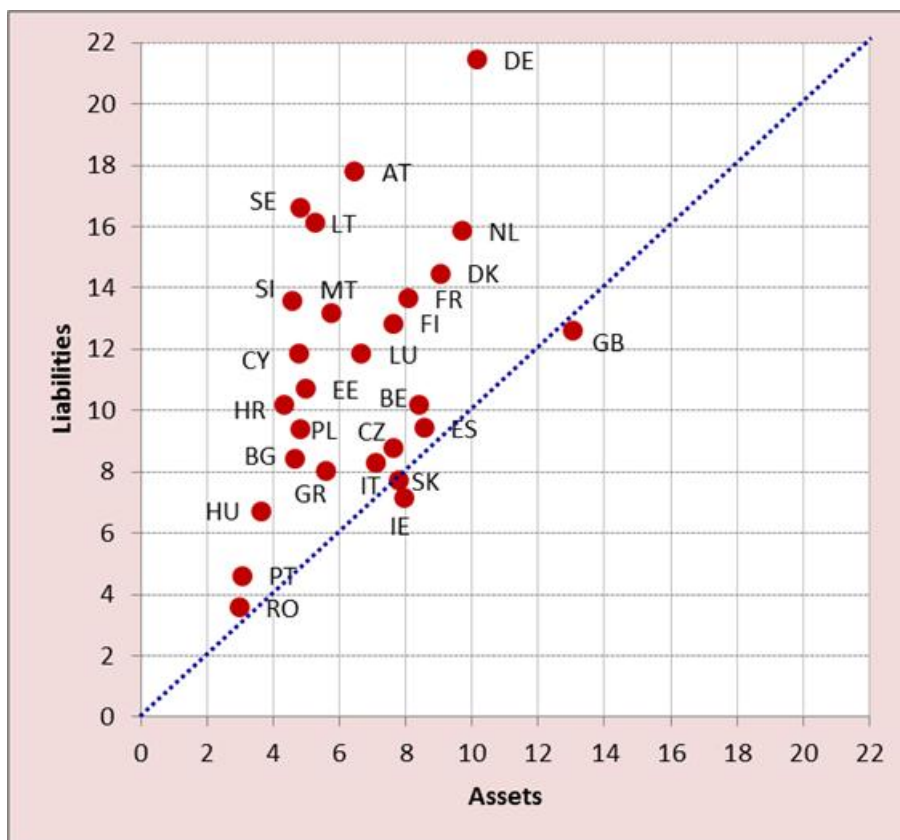

Figure 103: LYA - Duration Liabilities vs Duration Assets

336.   For the markets with long term guarantees without a sufficient matching regime, an increase in the distance to the diagonal is observed, which reflects an increase in the risk exposures to changes in the risk-free interest rates structures. In the case of the markets close to the diagonal, as expected, they are less impacted under this scenario.

337.   This is confirmed comparing the chart of mismatches under the low yield A scenario to the chart of mismatches of the Baseline scenario.
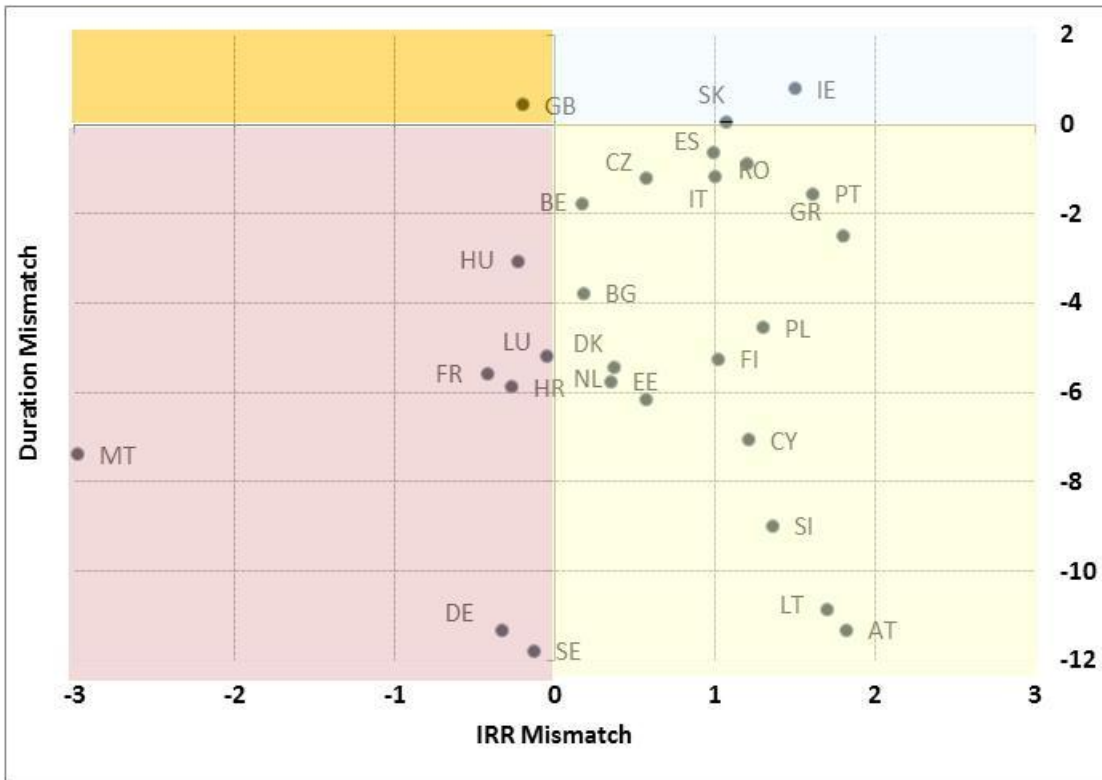
Figure 104: LYA: Mismatch of IRR and durations [IRR/Duration Assets minus IRR/Duration liabilities.

338. Figure 105 below shows a common pattern for almost all markets and also tries to make explicit the different magnitude of changes in IRR and durations. Markets with higher liability durations in the Baseline scenario deliver the highest changes in durations (sensitivity to the stress scenario).
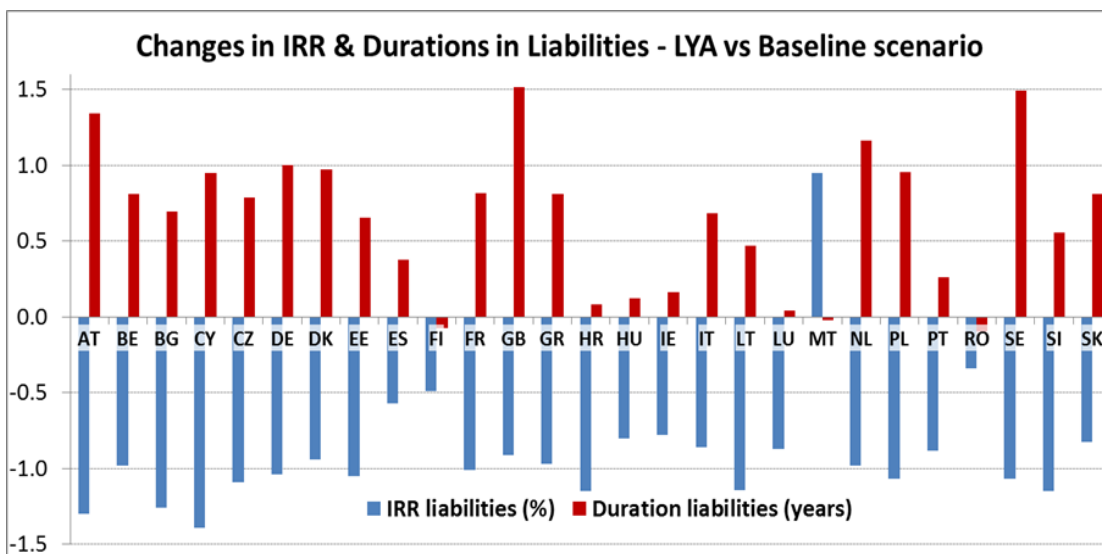

Figure 105: Changes IIR & Duration in Liabilities – LYA vs. BL

339. Figure 106 below shows the sensitivity to the stress scenario for IRR and Durations to the scenarios in the asset side.
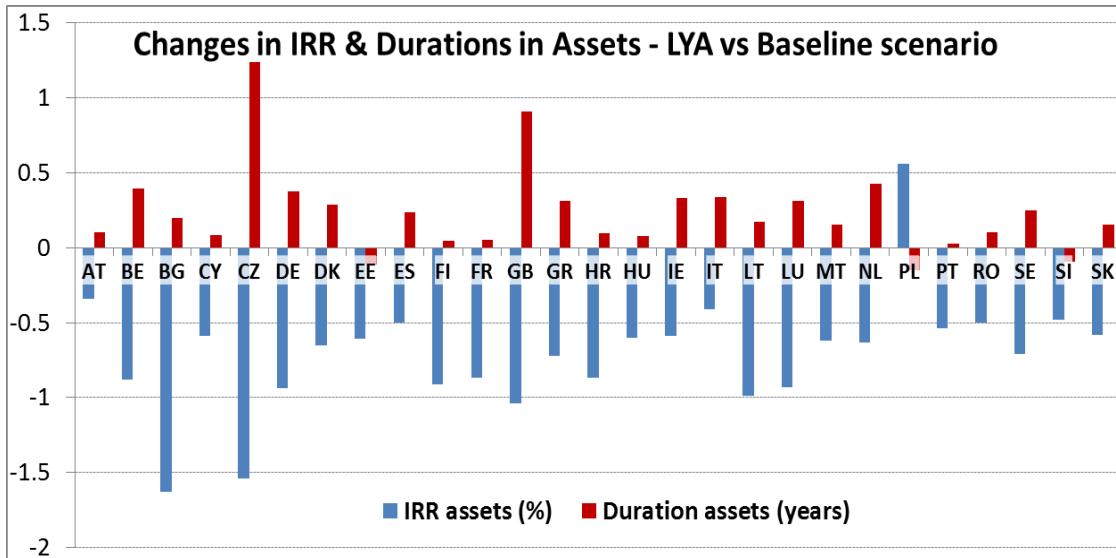

Figure 106: Changes IIR & Duration in Assets – LYA vs BL

F. "Inverse scenario" (atypical change in the shape of the yield curve)

1. The scenario assumptions

340. Similar to the first scenario and, in order to construct the inverse stressed curve, different historical episodes of the euro interest rate curves were analysed and investigated. Using the 31/12/2013 swap curve as a starting point, different recent historic dates were investigated in order to create a curve with the desired characteristics after stress i.e. curves for which one would get an upward shock for short-term maturities and/or a downward shock for mid- to long-term maturities (assuming an instantaneous shift). Different potential historic curves were identified i.e. November 2011, December 2011, June 2012, and December 2013. Finally, the June 2012 curve was chosen to reflect this stressed euro pivoting-scenario. The chosen curve is depicted below:
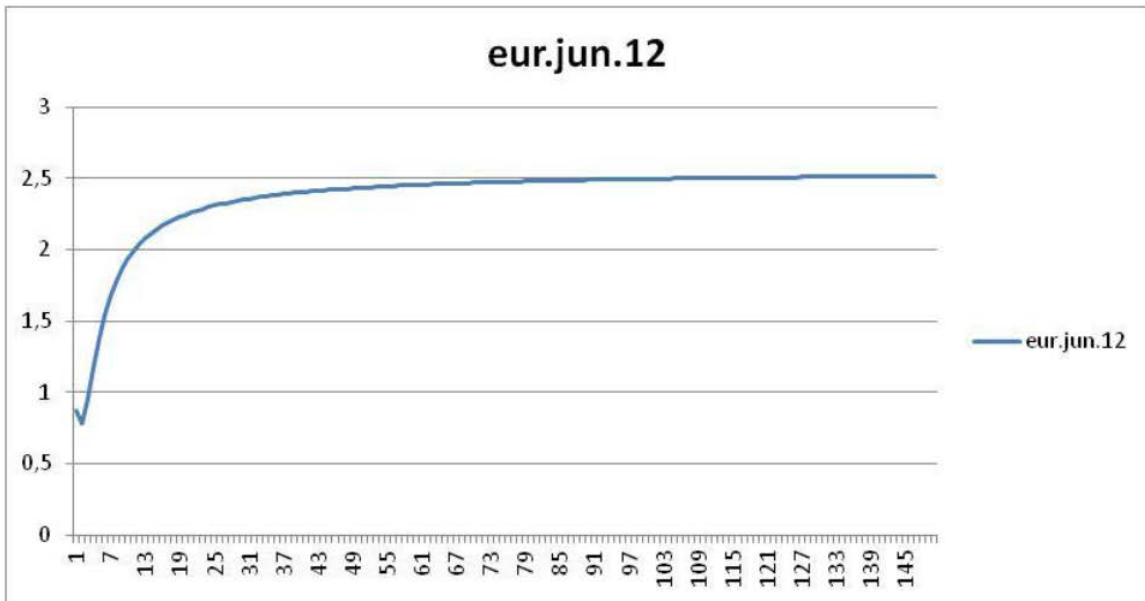
Figure 107: LYB - Inverse scenario 2012 IR curve

341. Similar to the technique applied for the Japanese scenario, this inverse curve was, in a first instance, used in order to define the situation after stress for the euro currency area. For other currencies, a 'stressed multiplier' was then derived 'in a proportional way' mirroring the observed shift from the base euro curve to the stressed inverse euro curve. The complete list of stressed curves for this second scenario can also be found in annex published with the stress test specifications[33].

2. The stress simulated results
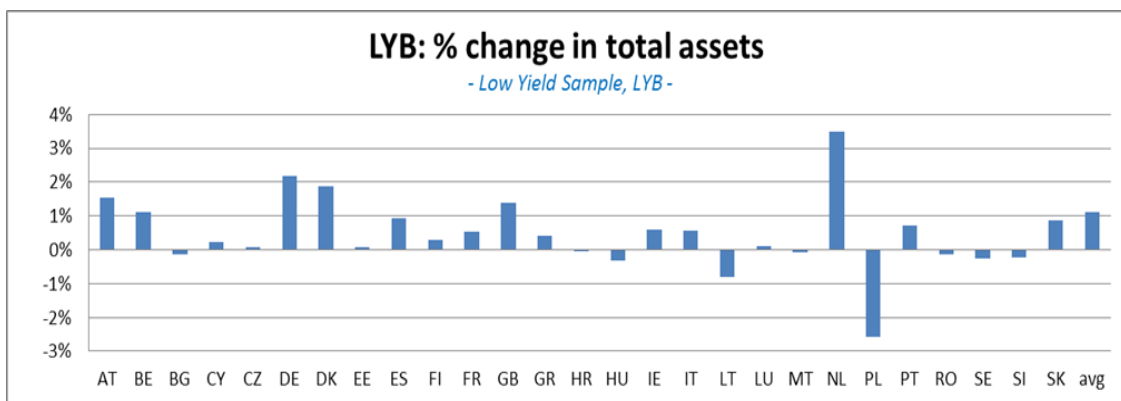
a) *Change in assets*

Figure 108: LYB: % Change in total assets

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https://eiopa.europa.eu/fileadmin/tx_dam/files/activities/financial_stability/insurance_stress_test_2014/eiopa-14-217-stress_test_2014_annex_dc1_20140528.xlsx

342. For participants from countries with comparatively 'longer' durations in their asset portfolio, the impact on the asset side of the inverse curve is expected to be positive. This is confirmed for several countries e.g. AT, BE, DE, DK, ES, GB, NL and SK. Some countries are characterised with participants showing a negative impact on the assets side of the inverse curves. Often, this is explained by the 'shorter' asset durations (due to the increase of the swap rates for the first 7/8 years) e.g. BG, HU, HR, LT, PL, RO, SI and SE.
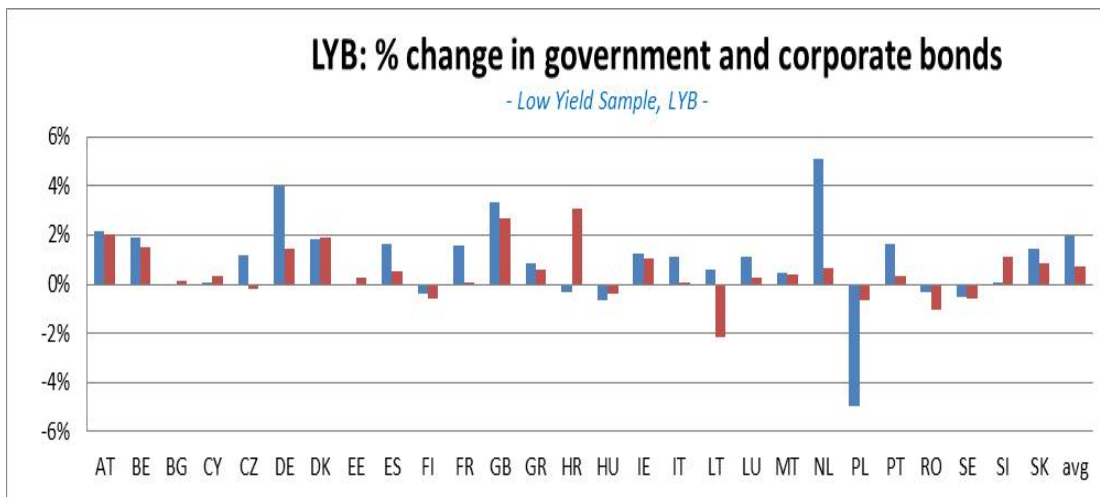

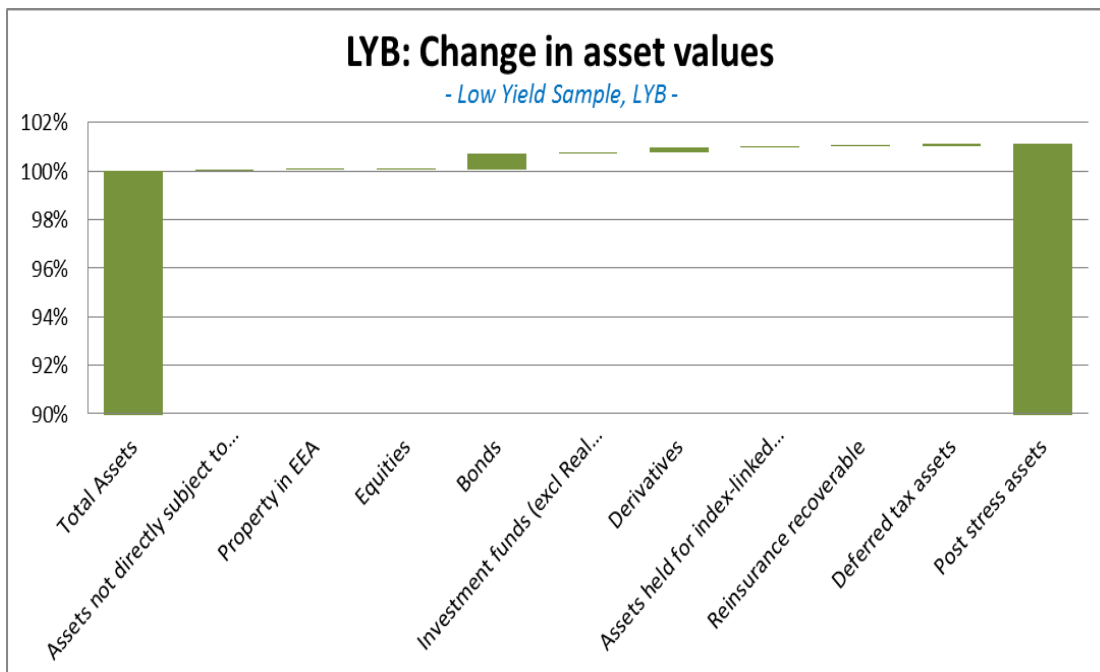**Figure 109: LYB: change in Government bonds and corporate bonds**

Figure 110: LYB: change in assets values

343. The overall impact on European level is positive on the asset side, but the offsetting effect across countries described above needs to be taken into account.

344.   As with the first low yield scenario (LYA), the asset category which is most materially impacted is the bond portfolio.

b)   Change in liabilities

345.   As the duration of the liabilities is generally longer than the assets, one expects a generally positive impact on liabilities is expected (i.e. TP is increasing). For several countries, several types of TPs are, however, decreasing, this can, e.g., be explained by their shorter duration (the inverse curve increases for these short durations).
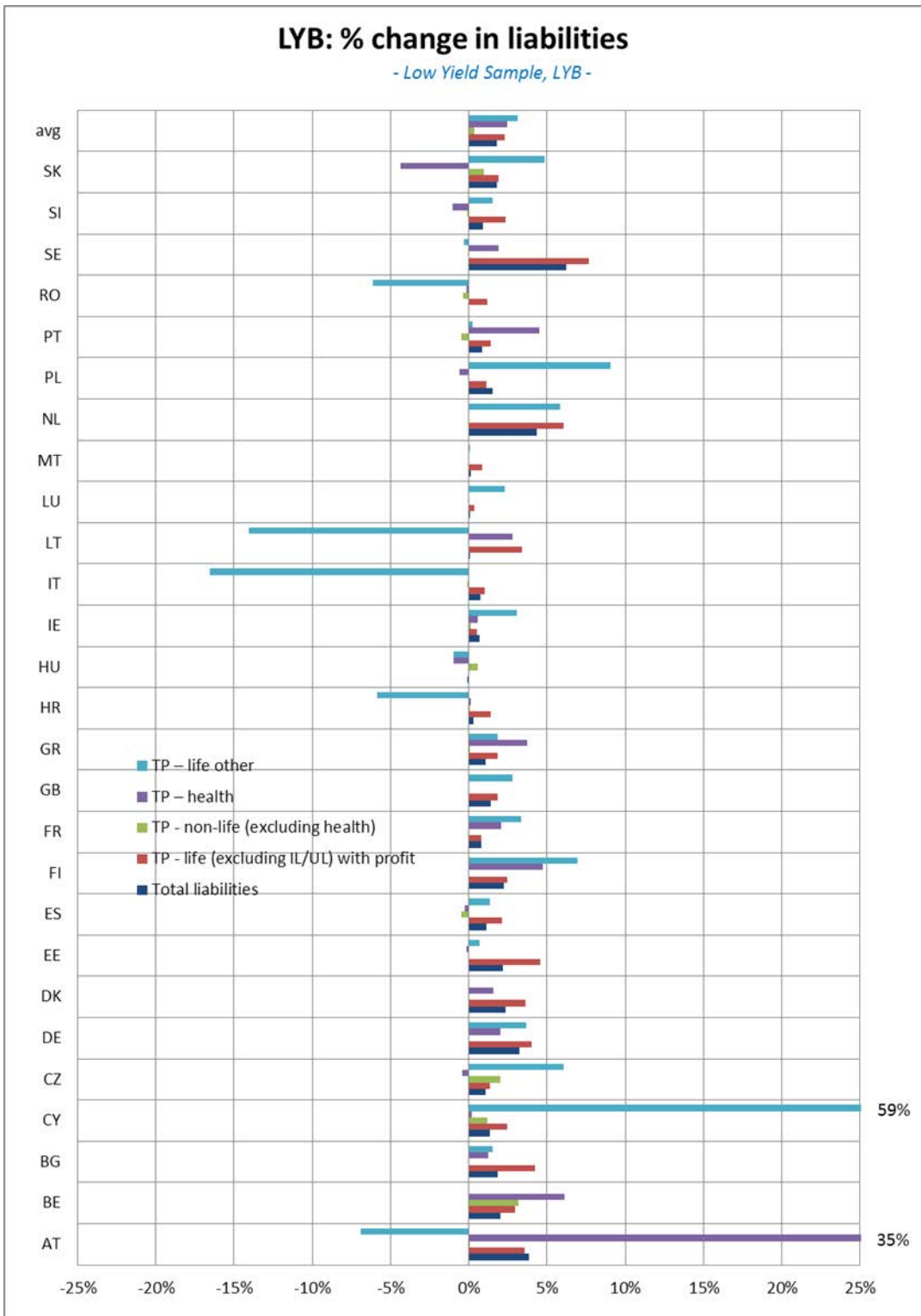
Figure 111 LYB: Changes in liabilities per country

346.   Overall the effect on the liabilities is indeed positive (TP increasing). For non-life TP the effect is slightly negative as the duration of these TP is generally shorter, the major effect on the TP is still generated by the TP-life.

c)   *Change in excess of assets over liabilities*
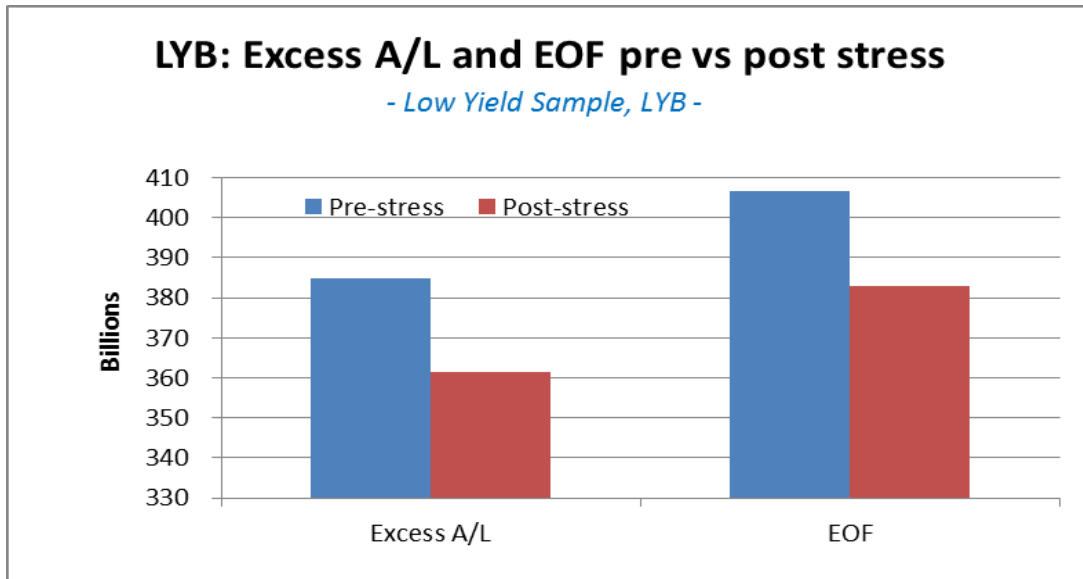
Figure 112: LYB: Excess of Assets over liabilities and Eligible Own Funds pre-post-stress
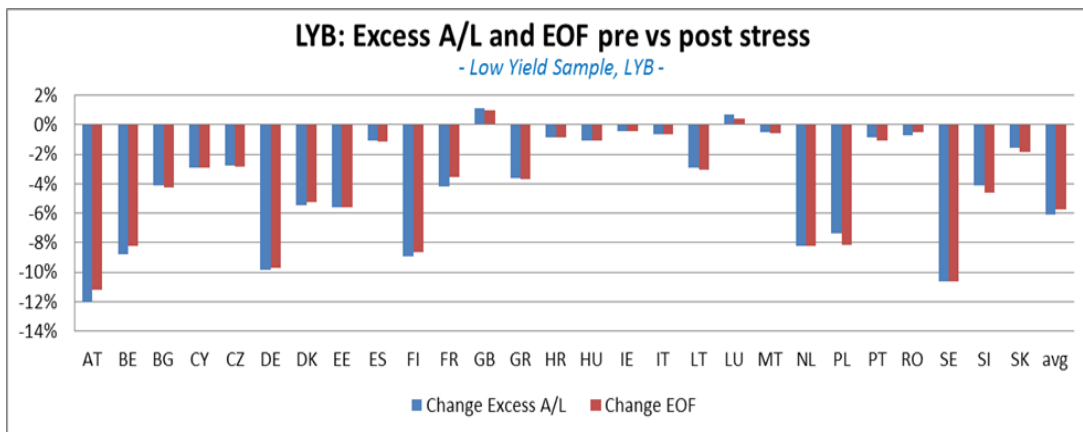
Figure 113: LYB: Excess of Assets over liabilities and Eligible Own Funds pre-post-stress per country

347.   On average, the excess of assets over liabilities decreases by around 6% in case of the application of the inverse curve. For the eligible own funds, the decrease is, similar to LYA, in line with the change in the excess of assets over liabilities.

348.   Countries most materially impacted are: AT, BE, DE, DK, EE, FI, NL, PL and SE. Some of these countries are marked in Table 2 as showing more positive duration mismatches and so participants in such situation are also negatively affected in the inverse scenario, despite the increase in the curve in the short end, with negative impact in their own funds. Some countries show a positive impact e.g. GB, LU.

Change in assets over liabilities		
	With LTG	Without LTG*
After LAC (TP & DT)	6.1%	10.8%
Before LAC (TP & DT)	NA	17.1%

Sample contains only companies that reported change without LTG measures

Table 17: LYB: Change in EAOL with-without LAC and LTG measures application

349.   The change of assets over liabilities is used in the current report as a tool for measuring the stress test impacts. As can be seen above in Table 17, loss absorption capacities of Technical Provisions and Deferred Taxes (LAC) and LTG measures increase resilience of the companies significantly. For the LYB scenario there is no information on the change in assets over liabilities before the LAC and with the LTG.

d) *Change in EOF*

Figure 114 LYB: change in EOF

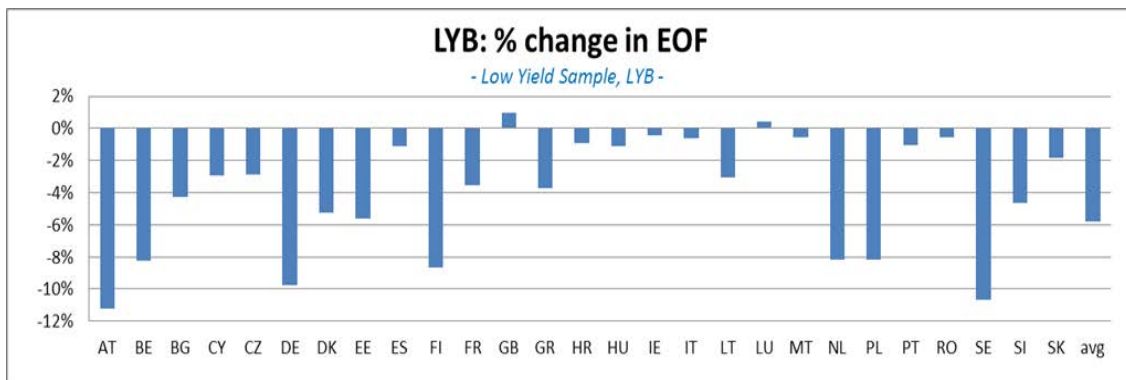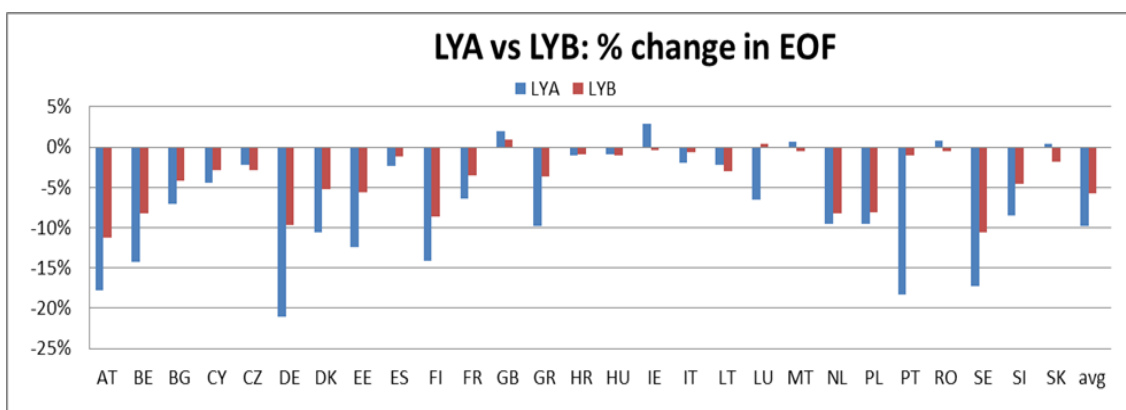**Figure 115: change in EOF LYA vs LYB**

350.   Interesting insights can be obtained by comparing the impact of LYA and LYB. Generally, the Japanese scenario is the more severe of the two low yield scenarios, which corresponds to the average asset-liability profile of the insurance industry. Participants for some countries however are more vulnerable to an inverse scenario e.g. CZ, HU, IE, LT, MT, RO

and SK. Often these countries are characterised by shorter asset and liability durations.
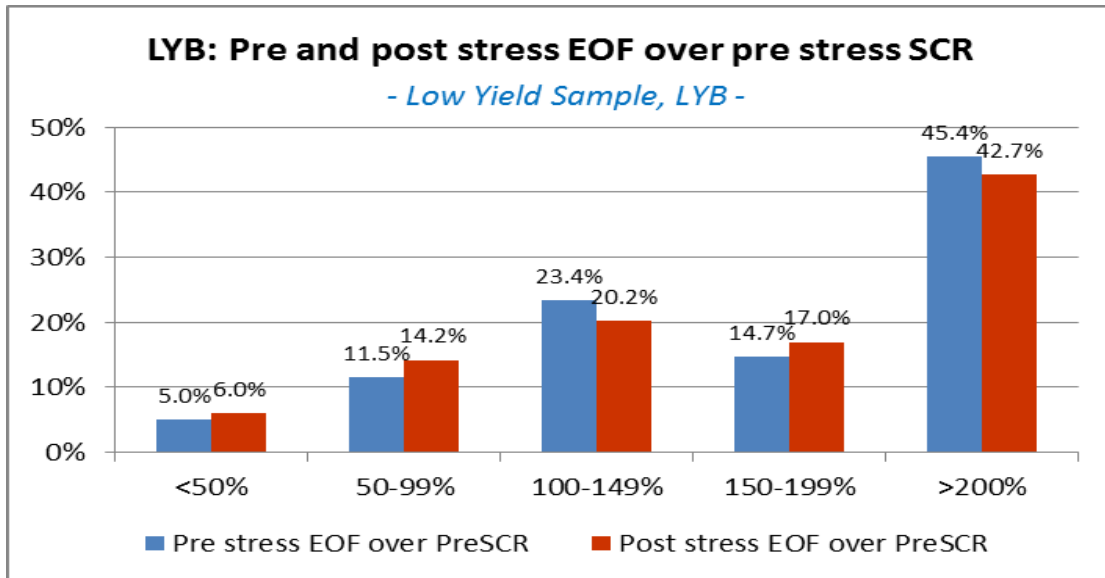
Figure 116:   LYB EOF over Pre SCR pre-vs.-post stress[34]

351.   Based on the starting assumption of SCR figures including the impact of LTG (note: as already stated above, there is no additional impact of LTG after the low yield stresses), around 20% of the participants do not have enough own funds to cover their capital requirements after stress. Overall, the outcome of LYB in terms on SCR ratios is more positive than the outcome of LYA.
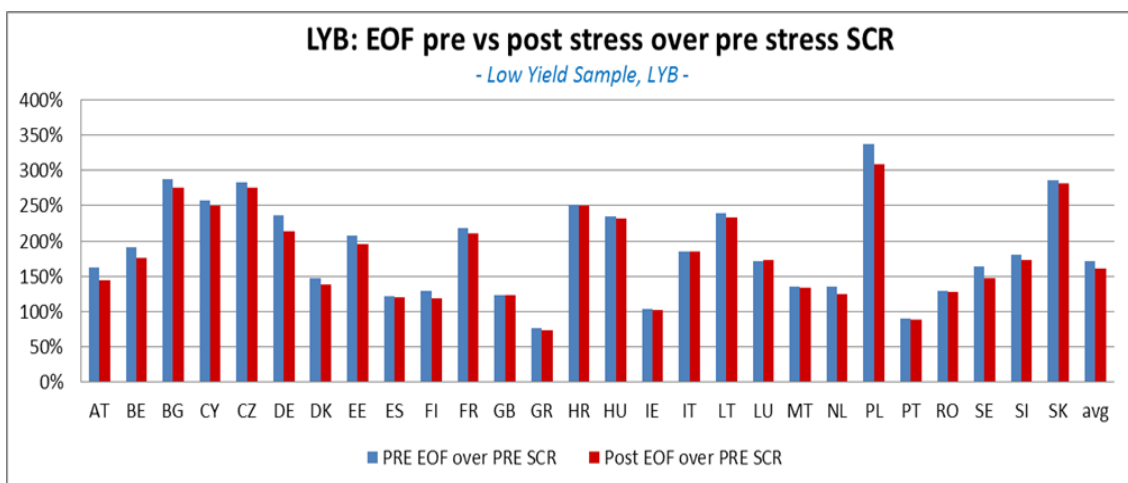
Figure 117: EOF (pre and post) over pre SCR per country

352.   On average, and similar to LYA, the impact of the own funds over pre- and post-stress SCR figures seems to show only a small impact. For

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[34] Only the EOF are recalculated after stress.

participants from countries with 'lower' starting SCR positions, even a smaller potential impact deserves the necessary attention from the supervisor. Based on these figures the impact of the potential inversing of the low yield curve is, at least, less dangerous that the continuation of a low yield environment for the European insurance industry

e)   ***Change in SCR***

LYB: Distribution of SCR (if reassessed)
- Low Yield Sample, LYB -

Figure 118: LYB: Distribution of post-stress SCR ratios for those undertakings which reassessed the SCR post stress (sample size 35)

LYB: Distribution of change in SCR (if reassessed)
- Low Yield Sample, LYB -
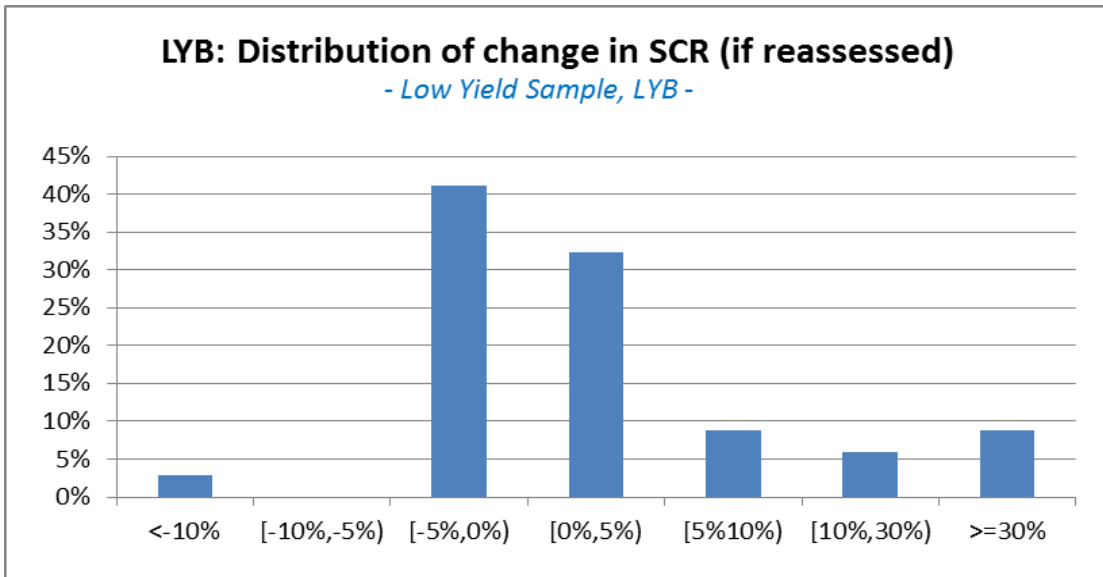
Figure 119: LYB: Distribution of change in post stress SCR for those undertakings which reassessed the SCR post stress (sample size 35)

353. In line with the Japanese scenario, the reassessment of the SCR often had a negative impact on the SCR ratio (SCR increased). As a consequence, the reassessed SCR ratios show a less positive picture.

f)   Change in Duration and IRR
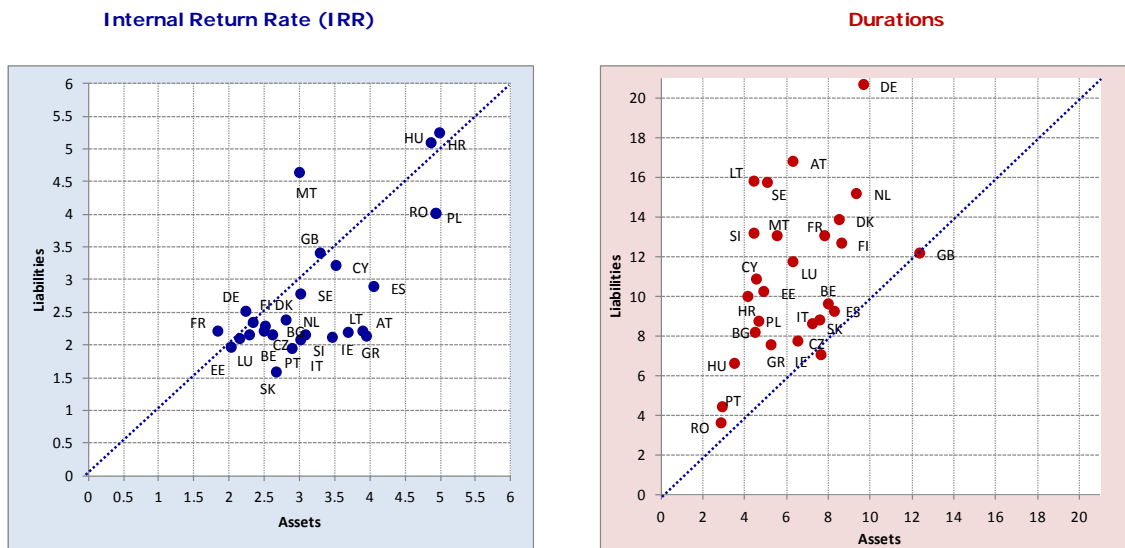
Figure 120: LYB Durations and IRR – Assets and Liabilities

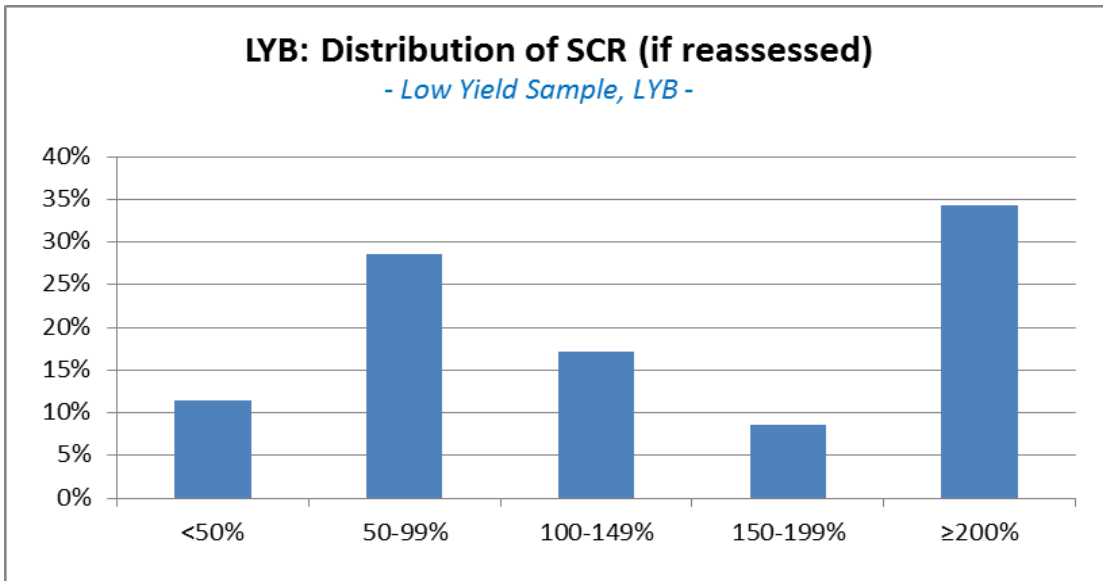354. There is no common direction in duration shifts, given the a-typical curve, this could correspond to intuition, i.e. both asset and liabilities can shift in different directions depending on their duration.

