



## Long Term Guarantees Assessment – Polish sample results

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## Executive Summary

This report is based on inputs provided in the context of the Long-Term Guarantee Assessment by the Polish industry and as such reflects the Polish market specificities. The market coverage of more than 70% is substantially exceeding the coverage threshold expected by the trilogue. A challenging timing of the LTG assessment, coinciding with the preparation of the annual financial statements by Polish (re)insurers, has made it difficult for the undertakings to maximally test all the scenarios. On the other hand, an extensive validation process has been performed to make the data internally consistent and reliable.

In the scenario without the LTG measures the SCR ratio coverage of 302% is the highest among Member States. Furthermore, the assessment shows that the time dimension of volatility shall be given more attention in further political discussion on the Solvency II framework, as it can have significant impact on solvency positions of participating undertakings.

Undertakings who participated in the assessment indicated that without the LTG measures, the insurance industry will have to hold too much capital (backing artificial volatility), making the industry uncompetitive in relation to other financial services providers. In the opinion of the Polish FSA (KNF), the Polish market needs the stabilization of short-term fluctuations in order to be able to achieve sustained development level in the future. The supervisory authority is also of the opinion that for the Polish market the non-application of the LTG measures, especially the Extended Matching Adjustment, will most likely result in deepening of the already visible shift by insurers from traditional insurance products to investment-like products with limited protection against risks for policyholders. This shift is not beneficial for policyholders and should be restricted. Insurance business should be insurance in its nature, offering protection against risks to its clients/policy holders which banking nor investment business may not offer.

### *Main technical findings and highlights*

#### a) Extended Matching Adjustment (EMA)

In the opinion of both the Polish FSA and the industry, the Extended Matching Adjustment (EMA) in case of Poland will be the most efficient measure of the LTG package to reduce artificial volatility. It would also have a positive impact on the supervision of undertakings from a systemic perspective. It should bring benefits in terms of more stable financial conditions of the undertakings and the offer of traditional insurance products to policyholders.

The assessment revealed that the quantitative impact of the Extended Matching Adjustment (EMA) on the own funds was smaller than the impact of the Counter Cyclical Premium (CCP) application. It is justified to state that the methodology of the EMA calculation is complex and the applicability conditions are rigid. Therefore, only these undertakings which possess long-term obligations well matched with liabilities, as an inherent part of their business, would

make an effort to make use of the EMA. Moreover, taking into consideration that in case of Poland the EMA seems to be the most effective instrument of the LTG package that may reduce the variability of own funds, its impact on policyholder protection should be concluded as positive.

Only the “Extended Alternative” version of the matching adjustment was expected by companies to substantially mitigate the impact of spread movements on own funds. This mechanism is especially needed for long-term products. The restrictive conditions applying to other versions of Matching Adjustment would exclude portfolios of many undertakings without economic reasons. Some of the restrictions (i.e. rating restrictions for assets) may lead to the risk of cliff-effects. Additionally, the calculation of application ratio where positive cash flows are not taken into account to offset negative cash flows are assessed by companies as leading to a restriction in the MA amount which is not economically justified. Due to the fact that CMA excludes mortality risk (despite it diversifying with longevity), undertakings expect that Extended Matching Adjustment would be more appropriate to their business.

The complex methodology of Extended MA played its role in limiting the use of this measure in the assessment. In the opinion of the Polish FSA, it is necessary to investigate how to streamline the use of this instrument while keeping the adequate policyholder protection.

It is interesting to notice, that in Poland no competitive disadvantage for small vs. large insurers with regard to the EMA application has been observed. Some small undertakings have also used this measure and the difficulties they have mentioned were no stronger than in case of the big undertakings.

#### b) Classical Matching Adjustment (CMA)

The instrument has not been used in the Polish sample. The vast majority of respondents indicated that their liabilities did not qualify for the CMA.

The application conditions of the CMA are more suitable for particular markets of the EU. A significant part of these markets constitute in life insurance, especially contracts providing retirement and retirement-like protection, for which the conditions of a paid-up premium, ring-fencing and lack of policyholders options are fulfilled with no greater effort.

#### c) Adapted relevant risk-free rate (CCP)

While discussing systemic risks, it is worth to notice that the CCP seems to be the only instrument of the LTG package, which could potentially interact – in a way leading to the distortion of the insurer’s ability to meet its obligation towards policy holders – with the extension of the recovery period (Article 138(4) of Solvency II Directive), because the adaptation of the risk-free rate may potentially be used also by undertakings already subject to recovery plans. Once the adapted risk-free rate is announced by EIOPA, all undertakings are allowed to use it. For an undertaking already subject to recovery plan may find it might be more difficult to fully execute this plan once the CCP is called off by EIOPA and the value of its technical provisions instantaneously rise. Perhaps it would be useful to introduce a safeguard

that the LTG measures may not be applied by undertakings subject to recovery plans or at least that their application in such circumstances should be subject to supervisory authority's consent.

The LTGA results for Poland show some decrease in the technical provisions as a result of the CCP application. Theoretically, the CCP application may result in the insufficiency of the technical provisions, as this instrument as such is designed for the purpose of reducing the technical provisions in times of distress in the market. However, based on the LTGA results for Poland, such insufficiency could emerge only in a severe and rare scenario, which presently is difficult to predict.

#### d) Extrapolation

Currently the measure is of less importance as the weighted durations of liabilities is lower than the last liquid point (LLP). The assessment shows that the effect of the CCP is much stronger than the effect of the extrapolation, particularly for the life sector.

#### e) Transitional Measures

It is expected that, the effects of the transitionals would be significant as the technical rates in Solvency I are generally much lower than the market rates prescribed in Solvency II. The lower rates would increase the technical provisions, diminishing the SCR/MCR surpluses and decreasing the SCR/MCR ratios, perhaps by as much as 40-60 percentage points.

#### *Way forward*

Taking into consideration the LTGA results for Poland, the Extended Matching Adjustment seems to be the most effective instrument of the LTG package which stabilizes technical provisions, own funds and capital requirements. Any potential use of the measure in the future would require additional work on its methodology which was complex in the LTGA. However, overall it seems to be well offset by the potential benefits from the application of this instrument, i.e. the stabilization of certain items of the (re)insurers' balance sheets.

Finally, in the opinion of the Polish FSA, political discussions aiming to address the artificial volatility of balance sheets caused by market valuation shall not be limited to the LTG measures but also acknowledge alternative volatility reduction mechanisms that are consistent with the forthcoming IFRS 9 standard.

# 1. Introduction

## 1.1. Disclaimer

This report is based on inputs provided in the context of the Long-Term Guarantee Assessment by the Polish industry and as such reflects Polish market specificities. Therefore, the opinions, analyses and data may differ from those presented in EIOPA's Technical Findings on the Long-Term Guarantee Assessment.

Some parts of EIOPA's Technical Findings on the Long-Term Guarantee Assessment has been taken and adapted to provide more complete picture of the LTGA assessment and Solvency II in general. In particular to shortly describe the concept and methodology of particular LTG measures.

## 1.2. Background

### *Omnibus 2 process*

In the context of the Omnibus 2 negotiations, Triologue parties (the European Parliament, the Council and the European Commission) considered that Solvency II should include regulatory measures to deal with issues associated with insurance products with long-term guarantees that may be affected by what the Triologue parties call "artificial volatility".

In July 2012, Triologue parties agreed that the impact of the discussed package of long-term guarantees measures ("the LTG package") should be evaluated to assess the effects that implementation of the package will have. EIOPA has been requested to run this assessment with the support from relevant National Supervisory Authorities (NSAs).

### *Terms of Reference to the LTGA*

The exact terms and conditions of the Long-Term Guarantees Assessment (LTGA) have been laid out in the "Terms of Reference" (ToR) agreed by Triologue parties on 14 December 2012. The ToR specified the scope of the assessment with regards to:

- General objectives
- Market coverage and composition of the sample (see section 1.5 for details)
- Measures and quantitative scenarios tested (see below for details)
- Outputs to be provided including additional analysis required by EIOPA
- Qualitative questions to participants
- Procedure and timelines (see below for details)

### *Measures and quantitative scenarios tested*

The following LTG measures have been tested during the LTGA:

- Adapted relevant risk-free interest rate term structure (also known as the Countercyclical Premium or "CCP") – this measure is described in the non-public Omnibus 2 draft text as of 9 July 2012 in Article 77a



- Extrapolation – this measure is described in the non-public Omnibus 2 draft text as of 9 July 2012 in Article 77b
- Matching adjustment for certain life insurance obligations (also known as the “Classical” Matching Adjustment or “CMA”) – this measure is described in the non-public Omnibus 2 draft text as of 9 July 2012 in Article 77c
- Matching adjustment for certain insurance obligations not covered by Article 77c (also known as the “Extended” Matching Adjustment or “EMA”) – this measure is described in the non-public Omnibus 2 draft text as of 9 July 2012 in Article 77e
- Transitional measures – this measure is described in the non-public Omnibus 2 draft text as of 9 July 2012 in Article 308b
- Extension of recovery period (or “EoRP”, not subject to quantitative assessment) – this measure is described in the non-public Omnibus 2 draft text as of 9 July 2012 in Article 138(4).

The following scenarios have been designed by Triologue parties to be tested in the quantitative assessment:

	0	Scenarios at the reference date YE11									Scenarios at historic reference dates			
		1 BASE	2	3	4	5	6	7	8	9	10	11	12	
<b>I</b>	<b>Adapted relevant risk-free interest rate term structure (CCP)</b>													
A	No CCP	x												
B	CCP of 100bps		x		x	x	x	x	x	x	x			
C	CCP of 50bps			x										
D	CCP of 250 bps				x									
<b>II</b>	<b>Extrapolation</b>													
A	LLP 30yrs for EUR, 40 yr convergence	x												
B	LLP 20yrs for EUR, 40 yr convergence					x								
C	LLP 20yrs for EUR, 10 yr convergence		x	x	x	x	x	x	x	x	x	x	x	x
<b>III</b>	<b>Classical Matching adjustment</b>													
A	No Matching Adjustment	x												
B	Classic Standard version		x	x	x	x	x	x	x	x	x	x	x	x
C	Classic Alternative version				x									
<b>IV</b>	<b>Extended Matching adjustment</b>													
A	No Matching Adjustment	x								x	x			
B	“Extended” Standard I version		x	x	x	x	x					x	x	x
C	“Extended” Standard II version							x						
D	“Extended” Alternative version						x							
<b>V</b>	<b>Transitional Measures</b>													
A	No transitional measure	x	x	x	x	x	x	x	x			x	x	x
B	Transitional measure applied to all existing business									x			x	
C	Transitional measure applied to paid in premiums only										x			
<b>VI</b>	<b>Reference date</b>													
A	31 December 2011 (YE11)	x	x	x	x	x	x	x	x	x				
B	31 December 2009 (YE09)										x			
C	31 December 2004 (YE04)											x	x	x

These scenarios are shown for information purposes. Throughout the report, there are references to these scenarios, but the Polish FSA has tried to present all results in a way that is comprehensive to readers not familiar with the scenarios.

It should be noted that for scenarios at historic reference dates, only financial market inputs were adapted, but balance sheet composition of participating (re)insurers were kept at YE11 levels to ensure comparability and reduce complexity.

### Timelines

Regarding timelines, EIOPA launched the LTGA on 28 January with participating (re)insurance undertakings having 9 weeks to complete the qualitative and quantitative part of the

assessment. Following validation, analysis and report writing work by the Polish FSA, this report was provided to EIOPA on 11 June 2013.

#### *Quality of data*

Furthermore, if not stated otherwise, all quantitative analyses presented in this report are based on the data provided by the LTGA Polish industry participants.

The short timelines of this exercise, the overlap with the year-end accounting processes and the complexity of the tested package have impacted the quality of provided data by participants. An extensive validation process has been performed to make the data internally consistent and reliable. A number of inconsistencies and errors have been eliminated, whereas some quality issues might remain given the tight timelines. Furthermore, the EIOPA's technical specification allowed for a number of simplifications.

#### *Focus on solo undertakings and standard formula*

The exercise was focused on the impact of the LTGA package on solo (re)insurance undertakings. This was done in line with the request by Trialogue parties. The Group perspective is therefore not focused on in this report. However, the report does provide some qualitative insights on Group impact in some sections.

Finally, quantitative results are based on the standard formula (SF) approach only.

## 1.3 Objectives

Based on the Terms of Reference, the LTGA has the following objectives:

- to assess, first and foremost, the impact of the proposed LTG package on policyholder protection
- to assess whether the proposed LTG package will allow supervisory authorities to supervise insurance and reinsurance undertakings and insurance and reinsurance groups efficiently and effectively
- to assess whether the proposed system can be implemented efficiently and effectively by all insurance and reinsurance undertakings and the cost of implementation
- to assess whether the proposed system provides the right incentives for good risk management and wide risk diversification and contributes to the correct risk reflection of the undertakings
- to assess, in cooperation with ESRB, the impact on financial stability and whether the proposed system has the potential to create systemic risks
- to assess the impact of the proposed LTG package on the single market including cross border business
- to assess the impact of the proposed LTG package on insurance and reinsurance undertakings' solvency position and also possible competition distortions in national markets and the single market



- to assess the impact of the proposed LTG package on long-term investments by insurance and reinsurance undertakings

Please note that this report assesses each of the long-term guarantee measure subject to the LTGA and the combination of those using the listed objective. The sections relating to each of the LTG measures and to the overall package are therefore all structured in the same way along.

## 1.4 Analysis Framework and the Long-Term Guarantee Package's overall assessment

The framework and methodology has been mostly explained in the EIOPA's Technical Findings on the Long-Term Guarantee Assessment. Below, the findings for the Polish sample have been presented that are common to all the LTG measures, and may not be attributed to the particular LTG measures.

### 1.4.1. Introduction

Before describing any results in detail, a general observation needs to be made. A challenging timing of the LTG assessment, coinciding with the preparation of the annual financial statements, has become a major obstacle to many of the participants in performing the numerous scenarios calculations and therefore delivering the full range of results. In particular, it has made it difficult for the undertakings participating in the assessment to break down their qualitative replies into the particular LTGA measures.

### 1.4.2. Impact on policy holder protection

General remark relevant to all of the LTG measures tested:

Based on the LTGA results it is difficult to distinguish between the impact of any of the LTG measures on existing and future contracts. It is only possible to speculate in a general manner that the impact on future contracts may be slightly bigger than on the existing ones, as it is usually in case of any new regulatory solution (the companies would need some time to encompass and comprehend the new instruments).

One of the aspects of policy holder protection is the products availability on the market. All insurance and reinsurance undertakings participating in the assessment pointed out that any long term guaranteed annuity or savings product will be impacted by the proposed measures in the LTGA package. "Consequently product design will focus on shorter maturities and guarantees in case artificial volatility of results are not adequately offset. At the end of the day, without LTG measures, the Solvency II framework will be too volatile for long-term products." – the qualitative input has revealed.

### 1.4.3. Impact on effective and efficient supervision

The impact could be attributed to a particular LTG measure. See relevant sections in the following chapters.

### 1.4.4. Implementation effort (with insights on internal model users if possible)

#### *For insurance industry*

Only 3 undertakings (ca. 10% of the total respondents) have provided estimates of the additional resources that are likely to be required to implement the LTG package broken down into particular LTG measures. Most of participants assessed the impact with respect to all of the LTG measures as a whole. No major differences were identified between the replies of smaller vs. larger undertakings.

With respect to developing appropriate systems and processes (i.e. the resources for initial implementation), the answers varied from 100 person weeks (1 insurance group as a whole, including its 2 subsidiaries in Poland) to 2 person weeks (4 undertakings). The most common answers were either around 50 weeks (40-56 weeks) or around 10 weeks (8-12 weeks). The latter related to undertakings which provided only partial quantitative results.

With respect to carrying out a valuation each year of the measures in accordance with the methodology proposed (i.e. the on-going resource required each year), the answers varied from 60 person weeks (1 insurance group as a whole, including 2 undertakings in Poland) to 1 person weeks (3 undertakings). The most common answers were either 6 weeks (4-10 weeks, 10 undertakings) or around 2 weeks (10 undertakings). The latter related to undertakings which provided only partial quantitative results.

#### *For NSA*

The impact could be attributed to a particular LTG measure. See relevant sections in the following chapters.

#### *Group aspects*

The LTGA results were calculated on the company level. Most of the (re)insurers participating in the assessment did not see additional complexity or obstacles for the application of the LTG measures at Group level. They thought that provided that these measures are applied at the legal entity level in a way that correctly reflects the nature of risks and business (in particular with reference to Matching Premiums – the measures which have most theoretical foundations), they will be also feasible at the group aggregated level.

A few undertakings noticed the same obstacles or implementation efforts as at a solo company level, but not any additional ones, relating from the fact of application at a group level.

In the view of the Polish FSA, the use of country-specific LTG measures may add some complexity to the tasks of group supervisors and may be subject to the discussion at college meetings. However, since the insurance markets in the EU Member States are not identical and the market consistent valuation will most likely shorten the perspective of insurers' activity – both in terms of investments and products offered – this additional complexity seems to be well justified and offset.

#### 1.4.5. Incentives for good risk management

Many respondents did not provide any specific answers to the question “How would you be able to demonstrate that the measures applied provide the right incentive for good risk management?” since the application and though the impact of the LTG measures on their existing portfolios was small. It is worth to notice in this context, that the LTG Assessment was performed in a very difficult time of the year, back-to-back with preparation of statutory financial statements, and within a very tight timeline. This significantly contributed to the very limited use of the LTG measures, in particular the Extended Matching Adjustment, by undertakings which participated in the assessment, at least in case of Poland.

