INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS

Public

Basic Capital Requirements for Global Systemically Important Insurers

9 July 2014

Public Consultation Document

Comments due by 8 August 2014

About the IAIS

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Established in 1994, the IAIS is the international standard setting body responsible for developing principles, standards and other supporting material for the supervision of the insurance sector and assisting in their implementation. The IAIS also provides a forum for Members to share their experiences and understanding of insurance supervision and insurance markets. In addition to active participation of its Members, the IAIS benefits from input in select IAIS activities from Observers representing international institutions, professional associations and insurance and reinsurance companies, as well as consultants and other professionals.

The IAIS coordinates its work with other international financial policymakers and associations of supervisors or regulators, and assists in shaping financial systems globally. In particular, the IAIS is a member of the Financial Stability Board (FSB), founding member and co-parent of the Joint Forum, along with the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO), member of the Standards Advisory Council of the International Accounting Standards Board (IASB), and partner in the Access to Insurance Initiative (A2ii). In recognition of its collective expertise, the IAIS also is routinely called upon by the G20 leaders and other international standard setting bodies for input on insurance issues as well as on issues related to the regulation and supervision of the global financial sector.

International Association of Insurance Supervisors
c/o Bank for International Settlements
CH-4002 Basel
Switzerland
Tel: +41 61 225 7300
Fax: +41 61 280 9151
www.iaisweb.org

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1 Overview

1.1 Purpose

1. The purpose of this Consultation Document is to solicit feedback regarding the development of global Basic Capital Requirements (BCR) for Global Systemically Important Insurers (G-SIIs). The BCR is expected to be privately reported by G-SIIs to group-wide supervisors from 2015.

2. The development of the BCR is the first step of the International Association of Insurance Supervisors' (IAIS) project to develop group-wide global capital standards. The second step is the development of Higher Loss Absorbency (HLA) requirements to apply to G-SIIs, due to be completed by the end of 2015. The HLA will build on the BCR and address additional capital requirements for G-SIIs reflecting their systemic importance in the international financial system. The third step is the development of a risk based group-wide global insurance capital standard (ICS), due to be completed by the end of 2016, and to be applied to Internationally Active Insurance Groups (IAIGs) from 2019 after refinement and final calibration in 2017 and 2018. The development of the ICS will be informed by the work on the BCR.

3. The BCR is the foundation for HLA, together with which it forms a consolidated group-wide capital requirement. A primary goal of the BCR is to introduce a common measure for capital assessment to be used as a comparable foundation for the calculation of HLA. When finalised, the ICS will replace the BCR in its role as the foundation for HLA. The key principle is that G-SIIs should be required by their group-wide supervisors to hold higher levels of regulatory capital than would be the case if they were not designated as G-SIIs.

4. This public consultation provides an opportunity for comments on a specific BCR proposal that has been based on an illustrative calibration level. This is explained on pages 8 and 12 of this Consultation Document. The actual calibration level will be initially determined, after further analysis in July and August of information collected from field testing volunteers. Because of the interlinkage of BCR and HLA, the actual calibration may be further modified depending on the HLA requirements. From 2019, G-SIIs will be required to hold capital in excess of the BCR plus HLA.

5. From 2019, HLA will commence to apply to G-SIIs – HLA will initially be based on BCR as a foundation, but later will be based on ICS as a foundation. The exact timing of the transition of the foundation from BCR to ICS will depend upon the adoption date of the ICS by the IAIS and upon the time required for jurisdictions to develop and implement the necessary legislative frameworks for implementation of the ICS. The scheduled ICS adoption date is October 2018. Calibration of HLA may need to be revised once the ICS has been adopted.

6. Comments on the first public Consultation Document on the BCR, issued on 16 December 2013, were received, considered and factored into the BCR development process following the close of the consultation on 3 February 2014[1].

7. The field testing exercise to collect data to inform BCR development commenced on 21 March 2014. Thirty three volunteer insurance groups, covering a wide range of products and geographical markets, participated in the exercise. Eight of the nine G-SIIs submitted sufficient data in early May to allow for preliminary analysis and model testing, while submissions from most volunteers (including G-SIIs) were received by 2 June 2014. Some submissions were received after that date and hence were not able to be included in the initial field testing analysis. Late submissions will be included in the ongoing field testing process, where possible. The data collected were assessed as sufficient quality to inform the proposed BCR design, specific factors and calibration level, despite the need to analyse data more thoroughly in certain areas, including non-traditional insurance exposures and non-insurance exposures. Data coverage and quality will be improved during the consultation process and will be used to inform the final BCR design, specific factors and calibration level.

8. Significant progress has been made in developing the BCR since the last Consultation Document. Feedback is therefore solicited on this Consultation Document to facilitate the design and calibration of the BCR proposal which will be delivered to the G20 summit in November 2014.

9. The views expressed in this Consultation Document are preliminary and may not be reflected in future IAIS standards.

1.2 Providing feedback

10. Comments on this Consultation Document are invited by 8 August 2014. Comments are invited on any aspect of this paper, but are most helpful if they:

    - Are clear as to the issue being addressed,
    - Provide a clear rationale and basis for comments made, and
    - Describe alternatives proposed for consideration.

11. Comments must be sent electronically via the "Consultations" pages on the IAIS website http://www.iaisweb.org/. All comments will be published on the IAIS website unless a specific request is made for comments to remain confidential.

[1] The comments received on the first BCR Consultation Document are available at http://www.iaisweb.org/Supervisory-Material/Financial-Stability-Macroprudential-Policy-Surveillance-988

2 Executive summary

2.1 Background & Mandate

12. The BCR is the foundation[2] for Higher Loss Absorbency (HLA) together with which it forms a consolidated group-wide capital requirement. The current BCR proposal for endorsement by G-20 in 2014 will apply to G-SIIs only. It serves as a comparable basis for the application of proposed HLA requirements. The IAIS proposes that initially the BCR will be reported on a confidential basis to group-wide supervisors, subject to access by the IAIS for refinement purposes (if relevant).

13. This second public Consultation Document is being published pursuant to the IAIS' mandate to develop a BCR by the end of 2014. The development and field testing of the BCR will inform development of the ICS. It is intended that ultimately the ICS will become the foundation for the HLA, at which point the role of the BCR will be reassessed.

14. Consistent with the principles in Annex A, the BCR will reflect major categories of risks impacting the businesses of G-SIIs and will account for on- and off-balance-sheet exposures.

15. Material liability and asset risks are considered. The distinctions between long and short term liabilities are recognised. The focus of the design and development of the BCR is on the risks directly associated with the contingencies insured and other sources of risk for the G-SIIs. It is expected that a more comprehensive approach will be adopted for ICS development. Capital requirements are one of many elements of a full supervisory assessment of the financial condition of G-SIIs and will need to be combined with an evaluation of Qualifying Capital Resources with proper adjustments reflecting specific characteristics of insurance liabilities, as well as other quantitative and qualitative supervisory tools.

2.2 BCR Design

2.2.1 BCR Ratio

16. The BCR status of an insurance group is captured by its BCR Ratio:

BCR Ratio = Qualifying Capital Resources (for BCR) / Required Capital (for BCR)

2.2.2 Factor-Based Approach for BCR Required Capital

17. BCR Required Capital will be calculated on a consolidated group-wide basis. All holding companies, insurance legal entities, banking legal entities and any other service companies will be included in the consolidation. It will be constructed in three basic

[2] On 18 July 2013, the IAIS and the Financial Stability Board (FSB) made the following joint commitment:

"*As a foundation for HLA requirements for G-SIIs, the IAIS will as a first step develop straightforward, backstop capital requirements to apply to all group activities, including non-insurance subsidiaries, to be finalised by the end of 2014.*"

components: an insurance component (including NT activities); a banking component that applies the Basel III Leverage Ratio or the Basel III Risk-Weighted Assets requirements; and a component for other non-insurance financial and material non-financial activities) not currently subject to regulatory capital requirements.

18. The BCR is determined using a 'factor-based' approach with 15 factors applying to defined segments within the main categories of insurance activity, namely Traditional Life insurance, Traditional Non-Life insurance, Non-Traditional (NT) insurance, Assets and Non-Insurance (NI). Consistent with Principle 1 (see Annex A), major risk categories are reflected.

19. As a formula, the BCR Required Capital is:

$$BCR\ Required\ Capital = \alpha \left[\sum_{i=1}^{4} a_i\, TL_i + \sum_{i=1}^{4} b_i\, TNL_i + \sum_{i=1}^{4} c_i\, NT_i + \sum_{i=1}^{3} d_i\, A_i \right] + \sum_{i=1}^{n} NI_i$$

where:

- α (alpha) is the scalar to adjust the overall BCR level and potentially target a specified confidence level[3]
- a_i, b_i c_i and d_i represent the factors applied to the exposures.
- TL_i, TNL_i, NT_i, and A_i represent the exposures (as per section 3.4)
- NI reflects the charges provided by sectoral rules[4] for non-insurance activities – for example, Basel Accord requirements, established by the Basel Committee on Banking Supervision (BCBS).

20. For the most part, Current Estimates[5] are the proposed proxy measure for risk exposures for insurance liabilities (excluding any prudential margins). For asset valuations, it is proposed to use generally accepted accounting principles in each relevant jurisdiction, with various adjustments to enhance comparability (for example, for invested assets use fair value measurement as a basis for valuation). Field testing informed the level of granularity required and will provide an understanding of the impact of stresses on that balance sheet. Non-traditional and non-insurance (NTNI) risks are also addressed to ensure that risks from all group activities are considered.

[3] The actual calibration level will be initially determined after further analysis in July and August of information collected from field testing volunteers and may be further modified depending on the HLA requirements.

[4] The breadth of applicability of the BCR is noted from the words "apply to all group activities, including non-insurance subsidiaries" in the joint announcement by the IAIS and FSB. This wording emphasises the cross-sectoral nature of the rationale for the BCR and the need to consider, and where considered appropriate reflect, developments in other parts of the financial sector, such as the Joint Forum's Principles for the Supervision of Conglomerates and Review of the Differentiated Nature and Scope of Financial Regulation.

[5] ICP 14.8, states: "The current estimate reflects the expected present value of all relevant future cash flows that arise in fulfilling insurance obligations, using unbiased, current assumptions." In other contexts a "current estimate" may be called a "best estimate." A "best estimate" of a quantity is, in principle, an estimate of the quantity that is neither deliberately overstated nor deliberately understated. The determination of a best estimate needs to be made within the context of its use. That is, the purpose for which it will be used needs to be clear and properly reflected.

21. A Market Adjusted Valuation Approach is the valuation approach to be initially adopted for the BCR. This will be reviewed, as the IAIS develops the valuation approach for ICS purposes. Under this approach, the G-SII starts with the amounts as reported on its audited, consolidated, general-purpose balance sheet, whether that be on an IFRS or GAAP basis.

2.2.3 Capital Resources

22. Capital resources are determined on a consolidated basis. However, adjustments are made, when required, to align capital resources with the approach followed for the construction of the BCR Required Capital which takes into account three components: an insurance component; a banking component that applies Basel III qualifying criteria; and a component for other non-insurance financial and non-financial activities not currently subject to sectoral regulatory requirements.