3.   The new cash flow pattern

355. The "inverse" scenario is referred in this section as scenario Low yield B. In this case there is a change (increase) in the shape of the curve, with higher risk-free interest rates in the short term (up to 7 years approximately) and lower yields in the long term maturities.

356. Therefore the impact on different markets depends to a great extent on the distribution of the cash flows. A priori the impact on both the market value of assets (with lower duration) and the best estimate liabilities might be really limited due to the twofold stress of different direction (short and long term). This intuitive analysis is confirmed in the following chart:
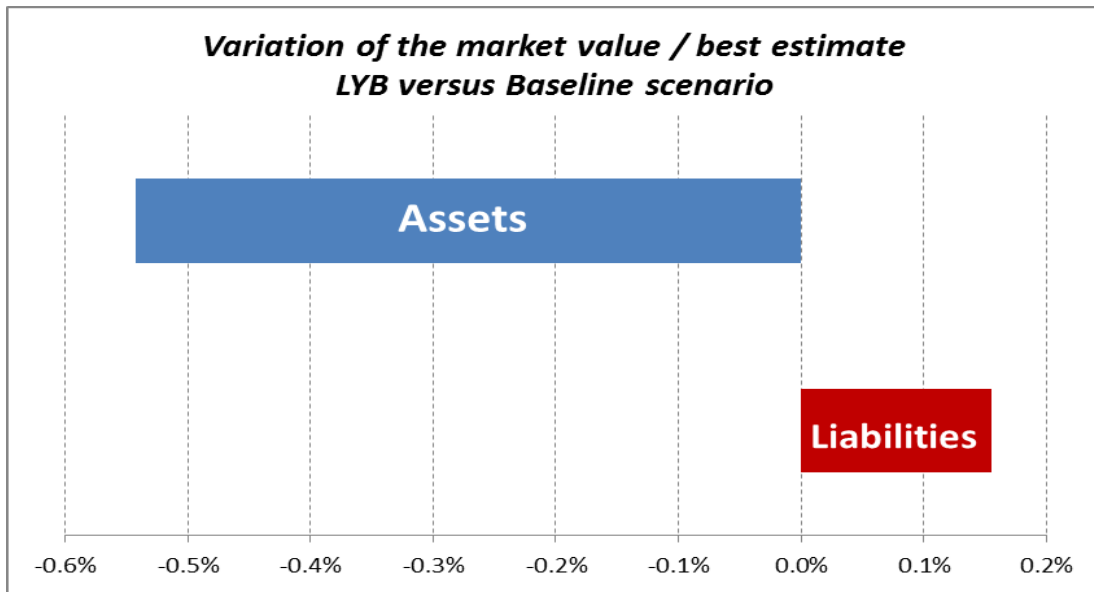
Figure 121: LYB: Variation of the market value / best estimate LYB versus Baseline scenario

357.   The slight decrease of the value of assets is explained because the increase of risk-free interest rates and spreads in the short term has a much higher impact than the reduction assumed in the longer maturities. On the liability side, the increase of the interest rates in short run derives an increase of the future benefits in the short run (both legal or contractual and discretionary). The magnitude of the increase of future benefits offsets the effect of the higher discount rates. This observation, taken together with the decrease of the rate in the long run, finally causes a slight increase of the best estimate of liabilities.

358.   The analysis of the changes of the cash flow vectors for assets and liabilities shows a similar pattern as for the low yield A, although with a slightly lower intensity of the variations. As aforementioned a more detailed analysis of the changes in assumptions will be relevant in the future to better understand these behaviours.
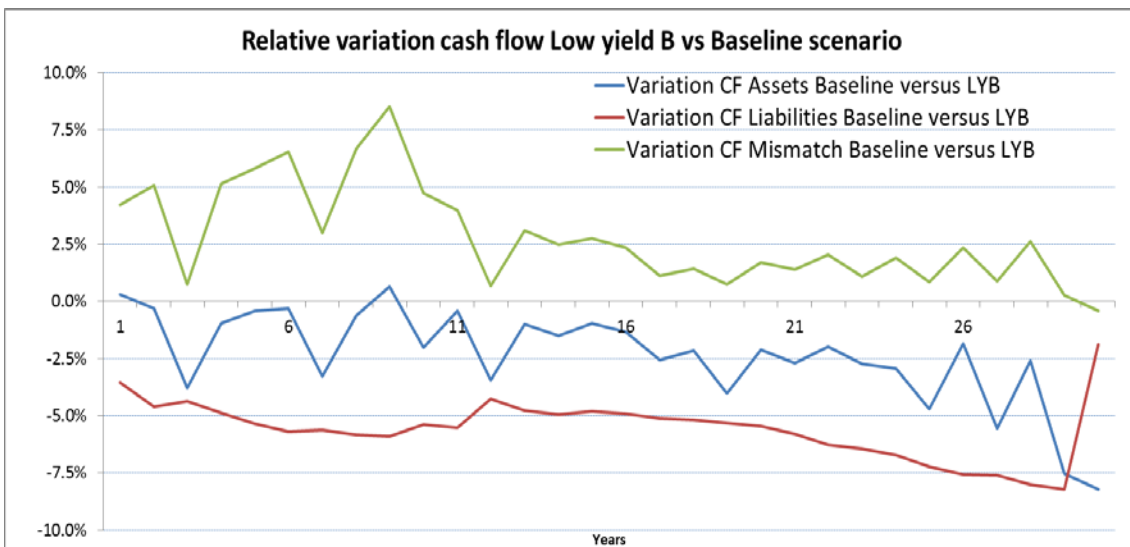
Figure 122: Relative variation of cash flows - LYB vs BL

359.   Once again, it is not possible to identify concrete rules applicable to specific types of undertakings, because the change of cash flows in low yield B scenario also depends, to a great extent, on the type of insurance business. The chart below is again self-conclusive showing such a dependency.
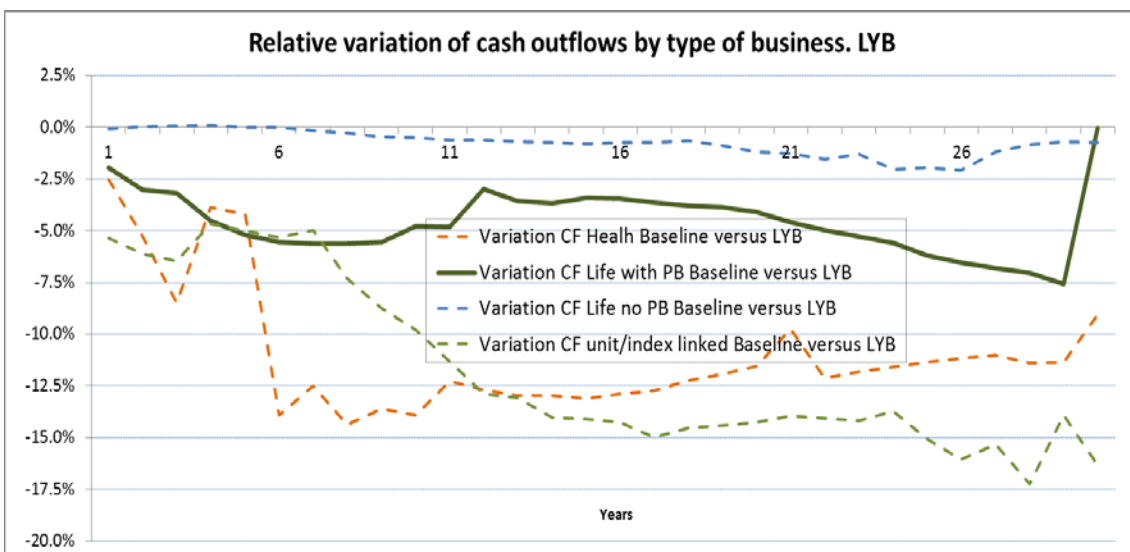
Figure 123: LYB: Relative variation of cash outflows by type of business

360.   The line corresponding to the change (Baseline scenario to low yield scenario B) in cash flows of non-life portfolios has not been plotted because it distorts the chart (the cash flows are very low compared to the cash flows of life with profit participation features and hence their variation is much higher and limited to the first years of the projection).

361.   The solid line green line reflects the relative change of cash flows of the major type of business reported in the cash flow analysis: life with

profit participation features. The chart shows on average a reduction of the cash flows nearby 5.0 per cent.

362.   For all types of business the chart displays a reduction of the cash flows in low yield B scenario compared to Baseline scenario. In all cases the reduction is lower than the reduction of low yield A scenario.

363.   The Figure 124 below compares the duration of assets and liabilities with the same presentation already explained in the item referred to the Baseline scenario.
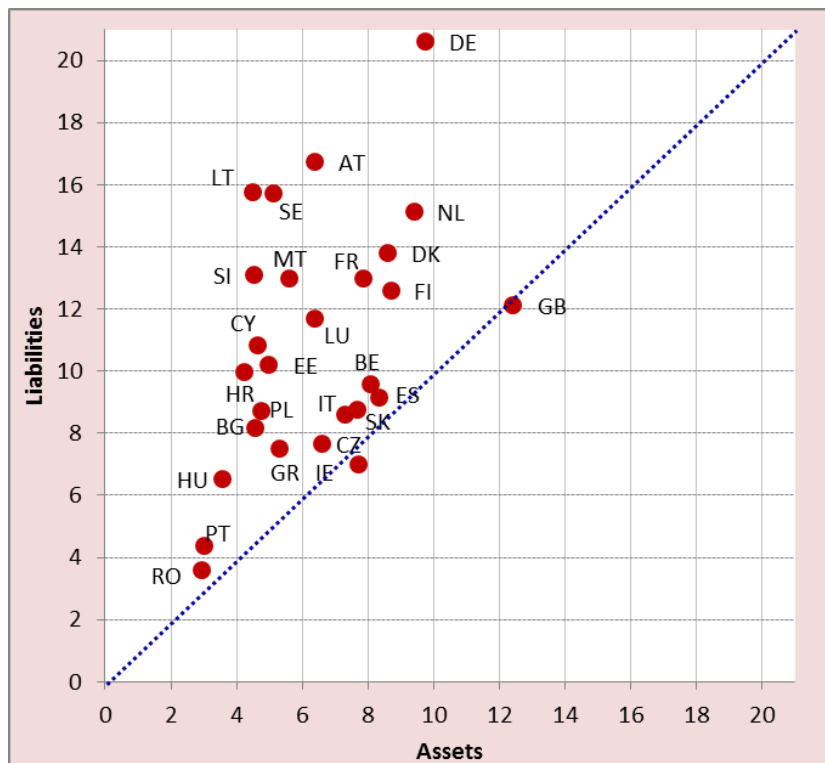
Figure 124: Low yield B scenario. Duration Liabilities vs Duration Assets

364.   Once again, for the markets with long term guarantees without a matching regime, an increase in the distance to the diagonal is observed (although lower than in the case of low yield B scenario), which reflects an increase in the risk exposures to changes in the risk-free interest rates structures. In the case of the markets close to the diagonal, as expected, they are less impacted under this scenario.

365.   This is confirmed comparing the chart of mismatches under the low yield A scenario to the chart of mismatches of the Baseline scenario.
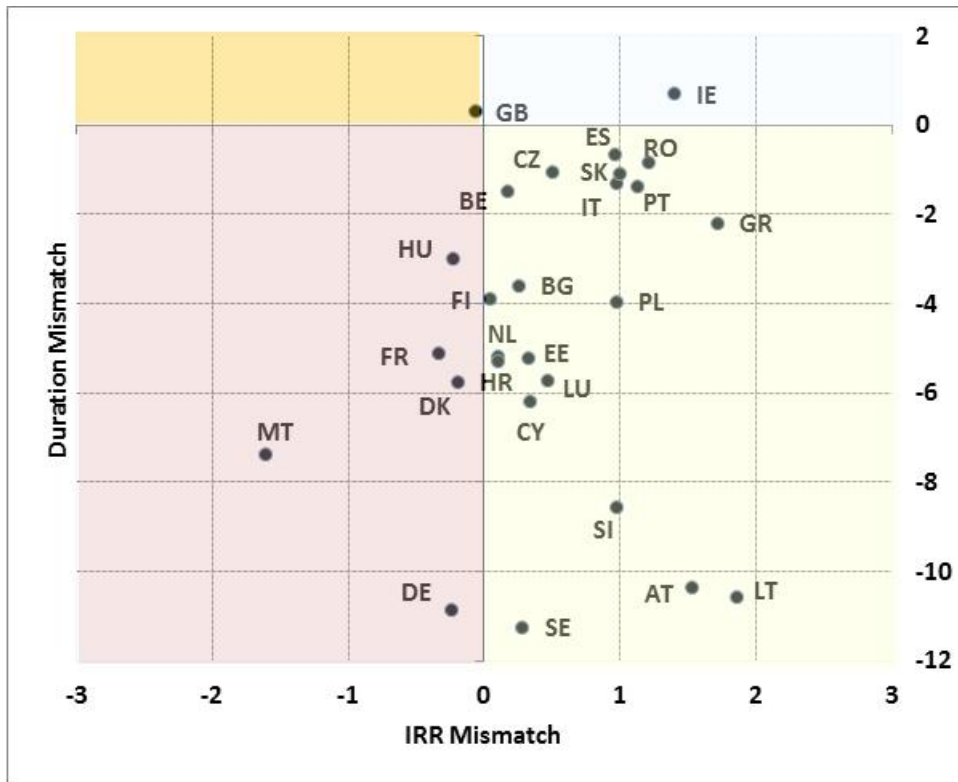
Figure 125: LYB: mismatch of IRR & Durations [Assets minus Liabilities]

366. The Figure 126 below shows a common pattern for almost all markets and also makes explicit the different magnitude of changes in liabilities IRR and durations. Markets with highest durations in the Baseline scenario deliver the highest changes in durations (sensitivity to the stress scenario).
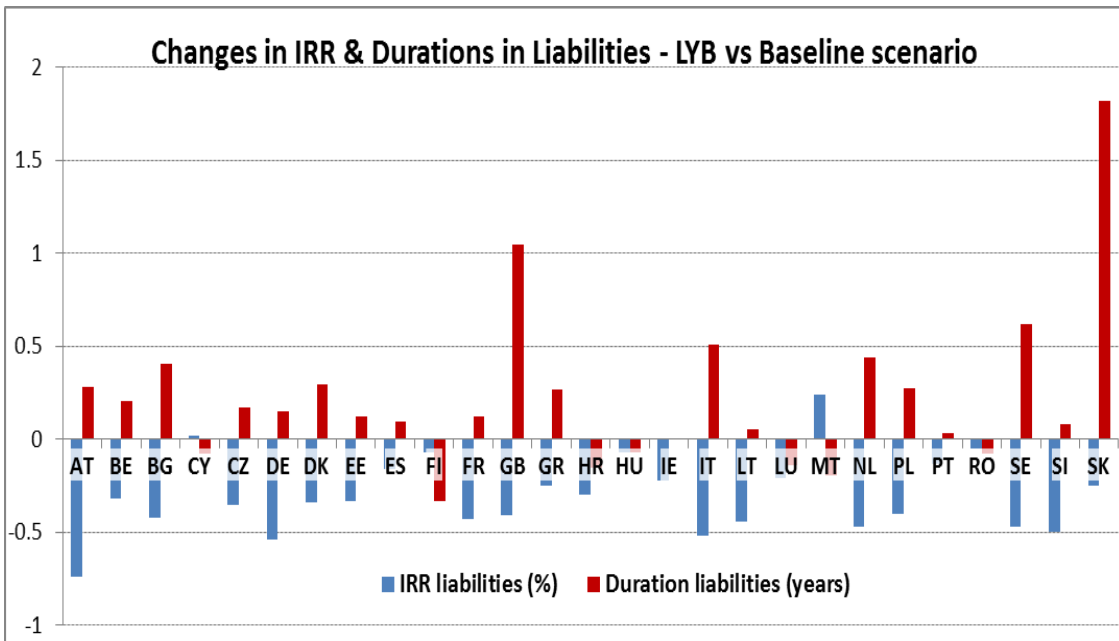
Figure 126: Changes IIR & Duration in Liabilities – LYB vs. BL

The Figure 127 below shows the sensitivity to the LYB scenario for the IRR and Durations to the scenarios in the asset side.
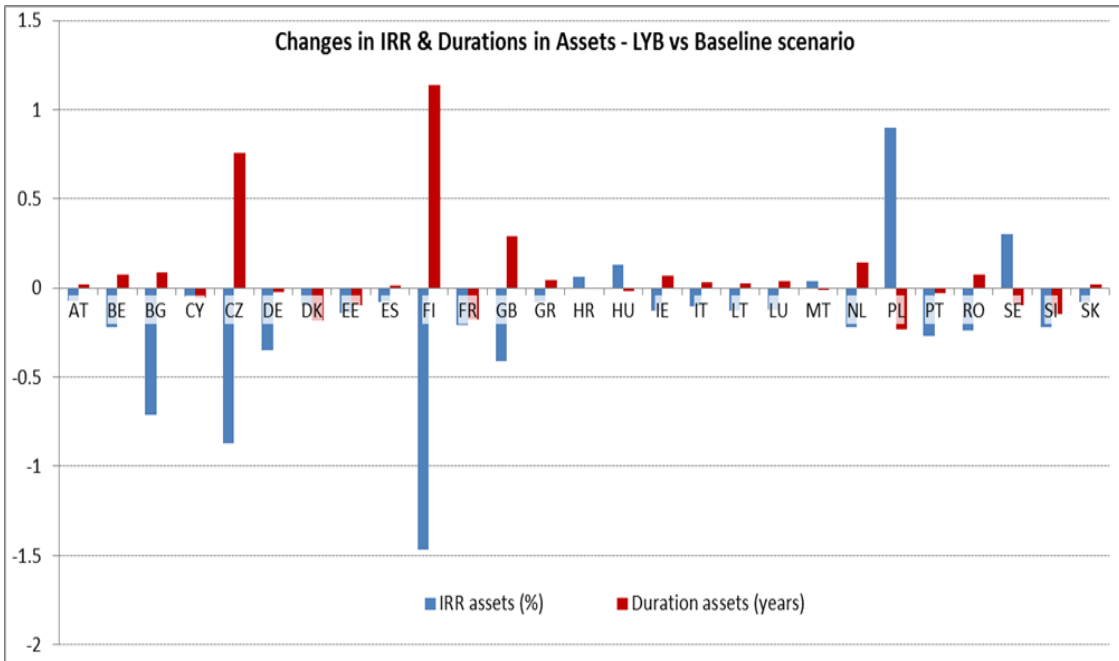
Figure 127: Changes IIR & Duration in Assets – LYB vs BL

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Annex I: Participants list

Top 30 classification is based on EIOPA's Financial Stability framework. The same classification is used for other Financial Stability publications of EIOPA, e.g. Financial Stability Reports and Risk Dashboards. The table below contains the list of groups included by EIOPA in the *Top 30 as per September 2014.*

Top30	Jurisdiction	Insurance Group
1	NL	Achmea (Eureko group)
2	NL	AEGON
3	BE	AGEAS
4	DE	Allianz Group
5	UK	Aviva
6	FR	AXA
7	FR	BNP Paribas Cardif
8	ES	Grupo CATALANA OCCIDENTE
9	FR	CNP Assurances
10	IT	Generali
11	FR	Groupama
12	FR	Groupe Credit Agricole Assurances
13	DE	HDI/Talanx
14	SE	IF P&C Insurance
15	NL	NN Group (former ING Groep)
16	BE	KBC
17	UK	Legal & General Group plc
18	ES	Mapfre S.A.
19	DE	Munich Re
20	UK	Old Mutual plc. *(Did not participate in EIOPA Stress Test)*
21	UK	Prudential
22	UK	RSA (Royal Sun Alliance)
23	FR	SCOR
24	UK	Lloyds Banking Group (Lloyds HBOS and Scottish Widows)
25	CH	Swiss Re
26	CH	Swiss Life *(Did not participate in EIOPA Stress Test)*
27	UK	The Standard Life Assurance Company
28	IT	Unipol
29	AT	UNIQA Insurance Group
30	AT	Vienna Insurance Group
31	CH	Zurich Insurance Group

Name of participant	Country of incorporation	Low Yield exercise
AachenMünchener Lebensversicherung AG	DE	x
AAS "SEB Dzīvības apdrošināšana"	LV	x
AB "Lietuvos draudimas"	LT	
Achmea B.V.	NL	
Achmea Pensioen- en Levensverzekeringen N.V.	NL	x
Adriatic Slovenica zavarovalna družba d.d.	SI	x
AEGON Levensverzekering NV	NL	x
AEGON Magyarország Biztosító Zrt.	HU	x
Aegon N.V.	NL	
AFA Insurance	SE	
AFA Livförsäkringsaktiebolag	SE	x
AFA Sjukförsäkringsaktiebolag	SE	x
AFA Trygghetsförsäkringsaktiebolag	SE	x
AG Insurance	BE	x
AG2R LA MONDIALE	FR	
Ageas	BE	
Agram životno osiguranje d.d.	HR	x
AIG Europe Limited	GB	
Alecta pensionsförsäkring, ömsesidigt	SE	x
ALICO Bulgaria Jivotozastrahowatelno Drujestvo EAD	BG	x
Allcare Insurance Limited	MT	
Alleanza Assicurazioni S.p.A.	IT	x
Allianz - Slovenská poisťovňa, a.s.	SK	x
Allianz Benelux S.A.	BE	x
Allianz Bulgaria Zhivot	BG	x
Allianz Hellas SA	GR	x
Allianz Hungária Zrt.	HU	x
Allianz Lebensversicherungs-AG	DE	x
Allianz Private Krankenversicherungs-AG	DE	x
Allianz SE	DE	
Allianz Spa	IT	x
Allianz Tiriac Asigurari S.A	RO	x
Allianz Vie	FR	x
Allianz zagreb d.d.	HR	x
Allianz, Compañía de Seguros y Reaseguros, S.A.	ES	x
ALPHA INSURANCE LTD	CY	x
American Life Insurance Company (CY) Ltd	CY	x
AMF Pensionsförsäkring AB	SE	x
Ancoria Insurance Public Ltd	CY	
AS SEB Elu- ja Pensionikindlustus	EE	x
ASR Levensverzekering N.V.	NL	x
ASR Nederland N.V.	NL	
Assicurazioni Generali Spa	IT	
Assurances du Crédit Mutuel	FR	
Assurances du Crédit Mutuel Vie SA	FR	x
ATE Insurance	GR	x
ATLANTIC INSURANCE COMPANY PUBLIC LIMITED	CY	
Atlas Insurance PCC Limited - Core	MT	
Atlas Insurance PCC Limited - Ocado Cell	MT	

Atlas Insurance PCC Limited - Perfecthomes Cell	MT	
Atlas Insurance PCC Limited - Travelodge Cell	MT	
Atlas Insurance PCC Limited - TVIS Cell	MT	
Aviva Annuity UK Ltd	GB	x
Aviva Group Plc	GB	
Aviva Life & Pensions UK Ltd	GB	x
Aviva Vie	FR	x
AXA	FR	
AXA Assurances Vie Luxembourg	LU	x
Axa Aurora Vida, SA	ES	x
AXA Belgium	BE	x
AXA Biztosító Zrt., Hungary	HU	x
AXA France	FR	x
AXA GREECE	GR	x
AXA Insurance Limited	IE	x
AXA PORTUGAL	PT	x
AXA Portugal Companhia De Seguros de Vida	PT	x
Axa Vida, SA	ES	x
Bayern-Versicherung Lebensversicherung AG	DE	x
BBVA SEGUROS S.A DE SEGUROS Y REASEGUROS	ES	x
BCR Asigurari de Viata Vienna Insurance Group SA	RO	x
BNP Paribas Cardif	FR	
BTA Insurance Company SE	LV	
BULSTRAD LIFE VIENNA INSURANCE GROUP	BG	x
CAA	FR	
Caixa Seguros e Saúde	PT	
Canada Life International Re Limited	IE	x
Cardif Assurance Vie	FR	x
Cardif Lux Vie	LU	x
Ceska pojistovna, a.s.	CZ	x
CNP Asfalistiki	CY	x
CNP Assurances	FR	x
CNP Cyprialife	CY	x
Commercial General Insurance Ltd	CY	
Companhia de Seguros Allianz Portugal, S.A.	PT	x
Compensa Life Vienna Insurance Group SE	EE	x
Cosmos Insurance Company Ltd	CY	
Croatia osiguranje d.d.	HR	x
CSOB Poistovna a.s	SK	
D.A.S. Jogvédelmi Biztosító Zrt.	HU	x
Danica Group	DK	
Danica Pension	DK	x
Debeka Krankenversicherungsverein a. G.	DE	x
Debeka Lebensversicherungsverein a. G.	DE	x
Debeka-Gruppe	DE	
Delta Lloyd Group N.V.	NL	
Delta Lloyd Levensverzekering NV	NL	x
DIMENZIÓ Kölcsönös Biztosító és Önsegélyező Egyesület	HU	x
Direct Line UK	GB	
DKV Deutsche Krankenversicherung AG	DE	x
DNB Livsforsikring ASA	NO	x

DONAU Versicherung AG	AT	x
DZI Insurance PLC	BG	x
Elmo Insurance Limited	MT	
ERGO Asigurari de Viata SA	RO	x
ERGO Lebensversicherung AG	DE	x
ERGO Life Insurance SE	LT	x
ERGO osiguranje d.d.	HR	
Ergo Življenjska zavarovalnica d.d., Ljubljana-Črnuče, Slovenia	SI	x
ERGO životno osiguranje d.d.	HR	x
Erste Vienna Insurance Group Zrt.	HU	x
Ethias SA	BE	x
Ethniki General Insurance	CY	x
Ethniki General Insurance	GR	x
Ethniki Life Insurance	CY	x
Euroherc osiguranje d.d.	HR	
Euroins Romania Asigurare Reasigurare SA	RO	x
Eurolife ERB Asigurari de Viata	RO	x
Eurolife ERB Asigurari Generale	RO	x
Eurolife ERB General Insurance	GR	
Eurolife ERB Life Insurance	GR	x
EuroLife Ltd	CY	x
European Reliance General Insurance S.A.	GR	x
EUROSURE INSURANCE COMPANY LTD	CY	
FBD Insurance plc	IE	x
Fidelidade - Companhia de Seguros	PT	x
Folksam ömsesidig livförsäkring	SE	x
Folksam ömsesidig livförsäkring group	SE	
Folksam ömsesidig sakförsäkring group	SE	
Foyer Vie	LU	x
Gan Direct	CY	
GasanMamo Insurance	MT	
General Insurance of Cyprus Ltd	CY	
Generali Biztosító Zrt.	HU	x
Generali España, Sociedad Anónima de Seguros y Reaseguros	ES	x
Generali Hellas	GR	x
GENERALI ITALIA	IT	x
Generali Lebensversicherung AG	DE	x
Generali osiguranje d.d.	HR	x
Generali Poisťovňa, a. s.	SK	x
Generali Vida, Companhia de Seguros, SA	PT	x
Generali Vie	FR	x
Gjensidige Forsikring Konsern	NO	
GlobalCapital Life Insurance Ltd	MT	x
GMF VIE	FR	x
GRAWE Életbiztosító Zrt.	HU	x
Grawe Hrvatska d.d.	HR	x
Grawe Reinsurance Ltd	CY	x
Grawe Romania Asigurare SA	RO	x
Grawe Zavarovalnica d.d.	SI	x
GROUPAMA	FR	
Groupama Asigurari	RO	x

Groupama Gan Vie	FR	x
Groupama garancia Insurance Company	HU	x
GROUPAMA-PHOENIX SA	GR	x
Groupe CNP Assurances	FR	
Groupe COVEA	FR	
Groupe Macif	FR	
Grupa Powszechnego Zakładu Ubezpieczeń Spółka Akcyjna	PL	
Grupo Catalana Occidente, S.A.	ES	
GRUPO MUTUA MADRILEÑA AUTOMOVILISTA SSPF	ES	
Gruppo Assicurativo Intesa Sanpaolo Vita	IT	
Gruppo Reale Mutua	IT	
Hannover Re Ireland	IE	x
HD Insurance Ltd	CY	x
HDI Haftpflichtverband der Deutschen Industrie V.a.G.	DE	
HELLENIC ALICO LIFE INSURANCE COMPANY LTD	CY	x
HSBC Life Assurance (Malta) Ltd	MT	x
HYDRA INSURANCE	CY	
If Skadeförsäkring Holding AB (publ)	SE	
ING Asigurari de Viata	RO	x
ING Greek Life Insurance Company SA	GR	x
ING TOWARZYSTWO UBEZPIECZEŃ NA ŻYCIE S A	PL	x
ING Životná poisťovňa, a.s.	SK	x
Interamerican Hellenic Life Insurance Company SA	GR	x
Intesa Sanpaolo Vita	IT	x
Irish Life Assurance PLC	IE	x
JADRANSKO osiguranje d.d.	HR	
JSC IC LAMANTINAS	LT	
K&H Insurance	HU	x
KBC Insurance Group	BE	
KBC Verzekeringen	BE	x
Kentriki Insurance Ltd	CY	
KÖBE Central European Mutual Insurance Association	HU	x
Komerční pojišťovna, a. s.	CZ	x
Kommunal Landspensjonskasse gjensidig forsikringsselskap	NO	x
Komunálna poisťovňa, a.s. VIG	SK	x
Kooperativa poisťovňa, a.s. VIG	SK	x
Kooperativa pojišťovna, a.s., Vienna Insurance Group	CZ	x
La Luxembourgeoise Vie	LU	x
LA MONDIALE	FR	x
LähiTapiola keskinäinen Henkivakuutusyhtiö	FI	x
LähiTapiola Keskinäinen Vakuutusyhtiö	FI	x
Länsförsäkringar Liv AB	SE	x
Länsförsäkringar Sak	SE	
Legal & General	GB	
Legal & General Assurance Society	GB	x
Liberty Insurance Ireland	IE	x
Life insurance company "BONUM PUBLICUM"	LT	x
Livförsäkringsbolaget Skandia, ömsesidigt	SE	
Livförsäkringsbolaget Skandia, ömsesidigt	SE	x
MAAF VIE	FR	x
Magyar Posta Biztosító Zrt.	HU	x

Magyar Posta Életbiztosító Zrt.	HU	x
Mandatum Life Insurance Company Limited	FI	x
MAPFRE CAJA MADRID VIDA S.A DE SEGUROS Y REASEGUROS	ES	x
MAPFRE SA	ES	
MAPFRE Seguros de Vida, S.A.	PT	x
MAPFRE VIDA, S.A. DE SEGUROS Y REASEGUROS SOBRE LA VIDA HUMANA	ES	x
MEDIOLANUM VITA	IT	
Medlife Insurance Ltd	CY	x
Merkur osiguranje d.d.	HR	x
MERKUR ZAVAROVALNICA d.d.	SI	x
MetLife Amslico poistovna, a.s.	SK	x
MetLife Life Insurance Company S.A.	GR	x
MetLife Towarzystwo Ubezpieczeń na Życie i Reasekuracji S.A	PL	x
MIDDLESEA INSURANCE p.l.c.	MT	
Minerva Insurance Company Public Ltd	CY	
MKB Általános Biztosító Zrt.	HU	x
MKB Életbiztosító Zrt.	HU	x
MMA VIE	FR	x
Modra zavarovalnica d.d.	SI	x
MSV Life plc	MT	x
Munich Re Group	DE	
Munich Re of Malta p.l.c.	MT	x
Mutavie	FR	x
Nationale Nederlanden Levensverzekering Maatschappij N.V.	NL	x
New Ireland Assurance Company	IE	x
NLB Vita d.d. Ljubljana	SI	x
NN Group N.V. (formerly ING)	NL	
Nordea Life & Pension Denmark	DK	x
Nordea Life Finland Ltd	FI	x
Nordea Life Holding AB	SE	
Ocidental - Companhia Portuguesa de Vida, S.A.	PT	x
OKKAR Líftryggingar hf	IS	
Olympic Insurance Company Ltd	CY	
Omniasig Vienna Insurance Group	RO	x
OP Life Assurance Company Ltd	FI	x
Pancyprian Insurance Ltd	CY	
PFA PENSION	DK	x
Pohjola Insurance Ltd	FI	x
Pohjola Non-life Group	FI	
Poisťovňa Poštovej banky, a.s.	SK	x
Poste Vita	IT	x
Powszechny Zakład Ubezpieczeń na Życie Spółka Akcyjna	PL	x
Powszechny Zakład Ubezpieczeń Spółka Akcyjna	PL	x
Predica	FR	x
PRIME INSURANCE	CY	x
Progressive Insurance Ltd	CY	
Prudential PLC	GB	
Prudential UK	GB	x
Prva osebna zavarovalnica, d.d.	SI	x
R+V Lebensversicherung AG	DE	x
R+V Versicherung AG	DE	

Raiffeisen Versicherung AG	AT	x
REAAL NV	NL	
ROYAL CROWN INSURANCE CO LTD	CY	
RSA Insurance Group PLC	GB	
RSA Insurance Ireland Limited	IE	x
S.C.Garanta Asigurari SA	RO	x
Salzburger Landesversicherung	AT	x
Sampension A/S	DK	x
Santander Seguros y Reaseguros Compañía Aseguradora S.A.	ES	x
Sava Reinsurance Company	SI	
SC ASIGURAREA ROMANEASCA ASIROM - VIENNA INSURANCE GROUP SA	RO	x
SCOR Global Life SE	FR	x
SCOR Group	FR	
Scottish Widows Group Limited	GB	
SEB gyvybes draudimas, UAB	LT	x
SEB Pensionsforsikring A/S	DK	x
SID - Prva kreditna zavarovalnica d.d.	SI	
Sjóvá-Almennar tryggingar hf.	IS	
Skandia Livsforsikring A A/S	DK	x
Skandia Livsforsikring A/S	DK	x
SOGECAP_GROUP	FR	
SOGECAP_SOLO	FR	x
SpareBank 1 Skadeforsikring AS	NO	
Sparkassen Versicherung AG	AT	x
SRLEV NV	NL	x
Standard Life Assurance Limited	GB	x
Storebrand Livsforsikring AS	NO	
Suomi Mutual Life Assurance Company	FI	x
Swedbank Life Insurance SE	EE	x
Swiss Life Luxembourg SA	LU	x
Swiss Re Ltd	CH	
Topdanmark Forsikring Group	DK	x
Towarzystwo Ubezpieczeń na Życie Europa S.A.	PL	x
Triglav osiguranje d.d.	HR	x
TRIGLAV RE, Reinsurance Company, Ltd.	SI	
Triglav, Zdravstvena zavarovalnica, d. d.	SI	
Tryg A/S	DK	
Tryggingamiðstöðin	IS	
TUiR WARTA S.A.	PL	x
TUnŻ WARTA S.A.	PL	x
UAB "PZU Lietuva gyvybės draudimas"	LT	x
UAB DK PZU Lietuva	LT	x
UGF S.p.A.	IT	
Union Vienna Insurance Group Biztosító Zrt.	HU	x
UnipolSai Assicurazioni S.p.A.	IT	x
UNIQA Biztosító Zrt.	HU	x
UNIQA Insurance Group AG	AT	
UNIQA Österreich Versicherung AG	AT	x
UNIQA Romania	RO	x
Universal life Insurance Public Company Limited	CY	x
Uždaroji akcinė gyvybės draudimo ir pensijų bendrovė "Aviva Lietuva"	LT	x

Vátryggingafélag Íslands h.f.	IS	
VELEBIT OSIGURANJA d.d.	HR	
VELEBIT ŽIVOTNO OSIGURANJA d.d.	HR	x
VIDACAIXA, S.A. DE SEGUROS Y REASEGUROS	ES	x
VIDACAIXA, S.A. DE SEGUROS Y REASEGUROS Y SOCIEDADES DEPENDIENTES	ES	
VIENNA INSURANCE GROUP AG Wiener Versicherung Gruppe	AT	
Vörður tryggingar hf	IS	
Vzajemna zdravstvena zavarovalnica, d.v.z.	SI	
Wiener osiguranje Vienna Insurance Group d.d.	HR	x
Wiener Städtische Versicherung	AT	x
Württembergische Lebensversicherung	DE	x
Wustenrot poistovna	SK	x
XL Group	IE	
XL Re Europe	IE	x
Ydrogios Insurance Company (Cyprus) Ltd	CY	
Zavarovalnica GENERALI, d.d.	SI	x
Zavarovalnica Maribor	SI	x
Zavarovalnica Tilia, d.d. Novo mesto	SI	x
Zavarovalnica Triglav, d.d., Ljubljana	SI	x
Zurich Deutscher Herold Lebensversicherung AG	DE	x
Zurich Insurance Group	CH	
Zurich Insurance PLC	IE	x
Zurich Life Assurance plc	IE	x

The following undertakings from the Great Britain Overseas territories submitted results which were considered in the overall calculations but not displayed separately or within the Great Britain results.

Name of participant from GBov	Low Yield Module
Acromas Insurance Company Limited	x
Admiral Insurance (Gibraltar) Limited	
Advantage Insurance Company Ltd	
Brit Insurance (Gibraltar) PCC Limited	x
Markerstudy Insurance Company	x
Zenith Insurance	x

Annex II: Overview of the 2014 stress test parameters for the core module

Stresses	2014 Core module Parameters	
	Adverse 1 (STOX)	Adverse 2 (CORP)
Interest Rates Stresses[35] (bps) (shocks expressed w.r.t. euro swap rates)		
Maturity 1y	-26	-35
Maturity 2y	-56	-42
Maturity 3y	-67	-30
Maturity 5y	-78	-9
Maturity 7y	-85	0
Maturity 10y	-91	8
Maturity 20y	-97	16
Maturity 30y	-103	15
Equity Stresses (Shall apply to all equity exposures)		
MSCI Europe	-41%	-21%
Corporate Bond Stresses* – Financials F^{up} (bps) (shocks expressed as delta over observed yield at 31-12-2014 Calibrated as spreads to 2-year German bund)		
AAA	24	86
AA	35	150
A	101	206
BBB	316	262
BB	365	292
B and lower	420	315
Unrated	455	328
Corporate Bond Stresses* – Financials covered F^{up} (bps) (shocks expressed as delta over observed yield at 31-12-2014 - Calibrated as spreads to 2-year German bund)		
AAA	8	32
AA	38	63
A	48	68
BBB	69	86

[35] Participants had to use the stressed currency specific term structures provided in the complementary spread sheet "eiopa-14-217-stress_test_2014_annex_dc1". For further reference on the methodology used, see also document "eiopa-14-218-stress_test_2014_list_technical_details_calculations_volatility_adjustment".