Those who did answer, pointed out at a good asset-liability management (ALM) system which they have implemented and can present to their supervisor. They also believed that the LTG measures were generally adequate for the insurer's business perspective. They pointed out at the following negative outcome of non-application of the tested measures:

- Loss of a potential to reduce volatility – resulting in reduced benefits for customers, which in many cases would mean that undertakings could not offer existing products to clients anymore and would have to shift to products which transfer the risk towards the clients. Alternatively they could hold excessive amounts of capital to back artificial volatility and subsequently become uncompetitive, as these capital costs need to be earned through selling their products. This likely will not be supported by the capital markets investing in the insurance sector.
- Without any changes in Solvency II regulations, they do not envisage any incentives to extend their product offer. They would concentrate on unit-linked business and pure risk products.

#### 1.4.6. Impact on financial stability and prevention of systemic risks

The impact could be attributed to a particular LTG measure. See relevant sections in the following chapters.

### 1.4.7. Impact on insurance and reinsurance undertakings' solvency position

The impact could be attributed to a particular LTG measure. See relevant sections in the following chapters.

### 1.4.8. Impact on competition

Several undertakings who participated in the assessment indicated that without the LTG measures, the insurance industry will have to hold too much capital (backing artificial volatility), making the industry uncompetitive in relation to other financial services providers.

### 1.4.9. Impact on Long Term Investments

The impact could be attributed to a particular LTG measure. See relevant sections in the following chapters.

### 1.4.10. Other considerations

None material issues has been identified.

## 1.5. Participation/ Coverage

Following the Terms of Reference, the LTGA should be based on a representative sample of individual undertakings selected by national supervisory authorities (NSAs), in collaboration with EIOPA, and based on the following criteria:

- the sample consists of individual insurance and reinsurance undertakings;
- for each Member State the sample is representative of the national market, in particular in relation to the nature, size and complexity of undertakings (the sample should also be representative in relation to the insurers that are affected by the proposed long-term guarantee measures);
- in relation to life business, the sample should cover at least 50% of the market of each Member State, calculated according to technical provisions (TP);
- in relation to non-life business, the sample should cover at least 20% of the market of each Member State, calculated according to gross written premiums (GWP), and should in particular capture non-life obligations most affected by the proposed LTG package;
- the sample allows separate results to be derived for different national markets, and for undertakings of different nature, size and complexity.

EIOPA interpreted the coverage targets as follows:

- in relation to life business, the 50% coverage should relate to the most affected life business estimated by all life TP excluding unit-linked business;
- in relation to non-life business, the 20% target should relate to the most affected nonlife business estimated by non-life annuity TP.

The tables and figures below provide an overview of actual coverage for the **Polish market**. The market coverage (>70%) is almost equally split between the life and the non-life sector.

Sample	Total
Total	35
Life	17
Non-life	18

Table 1.1. Participating undertakings by type.

Sample	Market coverage
Life TP	77,6%
Life TP excl UL	75,1%
Non-Life GWP	71,9%

Table 1.2. The LTGA sample market coverage (Solvency I, YE11).

Sample in BN EUR	Required SM	Available SM	Solvency ratio
<b>Total</b>	1,29	4,87	376,2%
<b>Life</b>	0,69	2,11	306,0%
<b>Non-Life</b>	0,60	2,75	456,6%

Table 1.3. Aggregate solvency position of the LTGA sample (Solvency I, YE11).

The figure below shows that for some scenarios the coverage is null. The main reason for this is the non-applicability of the tested measures in case of scenarios 4 and 7, respectively and a mix of technical complexity and non-relevance of the tested measure in case of scenario 9. For the historical scenarios 10-12, the coverage is generally lower than for the YE11 scenarios due to the “best efforts” nature of the exercise and the fact that some participants prioritized YE11 scenarios over the historical ones.

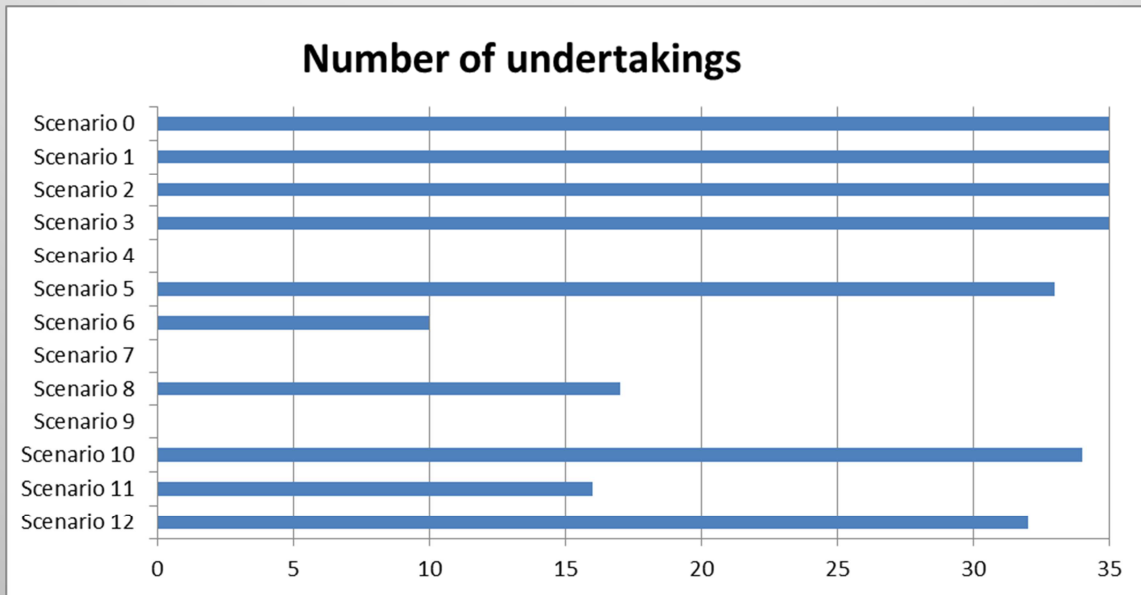


Figure 1.1. Number of participating undertakings by scenario.

## 2. Situation without the LTG Package

This section presents the expected impact on participating undertakings at YE11 in case no LTG measures would be applied.

It should be noted that the tested scenario without the LTG package (scenario 0) was requested by Triologue parties in order to provide a neutral starting point for assessing the impact of the LTG measures.

In the tested scenario 0 no CCP, no CMA, no EMA and no transitional measures apply. Furthermore, the extrapolation for PLN uses a last liquid point of 10 years and a convergence period of 40 years.

The following chart shows the respective discount curve relating to this scenario.

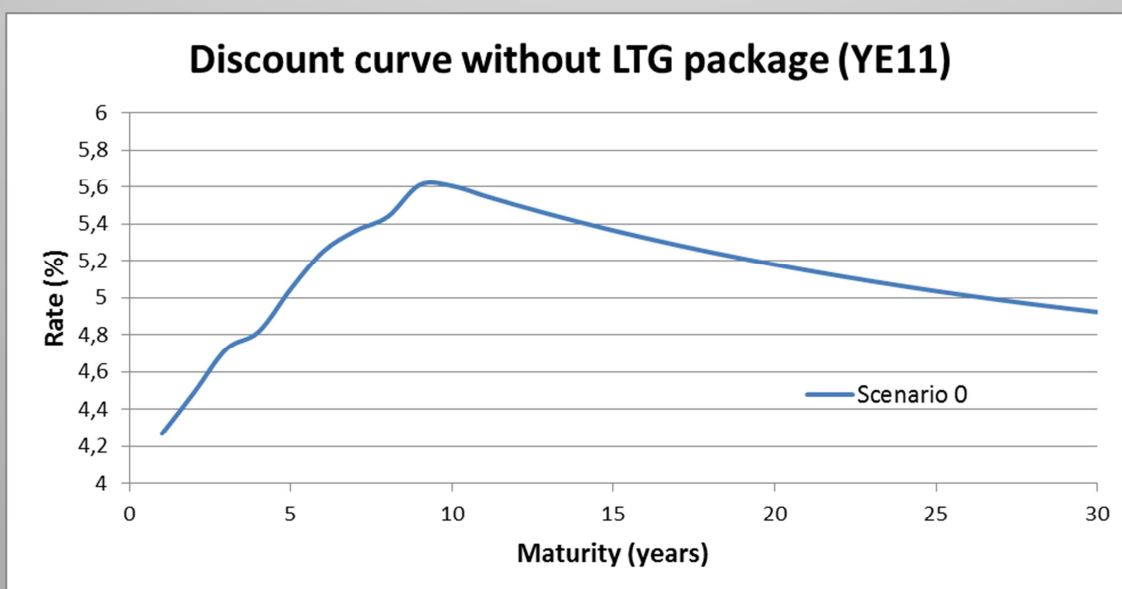


Figure 2.1. PLN discount curve at YE11 (without LTG package).

For the entire LTGA sample (see the figures below) the described scenario 0 at YE11 results in a weighted average MCR ratio of 1098%. The SCR ratio is 302% respectively.

Looking at the life sample, the weighted average MCR ratio is 1395%. The SCR ratio is 367% respectively.

Looking at the non-life sample, the weighted average MCR ratio is 921%. The SCR ratio is 260% respectively.



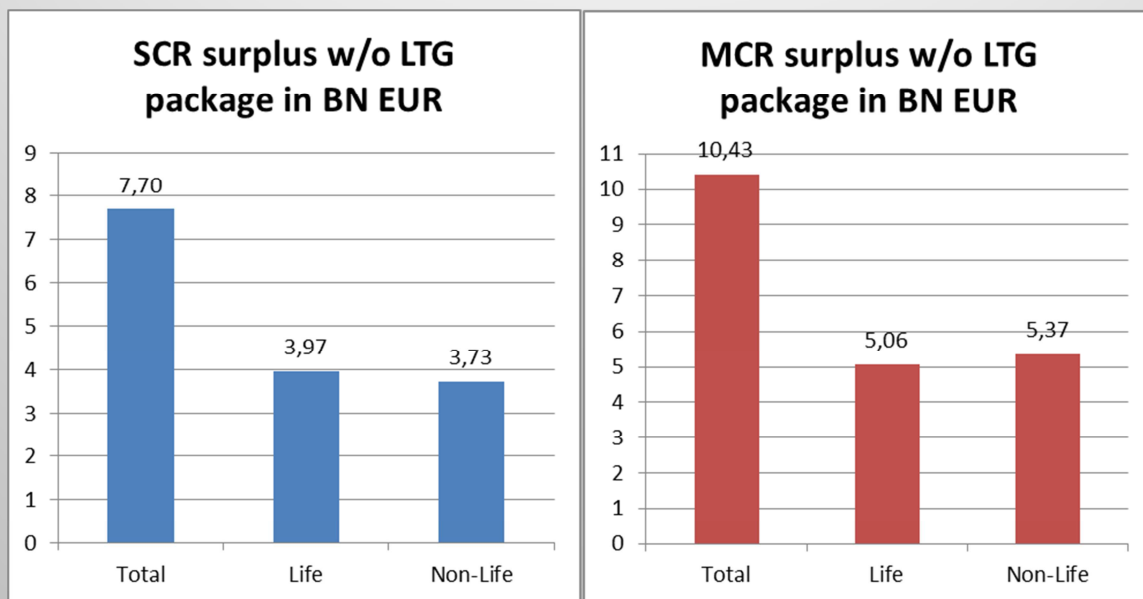


Figure 2.2. The SCR and MCR surpluses (Solvency II, without the LTGA measures).

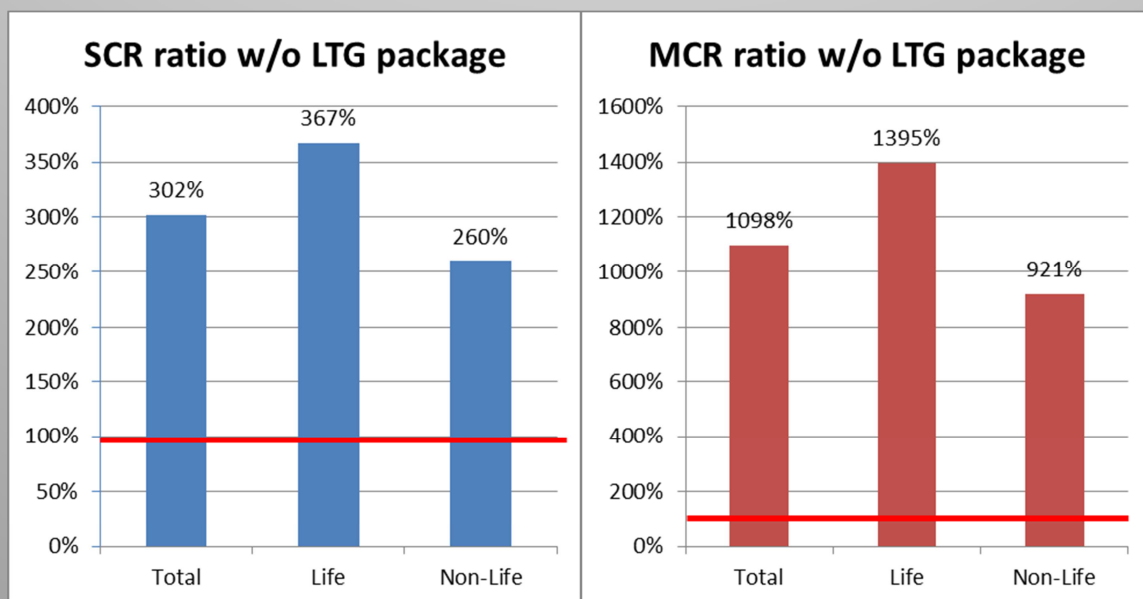


Figure 2.3. The SCR and MCR ratios at YE11 (Solvency II, without the LTGA measures).

The following figures provide the SCR and MCR ratios distribution for the Polish sample.

For 5 out of 35 entities (all non-life) the SCR ratio is below 100%. For vast majority of firms the SCR ratio is above 150%. The capital shortfall to fully cover the SCR ratio is approx. 0,3% of assets.

For 3 out of 35 entities (including 1 life) the MCR ratio is below 100%. Again, for vast majority of firms the MCR ratio is above 150%. The capital shortfall to fully cover the MCR ratio is approx. 0,03% of assets.



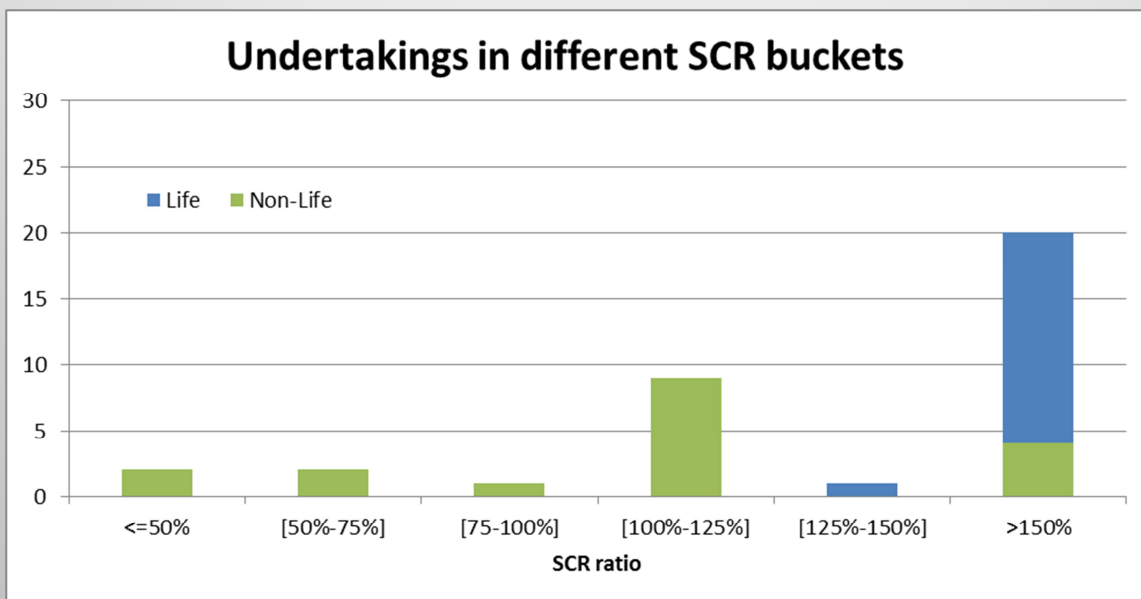


Figure 2.4. The distribution of the SCR ratios at YE11 (without the LTG package).

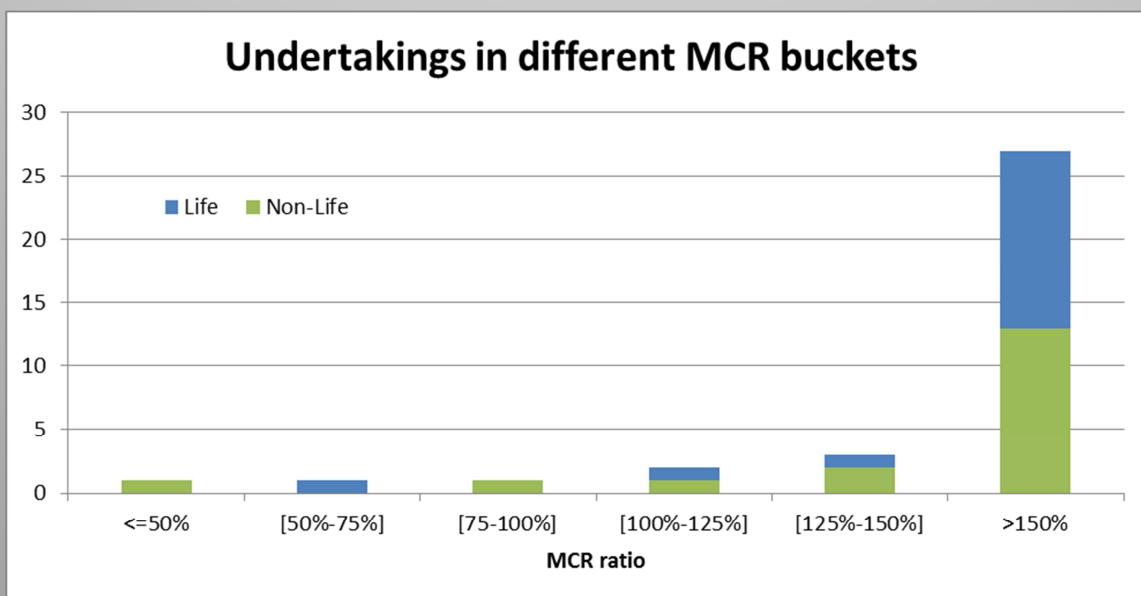


Figure 2.5. The distribution of the MCR ratios at YE11 (without the LTG package).

