Guernsey Financial Services Commission

REPORT ON THE CAPITAL IMPACT ASSESSENT OF GENERAL INSURERS FOR RISK BASED SOLVENCY

23 September 2013

Contents

Executive Summary

This report presents the results of the capital impact assessment (the "Assessment") on undertakings writing general business conducted by the Commission in Q1 of 2013. This Assessment was undertaken in order that the Commission and stakeholders might better understand the quantitative impact of the proposed solvency framework and to assist the Commission in calibrating the standard formula. Overall, 28% of general (re)insurers participated in the Assessment.

The current solvency framework for general insurers is as follows. The margin of solvency ("MOS") requirement is equal to broadly 18% of net earned premium during the previous financial year or 5% of loss reserves, whichever is the higher. The MOS must be covered by approved assets, the classification and value of which reflects market and counterparty default risk. The MOS is subject to an absolute floor of £100,000.

The Commission tested the impact of introducing two regulatory capital requirements, the Prescribed Capital Requirement ("the PCR") and the Minimum Capital Requirement ("the MCR"). The PCR represents the supervisory control level above which the Commission does not intervene on capital adequacy grounds. The MCR represents the supervisory control level below which the Commission invokes its strongest regulatory actions.

The MCR tested is similar to the MOS but recalibrated at 18% of net written premium during the previous financial year or net residual reserves, whichever is the higher. The Assessment results suggest that around 10% of non-commercial participants and 19% of commercial participants would have insufficient capital to meet the MCR. However, on subsequent review, four of the five commercial participants that failed could meet the MCR if credit was taken for existing recourse agreements, solvency modifications and loan approvals. A large number of participants questioned the calibration of the MCR, and in particular, that the claims based solvency factor of 18% was too high. The Commission agrees with these comments and has recalibrated the MCR using a factor of 12%.

The PCR tested is calculated as the sum of the capital requirement for premium risk, reserve risk, counterparty default risk and market risk less an allowance for diversification. The capital for each risk is determined by multiplying an exposure measure (such as net premiums and net reserves) by a prescribed capital factor. This approach is consistent with the approach adopted by general (re)insurers in their Own Solvency Capital Assessment.

The capital factors were calibrated by the Commission to reflect the expected reduction in the undertaking's capital resources (via either a decrease in the asset value and/or an increase in the liability value) over the next twelve months at a 90% confidence level for non-commercial undertakings and a 97.5% confidence level for commercial undertakings. The Assessment results suggested that around 8% of non-commercial participants and 33% of commercial participants would have insufficient eligible capital to meet their PCR. However, on further investigation, six of the initial nine commercial participants that failed could meet their PCR if credit was taken for existing recourse agreements, solvency modifications and loan approvals.

Overall, the Commission received positive verbal feedback relating to the design and ease of completing the Assessment. Areas of improvement were provided and the Commission has considered each suggestion as part of its post Assessment calibration exercise.

1. Introduction

1.1 Purpose of this Document

This document summarises the standard formula results for the insurance and reinsurance undertakings writing general business that participated in the GFSC's capital impact assessment (the "Assessment"). Undertakings writing life business were excluded from the Assessment and not considered further in this paper.

1.2 Objectives of the Assessment

On 29 January 2013 a sample of insurance and reinsurance undertakings writing general business were requested to participate in the Assessment as set out by the Commission in the Regulatory Solvency workbook (the "Workbook").

The quantitative objectives of the Assessment were to evaluate the capital impact on licensees and to assist the Commission in its calibration of the standard formula for commercial and non-commercial undertakings as set out in the Workbook.

The qualitative objectives of the assessment were to:

- Assess the ease of using the Workbook
- Assess the format, comprehensiveness and content of the guidance provided
- Identify any ambiguities and inconsistencies; and
- Form an opinion on the time taken to complete the assessment.

1.3 Reference Dates Used

The reference date of the Assessment was 2012 financial year end with the exception of a hand full of undertakings that submitted results based on 2013 year end data.

1.4 Participation

The GFSC requested 128 undertakings to participate in the Assessment: 35 commercial and 93 non-commercial undertakings. Of these undertakings, 21 were subsequently excluded from the scope of the assessment for reasons outlined below and 9 undertakings were added; a net reduction of 8 non-commercial and 4 commercial undertakings. One non-commercial participant was reclassified as a commercial undertaking based on meeting the definition of a commercial undertaking as defined in Section 1.5 below.

The subsequent revised sample was 116 undertakings: 32 commercial and 84 non-commercial undertakings. Of this sample, 31 commercial and 82 non-commercial undertakings participated. Based on 97 commercial and 304 non-commercial undertakings being within the scope of the Assessment, 32% of commercial and 27% of non-commercial undertakings participated in the Assessment.

All licensed insurance managers, of which there were 17, participated in the Assessment.

Undertakings were randomly selected to participate in the Assessment unless:

- They were considered too important to exclude based on, for example, their balance sheet size or market share
- They had been reviewed in a previous version of the Workbook;
- They were included to ensure all insurance managers participated in the Assessment; or
- They were included to ensure all insurance managers undertook an Assessment of at least one commercial and non-commercial undertaking.

Undertakings that were excluded from the scope of the Assessment were:

- Those writing life insurance and life reinsurance obligations
- Those newly authorised for business in calendar year 2012
- Those that are branch offices (for which the Commission is not the prudential regulator)
- Those undertakings dormant or nil insurance liabilities
- Those with fully-funded obligations[1]; and
- The core of protected cell companies ("PCCs") and incorporated cell companies ("ICCs")[2].

1.5 Terminology

For completeness, the following terms are used for the purpose of the Assessment:

(1) PCR (Prescribed Capital Requirement) = the solvency control level above which the Commission would not require action to increase the capital resources held or reduce the risks undertaken by the licensee.

(2) MCR (Minimum Capital Requirement) = the intervention point at which the Commission would invoke the strongest action (for example, imposing new business restrictions or expanding existing restrictions) unless immediate actions to protect the interests of policyholders are undertaken.

(3) MOS (Minimum Margin of Solvency) = the existing margin of solvency requirements as set out in Schedule 2 of the Insurance Business (Bailiwick of Guernsey) Law, 2002 (the "Law").

(4) Commercial undertaking = an insurer writing insurance or reinsurance business for non-associated parties or for the general public, a reinsurer of a commercial insurer, a

[1] Fully funded obligations relate to policies where the insured benefits are capped to be no higher than the gross premium written plus the available capital resources and the undertaking holds capital resources to meet the insured benefits for all policies written.

[2] The Commission does not encourage insurance business to be directly written in the core of PCCs or ICCs.

producer-owned reinsurance company ("PORC") and a producer-owned insurance company ("POIC")[3].

(5) Non-commercial undertaking = an insurance or reinsurance entity created and owned, directly or indirectly, by one or more industrial, commercial or financial entities other than an insurance or reinsurance undertaking (or a group of insurance or reinsurance undertakings), the purpose of which is to provide insurance or reinsurance cover for risks of the entity or entities to which it belongs, or for entities connected to those entities (includes insurers owned by associations which provides cover only for the members of that association.

(6) Solvency Ratio = available capital (which is equal to assets less liabilities) divided by required capital.

[3] Few, if any, POICs and PORCs participated in the Assessment.