BB	84	97
B and lower	93	105
Unrated	99	109
Corporate Bond Stresses* – Non-Financials F^{up} (bps) (shocks expressed as delta over observed yield at 31-12-2014 - Calibrated as spreads to 2-year German bund)		
AAA	5	93
AA	8	126
A	14	134
BBB	48	169
BB	69	190
B and lower	96	219
Unrated	108	231
Sovereign Bond Stresses* (bps) (shocks expressed as delta over observed yield at 31-12-2014 - Calibrated as spreads to 2-year German bund)		
AT	41	46
BE	96	55
BG	87	104
CY	200	142
CZ	76	147
DE	0	0
DK	10	66
ES	148	65
FI	18	35
FR	44	38
GR	594	251
HR	85	105
HU	286	278
IE	217	149
IT	195	90
LT	47	136
LU	109	90
LV	82	108
MT	33	27
NL	17	37
PL	132	139
PT	282	86
RO	48	11
SE	13	56
SI	200	142
SK	45	114
GB	36	61
EU mean (info)	121	99
EU std (info)	127	64

IS	74	90
NO	33	112
CH	44	60
US	46	61
JP	80	125
Property Stresses		
Commercial	-49,00%	-18,00%
Residential	-17,10%	-15,70%
Non-Life Stresses	Adverse 1	Adverse 2
NatCat / ManCat	1-in-100 year event	1-in-200 year event
Provisions deficiency	1,00%	3,00%
Life Stresses	Adverse 1	Adverse 2
Longevity	10,00%	18,00%
Mortality	0.6 additional death	2 additional death
Mass Lapse Stress	Adverse 1	Adverse 2
Mass lapse	20,00%	35,00%

Table 18: Stress factors

367. Note: When applying the interest rate stresses in scope of the core module, total yields should have been kept constant. As a consequence, the decrease in the risk free rates was reversed by an equal spread movement in the opposite direction (i.e. for the bond portfolio). Additionally, for the corporate and sovereign bonds stresses, spreads are shocked in accordance with the table above values (where shocks are expressed as spreads to 2-year German bund). As a consequence, for the core module the two shocks combined (interest rate and spreads) produce a 'double hit' in the own funds.

Annex III: Sensitivity to single factor insurance stresses (SFIS) and combination with market scenarios

Non-life stress scenarios

368.   Undertaking specific/ PML events (x2)
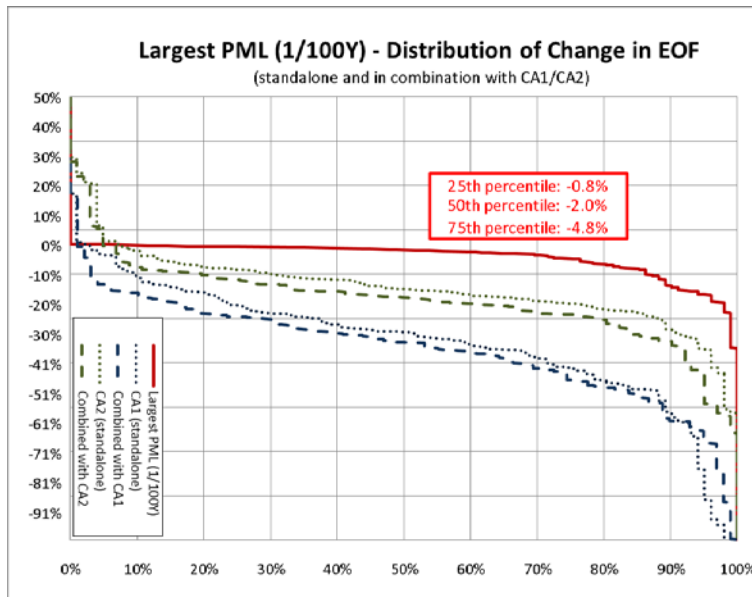
Figure 127: Largest PML (1/100Y) – Distribution of Change in EOF
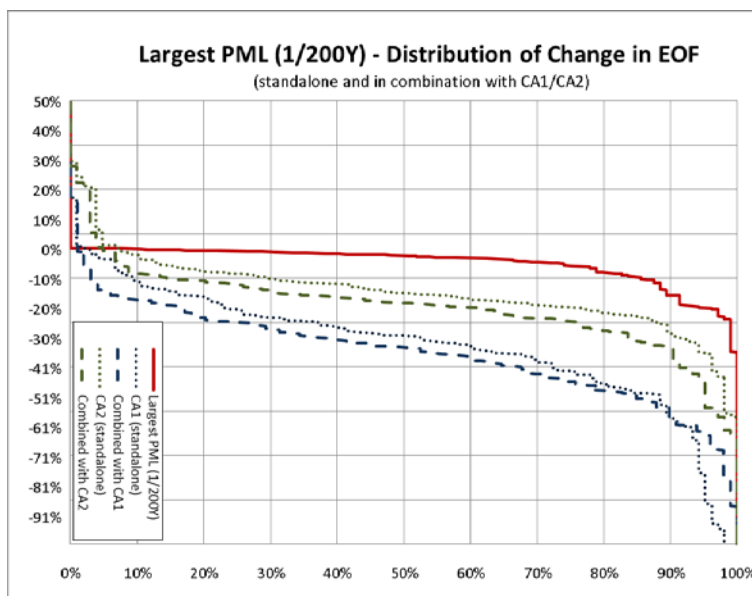
Figure 128: Largest PML (1/200Y) – Distribution of Change in EOF

369. Predefined market CAT event (x5)
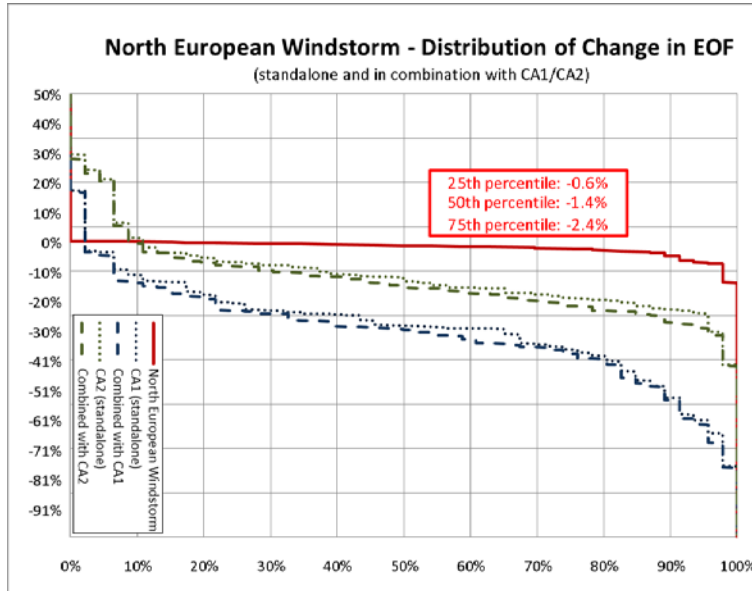
Figure 129: North European Windstorm – Distribution of Change in EOF
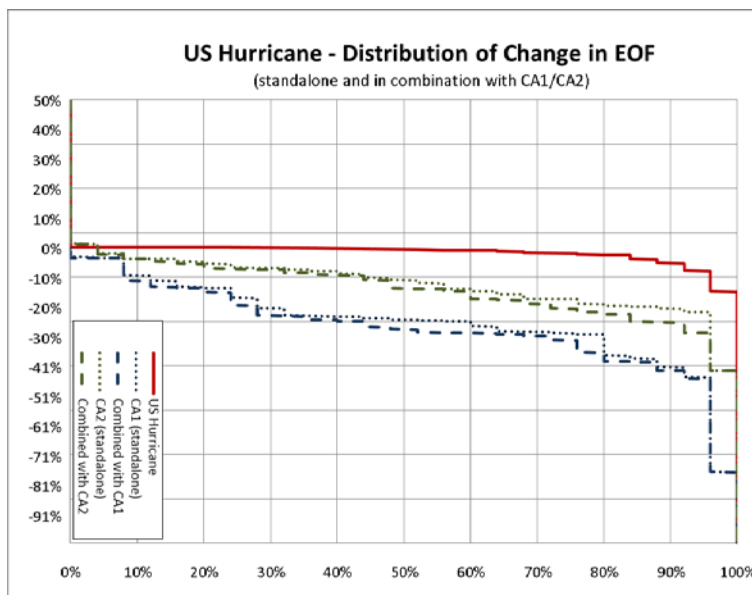
Figure 130: US Hurricane – Distribution of Change in EOF
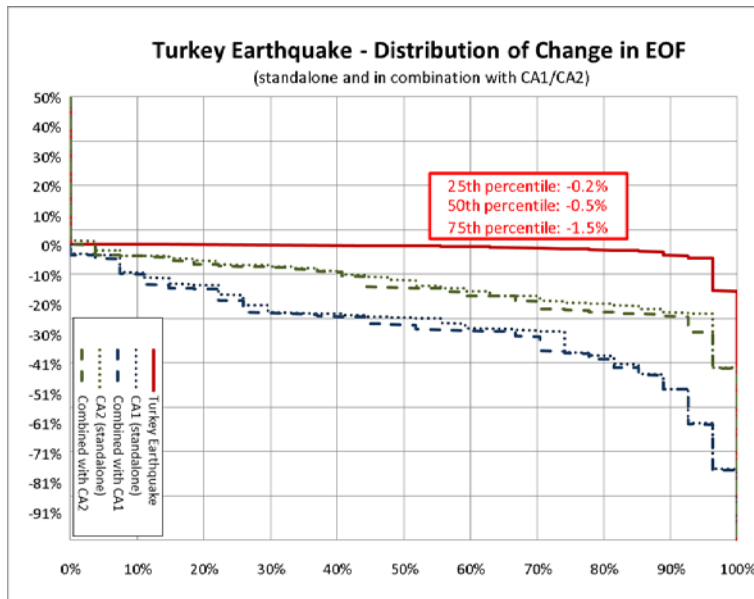
Figure 131: Turkey Earthquake – Distribution of Change in EOF
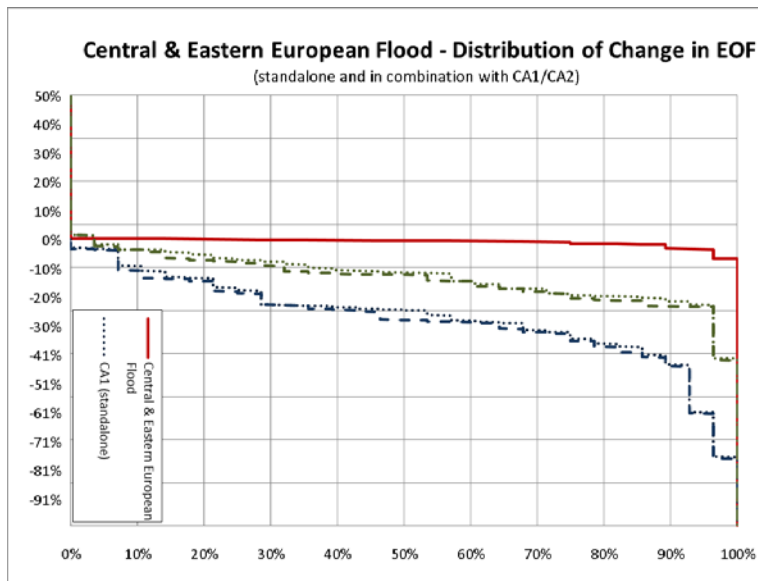
Figure 132: Central & Eastern European Flood – Distribution of Change in EOF
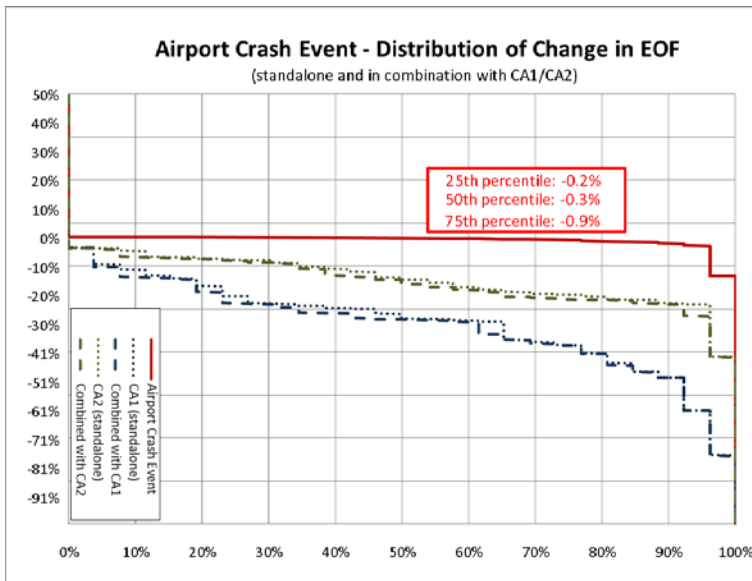
Figure 133: Airport Crash Event – Distribution of Change in EOF

370. Provision deficiency tests (including qualitative questionnaire)
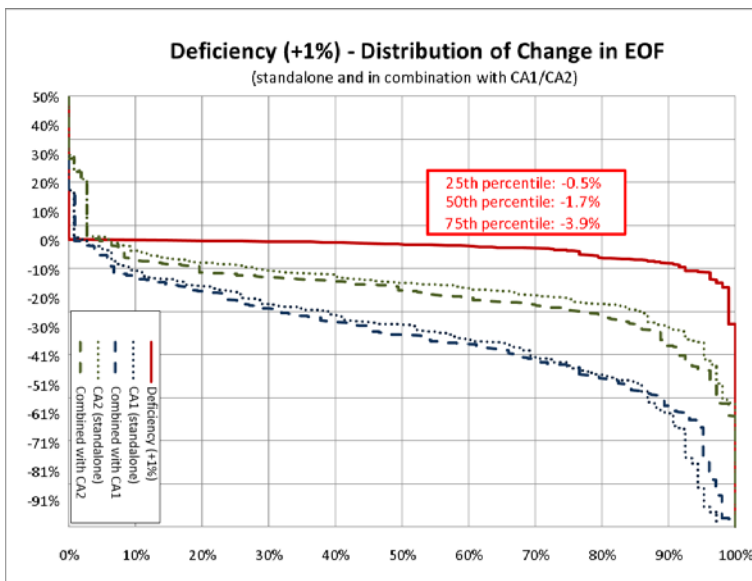
Figure 134: Deficiency (+1%) – Distribution of Change in EOF
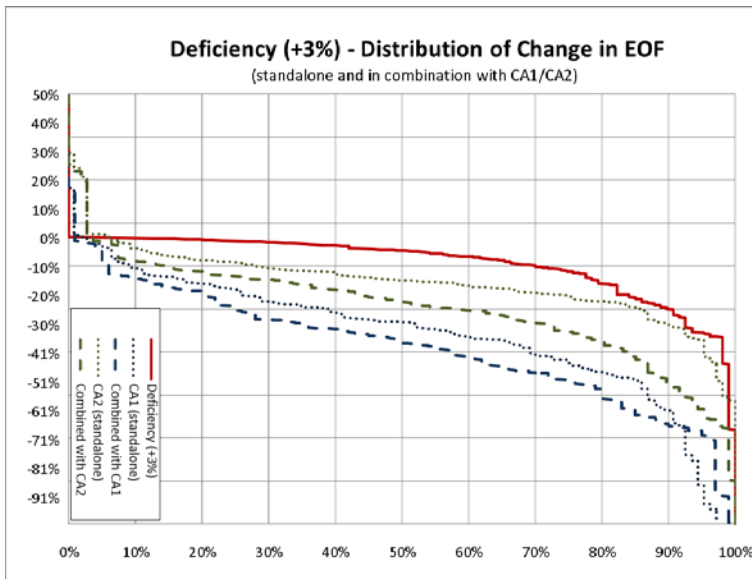
Figure 135: Deficiency (+3%) − Distribution of Change in EOF

Life stress scenarios

371.   Longevity (life)   +10% and +18%
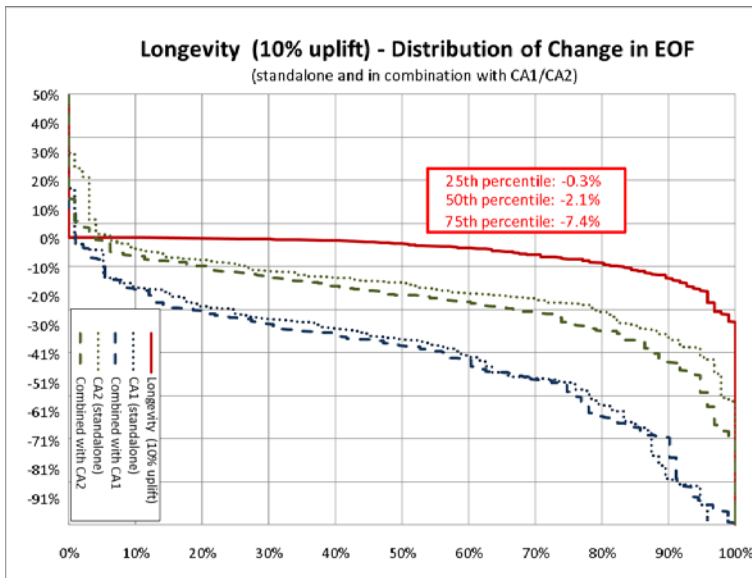
Figure 136: Longevity (10% uplift) − Distribution of Change in EOF
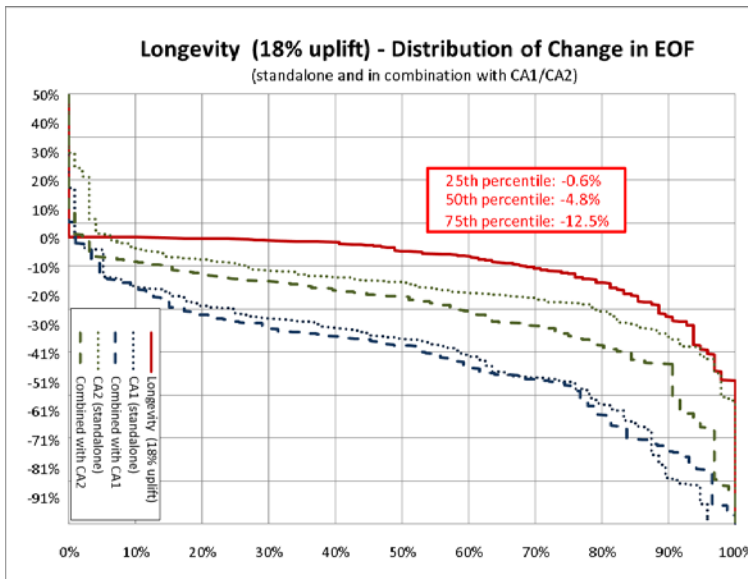
Figure 137: Longevity (18% uplift) − Distribution of Change in EOF

372. Mortality (life):   + 0.2% and +0.06%
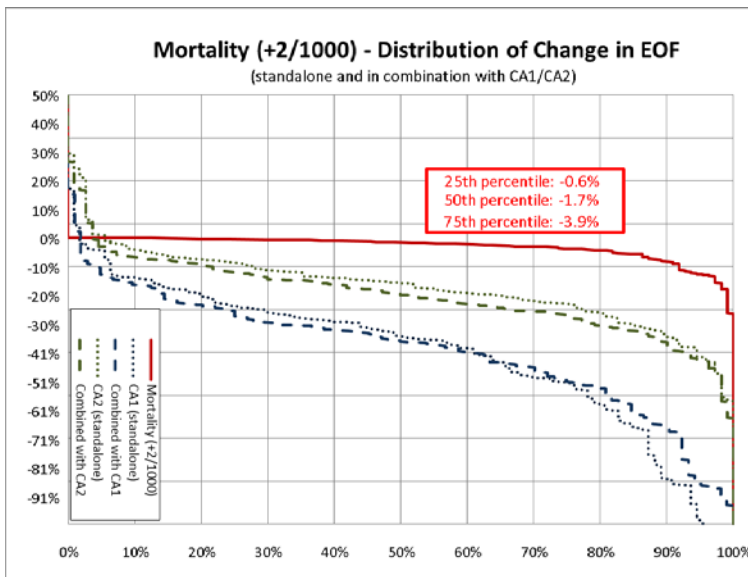
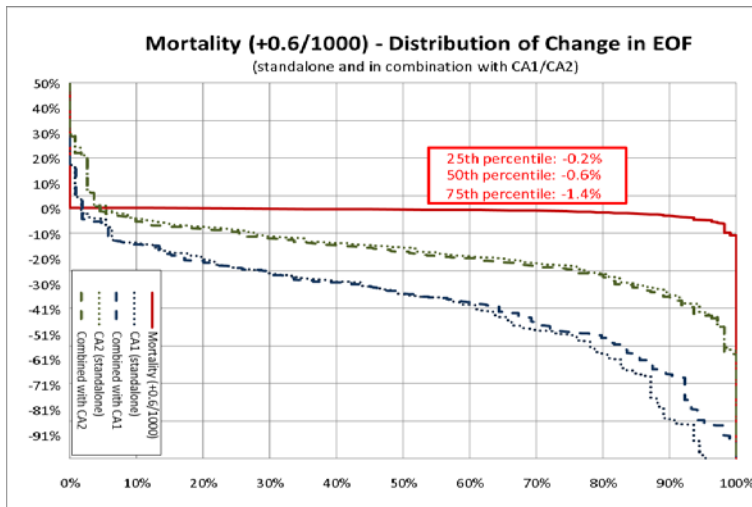**Figure 138: Mortality (+2/1000) − Distribution of Change in EOF**

Figure 139: Mortality (+0.6/1000) – Distribution of Change in EOF
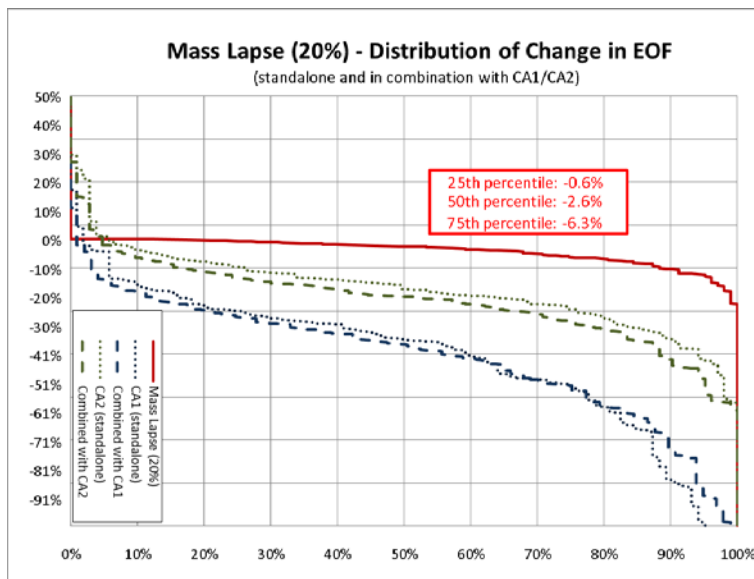
373.   Lapse (life):   20% and 35%

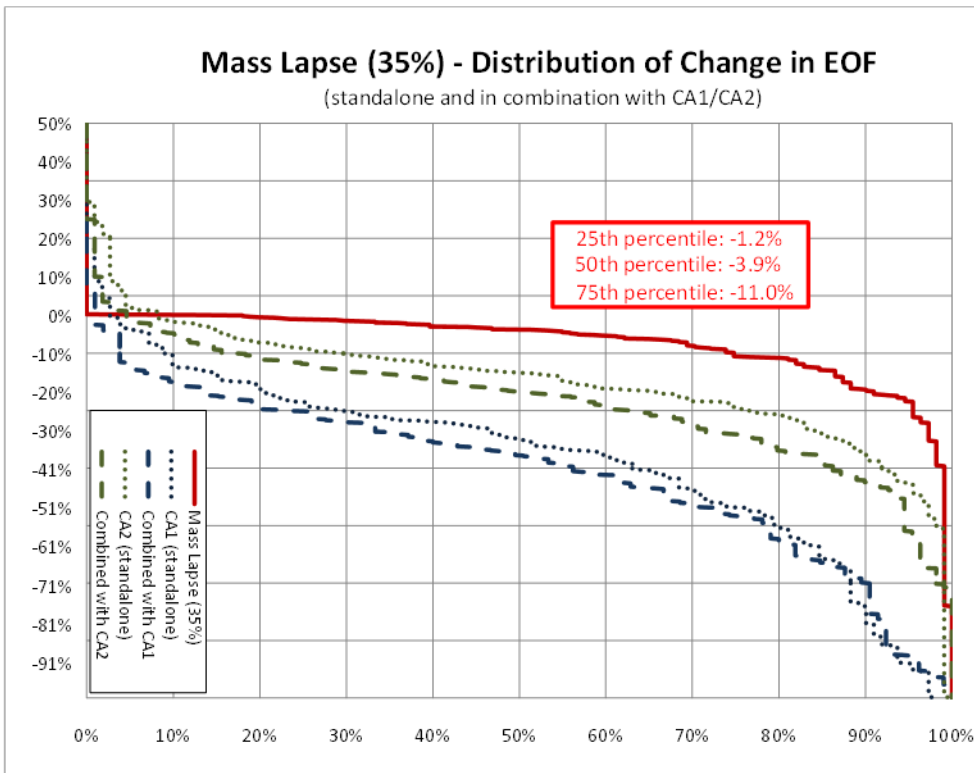**Figure 140: Mass Lapse (20%) – Distribution of Change in EOF**

Figure 141: Mass Lapse (35%) — Distribution of Change in EOF

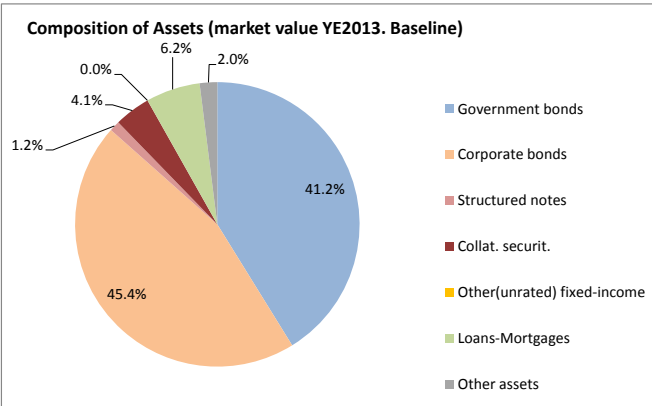# Annex IV Low Yield: Summary of Cash Flow analysis per country

This annex contains information for each country where more than 3 participants reported cash flow data as part of the Low Yield Module. It shows some of the figures included in the cash flow analysis of the Section IV of the report at country level, allowing for the identification of the heterogeneous investment strategies among national markets as well as the heterogeneous cash flow pattern in the liability side. The statements on data and methodology made for the section IV of the EIOPA Stress test report hold for the current annex.

List of countries includes all the EIOPA members except Latvia (LV) where only one participant reported for the purpose of the low yield module:

1. Austria (AT),
2. Belgium (BE),
3. Bulgaria (BG),
4. Cyprus (CY),
5. Czech Republic (CZ),
6. Germany (DE),
7. Denmark (DK),
8. Estonia (EE),
9. Spain (ES),
10. Finland (FI),
11. France (FR),
12. Great Britain (GB),
13. Greece (GR),
14. Croatia (HR),
15. Hungary (HU),
16. Ireland (IE),
17. Italy (IT),
18. Lithuania (LT),
19. Luxemburg (LU),
20. Malta (MT),
21. Netherlands (NL),
22. Poland (PL),
23. Portugal (PT),
24. Romania (RO),
25. Sweden (SE),
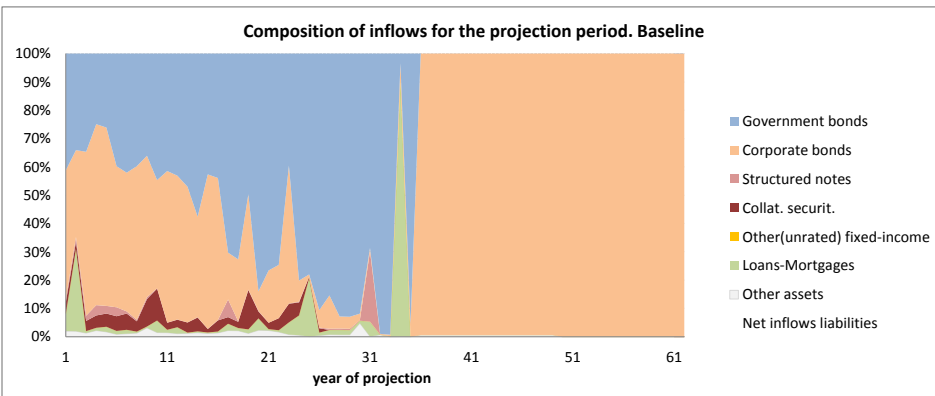26. Slovenia (SI) and
27. Slovakia (SK).

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: AUSTRIA
AT

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

6.2% 2.0% 0.0% 4.1% 1.2% 41.2% 45.4%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities
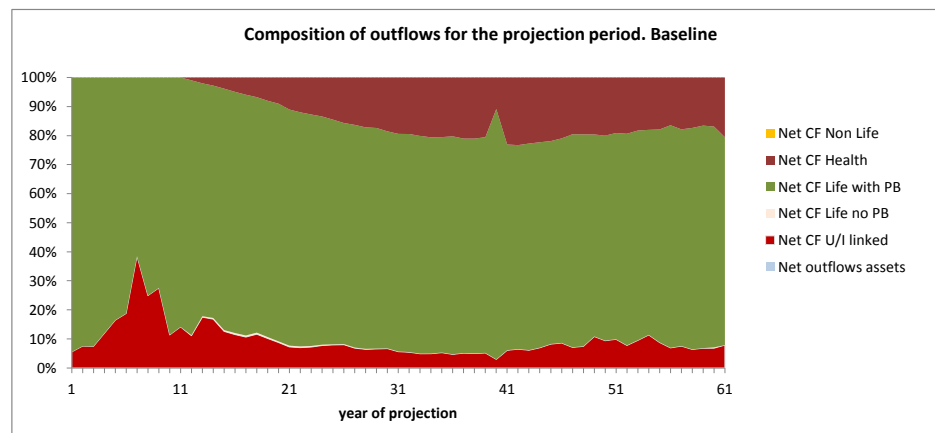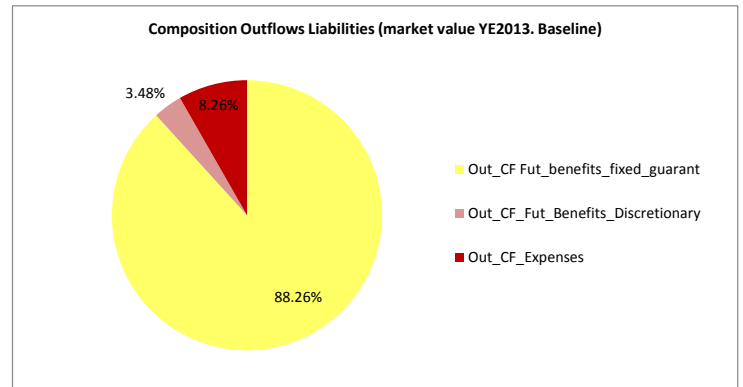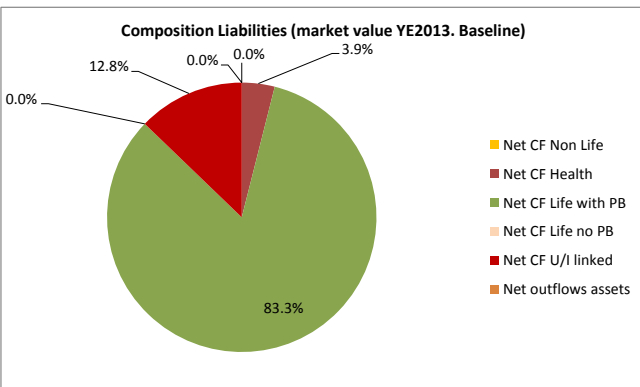
year of projection

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

12.8% 0.0% 0.0% 3.9% 0.0% 83.3%

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

3.48% 8.26% 88.26%

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

year of projection

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.
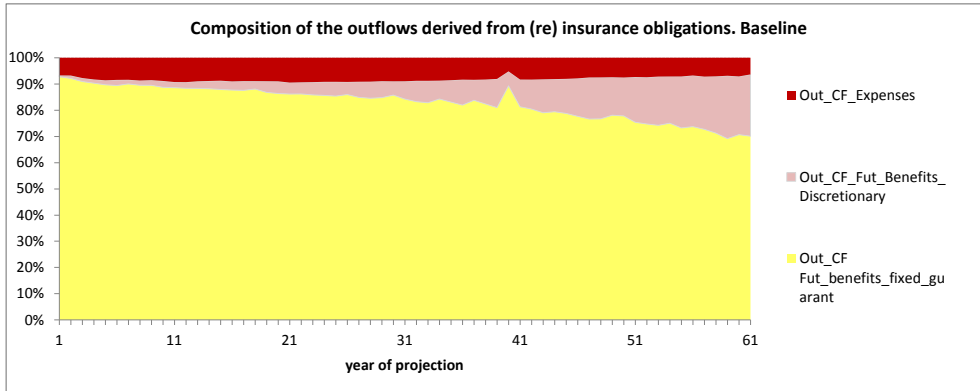
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

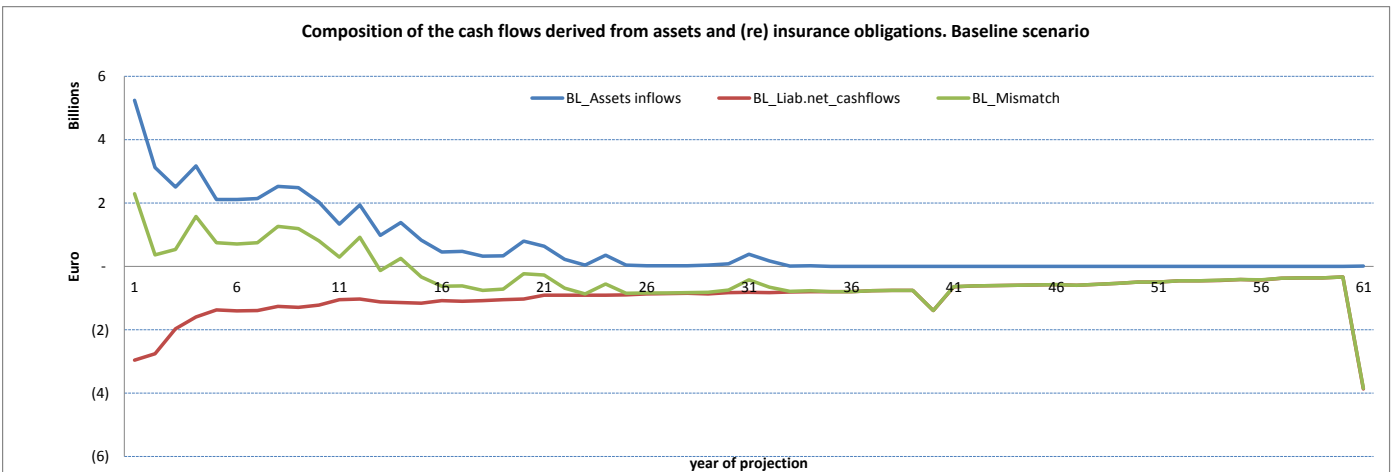(Below there are Figures showing the economic amounts).