23. BCR Qualifying Capital Resources may be classified as either core or additional capital The IAIS is still assessing whether one or both categories of Qualifying Capital Resources will be assessed against the BCR Required Capital. The answer to this question may ultimately depend on the methodology adopted for the application of the HLA requirement. For this reason, two categories of capital are defined and used in this Consultation Document; to provide flexibility with respect to the future application of the HLA requirement.

2.2.4 Treatment of Diversification

24. The treatment of diversification in the BCR, especially in the context of composite G-SIIs where their life and non-life business may be of similar sizes, has been explored further. While it would be appropriate to reflect the effect of diversification between major risk drivers in the ICS, the technical complexity of doing so explicitly in the BCR formula is inconsistent with its simple design[6]. As a straightforward approach, the calibration level of the BCR will implicitly account for some degree of diversification.

2.2.5 Asset-Liability Matching (ALM)

25. The first BCR Consultation Document stated that "ALM is a major risk category, particularly for life insurance, and so it is desirable that ALM risks be included. However, practical difficulties within the given timeframe for the development of the BCR may pose a particular challenge for addressing this risk category." Following initial analysis of field testing data in June 2014, the IAIS determined that explicitly including such a factor in the BCR formula is not appropriate given the simple design of the formula. As a straightforward approach, the calibration level of the BCR will implicitly account for the absence of an ALM factor.

[6] The explicit treatment of diversification will be further explored in the development of the ICS.

2.3 Next steps

26. Key milestones for the development of the BCR and related global standards HLA and ICS are:

Expected timing	Key milestone
8 August 2014	Deadline for responses to this BCR Consultation Document
September / October 2014	IAIS and FSB agree the details of the BCR proposal
November 2014	G20 Leaders expected to endorse the BCR proposal
December 2014	Initial consultation documents on HLA and ICS released
January 2015	Confidential reporting on BCR to commence
February 2015	Deadline for responses to the HLA and ICS consultation documents
March to September 2015	Field testing of HLA and ComFrame, including ICS
December 2015	HLA proposal to be finalised
March to September 2016	Further field testing of ComFrame, including ICS
December 2016	ICS to be agreed, subject to further refinement via field testing
2017 and 2018	Further refinement of ComFrame, including ICS, via field testing
Late 2018	ComFrame, including ICS, to be adopted by IAIS
From 2019	Implementation of ComFrame, including ICS, to commence
From 2019	HLA commences to apply to G-SIIs, initially based on BCR as a foundation, later to be based on ICS as a foundation

3 Proposed BCR Approach

27. The BCR is the foundation for Higher Loss Absorbency (HLA), together with which it forms a consolidated group-wide capital requirement.

28. The BCR recognises major categories of risks, both direct and indirect that impact G-SIIs. The BCR accounts for on- and off-balance-sheet traditional and non-traditional insurance exposures as well as non-insurance business including banking and other non-financial business.

29. Material liability and asset risks are considered. The distinctions between long and short term liabilities are recognised. The focus of the design and development of the BCR is on the risks directly associated with the contingencies insured and other sources of risk for the G-SIIs. While necessary in a comprehensive framework (like the ICS), some business risks are not explicitly considered. The explicit integration of other risk areas, such as operational and liquidity risk, will require future consideration in the development of the ICS, but that work is generally beyond the scope of the BCR development, except for selected NI activities which are explained in section 3.5 and Annex F. The insurance components are described in detail in section 3.4. The non-insurance activities are addressed in section 3.5.

3.1 Application of BCR

30. The current BCR proposal for endorsement by G-20 in 2014 will apply to G-SIIs only. It serves as a comparable basis for the application of proposed higher loss absorbency requirements.

31. Application of BCR to Internationally Active Insurance Groups (IAIGs) was an unresolved topic for the first consultation. The IAIS has determined that the current BCR proposal will not apply to IAIGs.

32. The IAIS proposes that initially the BCR will be reported on a confidential basis to group-wide supervisors, subject to access by the IAIS for refinement purposes (if relevant).

33. Consistent with the FSB mandate, the IAIS has also committed to developing a more risk-sensitive global risk-based insurance capital standard (ICS) by 2016, to be included as part of ComFrame and applied to all IAIGs. Once developed and implemented, the ICS will be the basis for calculation of HLA for G-SIIs. The potential role of the BCR will be reassessed following the development and refinement of the ICS

3.2 BCR ratio

34. The BCR status of an insurance group is captured by its BCR Ratio:

BCR Ratio = Qualifying Capital Resources (for BCR) / Required Capital (for BCR)

3.3 Required Capital

35. The BCR Required Capital is:

$$BCR\ Required\ Capital = \alpha \left[\sum_{i=1}^{4} a_i\, TL_i + \sum_{i=1}^{4} b_i\, TNL_i + \sum_{i=1}^{4} c_i\, NT_i + \sum_{i=1}^{3} d_i\, A_i \right] + \sum_{i=1}^{n} NI_i$$

where:

- α (alpha) is the scalar to adjust the overall BCR level and potentially target a specified confidence level[7]
- a_i, b_i c_i and d_i represent the factors applied to the exposures.
- TL_i, TNL_i, NT_i, and A_i represent the exposures (as per section 3.4)
- NI reflects the charges provided by sectoral rules[8] for non-insurance activities, for example, Basel Accord requirements, established by the BCBS.

[7] The actual calibration level will be initially determined after further analysis in July and August of information collected from field testing volunteers and may be further modified depending on the HLA requirements.

[8] The breadth of applicability of the BCR is noted from the words "apply to all group activities, including non-insurance subsidiaries" in the joint announcement by the IAIS and FSB. This wording emphasises the cross-sectoral nature of the rationale for the BCR and the need to consider, and where considered appropriate reflect, developments in other parts of the financial sector, such as the Joint Forum's Principles for the Supervision of Conglomerates and Review of the Differentiated Nature and Scope of Financial Regulation.

3.4 Insurance

36. The IAIS has determined segments, factors, and proxy measures for risk exposure based on a combination of supervisory judgment informed by existing regulatory requirements and derivation from field testing data. Further information about this derivation is provided in Annex F.

BCR segment	Proxy measure for risk exposure	Factor	Factor value
Traditional Life (TL)			
Protection life	Net Amount At Risk	a_1	0.056%
Participating products	Current Estimate	a_2	0.6%
Annuities	Current Estimate	a_3	1.2%
Other life	Current Estimate	a_4	0.6%
Traditional Non-life (TNL)			
Property	Premium	b_1	6.25%
Motor	Current Estimate	b_2	6.25%
Casualty	Current Estimate	b_3	11.25%
Other non-life	Current Estimate	b_4	7.5%
Non-Traditional (NT)			
Variable annuities	Notional Value	c_1	1.2%
Mortgage insurance	Face Amount	c_2	1.11%
GICS & Synthetic GICS	Notional Value	c_3	1.11%
Other non-traditional	Current Estimate	c_4	1.29%
Assets (A)			
Credit - investment grade	Fair Value	d_1	0.69%
Credit - non investment grade	Fair Value	d_2	1.8%
Equity	Fair Value	d_3	8.4%

37. It is important to examine the regulatory arbitrage opportunities between the banking and insurance sectors, particularly as the BCBS requirements have been incorporated into the BCR for banking activities. However, the analysis of the differences needs to remain at a high level in BCR. The BCR includes capital charges for both assets and insurance liabilities, consistent with their relative contributions to risk. The Basel framework is primarily based on capital charges for assets and not liabilities. Therefore, a direct comparison between the two asset charges is not meaningful. However, the IAIS will consider whether the overall impact is comparable.

3.5 Non-insurance

38. Non-insurance activities are addressed according to their nature and having regard to any relevant global capital standard.

39. The NI component of BCR Required Capital will be:

$$NI\ Capital\ Component$$

$$= \sum_{b=1} \text{Regulated Banking requirement}_b$$

$$+ \sum_{b=1} x * \text{Non} - \text{Regulated Banking requirement}_b$$

$$+ \sum_{s=1} \text{Securities and other requirements}_s$$

where the summations are taken over the appropriate number of entities.

40. For regulated banking activities, the IAIS proposes applying the Basel III Leverage Ratio or the Basel III Risk-Weighted Assets requirements. Alternatively, the higher of the two measures could be applied.

41. Non-regulated banking activities will be considered by taking the leverage ratio in order to maintain a consistent treatment with that of regulated banking activities. That capital requirement can be scaled up depending on the overall calibration level of the insurance related BCR (by adjusting the scalar x in the above formula). Alternatively, the higher of the two measures (the Basel III Leverage Ratio or the full Basel III Risk-Weighted Assets requirements) could be applied.

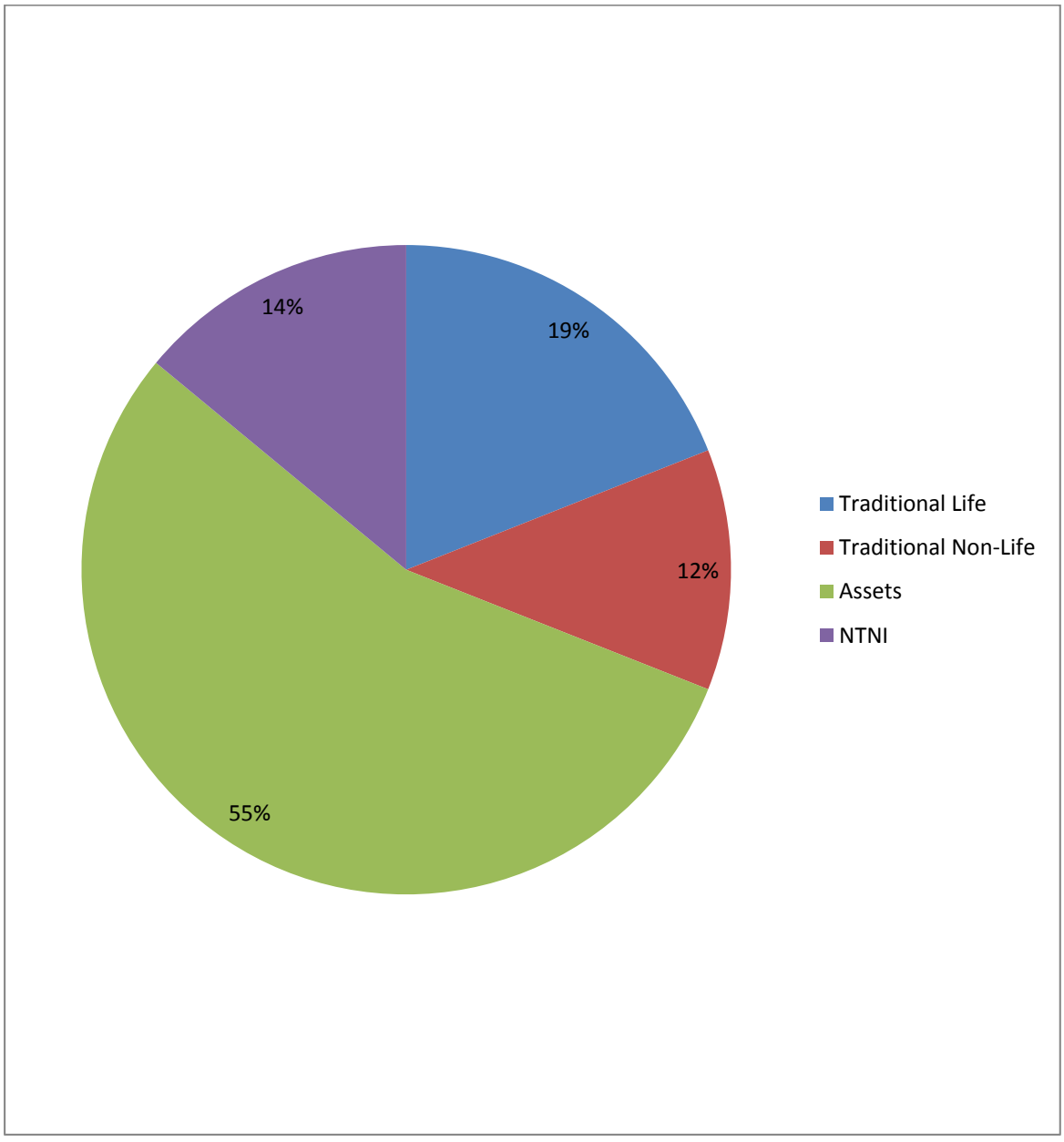
42. Financial activities which are subjected to neither banking nor insurance regulation, such as some securities operations[9], will be incorporated in the BCR by aggregating existing global capital requirements for such non-bank, non-insurance (NBNI) financial activities. As an alternative, the IAIS will consider including a capital requirement of up to 25 basis points on assets under management in order to achieve a further degree of improved global comparability. Alternatively, the higher of the two measures could be applied.