2. Overall Financial Impact

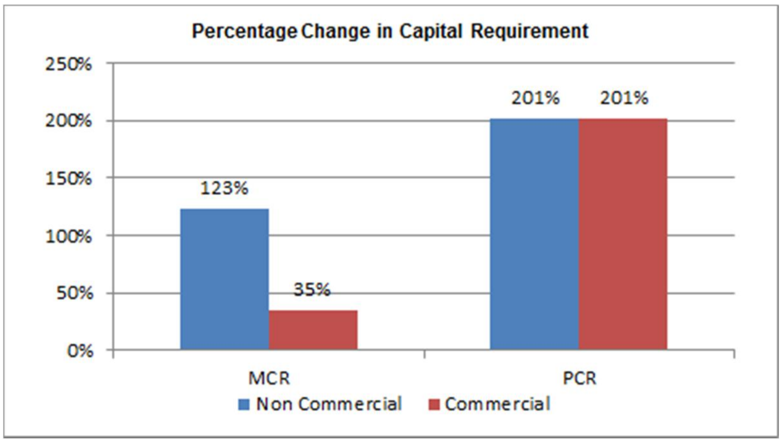
2.1 Financial Position

We have excluded two non-commercial and three commercial participants from the analysis in Section 2.1 where the MOS has been modified by the Commission. We have also excluded three large non-commercial participants to avoid distorting the results due to their relative size. Three PCC cells that have recourse to the core assets have also been excluded.

Required Capital

The MOS is calculated as the highest of (a) 18%[4] of net premium income and (b) 5% of net residual reserves. Although details relating to the historical calibration of the MOS are unavailable, the premium risk component implicitly reflects a 94% confidence level (equivalent to a 1 in 17 year event) and the reserve risk component reflects a significantly lower 69% confidence level (equivalent to a 1 in 3 year event).

The Commission tested a MCR recalibrated at 18% of net written premium for the financial year and 18% of net residual reserves, whichever is higher. The recalibration implicitly represents a 94% confidence level (equivalent to a 1 in 17 year event) for both the premium risk component and reserve risk component (i.e. a strengthening of the capital requirement for reserve risk).



The MCR was around 123% higher than the MOS for non-commercial participants and 35% higher for commercial participants.

The Commission tested a PCR calibrated to represent a 90% confidence level (equivalent to a 1 in 10 year event) for non-commercial participants and a 97.5% confidence level (equivalent to a 1 in 40 year event) for commercial participants. Capital was required for market risk, counterparty default risk, premium risk and reserve risk. The factors for premium risk and reserve risk were calibrated to take account of the confidence levels adopted and the inherent riskiness of each line of business. Diversification was taken into account both within each risk module and between risk modules.

The PCR was around 200% higher than the MOS for both non-commercial and commercial participants.

[4] In fact, it is the higher of 18% of the first £5 million of net premium income and 16% of net premium income excess of £5 million. Net premium income is equal to net earned premiums over the previous 12 months or, if 10% higher than the said amount, prospective net earned premium over the next 12 months.

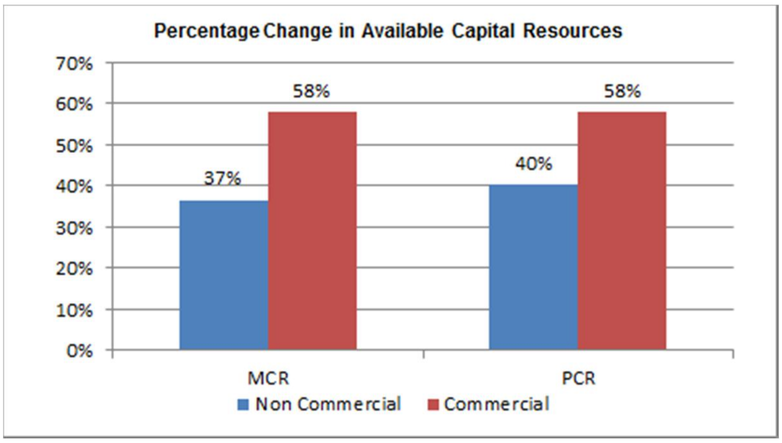
Available Capital Resources

The class of each asset and the amount each asset can contribute to the MOS are outlined in the Insurance Business (Approved Assets) Regulations, 2008 and the Insurance Business (Asset and Liability Valuation) Regulations, 2008. These regulations apply haircuts to the value of assets eligible to meet the MOS capital requirement to take account of market risk and counterparty default risks.

The Commission proposes to repeal the Approved Asset and Asset & Liability Valuation regulations and the implicit haircuts currently applied. Instead, capital resources will reflect the valuation of assets and liabilities on the regulatory basis, which for reasons of simplicity and practicality will follow accepted accounting standards. However, the Commission will permit insurers to revalue their assets and liabilities to reflect the risk adjusted present value of their cash flows should they wish to do so. Few participants did so.

For the purpose of the Assessment, off-balance sheet assets were eligible to meet the PCR but not the MCR. This reflected a strengthening of the current MOS rules, which allow insurers to use irrevocable letters of credit, subject to prior approval, to be used to meet their MOS capital requirement. Several participants questioned this strengthening. The value of intangible assets and deferred acquisition costs were excluded from and subordinated loans added to capital resources to meet both the MCR and PCR.

The impact of the above proposals is to increase the available capital resources to meet the MCR by 37% for non-commercial participants and by 58% for commercial participants. The increase for commercial participants reflects the greater proportion of Class 3, Class 4 and not approved assets held compared to non-commercial participants.

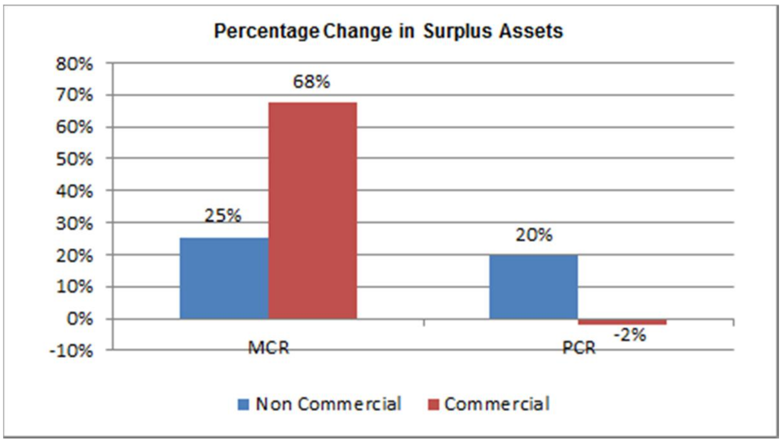


The available capital resources to meet the PCR increased by 40% for non-commercial participants and remained at 58% for commercial participants. The increase in the PCR for non-commercial participants compared to the MCR reflects the inclusion of off-balance sheet letters of credit and issued but unpaid share capital. No off-balance sheet assets were bought into account by commercial participants.

Overall Surplus

For non-commercial participants, the overall solvency surplus (i.e. the excess of available assets over required capital) over the PCR increased by 20% and increased by 25% over the MCR compared to the MOS requirement. The increase in the surplus assets for non-commercial participants is due to the increase in the required capital more than being offset by the increase in available capital resources.

For commercial participants, the overall solvency surplus over the MCR was 68% higher than compared to the MOS. However, overall solvency surplus over the PCR reduced marginally compared to the MOS requirement. This is due to the increase in the available capital being more than offset by the increase in the required capital.