AUSTRIA

Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
  - either the expected cash outflows of very short term non-life or health business,
  - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario
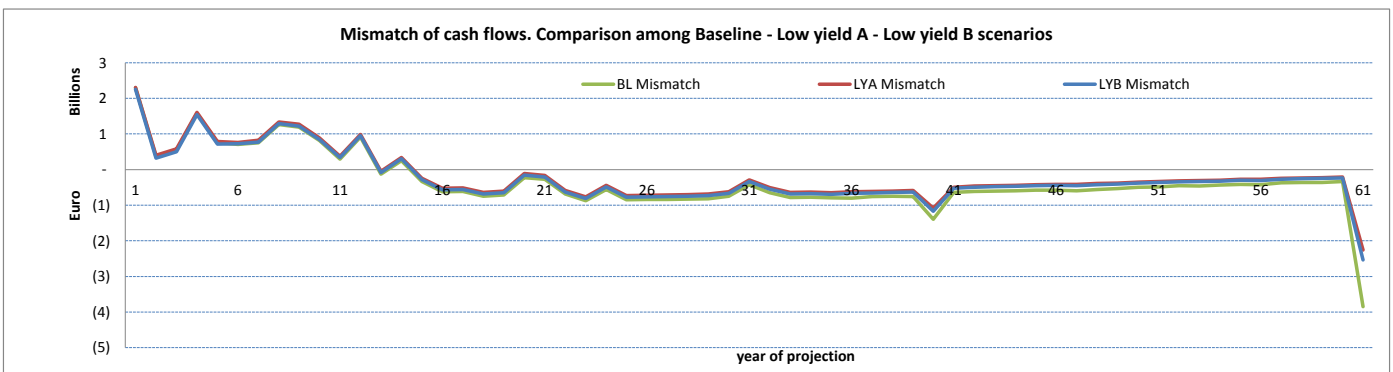

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
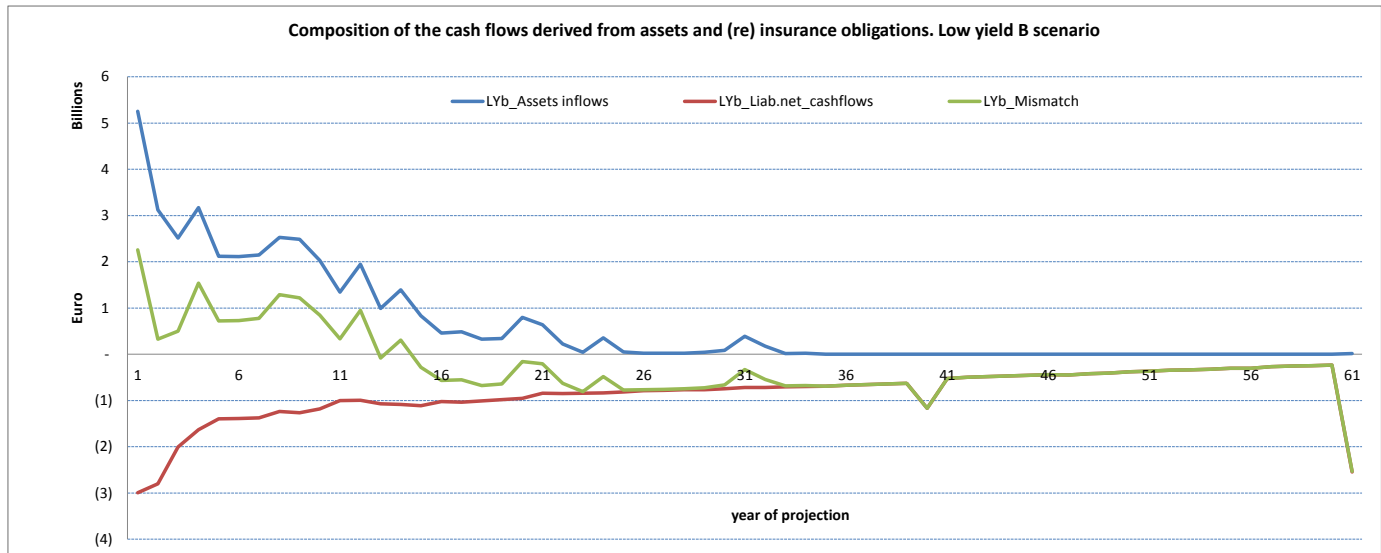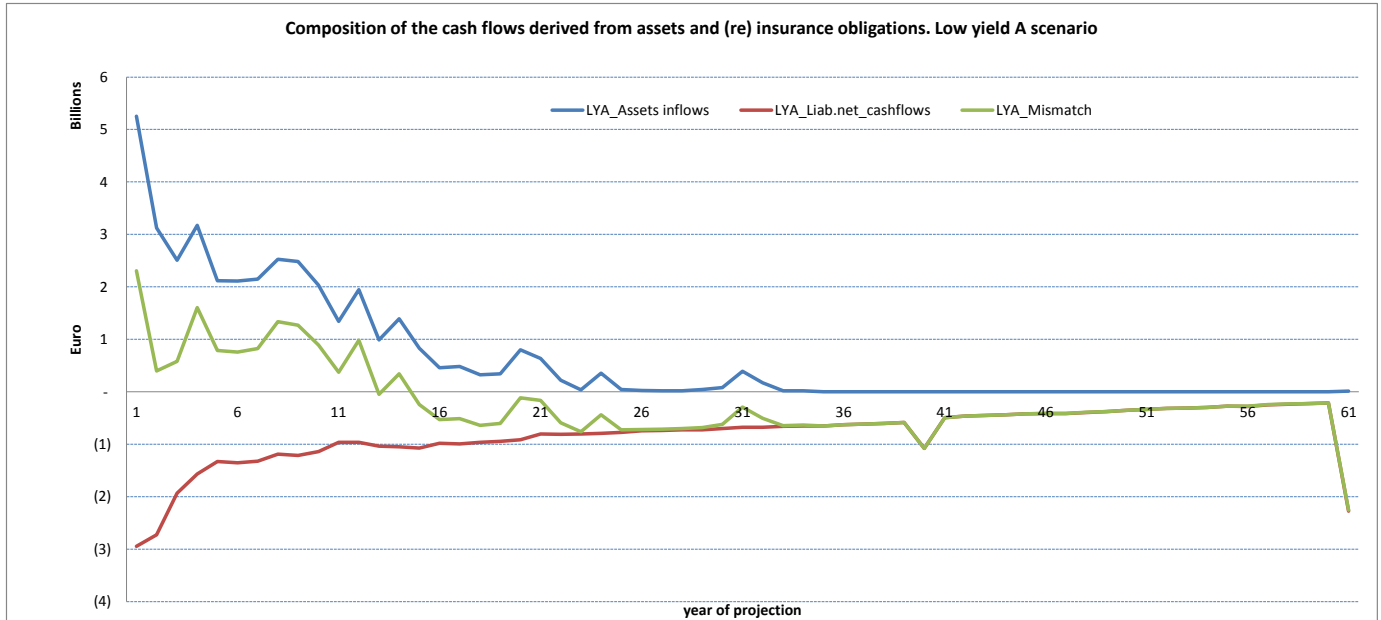Finally there may be cases of peaks in the medium and long term cash outflows, due to
  - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
  - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
      (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
      these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
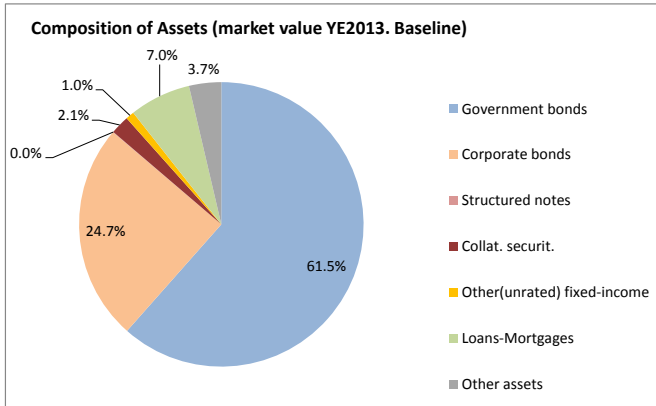Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
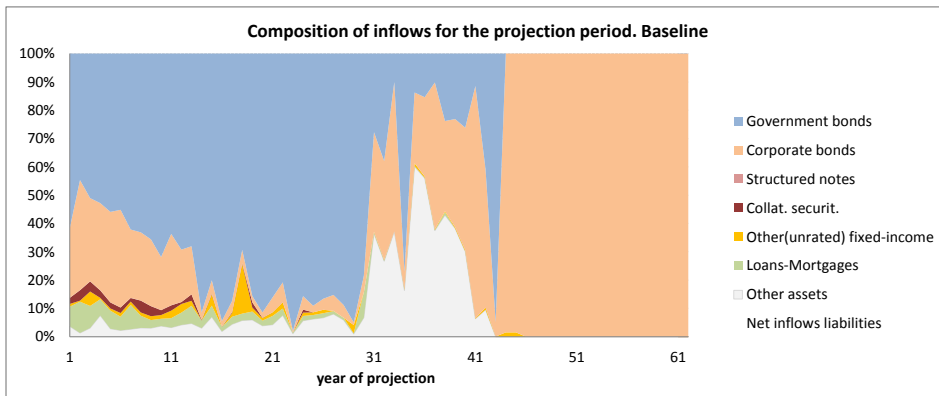
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: BELGIUM
BE

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

Legend:
- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

Legend:
- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
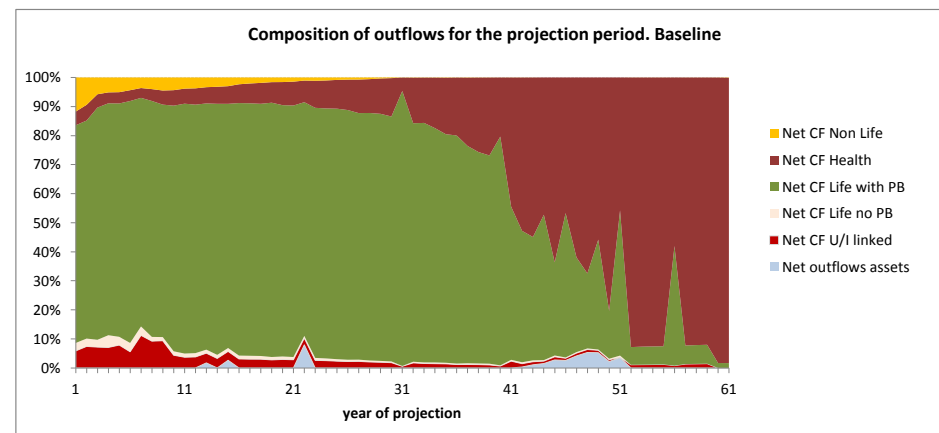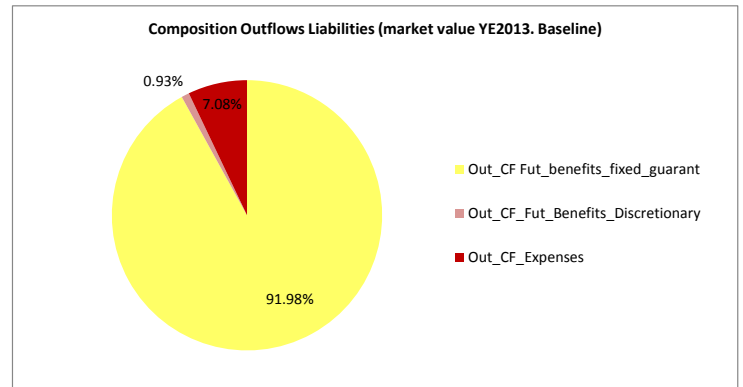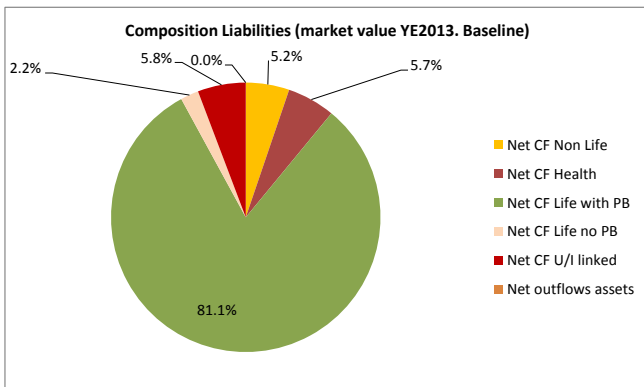- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
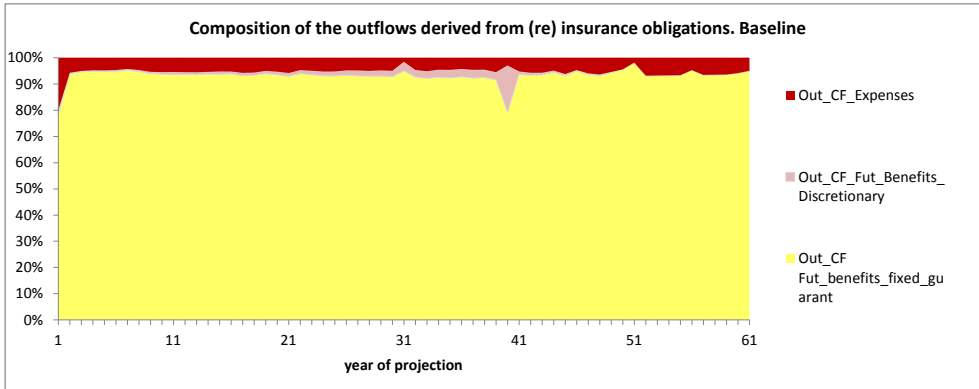
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

Legend:
- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

Legend:
- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

Legend:
- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

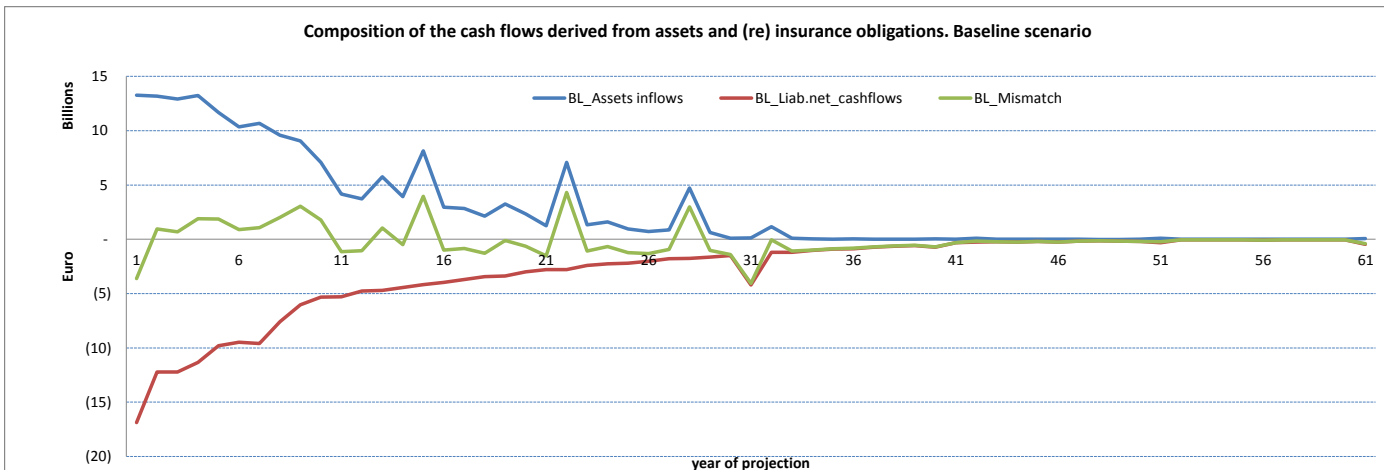(Below there are Figures showing the economic amounts).

BELGIUM

Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

Legend:
- BL_Assets inflows
- BL_Liab.net_cashflows
- BL_Mismatch

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
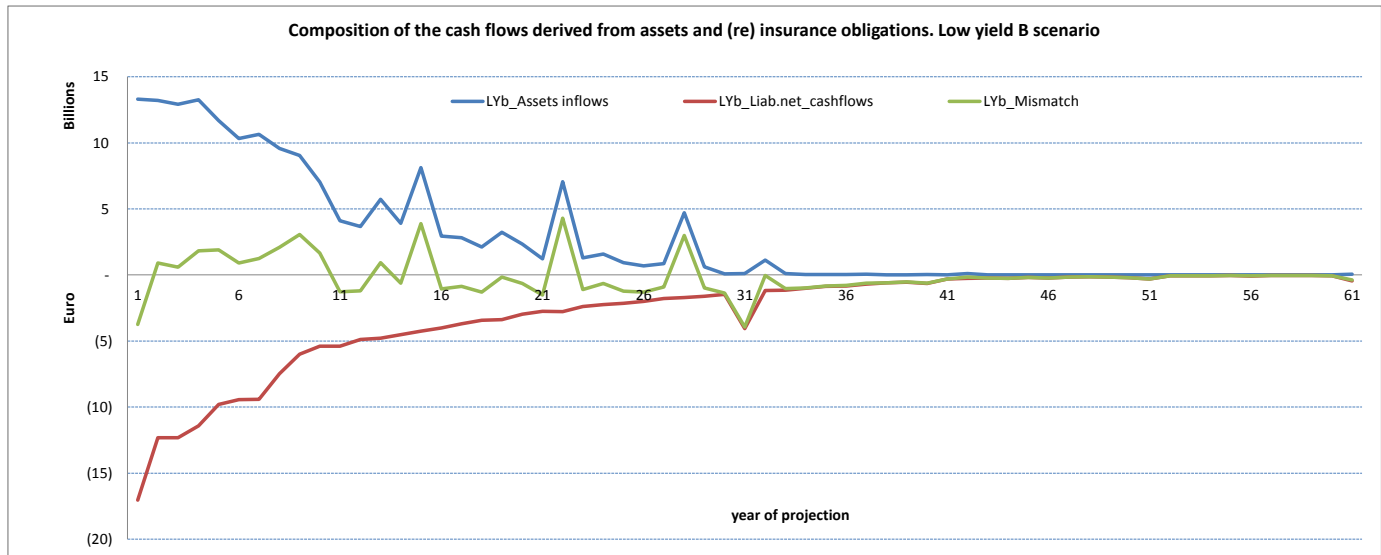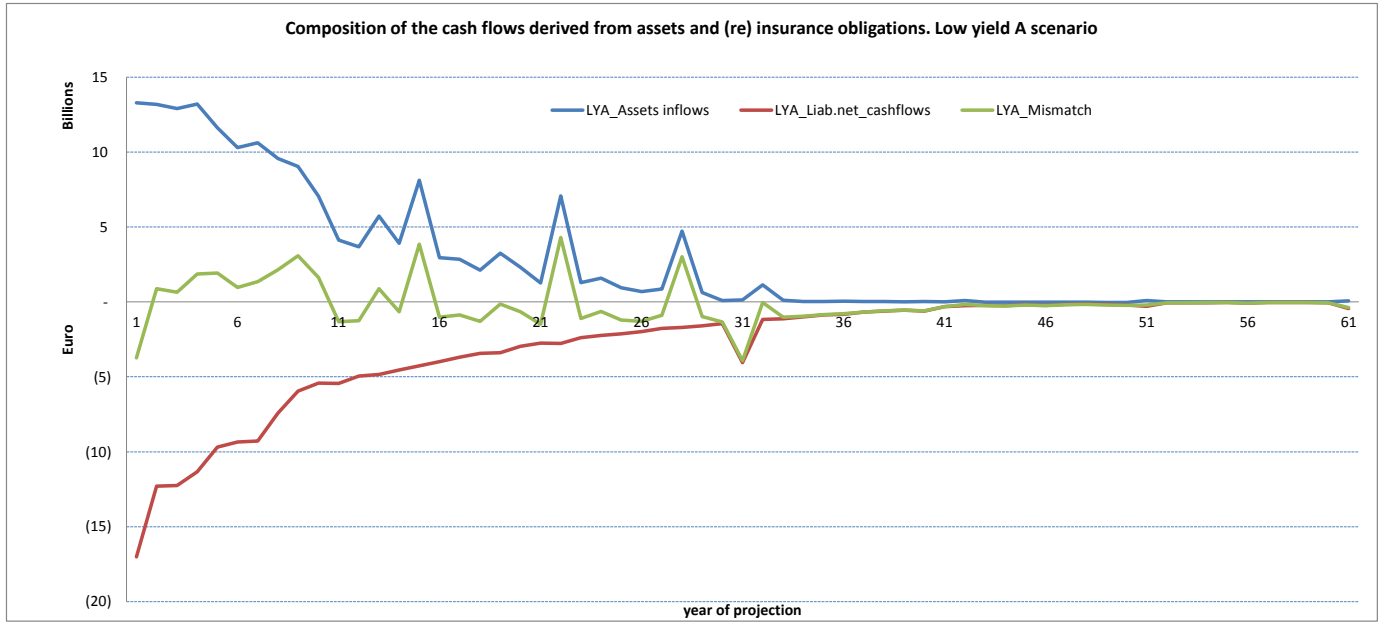Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
  (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
  these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
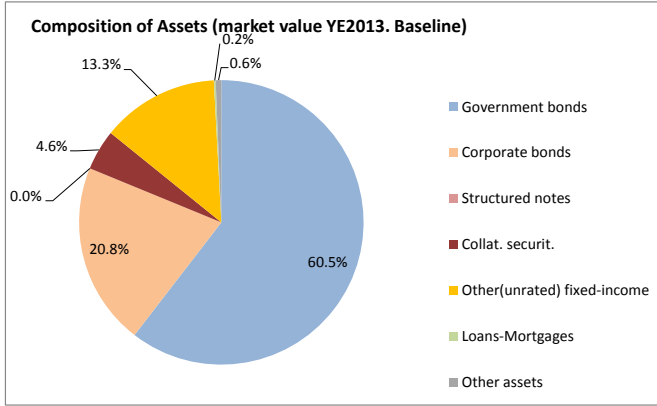Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
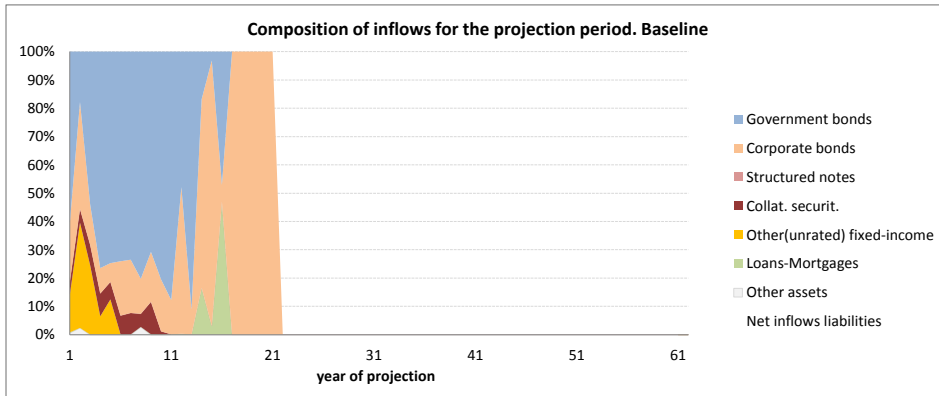
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Legend:
- BL Mismatch
- LYA Mismatch
- LYB Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: BULGARIA
BG

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
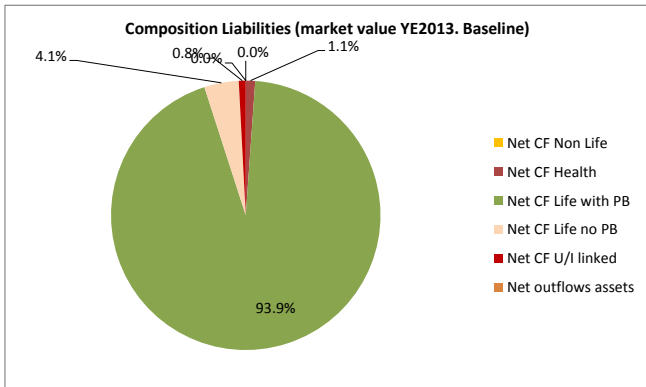- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
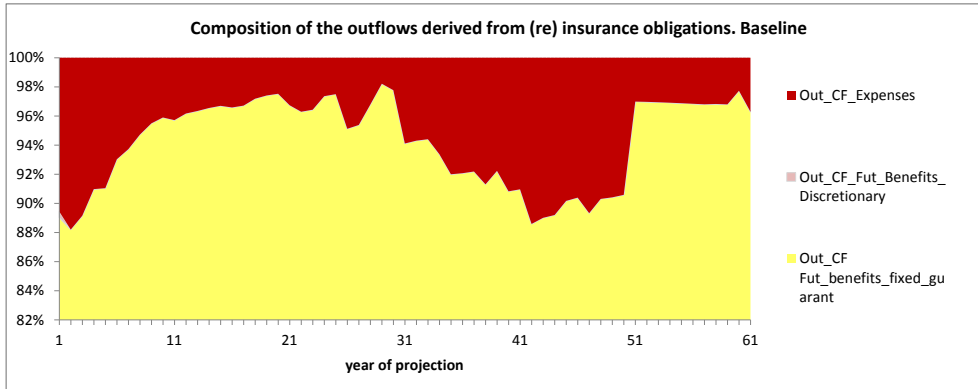
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

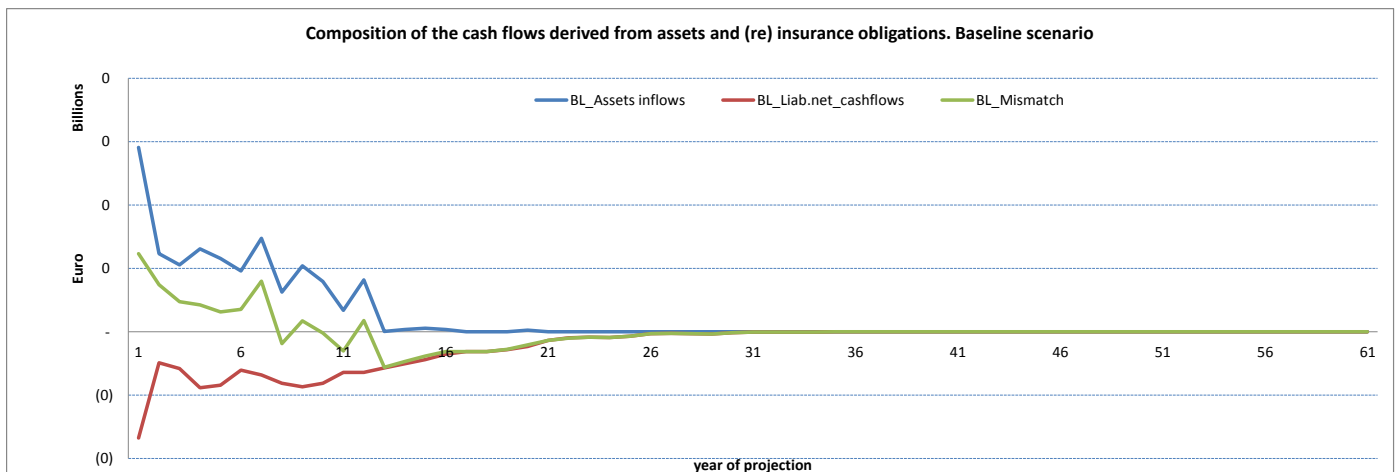(Below there are Figures showing the economic amounts).

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BULGARIA

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
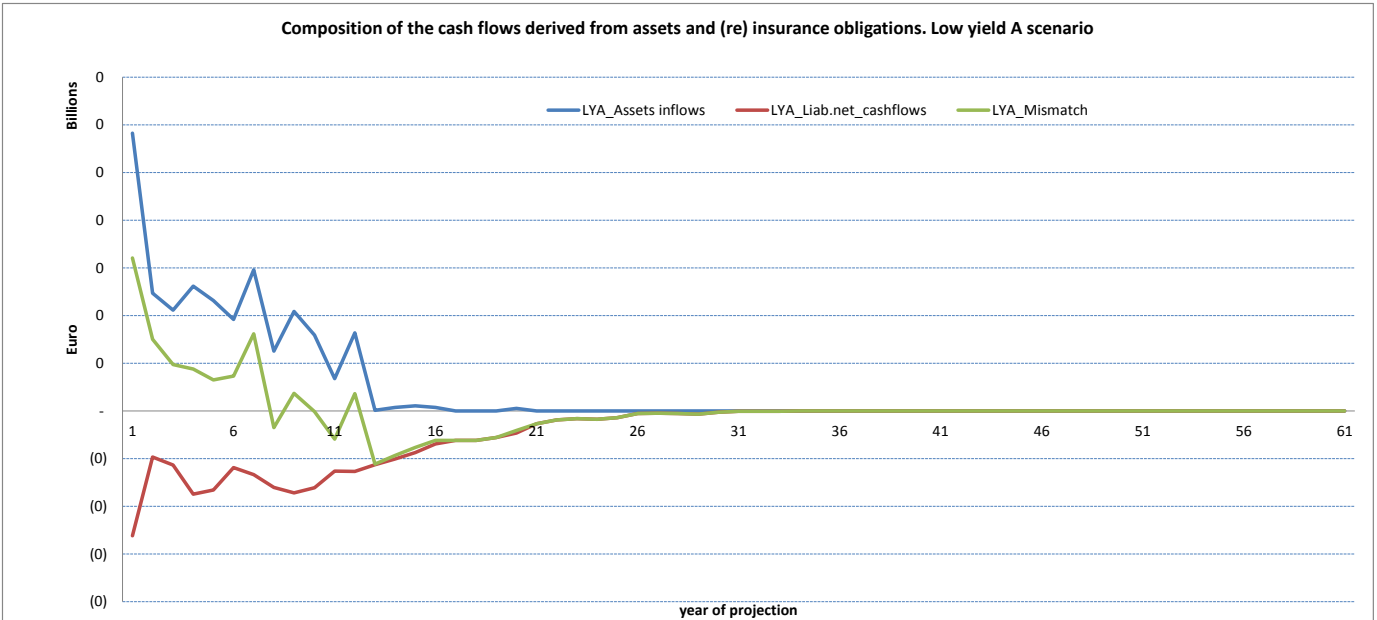Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
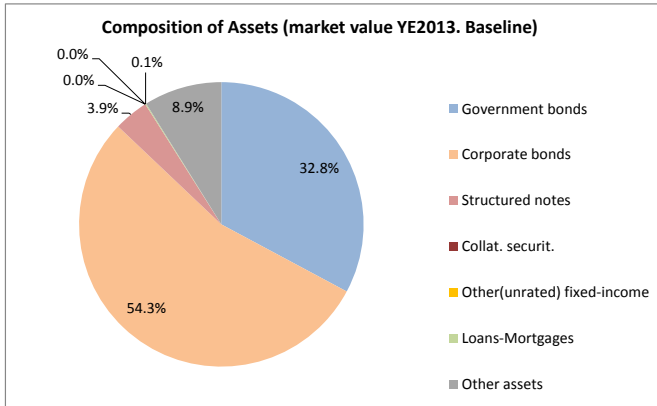Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
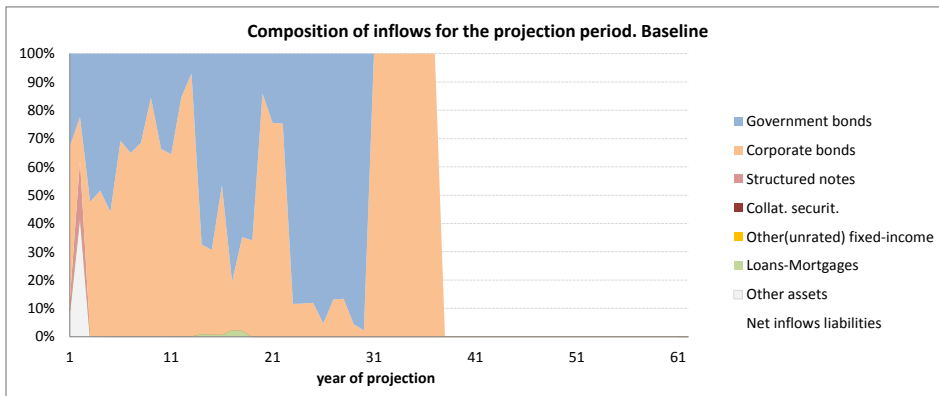
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: CYPRUS
CY

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
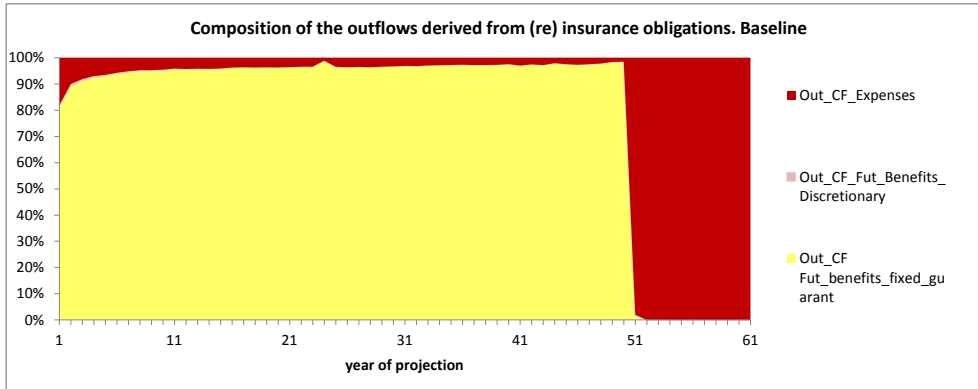
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.
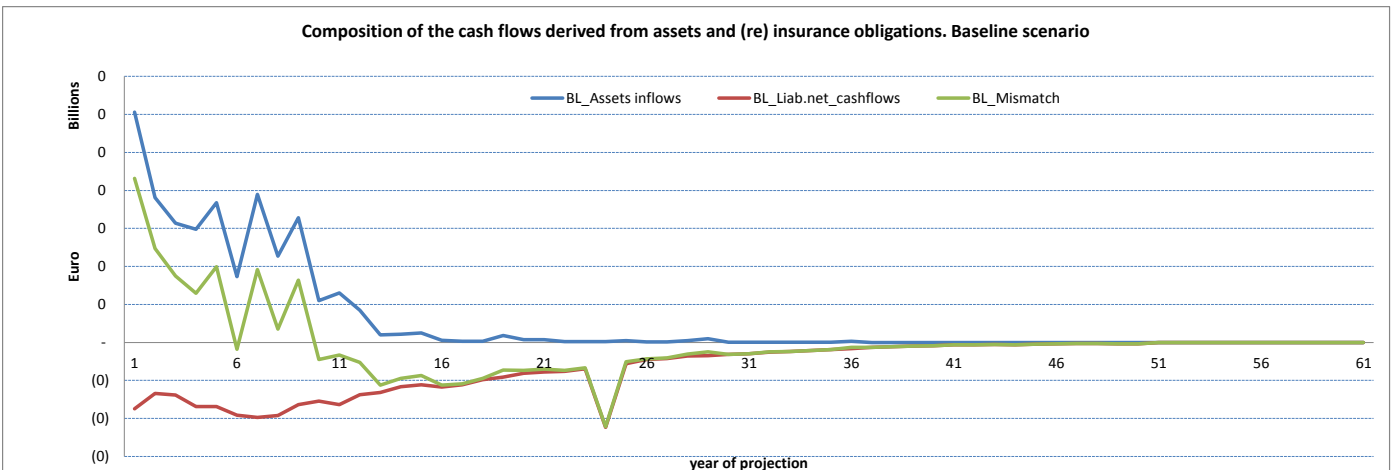
(Below there are Figures showing the economic amounts).

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CYPRUS

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

- BL_Assets inflows
- BL_Liab.net_cashflows
- BL_Mismatch

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
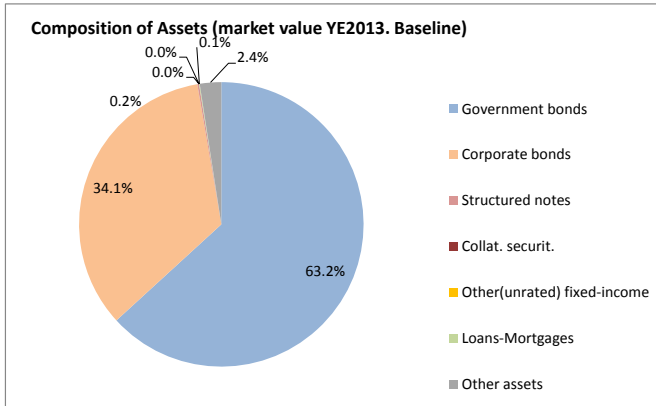Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
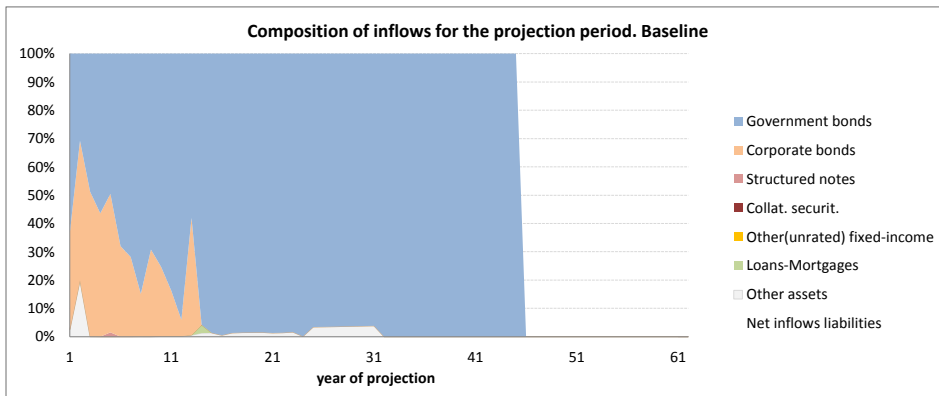
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

- BL Mismatch
- LYA Mismatch
- LYB Mismatch

CYPRUS

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: CZECH REP.
CZ

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
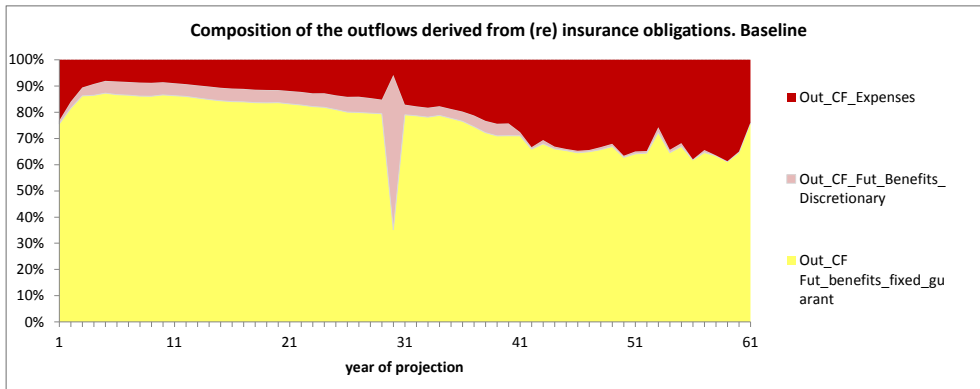
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

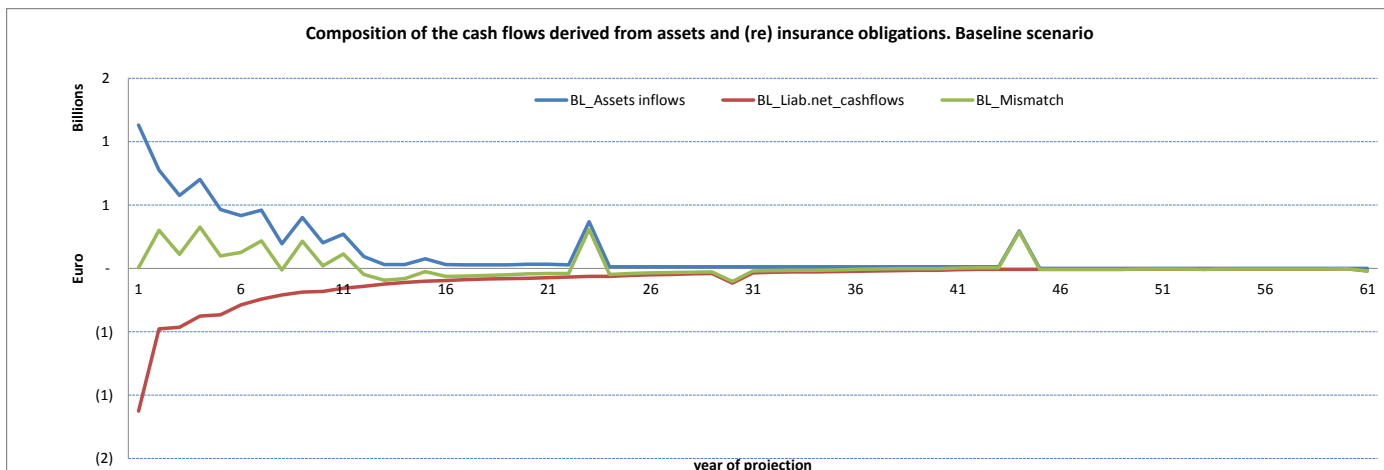(Below there are Figures showing the economic amounts).

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Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

Legend: BL_Assets inflows — BL_Liab.net_cashflows — BL_Mismatch

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
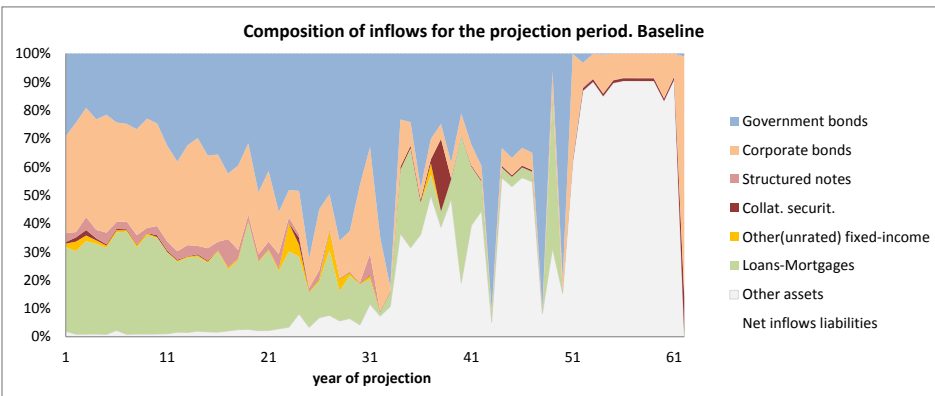
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Legend: BL Mismatch — LYA Mismatch — LYB Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: GERMANY
DE
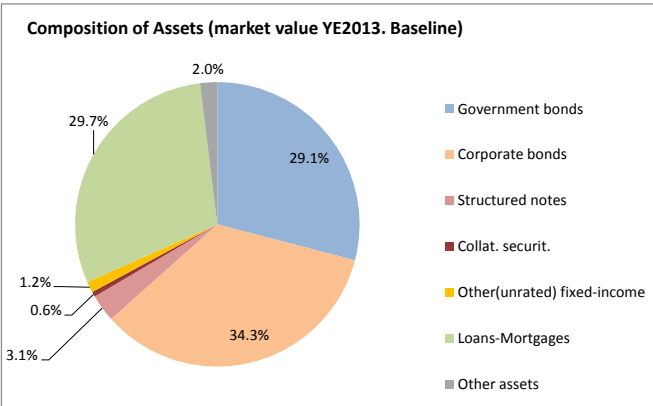
This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
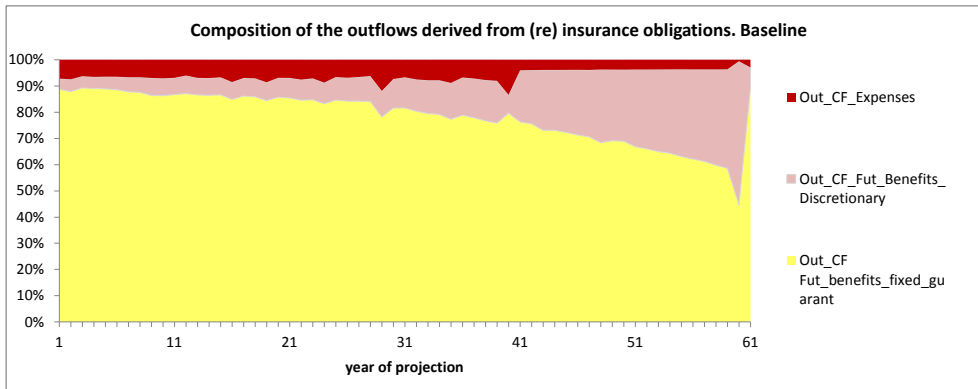
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

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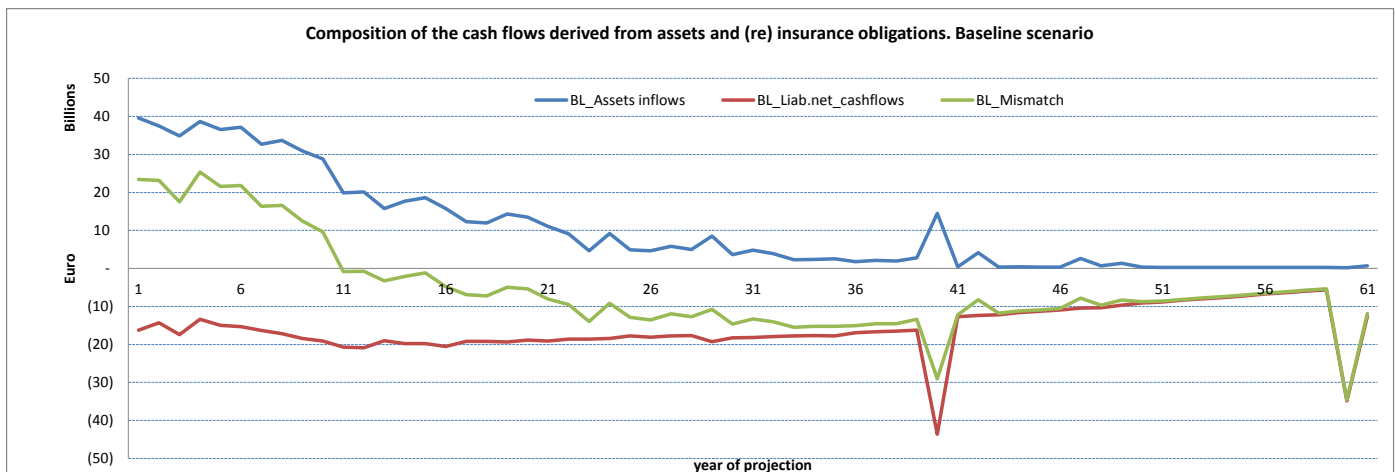(Below there are Figures showing the economic amounts).