43. Non-financial activities are typically exposed to risks (e.g. legal or reputational risk) that are difficult to capture in a capital requirement. The risks from non-financial activities will be taken into account in a qualitative risk assessment, if such is added to the broader BCR framework. Alternatively, such business can be subjected to similar charges for operational risks, as for the financial NBNI off-balance-sheet activities.

[9] Some securities operations fall in the scope of either banking or insurance regulation. These are not intended to be included in this paragraph. The IAIS assumes that such operations are already covered by the consideration of the respective sectoral requirements of the insurance-related BCR. Additional consideration may be given in subsequent BCR analysis and calibration to the optimal way to incorporate off-balance sheet securities activities.

3.6 Indicative capital allocation

44. From the data provided by the G-SIIs, the factors above result in the following allocation of capital to the components of the BCR.



3.7 BCR principles

45. The proposed BCR formula has been developed to reflect the principles that were published in December and are restated in Annex A. For example:

- Major risk categories have been reflected through both the selection of high level risk exposures and the selection of related segments.
- Options for adequate comparability have been investigated through the field testing exercise and the use of Current Estimates of liabilities and adjustments to GAAP balance sheets have been selected to provide adequate comparability.
- Resilience to stress has been difficult to assess at this stage, as only static information is available from the field testing exercise, so further investigations are planned prior to finalisation of the BCR.
- The BCR design is relatively simple, compared to the complexity of the risks that are being assessed.
- The BCR structure and its applicability appear consistent for the target universe of insurance groups, the G-SIIs.
- Transparency of the BCR is affected by differences in what data is currently public in different jurisdictions, so transparency would be improved if all G-SIIs were required to publish the specified components of the BCR calculation, after the period of confidential reporting ends.

4 Qualifying Capital Resources

46. Capital resources are determined on a consolidated basis. However, adjustments are made, when required, to align capital resources with the approach followed for the construction of the BCR Required Capital which takes into account three components: an insurance component; a banking component that applies Basel III qualifying criteria; and a component for other non-insurance financial and non-financial activities not currently subject to sectoral regulatory requirements

47. Annex D includes a summary of the proposed ComFrame criteria, which defines Qualifying Capital Resources. These criteria are consistent with the 2014 field testing instructions. Additional considerations and updated specifications with respect to Qualifying Capital Resources are included below.

4.1 Tiering of Capital Resources

48. BCR Qualifying Capital Resources may be classified as either core or additional capital.

ComFrame contains a requirement that Core Capital be at least 50% of the capital requirement. The IAIS is still assessing whether one or both categories of Qualifying Capital Resources will be assessed against the BCR Required Capital. The answer to this question may ultimately depend on the methodology adopted for the application of the HLA requirement. For this reason, two categories of capital are defined and used in this document; to provide flexibility with respect to the future application of the HLA requirement.

4.2 BCR Ratio and HLA requirement

49. Having two categories of Qualifying Capital Resources also provides the IAIS with the option of defining a number of potential BCR Ratios. For example, a:

    a. BCR Core Ratio defined as Core Capital over Required Capital

    b. BCR Total Ratio defined as Total Capital over Required Capital

    c. A number of potential BCR Combined Ratios that can be defined with specified combinations of Core and Additional Capital, with composition limits.

50. The aim of the HLA requirement, as endorsed by the G20 in 2010, is to ensure that G-SIIs (and other G-SIFIs) have a higher share of their balance sheets funded by capital elements which increase the resilience of the institution as a going-concern.

51. Given the going-concern objective of the HLA capacity requirement, the HLA capacity of G-SIIs should be met by Core Capital which is the highest quality capital proposed within ComFrame. At least 50%[10] of the BCR should also be met by Core Capital.

4.3 Further work potentially affecting the current definition of Core Capital

52. Two items require additional work which have the potential to impact on the current definition of Core Capital:

    a. Margin Over Current Estimate (MOCE):

        As stated in ICP standard 14.9, "The MOCE reflects the inherent uncertainty related to all relevant future cash flows that arise in fulfilling insurance obligations over the full time horizon thereof." For many of the G-SIIs, the movement of the MOCE from the liabilities to capital resources is significant, with this component accounting for, on average, 38% of G-SII Core Capital resources. The impact of this is to increase the measured BCR Core and Total Ratios, which may then appear excessively high. The IAIS intends to revisit this approach, and consider the reintroduction of a MOCE as part of Technical Provisions, calculated in a consistent manner. For example, Technical Provisions could include the amount of MOCE calculated as a specified percentage of Current Estimate. The specified percentage could be a standard margin amount which approximates a simple average margin for G-SIIs. This simple approach compensates for the lack of convergence in accounting standards with respect to the MOCE.

    b. Non-qualifying reinsurance:

        The field testing concept of non-qualifying reinsurance focused solely on the existence of an executed and legally binding contract. The definition of non-qualifying reinsurance could be extended to also include agreements with reinsurers which are not licensed, certified, authorized or registered in a jurisdiction and to agreements which do not include a sufficient transfer of risk.

The IAIS intends to review both of these issues within the context of developing the ICS, given the tight timeframe for development of the BCR.

4.4 G-SII capital resources

53. The data collected from G-SIIs during field testing shows that the majority of capital resources is classified as core rather than additional. For G-SIIs, approximately 75% of GAAP capital resources are classified as core, on average.

54. Some sensitivity analysis has been done and the results are shown in Annex H.

[10] This minimum percentage has yet to be decided by the IAIS but will be at least 50%.

5 Market Adjusted Valuation Approach

55. In order to satisfy BCR Principle 2, comparability of outcomes across jurisdictions, the inputs into the BCR formula need to be comparable. The balance sheet of a G-SII will provide the underlying exposures for many of the factors in the BCR formula. In addition, the balance sheet provides the foundation for determining capital resources. Both the capital requirement and the capital resources need to be comparable. Therefore, it is imperative that the starting point is comparable valuation.

5.1 Valuation principles

56. A Market Adjusted Valuation Approach is the valuation approach to be initially adopted for the BCR. This will be reviewed, as the IAIS develops the valuation approach for ICS purposes. Under this approach, the G-SII starts with the amounts as reported on its audited, consolidated, general-purpose balance sheet, whether that be on an IFRS or GAAP basis.

57. G-SIIs are not required to revalue every balance sheet item to a market based methodology. The G-SIIs are required to make adjustments to major balance sheet items, more specifically:

    a. Insurance liabilities and reinsurance balances are to be adjusted based on the specification in Annex C.

    b. Financial instruments, both assets and liabilities, including derivatives and mortgages/ loans made[11], are to be adjusted to fair value as determined under the G-SII's applicable IFRS or GAAP standards for reporting or disclosure purposes.

58. The valuation of assets and liabilities other than insurance liabilities and financial instruments are required to be based on IFRS or GAAP valuations, as applicable for consolidated audited general-purpose financial statements.

59. Annex E gives specific guidance for various balance sheet items.

60. From the data collected in field testing, it is apparent that the key difference in the IFRS or GAAP valuation and the market adjusted valuation of insurance liabilities is due to the recognition of the margin over Current Estimate in equity (capital resources). The movement of margins from liabilities to equity increased core and total Qualifying Capital Resources significantly.

[11] In this context, mortgages/loans made means mortgages/loans that the volunteer IAIG has invested in or itself written as the offeror.

6 Impact on G-SIIs and potential G-SIIs

6.1 Calibration Level and Capital Resources

61. The primary focus of field testing to date has been to examine the potential impact of the BCR on G-SIIs. However, there has also been consideration to the impact on all volunteers, as some of the other volunteers could be designated as G-SIIs at some time in the future.

62. By targeting the BCR between the upper and lower thresholds for supervisory intervention (e.g. typically between the Prescribed Capital Requirement (PCR) and the Minimum Capital Requirement (MCR)), frequent breaches are not expected assuming normal business conditions. Field testing has analysed the level of the proposed BCR compared to the reported PCR of volunteers. For the eight G-SIIs which submitted data, the average level of the proposed BCR is 73% of their reported PCR when the alpha scalar of 100% is applied. For all volunteers considered, the average level of the proposed BCR is 74 % of the reported PCR when the alpha scalar of 100% is applied.

63. Field testing has also analysed the level of the proposed BCR compared to the reported total capital resources of volunteers.

64. For volunteers which are G-SIIs, the reported total Qualifying Capital Resources represent 427% of the proposed BCR for those volunteers and the core Qualifying Capital Resources represent 376%. For all volunteers considered, the reported total Qualifying Capital Resources represent 404% of the proposed BCR for those volunteers and the core Qualifying Capital Resources represent 355% of the proposed BCR. For volunteers which are G-SIIs, reported capital adequacy or solvency ratios (for example Qualifying Capital Resources/ reported PCR) are generally within the range of 200% to 400% but can also be higher.

65. The sensitivity of these results due to changes in factors is included in Annex H.

6.2 Reporting and Applicability

66. The IAIS proposes that initially the BCR will be reported on a confidential basis to group-wide supervisors, subject to access by the IAIS for refinement purposes (if relevant). Future reporting to group-wide supervisors will be used to assess stability of the BCR over time. The IAIS will maintain appropriate governance and security arrangements to protect the confidentiality of the information collected. The IAIS will review the suitability of the BCR factors over time, as the composition of G-SIIs changes and as market conditions change, to ensure that the BCR remains fit for purpose.