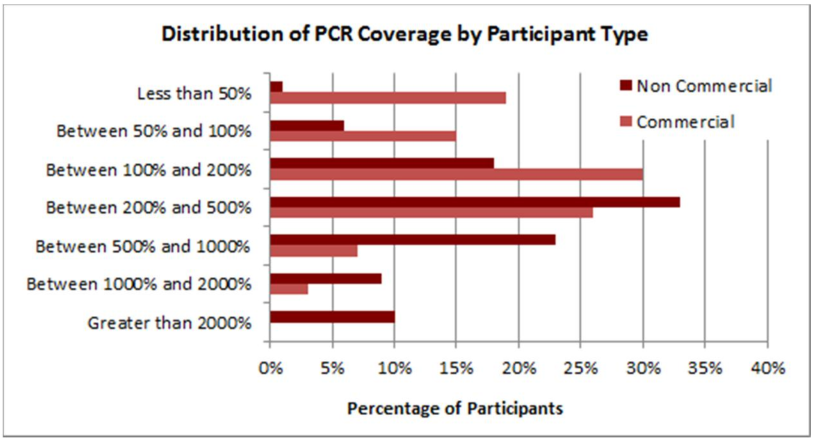
2.2 Solvency Ratio Coverage

We have excluded two non-commercial and three commercial participants from the analysis in Section 2.2 where the MOS had been modified by the Commission. Three PCC cells that have recourse to the core assets have also been excluded.

PCR Coverage

8% of non-commercial participants and 33% of commercial participants would have insufficient eligible capital to meet their PCR. This means they have capital resources less than 100% of the value of the PCR. This is an absolute increase in the number of participants with insufficient capital to meet the MOS of 5% and 29% for non-commercial and commercial participants respectively.

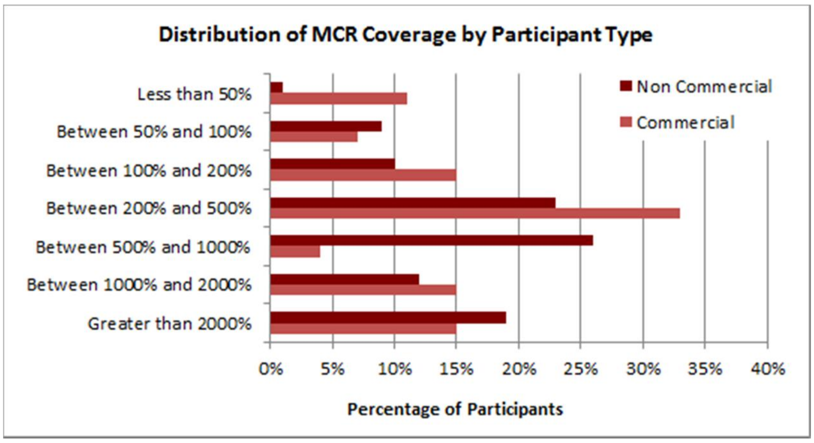
The distribution of the PCR coverage by undertaking type is illustrated in the diagram below. The number of participants in each solvency ratio band is shown in Table B2 in Appendix B.



MCR Coverage

10% of non-commercial participants would have insufficient eligible capital to meet their MCR. Interestingly, it is also 3% higher than the proportion unable to meet the PCR (of 8%). This reflects the removal of the off-balance sheet assets from eligible capital to meet the MCR, the calibration of the MCR and PCR (which reflect a 94% and 90% confidence level respectively), and the relative risk insensitivity of the MCR relative to the PCR.

19% of commercial participants would have insufficient eligible capital to meet their MCR. It is also 16% lower than the proportion unable to meet the PCR (of 33%). This reflects the higher calibration of the PCR relative to the MCR (which reflects respectively a 97.5% and 94% confidence level), partially offset by the relative risk insensitivity of the MCR relative to the PCR.

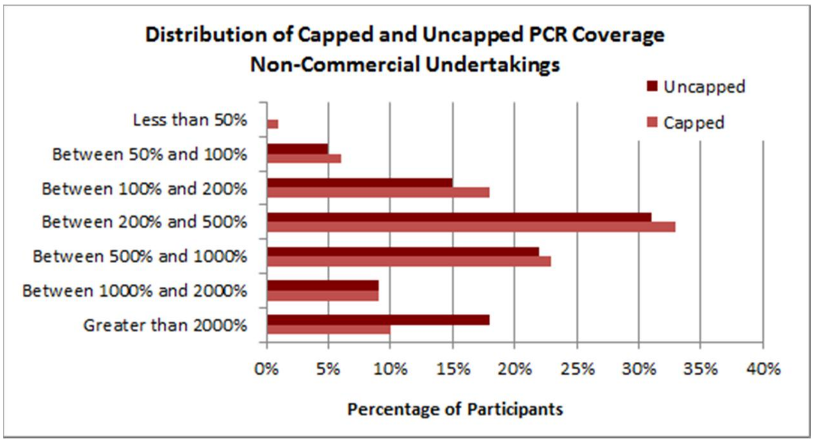


The distribution of the MCR coverage is illustrated in the diagram below. The number of participants in each solvency ratio band is shown in Table B4 in Appendix B.

Comparison of Capped and Uncapped PCR

Around 54% of non-commercial participants compared to 26% of commercial participants had a PCR capped by the MCR.

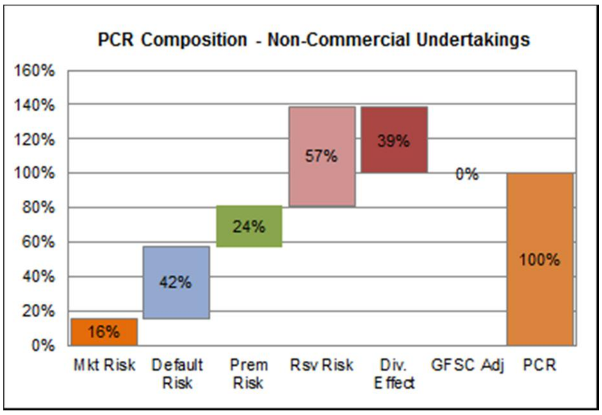
5% non-commercial participants would have insufficient eligible capital to meet their PCR if the MCR was recalibrated to be equal to or less than the PCR (i.e. if the PCR was not capped to be no less than the MCR). No change in the proportion of commercial participants with insufficient eligible capital would be observed if the PCR was uncapped.

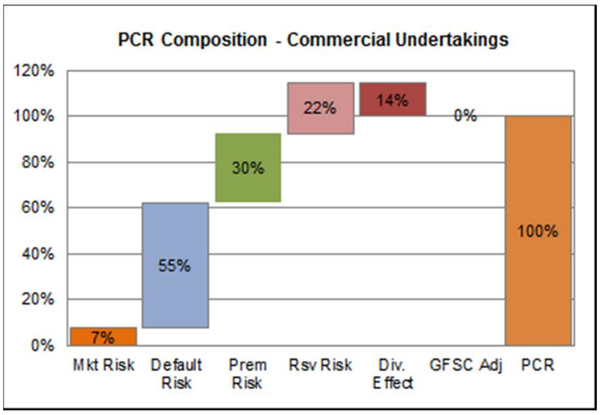


The distribution of the uncapped PCR coverage for non-commercial participants is illustrated in the diagram below.

2.3 Prescribed Capital Requirement

The composition of the PCR by nature of business and amount is reflected in the following diagrams. We have excluded three non-commercial participants from the analysis below to avoid distorting the overall composition due to their size.