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Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
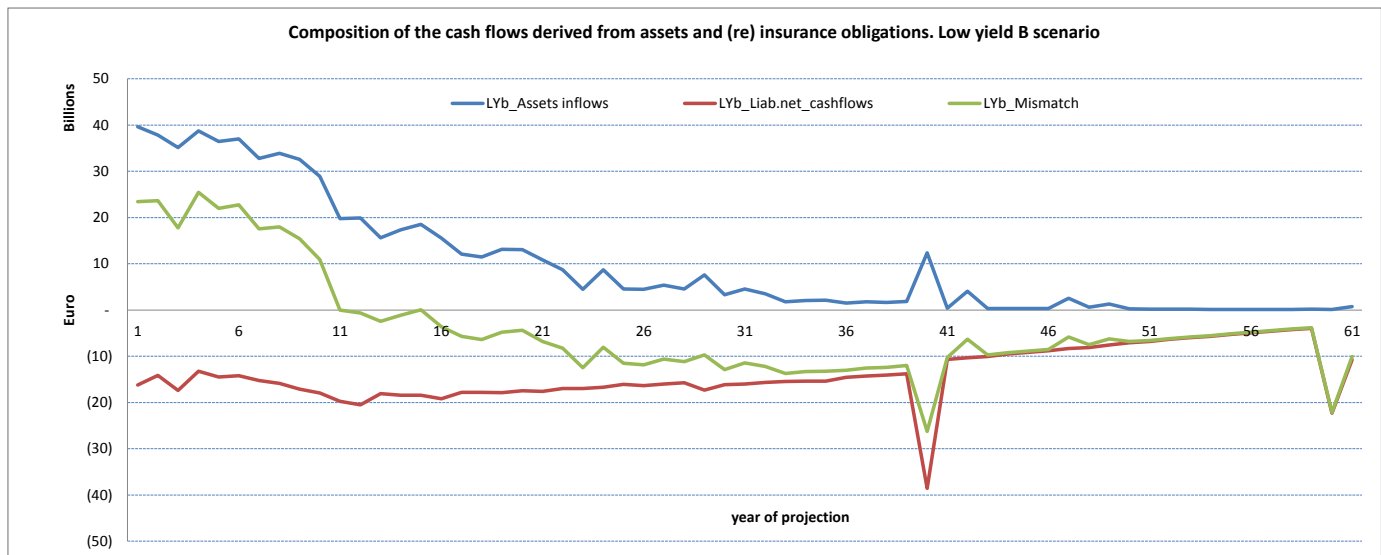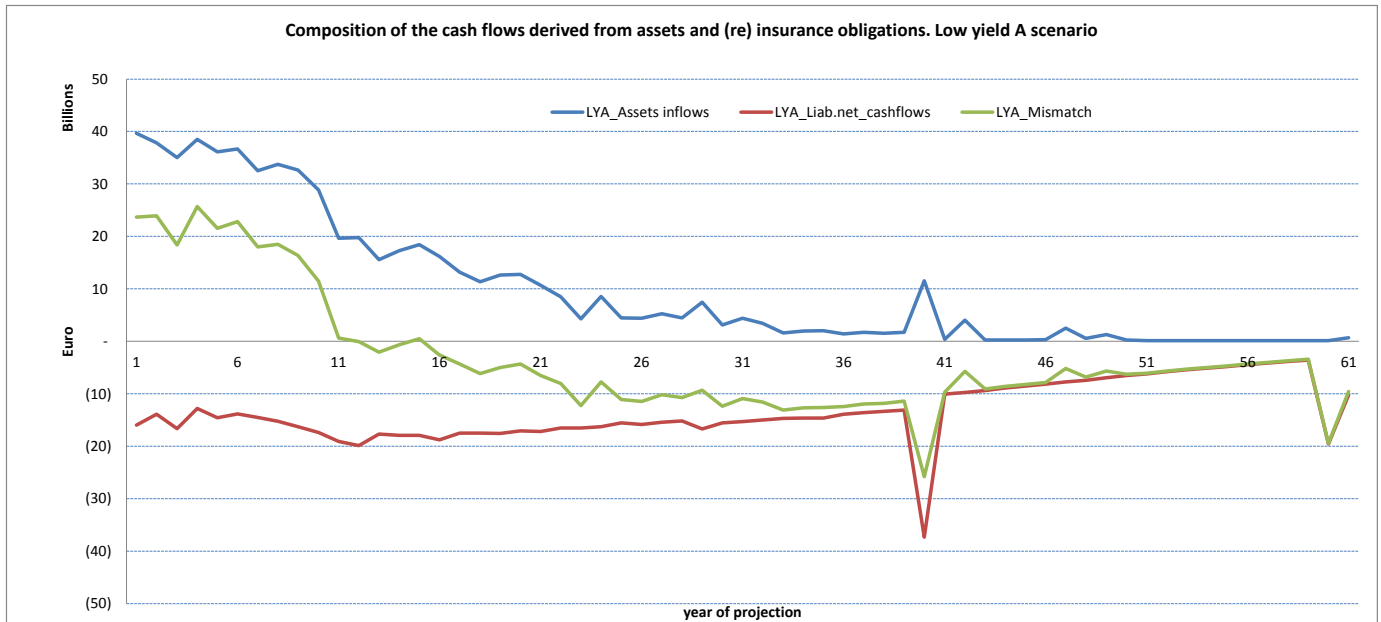Finally there may be cases of peaks in the medium and long term cash outflows, due to
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- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
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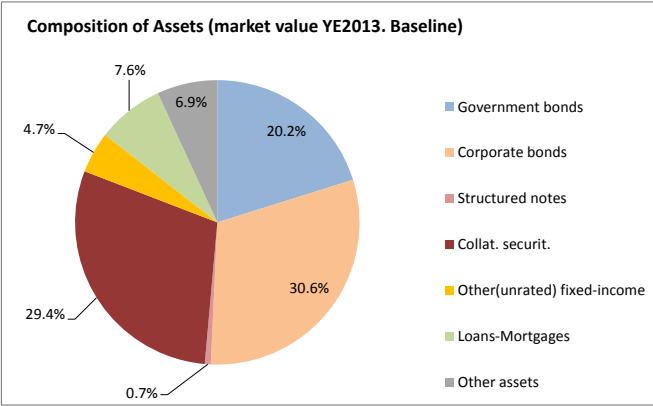Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
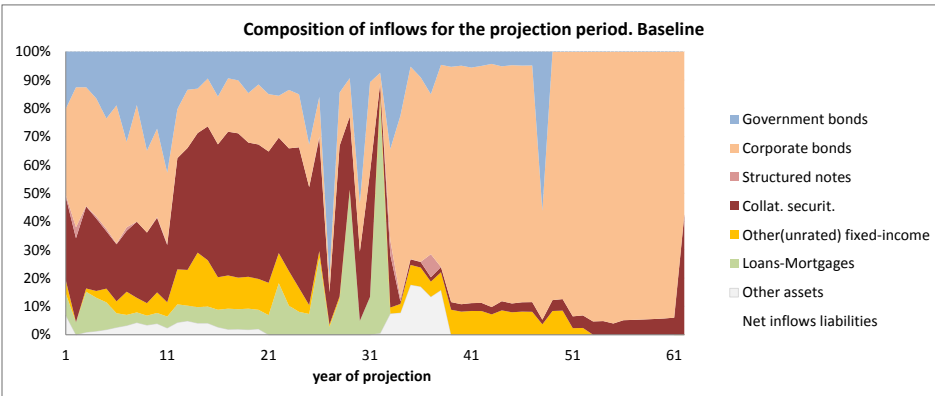
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows　　— LYA_Liab.net_cashflows　　— LYA_Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows　　— LYb_Liab.net_cashflows　　— LYb_Mismatch

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: DENMARK
DK

Composition of Assets (market value YE2013. Baseline)

Legend:
- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

Values: 20.2%, 30.6%, 0.7%, 29.4%, 4.7%, 7.6%, 6.9%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

Legend:
- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
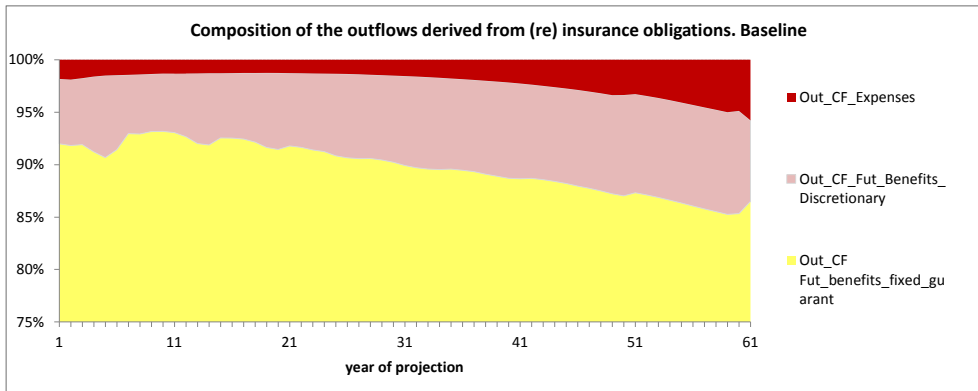
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

Values: 2.2%, 0.0%, 0.0%, 0.0%, 1.0%, 96.8%

Legend:
- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

Values: 1.50%, 6.96%, 91.53%

Legend:
- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

Legend:
- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

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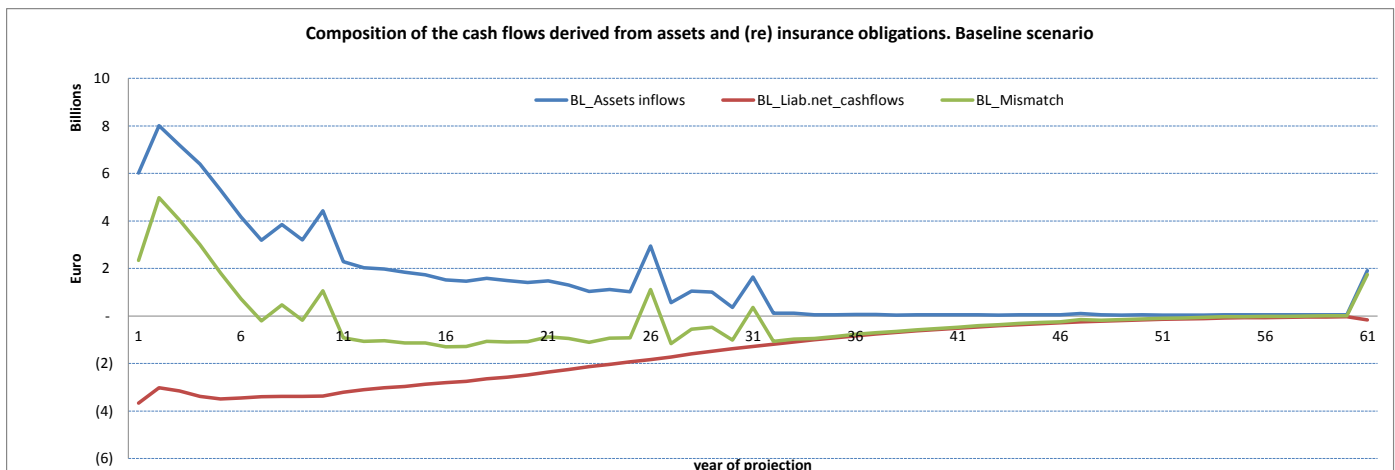(Below there are Figures showing the economic amounts).

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DENMARK

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
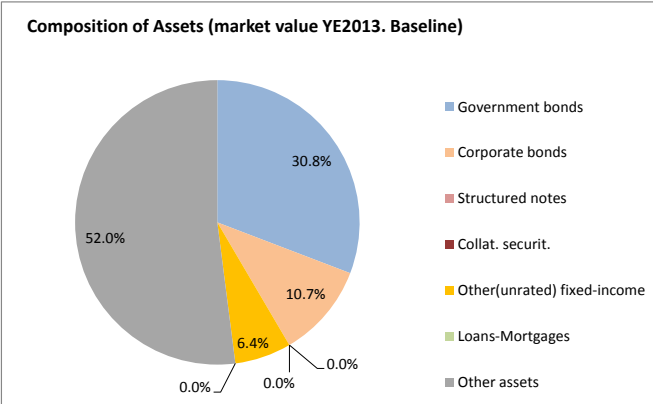Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
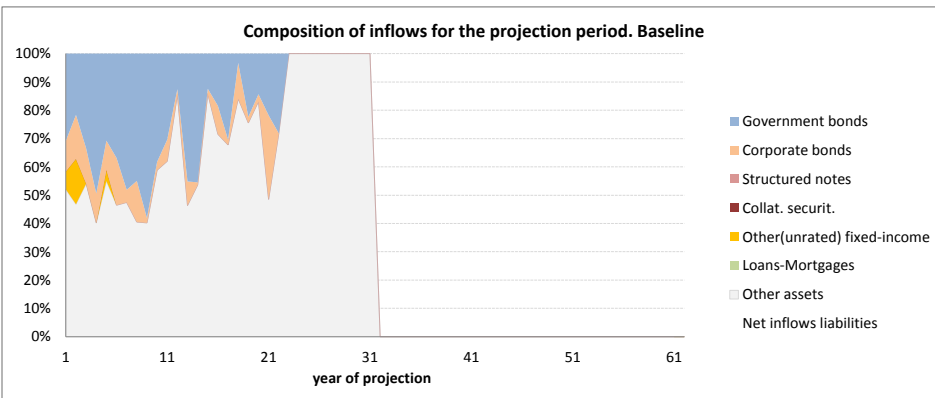
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: ESTONIA
EE

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
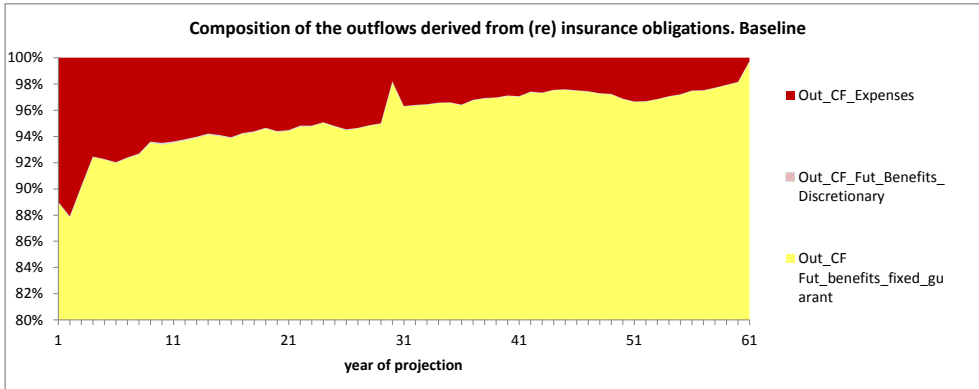
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

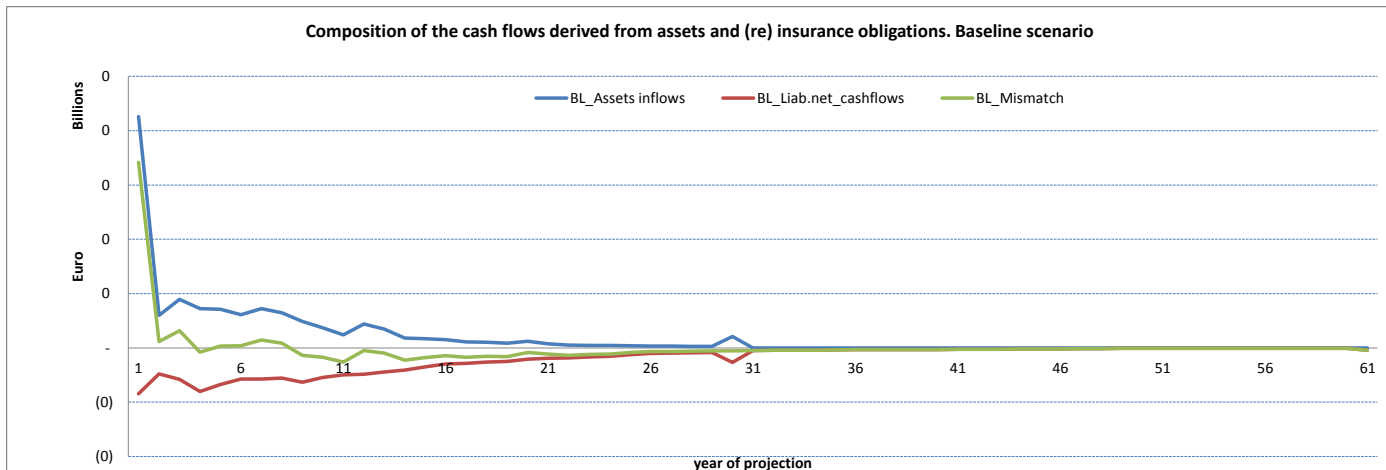(Below there are Figures showing the economic amounts).

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ESTONIA

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
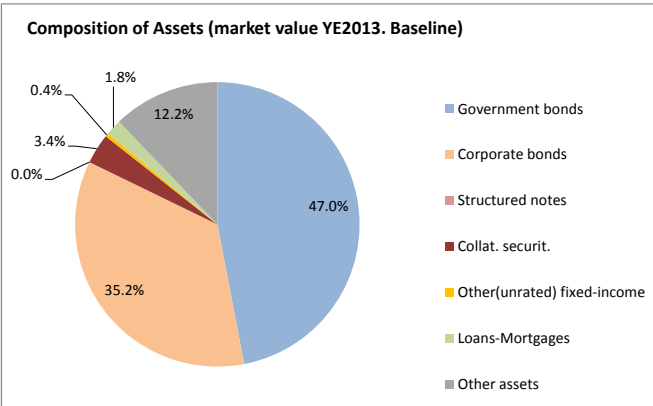Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
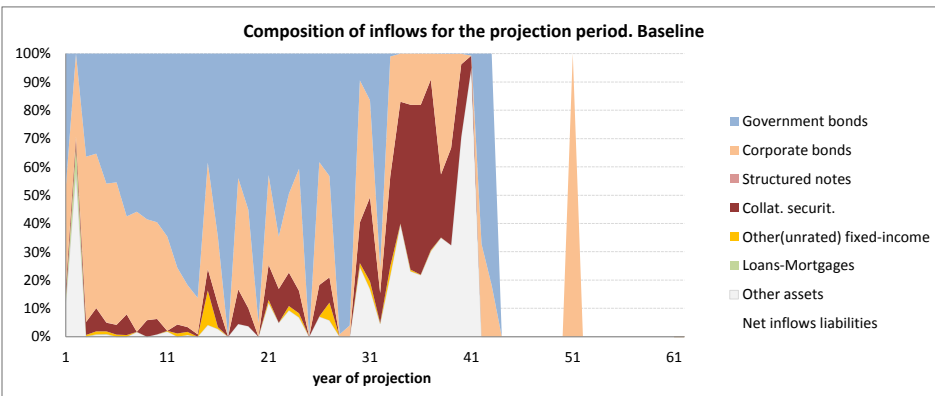
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: SPAIN
ES

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
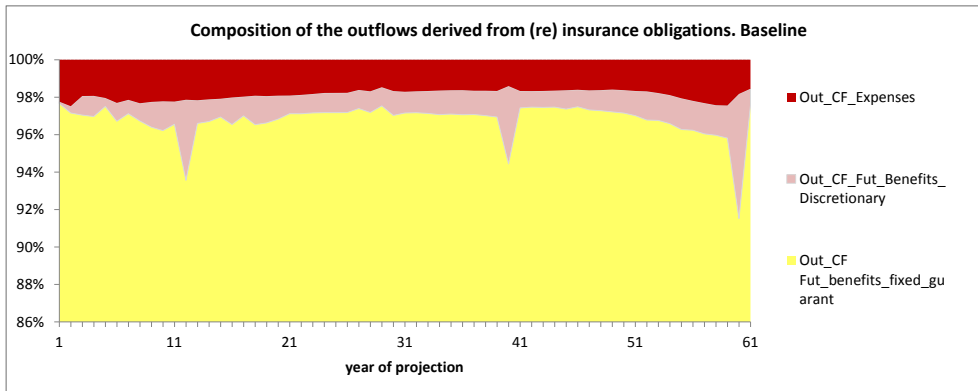
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.
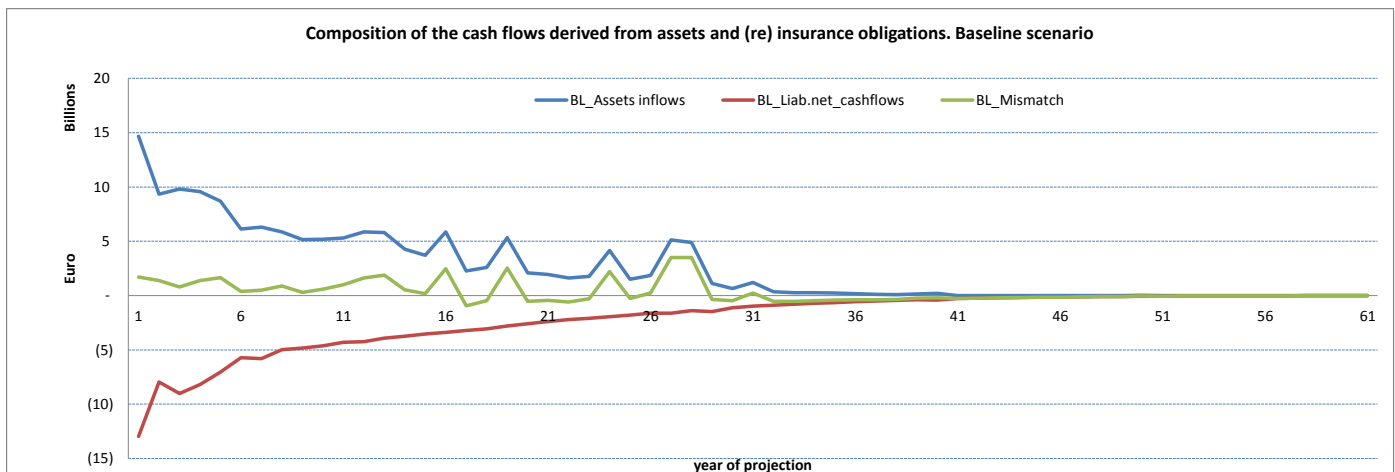
(Below there are Figures showing the economic amounts).

SPAIN

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
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  (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
  these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
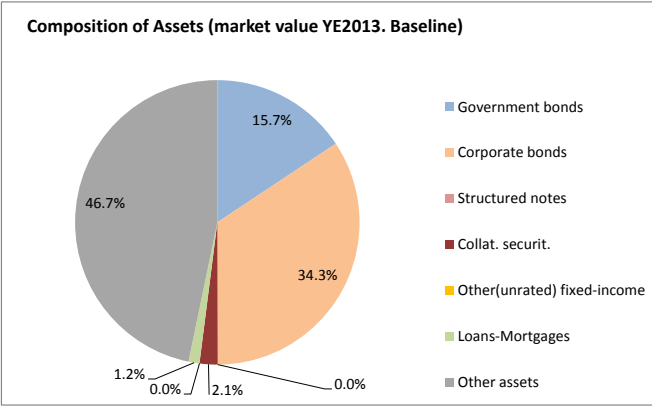Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
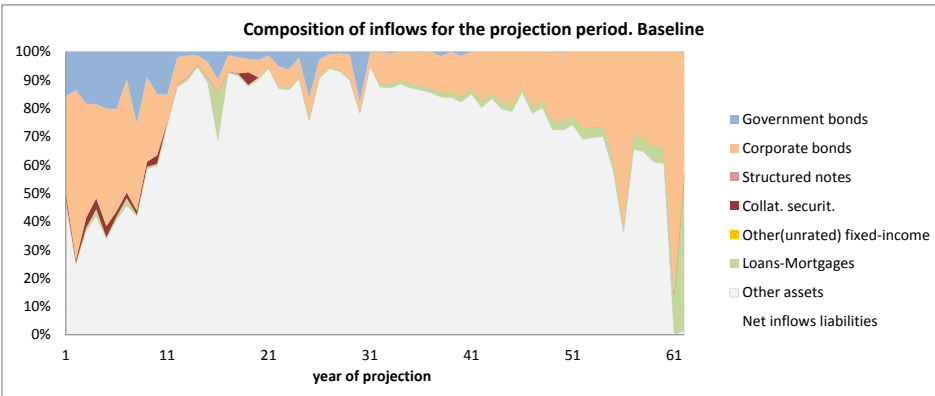
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows   — LYA_Liab.net_cashflows   — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows   — LYb_Liab.net_cashflows   — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: FINLAND
FI

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

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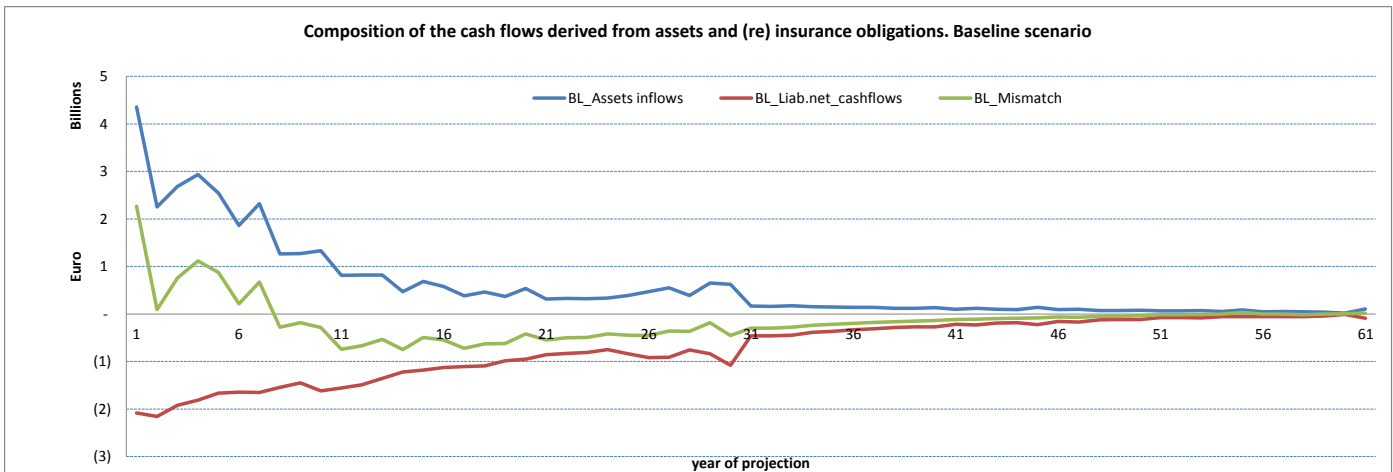(Below there are Figures showing the economic amounts).

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
   - either the expected cash outflows of very short term non-life or health business,
   - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
   - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
   - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
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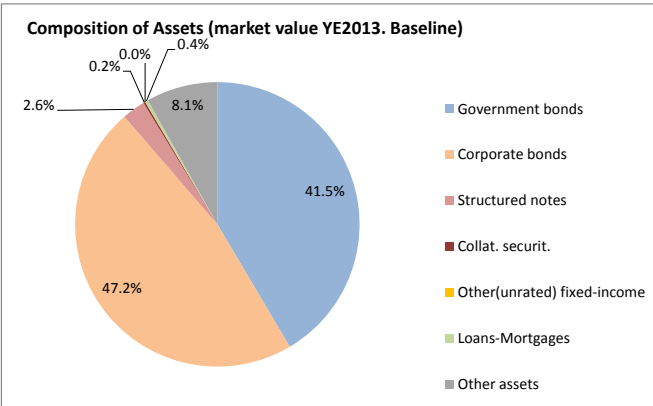Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
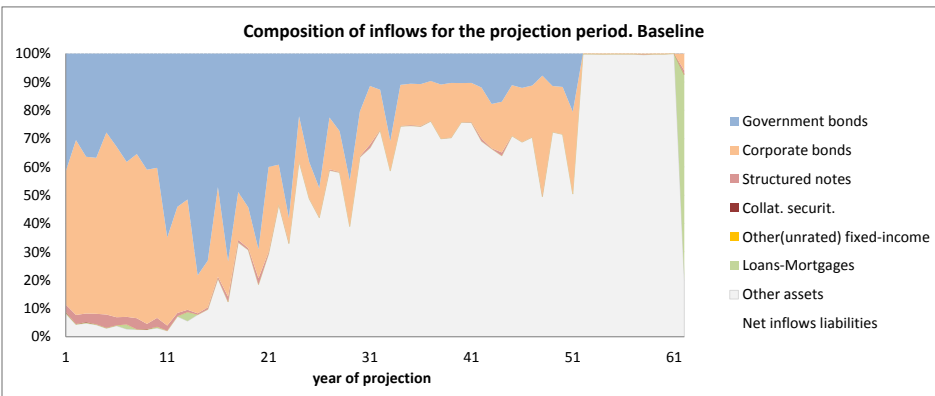
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: FRANCE
FR

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

0.0%
0.4%
0.2%
2.6%
8.1%
41.5%
47.2%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

year of projection

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

12.0%
0.6%
0.0%
0.1%
1.4%
85.9%

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

27.12%
10.67%
62.20%

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

year of projection

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

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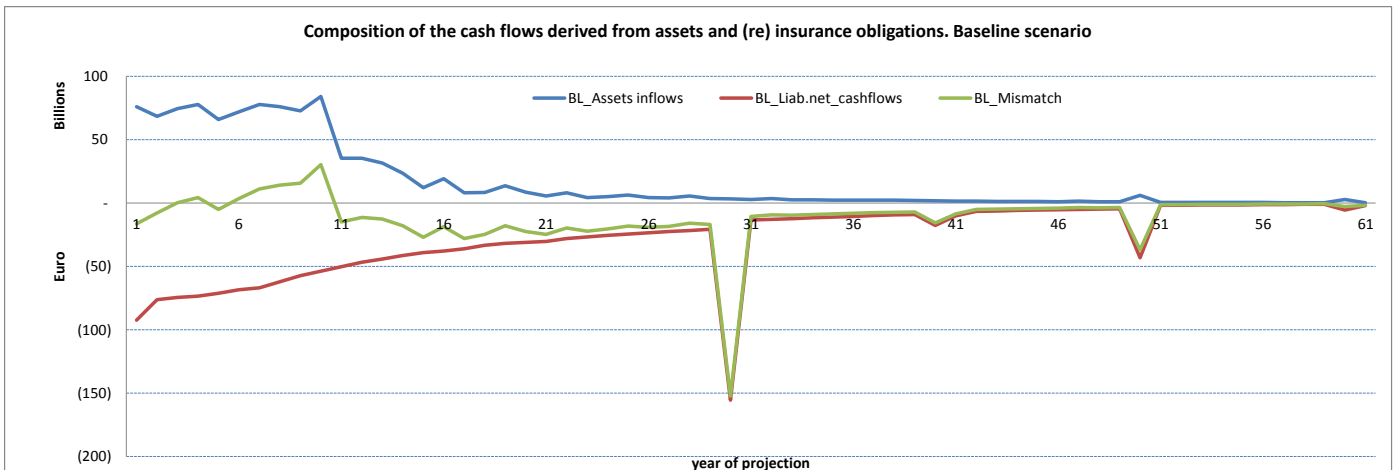(Below there are Figures showing the economic amounts).

FRANCE

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
  - either the expected cash outflows of very short term non-life or health business,
  - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

— BL_Assets inflows — BL_Liab.net_cashflows — BL_Mismatch

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
  - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
  - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
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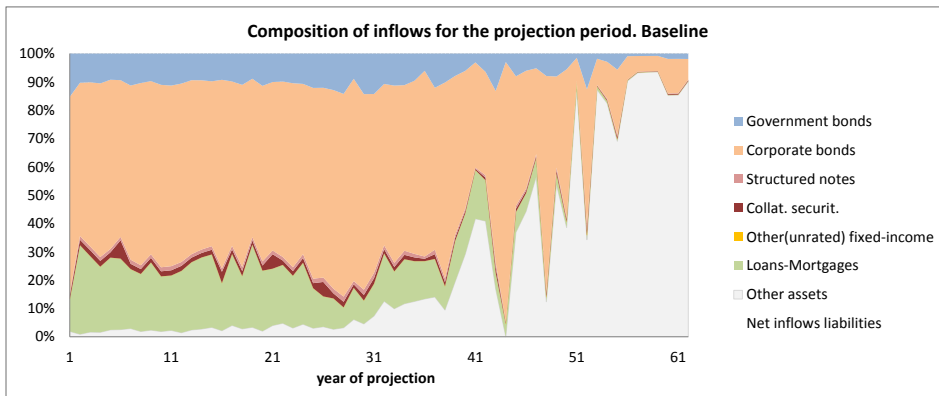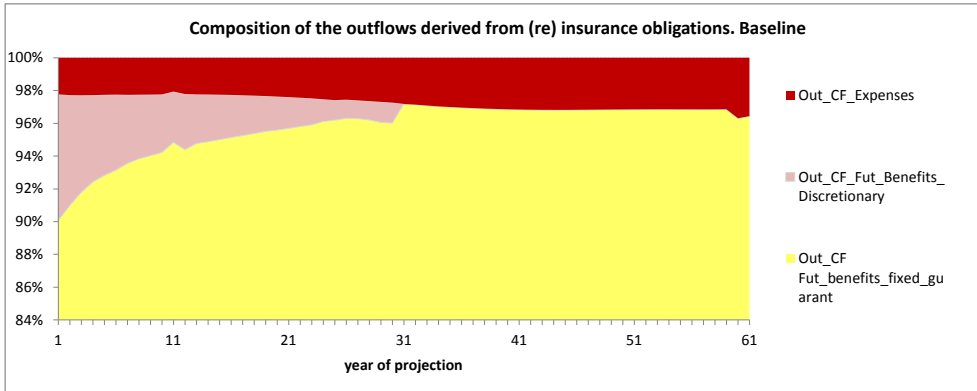
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

— BL Mismatch — LYA Mismatch — LYB Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: GREAT BRITAIN
GB

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- 15.2% Government bonds
- 69.2% Corporate bonds
- 0.9% Structured notes
- 1.4% Collat. securit.
- 0.0% Other(unrated) fixed-income
- 11.4% Loans-Mortgages
- 1.9% Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- 6.7% 0.0% 0.0% 0.0%
- 8.7%
- 84.6%

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- 2.98% 2.31%
- 94.71%

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

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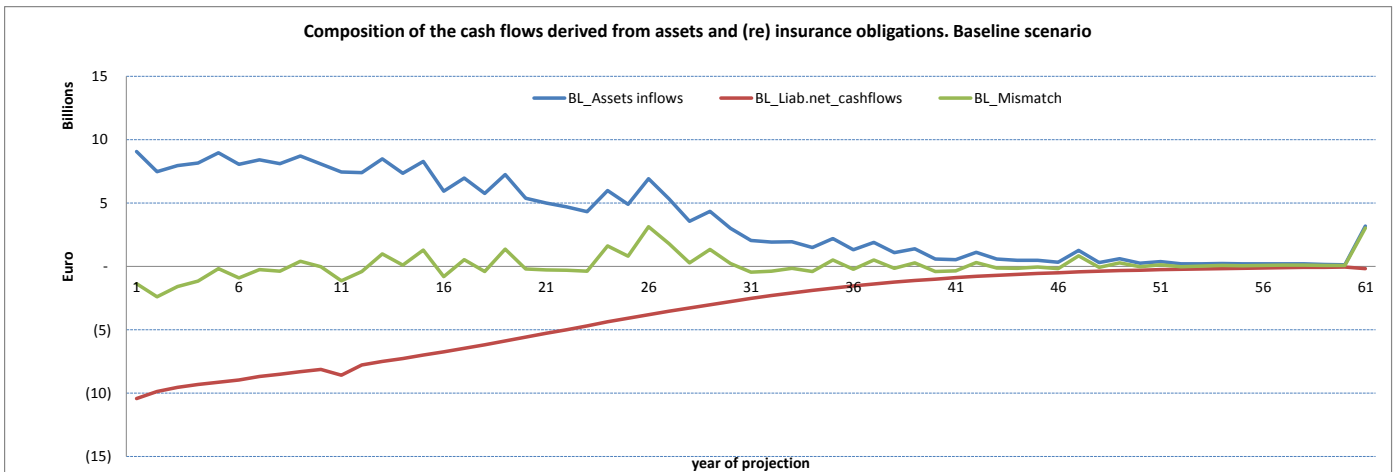(Below there are Figures showing the economic amounts).

GREAT BRITAIN

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
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- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).
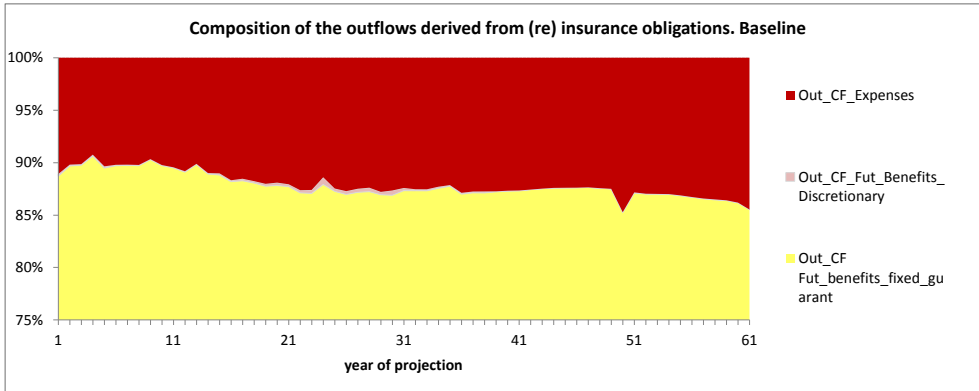
Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
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- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
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Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

EIOPA stress Test
Annex IV

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: GREECE
GR

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

0.5% 17.8% 0.0% 0.0% 0.9% 51.7% 29.0%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

0.0% 19.6% 21.8% 2.5% 0.8% 55.3%

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

0.13% 10.54% 89.33%

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

(Below there are Figures showing the economic amounts).

GREECE

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
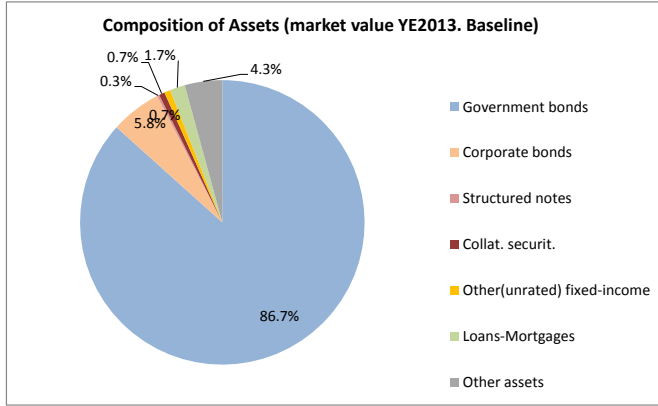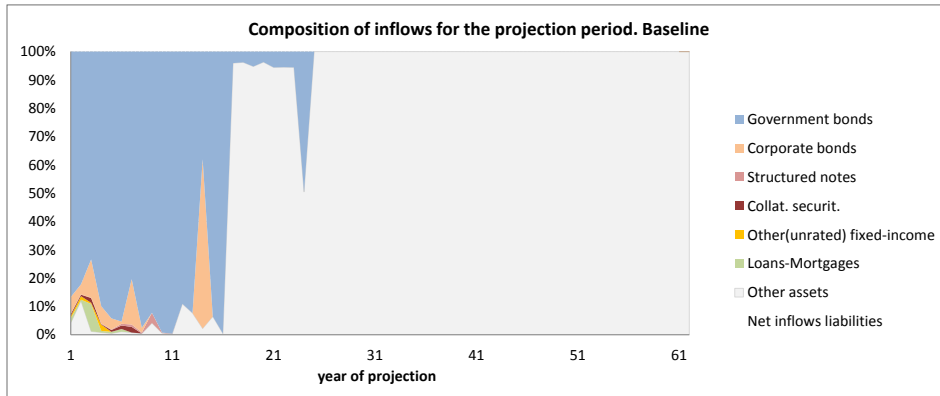In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows   — LYA_Liab.net_cashflows   — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows   — LYA_Liab.net_cashflows   — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: CROATIA
HR

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
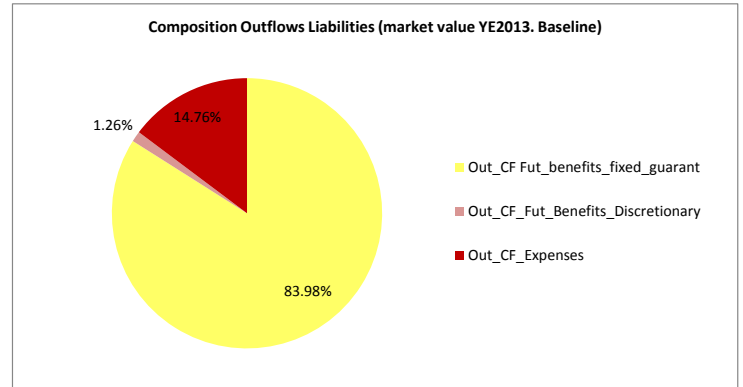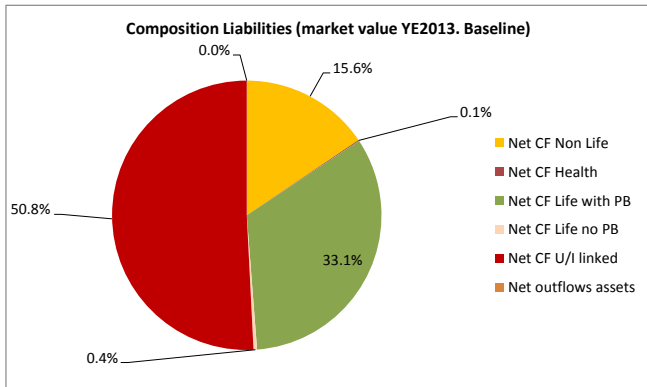- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
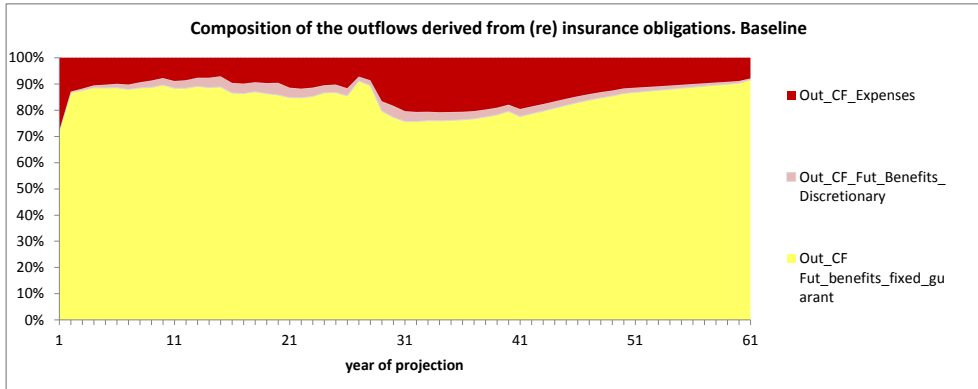
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

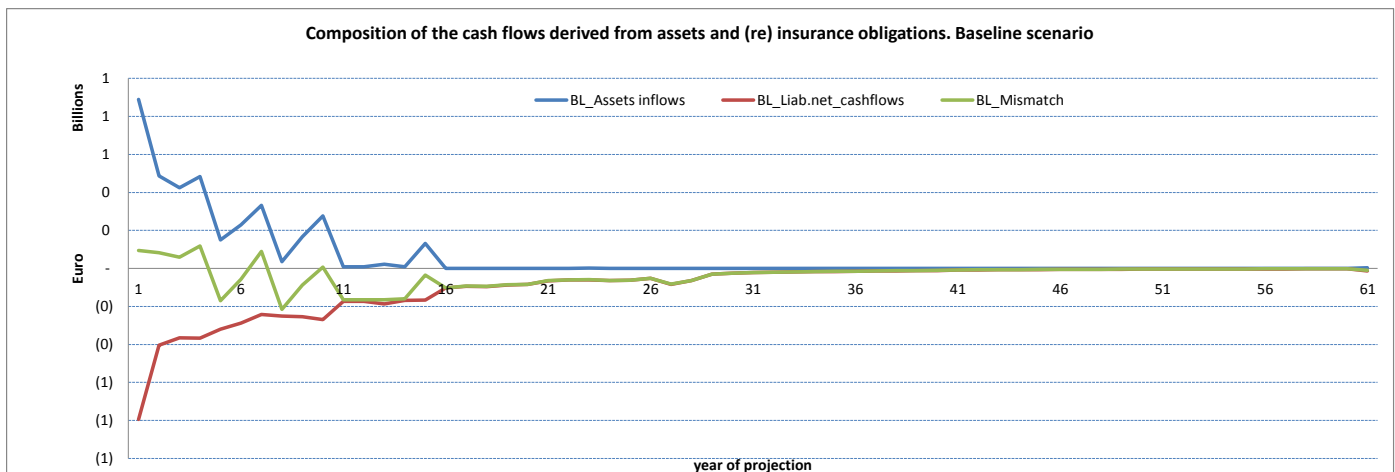(Below there are Figures showing the economic amounts).