6.3 Implementation of the BCR

67. Once the BCR has been approved by the FSB and endorsed by the G20 Leaders Summit, responsibility for implementation of the BCR will be held by the relevant legislative authorities in each jurisdiction.

7 Communication plans and next steps

68. Leading up to the finalisation of the BCR, the IAIS intends to publish the documents used for field testing data collection, in order to enhance transparency to the public. At a later stage, selected aggregate summary results from field testing will be disclosed to further enhance transparency but in a manner such that individual volunteers cannot be identified.

69. The BCR will be published following endorsement by the G-20 Leaders Summit in November 2014.

70. A consultation paper on HLA is scheduled for publication in December 2014. This paper will address the proposed linkages between the BCR and HLA and how the combination of BCR plus HLA will meet the policy objectives outlined in the G-SII policy measures paper published in July 2013.

71. Key milestones for the development of the BCR and related global standards HLA and ICS are:

Expected timing	Key milestone
8 August 2014	Deadline for responses to this BCR Consultation Document
September / October 2014	IAIS and FSB agree the details of the BCR proposal
November 2014	G20 Leaders expected to endorse the BCR proposal
December 2014	Initial consultation documents on HLA and ICS released
January 2015	Confidential reporting on BCR to commence
February 2015	Deadline for responses to the HLA and ICS consultation documents
March to September 2015	Field testing of HLA and ComFrame, including ICS
December 2015	HLA proposal to be finalised
March to September 2016	Further field testing of ComFrame, including ICS
December 2016	ICS to be agreed, subject to further refinement via field testing
2017 and 2018	Further refinement of ComFrame, including ICS, via field testing
Late 2018	ComFrame, including ICS, to be adopted by IAIS
From 2019	Implementation of ComFrame, including ICS, to commence
From 2019	HLA commences to apply to G-SIIs, initially based on BCR as a foundation, later to be based on ICS as a foundation

Annex A – BCR Principles

1. The development of the BCR has been guided by 6 main principles which were detailed in the previous BCR consultation document. These principles provide a high level framework against which approaches and proposals may be reviewed. The principles are:

Substantive principles:

2. BCR Principle 1 - Major risk categories should be reflected. The BCR must reflect major insurance risks including risks from both assets and liabilities, and non-insurance risks.

3. BCR Principle 2 - Comparability of outcomes across jurisdictions. Outcomes should be comparable across jurisdictions. This implies the need to minimise distortions, including those arising from differing levels of conservatism included in valuation processes. The level of discretions that may be applied or introduced should be minimised across jurisdictions and over time.

4. BCR Principle 3 - Resilience to stress. The BCR should be able to function in a wide variety of circumstances (including a stressed macro environment) and remain valid. Approaches adopted should be testable against historic data and circumstances to reflect the impact of major drivers of experience that are appropriate for basic capital requirements.

Construction principles:

5. BCR Principle 4 - Simple design and presentation. The design of the BCR needs to be pragmatic and practical. The form of presentation of the BCR, focusing on meaningful communication to external parties, should be “simple” and “intuitive” at a high level, yet sufficiently granular for the results to be fit for purpose. The BCR should utilise the minimum number of parameter and data requirements while attaining valid and robust outcomes with a focus on material issues.

6. BCR Principle 5 - Internal consistency. The structure of the BCR needs to be consistent and should be applicable over the range of insurance and non-insurance entities it will need to cover and over time.

7. BCR Principle 6 - Optimise transparency and use of public data. The level of transparency, particularly with regard to the final results provided, and the use of public data should be optimised.

Annex B – Glossary

Abbreviation	Meaning
ALM	Asset Liability Matching
BCBS	Basel Committee on Banking Supervision (also Basel Committee)
BCR	Basic (or Backstop) Capital Requirements
BCR Ratio	Ratio of Qualifying Capital Resources divided by the Required Capital.
ComFrame	Common Framework for the Supervision of Internationally Active Insurance Groups
DTAs	Deferred Tax Assets
DTLs	Deferred Tax Liabilities
FSB	Financial Stability Board
GICs	Guaranteed investment contracts
G-SIFIs	Global Systemically Important Financial Institutions
G-SIIs	Global Systemically Important Insurers
G20	Group of Twenty Countries
HLA	Higher Loss Absorbency
IAIGs	Internationally Active Insurance Groups
IAIS	International Association of Insurance Supervisors
IAS	International Accounting Standard
IASB	International Accounting Standards Board
ICP	IAIS Insurance Core Principle
ICS	Risk–based global Insurance Capital Standard
MCR	Minimum Capital Requirement
MOCE	Margin Over Current Estimate (for BCR purposes)
NAAR	Net Amount at Risk
NTNI	Non-traditional Insurance and Non-insurance (activities)
PCR	Prescribed Capital Requirement
TER	Total expense ratio
Other important terms	
Qualifying Capital Resources	The amount of qualifying capital resources available for BCR purposes
Required Capital	The amount of capital required to satisfy the BCR
Technical Provisions	The amount an insurer sets aside to fulfil its insurance obligations

Annex C – Insurance Liabilities and Reinsurance Recoverables

Segmentation

1. The allocation of insurance liabilities to the lines of business should follow the principle of substance over form. This means insurance liabilities should be allocated to the lines of business which better reflect the nature of the underlying risks. Segmentation should be based on the nature of the risks underlying the contract (substance) rather than the legal form of the contract (form).

2. The application of this principle implies that the legal classification of insurance contracts, for authorisation or accounting purposes, is not the determining criteria for segmentation.

3. The segments to be used for valuation and BCR reporting are shown in Annex G.

Market Adjusted Valuation Approach – Methodology for calculation of Current Estimate

Basis for calculation

4. The Current Estimate should correspond to the probability-weighted average of the present values of the future cash flows associated with insurance liabilities discounted using the relevant interest rate term structure to derive a present value. This applies equally to the calculation of reinsurance recoverables. Reinsurance recoverables need to be calculated so that they are consistent with the Current Estimates of insurance liabilities. Therefore the same assumptions and inputs should be used.

5. The calculation of the Current Estimate is based upon up-to-date and credible information and realistic assumptions. Implicit or explicit margins are not part of the Current Estimate. The determination of Current Estimate has to be comprehensive, and objectivity is required in terms of observable input data.

6. Uncertainty in the future cash-flows should be captured in the Current Estimate. Uncertainty in cash flows can arise from a number of sources, namely: (1) the timing, frequency and severity of claim events; (2) claims amounts and the period needed to settle claims; (3) the amount of expenses; (4) the value of an index/market values used to determine claim amounts; (5) policyholder behaviour; and, (6) path dependency. The calculation should consider the variability of the cash flows in order to ensure that the Current Estimate represents the mean of the distribution of cash flow values.

7. By definition, the Current Estimate is the average of the outcomes of all possible scenarios, weighted according to their respective probabilities. However, it may not be necessary or even possible to explicitly incorporate all possible scenarios in the valuation of insurance liabilities, or to develop explicit probability distributions in all

cases. This depends mainly on the type of risks affecting the scenarios and the expected materiality of their financial impact in the overall calculation.

8. When valuing insurance liabilities no adjustment to take account of the own credit standing of the G-SII should be made.

Cash-flow projection

9. Cash flow projections should reflect expected realistic future demographic, legal, medical, technological, social or economic developments. Appropriate inflation assumptions should also be incorporated in the cash flow projections, appropriately recognizing the different types of inflation to which the entity can be exposed (e.g. consumer price index, medical inflation and salary inflation). Premium adjustment clauses, where relevant, may also need to be considered.

10. The Current Estimate should be calculated gross of reinsurance and special purpose vehicles. Recoverables from reinsurance or special purpose vehicles should be separately calculated and recognized as an asset.

11. The cash-flows to be included in the calculation of Current Estimate should, at least, include:

    - benefit and claim payments
    - direct and indirect expenses incurred (a non-exhaustive list of examples could include: administrative expenses; investment management expenses; claims management expenses; and, handling expenses)
    - premiums received, provided they are included within the contract boundaries
    - subrogation payments and recoveries other than reinsurance and special purpose vehicle
    - other payments made necessary in order to settle the claims

12. In determining the Current Estimate, G-SIIs should take into account taxation payments which are charged to policyholders.

Recognition / Derecognition of insurance liabilities

13. Without prejudice to the specifications set in the “contract boundaries” section, a liability should be recognised and valued as soon as the G-SII becomes party to a contract, without any possibility to amend or cancel it, even though the insurance coverage has not started yet.

14. A contract should be derecognised when all possible claims linked to this contract have been completely settled, and all future cash-flows are certainly nil.

Example

Consider a contract providing a health coverage starting on 1st March 2014. The contract has been underwritten on the 20 December 2013, with no possibility to change the terms of the contracts before the coverage starts. On the 31 December 2013, this contract should be recognised in the balance sheet.

Contract Boundaries

15. Only contracts existing at the valuation date, and recognised in line with previous section, should be taken into account. This provision implies that no future business should be taken into account for the calculation of insurance liabilities.

16. Any obligations, including future premiums, relating to the contract shall belong to the contract. However, future premiums (and associated claims and expenses) relating to an existing and recognised contract beyond the following dates should not be considered in insurance liabilities, unless the G-SII can demonstrate that they are able and willing to compel the policyholder to pay the premiums:

    - The future date where the G-SII has a unilateral right to terminate the contract or reject the premiums payable under the contract;
    - The future date where the insurance or reinsurance undertaking has a unilateral right to amend the premiums or the benefits payable under the contract in such a way that the premiums fully reflect the risks.

17. For group policies, similar rules apply. If premiums can be amended unilaterally for the entire portfolio in a way that fully reflects the risks of the portfolio, the second condition above will be fulfilled for group policies.

Example

Consider a whole life policy, with a level premium. According to the terms of the insurance contract, the G-SII cannot reject any premium, and the premium is constant throughout the life of the contract. Therefore, all (probability-weighted) future premiums of this contract should be taken into account in the insurance liabilities, along with the related claims and expenses.

Example

Consider a health policy (medical expenses), starting on 1st July 2013, with a premium paid monthly. Premium indexation is possible at each anniversary date, and the policyholder has no right to cancel the policy during the first 12 months. On the 31 December 2013, insurance liabilities should include 6 months of future premiums (Jan – Jun 2014), along with the related claims and expenses.

Example

Consider an annually renewable life protection policy sold on a group basis. The G-SII does not manage this portfolio on a contract-by-contract basis, but can freely adjust the premiums for the entire portfolio at the policy anniversary date, to fully reflect the risks stemming from that portfolio. In this case, the conditions defined in paragraph 101 are deemed applicable. The calculation of Current Estimates should not include any premiums beyond the next future anniversary date where such adjustment is possible, along with the related claims and expenses.