The diagrams above show that the PCR for non-commercial participants was composed mainly of reserve risk, which has the largest percentage of 57% of the uncapped PCR; followed by default risk and premium risk, which form 42% and 24% respectively of the uncapped PCR. In contrast, reserve risk forms 22% of the uncapped PCR for commercial participants with default risk dominating at 55% of the uncapped PCR.

Default risk is an important risk for commercial and non-commercial participants because they hold a large proportion of assets as loans, and in particular, loans to unrated counterparties (as considered in Section 6.2), which incur a counterparty default risk capital requirement of 38% and 62% for non-commercial and commercial participants respectively.

Reserve risk was the significant risk for non-commercial participants due to premium and claim reserves being a large proportion of total liabilities.

Non-commercial participants benefit materially from diversification, with risks assumed to be uncorrelated (consistent with the calibration of the PCR). In contrast, commercial participants experienced limited diversification benefits, which reflects the overall dominance of default risk and the correlation adopted.

For both commercial and non-commercial participants, market risk is the least important risk accounting for 16% and 7% of the uncapped PCR respectively.

3. Valuation of Assets and Liabilities

The impact of the valuation change on the assets, liabilities and capital resources is discussed in Sections 3.1, 3.2 and 3.3 respectively. For consistency purposes, we have excluded the same participants as excluded in Section 2.1.

3.1 Impact of Valuation Change on Assets

The table below shows a material difference in the composition of total assets as reflected in the current financial statements (referred to as the Accounting Basis) between non-commercial and commercial participants. Non-commercial participants held the majority of their assets in deposits (31.6%), cash (18.7%) and loans to associated parties (15.8%). In contrast, commercial participants held primarily insurance and reinsurance receivables (19.7%), cash (16.8%) and deposits (13.2%).

Table 1: Composition of Total Assets by Valuation Basis and Undertaking Type

Assets	Accounting Basis		Regulatory Basis	
	Non-Commercial	Commercial	Non-Commercial	Commercial
Fixed Assets				
Tangible	0.0%	0.4%	0.0%	0.4%
Intangible	0.0%	0.6%	0.0%	0.0%
Total	**0.0%**	**1.0%**	**0.0%**	**0.4%**
Investments				
Bonds – government	9.4%	0.0%	9.3%	0.0%
Bonds – corporate	7.9%	7.8%	7.9%	7.9%
Equity/other shares	0.2%	0.2%	0.2%	0.2%
Property	0.0%	0.5%	0.0%	0.5%
Derivatives	0.0%	0.0%	0.0%	0.0%
Investment funds	6.4%	3.1%	6.3%	3.1%
Deposits	31.6%	13.2%	31.3%	13.3%
Other investments	0.1%	0.1%	0.1%	0.1%
Total	**55.6%**	**24.9%**	**55.1%**	**25.1%**
Loans				
Loans to associated parties	15.8%	9.0%	15.6%	9.1%
Other loans	0.3%	0.0%	0.3%	0.0%
Total	**16.1%**	**9.0%**	**15.9%**	**9.1%**
Technical Assets				
Insurance and intermediaries receivables	4.2%	19.7%	4.2%	19.9%
Reinsurance receivables (other than reserves)	0.6%	1.7%	0.6%	1.7%
Reinsurance share of premium reserves	1.7%	14.9%	1.7%	15.0%
Reinsurance share of claim reserves	1.2%	8.6%	1.2%	8.8%
Other technical assets	1.3%	0.6%	1.3%	0.6%
Total	**9.0%**	**45.5%**	**9.0%**	**46.0%**
Other Assets				
Prepayments and other debtors	0.4%	2.0%	0.4%	2.0%
Cash and cash equivalents	18.7%	16.8%	18.2%	17.0%
Deferred acquisition costs	0.0%	0.4%	0.0%	0.0%
Other assets, not elsewhere shown	0.2%	0.4%	0.2%	0.4%
Total	**19.3%**	**19.6%**	**18.8%**	**19.4%**
Off-balance Sheet Assets				
Letters of credit	0.0%	0.0%	0.7%	0.0%
Issued but unpaid capital	0.0%	0.0%	0.5%	0.0%
Other off-balance sheet assets	0.0%	0.0%	0.0%	0.0%
Total	**0.0%**	**0.0%**	**1.2%**	**0.0%**
% of Total Assets	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Amount of Total Assets	**£1,150.4m**	**£396.4m**	**£1,163.5m**	**£392.6m**

The table above shows that the total assets of participants did not materially change moving from the accounting basis to the regulatory basis[5]. Nonetheless, total assets for non-commercial participants increased and for commercial participants total assets decreased.

The increase in the assets for non-commercial participants was due to the inclusion of off-balance sheet assets (letters of credit and issued but unpaid capital) by 15% of non-commercial participants. These inclusions resulted in the composition of the on-balance sheet assets decreasing.

The reduction in assets for commercial participants was due to the 100% reduction in the value of intangible assets and deferred acquisition costs which are not proposed to be recognised as an asset under the regulatory basis. These reductions were partially offset by some participants revaluing the value of reinsurance share of claim reserves.

3.2 Impact of Valuation Change on Liabilities

The table below shows the composition of technical liabilities differs materially between non-commercial and commercial participants. However, the composition of total assets did not materially change from moving to regulatory basis for either undertaking type.

Non-commercial participants held significantly less premium reserves than commercial participants. This may reflect that non-commercial participants tend to write policies with a policy period coinciding with their accounting year. In contrast, commercial participants tend to write policies throughout the year, and therefore, around half of premium receipts relate to unexpired risks at the accounting year end.

Table 2: Composition of Total Liabilities by Valuation Basis and Undertaking Type

Liabilities	Accounting Basis		Regulatory Basis	
	Non-Commercial	Commercial	Non-Commercial	Commercial
Technical Liabilities				
(Re)insurance accounts payable	5.1%	17.6%	5.1%	17.5%
Premium reserves	10.3%	44.7%	10.4%	44.6%
Claim reserves	80.5%	30.1%	81.0%	30.3%
Risk Margin / Contingency	1.1%	0.0%	1.2%	0.0%
Other technical liabilities	0.8%	1.7%	0.8%	1.7%
Total	**97.8%**	**94.1%**	**98.5%**	**94.1%**
Loans				
Subordinated loans	0.7%	0.0%	0.0%	0.0%
Unsubordinated loans	0.6%	0.8%	0.6%	0.8%
Total	**1.3%**	**0.8%**	**0.6%**	**0.8%**
Other Liabilities				
Accruals and other creditors	0.6%	4.0%	0.6%	4.0%
Doubtful debt provision	0.0%	0.3%	0.0%	0.3%
Other liabilities, not elsewhere shown	0.3%	0.8%	0.3%	0.8%
Total	**0.9%**	**5.1%**	**0.9%**	**5.1%**
Off-Balance Sheet Liabilities	0.0%	0.0%	0.0%	0.0%
% of Total Liabilities	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Amount of Total Liabilities	**£681.0m**	**£241.3m**	**£674.8m**	**£241.6m**

[5] The regulatory basis is equal to the accounting basis but insurers are permitted (although not required) to revalue their assets and liabilities to reflect the risk adjusted present value of their cash flows. Also off-balance sheet assets can be brought into account and certain on-balance sheet assets are excluded from account.

3.3 Impact of Valuation Change on Capital Resources

For completeness, the Commission has shown the impact of the change in valuation basis on capital resources below. The overall impact is immaterial.

The available capital resources to meet the PCR for non-commercial participants increased slightly and decreased slightly for commercial participants. For non-commercial participants, a positive reconciliation reserve arises from an increase in total assets and a decrease in total liabilities. The converse occurs for commercial participants.