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CROATIA

Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

year of projection

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
   - either the expected cash outflows of very short term non-life or health business,
   - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

Legend:
- BL_Assets inflows
- BL_Liab.net_cashflows
- BL_Mismatch

year of projection

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
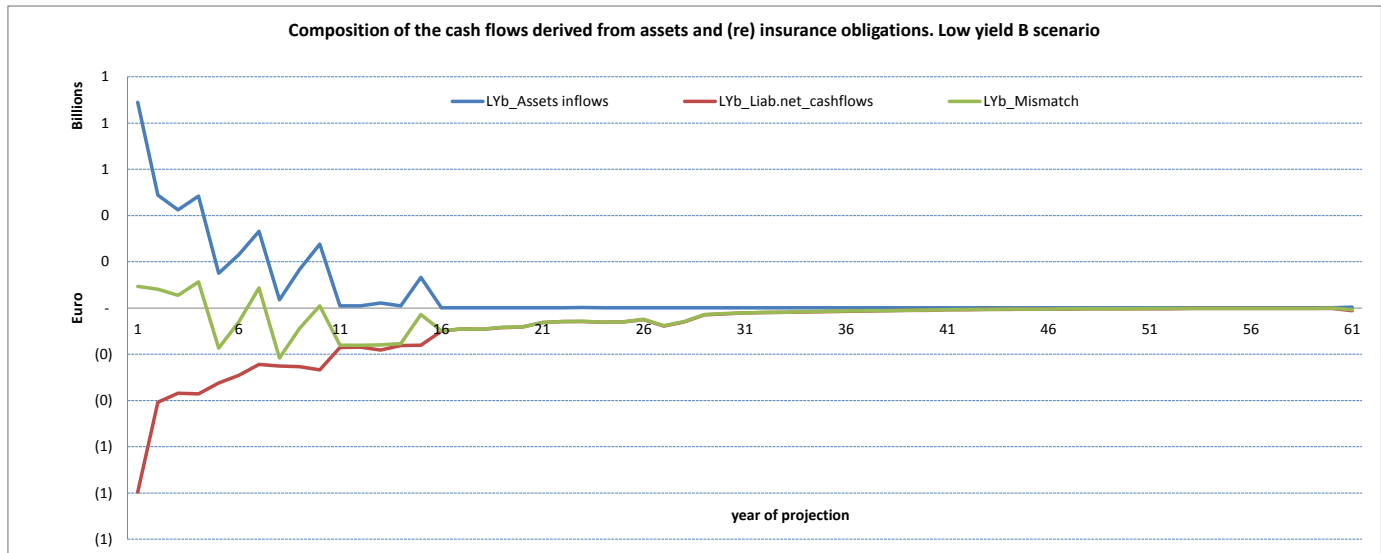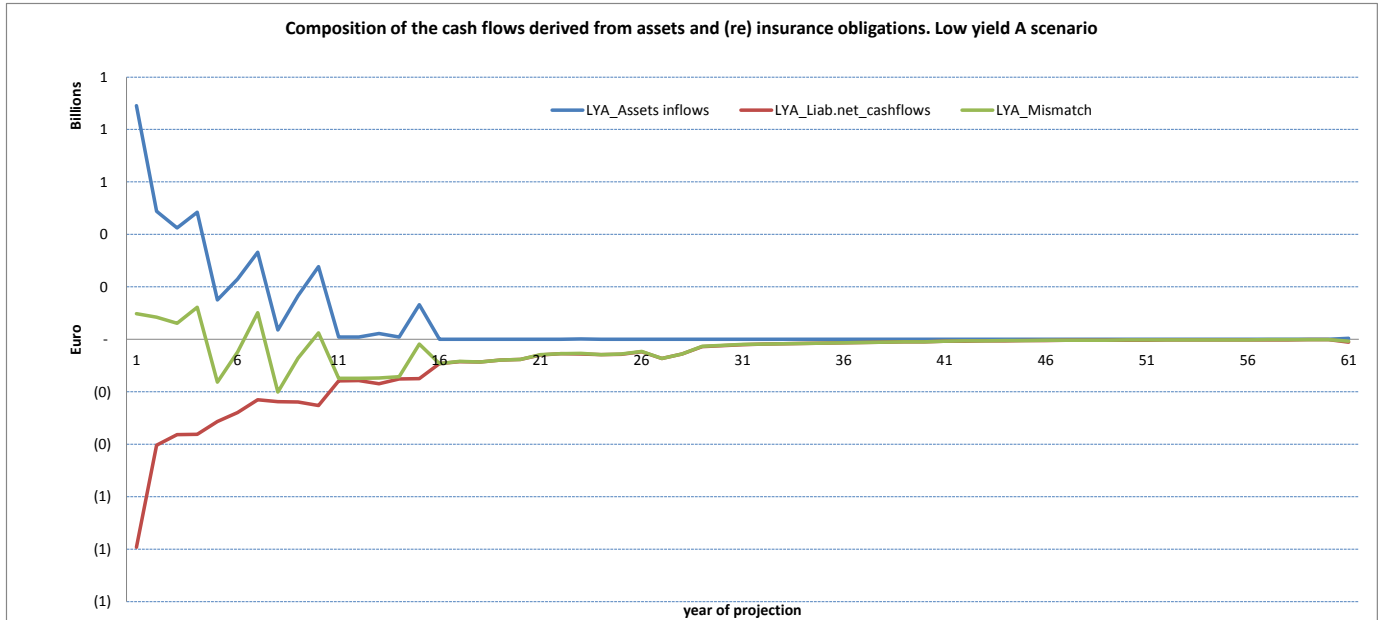Finally there may be cases of peaks in the medium and long term cash outflows, due to
   - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
   - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
        (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
        these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

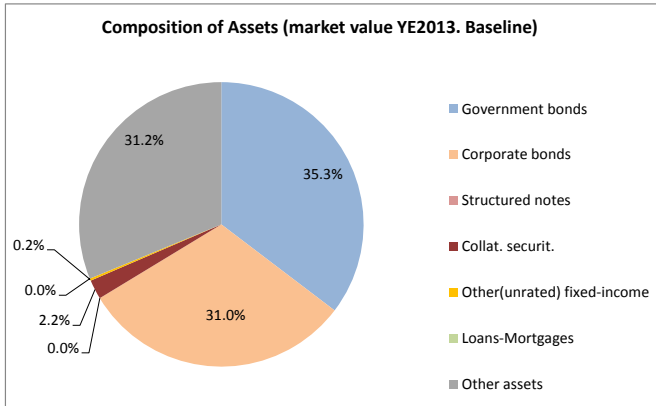Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
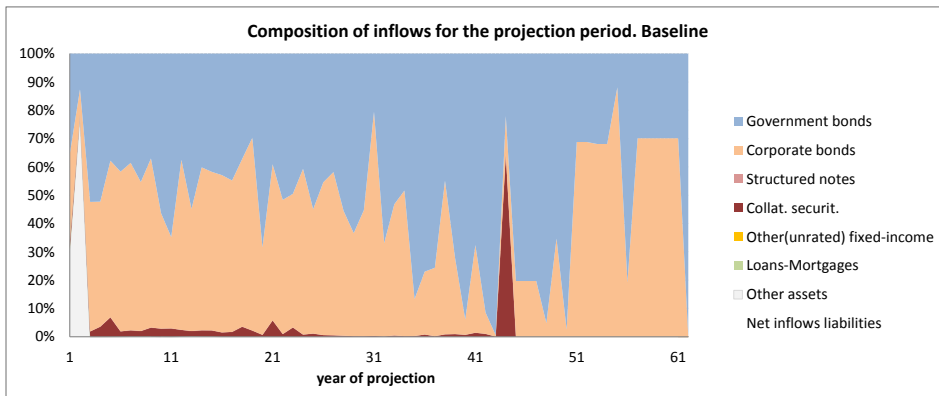
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Legend:
- BL Mismatch
- LYA Mismatch
- LYB Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Billions

Euro

LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

Billions

Euro

LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: HUNGARY
HU

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
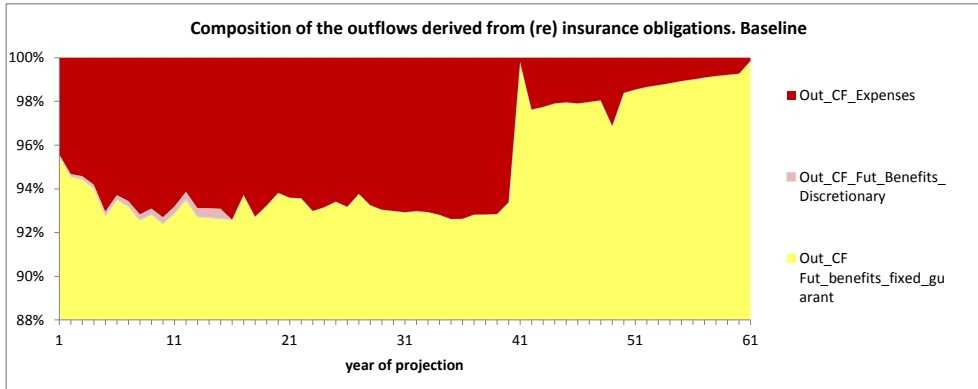
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

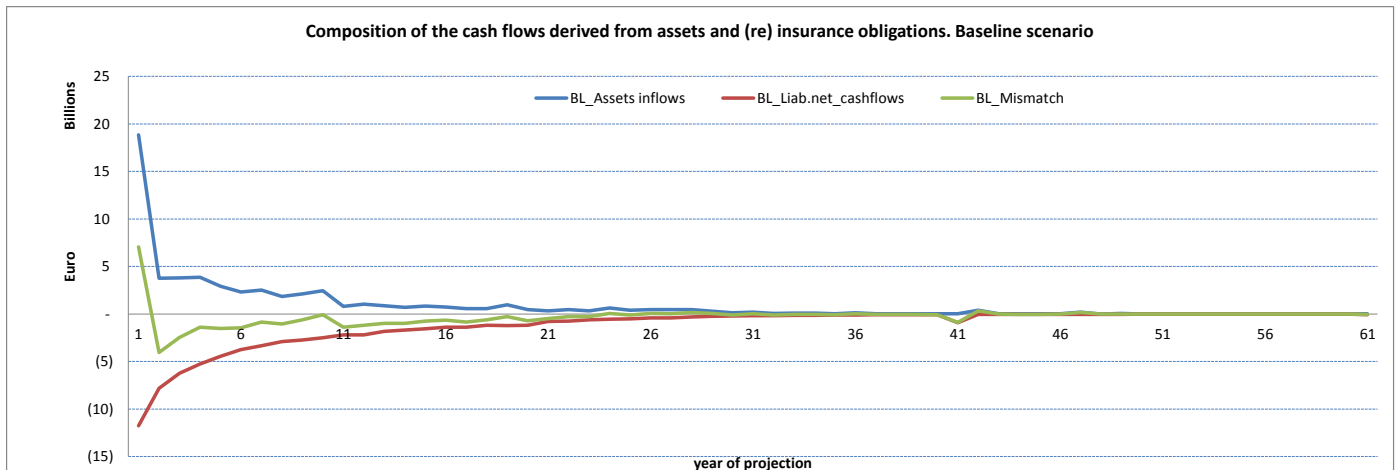(Below there are Figures showing the economic amounts).

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HUNGARY

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
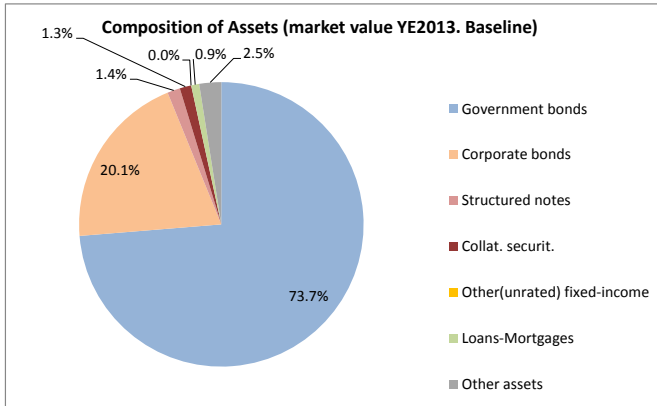Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
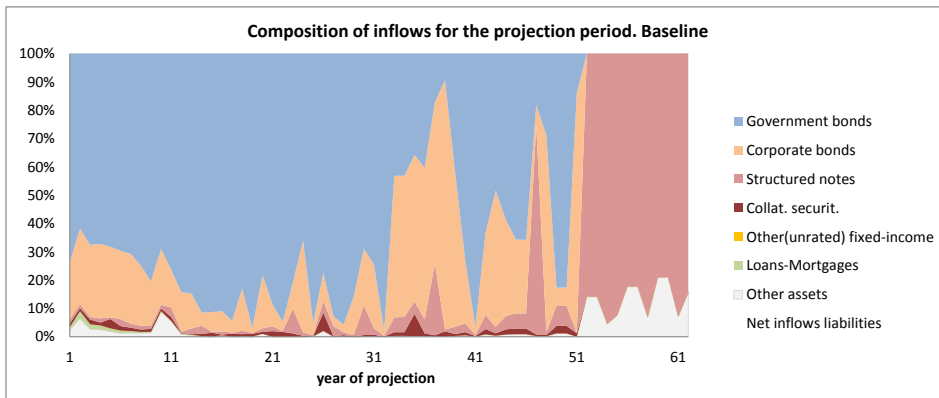
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows   — LYA_Liab.net_cashflows   — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows   — LYb_Liab.net_cashflows   — LYA_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: IRELAND
IE

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
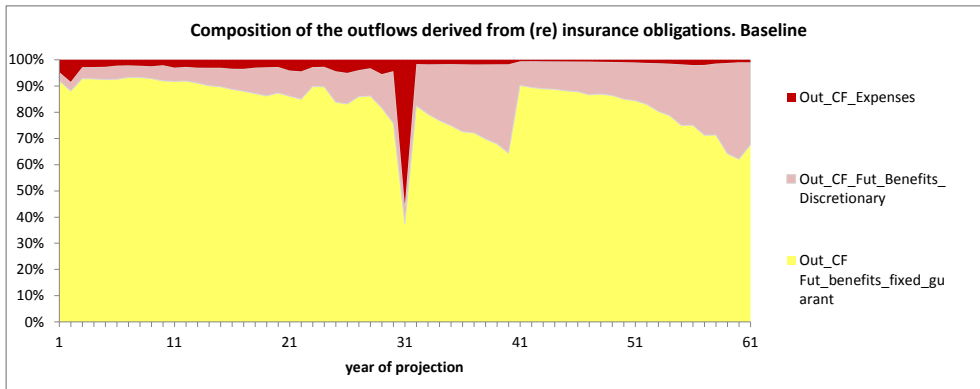
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

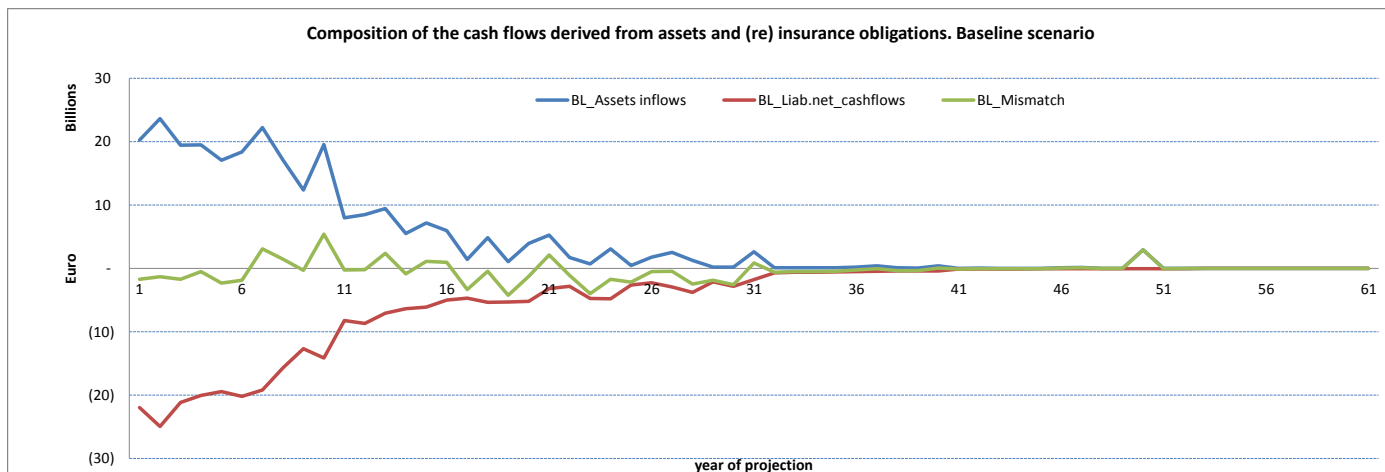(Below there are Figures showing the economic amounts).

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
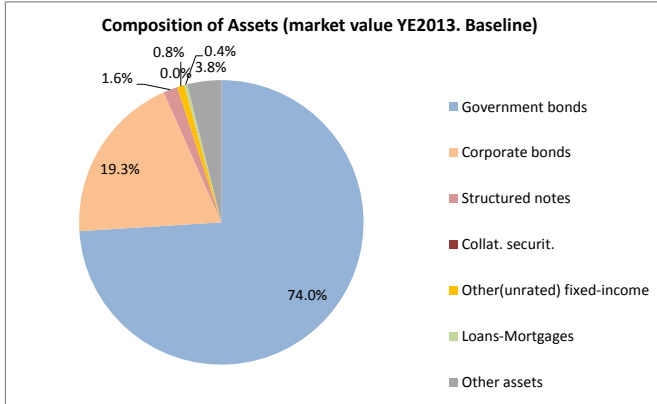Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
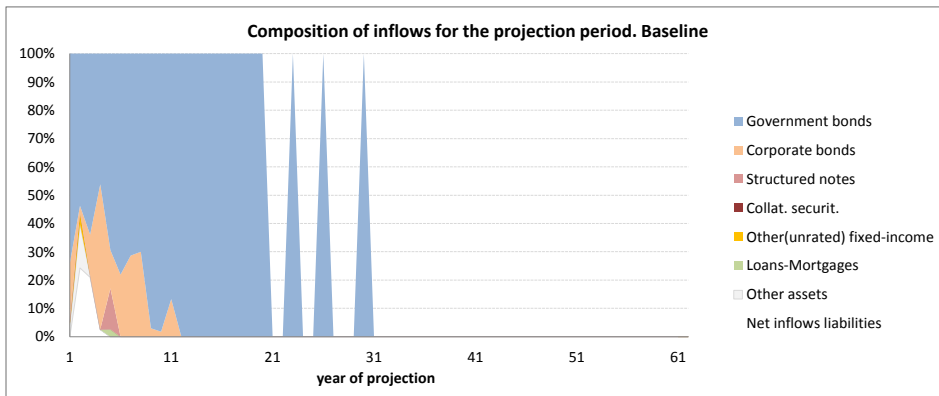
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

—— LYA_Assets inflows   —— LYA_Liab.net_cashflows   —— LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

—— LYb_Assets inflows   —— LYb_Liab.net_cashflows   —— LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: ITALY
IT

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds — 73.7%
- Corporate bonds — 20.1%
- Structured notes — 1.4%
- Collat. securit. — 1.3%
- Other(unrated) fixed-income — 0.0%
- Loans-Mortgages — 0.9%
- Other assets — 2.5%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
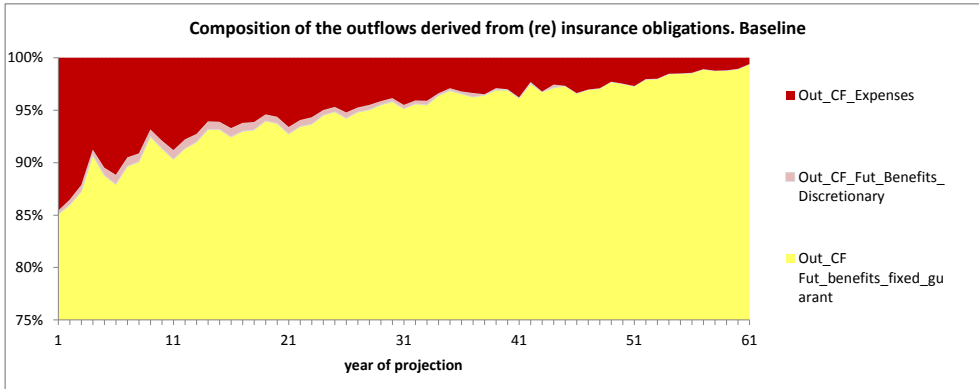
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life — 6.4%
- Net CF Health — 3.0%
- Net CF Life with PB — 90.3%
- Net CF Life no PB — 0.3%
- Net CF U/I linked — 0.0%
- Net outflows assets — 0.0%

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant — 91.16%
- Out_CF_Fut_Benefits_Discretionary — 5.34%
- Out_CF_Expenses — 3.51%

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

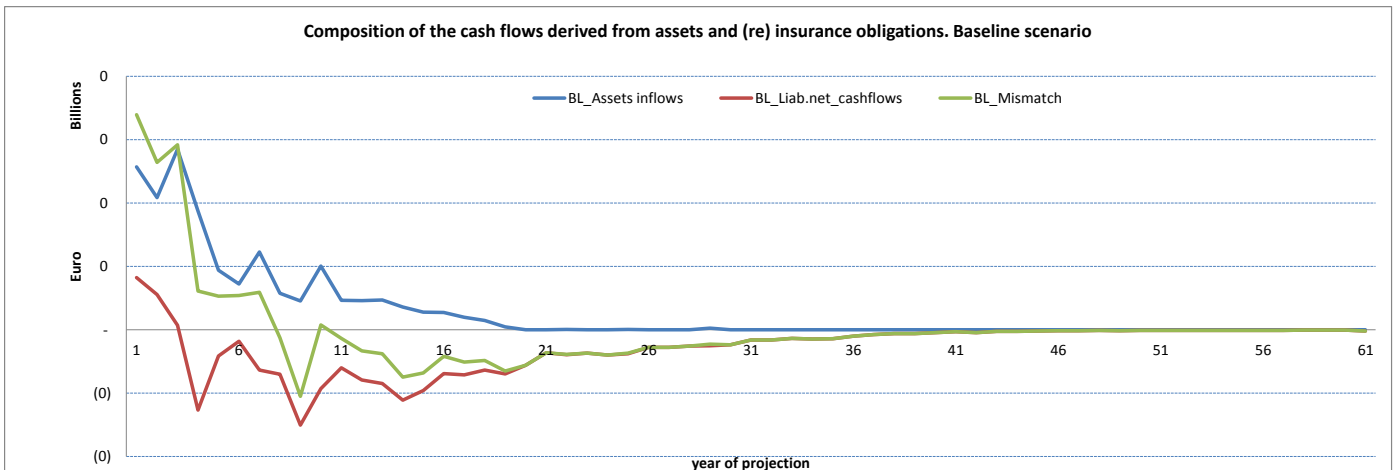(Below there are Figures showing the economic amounts).

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ITALY

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

EIOPA stress Test
Annex IV

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

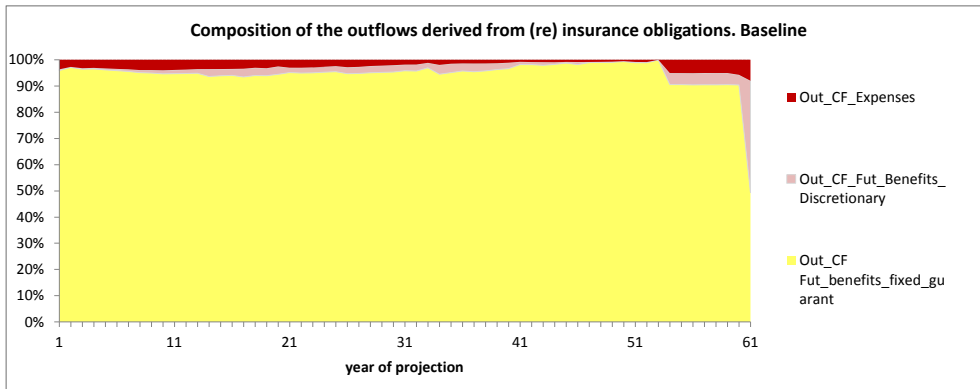**Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario**

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
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    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: LITHUANIA
LT

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

74.0%, 19.3%, 1.6%, 0.0%, 0.8%, 0.0%, 0.4%, 3.8%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

0.0%, 1.7%, 0.0%, 39.8%, 58.5%, 0.0%

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

0.49%, 9.58%, 89.93%

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

(Below there are Figures showing the economic amounts).

LITHUANIA

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
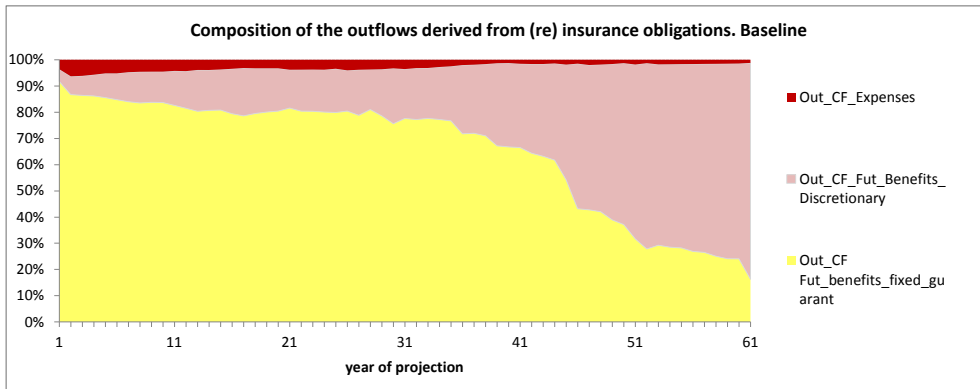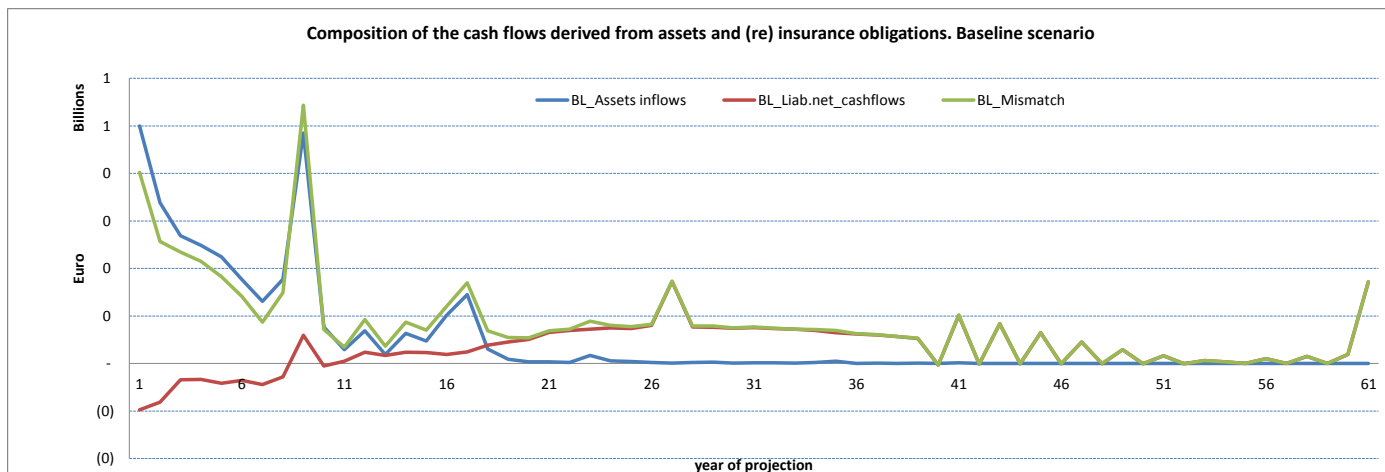 - either the expected cash outflows of very short term non-life or health business,
  - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

- BL_Assets inflows
- BL_Liab.net_cashflows
- BL_Mismatch

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
  - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
  - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
      (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
      these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

- BL Mismatch
- LYA Mismatch
- LYB Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: LUXEMBURG
LU

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
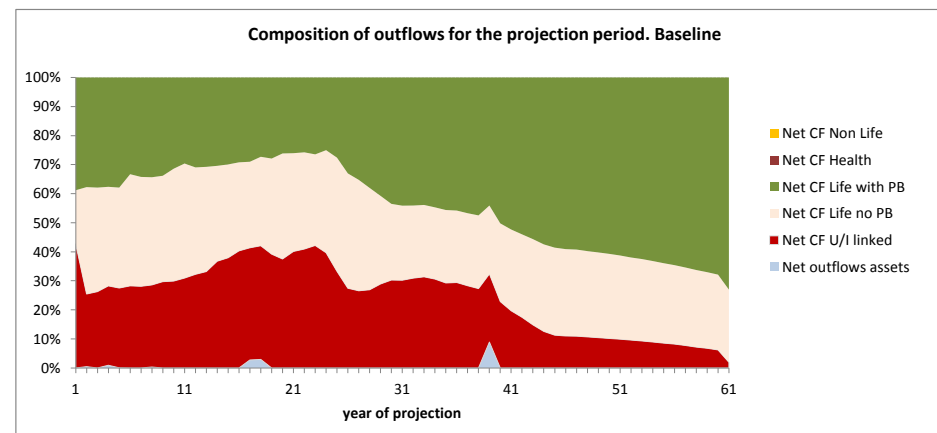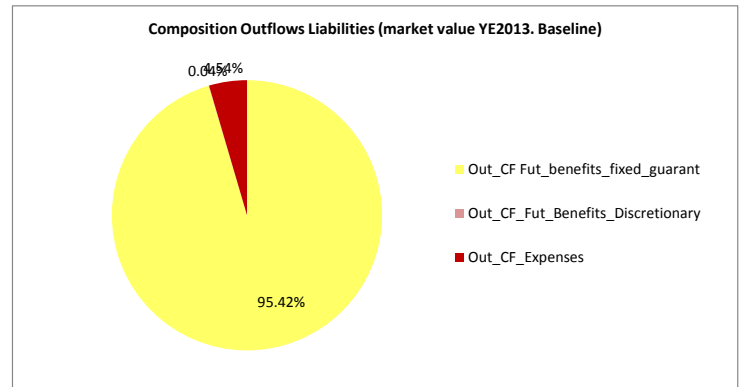- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

(Below there are Figures showing the economic amounts).

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LUXEMBURG

Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

year of projection

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
  - either the expected cash outflows of very short term non-life or health business,
  - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

Legend: BL_Assets inflows — BL_Liab.net_cashflows — BL_Mismatch

year of projection

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
  - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
  - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
      (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
      these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Legend: BL Mismatch — LYA Mismatch — LYB Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: MALTA
MT

EIOPA stress Test
Annex IV

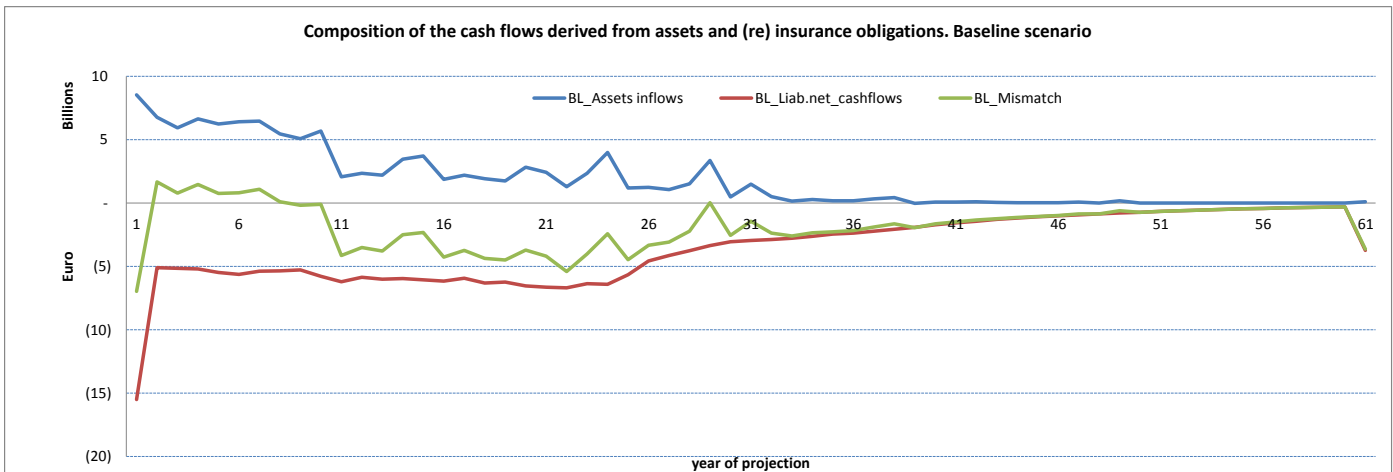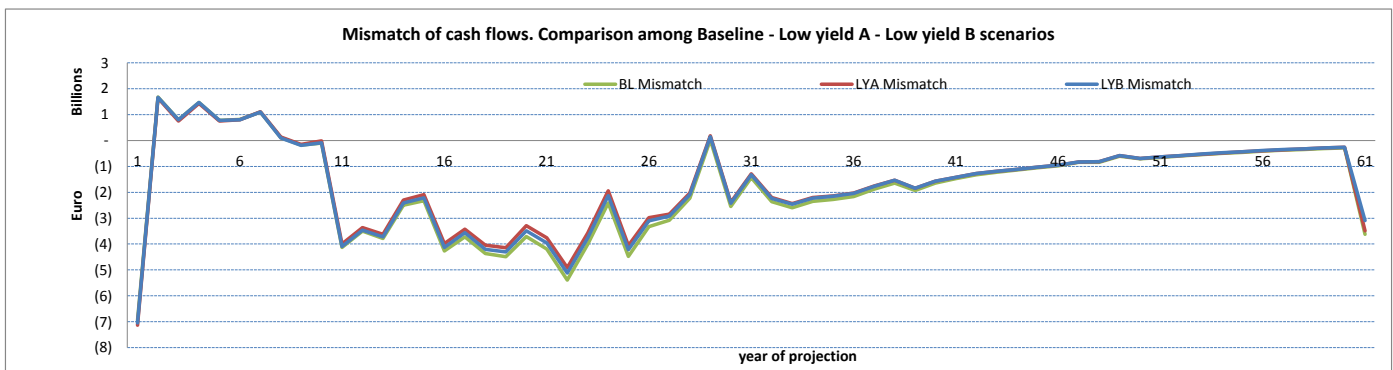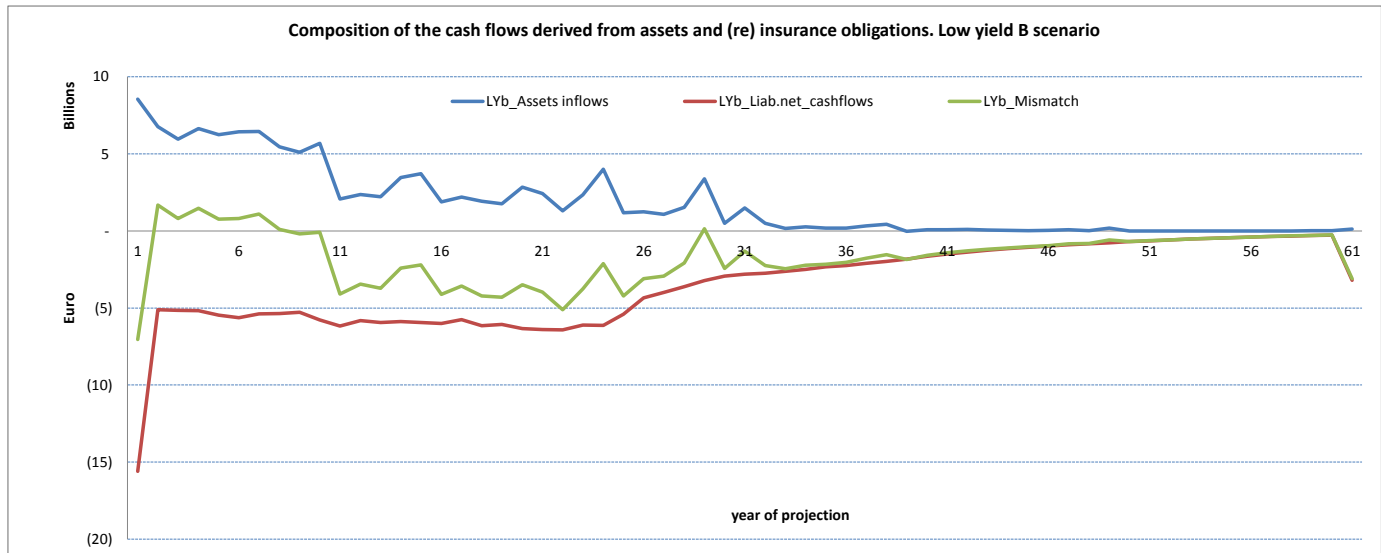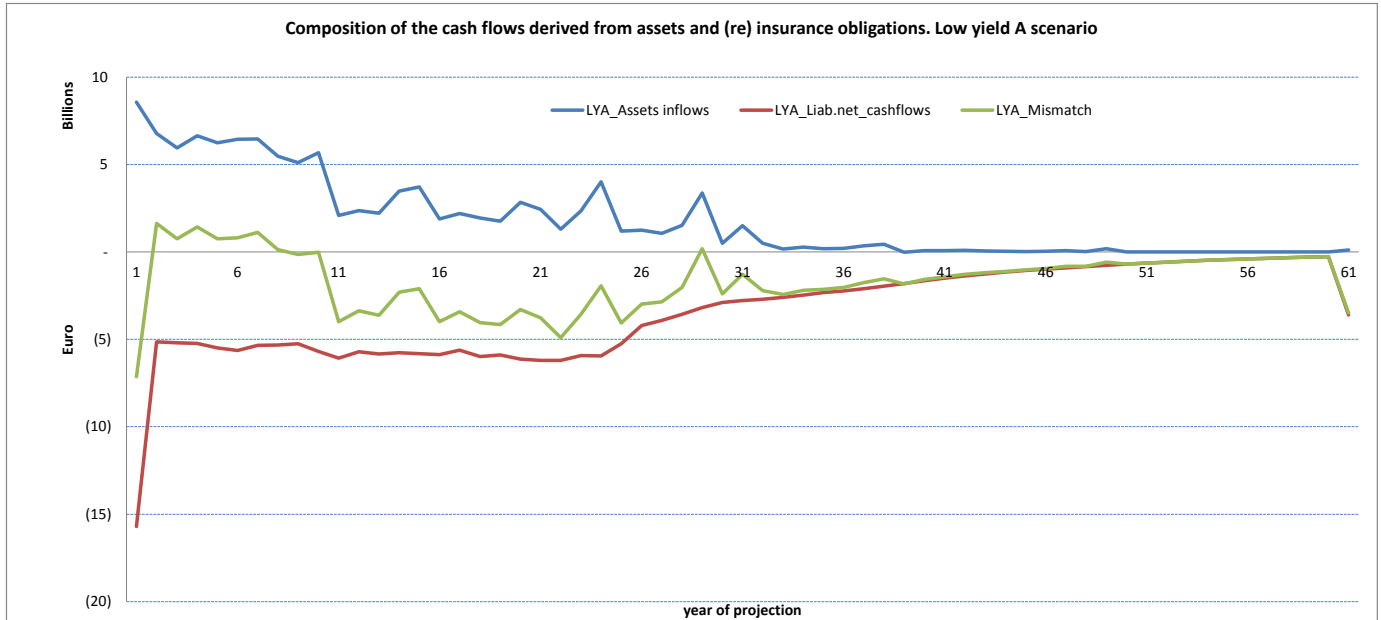**Composition of Assets (market value YE2013. Baseline)**