Time horizon

18. The projection horizon used in the calculation of the Current Estimate should cover the full lifetime of all the cash in- and out-flows required to settle the obligations related to existing insurance and reinsurance contracts on the date of the valuation.

Data quality and setting of assumptions

19. When selecting data for the calculation of the Current Estimate, G-SIIs should consider:

    - the quality of data, for different data sets, based on the criteria of accuracy, completeness and appropriateness;
    - the use and setting of assumptions made in the collection, processing and application of data;
    - the frequency of regular updates and the circumstances that trigger additional updates.

20. In some cases, only limited or unreliable data may be available from the G-SII's own experience of a particular type of contract or claim from which to base an assumption for that contract or claim. Historical data about the G-SII's own experience should be supplemented when necessary with data from other sources. Adjustment should be made to these alternatives sources so that they are more consistent with the risk characteristics of the portfolio considering in particular whether:

    - the characteristics of the portfolio differ (or will differ, for example because of adverse selection) from those of the population that has been used as a basis for the historical data;
    - there is evidence that historical trends will not continue, that new trends will emerge or that economic, demographic and other changes may affect the cash flows that arise from the existing insurance contracts; or
    - there have been changes in items such as underwriting procedures and claims management procedures that may affect the relevance of historical data to the portfolio of insurance contracts.

21. When calculating the Current Estimate consideration should be given to events not captured in the data that can impact the Current Estimate.

22. Consistency across assumptions is important to consider, for example the relationship between inflation and interest rates.

Possible methodologies (linked to the principle of proportionality)

23. The calculation of insurance liabilities is typically based on valuation models. Where this is the case, these models should be comprehensive, transparent, based on current and reliable data, and use appropriate actuarial and statistical methods. Valuation models and their parameters should be calibrated as much as possible on the basis of objectively observable data.

24. G-SIIs should use actuarial and statistical techniques for the calculation of the Current Estimate which appropriately reflect the risks that affect the cash flows. This may include simulation methods, deterministic techniques and analytical techniques. Following the application of the Proportionality Principle, in the case of more complex cash flow projections (e.g. future discretionary benefits relating to participating contracts or embedded options and guarantees), simulation techniques may lead to more robust valuation results. In other cases, deterministic and analytical techniques may be more appropriate.

Liabilities expressed in different currencies

25. Discounting of liabilities needs to occur with a yield curve relevant to the particular currency. Conversion to the reporting currency from different currencies should be carried out according to the jurisdictional GAAP for consolidated group reporting. This will usually result in conversion at the currency conversion spot rate at the balance date.

Valuation of options and guarantees

26. Insurance contracts often include embedded options and guarantees, such as guarantees of minimum investment returns (including as part of death benefits), maximum charges for mortality, surrender options, or options for the policyholder to reduce or extend coverage. Expected cash flows for these options and guarantees should be included in the cash flows to determine Current Estimates. Expected cash flows should reflect expected policyholder behaviour. For the calculation of the time value of options and guarantees all payments which are connected to the insured risks have to be considered, especially profit participations.

27. Options and guarantees should be valued using stochastic approaches. However, for the purposes of initial reporting and subject to a materiality assessment, simplified deterministic approaches can be used.

Policyholder behaviour

28. Expected cash flows should reflect expected policyholder behaviour, particularly where the options or guarantees allow policyholders to take actions to change the amount, timing or nature of the benefits they will receive. In the case of long term

contracts, options available to policyholders can include the termination of a contract, guaranteed living benefits, guaranteed income benefits or any other contractual options.

29. The likelihood that policyholders will exercise contractual options should be taken into account, considering in particular:

    - past behaviour of policyholders;
    - how beneficial the exercise of options would be to policyholders under specific circumstances;
    - economic conditions;
    - past management actions.

30. The likelihood that policyholders will exercise contractual options, including lapses and surrenders, shall be based on a prospective view of expected policyholder behaviour that makes appropriate and justified assumptions about the elements mentioned above.

31. The assumptions on policyholder behaviour should be appropriately founded in statistical and empirical evidence, to the extent that it is deemed representative of the future expected behaviour.

32. Policyholder behaviour is driven by convenience and other considerations and not purely financial self-interest (or may appear as such to the G-SIIs due to the lack of knowledge of the specific circumstances of the policyholder). Realistic current expectations would incorporate at least some policyholder action or inaction consistent with observed policyholder behaviour.

33. The assumptions concerning policyholders' behaviour would need to be consistent with the assumptions for investment returns and should not, in general, be assumed to be independent of financial markets. For instance policyholders' behaviour may be linked to the interest rate scenario and associated assumptions.

34. The quantification of the impact on the Current Estimate of optionality or other non-symmetric cash flow could be done using a stochastic method considering the entire range of scenarios.

Valuation of future benefits (discretionary vs. non-discretionary)

35. All future benefits that are non-discretionary should be included within the projection of cash flows according to the contractual obligation of the G-SII and the economic or loss scenarios applicable for the Current Estimate.

Example

For non-discretionary amounts such as bonuses or crediting rates, the Current Estimate should recognise the amounts expected to be paid consistent with the expected future experience and economic scenarios for which the liability valuation is based. For example, if a reference group of assets is expected to earn a greater amount than the contractual crediting rate and discretionary additional credit rates can be declared, the expected discretionary crediting rate should be taken into account. This projection should be consistent with the yield curve that is used to discount the cash flows for the contract.

36. Discretionary benefits and the exercise of policyholder options are usually connected in the projection of cash flows. The application of discretions often drive policyholder behaviour and so must be considered along with options and guarantees embedded within policies. A Current Estimate of cash flows will include the value of cash flows as a result of the exercise of discretions consistent with the assumed policyholder behaviour.

Management actions

37. When calculating the Current Estimate, the G-SII's future management actions could be taken into account if they can reasonably be expected to be carried out under the specific circumstances to which they are applied.

38. Management actions should be objective, realistic and verifiable. They cannot be contrary to the G-SII's obligations to policyholders or to legal provisions applicable to the G-SII. Assumed future management actions should be consistent with the G-SII's current business practice and business strategy unless there is sufficient evidence that the G-SII will change its practices or strategy.

39. Assumed future management actions shall be consistent with each other. The assumptions about future management actions should take into account the time needed to implement them and any expenses caused by them.

Simplifications/approximations and appropriate adjustments (application of the Proportionality principle)

40. Where existing approaches (GAAP or economic valuation) provide a reasonably close approximation to the valuation principles outlined above for the market adjusted valuation approach, it is acceptable to use these valuation frameworks as starting points and apply adjustments.

41. Possible adjustments could include approximating the market-adjusted value by using sensitivities of economic values to using different yield-curves for discounting.

42. For insurance business not including embedded options and guarantees (in particular insurance liabilities related to non-Life insurance), there might be no need to perform stochastic valuations. In that case, the adjustment of GAAP values based on

management's best estimates for determining market-adjusted values could be limited to applying discounting to the insurance liabilities which were determined according to GAAP.

Discounting

43. Current Estimates of insurance liabilities (and related reinsurance recoverables) are to be calculated using the IAIS specified discount curves.

IAIS Specified Discount Curves

44. The main objective of applying IAIS specified discount curves is to improve comparability. As such, the initial approach chosen for the BCR does not pre-empt the future development of alternative comparable approaches to discounting the Current Estimate that may better reflect the long term nature of insurance liabilities and that could be eventually used as part of IAIS standards. That applies to both the mechanics of the curve as well as any factors used in the calculation for the purposes of the field test.

45. The IAIS specified discount curves are based on risk adjusted liquid interest rate swaps or government bonds (where the latter are considered being more liquid) and some adjustment based on corporate bond indices.

46. The curves provided to volunteers for field testing are based on calendar year end 2013 market data for swaps and government bonds as well as an adjustment based on a relevant corporate bond index. To derive the full curve (before adjustment), the Smith Wilson technique was used. This technique is a macroeconomic approach: A spot (i.e. zero coupon) rate curve is fitted to observed prices of financial instruments. The curves are flat after 30 years.

47. Adjustment: For this field testing exercise the adjustments were grouped by three different buckets: 1) adjustment for currency/jurisdiction identity, 2) adjustment for currency unions and 3) adjustment for markets with small corporate bond markets

48. The basis for this adjustment is an investment grade corporate bond or broad market index, where these are available.

49. The adjustment was calculated as a fixed percentage upward shift and is based on the 10 year unadjusted rate (where available). Only 40% of the actual corporate bond spread is used for the adjustment. The percentage adjustment that is applied to the curve is then relative to the (10 year) basic risk free rate. The adjustment was capped at the absolute spread as calculated at 10 years.

$$interest\ rate_{adjustment} = min\left(basic\ risk\ free_t \frac{40\%\ times\ spread_{10}}{basic\ risk\ free\ rate_{10}}, spread_{10}\right)$$

50. In case of currency unions, such as the Eurozone, both government bond and corporate bond spreads are taken into account. The adjustment has regard to the

average composition of G-SIIs' assets between government bonds and corporate bonds. The adjustment is hence calculated as:

*Weight_Govt * Relevant_Spread_Govt +Weight_Corp * Relevant_Spread_Corp.*

51. For markets where a number of indicators (e.g. lack of index, low amount outstanding, few bonds high quality bonds) suggest that the corporate bond market does not allow considerable investments by G-SIIs, a simple assumption has been made that the adjustment would be 50bp. Further investigation will be undertaken on the development of the local corporate bond markets.

52. The IAIS provided the discount curves for a number of currencies/jurisdictions. To ensure comparability, for a given currency, each volunteer was asked to use the relevant curve provided by the IAIS for this first field testing exercise.

Curves not provided centrally

53. The IAIS will not provide discount curves for all currencies and countries where G-SIIs operate. In those cases, the G-SIIs are required to derive the curve following the approach set out above by complying with the principles presented above.

Method to derive risk free term structure for field testing purposes

54. For discount curves that are not centrally provided, the G-SIIs are required to take the following aspects into account, when deriving the basic risk free curve:

- The risk free interest rate term structure should be determined on the basis of market data as of the valuation date.
- The relevant data should either be swaps or government bonds, both adjusted for credit risk. In the rarer case where neither is available, other financial instruments that are similar to swaps can be used, subject to appropriate credit risk adjustment.
- If the risk free rate is derived by using swaps, an appropriate (flat) basis point adjustment to the swap rates should be applied. The credit risk of sovereigns could be measured by looking at CDS premiums on government bonds. It is recognised though, that under certain market circumstances the relationship between government bonds and CDS prices can be weak.
- The rates should be based on financial instruments for which a reliable market value is available. This requires a deep, liquid and transparent market.
- Where the credit risk assessment lacks a sufficiently robust basis, the adjustment should be approximated by multiplying the credit risk adjustment used for USD multiplied by the respective interest rate differential.
- The interpolation should be done in line with the approaches mentioned in the technical specifications. However, a simple linear interpolation between the observed spot rates is also acceptable.

The particular case of obligations replicable by a portfolio of assets

55. Where future cash flows associated with insurance obligations can be replicated reliably using financial instruments for which a reliable market value is observable, the value of insurance obligations associated with those future cash flows could be determined on the basis of the market value of those financial instruments.