Table 3: Composition of Capital Resources by Valuation Basis and Undertaking Type

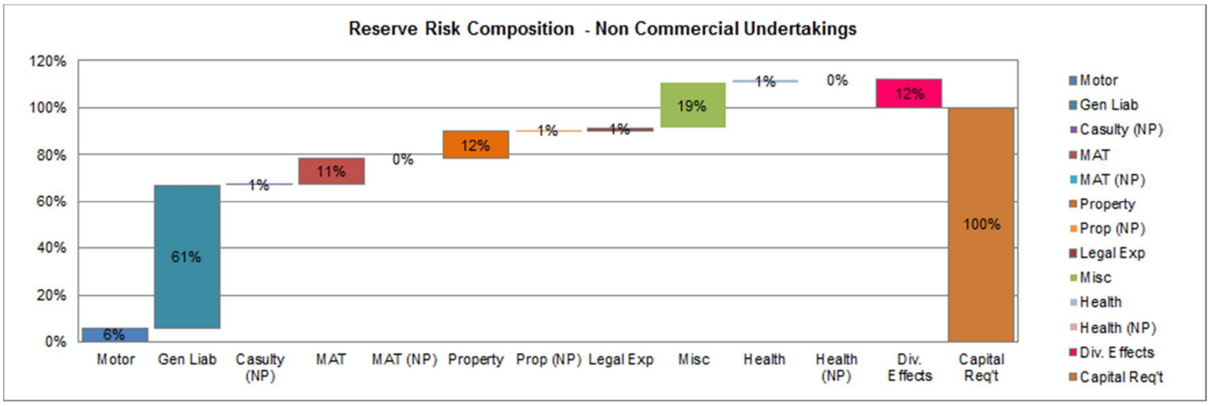
Capital Resources	**Accounting Basis**		**Regulatory Basis**	
	Non-Commercial	**Commercial**	**Non-Commercial**	**Commercial**
Capital and Reserves				
Share capital	26.4%	27.0%	25.3%	27.7%
Share premium	8.9%	5.3%	8.5%	5.4%
Retained earnings	49.6%	66.8%	47.8%	68.6%
Other capital resources	15.1%	0.9%	14.5%	1.0%
Total	**100.0%**	**100.0%**	**96.1%**	**102.7%**
Reconciliation Reserve				
Adjustments to assets	0.0%	0.0%	2.7%	(2.5%)
Adjustments to technical liabilities	0.0%	0.0%	0.2%	(0.2%)
Adjustments to other liabilities	0.0%	0.0%	1.0%	0.0%
Total	**0.0%**	**0.0%**	**3.9%**	**(2.7%)**
% of total capital resources to meet the PCR	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Amount of capital resources to meet the PCR	**£469.4m**	**£155.1m**	**£488.7m**	**£151.0m**
Amount of off-balance sheet assets	**nil**	**nil**	**(£13.6m)**	**nil**
Amount of capital resources to meet the MCR	**£469.4m**	**£155.1m**	**£475.1m**	**£151.0m**

4. Reserve Risk

We have excluded three non-commercial participants from the analysis in Section 4 to avoid distorting the overall results due to their relative size.

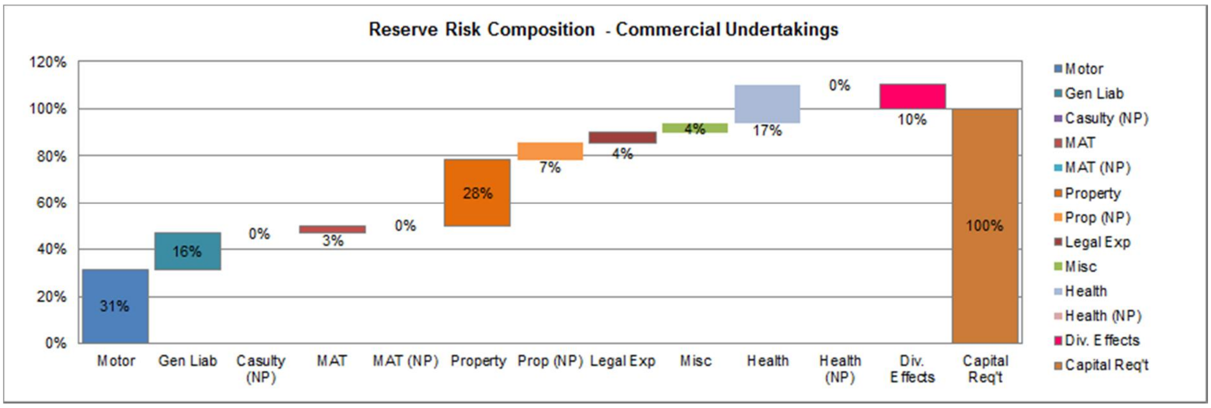
4.1 Composition by Amount

The composition of the reserve risk capital requirement for non-commercial participants by amount is shown in the following diagram.



The diagram above shows that the reserve risk capital requirement for non-commercial participants is composed mainly of general liability risks, which accounts for 61% of the overall capital requirement; followed by miscellaneous (19%), property (12%); and marine, aviation and transport ("MAT") (11%). Very few non-commercial participants' allocated risks to the non-proportional lines of business, which accounted for less than 1% of the overall reserve risk capital requirement.

The composition of the reserve risk capital requirement for commercial participants is shown in the following diagram.



The diagram above shows that motor and property risks dominate for commercial participants, accounting for 31% and 28% of the overall reserve risk capital requirement respectively. Commercial participants also had limited non-proportional risks, with the exception of non-proportional property risks.

4.2 Composition by Frequency

In total, 76 non-commercial and 21 commercial participants reported exposure to reserve risk. The following table shows the number of participants with an exposure in each line of business and the number that obtained a diversification adjustment to the capital requirement.

Table 4: Number of Participants with Reserve Risk Exposure

Line of Business	Non-Commercial	Commercial	Total
Motor	10	2	12
General Liability	42	3	45
Casualty Non-Proportional	1	0	1
Marine, Aviation and Transport (MAT)	10	2	12
MAT Non-Proportional	0	0	0
Property	32	7	39
Property Non-Proportional	3	1	4
Legal Expenses	3	4	7
Miscellaneous	14	7	21
Health	6	2	8
Health Non-Proportional	0	0	0
Undiversified Capital Requirement	**76**	**21**	**97**
Diversification Adjustment	25	5	30
Capital Requirement	**76**	**21**	**97**

The significant lines of business for non-commercial participants are general liability and property, with over 55% and 42% of participants (with reserve risk) reporting exposures to these two lines of business respectively. This contrasts with Section 4.1 where property risks account for 12% of the composition of the reserve risk capital requirement when measured by exposure amount.

The significant lines of business for commercial participants are property and miscellaneous, with around 33% reporting exposures to these two lines of business respectively. The motor line of business is not a dominant line of business, which contrasts with Section 4.1 which showed that the motor line of business accounted for 31% of the overall capital requirement. This arises from the impact of a single commercial undertaking.