Sample	Capital shortfall to cover 100% SCR ratio (% of assets)	Capital shortfall to cover 100% MCR ratio (% of assets)
Total	0,31%	0,03%
Life	0,00%	0,01%
Non-Life	0,70%	0,07%

Table 2.1. Capital shortfalls as percentage of assets.

### 3. Adapted relevant risk-free interest rate term structure (CCP) – Article 77a

#### 3.1. Purpose of the measure and highlights of the tested approach (CCP)

The adaptation of the risk free rate curve (also called the counter-cyclical premium or CCP) is aimed to reduce the impact of short-term or “artificial” volatility on the Solvency II balance sheet during stressed situations of financial markets, most notably crises related to widening of credit spreads. At the same time, the CCP aims at preventing insurance undertakings from firesale of distressed assets. As in the current design, the CCP is considered to be a short-term tool for temporary and exceptional financial market stresses; the triggering of the CCP is therefore expected to be of a discretionary nature.

The CCP represents a portion of the spread between the interest rates that could be earned from assets included in a portfolio that a representative insurance undertaking is invested in and the risk free rate. The CCP is claimed to be the portion of the spread that is not attributable to a realistic assessment of expected losses or unexpected credit risk.

During the LTGA, two options with regards to the determination of the representative portfolio have been tested with add-on technical analysis by EIOPA: (a) the representative portfolio links to the average insurance market portfolio of the currency area, or (b) it links to the national insurance market portfolio. Due to the specificity of the Polish market, the currency and national CCP coincide.

Technically, the CCP is added to the risk free rate term structure once the measure has been triggered by supervisory authorities due to exceptional financial market conditions. Further considerations regarding the potential triggering mechanism are beyond the scope of this report.

Further key highlights of this measure: the application is optional for undertakings, the impact of the CCP application needs to be publicly disclosed, the measure will stay enacted for at least 12 months once it is triggered, its applications should not be anticipated by undertakings and it is associated with a capital charge that reflects a full loss of the CCP within the next year.

The approach chosen for the impact assessment has been to test the quantitative impact of three default levels of CCP: 100 bps, 50 bps, and 250 bps (scenarios 1-3). The actual calibration of the CCP values based on currency area and national specific reference portfolios, has been determined in an add-on technical analysis by EIOPA and for Poland stood at 17 bps at YE11.

### 3.2. Impact on policy holder protection

Quantitative impact of the CCP on the solvency positions of the undertakings is described in section 3.7. The LTGA results for Poland show some decrease in the technical provisions as a result of this measure's application. Theoretically, the CCP application may result in the insufficiency of the technical provisions, because this instrument as such is designed for the purpose of reducing the technical provisions in times of distress in the market. However, based on the LTGA results for Poland, such insufficiency could emerge only in a severe and rare scenario, which presently is difficult to predict.

A small number of participants pointed out at the CCP specifically in the context of product availability. They indicated that the CCP as drafted is completely unpredictable as a measure and cannot be relied upon to ensure long term guarantee type products can continued to be sold. According to them, it is crucial that the financial conditions regarding when the Counter-Cyclical Premium will apply and its calculation are clearly defined (especially with regard to the CCP's application for a given currency vs. for a given Member State).

### 3.3. Impact on effective and efficient supervision

In the view of the Polish FSA, the CCP seems to be the most challenging measure of the proposed LTG package in terms of effective and efficient supervision because it will be introduced instantaneously, unexpectedly, and will affect all undertakings, regardless of their financial condition. It can make the solo or group supervision more difficult because it may lead to insufficiency of the technical provisions in case policyholders would need to receive their benefits, that are artificially undervalued. By contrast, the matching adjustment is designed to be a regular part of the undertaking's condition, once the undertaking identifies the eligible obligations and makes the decision to maintain their matching with certain assets. Therefore it should not cause instantaneous reductions in technical provisions valuation which may happen when the CCP is declared. The CCP introduction, may reduce, for example, technical provisions relating to a payment which falls due within a day or few days since the CCP introduction. Such situation does not seem possible with any other LTG measure. Additionally, there are no particular supervisory measures available with regard to the CCP.

It is difficult to foresee a unique impact of the CCP on the Supervisory Review Process (SRP) – i.e. on the way in which the SRP will need to be performed. The SRP would need to consider the impact of this measure similarly as in the case of any other factor which may influence the condition and risk-outlook of the undertaking. The most visible impact may consist in the need to gather by the national supervisory authority, within the framework of the SRP, the required data for EIOPA to declare the use of the CCP and calculate its amount.

## 3.4. Implementation effort

### 3.4.1. For industry

Generally, the impact was assessed with respect to all the LTG measures altogether – please, see section 1.4.4.

A few undertakings, who did make any differentiation among the LTG measures, pointed out that the CCP, matching adjustment (any version) and transitional measure will require the most additional resources. One undertaking noticed that the CCP impact would be not so high provided that the undertaking would be provided with the curves with/without CCP in a timely manner. One undertaking pointed out that application of the national CCP would require the significant change on the undertaking's current process design to adopt the yield curves driven by the country and products instead of the currencies.

The CCP scored the 5<sup>th</sup> most common indications as being the aspect of the technical specifications involving most of the (re)insurer's resources when completing the technical assessment. In particular, the main concerns were raised in case of applying the CCP for unit-linked business.

Two undertakings have made the observations that the CCP poses 2 main feasibility issues:

- Should the measure be applicable only for liabilities with duration higher than 7 years, this will pose the problem of splitting the liabilities by duration (therefore introducing a new "classification" reference) and the use of different risk free rates for "with profit contracts" backed by the same (legally) identified asset portfolio.
- The current measure of the CCP risk (100% of the stress) and its correlation with other risks may largely offset the benefit to the solvency position of the company derived by the use of the CCP for the valuation of the liabilities.

### 3.4.2. For NSA

In the view of the Polish FSA, the use of CCP will be quite demanding for the supervisors. They would need to deliver a significant amount of data to EIOPA in order to allow EIOPA to calculate the CCP. EIOPA's decision to declare the use of the CCP would also need a thorough consideration from supervisors as to whether there might be reputation and contagion systemic effects once the decision to allow the use of the CCP is published (the CCP indicates the distorted situation in the financial markets).

## 3.5. Incentives for good risk management

A very demanding task in the supervision of the CCP application would be to safeguard that (re)insurers may not anticipate the adaptation of risk free rates following the observation of a stressed situation of financial markets (i.e. to prevent this anticipation in pricing, valuation

and risk management). This requirement cannot be effectively supervised. No particular enforcement measures are available to supervisors in this context in Solvency II. Articles 137-141 of Solvency II Directive allow the supervisor to prohibit the free disposal of assets by an undertaking in cases where the undertaking is not compliant with technical provisions or capital requirements. As long as the compliance takes place, the prohibition would be difficult to justify.

Generally, the undertakings assessed the incentives with respect to all the LTG measures altogether – please, see section 1.4.5.

A few undertakings indicated that more clarity is needed on the calibration of the level of the CCP, especially whether it will be calibrated on the currency or national market (Member State) basis. According to them, the amount of the CCP for liabilities valued at a given currency should not differ per country because the final choice of the CCP level will impact the type of government bonds that will be bought by each (re)insurer (e.g. mainly national government bonds in case of a national CCP).

One observation was that without the CCP, companies would be forced away from their investment strategies during stressed market conditions, which would cause forced sales and pro-cyclical effects (not only for insurers but also for the wider market). In general, given their liability maturities, insurers are not very sensitive to short-term market value movements and are able to hold the assets until markets recover having a stabilising effect on markets.

Another one, however, noticed that the CCP does not seem to provide significant incentives for effective risk management. The CCP may encourage (re)insurers to take more risk than under normal conditions. However in case of especially deep economic downturns such measure might be required to support insurers and prevent un-optimal decisions based on short term interest rate movements.

As some undertakings pointed out, the Polish market is dominated by unit-linked products and there are many issues e.g. with understanding the contract boundary. An unfavourable interpretation of these could confuse market players. The arbitrariness of decisions concerning the CCP may be a problem in this context. In order to enable (re)insurers to use such methods, the conditions determining when to use the CCP and of what amount should be more objective.

### 3.6. Impact on financial stability and prevention of systemic risks

With respect to impact on financial stability it is worth to notice that the adapted risk free interest rate would not need to be applied in Poland on the reference dates of 31 December 2011 and 30 June 2012. No exceptional behaviour on the financial markets relevant for Polish entities was observed at these periods. In particular, the Polish market experienced the decrease in yields (both government and corporate) that was beneficial overall. The equity markets were at pre-2007 levels.

In the view of the Polish FSA, the CCP theoretically may contribute to the systemic risk materialization. The underlying mechanism of the CCP is to reduce technical provisions in times of distress on the market in order to make it easier for the undertakings to continue to operate without capital requirements' breach. However, by doing so, the CCP may aggravate the problem instead of healing it. By reducing technical provisions the CCP may instantaneously hide some risks in many undertakings on the market at the same time.

### 3.7. Impact on insurance and reinsurance undertakings' solvency position<sup>1</sup>

#### 3.7.1. All undertakings

This section presents the expected impact on participating undertakings at YE11, YE09 and YE04 in case the CCP measure would be applied.

##### YE11

It should be noted that all analyses at YE11 shown in this section are based on scenarios 1, 2, 3 and since no entity has applied the classical MA Standard version, the Extended MA Standard I version, the analysis of movements can be solely attributed to the CCP effect. Furthermore, the extrapolation for PLN uses a last liquid point of 10 years and a convergence period of 10 years.

As scenario 0 differs from scenarios 1-3 in both the convergence period and the CCP, in order to obtain the benchmark for the CCP movement analysis, The Polish FSA performed additional analyses to estimate technical provisions, the SCR/MCR and SCR/MCR surplus for the case of no CCP and the convergence period of 10 years. It turned out that the changes in best estimates among scenarios 1-3 could be very well approximated by the linear regression line that allows for a simple extrapolation of the best estimate of technical provisions for the zero CCP case and the convergence period of 10 years. The effect on technical provisions has been adjusted for the change in the SCR mainly due to the CCP risk module.<sup>2</sup> All the calculations have been made on the individual company level.

The following chart shows the respective discount curves relating to relevant scenarios.

<sup>1</sup> It should be noted that all analysis shown in this section are based on scenarios 1,2,3 and since no single entity have applied the classical MA Standard version, the Extended MA Standard I version, the analysis of movement can be solely attributed to the CCP.

<sup>2</sup> The net DTL and FDB effects were immaterial.



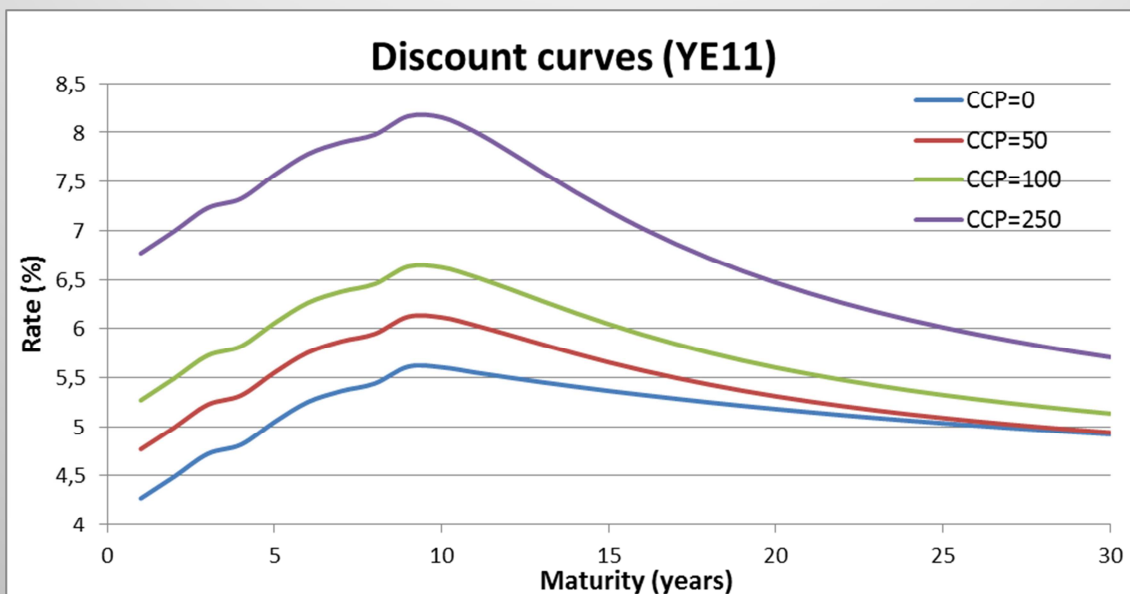


Figure 3.1. PLN discount curves at YE11 with various CCP values (bps).

The next graph displays the change in total technical provisions comparing the three tested default CCP levels and the zero CCP benchmark. The introduction of the CCP of 50 bps decreases technical provisions by approx. 0,5%. The effect for non-life undertakings is approx. 0,9% and is stronger than for life undertakings (0,3%) mainly due to the UL business, for which an increase in the discount rate is typically harmful.

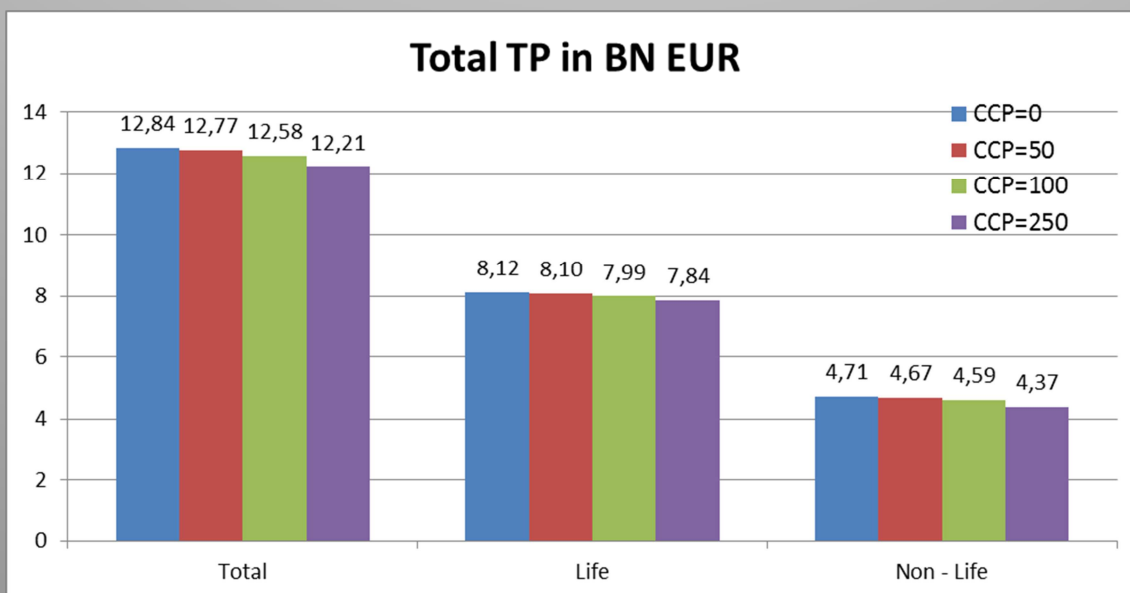


Figure 3.2. The effects of CCP on the total technical provisions at YE11.

The impact of the CCP on the SCR/MCR surpluses and the SCR/MCR ratios are illustrated on the following figures. The introduction of the CCP of 50 bps increases the SCR (MCR) ratio by approx. 2 (12) percentage points. The effect is stronger for the non-life sample. Therefore, the

calibrated by EIOPA national and currency CCP for PLN of 17 bps is expected to have negligible (<1 percentage point) effect on the SCR ratios.