56. The cash flows associated with insurance obligations cannot be reliably replicated when:

    - policy holders can exercise contractual options, including lapses and surrenders
    - obligations depend on mortality, disability, sickness and morbidity rates
    - expenses associated with insurance obligations cannot be reliably replicated

57. Financial instruments used to value insurance obligations must be traded in deep, liquid and transparent (DLT) markets.

Other Liabilities

58. For the market-adjusted valuation approach, liabilities will be reflected at a market-value that does not take into account changes in the credit standing of the G-SII.

Annex D – Qualifying Capital Resources - ComFrame

1. The BCR uses the proposed ComFrame definition of Qualifying Capital Resources, both Core and Additional, including, the following:

Financial Instruments

2. Financial instruments will only be classified as capital resources where those instruments[12]:

    - are available
    - are not undermined or rendered ineffective by encumbrances;
    - are subordinated to the rights of its policyholders in an insolvency or winding-up. Policyholder priority order should not be compromised by guarantees or security arrangements given by either the G-SII or another related entity for the benefit of holders;
    - have a level of distribution that is neither tied nor linked to the credit standing or financial condition of the G-SII or another related entity, such that those distributions may accelerate insolvency.

3. Financial instruments will only be classified as Core Capital where those instruments:

    - do not have a fixed maturity;
    - are not retractable by the holder;
    - are not redeemable within the first five years after issuance;
    - require that redemption is subject to review or approval from the relevant supervisor;
    - are fully paid-up;
    - have distributions (e.g. dividends and coupon payments) that can be cancelled without the risk of invoking default or triggering insolvency
    - with distributions that are cancellable are non-cumulative;
    - have no fixed serving costs (e.g. fixed interest payments and principal repayments); and
    - are free from charges, claims or other hindrances and do not include a right by the holder to receive compulsory payments.

4. Where financial instruments do not meet the criteria for classification as Core Capital, they may be classified as additional capital where those instruments:

    - have an initial maturity of at least five years, where the instrument's limited protection as it nears maturity is captured either:

[12] Availability and subordination may be encumbered if there is any arrangement or connected transaction that prevents the financial instrument from meeting the criteria.

- by the notional amount of the instrument being amortised on a straight-line basis in the final five years to maturity;
- due to the existence of a requirement for the G-SII to suspend repayment or redemption if it is in breach of its capital requirement or would breach it if the instrument is repaid or redeemed

- require that redemption is subject to review or approval from the relevant supervisor;
- give holders no rights to accelerate the repayment of future scheduled principal or coupon payments, except in bankruptcy, insolvency, winding-up or liquidation.

5. G-SIIs will only be permitted to include non-paid-up capital items (e.g. unpaid preference shares, unpaid subordinated debt, letters of credit, guarantees) in additional capital where those items contain legally binding commitments that increase the amount of qualifying paid-up capital at the discretion of the G-SII, at any time.

Elements Other than Financial Instruments

6. Core Capital elements other than financial instruments may include, for example:

- Retained earnings
- Surplus funds
- Contributed surplus
- Paid-up initial funds (e.g. mutual entities)
- Non-participating account (e.g. mutual entities)
- Participating policyholders' equity or account (e.g. joint stock entities)
- Accumulated Other Comprehensive Income (AOCI)
- Margins Over Current Estimates (MOCE)/Reserves included in GAAP equity or otherwise allocated to equity

Adjustments, exclusions and deductions

7. The following items are excluded or deducted from Core Capital[13] :

a) Goodwill

b) Intangible assets, including computer software intangibles

c) Each net defined benefit pension plan asset, where it cannot be easily and promptly accessed for the own use and on-going operations of the G-SII

d) Deferred Tax Assets (DTAs), which rely on the future profitability of the G-SII

e) Reciprocal cross holdings, arranged either directly or indirectly between financial institutions and which artificially inflate the Core Capital position of the G-SII

f) Direct investments in own shares and in own Core Capital financial instruments

[13] Items (a) to (d) should be net of associated DTLs

g) Reinsurance assets arising from arrangements deemed to constitute non-qualifying reinsurance i.e. those without an executed and legally binding contract (subject to a six-month grace period from the effective date of reinsurance coverage)

h) Investments controlled by the G-SII, including investments in Core Capital-like capital resources of non-insurance financial institutions subject to risk-based capital requirements (banks subject to Basel capital requirements)

i) Total secured (encumbered) assets in excess of the sum of:

- the value of the G-SII's on-balance sheet liabilities secured by the (encumbered) assets; plus
- the value of the G-SII's incremental supervisory capital requirements for liabilities secured by the (encumbered) assets; plus
- the value of the G-SII's incremental supervisory capital requirements for secured (encumbered) assets

8. The following items are excluded or deducted from additional capital:

- Reciprocal cross holdings, arranged either directly or indirectly between financial institutions and which artificially inflate the additional capital position of the G-SII
- Direct investments in own additional capital financial instruments
- Investments controlled by the G-SII in additional capital-like capital resources of non-insurance financial institutions subject to risk-based capital requirements (banks subject to Basel capital requirements)

9. The following items, though excluded or deducted from Core Capital, are added back or included in additional capital:

- Realisable value of net DTA which relies on future profitability
- Realisable value of computer software intangibles
- 50% of each pension plan asset, net of any eligible DTLs

Annex E – Guidance for specific balance sheet items

G-SIIs are required to apply the following adjustments to these specific balance sheet items:

1. Goodwill and other intangibles: valuation of goodwill and other intangibles are required to be based on the G-SII's reported IFRS or GAAP valuations, as applicable for consolidated audited general-purpose financial statements in each G-SII's respective home jurisdiction. However, goodwill and other intangibles are subject to adjustments in deriving the value of capital resources to be used in determining whether the G-SII has sufficient Qualifying Capital Resources to meet the BCR.

2. Property (own use and investment): valuation of these items is to be based on the G-SII's reported IFRS or GAAP valuations, - Ref: IAS 16 & 40)

3. Mortgages and loans made: See Annex D for financial instruments.

4. Reinsurance recoverables: these items are required to be reported on a basis consistent with the determination of insurance liabilities. Recoverables on paid and unpaid balances will be reported net of allowances for estimated uncollectible amounts.

5. Pension assets/liabilities: pension assets/liabilities are required to be based on the G-SII's reported IFRS or GAAP valuations. However, pension assets are subject to adjustment in deriving the value of capital resources which is to be used in determining whether the insurer has sufficient Qualifying Capital Resources to meet the BCR. Ref: IAS 19.

6. Deferred taxes (Assets/Liabilities): deferred taxes (assets/liabilities) are required to be based on the G-SII's reported IFRS or GAAP valuations, as applicable for consolidated audited general-purpose financial statements in each G-SII's respective home jurisdiction. However, deferred tax balances are required to be adjusted consistently with other asset and liability adjustments made for field testing purposes. For example, certain other assets/liabilities are subject to adjustment in deriving the value of capital resources which is to be used in determining the G-SII's Qualifying Capital Resources; in such instances, a corresponding adjustment are required to be made to deferred tax assets/liabilities. However, the allocation of prudence (margins) from the insurance liabilities to the capital resources should not generate any tax adjustment.

7. Other assets: the valuation of these items is to be based on the G-SII's reported IFRS or GAAP valuations. Ref: IAS 28 (investments in associates and joint ventures).

8. Provisions other than insurance liabilities : Ref: IAS 37

9. Financial liabilities – upon initial recognition the valuation of these items is to be based on the G-SII's reported IFRS or GAAP valuations, but there should be no subsequent adjustment to take account of the change of the G-SII's own credit standing. See above section for financial instruments.

10. Financial instruments (including derivatives) – See Annex D for financial instruments.

11. Contingent liabilities: valuation of contingent liabilities is to be based on the G-SII's reported IFRS or GAAP valuations. Most contingent liabilities are disclosed in the notes to financial statements because estimates are not reliable and/or the IFRS/GAAP definition of a liability to be reported on the balance sheet is not met.

12. Other liabilities: valuation of other liabilities is to be based on the G-SII's reported IFRS or GAAP valuations.

Annex F – BCR Formula and Derivation

This annex provides an explanation of the derivation of the various components of the BCR formula. It also provides commentary on the rationale for implicit rather than explicit treatment of elements, such as ALM and diversification.

1. Initially, it was considered that it may be helpful to express the BCR formula as a grouping of factors, where one factor would be applied to the same set of exposures, with various risk weights applied to reflect the relative riskiness of the segments within a set of exposures. This approach would lead to a formula that would look as follows:

$$BCR\ Required\ Capital =$$

$$\propto \times [\beta_1 Traditional\ Life + \beta_2 Traditional\ Non\text{-}Life + \beta_3 Asset + \beta_4 ALM + \beta_5 NT] + \gamma \times NI$$

2. However, during the analysis conducted it became clear that it would be easier to use a simplified approach, where there is only one level of factors applied. This is especially the case where there are different exposure measures used within the same set of exposures. As an example, traditional life uses a combination of Net Amount at Risk and Current Estimate as exposure measures. Due to the different nature and magnitude of these measures, it is not intuitive to compare relative risk weights applied to these measures. The simplified approach is a change in presentation only, not in substance.

3. The revised approach results in the formula as set out in section 3.3

$$BCR\ Required\ Capital = \alpha \left[\sum_{i=1}^{4} a_i\, TL_i + \sum_{i=1}^{4} b_i\, TNL_i + \sum_{i=1}^{4} c_i\, NT_i + \sum_{i=1}^{3} d_i\, A_i \right] + \sum_{i=1}^{n} NI_i$$

4. This approach also increases the transparency of the formula, as it is clear which factors are applied to each exposure measure. The alpha scalar (α) could be removed after the formula has been calibrated.

Insurance Component

5. The process for determining the factors to be applied to the insurance component in the formula above was essentially done in two separate steps. The factors relating to the risk exposures (a1, a2, to d3) were derived separately from the alpha scalar (α). This facilitated the separation of the analysis required to derive the risk profile of the BCR from the wider discussion of how the overall level of the BCR should be calibrated.

Risk exposure factors

6. The intention for the derivation of the risk exposure factors was to use the data collected during field testing to derive the relative riskiness of the segments and hence to derive the appropriate factors.

7. Two sources of the data request were designed to gather this information. The first source was from supervisors' responses to a questionnaire seeking estimates of relative

riskiness of various proxy measures of risk related to different asset and liability segments. Supervisors of jurisdictions in which most of the G-SIIs are based and in which the G-SIIs have key operations provided estimates of relative riskiness which could be applied, based on their knowledge and actual experience of the underlying risks and the G-SIIs.

8. This process yielded an interesting result, namely that even though the level of factors differed between the various supervisors, the relative riskiness allocated to the different exposure measures appeared similar, although there were significant differences in some estimates, especially in relation to asset risks.

9. Further analysis applying the estimated factors to the exposure data collected from the volunteers showed that the ranking of Required Capital for G-SIIs using the different sets of factors from the supervisors was similar even though the level of Required Capital differed.