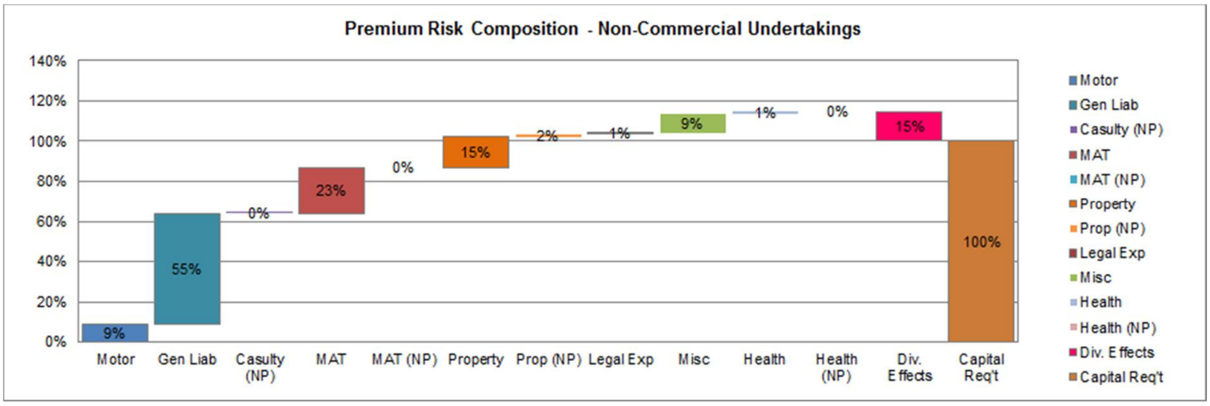
The majority of participants have exposure to a single line of business, with only 33% of non-commercial and 24% of commercial participants reporting reserve risk exposures in more than one line of business.

5. Premium Risk

We have excluded three non-commercial participants from the analysis in Section 5 to avoid distorting the overall composition due to their size.

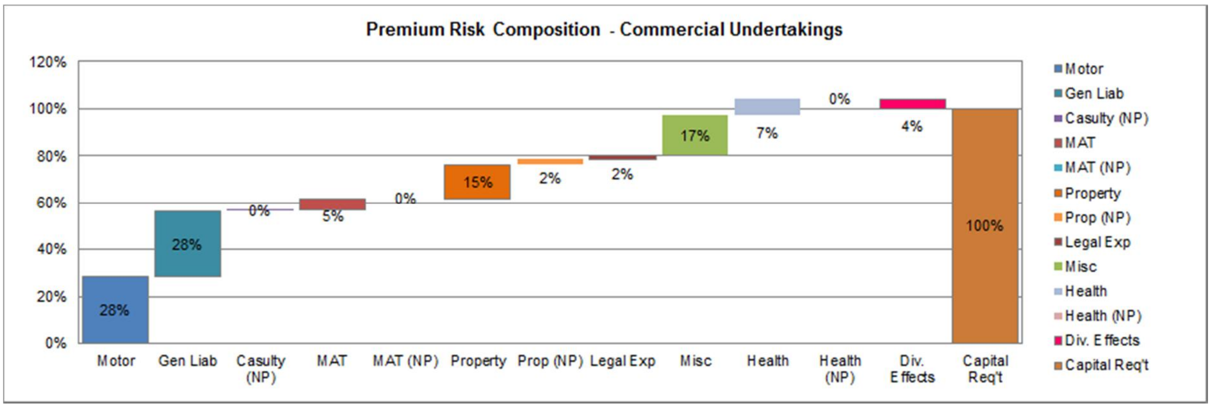
5.1 Composition by Amount

The composition of the premium risk capital requirement for non-commercial participants by amount is shown in the following diagram.



The diagram above shows that the premium risk capital requirement for non-commercial participants is composed mainly of general liability risks, which accounts for 55% of the overall capital requirement; followed by MAT (23%), property (15%), miscellaneous (9%) and motor (9%). Very few non-commercial participants allocated risks to the non-proportional lines of business, which accounted for less than 1% of the overall premium risk capital requirement.

The composition of the premium risk capital requirement for commercial participants is shown in the following diagram.



The diagram above shows that motor and general liability risks dominate for commercial participants, which accounted for 28% of the overall reserve risk capital requirement respectively. Commercial participants also had limited non-proportional risks.

The above results for non-commercial and commercial participants are broadly similar to the results for reserve risk in Section 4.1.

5.2 Composition by Frequency

In total, 71 non-commercial and 26 commercial participants reported exposure to premium risk. The following table shows the number of participants with an exposure in each line of business and the number that obtained a diversification adjustment to the capital requirement.

Table 5: Number of Participants with Premium Risk Exposure

Line of Business	Non-Commercial	Commercial	Total
Motor	10	2	12
General Liability	39	4	43
Casualty Non-Proportional	1	1	2
Marine, Aviation and Transport (MAT)	12	2	14
MAT Non-Proportional	0	0	0
Property	29	6	35
Property Non-Proportional	3	1	4
Legal Expenses	4	4	8
Miscellaneous	12	11	23
Health	6	2	8
Health Non-Proportional	0	0	0
Undiversified Capital Requirement	**71**	**26**	**149**
Diversification Adjustment	25	5	30
Capital Requirement	**71**	**26**	**149**

The significant lines of business for non-commercial participants are general liability and property, with over 55% and 41% of participants reporting exposures to these two lines of business respectively. In contrast, property risks accounted for only 15% of the composition of the premium risk capital requirement when measured by exposure amount.

The significant lines of business for commercial participants are miscellaneous and property, with over 42% and 23% reporting exposures to these two lines of business respectively. The motor line of business is not a dominant line of business, which contrasts with the composition of the reserve risk capital requirement which shows that the motor line of business accounted for 28% of the overall capital requirement.

The majority of participants have exposure to a single line of business; with 35% of non-commercial and 19% of commercial participants have premium risk exposures in more than one line of business.

The above results are broadly similar to those reported in Section 4.2 for reserve risk.

6. Counterparty Default Risk

We have excluded three non-commercial participants from the analysis in Section 6 to avoid distorting the overall composition due to their size.

6.1 Receivables

The proportion of receivables outstanding by due date was broadly similar between commercial and non-commercial undertaking as shown in the following table. Although not shown, 15% of non-commercial and 10% of commercial participants had receivables due by more than 90 days, which incurred a risk capital charge of 100%.

Table 6: Proportion of Receivable Residual Exposure by Days Overdue

Exposure Type	Non Commercial		Commercial	
	0 to 90	Over 90	0 to 90	Over 90
Insurance and intermediaries receivables	85.4%	2.3%	87.6%	2.5%
Reinsurance receivables (other than reserves)	10.7%	1.8%	7.5%	0.1%
Other receivables due	2.1%	0.2%	3.3%	0.0%
Less: Amounts offset in case of default	(2.5%)	(0.0%)	(1.0%)	(0.0%)
Residual Exposure	**95.7%**	**4.3%**	**97.4%**	**2.6%**

6.2 Other Exposures

The majority of counterparty default risk exposures for non-commercial participants were to counterparties with a Standard & Poor’s equivalent credit rating of between AAA and AA. This rating band did not incur a capital charge for non-commercial participants. Around two thirds of total exposures related to *cash and cash equivalents* held as shown in the table below.

Loans were the other dominant exposure type, with 55% of loans being to counterparties rated less than BBB or unrated, and accounting for 60% of the total counterparty default risk capital requirement.