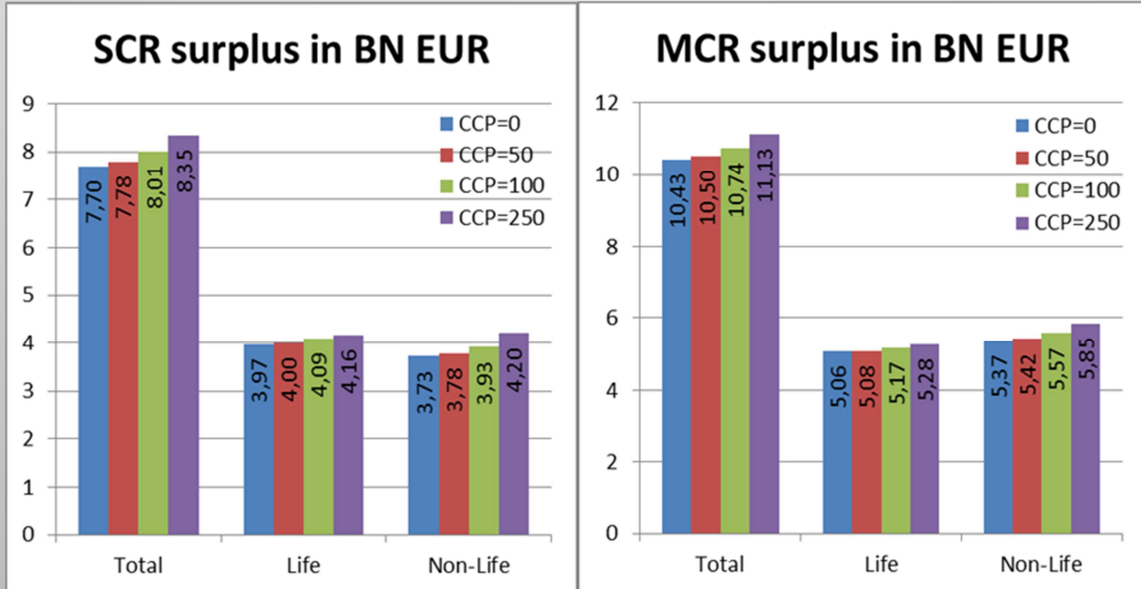


Figure 3.3. The SCR and MCR surpluses for various CCP values.

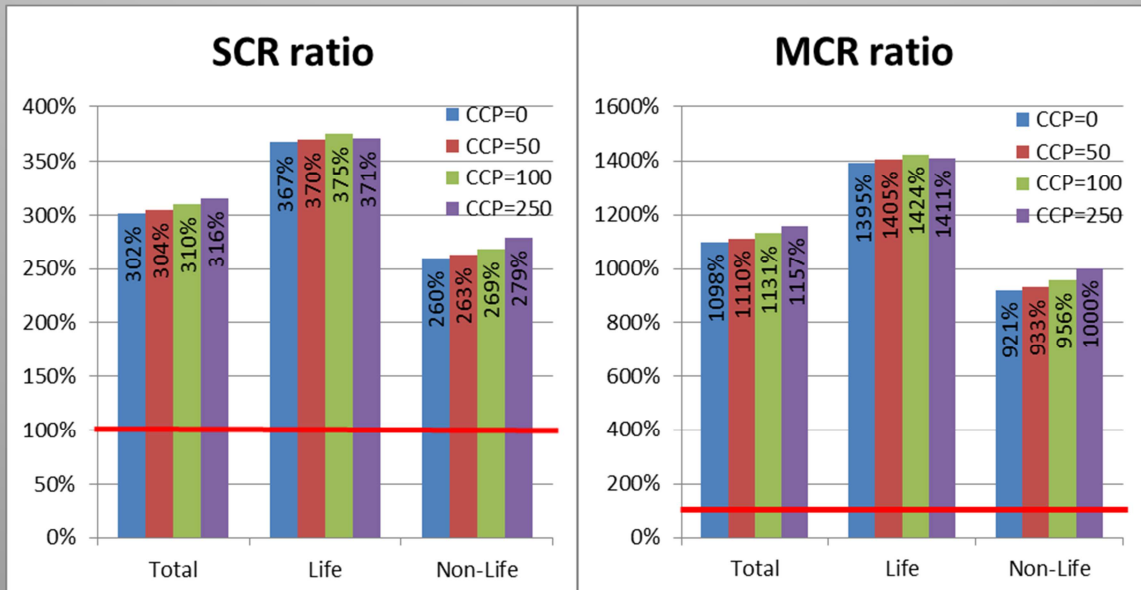


Figure 3.4. The SCR and MCR ratios for various CCP values.

The following figures provide the distribution of the SCR and MCR ratios for various levels of the CCP. As the effect of the CCP is small, the distributions are similar to the ones in section 2.



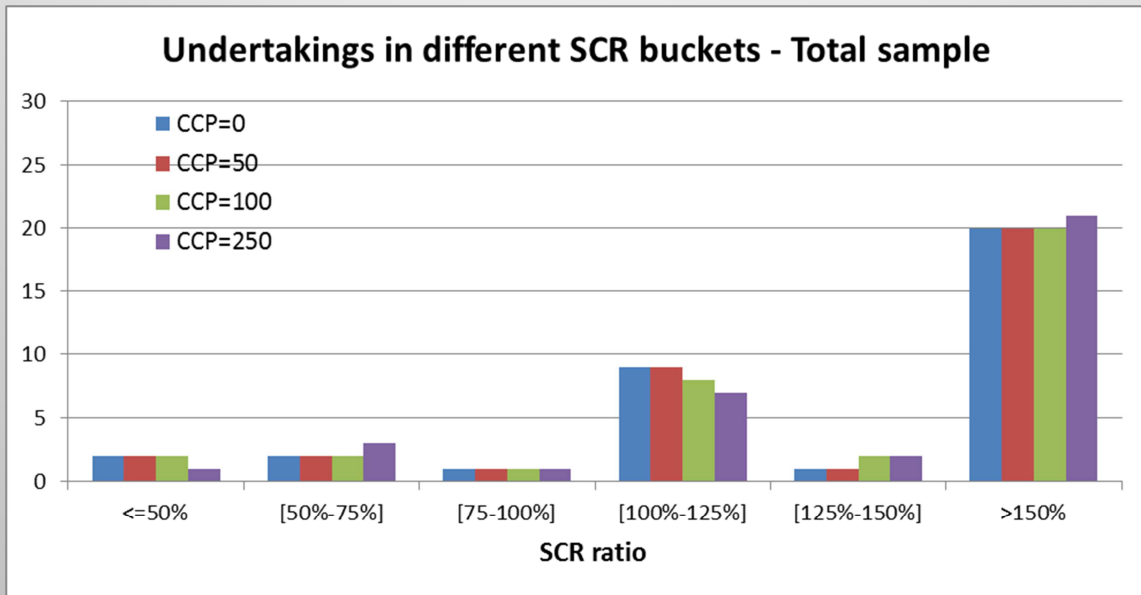


Figure 3.5. The distribution of the SCR ratios at YE11 for various CCP values (full sample).

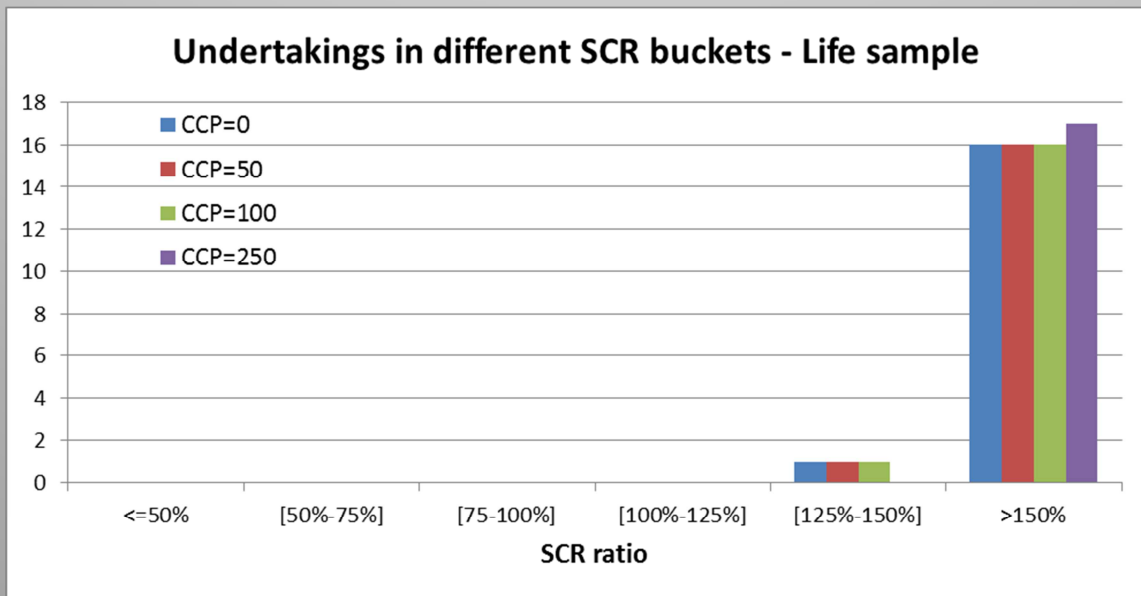


Figure 3.6. The distribution of the SCR ratios at YE11 for various CCP values (life sample).

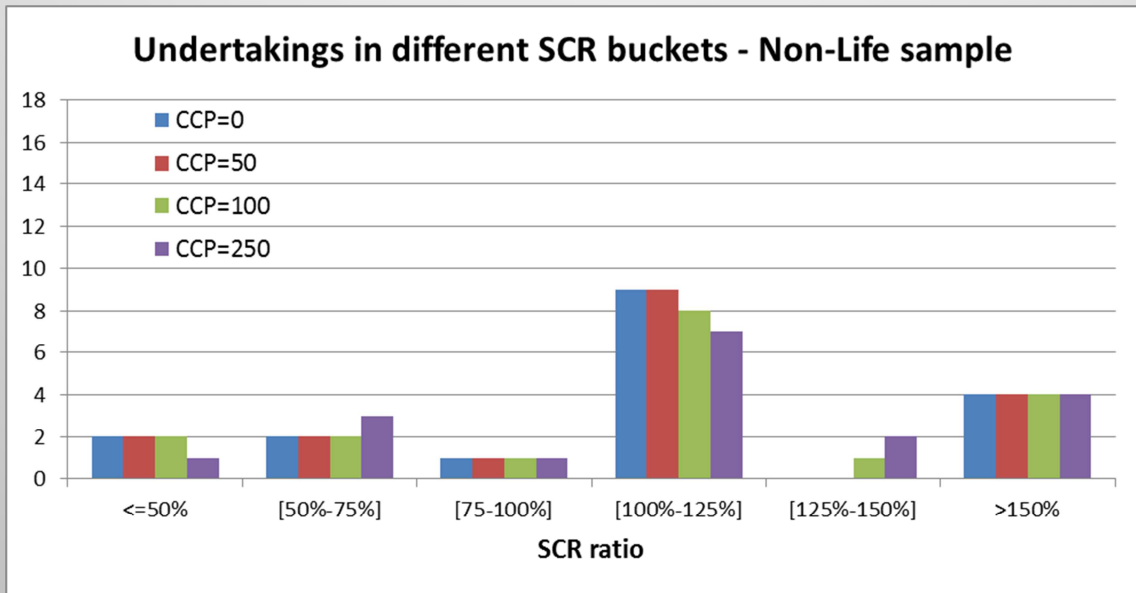


Figure 3.7. The distribution of the SCR ratios at YE11 for various CCP values (non-life sample).

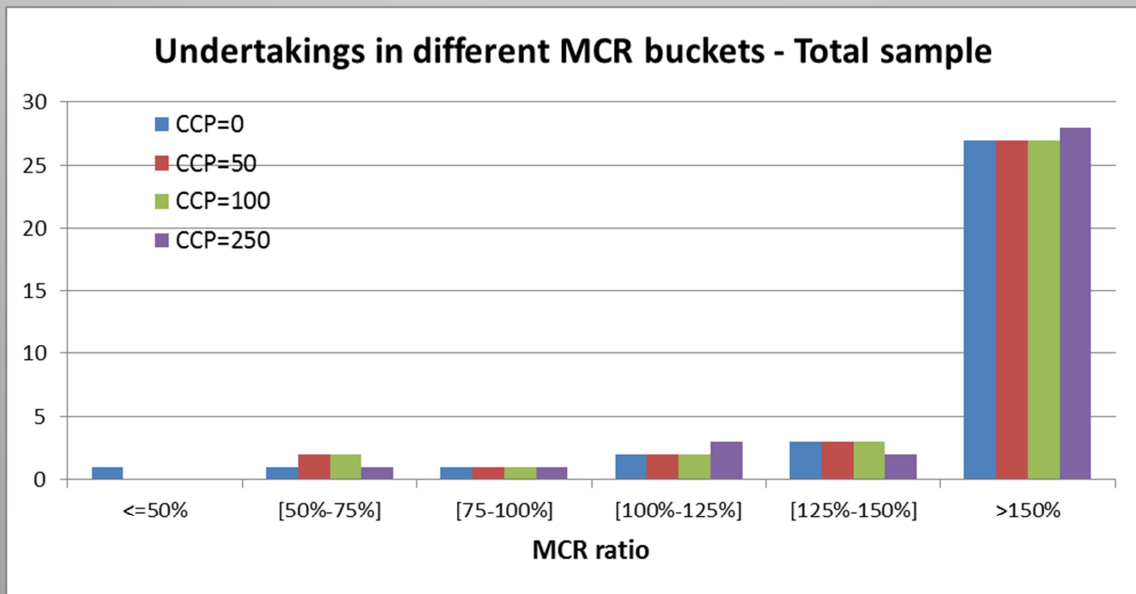


Figure 3.8. The distribution of the MCR ratios at YE11 for various CCP values (full sample).

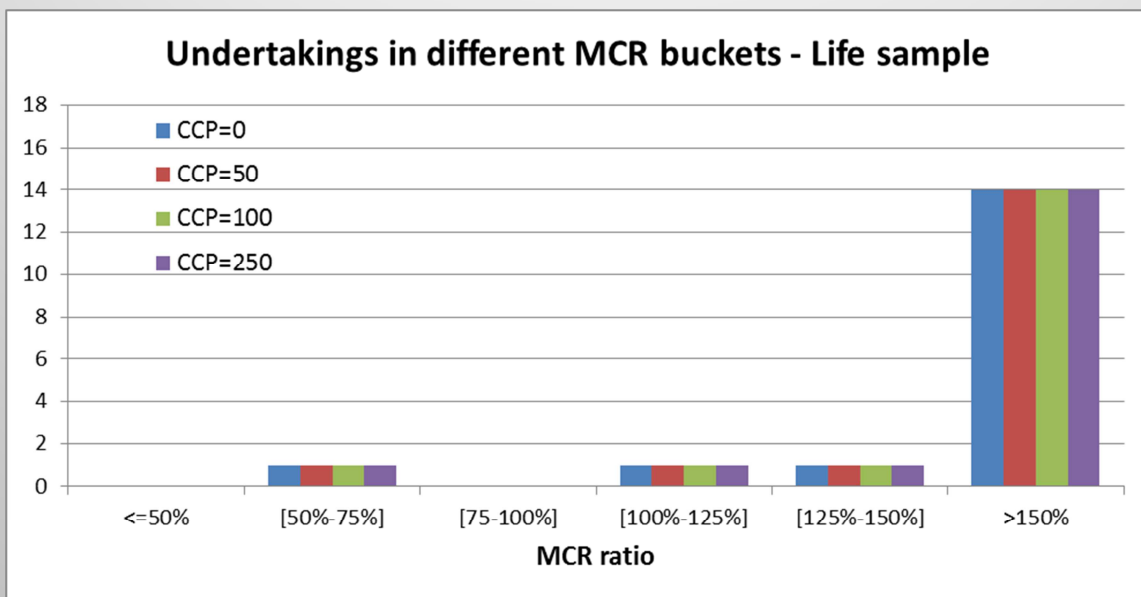


Figure 3.9. The distribution of the MCR ratios at YE11 for various CCP values (life sample).

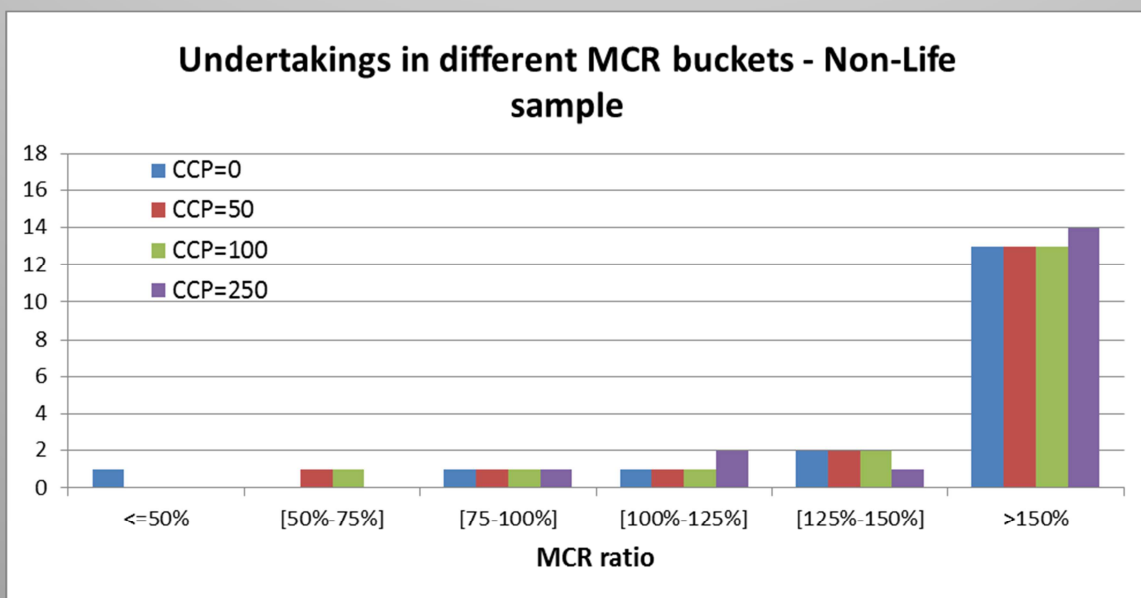


Figure 3.10. The distribution of the MCR ratios at YE11 for various CCP values (non-life sample).

As an add-on analysis the impact of the CCP risk submodule has been tested i.e. it's deletion from the market SCR. The impact and the transmission mechanism are illustrated on the below figures. As a result, in the current CCP methodology, the effect on technical provisions dominates the effect on the SCR. For the life sector the exclusion of the CCP risk submodule has a significantly higher effect on the SCR ratio comparing to the non-life sector. This is due to different risk profiles.