10. The second source was question 76 of the explanatory questionnaire which asked volunteers to allocate their economic capital to the various factors for which exposure calculation was collected. From the 31 volunteers who provided information, 19 answered this question, five of which were G-SIIs.

11. The responses from volunteers did not provide sufficient information on which to base the factors on, as there were some complications with using their data, most notably that the response to the question was often incomplete. Only six volunteers (but no G-SIIs) provided both components of information, margins and capital.

12. During the analysis, the key metrics considered were:

    - The level of BCR compared to the level of PCR[14]
    - The ratio of Core Capital resources to BCR

13. For those G-SIIs that provided sufficient data, comparison of the split of capital requirement over the risk exposures derived using the supervisors' factors to that provided by the volunteers gave additional comfort that the overall allocation of risk capital was appropriate.

    As the relativity of the capital required for risks suggested by the supervisors was similar but the calibration level diverged, a single set of parameters was developed based on combining the parameters from the jurisdictions in which most G-SIIs are based. Calibration was then carried out consistent with the objective of the targeting the BCR between the upper and lower thresholds for supervisory intervention (e.g. typically between PCR and MCR).

14. The process as described above has resulted in the factors shown in section 3.4.

[14] Not all G-SII jurisdictions have group-wide PCRs. However, for those G-SIIs which are not subject to a group-wide PCR, additional guidance was given to estimate what a group wide PCR may be based on the existing requirements at the individual insurer level.

15. Care should be taken when comparing factors. Different exposure measures are used, resulting in different magnitudes of factors. As an example, Net Amount at Risk on protection business will be a large amount as it represents the total exposure of the G-SII. Any such factor applied to Net Amount of Risk will be much lower than a factor applied to a different measure, such as a Current Estimate.

16. Even where factors are applied to the same exposure measure, care needs to be taken when comparing the factors due to the different nature of the underlying risks. As an example even though Current Estimate is used as an exposure measure for both life and non-life business, the factors applied to the exposures are very different.

17. The Current Estimate for non-life business will typically be smaller than the Current Estimate for non-protection life business, as it will be dependent on contingent low probability events occurring. This in contrast to non-protection life business where there will typically be a build-up of funds which will be paid out to the policyholder in the future.

18. Thus, even though the factors applied to non-life business are higher, they are applied to a smaller exposure.

Scalar

19. In determining the level of the BCR, the IAIS has targeted a level between the upper and lower thresholds of supervisory intervention, such that frequent breaches are not expected assuming normal market conditions. As set out in section 6 of the report, the data has shown that for the G-SIIs the average level of the proposed BCR is 73% of the reported PCR when the scalar parameter (alpha) of 100% is applied.

20. Further consideration when determining the calibration level of the BCR is as follows:

- For G-SIIs, HLA will be added to the BCR, so the level of the BCR should be considered together with the level of the HLA;
- The BCR is a crude measure, making it difficult to accurately reflect the riskiness of the G-SII, which may mean that the BCR is overstated for some G-SIIs and understated for others. A more risk sensitive approach will be considered when developing the ICS; and
- The extent to which G-SIIs are able to meet their BCR will be dependent on the capital resources which the G-SII may take into account. Thus the overall level of the BCR may be influenced by decisions made on the composition of Qualifying Capital Resources. Sensitivities are provided in Annex H showing that the ratio of capital resources to BCR is heavily dependent on the definition of capital resources.

Selection of the segments – general approach

21. The fifteen BCR insurance segments have been selected following consideration of all of the sub-segments reported as part of field testing. This ensures the BCR formula avoids unnecessary complexity while remaining sufficiently granular to provide a robust and risk sensitive capital measure. In particular, we have been mindful of the specific risk profile of the G-SIIs to which the BCR is to be applied. As part of field testing, insurance was captured at the level of 26 sub-segments. All of these sub-segments have been mapped to one of twelve segments (please see the table in Annex G). In grouping into the segments chosen for the BCR formula, supervisory judgement was applied to allocating business to broadly homogeneous groups with specific consideration given to:

    - Whether the same exposure measure is appropriate for different risks grouped together
    - Similarity in terms of uncertainty relating to the size and timing of payments
    - Relative riskiness of earned and unearned business

22. The appropriateness of the initial allocation of sub-segments was then validated against the data provided as part of field testing. In particular, consideration was given to the materiality of the segments and sub-segments in the context of the G-SIIs with a view to avoid allocating a specific capital charge to an immaterial segment or conversely creating the need to derive a blended factor for two or more material sub-segments.

23. Although consideration was also given to data provided by all volunteers, greater weight was given to the specific risk profile of G-SIIs given that the BCR, in the form proposed in this Consultation Document, is to be applied only to G-SIIs. Although, on the whole, the final allocation of sub-segments to segments was broadly consistent with the initial allocation, some re-allocations were made as a result of this validation exercise.

24. The IAIS has sought to ensure that the segmentation of the BCR avoids the need to derive blended factors for two or more sub-segments accounting for more than 3% of Current Estimates in the aggregate. The IAIS has also looked to derive segments for which the mix of business is broadly consistent across the various G-SIIs.

Traditional Life Insurance Segmentation

25. When considering all G-SIIs in the aggregate, 80% of Current Estimates are just in three sub-segments, namely Savings without guarantees (approximately 20%), Annuities (approximately 10%) and Participating Products (approximately 50%). The proportion of Current Estimates explained by these three sub-segments ranges from 70% to 95% across the G-SIIs that participated in field testing. For all field testing volunteers the allocation of reserves between the three sub-segments does vary from the G-SII population, overall they continue to account for approximately 80% of Current Estimates in the aggregate. Two of these three dominant sub-segments, Annuities and Participating Products, have each been allocated a separate factor under the proposed BCR. The third of the three dominant sub-segments (Savings without guarantees) has

been allocated to the Other Life Segment and is by far the most important element of this segment. All segments are dominated (80% of exposure measure or more) by a single sub-segment with the particular sub-segment being similarly dominant across all G-SIIs that have provided data. Current Estimates are not an ideal exposure proxy for some lines of business – in particular protection business.

Exposure measures for traditional life business

26. The proposed proxy measures for risk exposure for the four segments of the "Traditional Life insurance" main category of activity are:

- Participating, Annuities, Other life: Current Estimate as specified in the Market Adjusted Valuation Approach, net of reinsurance recoverables, using the IAIS specified discount curve. The reason for the choice of the Current Estimate is to improve comparability across jurisdictions and to optimise transparency through the use of a common and explicitly specified yield curve. The Current Estimate is net of reinsurance recoverables to allow for the risk mitigating effect of outwards reinsurance.

- Protection: Net Amount at Risk (NAAR), equal to the sum insured minus the Current Estimate, net of reinsurance recoverables, where the sum insured is the sum of all maximum amounts that the insurance group would have to pay out on policies in force within the Protection segment. The NAAR equals the maximum possible payouts in excess of the Current Estimate and thus provides a measure of relative riskiness; it is comparable across jurisdictions. The NAAR is considered an appropriate proxy for the Protection – Life sub-segment, which is the most material sub-segment; for other sub-segments the appropriateness of the proxy is under further consideration. The Current Estimate is not considered an adequate proxy for the Protection segment because it is derived from cash-flows in which benefit and claims payments are netted by premiums received, so that the Current Estimate could be negative. An estimate of the present value excluding premiums received is not available from the field testing data.

Traditional Non-Life segmentation

27. The pattern of segments that are dominated by a single sub-segment is also the case for non-life insurance except for the Non-Life Other segment. For most G-SIIs, the most material sub-segment within this segment is Accident, Protection & Health business but this is not universally the case. However, in the context of G-SIIs this is not a material segment and segmenting to a more granular level would introduce a disproportionate level of granularity to the BCR formula in return for very limited additional risk sensitivity.

28. For the G-SIIs that participated in field testing, the property segment is dominated by property damage and other property sub-segments (non-proportional property, accident protection and health, motor damage and catastrophe reinsurance) are all relatively insignificant for the G-SII population.

29. For the casualty segment, the other liability segment dominates with an immaterial amount of non-proportional liability business.

30. It is notable that non-proportional sub-segments are not significant for the G-SIIs that participated in field testing.

Exposure Measures for Non-Life Business

31. For three of the four non-life segments, Current Estimates have been used as a proxy measure for risk exposure. For the most part, Current Estimates provide a reasonable indication of business volumes as well as exposure to open claims which may deteriorate materially as a result of adverse legal or legislative decisions. In particular, Current Estimates offer an indication of accumulated exposure to possible legacy issues which is a significant area of risk for traditional casualty business. Although Current Estimates are less sensitive than premium to more recent changes in non-life business volumes, this is unlikely to be a significant concern in the case of G-SIIs.

32. For the Property segment, net written premium was identified as providing a better proxy and it is against this measure, therefore, that the BCR Property factor is applied. There are various reasons for taking this alternative approach;

- For traditional property business, the most material area of uncertainty relates to the possibility of future events impacting such business (e.g. major fire, terrorist attack or windstorm). The best indicator of exposure to future events, which can reasonably[15] be provided by companies, is net written premium as this should reflect both business volume and, if priced appropriately, its relative riskiness.

- Current Estimates are not an appropriate measure because:

    - They provide only a weak indicator of those events which have not yet occurred.

    - They do not necessarily offer a good indicator of risk relating to previous events (e.g. where policy limits or retention levels have already been reached).

    - They would introduce unjustifiable levels of volatility in the BCR as the BCR would increase materially following a major event

    - There is a concern that Current Estimates would not be sufficiently sensitive to rapidly adjusting exposures to property related risks resulting in a significant lag between material changes in underlying exposures and the reflection of this in the BCR

[15] Arguably, sums insured will provide an enhanced exposure measure but the integrity and comparability of such data is likely to be weaker than for net written premium.

Non-Traditional Insurance Segmentation

33. There were four sub-segments of non-traditional life insurance – Variable annuities (separate information was obtained about the guarantees), GICS, Synthetic GICS and other non-traditional life insurance. The IAIS does not intend to significantly reduce the segmentation on non-traditional business and therefore has only combined GICS and Synthetic GICS with variable annuities remaining in its own segment. Other non-traditional life insurance business has been combined into a comprehensive other non-traditional insurance category along with other non-traditional non-life insurance and commercial credit insurance and suretyship.

34. Mortgage insurance remains as a separate segment of non-traditional, non-life business.

Exposure Measures for Non-traditional Insurance Business

Variable Annuities – Notional Value

35. The notional value of variable annuities represents the present value of those payouts that are contractually guaranteed to each policyholder as of the valuation date. Before hedging, the main risk of loss in this business relates to declining interest rates and equity market prices. Notional value is deterministic, independent of jurisdictional accounting standards and always results in a positive exposure. The notional value varies as the book of business ages, and captures many of key contract terms, particularly the roll-up rates and the equity market ratchet features. Current estimate liabilities were considered, but were not chosen as the exposure base because they may be negative, vary by accounting regime, are typically calculated using stochastic techniques, and are not well suited for factor-based capital requirements. `Separate account value' was considered but rejected because it does not capture the value of the guarantees and, under a factor-based approach, would lead to declining capital requirements; even as Current Estimates increase.