Table 7: Proportion of Other Default Risk Exposure by Credit Rating Grade — Non-Commercial Participants

Exposure Type	Between AAA to AA	Between A to BBB	Less Than BBB or Unrated	Total
Reinsurance share of reserves	3.6%	1.2%	0.5%	5.3%
Loans	4.7%	8.4%	15.9%	29.0%
Cash and cash equivalents	48.5%	18.7%	0.1%	67.3%
Other on-balance sheet assets	0.1%	0.2%	2.3%	2.6%
Off-balance sheet assets	0.0%	1.3%	0.8%	2.1%
Less: Amounts offset in case of default	(0.0%)	(0.0%)	(6.3%)	(6.3%)
Residual Exposure	**56.9%**	**29.8%**	**13.3%**	**100.0%**

The majority of counterparty default risk exposures for commercial participants were to counter parties rated between A and BBB, which incurred an 8% capital charge. 45% of total exposures related to *reinsurance share of reserves* and 36% to *cash and cash equivalents* held as shown in the table below.

Although *loans* contributed less to overall exposure than for non-commercial participants (i.e. 16.8% relative to 29%), loans accounted for 53% to the total counterparty default risk capital requirement.

Table 8: Proportion of Other Default Risk Exposure by Credit Rating Grade — Commercial Participants

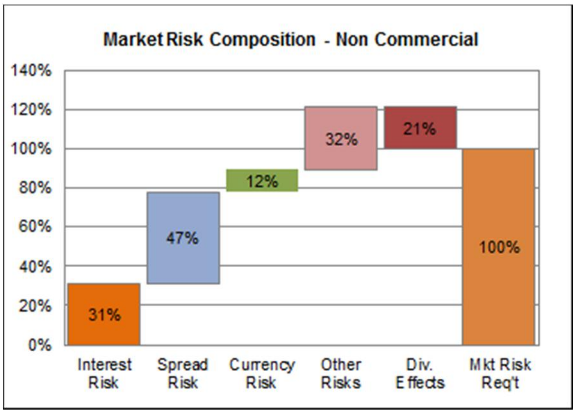
Exposure Type	Between AAA to AA	Between A to BBB	Less Than BBB	Total
Reinsurance share of reserves	9.2%	34.8%	1.0%	45.0%
Loans	0.0%	0.0%	16.8%	16.8%
Cash and cash equivalents	16.8%	15.5%	3.5%	35.8%
Other on-balance sheet assets	1.0%	0.7%	1.1%	2.8%
Off-balance sheet assets	0.0%	0.0%	0.0%	0.0%
Less: Amounts offset in case of default	(0.0%)	(0.0%)	(0.4%)	(0.4%)
Residual Exposure	**27.0%**	**51.0%**	**22.0%**	**100.0%**

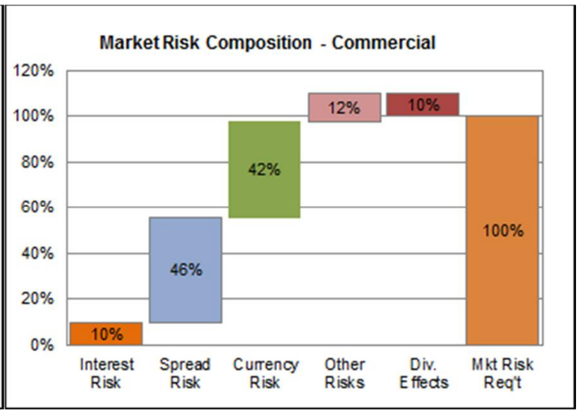
7. Market Risk

We have excluded three non-commercial participants from the analysis in Sections 7.1, 7.2 and 7.3 to avoid distorting the analysis of the results due to the comparative size of their asset exposures.

7.1 Composition by Amount

The composition of the market risk capital requirement by nature of business and amount is demonstrated in the following diagrams.





The diagrams above show that the market risk capital requirement for non-commercial participants is composed mainly of spread risk, which accounts for 47% of the capital requirement; followed by 'other Risks' (e.g. equity and other investment exposures) and interest rate risk, which form 32% and 31% respectively of the market risk capital requirement. In contrast, both spread risk and currency risk dominate for commercial participants, accounting for 88% of the total market risk capital requirement.

7.2 Interest Rate Risk

Half of non-commercial and 35% of commercial participants were subject to interest rate risk.

Around 89% of participants with interest rate risk exposure held interest sensitive assets with a duration of less than two years. The mix by nature of business varies considerably with commercial participants holding longer duration assets than non-commercial participants as reflected in the following table.

Table 9: Proportion of Interest Sensitivity Assets by Duration

Duration of Exposure	Non Commercial	Commercial	Total
Less than two years	93.9%	71.8%	88.6%
Between two years and five years	4.2%	22.9%	8.7%
Greater than five years	1.9%	5.4%	2.7%
Total	**100.0%**	**100.0%**	**100.0%**

Only three participants included their claim and premium reserve liability exposures when determining net exposure to interest rate risk. This reflects that almost all undertakings writing general business hold undiscounted reserves within their financial statements.

7.3 Spread Risk

40% of participants are subject to spread risk, with this percentage not being significantly different by nature of business.

Around 89% of participants with spread risk exposure held spread sensitive assets with a duration of less than two years. The mix by nature of business varies considerably with commercial participants holding longer duration assets than non-commercial participants as reflected in the following table.

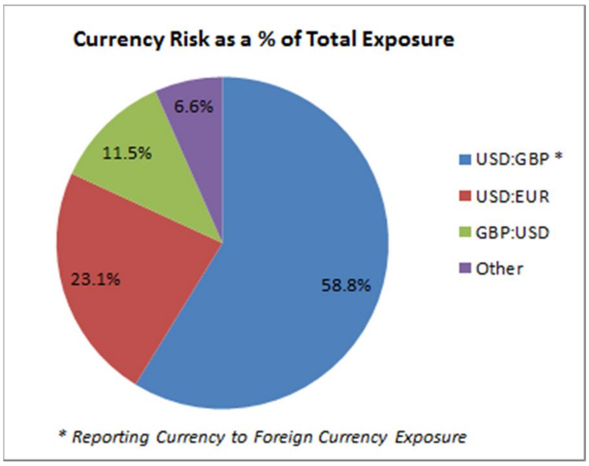
Table 10: Proportion of Spread Sensitivity Assets by Duration

Duration of Exposure	Non Commercial	Commercial	Total
Less than two years	94.7%	74.2%	89.3%
Between two years and five years	4.4%	20.9%	8.7%
Greater than five years	0.9%	4.9%	1.9%
Total	**100.0%**	**100.0%**	**100.0%**

One participant included liability exposure when determining net exposure to spread risk.

7.4 Currency Risk

25% of participants are subject to currency risk, with this percentage not being significantly different by nature of business.



Around 83% of the total number of foreign currency exposures reported was in GBP (31%), USD (28.6%) and EUR (23.8%). A small number of participants also reported exposures to Danish Kroner, Swiss Francs, Norwegian Kroner, South African Rand and Brazilian Reais. A detailed breakdown is provided in Appendix C.

Around 59% of currency risk exposure relates to participants whose financial statements are in USD and have GBP foreign exposures. 70.3% of currency risk exposure is between USD and GBP. A breakdown is given in the diagram above[6].

[6] We have excluded two participants from the exposure analysis to avoid distorting the results due to them having higher than average exposure in a single foreign currency, South African Rand and Brazilian Reais.

7.5 Other Market Risks

Other market risks covered risks relating to equities (both listed and unlisted), property, derivatives and other market investments. 11% of non-commercial and 16% of commercial participants were subject to 'Other' market risks. No participant reported derivative exposures.

8. Participant Feedback

Overall, the Commission received positive verbal feedback relating to the design and ease of completing the Assessment. The Commission provided industry training on the completion of the Workbook and positive verbal feedback was again received. However, one participant stated material difficulty in completing the Workbook.