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives, equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
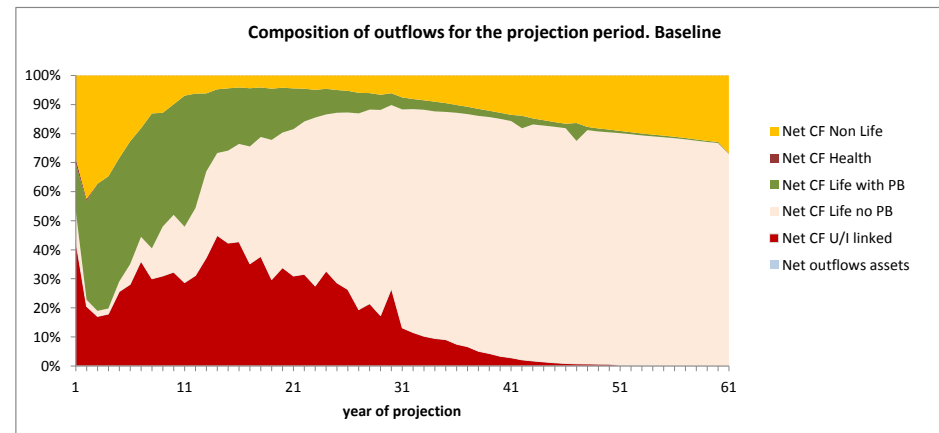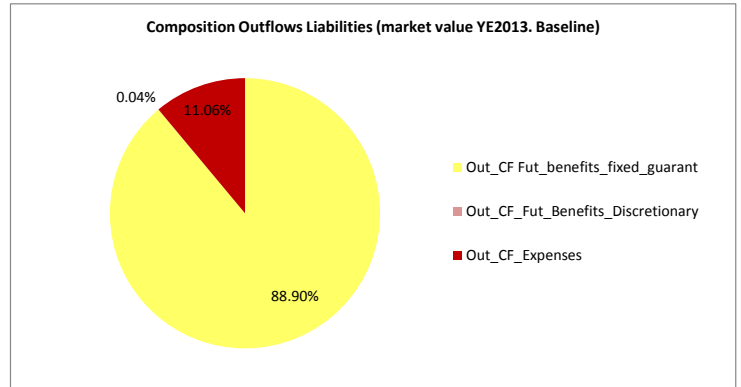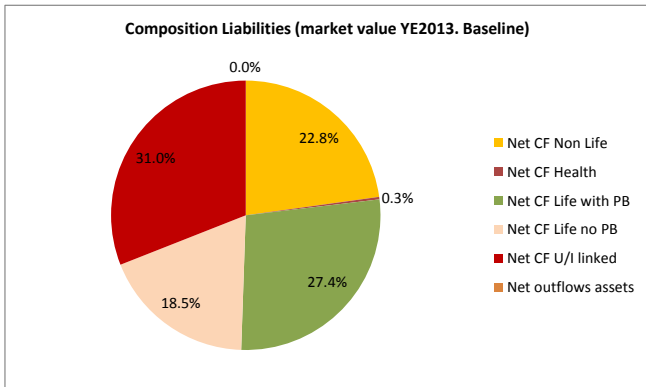- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.
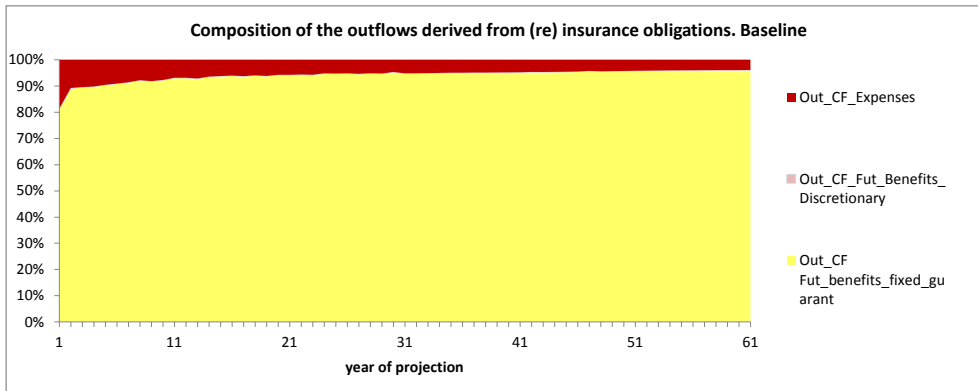
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

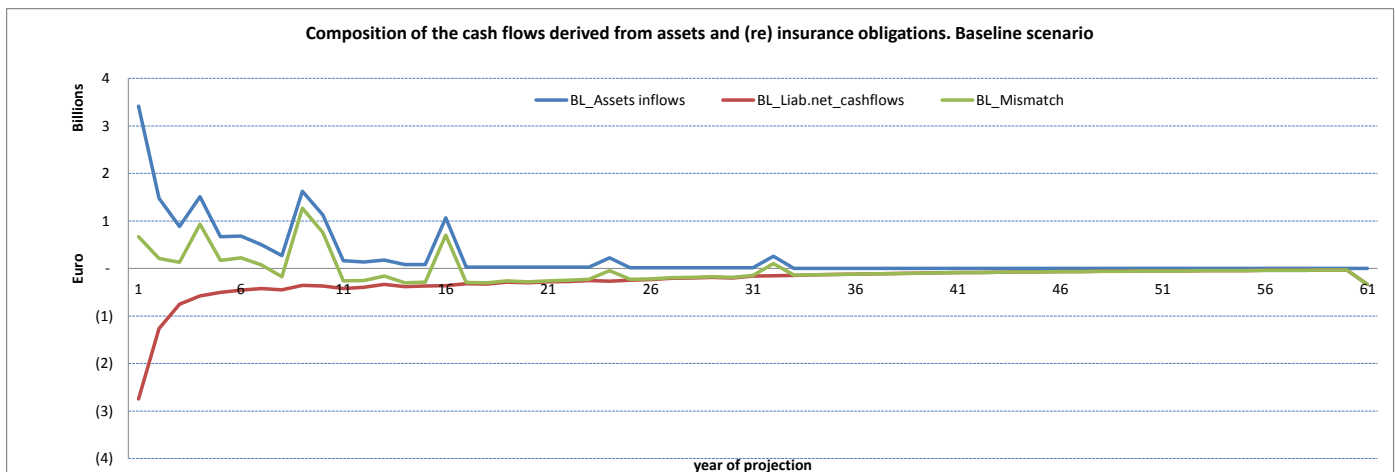(Below there are Figures showing the economic amounts).

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario
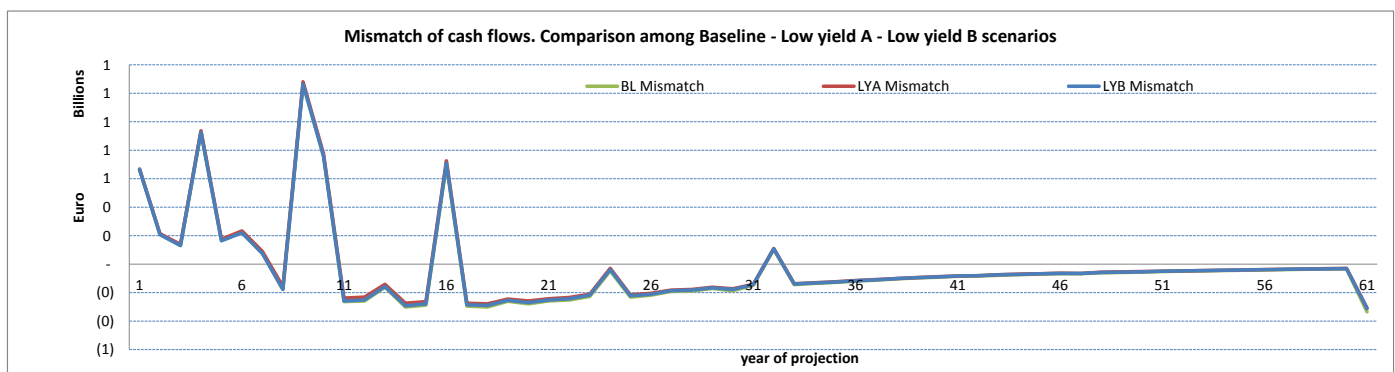

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
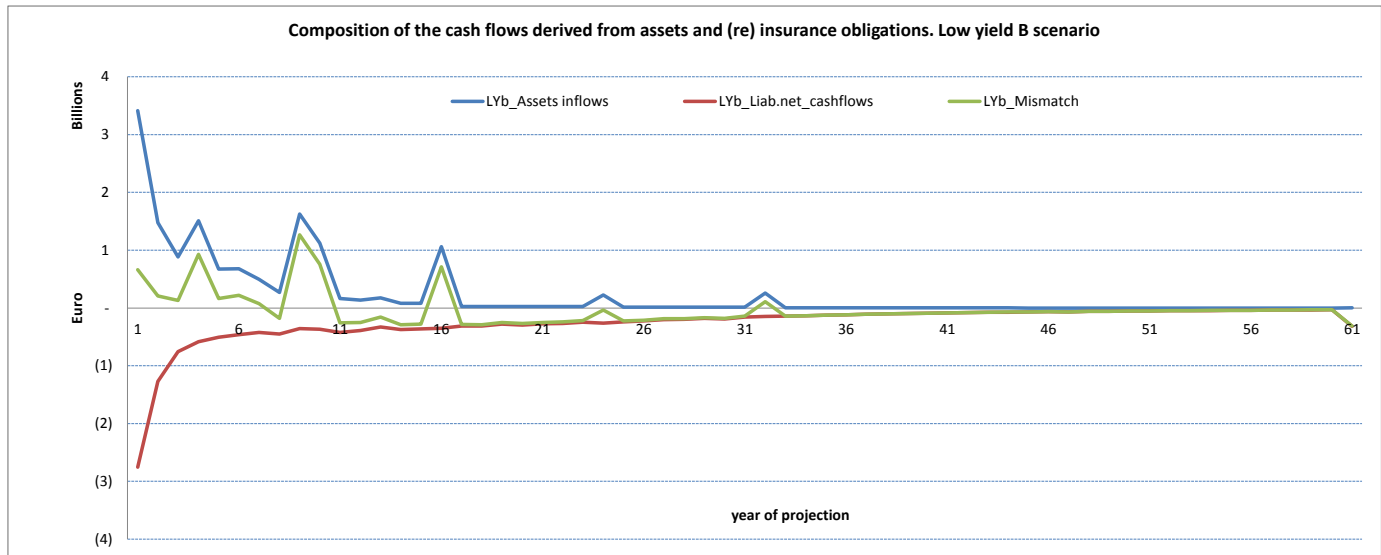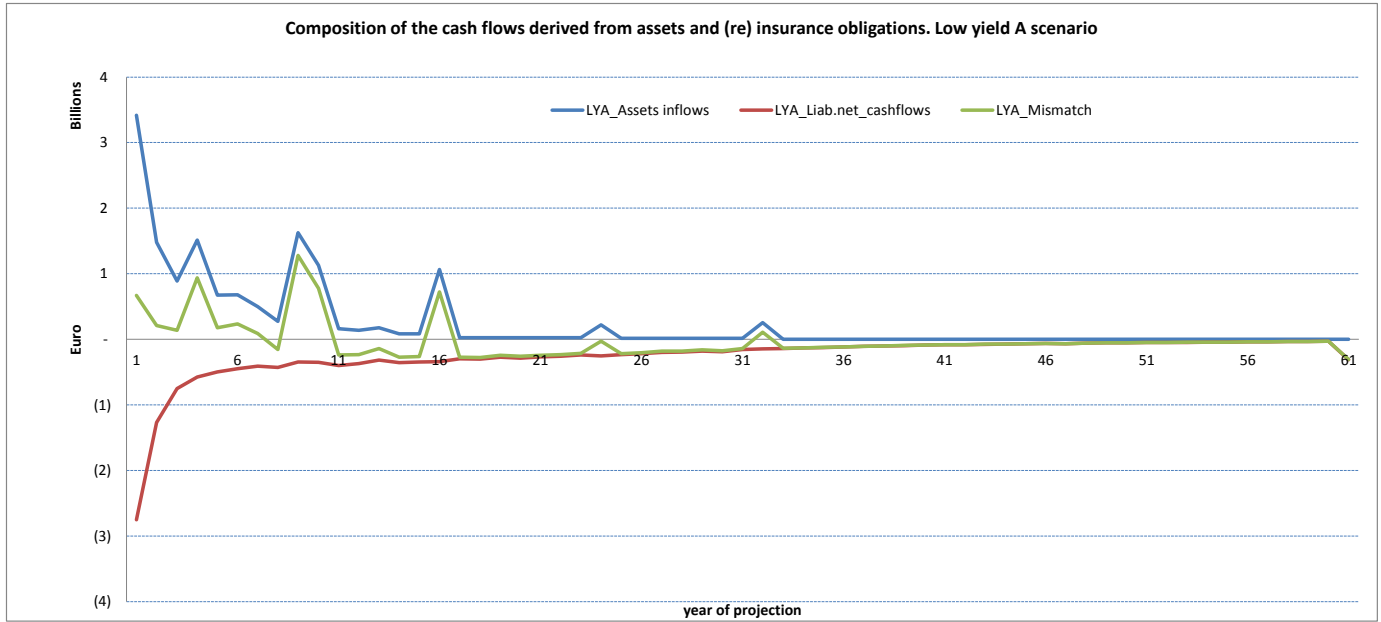Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: NETHERLANDS
NL

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
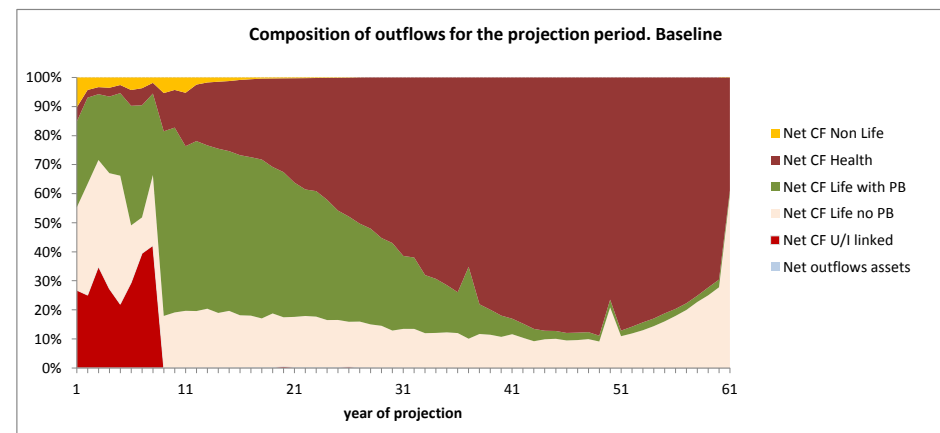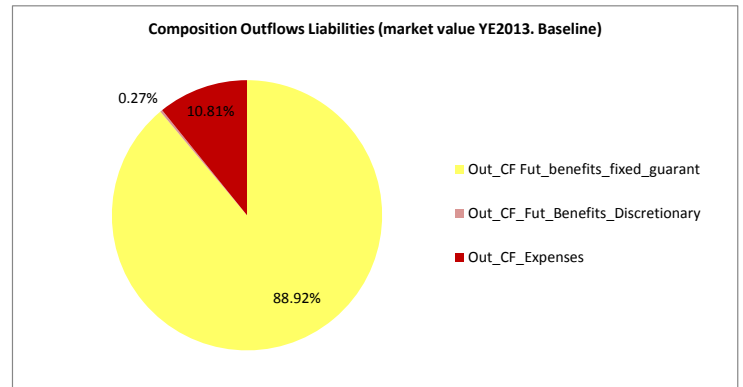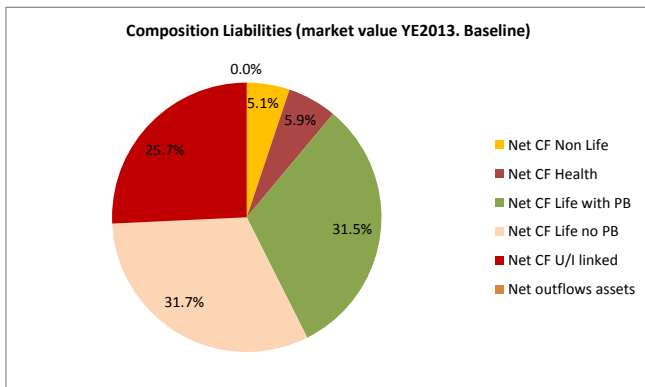- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.
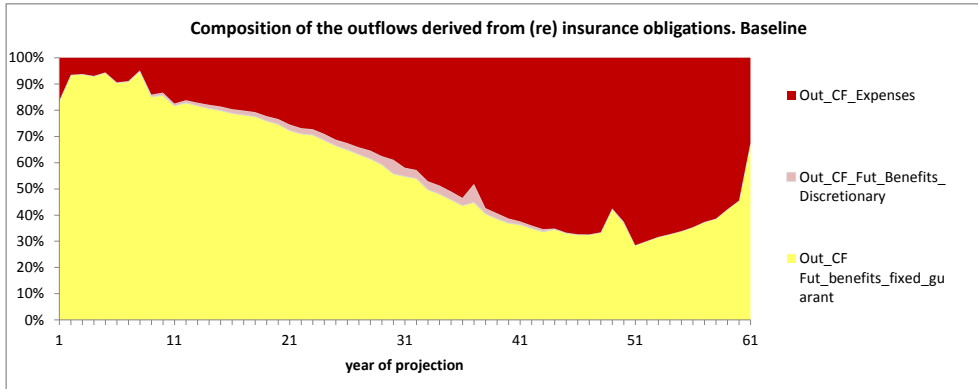
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

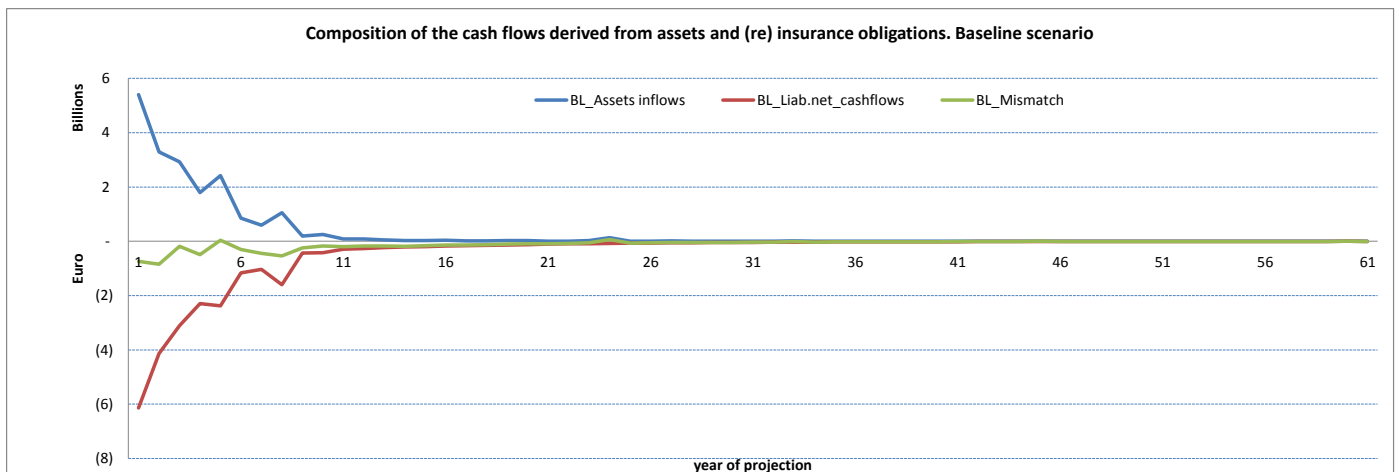(Below there are Figures showing the economic amounts).

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NETHERLANDS

Composition of the outflows derived from (re) insurance obligations. Baseline

Legend:
- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).

In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

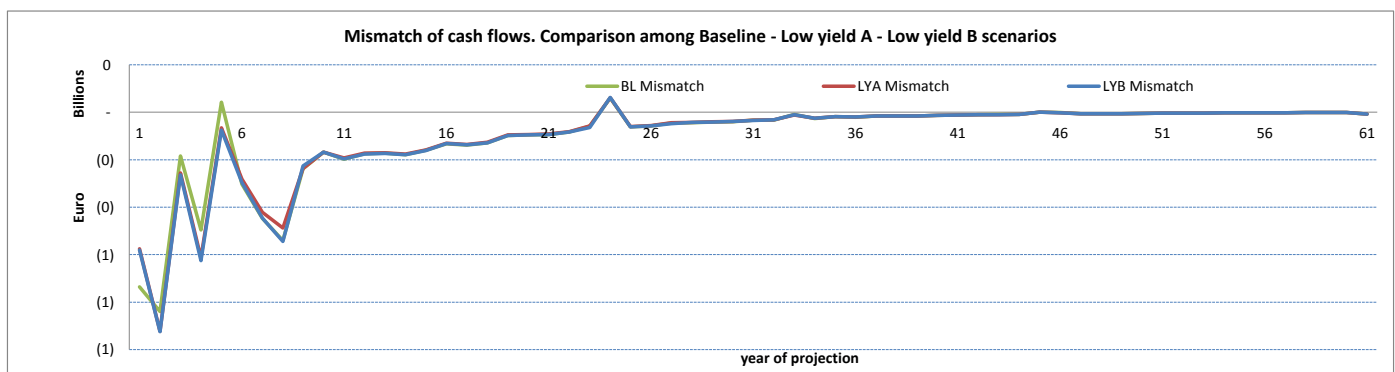Legend: BL_Assets inflows — BL_Liab.net_cashflows — BL_Mismatch

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
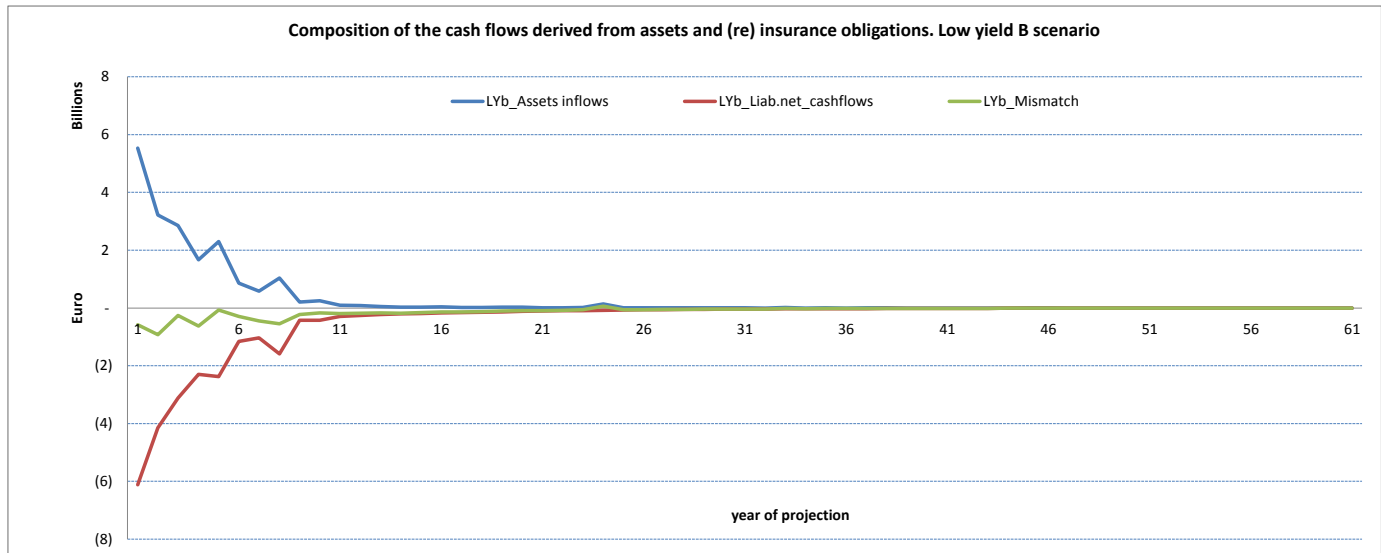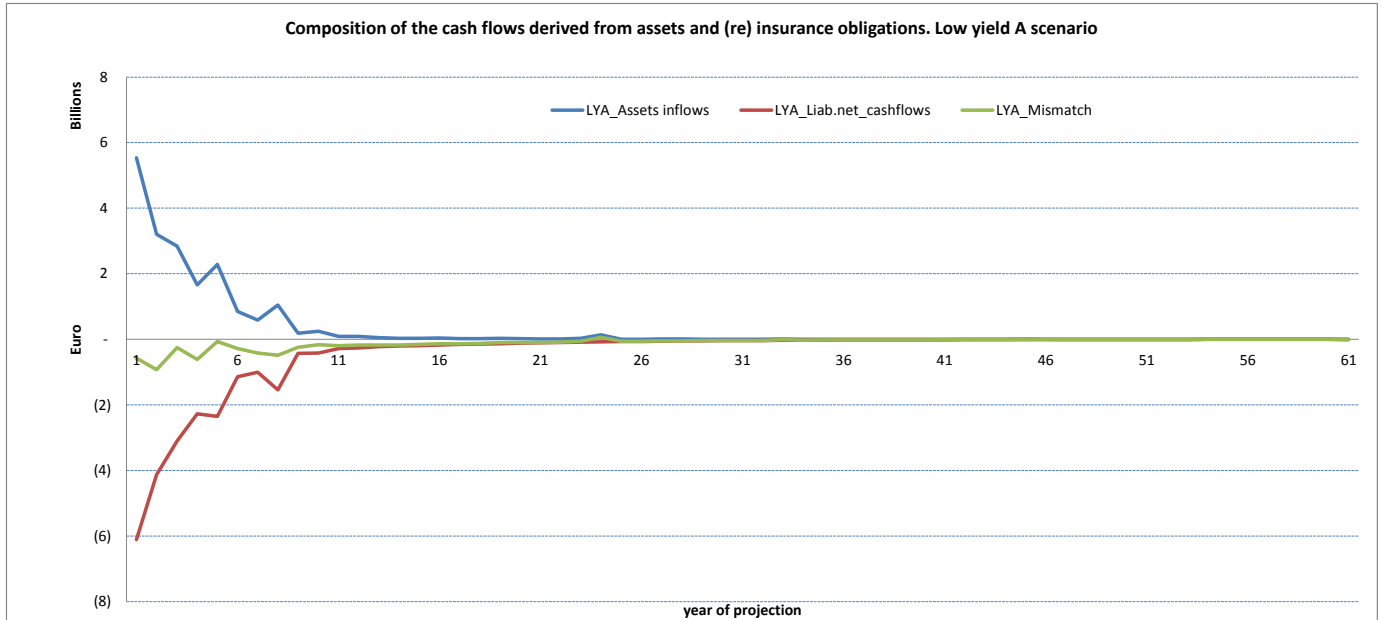
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
  (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.

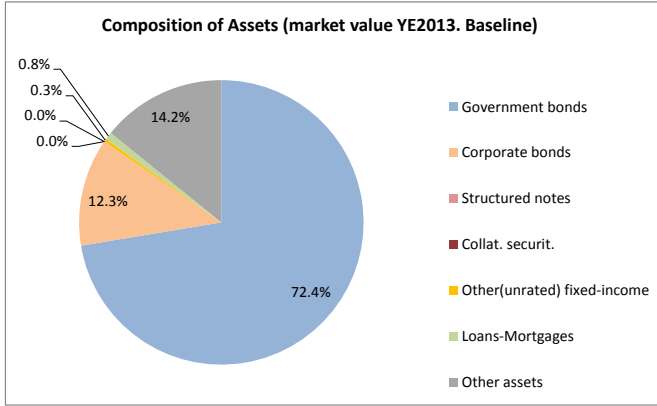Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
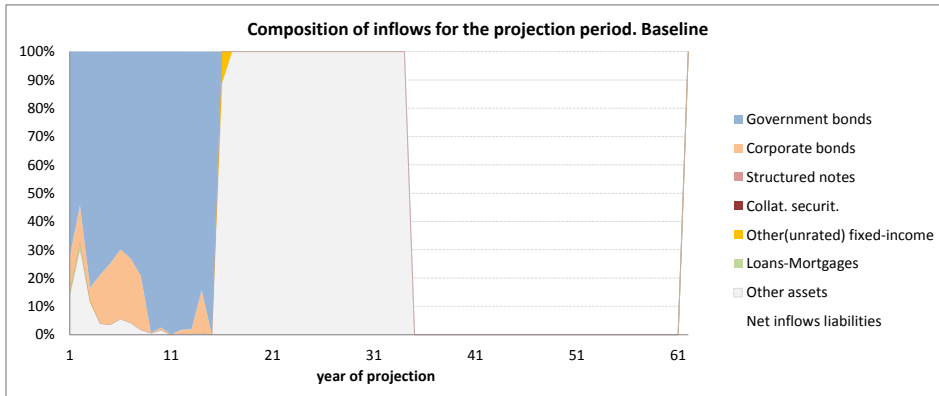
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Legend: BL Mismatch — LYA Mismatch — LYB Mismatch

EIOPA stress Test
Annex IV

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows   — LYA_Liab.net_cashflows   — LYA_Mismatch

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows   — LYb_Liab.net_cashflows   — LYb_Mismatch

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: POLAND
PL

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
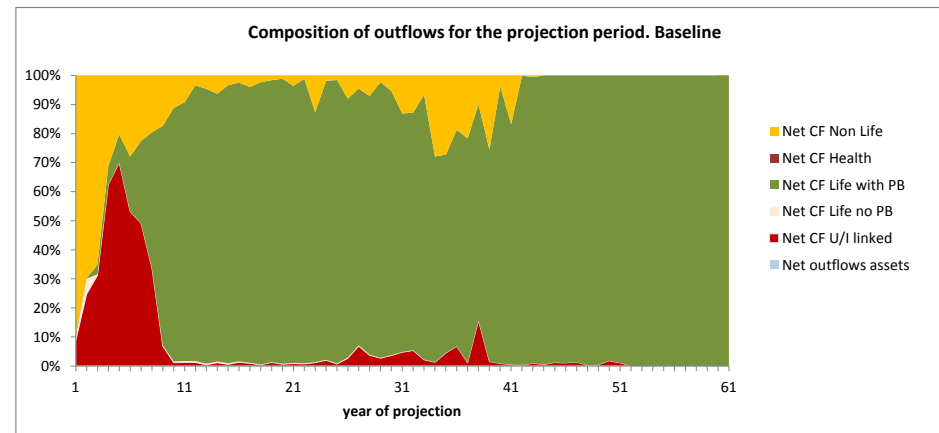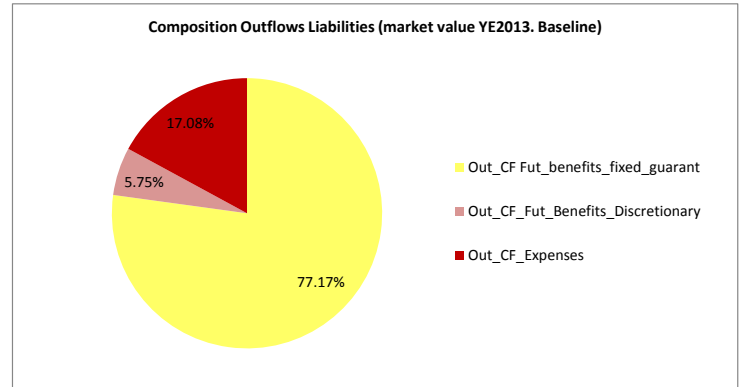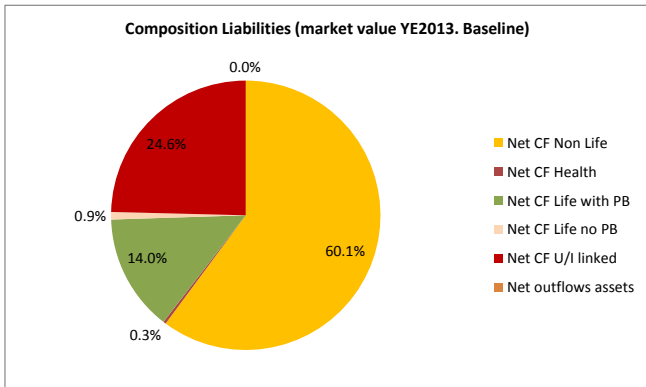- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.
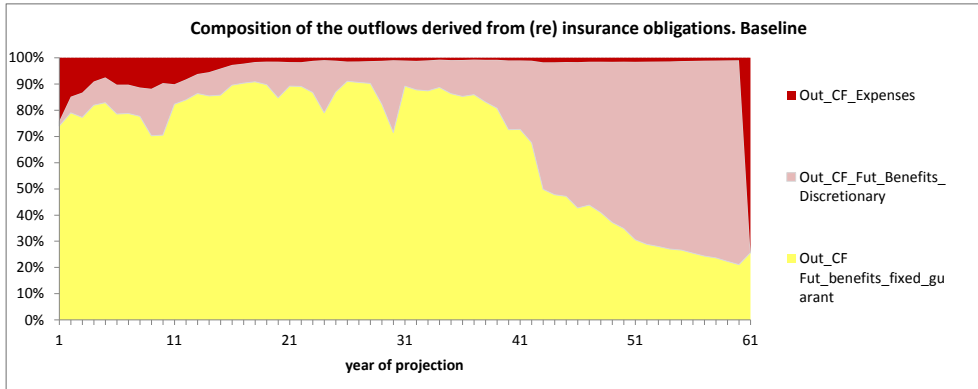
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

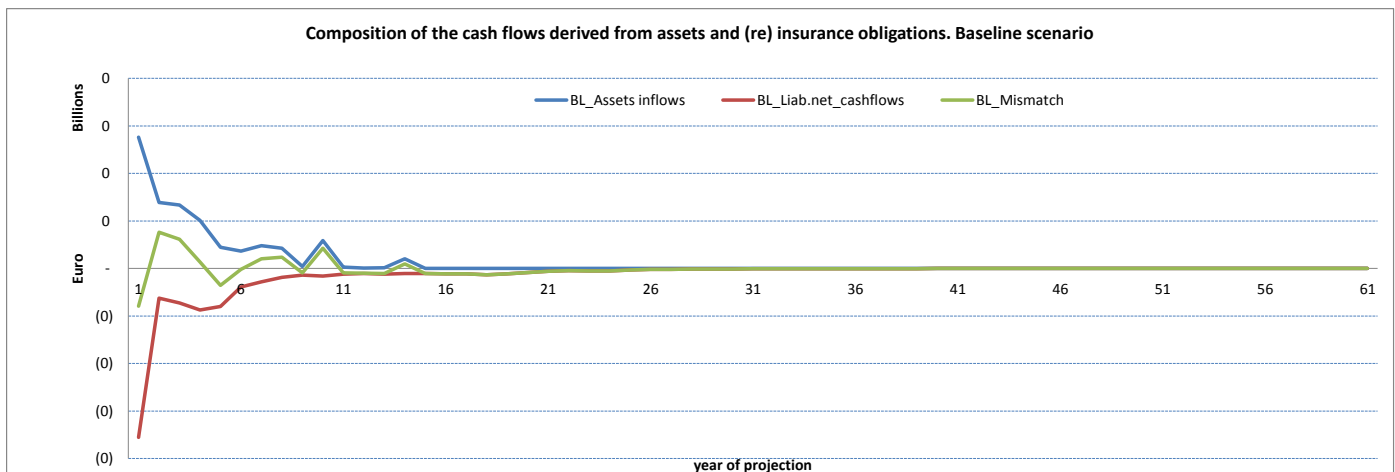(Below there are Figures showing the economic amounts).