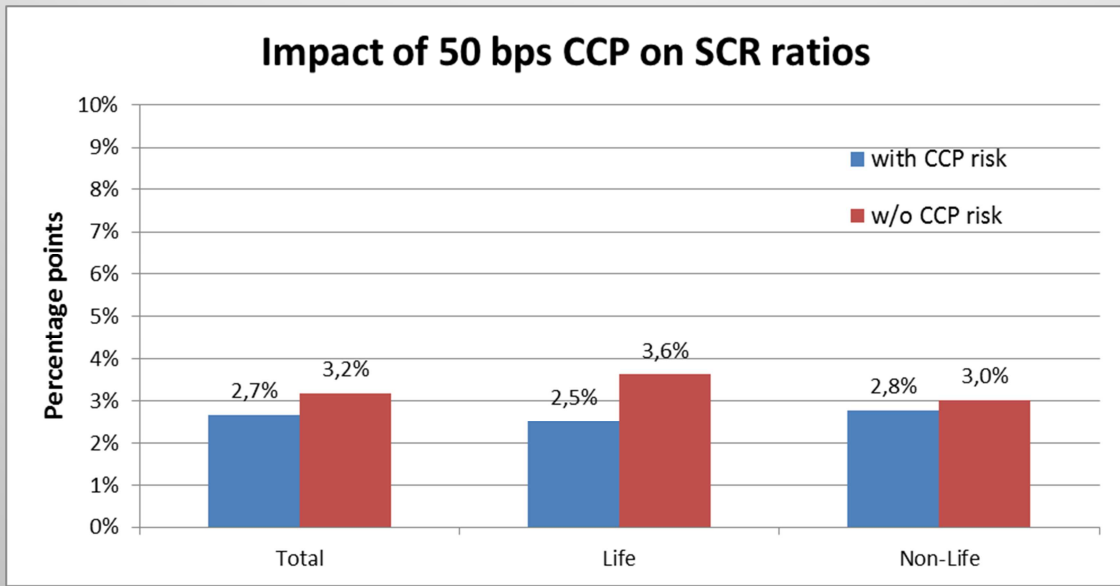


Figure 3.11. The impact of the introduction of the CCP on the SCR ratios at YE11.

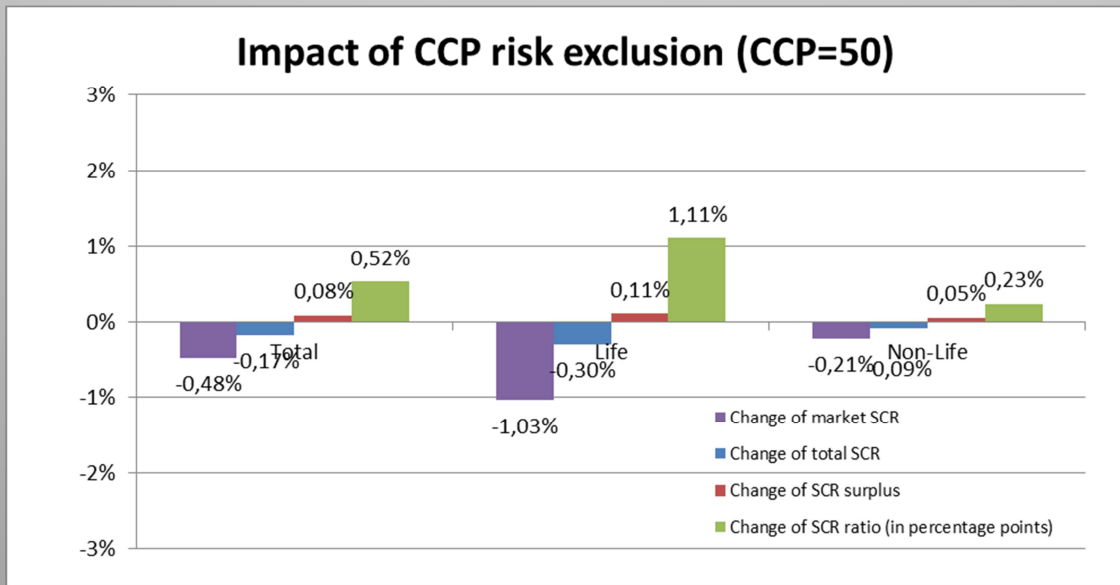


Figure 3.12. The impact of the exclusion of the CCP risk from the market risk SCR at YE11.

**YE09**

It should be noted that all analysis at YE09 shown in this section are based on scenarios 1 and 10 and since no entity has applied the classical MA Standard version, the Extended MA Standard I version, the analysis of movement can be attributed to the CCP effect. Furthermore, the extrapolation for PLN uses a last liquid point of 10 years and a convergence period of 10 years. In this section the results for scenario 1 differ from the results presented in the above section due to differences in the sample composition, i.e. the results presented in the current section are aggregated for those entities that delivered the results for both scenario 1 and scenario 10.

The following chart shows the respective discount curves relating to relevant scenarios.

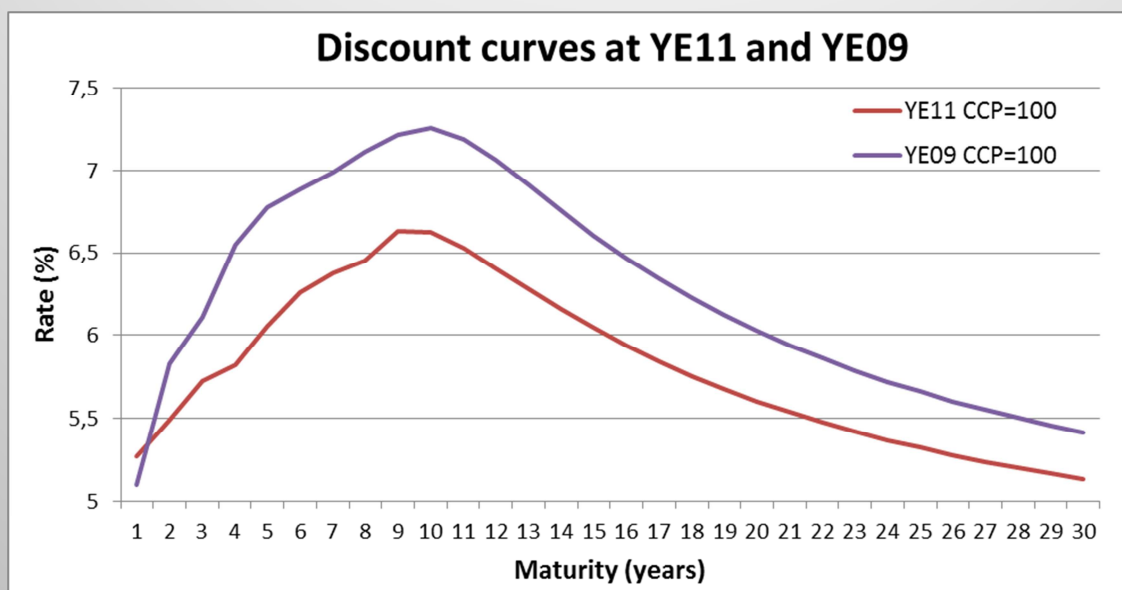


Figure 3.13. PLN discount curves at YE11 and YE09 (with the CCP of 100 bps).

The next graph displays the change in total technical provisions comparing the market conditions at YE11 and YE09. Due to higher discount rates the technical provisions are lower at YE09 by 1,5%.

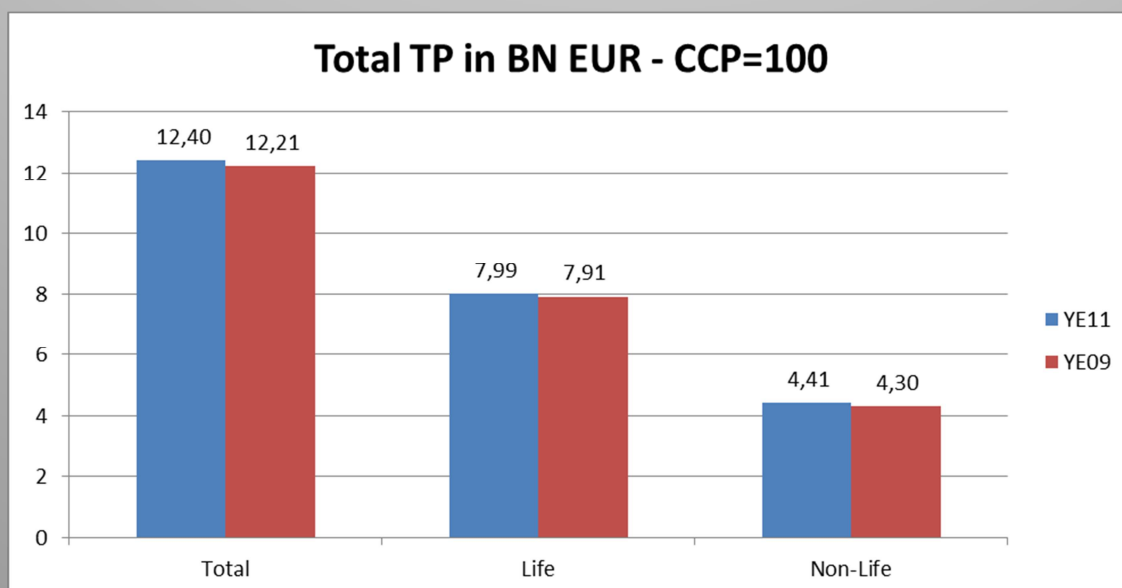


Figure 3.14. Total technical provisions at YE11 and YE09 (with the CCP of 100 bps).

The impact on the SCR/MCR surpluses and the SCR/MCR ratios are illustrated on the following figures. **The time effect is stronger than the introduction of the CCP of 50 bps at YE11. This might be interpreted as a warning that more attention shall be put on stability assessment of the LTG package over time.** The time effect is stronger for the non-life sample when comparing YE11 and YE09.

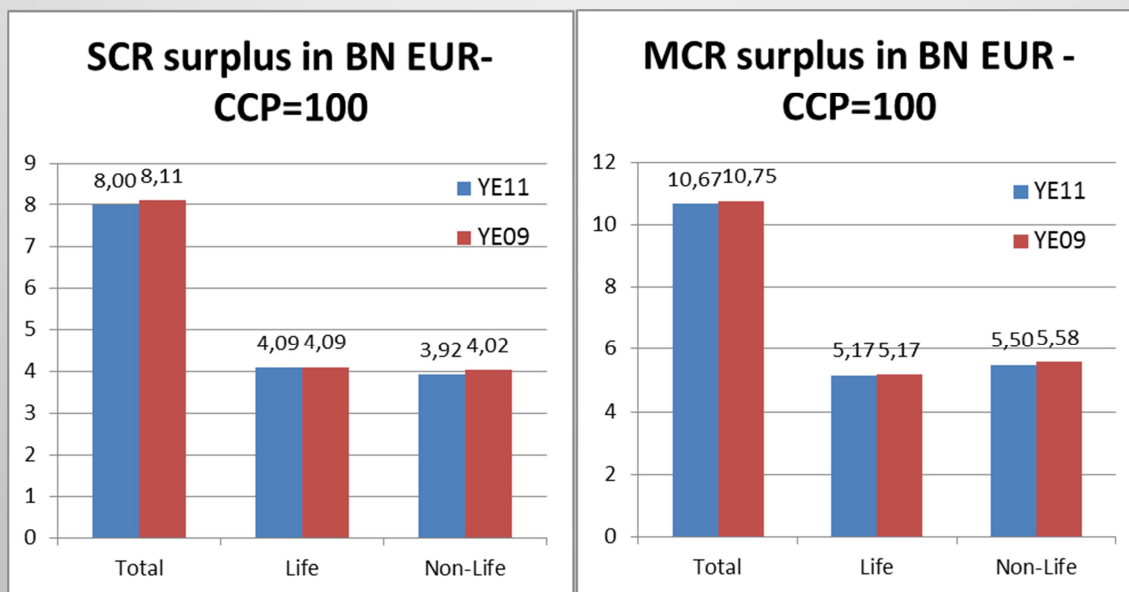


Figure 3.15. The SCR/MCR surpluses at YE11 and YE09 (with the CCP of 100 bps).

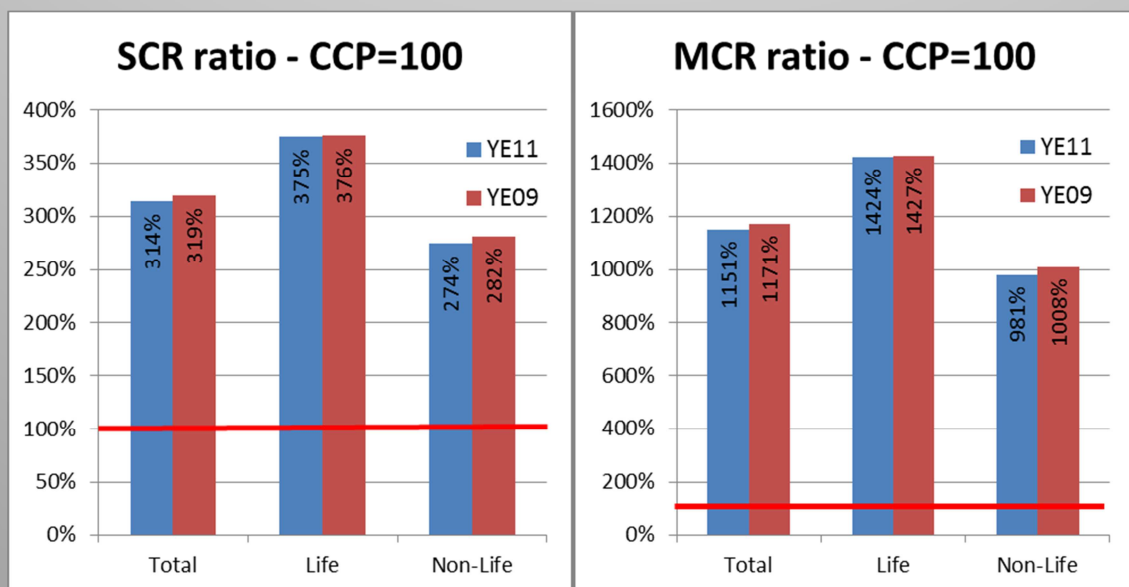


Figure 3.16. The SCR/MCR ratios at YE11 and YE09 (with the CCP of 100 bps).

#### YE04

It should be noted that all analysis at YE04 shown in this section are based on scenarios 0 and 12. No entity has applied the classical MA Standard version and the Extended MA Standard I version. Both scenarios assumed no CCP. Furthermore, the extrapolation for PLN uses a last liquid point of 40 years (scenario 0) and a convergence period of 10 years (scenario 12), but the extrapolation effect is expected to be dominated by the difference between market conditions at YE11 and YE04.<sup>3</sup> In this section the results for scenario 0 differ from the results presented in the above section due to differences in the sample composition, i.e. the results

<sup>3</sup> This due to the fact that weighted average duration of liabilities is less than 4 years, much lower than the LLP.

presented in the current section are aggregated for those entities that delivered the results for both scenario 0 and scenario 12.

The following chart shows the respective discount curves relating to relevant scenarios.

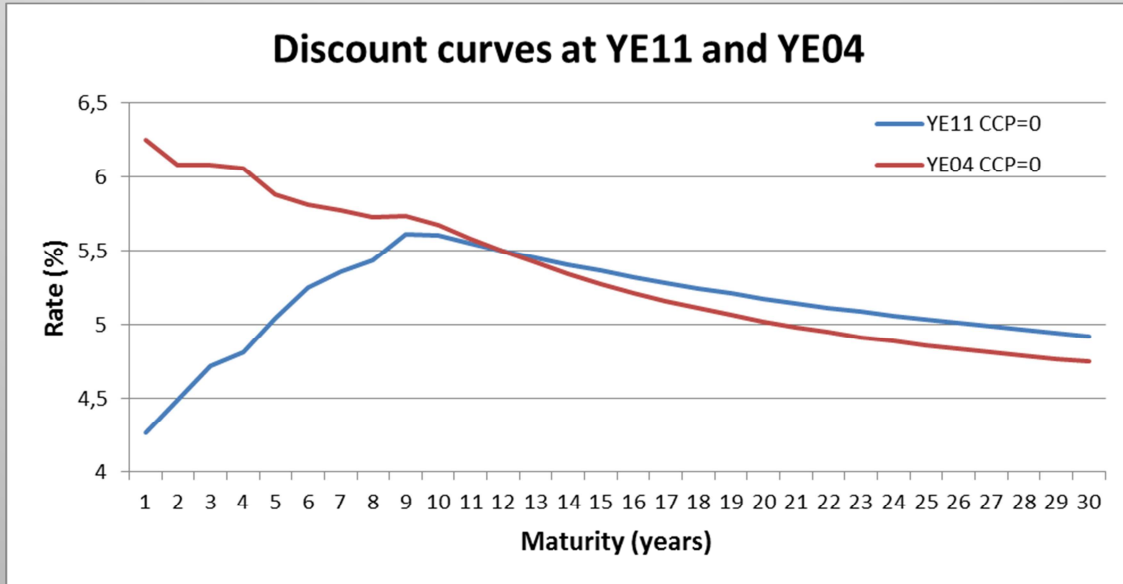


Figure 3.17. PLN discount curves at YE11 and YE04 (without the CCP).

The next graph displays the change in total technical provisions comparing the market conditions at YE11 and YE04. Due to higher discount rates the technical provisions are lower at YE04 by 4,2%.