Mortgage Insurance – Risk in force

36. Mortgage insurance risk-in-force measures the insured outstanding principal of the mortgage loans insured. The main risk in this business is credit loss due to housing market and general household credit quality deterioration. Unexpected insured losses are incurred when loan delinquencies and loss severities exceed expected levels. Jurisdictional capital requirements typically prescribe maximum risk to capital ratio thresholds for supervisory intervention. Since liabilities are typically not incurred until loans become delinquent, the use of Current Estimate liabilities as an exposure base for factor-based capital requirement would be backward-looking and a poor indicator of unexpected loss.

GICs – Notional value

37. The notional value of a guaranteed investment contract (GIC) represents the present value of principal and interest payments that are contractually guaranteed by the G-SII. The main risk of loss relates to declining interest rates and credit losses in underlying

investments. For non-synthetic GICs, notional value are close to Current Estimates. For synthetic products, Current Estimates are typically small under benign market conditions, but are sensitive to unrealized market and credit losses in the reference portfolios, so Current Estimate is not a good exposure base to measure unexpected loss in a factor-based framework.

Other non-traditional – Current Estimate (or Notional value if available)

38. Other non-traditional insurance includes credit products like surety, trade credit and political risk insurance. Due to limited data availability, Current Estimate has been used as the proxy exposure measure during initial field testing. Notional value captures insured volumes outstanding and could be better suited for the BCR. The main risk of loss comes from non-performance by the reference obligors in the contracts. Like mortgage insurance, a loss is not typically incurred until there is a credit event. The feasibility of using Notional value will be investigated during further field testing.

Asset segmentation

39. With respect to risk associated with assets, the BCR has been calibrated to the three segments of Credit – investment grade, Credit – non investment grade and Equity. The process for the selection and validation of the asset classes is broadly consistent with that applied when selecting the appropriate insurance segments. As expected, the investment grade asset class comprises a broadly consistent blend of corporate and government bonds. With regards non-investment grade assets, the segment is largely explained by the sub-segments of Corporate Bonds and Mortgage loans with some further exposure to corporate bonds. In the case of equity, the segment is largely attributable to a combination of traditional equities and real estate with the balance explained by other invested assets.

Exposure Measures for Assets

40. The proposed proxy measure for risk exposure for the three segments Credit – investment grade, Credit – non-investment grade, and Equity is fair value. One reason for the choice of fair value is comparability across jurisdictions, in contrast to GAAP values; another reason is that the fair value is defined to optimise transparency through the maximum use of relevant public data.

41. Assets supporting liabilities where the asset risks have been fully passed through to the policyholder (e.g unit linked) are not included in the asset category. For some life insurance products, such as those maintained in separate accounts without guarantees, the assets are specifically identifiable. For other life insurance products, with residual asset risk exposure, the IAIS will provide guidance to ensure consistent application of this proposed exclusion of assets.

Asset-Liability Matching (ALM)

42. The first BCR Consultation Document stated that “ALM is a major risk category, particularly for life insurance, and so it is desirable that ALM risks be included. However,

practical difficulties within the given timeframe for the development of the BCR may pose a particular challenge for addressing this risk category." Following initial analysis of field testing data in June 2014, the IAIS determined that explicitly including such a factor in the BCR formula is not appropriate given the simple design of the BCR formula. As a straightforward approach, the calibration level of the BCR will implicitly account for the absence of an ALM factor.

Diversification

43. The treatment of diversification in the BCR, especially in the context of composite G-SIIs where their life and non-life business may be of similar sizes, has been explored further. While it would be appropriate to reflect the effect of diversification between major risk drivers in the ICS, the technical complexity of doing so explicitly in the BCR formula is inconsistent with its simple design. As a straightforward approach, the calibration level of the BCR will implicitly account for some degree of diversification.

Non-Insurance Component

44. Field testing indicated that the volunteers have material exposures to banking activities. The data give us confidence that the Basel III Leverage Ratio for banking regulated activities would yield a result which is broadly comparable to where the insurance related BCR lies with a calibration using a 100% alpha scalar (α).

45. For regulated banking activities the implied capital requirement of the leverage ratio will be consolidated in the total BCR requirement. If the insurance related BCR was pitched at a higher level in subsequent discussions, e.g. through an adjustment of the alpha scalar (α), the full Basel III Risk-Weighted Assets requirements could be considered instead of the Basel III Leverage Ratio.

46. The field testing volunteers have reported limited exposure to non-regulated banking activities. In order to maintain a consistent treatment with that of regulated banking activities, the IAIS is currently considering applying the Basel III Leverage Ratio to non-regulated banking activities as well. In addition, the IAIS identified material exposures of the field testing volunteers to financial activities such as securities operations and third party asset management. While some jurisdictions apply capital requirements for such activities, there are currently no global capital requirements.

47. To the extent that such operations are conducted off-balance sheet and to the extent that the associated assets are not directly charged with capital by banking or insurance capital rules, the IAIS assumes that the material risks associated with these off-balance sheet activities are limited to operational risk.

48. Several jurisdictions indicated that they have operational risk charges for off-balance sheet investment funds that are within the scope of the banking group for regulatory purposes. These capital requirements are typically calculated on the basis of a flow measure such as net income. Under the Basel II basic indicator approach, the capital charges for operational risk are 15% of "Gross income – defined as net interest income plus net non-interest income". The "net non-interest income" includes in particular the

difference between commissions/fees receivable and commissions/fees payable. The total expense ratio (TER) for investment funds includes all expenses charged on the assets in the investment fund with the exception of transaction fees. It may therefore be a reasonable proxy for the difference between commissions/fees receivable and commissions/fees payable from asset management services. The TER depends on the specific design of the investment fund. 1% may be a reasonable approximation. This would convert to a 0.15% capital charge for operational risk as a ratio of assets under management. Another jurisdictional approach results in a charge of 0.25 %.

49. The IAIS proposes to aggregate the existing capital requirements for such non-bank, non-insurance (NBNI) financial activities in the BCR. The IAIS considers including a factor of up to 25 basis points on assets under management in order to achieve a further degree of improved global comparability.

50. The field testing results indicated that the G-SIIs conduct a limited amount of non-financial activities such as consulting and legal services. The risks associated with such activities (e.g. legal or reputational risk) are difficult to capture in a capital requirement.

51. The IAIS proposes that the risks from non-financial activities be taken into account in a qualitative risk assessment. Alternatively, such business could be subjected to similar charges for operational risks, as the financial NBNI off-balance-sheet activities.

Annex G – Mapping table: BCR category to field testing data collection

BCR category	BCR segment	Data collection
Traditional Life		
	Protection	Protection - Life
	Participating products	Participating products
	Annuities	Annuities
	Other life	Protection - health Protection - other Savings without guarantees or living benefits (including VA without guarantees) Other traditional
Traditional Non-life		
	Property	Property Damage Non-proportional property, Accident, protection and health and motor damage (including property catastrophe) Catastrophe Reinsurance
	Motor	Motor
	Casualty	Other liability Non-proportional liability
	Other non-life	Accident, protection and health Marine, Aviation and Transport (MAT) Non-proportional MAT Other traditional - short-tail Other traditional - medium-tail Other traditional - long-tail
Non-Traditional		
	Variable annuities	value of guarantees
	Mortgage insurance	Mortgage insurance
	GICS & Synthetic GICS	Guaranteed Investment Contracts (GICs) Synthetic GICs
	Other non-traditional	Other non-traditional Commercial credit insurance including Suretyship Other non-traditional non-life insurance
Assets		
	Credit - investment grade / non-investment grade	Investment income receivable / accrued Fixed Interest Government Bonds Fixed interest Corporate Bonds Fixed Interest Municipal Bonds Variable Interest Government Bonds Variable interest Corporate Bonds

		Variable Interest Municipal Bonds
		Convertible notes
		Residential Mortgage Loans
		Non-residential Mortgage Loans
		Other (non-mortgage) Loans
		Loans to policyholders
		Residential Mortgage Backed Securities
		Commercial Mortgage Backed Securities
		Insurance Linked Securities
		Other structured securities
		Reinsurance recoverables
		Other reinsurance assets
	Equity	Equities
		Hedge Funds
		Private equity
		Real estate (for investment purposes)
		Infrastructure
		Other investment assets

Annex H – Sensitivity Analysis

Various sensitivities have been investigated to better understand the key drivers of the BCR formula and selected sensitivities are shown in the table below to give an indication of the impact of these key drivers (based on alpha scalars of 100% and 150%).

	G-SIIs								All volunteers	
	BCR split by BCR category						BCR / PCR	Cap Res / BCR	BCR / PCR	Cap Res / BCR
	TL	TNL	NT	Assets	NI	Total				
BCR Proposal	19%	12%	4%	55%	10%	100%	73%	376%	74%	355%
Alpha + 50%	20%	12%	4%	57%	7%	100%	106%	259%	105%	250%
a_1 +100%	22%	12%	4%	53%	9%	100%	76%	362%	77%	342%
a_2 +100%	25%	11%	4%	51%	9%	100%	79%	348%	78%	336%
a_3 +100%	22%	12%	4%	53%	9%	100%	76%	364%	77%	339%
a_4 +100%	23%	11%	4%	52%	9%	100%	77%	359%	77%	341%
b_1 +100%	19%	14%	4%	54%	9%	100%	75%	368%	76%	347%
b_2 +100%	19%	15%	4%	53%	9%	100%	76%	362%	76%	345%
b_3 +100%	19%	15%	4%	53%	9%	100%	76%	361%	78%	335%
b_4 +100%	19%	14%	4%	54%	9%	100%	75%	368%	76%	348%
c_1 +100%	19%	12%	7%	53%	9%	100%	75%	366%	76%	346%
c_2 +100%	19%	12%	4%	55%	10%	100%	73%	376%	74%	355%
c_3 +100%	19%	12%	5%	54%	9%	100%	74%	371%	75%	352%
c_4 +100%	19%	12%	5%	55%	10%	100%	74%	374%	74%	354%
d_1 +100%	17%	11%	4%	60%	9%	100%	82%	336%	82%	320%
d_2 +100%	17%	11%	4%	59%	9%	100%	81%	338%	80%	329%
d_3 +100%	15%	9%	3%	66%	7%	100%	97%	284%	97%	272%

- The ratio BCR / PCR means the ratio of the BCR Required Capital covering insurance and non-insurance activities divided by the current regulatory baseline, covering insurance and non-insurance activities, as provided by the volunteers as part of the field testing exercise.
- The ratio Cap Res / BCR means the ratio of the Core Capital resources calculated according to IAIS specifications using data as provided by the volunteers as part of the field testing exercise divided by the BCR Required Capital covering insurance and non-insurance activities.
- For the BCR Proposal, the corresponding ratios for (Core Capital + Additional Capital Resources) / BCR would be 427% (for G-SIIs who submitted data) and 404% (for all volunteers who submitted data).