POLAND

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

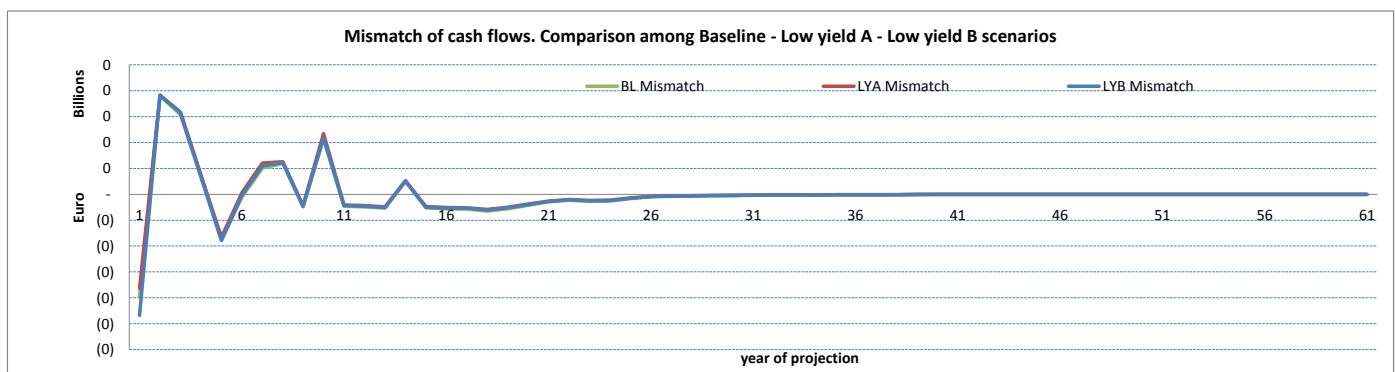**Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario**

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
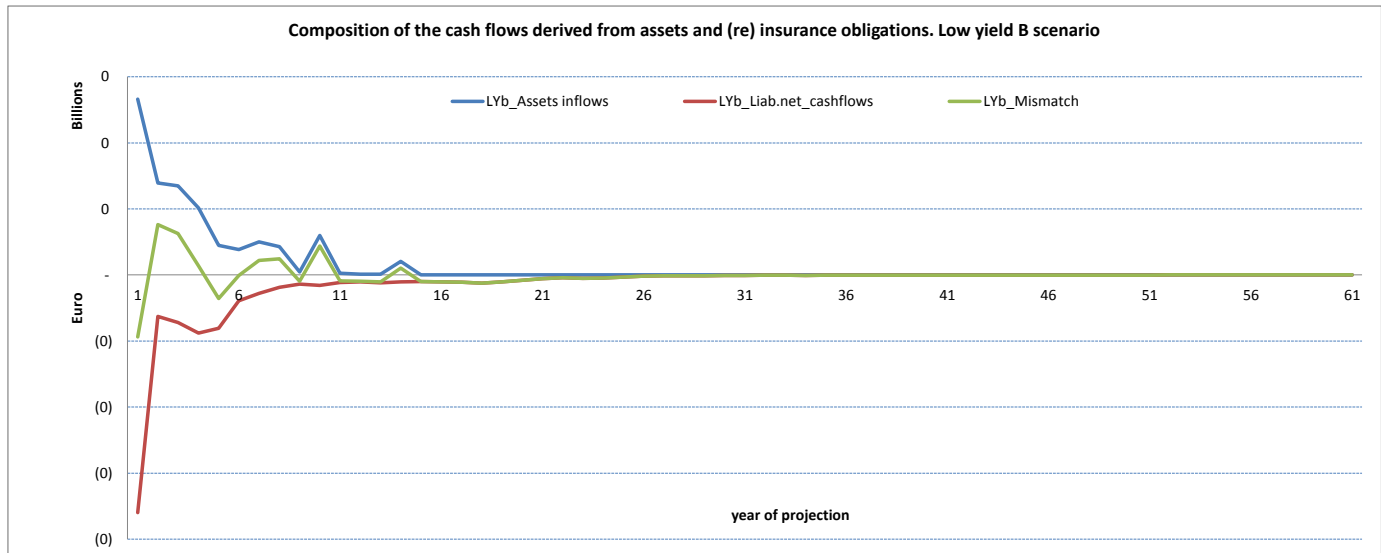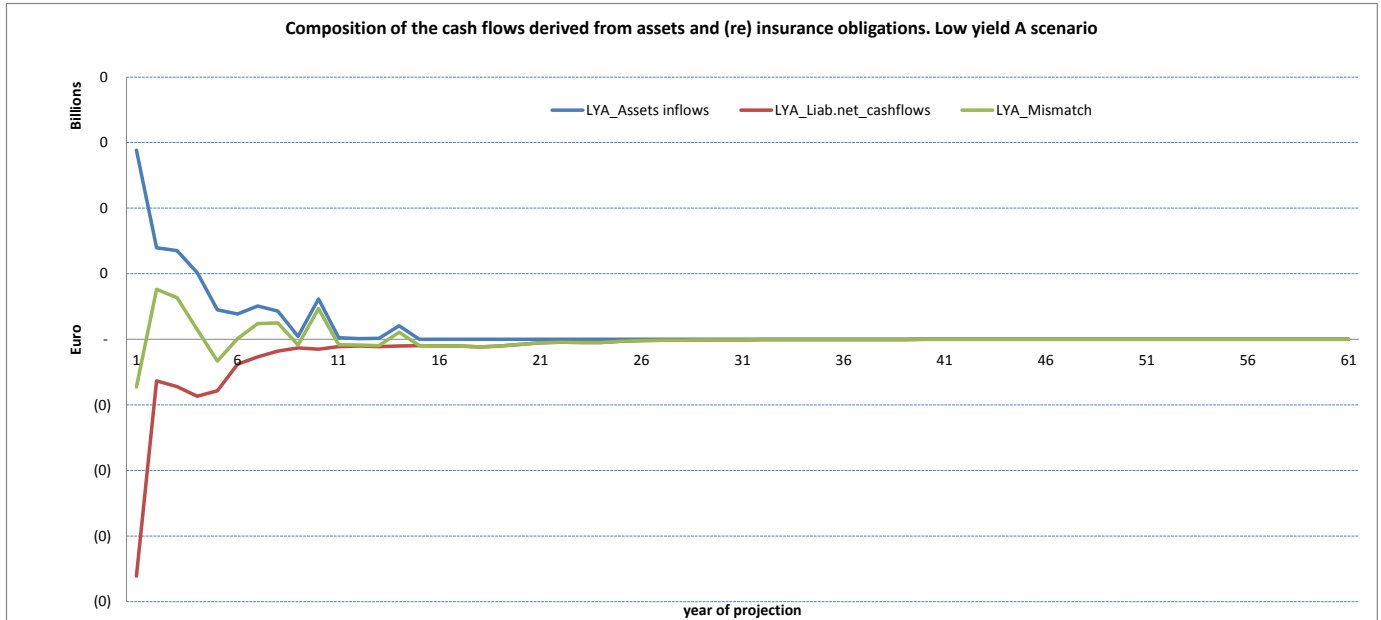Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
(in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
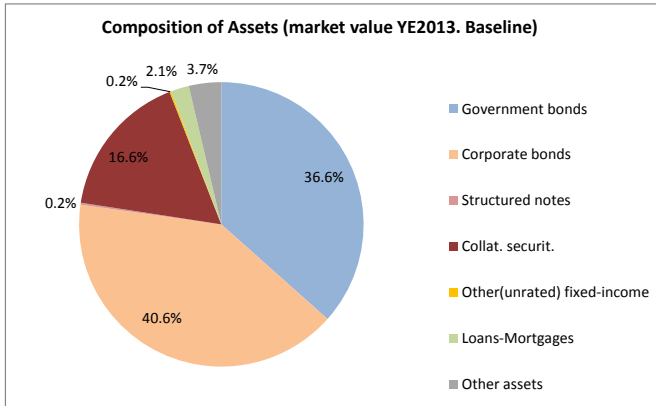Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
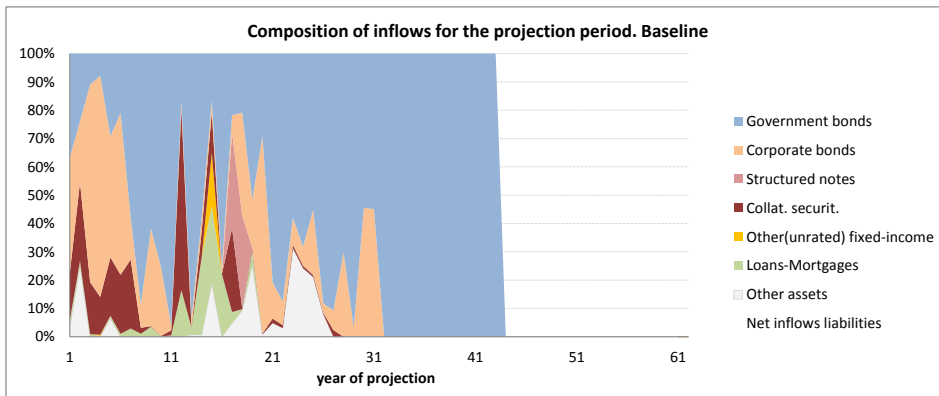
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Legend: LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

Legend: LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: PORTUGAL
PT

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
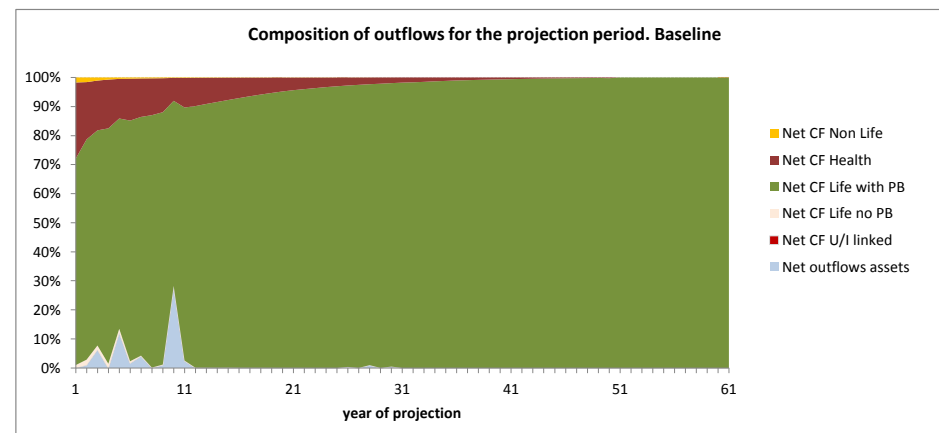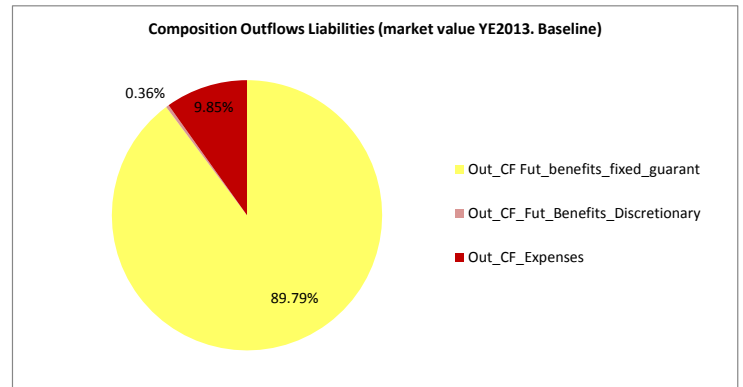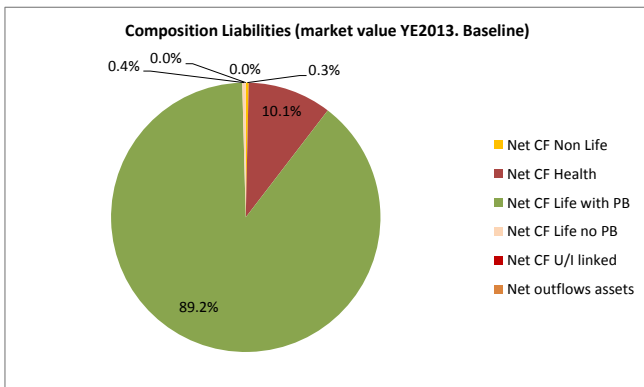- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
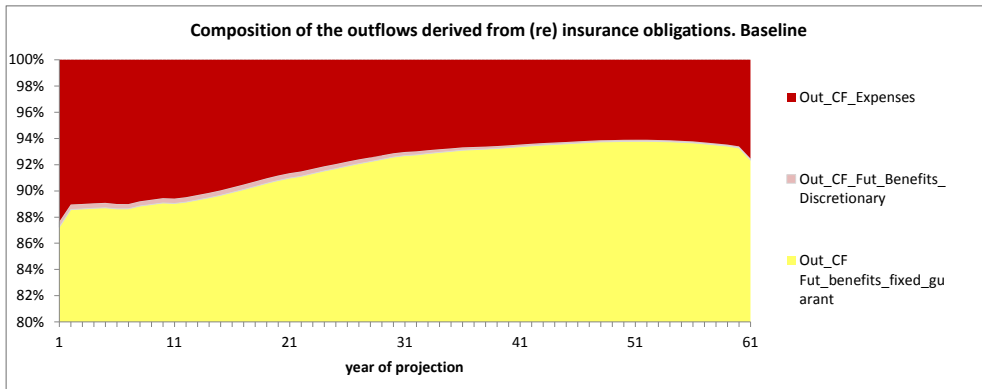
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

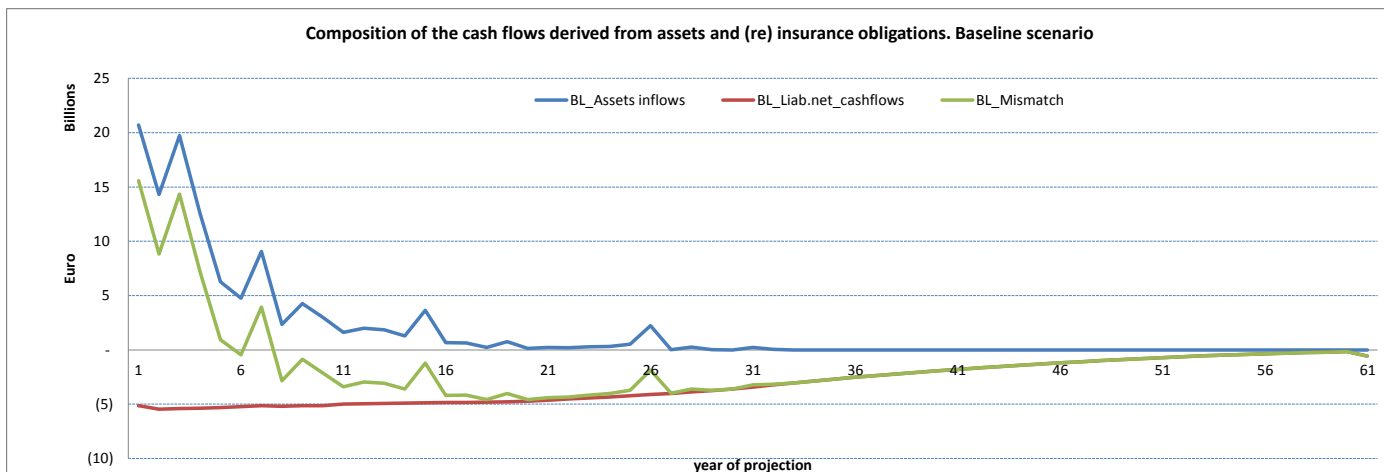(Below there are Figures showing the economic amounts).

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario
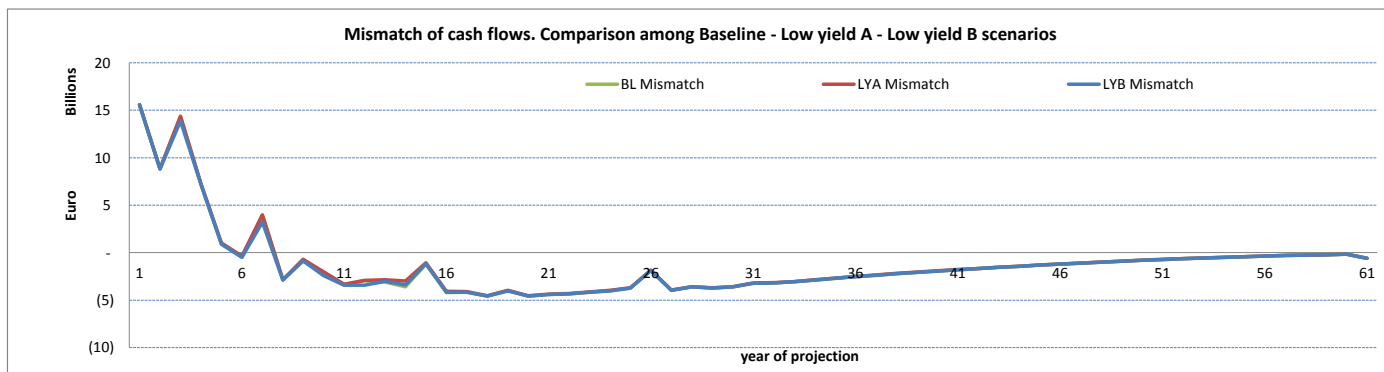

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
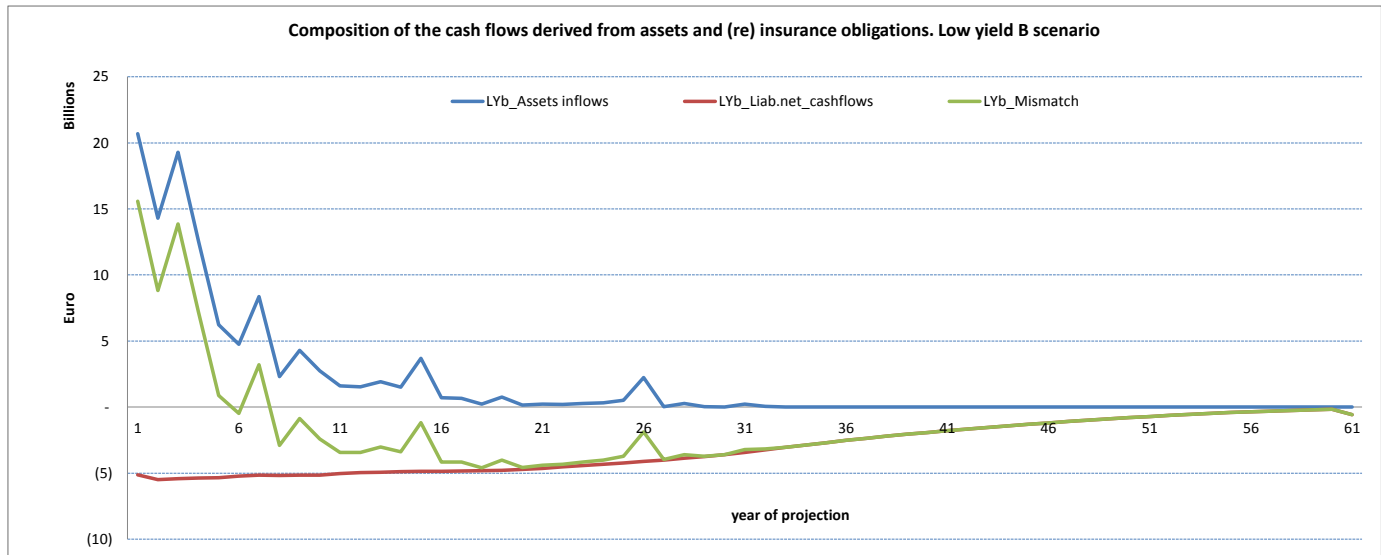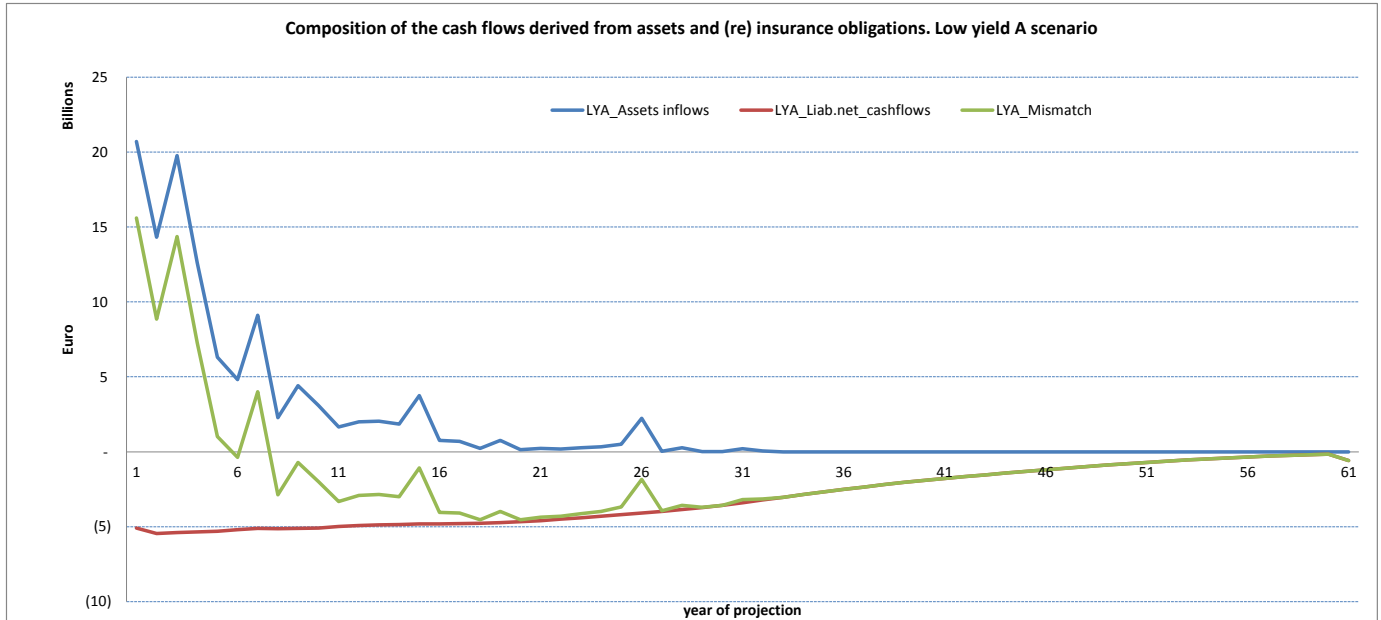Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
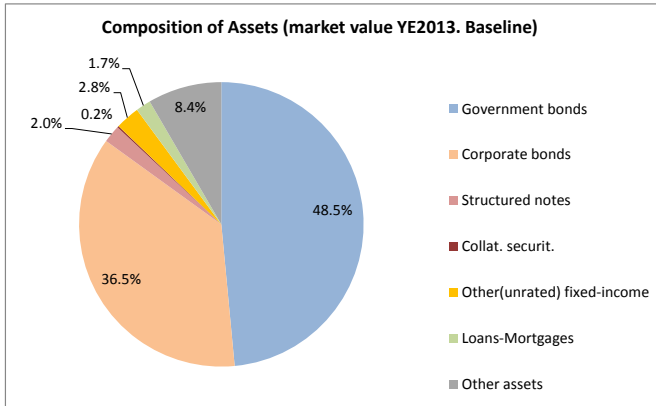Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
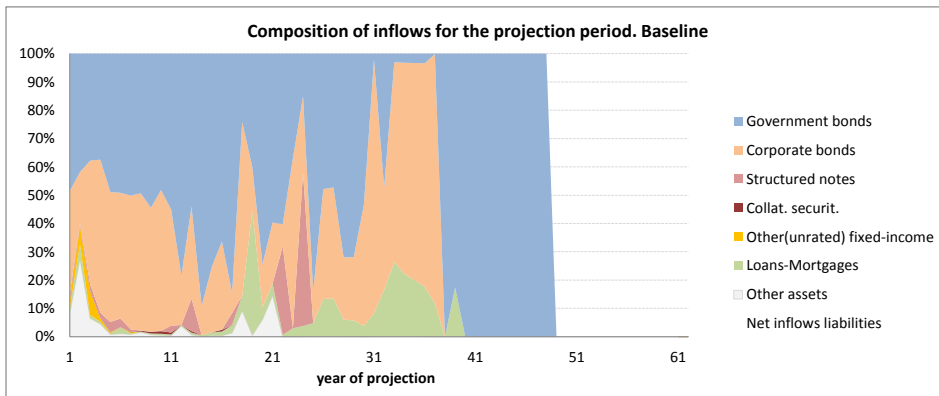
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows — LYA_Liab.net_cashflows — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows — LYb_Liab.net_cashflows — LYb_Mismatch

year of projection

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: ROMANIA
RO

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- 0.8%
- 0.3%
- 0.0%
- 0.0%
- 14.2%
- 12.3%
- 72.4%

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
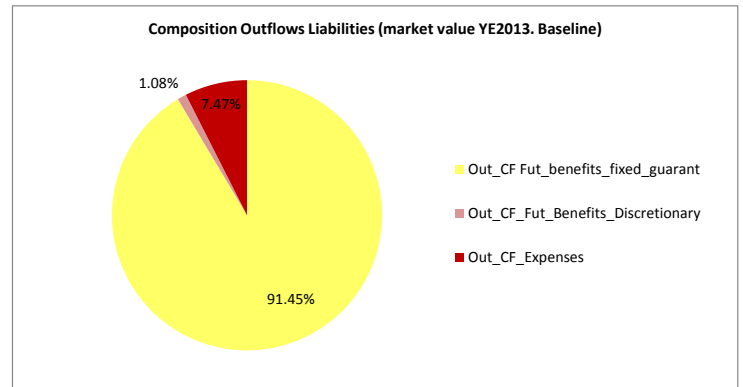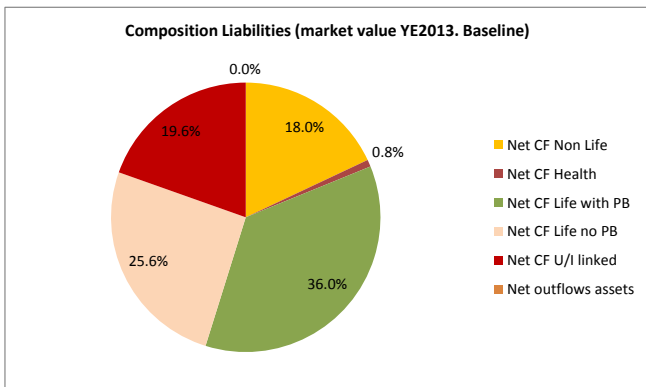- Net inflows liabilities

year of projection

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
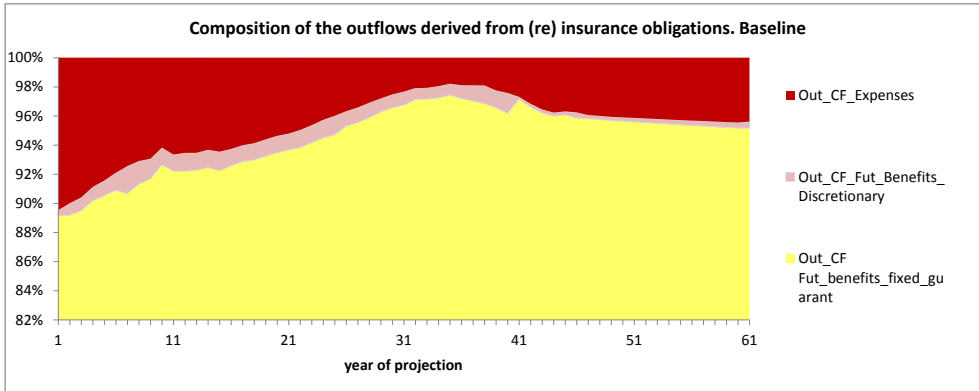
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- 0.0%
- 24.6%
- 0.9%
- 14.0%
- 0.3%
- 60.1%

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- 17.08%
- 5.75%
- 77.17%

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

year of projection

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

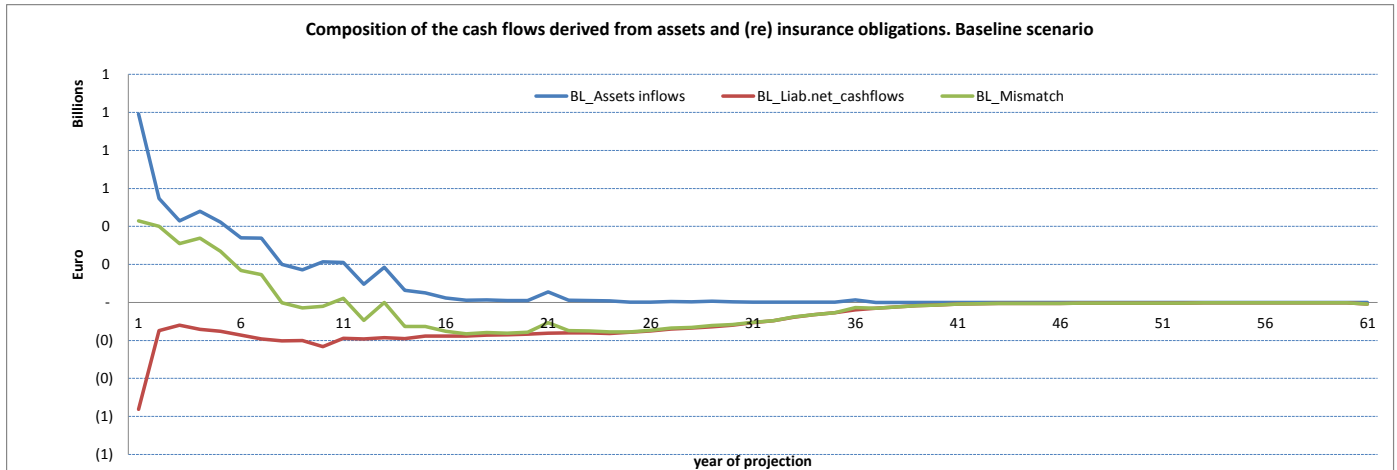(Below there are Figures showing the economic amounts).

EIOPA stress Test
Annex IV

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
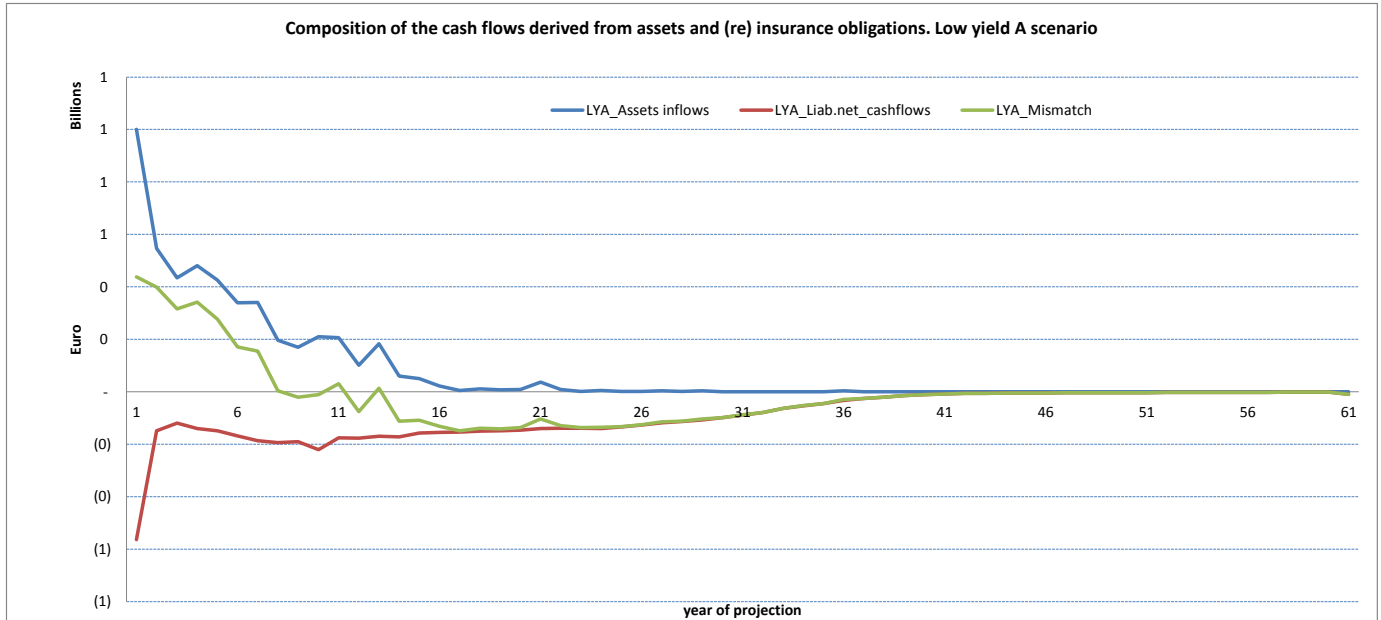Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
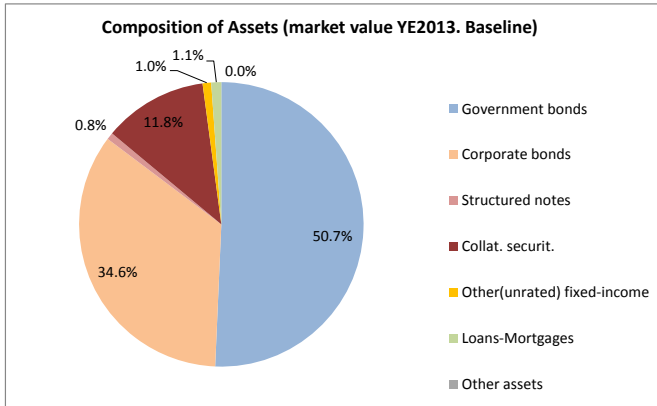Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.
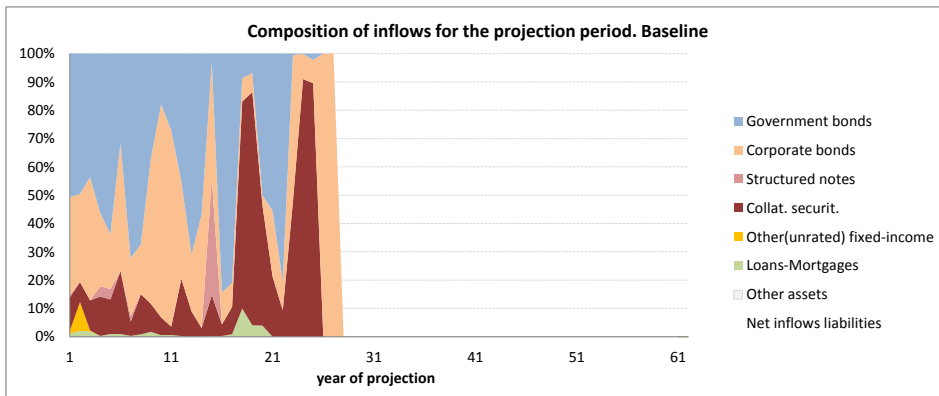
Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: SWEDEN
SE

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
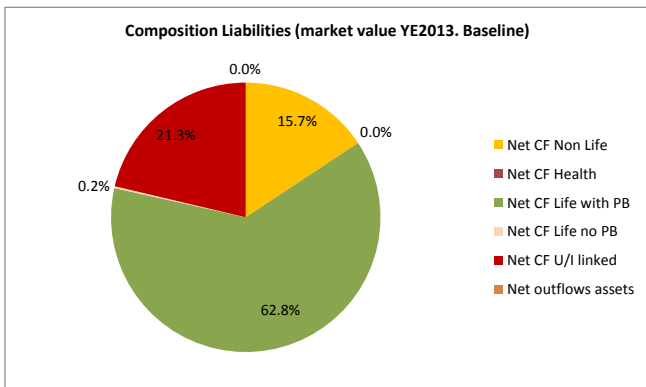- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.
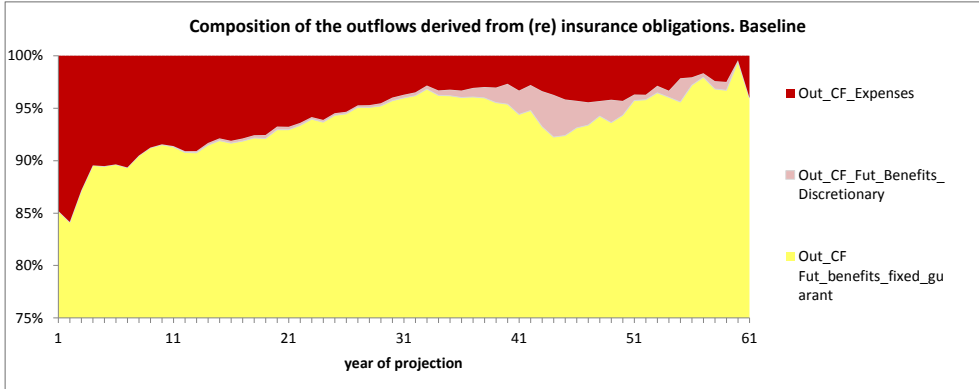
It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.
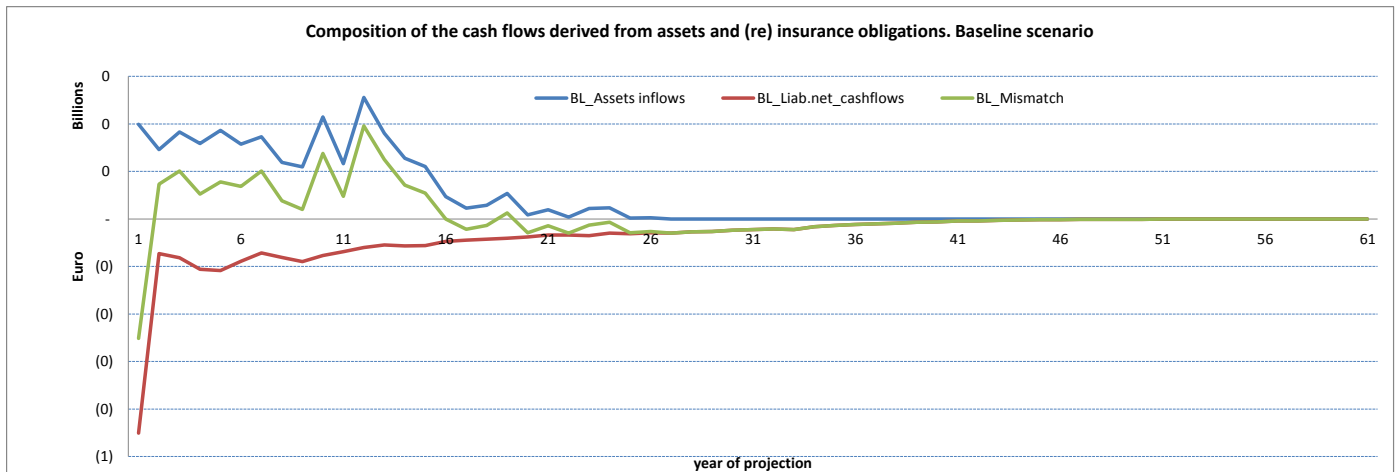
(Below there are Figures showing the economic amounts).

SWEDEN

Composition of the outflows derived from (re) insurance obligations. Baseline

- Out_CF_Expenses
- Out_CF_Fut_Benefits_Discretionary
- Out_CF Fut_benefits_fixed_guarant

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: SLOVENIA
SI

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds — 48.5%
- Corporate bonds — 36.5%
- Structured notes — 2.0%
- Collat. securit. — 0.2%
- Other(unrated) fixed-income — 2.8%
- Loans-Mortgages — 1.7%
- Other assets — 8.4%

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore, the economic amounts of the inflows in the later years of projection will be very small compared to the amounts of inflows of the first years of the projection. (Below there are Figures showing the economic amounts).

Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life — 18.0%
- Net CF Health — 0.0%
- Net CF Life with PB — 36.0%
- Net CF Life no PB — 25.6%
- Net CF U/I linked — 19.6%
- Net outflows assets — 0.8%

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant — 91.45%
- Out_CF_Fut_Benefits_Discretionary — 1.08%
- Out_CF_Expenses — 7.47%

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

(Below there are Figures
showing the economic amounts).

SLOVENIA

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
- either the expected cash outflows of very short term non-life or health business,
- or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
- either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
- or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
    (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
    these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

SUMMARY RESULTS FROM THE ANALYSIS OF ASSET AND LIABILITY CASH FLOW PROJECTIONS

Country: SLOVAKIA
SK

EIOPA stress Test
Annex IV

Composition of Assets (market value YE2013. Baseline)

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets

This Figure considers only those assets whose cash flows have been reported.

Therefore the Figure does not capture those assets whose cash flows are not predictable in a long and very long term (e.g. this may be the case of some derivatives,equities or properties).

Composition of inflows for the projection period. Baseline

- Government bonds
- Corporate bonds
- Structured notes
- Collat. securit.
- Other(unrated) fixed-income
- Loans-Mortgages
- Other assets
- Net inflows liabilities

For each year of projection this Figure shows the source (type of assets) of the inflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

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Composition Liabilities (market value YE2013. Baseline)

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

Composition Outflows Liabilities (market value YE2013. Baseline)

- Out_CF Fut_benefits_fixed_guarant
- Out_CF_Fut_Benefits_Discretionary
- Out_CF_Expenses

Composition of outflows for the projection period. Baseline

- Net CF Non Life
- Net CF Health
- Net CF Life with PB
- Net CF Life no PB
- Net CF U/I linked
- Net outflows assets

For each year of projection this Figure shows the source (type of (re)insurance obligations) of the outflows expected during that year.

It should be noted that the Figure provides a relative representation.

In general, the economic amount of the inflows decreases the projection advances.

Therefore the economic amounts of the outflows in the later years of projection will be lower than compared to the amounts of outflows of the first years of the projection.

(Below there are Figures showing the economic amounts).

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EIOPA stress Test
Annex IV

Composition of the outflows derived from (re) insurance obligations. Baseline

The Figure below displays the cash flow at country level considering all undertakings as a single entity
(i.e. summing all vectors of cash flows declared).
In some cases the cash outflows of the first years are materially higher than the rest of cash outflows. This may be due to
  - either the expected cash outflows of very short term non-life or health business,
  - or life insurance business with short term maturity (e.g. bancassurance unit/index linked contracts or life contracts with/without PB).

Composition of the cash flows derived from assets and (re) insurance obligations. Baseline scenario

In other cases, cash inflows of assets may present sudden peaks, reflecting the redemption of assets at their maturity
Finally there may be cases of peaks in the medium and long term cash outflows, due to
  - either the finalization of insurance contracts with lump sum benefits and comercialized to a given fixed date of reimbursment
  - or to the end of the projection the participant has provided, being in this case the peak the value of the remaining technical provision
      (in absence of an objective criteria to replace the cash outflow by the vector representing the remaining technical provision
      these cases have not been adjusted, but they are transparently displayed to allow readers their assessment).

Readers should be aware that those assets without a predictable long term cash flow pattern have not been reported.
Therefore negative mismatches shown in the Figures may be covered with assets whose cash flows have not been reported.

Mismatch of cash flows. Comparison among Baseline - Low yield A - Low yield B scenarios

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield A scenario

— LYA_Assets inflows   — LYA_Liab.net_cashflows   — LYA_Mismatch

year of projection

Composition of the cash flows derived from assets and (re) insurance obligations. Low yield B scenario

— LYb_Assets inflows   — LYb_Liab.net_cashflows   — LYb_Mismatch

year of projection

Appendix I: Table of figures[36]

[36] Figures included in Annex IV are not listed in this table.

Appendix II: Table of Tables

Appendix III: Table of abbreviations used

A/L	Assets/Liabilities
ALM	Assets Liability Management
BOS	Board of Supervisors
BE	Best estimate
BN	Billion
BS	Balance sheet
CA1	Core Adverse 1 (scenario)
CA2	Core Adverse 2 (scenario)
CF	Cash flow
CORP	=CA2
DT	Deferred Taxes
ECB	European Central Bank
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
EOF	Eligible Own Funds
ESRB	European Systemic Risk Board
EU	European Union
FDB	Future Discretionary Benefits
GBov	Great Britain overseas
GWP	Gross Written Premium
IRR	Internal rate of return
IM	Internal Models
IU	Insurance undertakings
LAC	Loss absorbing capacity
LIR	Low Interest Rate
LTG	Long-term guarantee
LY	Low yield
LYA	Low yield A (Japanese-like scenario)
LYB	Low yield B (Inverse scenario)
MA	Matching Adjustment
ManCat	Man Made Catastrophe
MCR	Minimum Capital Requirement
MSCI	Morgan Stanley Composite Index
NatCat	Natural Catastrophe
NCA	National Competent Authority
NSA	National Supervisory Authority
OF	Own Funds
PB	Participating Benefits

PML	Probable maximum loss
QRS	Quarterly Risk Dashboard
RFR	Risk Free Rate
RI	Replacement by reinsurance
SII	Solvency II
SCR	Solvency Capital Requirement
SF	Standard Formula
SFIS	Single-Factor Insurance Stresses
SST	Swiss Solvency Test
ST	Stress Test
STOX	=CA1
TP	Technical Provisions
TS	Technical Specifications
UL	Unit Linked
UFR	Ultimate Forward Rate
USP	Undertaking Specific Parameters
VA	Volatility Adjustment
YE13	Year End 2013