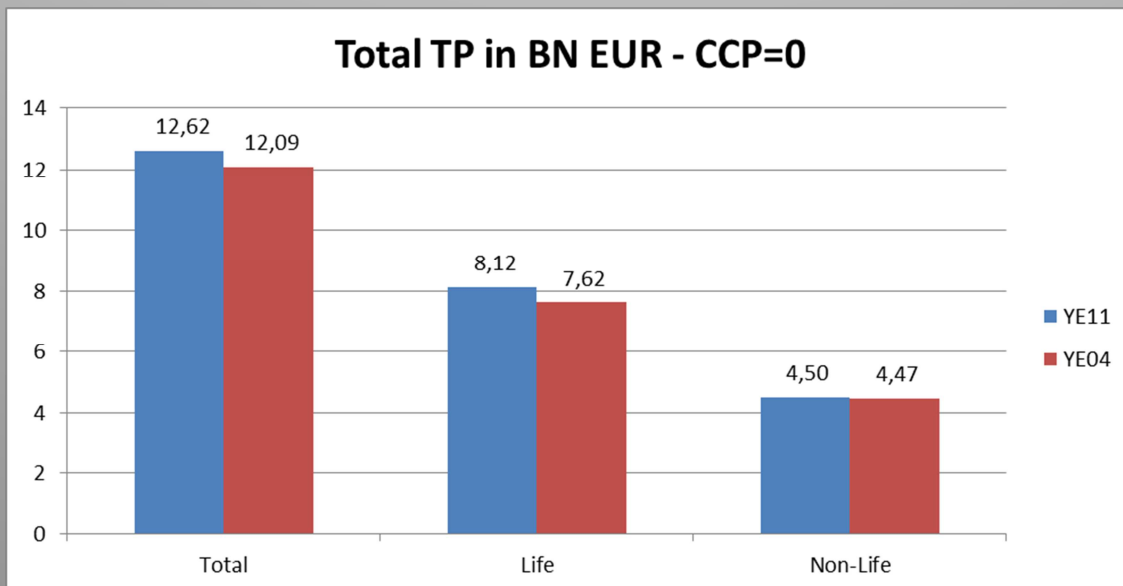


Figure 3.18. Total technical provisions at YE11 and YE04 (without the CCP).

The impact on the SCR/MCR surpluses and the SCR/MCR ratios are illustrated on the following figures. Again the time effect is strong.

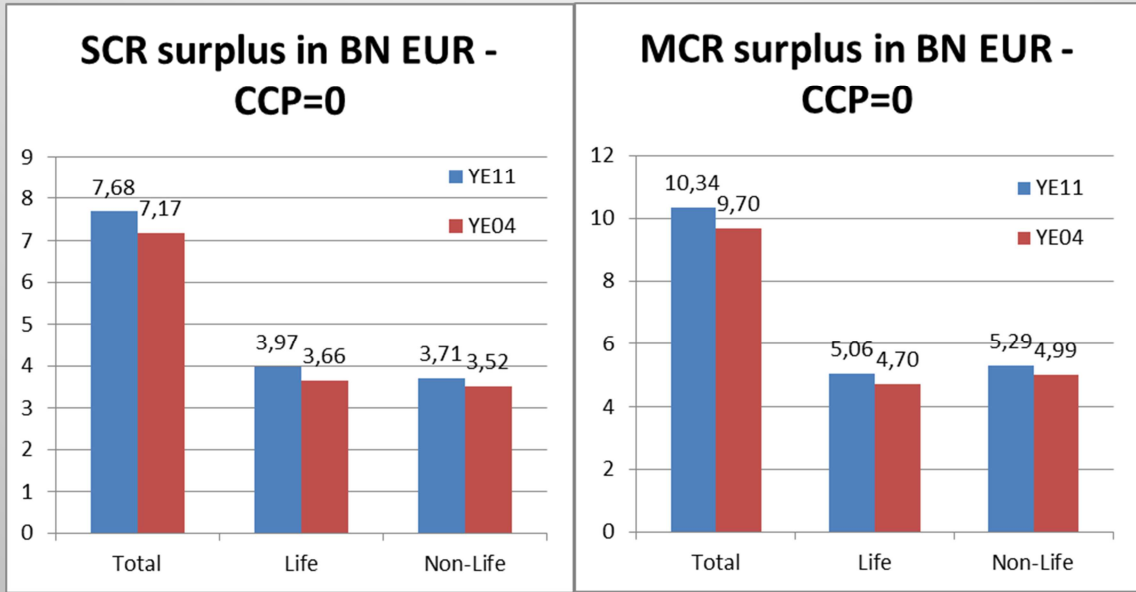


Figure 3.19. The SCR/MCR surpluses at YE11 and YE04 (without the CCP).

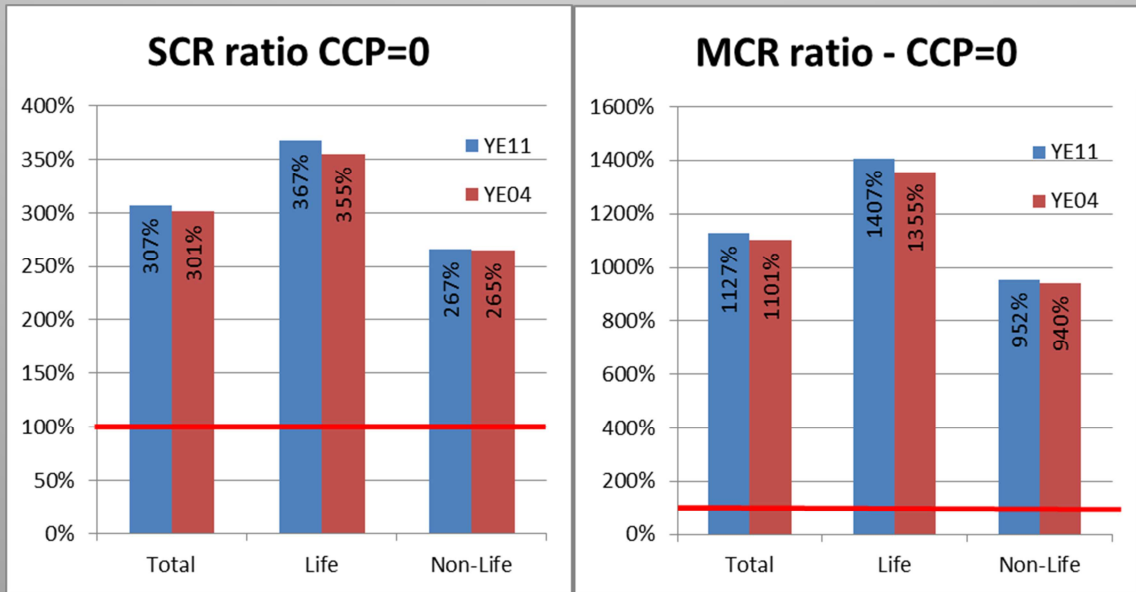


Figure 3.20. The SCR/MCR ratios at YE11 and YE04 (without the CCP).

### 3.7.2. Undertakings by size (small, medium, large)

As the LTGA sample is largely dominated by small undertakings<sup>4</sup> due to confidentiality reasons no separate data is provided for this section.

### 3.7.3. Undertakings by type (Life, NL, Health, Re, Composites)

See section 3.7.1.

<sup>4</sup> According to EIOPA terminology.



### 3.7.4. Group aspects

The impact was assessed with respect to all LTG measures altogether – please, see section 1.4.4.

### 3.7.5. National market insights (only where special observations have been made)

See section 3.7.1.

### 3.7.6. Cross-border business

None material issues has been identified.

### 3.7.7. SII balance sheet volatility

See the time effect in section 3.7.1.

## 3.8. Impact on competition

The impact was assessed with respect to all LTG measures altogether – please, see section 1.4.8.

## 3.9. Impact on Long Term Investments

Given that the CCP is per definition only applied under stressed market conditions, the impact on the general long-term investment behaviour is seen to be comparatively small. More fundamentally, the CCP is not designed to permanently diminish short-time volatility of balance sheet of an individual undertaking.

### 3.1. Other considerations

None material issues has been identified.

### 3.2. Main technical findings on the individual measure (Counter-cyclical Premium)

See executive summary.

## 4. Extrapolation – Article 77b

### 4.1. Purpose of the measure and highlights of the tested approach (Extrapolation)

#### *General concept*

Insurance obligations may have a longer term to maturity than the assets available in the market to determine the term structure of the interest rate used for valuation of technical provisions. Extrapolation is a method to define the risk free rate term structure for maturities, for which no reliable market data exists (i.e. for markets for which the financial markets for bonds or for reference instruments cannot be considered to be active, deep, liquid and transparent). For Solvency II a macroeconomic extrapolation method will be chosen, i.e. the forward rates converge to a (macroeconomic) long term equilibrium rate (the ultimate forward rate) in a specified period of time, the so called convergence period.

It is possible to analyse the impact on the value of technical provisions of a specific extrapolation method and the relevant parameters. EIOPA applies the Smith-Wilson method for extrapolation, whereby the forward rates converge to the Ultimate Forward Rate (UFR) and from which a spot curve is derived. The spot rate thus also converges to the level of UFR, albeit more slowly than the forward rate.

#### *Tested approach*

The LTGA involved the testing of different scenarios. The aim of all these calculations with regards to extrapolation was testing different levels of convergence speed (between 10 and 40 years). The last liquid point for PLN was 10 years.

For this entire section, it should be noted that the key extrapolation scenarios 1 and 5 tested the measure fully in isolation, as the quantitative results are also impacted by other measures, most notably the CCP which in both scenarios has a value of 100 basis points which resulted in an upwards shift of the risk-free rate curve of 100 basis points. The CCP disturbance is expected to be relatively small in PLN as the weighted average duration of liabilities is less than 4 years.

#### *Role of convergence speed*

If the spot rate at the LLP is below UFR, a rapid convergence will lead to a higher discount rate after the LLP and therefore a lower value of technical provisions than a slower rate of convergence. In the context of the LTGA, for YE11, for 11 European currencies out of 14, the spot rate at the LLP was below the UFR which was set to 4.2% for all currencies.

In general, for a spot rate at the LLP above UFR (e.g. the case of PLN at YE11, YE09, YE04), a rapid convergence will lead to a lower discount rate after the LLP and therefore a higher value of technical provisions than a slower rate of convergence.

It should be noted that the UFR was chosen as the macroeconomic long term equilibrium of long term interest rate plus long term inflation. The UFR level as applied in the LTGA should not be seen as a final calibration.

## 4.2. Impact on policy holder protection

No visible impact on policyholder protection has been noticed in the LTGA results for Poland.

## 4.3. Impact on effective and efficient supervision

The use of extrapolation, similarly as in case of the risk-free-rate transitional, should have the smallest impact on the supervision of undertakings in Poland of all the LTG measures. The first instrument will be calculated and provided by EIOPA based on the economic factors. The only more burdensome activity for both EIOPA and national supervisors would be to perform the ADLT criteria verification for the markets (active, deep, liquid, transparent).

## 4.4. Implementation effort

### 4.4.1. For industry

Generally, the impact was assessed with respect to all LTG measures altogether – please, see section 1.4.4.

With regard to extrapolation, an additional observation has been made that the non-availability of liquid assets in PLN with long maturities (beyond 10 years) encourages the application of extrapolation.

### 4.4.2. For NSA

In the view of the Polish FSA, no particular impact on the Supervisory Review Process (SRP) is foreseen in case of extrapolation and risk-free-rate transitional use. The calculation and use of these measures are either quite simple or dependent on EIOPA's actions. The impact of these measures will need to be assessed as a regular part of the SRP, as the impact of any other factors which may influence the condition and risk-outlook of the undertaking.

## 4.5. Incentives for good risk management

None material issues has been identified.

## 4.6. Impact on financial stability and prevention of systemic risks

None material issues has been identified.

## 4.7. Impact on insurance and reinsurance undertakings' solvency position

### 4.7.1. All undertakings

The LTGA calculations enable a direct comparison to be made for a variation of the speed of convergence in the extrapolation by comparing the outcomes of the tested scenarios 1 and 5. The only difference between these scenarios is a difference in the convergence period between 40 years in scenario 1 and 10 years in scenario 5.

Only undertakings that provided the outcomes for both scenarios are included in this section.

The following chart shows the respective discount curves relating to relevant scenarios.

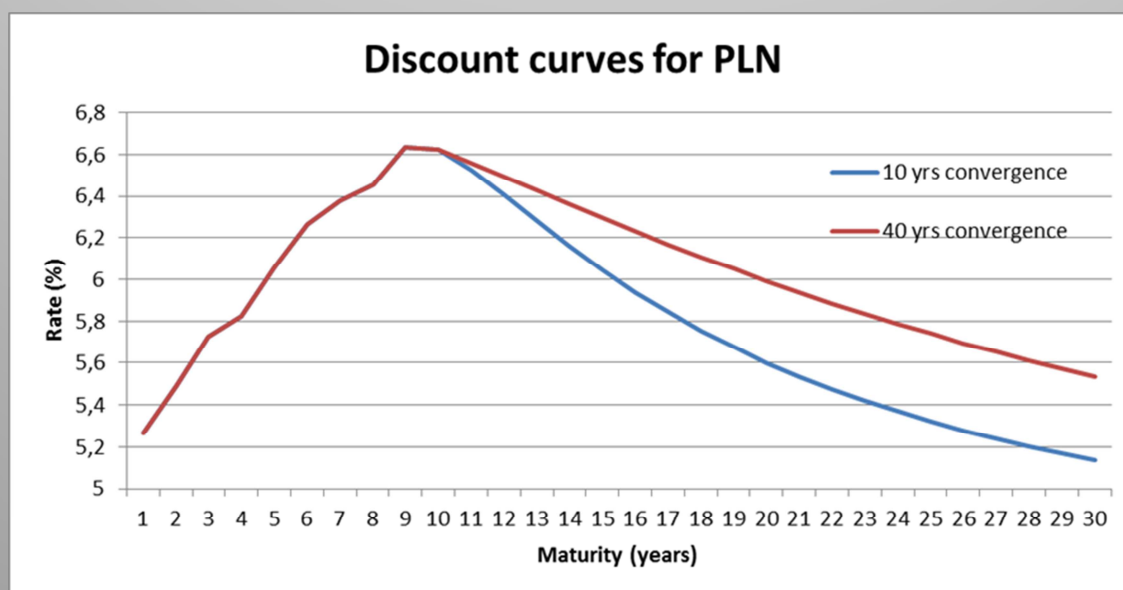


Figure 4.1. PLN discount curves at YE11 with different convergence periods (100 bps of the CCP).

The next graph displays the change in total technical provisions comparing the scenarios with 10 and 40 years of convergence and scenario 0 at YE11. Assuming the CCP value of 100 bps, an increase in technical provisions due the change from 10 to 40 years of the convergence period is estimated to be 0,9%. The effect for non-life undertakings on technical provisions is estimated to be higher (1,8%). The comparison with scenario 0 show that the effect of the CCP is much stronger than the extrapolation, particularly for the life sector.

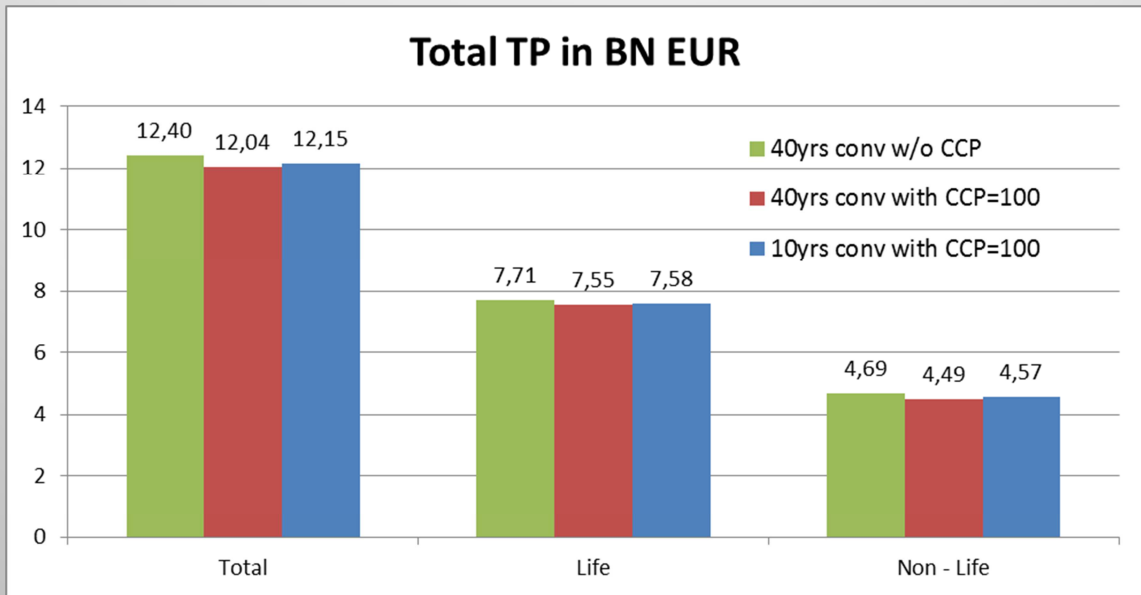


Figure 4.2. Total technical provisions at YE11 with different convergence periods.

The impact of extrapolation on the SCR/MCR surpluses and the SCR/MCR ratios are illustrated on the following figures. Overall the impact is relatively low and stronger for the non-life sample.