It was not the Commission's intention to document all feedback received from participants in this report. The Commission considered all comments received as part of its post Assessment calibration exercise. The key changes made to the Workbook since the Assessment is documented in the 'Change Log' sheet within the Workbook. Nonetheless, the following is a list of the type of feedback received.

- Participants questioned why all balance sheet items (such as prepayments and other debtors) were not subject to a risk-capital assessment and/or capital charge where necessary. The Commission does not consider it necessary for licensees to hold counterparty default risk capital for prepaid GFSC license fees.

- Participants questioned the calibration of the MCR, and in particular, that the claims based solvency factor of 18% was too high. The Workbook was found not to allow for solvency modification. The exclusion of irrevocable letters of credit from eligible capital to meet the MCR was questioned. The Commission agrees with these questions and has proposed changes accordingly. Participants also questioned whether the Commission intended to apply the MCR absolute floor of £100,000 at the individual PCC cell level, which was a strengthening of the current requirement where the minimum MOS is applied at the PCC entity level.

- Participants commented that the capital charge for unrated counterparties materially penalises loans to unrated associated parties. It was suggested that the implicit rating of an unrated counterparty could be based on the counterparty's solvency ratio (as determined under Solvency II). Potential misinterpretations of the credit rating grades between short term and long term ratings were also raised.

- Participants identified potential inconsistencies in the recognition of risk and the determination of risk capital when considering asset exposures to the same counterparty which are covered in market risk (such as term deposits) and counterparty default risk (such as cash, cash equivalents and money market funds).

- Participants stated that the model did not enable them to capture certain reinsurance risk mitigation contracts appropriately within premium risk.

- Validation checks were considered useful but areas for improve were provided.

- Participants questioned that the removal of deferred acquisition costs from capital resources was inconsistent with the valuation of net premium and claim reserves.

- Some participants were confused relating to the inclusion of liabilities in the calculation of net exposure for interest rate risk and spread risk.

Appendix A Commission Comments

The Commission reviewed the overall consistency of the information within the Workbook but did not compare the consistency of the information entered with other sources of information available to the Commission. For example, the Commission did not compare the segmentation of policies in the Premium Risk or Reserve Risk tabs with the narrative business plan provided in the participant's 2012 Annual Return.

The Commission amended 48 or 42% of all Workbooks provided. The table below provides a summary of the main items of difficulty identified by the Commission, and subsequently amended, when reviewing the Workbook submissions.

Subject	Commission Comment
Undertaking Information (Rate of Exchange)	5 participants included a Rate of Exchange of 1.000 despite their Reporting Currency not being GBP. Interestingly, the Commission received six different Rates of Exchange to convert USD to GBP as at 31 December 2012. These were not amended.
Undertaking Information (Business Type)	11 participants incorrectly reported they were a 'Commercial' undertaking when the Commission considered them to meet the definition of a 'Non-Commercial'. Similarly, 17 participants incorrectly reported they were a 'Non-commercial' undertaking when the Commission considered them to meet the definition of a 'Commercial'.
Validation Checks	9 participants provided an Assessment with validation errors. For example, inconsistency arose between the balance sheet and market risk, default risk and reserve risk.
Summary (Existing Solvency Margin)	14 undertakings did not enter information relating to their existing solvency margin. Five of these were subsequently identified as having a solvency modification.

Appendix B Detailed Results

Table B1: Number of Participants

	Non-Commercial	Commercial	Total
Original Sample of Invitees	93	35	128
Post Sample Exclusions	(15)	(6)	(21)
Post Sample Inclusions	7	2	9
Change in Business Type	(1)	1	0
Revised Sample	**84**	**32**	**116**
Non Participants	(2)	(1)	(3)
Participants (A)	**82**	**31**	**113**
In-scope Undertakings (B)	304	97	401
Participation Rate (A/B)	**27%**	**32%**	**28%**

Table B2: Number of Participants by Coverage of the PCR

Solvency ratio band	Non-Commercial	Commercial	Total
Less than 50%	1	5	6
Between 50% and 100%	5	4	9
Between 100% and 200%	14	8	22
Between 200% and 500%	26	7	33
Between 500% and 1000%	18	2	20
Between 1000% and 2000%	7	1	8
Greater than 2000%	7	0	7
Total	**78**	**27**	**105**
MOS Modification	2	3	5
PCC Cell with Recourse to Core	2	1	3

Table B3: Number of Participants by Coverage of the MOS

Solvency ratio band	Non-Commercial	Commercial	Total
Less than 50%	1	1	2
Between 50% and 100%	1	0	1
Between 100% and 200%	11	5	16
Between 200% and 500%	12	8	20
Between 500% and 1000%	14	7	21
Between 1000% and 2000%	15	4	19
Greater than 2000%	24	2	26
Total	**78**	**27**	**105**
MOS Modification	2	3	5
PCC Cell with Recourse to Core	2	1	3

Table B4: Number of Participants by Coverage of the MCR

Solvency ratio band	Non-Commercial	Commercial	Total
Less than 50%	1	3	4
Between 50% and 100%	7	2	9
Between 100% and 200%	8	4	12
Between 200% and 500%	18	9	27
Between 500% and 1000%	20	1	21
Between 1000% and 2000%	9	4	13
Greater than 2000%	15	4	19
Total	**78**	**27**	**105**
MOS Modification	2	3	5
PCC Cell with Recourse to Core	2	1	3

Table B5: Number of Participants with PCR Capped at the MCR

	Non-Commercial	Commercial	Total
PCR uncapped	42	7	49
PCR capped	36	20	56
Total	**78**	**27**	**105**
MOS Modification	2	3	5
PCC Cell with Recourse to Core	2	1	3

Table B6: Currency Risk as a Percentage of Number of Exposures

		Reporting Currency							
		GBP	USD	CHF	JPY	ZAR	NOK	AUD	**Total**
Foreign Currency Exposure	GBP		21.4%	2.4%		2.4%	2.4%	2.4%	**31.0%**
	USD	19.0%		2.4%	2.4%	2.4%	2.4%		**28.6%**
	CHF	4.8%							**4.8%**
	EUR	7.1%	11.9%	2.4%	2.4%				**23.8%**
	DKK	4.8%							**4.8%**
	NOK	2.4%							**2.4%**
	ZAR	2.4%							**2.4%**
	BRL	2.4%							**2.4%**
	Total	**42.9%**	**33.3%**	**7.1%**	**4.8%**	**4.8%**	**4.8%**	**2.4%**	**100.0%**

42 participants reported currency risk exposure to one or more foreign currencies

Table B7: Currency Risk as a Percentage of Total Exposure

		Reporting Currency							
		GBP	USD	CHF	JPY	ZAR	NOK	AUD	**Total**
Foreign Currency Exposure	GBP		58.8%	0.0%		0.1%	0.1%	0.0%	**58.9%**
	USD	11.5%		0.1%	0.0%	0.6%	1.0%		**13.2%**
	CHF	0.0%							**0.0%**
	EUR	3.5%	23.1%	0.4%	0.0%				**27.1%**
	DKK	0.7%							**0.7%**
	NOK	0.1%							**0.1%**
	ZAR								**0.0%**
	BRL								**0.0%**
	Total	**15.9%**	**81.9%**	**0.5%**	**0.0%**	**0.6%**	**1.1%**	**0.0%**	**100.0%**

We have excluded a ZAR and BRL foreign currency exposure from the table to avoid distorting the overall results.