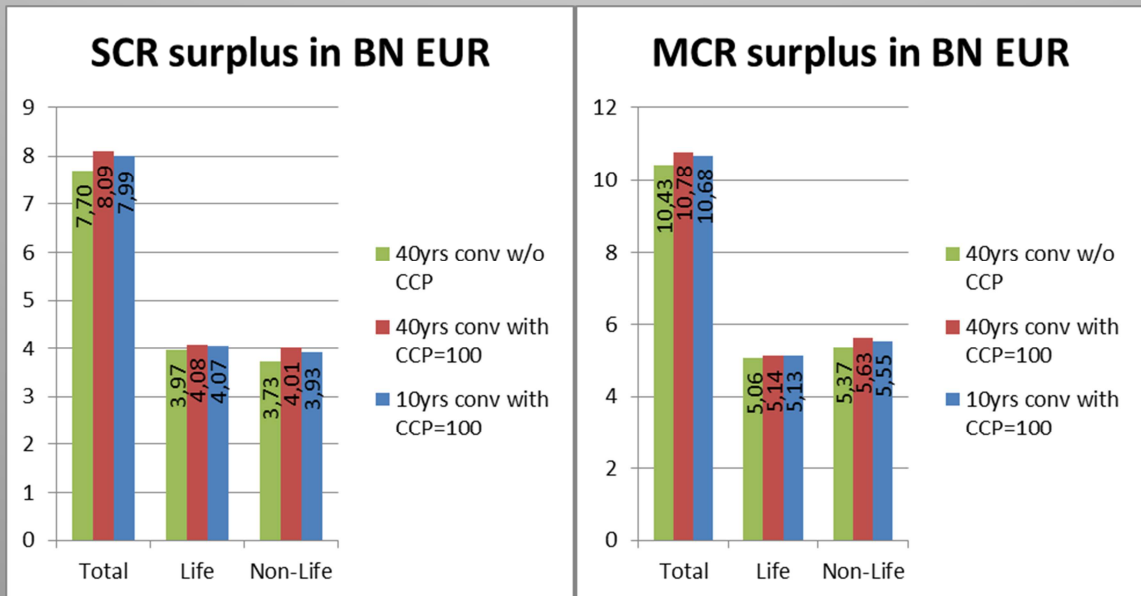


Figure 4.3. The SCR/MCR surpluses at YE11 with different convergence periods.

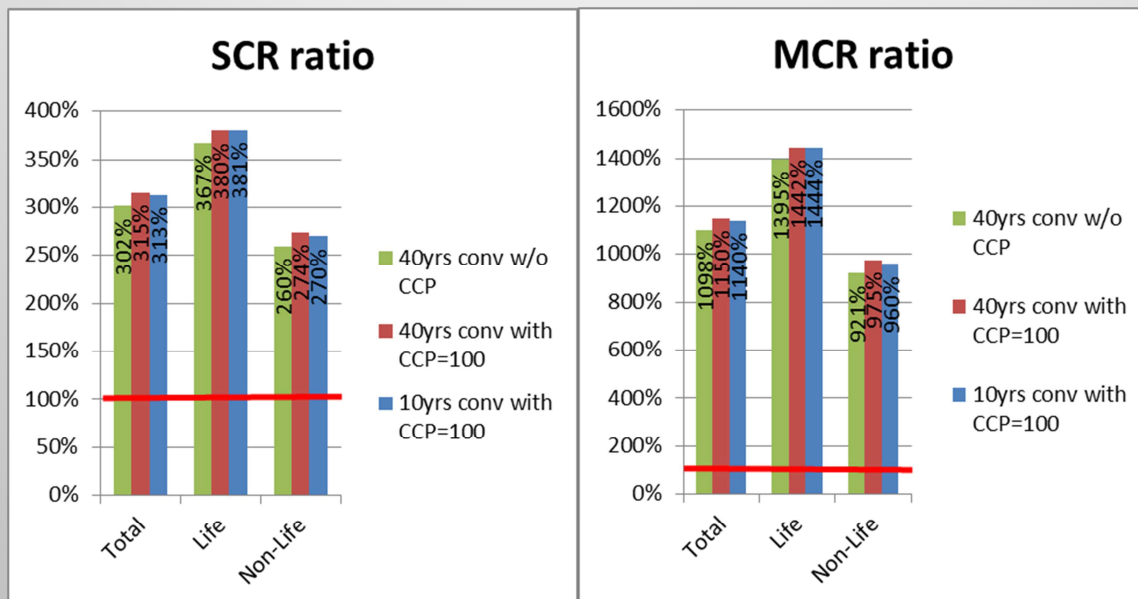


Figure 4.4. The SCR/MCR ratios at YE11 with different convergence periods.

#### 4.7.2. Undertakings by size (small, medium, large)

As the sample is largely dominated by small undertakings due to confidentiality reasons no separate data is provided for this section.

#### 4.7.3. Undertakings by type (Life, NL, Health, Re, Composites)

See section 4.7.1.

#### 4.7.4. Group aspects

The impact was assessed with respect to all the LTG measures altogether – please, see section 1.4.4.

#### 4.7.5. National market insights (only where special observations have been made)

See section 4.7.1.

#### 4.7.6. Cross-border business

None material issues have been identified.

#### 4.7.7. SII balance sheet volatility

Currently the measure is of less importance as the weighted durations of liabilities is lower than the LLP. See section 4.7.1 for more details.

#### 4.8. Impact on competition

None material issues have been identified.

#### 4.9. Impact on Long Term Investments

None material issues have been identified.

#### 4.10. Other considerations

None material issues have been identified.

#### 4.11. Main technical findings on the individual measure (Extrapolation)

See executive summary.



## 5. “Classical” Matching adjustment – Article 77c

The instrument has not been used in the Polish sample. The vast majority of respondents indicated that their liabilities did not qualify for the Classical Matching Adjustment.

### 5.1. Purpose of the measures and highlights of the tested approach (Matching adjustment)

The matching adjustment is an adjustment to the discount rate used to value predictable liabilities, whereby the market value of the liability mirrors the market changes evident in the asset values which are not related to default or downgrade costs. It is equal to the spread over the risk-free rate on admissible backing assets, less an estimate of the costs of default and downgrade (the fundamental spread). The matching adjustment can turn negative during periods of market exuberance, when spreads are generally low. In such cases technical provisions would be increased by the application of the classic MA.

The Classical MA as tested was not applicable to non-life businesses and reinsurance businesses. There were also other application conditions which in the end prevented the use by the Polish entities.

### 5.1. Impact on policy holder protection

Not applicable.

### 5.2. Impact on effective and efficient supervision

Not applicable.

### 5.3. Implementation effort

#### 5.3.1. For industry

Not applicable.

#### 5.3.2. For NSA

Not applicable.

### 5.4. Incentives for good risk management

Not applicable.

## 5.5. Impact on financial stability and prevention of systemic risks

Not applicable.

## 5.6. Impact on insurance and reinsurance undertakings' solvency position

Not applicable.

### 5.6.1. All undertakings

### 5.6.2. Undertakings by size (small, medium, large)

### 5.6.3. Undertakings by type (Life, NL, Health, Re, Composites)

### 5.6.4. Group aspects

### 5.6.5. National market insights (only where special observations have been made)

### 5.6.6. Cross-border business

### 5.6.7. SII balance sheet volatility

## 5.7. Impact on competition

The application conditions of the Classical Matching Adjustment are more suitable for particular markets of the EU. A significant part of these markets constitute in life insurance, especially contracts providing retirement and retirement-like protection, for which the conditions of a paid-up premium, ring-fencing and lack of policyholders options are fulfilled with no greater effort.

The Polish market needs the stabilization of short-term fluctuations in order to be able to achieve such level of development in the future. Therefore, it is of a vital importance for this market that the so called Extended Matching Adjustment is also made available to the undertakings under Solvency II. Any potential use of the measure in the future would require additional work on its methodology which was complex in the LTGA. However, overall it seems to be well off-set by the potential benefits from the application of this instrument, i.e. the stabilization of certain items of the (re)insurers' balance sheets.

## 5.8. Impact on Long Term Investments

See section 5.7.

## 5.9. Other considerations

No major issues have been identified.

## 5.10. Main technical findings on the individual measure ("Classical" MA)

See executive summary.

## 6. “Extended” Matching Adjustment – Article 77e

### 6.1. Purpose of the measures and highlights of the tested approach (Extended Matching adjustment)

The extended matching adjustment (EMA) differs from the classical matching adjustment (CMA) mainly by the fact that the assets of the assigned portfolio are held to back less predictable portfolio of insurance obligations. Insurance undertakings that apply the EMA are thus exposed to the risk of forced sale as a result of being matched with liability cash-flows subject to discontinuances.

To capture the uncertainty stemming from less predictable insurance obligations, an application ratio is set up. The application ratio intends to restrict the matching adjustment to allow for possible mismatch stemming from discontinuances or earlier than expected payments on eligible business. It is based on a measure of these costs under given stress scenarios.

Three versions of the extended matching adjustment applied for the impact assessment:

- EMA standard I (scenarios 1 to 5, 10 and 12)
- EMA standard II (scenario 7, 10)
- Alternative EMA (scenario 6)

#### *Difference between the standard EMA and the CMA*

The two major differences between the CMA and the standard EMA are the following:

- Allowance for unpredictable insurance obligations: all life and similar to life underwriting risks connected to the portfolio of insurance obligations are eligible to the EMA. Thus, insurance obligations exposed to lapse risk, mortality risk and disability/morbidity risk which are not fully predictable can benefit from the EMA. Furthermore, contracts underlying the portfolio of insurance obligations that still give rise to future premiums are not disqualified the portfolio for admissibility to the EMA.
- Reduction of the level of MA by the mean of an application ratio: the application ratio restricts the level of EMA to the share of asset and liability cash-flows which remains matched under stressed situations.

#### *Difference between the alternative EMA and the CMA*

In addition to the two above differences which are also relevant for the alternative EMA, this device is characterized by the relaxation of most of the governance requirements, especially:

- The matching criterion does not apply: insurance undertakings are not required to evidence any matching between asset cash-flows and liability cash-flows. A poorly matched portfolio would then be eligible.

- Asset cash-flows, like liability cash-flows, are allowed not to be predictable: the fixity of asset cash-flows requirement does not apply.
- The restrictions for good risk management do not apply: the EMA incentivizes investments in risky assets for such investments would earn a greater MA, no restriction on credit quality of assets applies (i.e. assets whose credit quality is below credit quality step 3 are eligible, the share of credit quality step 3 corporate bonds in the whole asset portfolio can be greater than 33%, the level of MA that insurers can obtain from credit quality step 3 assets can exceed the higher of the MA for assets of credit quality step 1 and 2) are removed.
- The fundamental spread is reduced: the fundamental spread only equals to the credit spread that corresponds to the probability of default of the assets (i.e. the calculation includes neither a component for downgrading risk nor a floor based on the long-term average of the spread).

#### *Calculation of the application ratio*

The application ratio shall ensure that insurance undertakings incur no losses due to mismatching and forced sales of assets with a probability of 99.5% over the period till run-off of the obligations.

The application ratio in respect of a portfolio of eligible obligations shall thus capture the portion of obligations which remains matched under stressed situations. Participants, shall apply the prescribed the formula for the application ratio.

## 6.2. Impact on policy holder protection

Quantitative impact of the Extended Matching Adjustment application on the solvency positions of the undertakings is described in the section 6.7. This instrument has been applied by a limited number of participants (less than 15% of the obligations portfolio of the whole industry). Its quantitative impact on the own funds was much smaller than the impact of the CCP application. Therefore it is justified to state that the Extended Matching Adjustment in case of Poland should not have any negative impact on policyholder protection, in particular should not lead to technical provisions' insufficiency. The methodology of the Extended Matching Adjustment calculation is complex and the applicability conditions are rigid. Therefore, only these undertakings which possess long-term obligations well matched with liabilities, as an inherent part of their business, would make an effort to make use of the Extended Matching Adjustment. Moreover, taking into consideration that in case of Poland the Extended Matching Adjustment seems to be the most effective instrument of the LTG package that may reduce the variability of own funds, its impact on policyholder protection should be concluded as positive.

#### *Product availability*

Most of the (re)insurers who took part in the assessment indicated that the impact of the LTGA measures on the existing portfolio is small or and they don't expect any business

impact. However, a few undertakings did envisage the impact. They agree that without appropriate mechanisms product design will focus on shorter maturities and guarantees or increase policyholders' charges due to artificial volatility and incorrect measure of the risk (and not due to the too high risk). They indicated also lack of competitiveness of the insurance industry due to the unjustified high capital requirements backing artificial volatility. Mechanism such as the Matching Adjustment has been assessed as an essential to adequately reflect the fact that certain asset and liability characteristics reduce the exposure of insurers to spread risk (and the associated valuation movements). The supervisory authority is also of the opinion that for the Polish market the non-application of the Extended Matching Adjustment will most likely result in deepening of the already visible shift by insurers from traditional insurance products to investment-like products with limited protection against risks for policyholders. This shift is not beneficial for policyholders and should be restricted. Insurance business should be insurance in its nature, not banking or investment business. One must notice, however, that a challenging timing of the LTG assessment, coinciding with the preparation of the annual financial statements by Polish (re)insurers, has made it difficult to fully test the existing products/obligations. Which makes, therefore, even harder to anticipate how the products may evolve in the future.

The supervisory authority does not expect any products to disappear as a result of LTG measures application. At the most, it is possible that new products will be introduced to the market. We expect that these new products will resemble the traditional life insurance of a long duration and will be of a protective nature to policyholders. The LTG measures, in particular the matching adjustment, should facilitate the offer of such products under Solvency II by reducing artificial volatility of the own funds. Market consistent valuation does not support the long-term perspective of insurance activity, in particular life insurance activity and underwriting of life-similar risks by non-life insurers.

It seems unlikely that insurance products benefitting from LTG would displace other products offered by insurers. These other products, especially the unit-linked insurance and structured products, are quite profitable for insurance undertakings and satisfy the investment needs of policyholders rather than their pursuit for insurance protection.

It seems even more unlikely that insurance products benefitting from LTG would displace other products offered by non-insurers. The LTG impact on the Polish market is definitely too low for such an effect.

In fact, the LTG measures, especially the extended matching adjustment, may rather off-set advantages/preferences for the short-term contracts which are inherent in the Solvency II framework thus providing more balance into the competitive conditions for the products. Therefore, it is difficult to see any incentives for products displacements in the LTG package. The situation should be quite the opposite.



### 6.3. Impact on effective and efficient supervision

The additional supervisory duties which the Extended Matching Adjustment would require seem to be well off-set and justified by the stabilizing effect it has proven for the Polish sample, especially if all data required for its supervision would constitute a part of Solvency II supervisory reporting.

The use of Matching Adjustment, either Classical or Extended version, will require additional verification by the supervisory authorities whether the conditions of Matching Adjustment application, are complied with on an on-going basis by the (re)insurance undertakings.

This should not add a lot of complexity to the supervisory review process, provided that reporting to supervisors in Solvency II contains necessary data to verify this matching – in particular – detailed cash flows of insurance liabilities split year-by-year. These data are already included in the annual reporting templates and the annual frequency of their submission seems sufficient. EIOPA may, however, consider the possibility of increasing information requirements for these undertakings which would use simplifications in the calculations of technical provisions and therefore would not provide all the necessary detailed cash-flows.

### 6.4. Implementation effort (with insights on internal model users if possible)

#### 6.4.1. For industry

Generally, the undertakings assessed the impact with respect to all LTG measures altogether – please, see section 1.4.4. A few undertakings, who did make any differentiation among the LTG measures, pointed out that CCP, matching adjustment (any version) and transitional measure will require the most additional resources.

Matching adjustment was the 1<sup>st</sup> element of the LTG package most commonly indicated by the industry participants as expected to be the most time and resource consuming in terms of implementation. Especially assets management and identification of the obligations that meet the criteria to apply matching adjustment were indicated in this context. Also the application ratio was concluded as extremely difficult and time consuming to calculate. The requirement to identify the portfolio as a ring fenced fund were also most commonly mentioned. At the same time, several undertakings indicated that the concept of matching adjustment is most adequate to reflect the economics of their life insurance obligations. One undertaking indicated that the Matching Adjustment would cost time and resources, but only because it is relatively new. Once processes have been implemented this would not cost additional time/resource. Due to the level of importance of the MA, this extra effort would be worth the extra cost. One undertaking pointed out that given the rules surrounding the matching adjustment they may need to rethink how their product lines are segmented and should they be backed by different portfolios.



As the most challenging issues in the survey in the scope of Matching Adjustment were mentioned: assessing whether the Matching Adjustment would apply, and to determine which version of the Matching Adjustment should be performed. Many of the discussions were also around the ring-fenced feasibility and how to address the hypothetical portfolios.

It is difficult to understand to which products, assets Matching Adjustment should be applied, and how exactly it should be calculated in case of Poland. However, most of the replies indicated that the Matching Adjustment and CCP are feasible in practice, and especially the Matching Adjustment can be feasible for certain portfolios or undertakings.

One undertaking also pointed out that both concepts create additional workload, however this is digestible once the methods are stable and allow for an automation of concepts. A few undertakings pointed out that under the current interpretation that EIOPA gives to the Technical Specifications, the use of the Matching Adjustment identifies the portfolio where the Matching Adjustment is being applied as a ring-fenced fund. The restrictions imposed to the ring-fenced funds may largely offset the benefits – in terms of solvency position - of increasing the discount rate by the Matching Adjustment, so that the application of the Matching Adjustment may be detrimental even for the eligible portfolios.

#### 6.4.2. For NSA

The most demanding instrument in terms of implementation for supervisors will probably be the Matching Adjustment (any version). However, since the Extended Matching Adjustment seems to be the most effective instrument of the LTG package which stabilizes technical provisions, own funds and capital requirements, therefore these implementation efforts seems to be well off-set by the potential benefits from the application of this instrument, i.e. the stabilization of the balance sheets.

At the later stage, the Polish FSA would focus on on-going supervision and verification of the adequacy of technical provisions, especially by gathering information on the detailed cash flows from insurance liabilities (within the supervisory reporting) and analysing the fulfilment of the matching condition. In certain cases, additional ad hoc reporting or stressed cash-flows may be necessary, for example in order to verify whether the forecasted cash flows hold the matching after application of shocks.

#### 6.5. Incentives for good risk management

The Polish FSA expects the increase in allocation of fixed-income instruments as these provide predictable cash-flows that can be matched with liabilities and therefore qualify for Extended Matching Adjustment. Artificial volatility implied by market valuation is regarded to be crucial issue, as our analyses clearly show that the balance sheet variability induced by the mark-to-market valuation requirement might take large fraction of own funds just to cover the day-to-day volatility of market prices.

Some respondents noticed that stabilizing the yield-curve for valuation purposes but addressing an adequate interest rate shock at the long end of the curve provides the right incentives for an adequate asset-liability management (ALM). It seems that the proposed measures would have a positive impact on effective risk management. They would encourage insurance companies to take better care of ALM risk. According to other respondents, effective risk management system requires that it is understood by all persons involved in portfolio management. Methods considered in LTGA do not fulfil this condition.

According to several respondents, not applying the Matching Adjustment would lead to an unjustified short term volatility of own fund. Without the Matching Adjustment, insurers with a buy-to-hold investment strategy could be forced to prematurely sell assets which were bought to match their long-term liabilities (irrespective of the fact that the liabilities are not due). For these insurers, the real risk in relation to bonds is default risk, not spread risk. When spreads go up, Solvency II would underestimate the own funds, requiring insurers to take unnecessary action and potentially pro-cyclical actions.

Extended Matching Adjustment is seen as a strong incentive to minimise the mismatch of cash flows between the assets and liabilities. Its positive effect would be visible through better asset liability matching for annuities related products (in non-life insurance).

Some respondents noticed that regarding the Matching Adjustment, the eligibility criteria applying to assets risk will have major impacts on the asset allocation in general. Asset eligibility should be analysed at portfolio level, rather than at asset by asset level, to reflect the real economics (e.g. a floating-rate bond combined with a floating-to-fixed swap is the same as a fixed-rate bond). The current approach unnecessarily risks rendering certain asset classes ineligible for the Matching Adjustment. This would make it very difficult for companies to include such assets in their long-term investment strategy. Additionally, any strict ring-fencing requirements in the context of the matching adjustment would also reduce unnecessarily portfolio diversification at company level. The proposed matching adjustment technique shall contribute to better structure of assets backing the long term liabilities as far as duration is concerned.

## 6.6. Impact on financial stability and prevention of systemic risks

The Extended Matching Adjustment has the biggest potential of reducing pro-cyclicality, however the complexity of this instrument and rigid application conditions makes it a tool for a narrow group of undertakings only.

The Extended Matching Adjustment in case of Poland will be the most efficient measure of the LTG package to reduce artificial volatility. Thus, it would also have a positive impact for the supervision of undertakings from a systemic perspective. It should bring benefits in terms of more stable financial condition of the undertakings and the offer of traditional insurance products to policyholders.

## 6.7. Impact on insurance and reinsurance undertakings' solvency position

### 6.7.1. All undertakings

Due to tight timelines of the LTGA exercise and complexity of the extended alternative matching adjustment only 10 out of 35 entities submitted the results for scenario 6, representing approx. 12% of technical provisions, of which only 25% applied the matching adjustment (see the below figure).

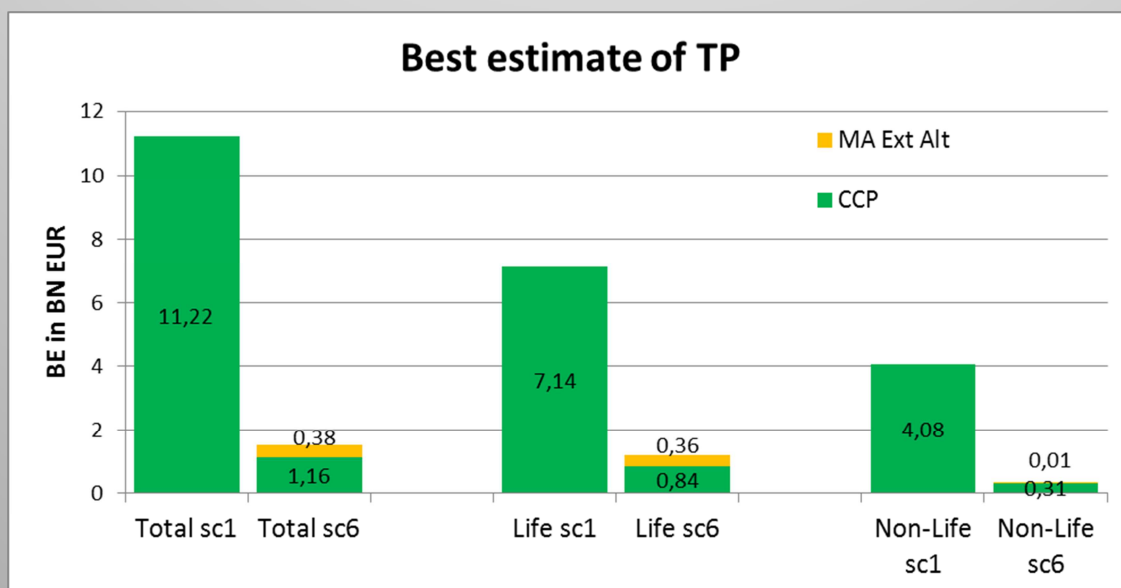


Figure 6.1. Extended alternative matching adjustment coverage.

The below table shows the values of the application ratio (50%) and the matching adjustment (0,3%).<sup>5</sup> Therefore, the size of the application ratio significantly lowered the final value of the matching adjustment.

Sample	Application Ratio	MA
Total	50,4%	0,3%
Life	49,9%	0,3%
Non-Life	62,5%	0,0%

Table 6.1. Average application ratio and applied matching adjustment.

In terms of solvency position, on comparative basis<sup>6</sup>, the SCR ratio dropped by 1 percentage point from 200% in scenario 1 to 199% in scenario 6. The decrease was due to the fact that the MA size (30 bps) was lower than the 100 bps value of the CCP and the priority of the MA application.

<sup>5</sup> Averages weighted by technical provisions.

<sup>6</sup> Meaning the sample of all the companies that provided the results for both scenario 1 and scenario 6.

Therefore, another approach is needed to estimate the effect of the introduction of the MA alone. Due to the low coverage of scenario 6, it might be interesting to estimate the impact of the extended alternative matching adjustment on the SCR/MCR ratios if this measure was to be applied to the full LTGA sample. Assuming the average MA and taking the results from Table 3.16, the introduction of the MA is estimated to increase the SCR ratio by 1,9 percentage points for the full sample.<sup>7</sup> For the life sector it would increase by 2,2 percentage points. The MA effect on the non-life sector is negligible. However, some cautions shall be to given, as the results for the MA level above are mainly driven by the one life and one non-life entity.

### 6.7.2. Undertakings by size (small, medium, large)

As the sample is largely dominated by small undertakings due to confidentiality reasons no separate data is provided for this section.

### 6.7.3. Undertakings by type (Life, NL, Health, Composites)

See section 6.7.1.

### 6.7.4. Group aspects

The impact was assessed with respect to all LTG measures altogether – please, see section 1.4.4.

### 6.7.5. National market insights (only where special observations have been made)

See section 6.7.1.

### 6.7.6. Cross-border business

The Extended Matching Adjustment is an undertaking-specific tool and is designed to be fit to the undertaking's portfolio. Therefore, none material issues in case of cross-border business has been identified.

### 6.7.7. SII balance sheet volatility

Taking into consideration the LTGA results for Poland, the Extended Matching Adjustment seems to be the most effective instrument of the LTG package which stabilizes technical provisions, own funds and capital requirements.

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<sup>7</sup> If the MA value is known then the effect on solvency position is the same as the effect of the CCP but with the CCP risk exclusion.

The Polish FSA expects that it would have a positive impact on the market from a systemic perspective. It should bring benefits in terms of more stable financial condition of the undertakings and the offer of traditional insurance products to policyholders. However, its application conditions has appeared quite strict. This instrument has been applied by a few participants (less than 15% of the obligations portfolio of the whole industry).

Some participants underlined that despite the Matching Adjustment is not applicable to their business, they believed that the ideas behind matching adjustments serve the purpose of reducing artificial volatility of own funds, provided that the right measures are taken to align the matching adjustment with illiquid assets held in the portfolio and committing the companies to keep sufficient liquidity buffers (so that the illiquid assets can be held to maturity).

Only the “Extended Alternative” version of the matching adjustment was expected by companies to substantially mitigate the impact of spread movements on own funds. This mechanism is especially needed for long-term products. The restrictive conditions applying to other versions of Matching Adjustment would exclude portfolios of many undertakings without economic reasons. Some of the restrictions (i.e. rating restrictions for assets) may lead to the risk of cliff-effects. Additionally, the calculation of application ratio where positive cash flows are not taken into account to offset negative cash flows are assessed by companies as leading to a restriction in the MA amount which is not economically justified. Due to the fact that Classical Matching Adjustment excludes mortality risk (despite it diversifying with longevity), undertakings expect that Extended Matching Adjustment would be more appropriate to their business.

Generally, undertakings which have used Extended Matching Adjustment in the LTGA would like to use it in the future. A few companies indicated that they would like to apply the Extended Matching Adjustment but they do not intend to change their portfolio and ALM strategy to comply with the matching criteria if they stay the same as for the LTGA (e.g. without netting of shortfalls).

Legal ring-fencing is impossible for companies to apply to most in-force portfolios and would require cancelling and renewing every single contract (which can rarely be done unilaterally). Therefore separate identification of the assets should be sufficient according to participants to apply the matching adjustment.

A few undertakings indicated firmly that they intend to apply Extended Matching Adjustment under Solvency II.

## 6.8. Impact on competition

The LTGA results for Poland have not shown that any of LTG measures might result in disadvantages for small undertakings vs. large ones. Before the study, the Polish FSA expected that Matching Adjustment, especially the extended version, might be more burdensome for the small undertakings. However, these expectations were not confirmed in reality.

## 6.9. Impact on Long Term Investments

The Extended Matching Adjustment in case of the Polish market is expected to be a measure which can adjust the level of technical provisions and capital requirement to the risk inherent to the long term business and consequently long term investment. Without this or similar measures the Solvency II system promotes the short term perspective.

### 6.10. Other considerations

No other major issues have been identified.

### 6.11. Main technical findings on the individual measure (“Extended” MA)

See executive summary.



## 7. Transitional measures – Article 308b

### 7.1. Purpose of the measures and highlights of the tested approach (Transitional measures)

A transitional measure is proposed for obligations that are severely impacted by the introduction of Solvency II, i.e. the value of these obligations significantly differs under Solvency II compared to Solvency I. The transitional measure tested in the LTGA is based on the relevant risk-free interest rate term structure to calculate the best estimate with respect to specific insurance or reinsurance obligations. The idea is to implement the valuation change gradually over a sufficiently long time-period, currently proposed to be 7 years.

The approach tested in the context of the LTGA involved that undertakings would generally apply Solvency II principles. However, a weighted average of Solvency II and Solvency I interest rate curves is used for valuing existing liabilities and for calculating the capital requirements.

Thereby, the Solvency I interest rate is fixed at the date of implementation of Solvency II. It should also be noted that the transitional measure would apply to business in force at Solvency II inception only, i.e. not to new business written thereafter, and the effect of the measure needs to be fully disclosed to the public. Furthermore, the tested approach included some restrictions. E.g. the measure applies to certain life obligations only at YE11. It cannot be applied by undertakings to any obligations already under the Matching Adjustment and it does not apply to cross-border business. Three LTGA scenarios relate to the application of the transitional measure:

- Scenario 8: Transitional measure on all existing business at YE11 assuming to be 0 years into the transitional period
- Scenario 9: Transitional measure on business related to paid-in premiums only at YE11 assuming to be 0 years into the transitional period
- Scenario 11: Transitional measure on all existing business at YE04 assuming to be at 0 years into the transitional period

### 7.2. Impact on policy holder protection

In case of Poland the existence of transitionals actually increases technical provisions (and the level of policyholder protection) as the Solvency I technical rates are lower than Solvency II market-based discount rates.

### 7.3. Impact on effective and efficient supervision

In the Polish FSA view, the use of risk-free-rate transitional, similarly as in the case of extrapolation, should have the smallest impact on the supervision of undertakings among all



of the LTG measures. The transitional's construction is quite simple and does not require much effort from the supervisor to supervise its application.

## 7.4. Implementation effort

### *For industry*

Transitional measures were the 2<sup>nd</sup> (after Matching Adjustment) element of the Assessment most commonly indicated by the (re)insurers as expected to be the most time and resource consuming in terms of implementation.

The undertakings did not consider this instrument as a viable option. Especially, its application to paid-in premiums only could not be supported by the underlying system infrastructure and the availability of data, i.e. actuarial model points.

### *For NSA*

In the view of the Polish FSA, no major impact on the Supervisory Review Process (SRP) is foreseen in case of extrapolation and risk-free-rate transitional use. The calculation and use of these measures are either quite simple or dependent on EIOPA's actions. The impact of these measures will need to be assessed as a regular part of the SRP, as the impact of any other factors which may influence the condition and risk-outlook of the undertaking.

## 7.5. Incentives for good risk management

None material issues have been identified.

## 7.6. Impact on financial stability and prevention of systemic risks

None material issues have been identified.

## 7.7. Impact on insurance and reinsurance undertakings' solvency position

### 7.7.1. All undertakings

Both the coverage (see section 1.5) and the quality of data on transitionals are significantly lower than for the remaining scenarios. To some extent, this is the consequence of the simplifications applied by the participants (e.g. an average technical rate applied to all existing business).

Furthermore, a number of entities reported major difficulties with proper reflection of the paid-in condition (scenario 9) in their actuarial systems and reported the same result for

scenario 8 and scenario 9. Scenario 11 lacks the benchmark and as a result is not used in this section.

Therefore, due to relatively high uncertainty around the estimates, the detail numerical results are not presented in the current section. However, based on the results for other scenarios, and the knowledge of the current solvency regime (Solvency I), it is expected that, the effects of the transitionals would be significant as the technical rates in Solvency I are generally much lower than the market rates prescribed in Solvency II. The lower rates would increase the technical provisions, diminishing the SCR/MCR surpluses and decreasing the SCR/MCR ratios, perhaps by as much as 40-60 percentage points.

### 7.7.2. Undertakings by size (small, medium, large)

See section 7.7.1.

### 7.7.3. Undertakings by type (Life, NL, Health, Re, Composites)

See section 7.7.1.

### 7.7.4. Group aspects

No other major issues have been identified.

### 7.7.5. National market insights (only where special observations have been made)

See section 7.7.1

### 7.7.6. Cross-border business

No other major issues have been identified.

### 7.7.7. SII balance sheet volatility

No other major issues have been identified.

## 7.8. Impact on competition

No other major issues have been identified.

## 7.9. Impact on Long Term Investments

No other major issues have been identified.

## 7.10. Other considerations

No other major issues have been identified.

## 7.11. Main technical findings on the individual measure (Transitional measures)

See executive summary.

## 8. Extension of Recovery Period – Article 138(4)

### 8.1. Purpose of the measures and highlights of the tested approach (Extension of recovery period)

Insurance and reinsurance undertakings are required to comply with their SCR on an ongoing basis. Where undertakings observe that their SCR is no longer complied with, undertakings are granted a 6 months period from the observation of non-compliance to recover the SCR. The supervisory authority may extend that period to a maximum of 9 months.

However, in the event of an exceptional fall in financial markets, as determined by EIOPA, an extension of the recovery period may be granted by the supervisory authority to the undertaking concerned. The maximum extension is part of agreement of long-term guarantee package but should take account the average duration of the technical provisions.

The factors by the mean of which EIOPA should be based its decision to declare the existence of an exceptional fall in the markets is also under discussion. But one of those criteria is likely to be fact that the fall in financial markets affects adversely the financial situation of one or more insurance and reinsurance undertakings.

The extension of the recovery period is designed to tackle possible pro-cyclical effects of the breach of SCR, such as distressed sales of assets on financial markets. It also addresses the specific nature of long-term guarantees, without distinction between life and non-life activities, insofar as the determination of the extension of the period should be higher for technical provisions with higher average duration.

**The measure has not been assessed quantitatively by the Polish FSA.**

### 8.2. Impact on policy holder protection

Not applicable.

### 8.3. Impact on effective and efficient supervision

Not applicable.

### 8.4. Implementation effort (with insights on internal model users if possible)

Not applicable.

#### 8.4.1. For industry

#### 8.4.2. For NSA

### 8.5. Incentives for good risk management

Not applicable.

### 8.6. Impact on financial stability and prevention of systemic risks

Not applicable.

### 8.7. Impact on insurance and reinsurance undertakings' solvency position

The measure has not been assessed quantitatively by the Polish FSA. This was EIOPA's task stemming from the ToR.

#### 8.7.1. All undertakings

#### 8.7.2. Undertakings by size (small, medium, large)

#### 8.7.3. Undertakings by type (Life, NL, Health, Re, Composites)

#### 8.7.4. Group aspects

#### 8.7.5. National market insights (only where special observations have been made)

#### 8.7.6. Cross-border business

#### 8.7.7. SII balance sheet volatility

### 8.8. Impact on competition

Not applicable.

### 8.9. Impact on Long Term Investments

Not applicable.

## 8.10. Other considerations

Not applicable.

## 8.11. Main technical findings on the individual measure (Extension of recovery period)

Not applicable.