January 2015

Prudential Standard GPS 113

Capital Adequacy: Internal Model-based Method

Objective and key requirements of this Prudential Standard

This Prudential Standard sets out the requirements that a general insurer or Level 2 insurance group must meet to use an Internal Model-based Method for calculating the prescribed capital amount of the general insurer or Level 2 insurance group, both at the time of application and subsequently.

The ultimate responsibility for complying with the requirements to obtain and maintain approval for the use of an Internal Model-based Method rests with the Board of directors of a general insurer or Level 2 insurance group.

The key requirements to obtain and maintain approval for the use of an Internal Model-based Method are that:

- the general insurer or Level 2 insurance group must have an Internal Capital Adequacy Assessment Process that demonstrates an advanced approach to risk management and capital management that includes an appropriate Economic Capital Model;
- governance arrangements for the development and use of the Economic Capital Model are suitable;
- the Economic Capital Model must be used by the general insurer or Level 2 insurance group for its own purposes or for the purposes of the group, and be embedded in management, operations and decision-making processes; and
- the Economic Capital Model must be technically sufficient to produce a reliable estimate of the capital required by the general insurer or Level 2 insurance group.

Authority

1. This Prudential Standard is made under section 32 of the *Insurance Act 1973* (**the Act**).

Application

2. This Prudential Standard applies to each:

   (a) **general insurer** authorised under the Act (**insurer**); and

   (b) **Level 2 insurance group** as defined in *Prudential Standard GPS 001 Definitions* (GPS 001).

   Where a requirement applies to a Level 2 insurance group, the requirement is imposed on the **parent entity** of the Level 2 insurance group.

3. This Prudential Standard applies to insurers and Level 2 insurance groups (**regulated institutions**) who apply to APRA for approval,[1] or already have approval to use the **Internal Model-based Method** (IMB Method) to determine the **prescribed capital amount** in accordance with *Prudential Standard GPS 110 Capital Adequacy* (GPS 110).

4. This Prudential Standard applies to the aforementioned regulated institutions from 1 January 2015.

5. A regulated institution that chooses to apply for approval to use the IMB Method must comply with this Prudential Standard, and continue to comply with GPS 110 at all times.

Interpretation

6. Terms that are defined in GPS 001 appear in bold the first time they are used in this Prudential Standard.

7. For the purposes of this Prudential Standard:

   (a) 'Economic Capital Model' (ECM) means the internal capital measurement model developed for a regulated institution's own purposes;

   (b) 'Regulatory Capital Model' (RCM) means the particular implementation and application of the ECM that is to be used for the purpose of determining the prescribed capital amount using the IMB Method; and

---

[1] In this Prudential Standard reference is made to "approval" to use the IMB Method. Approval refers to a decision by APRA to modify GPS 110 pursuant to subsection 32(3A) of the Act by replacing particular requirements in GPS 110 with an in house capital adequacy model.

(c) A ‘business segment’ is any part of the insurance business for which:

(i) if the segment is covered by the ECM, both the method of modelling underwriting and reserving risk and the outcomes from the modelling are separately identifiable for that segment; and

(ii) if the segment is not covered by the ECM, the means of determining its overall contribution to the prescribed capital amount, and the amount of that contribution, are separately identifiable.

Internal Model-based Method

8. The IMB Method is intended to allow a regulated institution to have its prescribed capital amount determined based on its own ECM. The underlying purpose of allowing a regulated institution to use the IMB Method is to have regulatory capital requirements that better reflect the nature and extent of risks in the regulated institution’s particular business structure and business mix.

9. There is no prescribed form or structure for a regulated institution’s ECM. Each regulated institution has the flexibility to develop a model that is suited to its business, and to use the ECM in the way it chooses. The manner in which the ECM is used as part of the RCM to determine the prescribed capital amount is likely to vary from the use of the ECM by the regulated institution for its own risk and capital management purposes.

10. The ECM and RCM must meet the criteria specified in this Prudential Standard and the RCM must be approved by APRA before it can be used for the purpose of determining the regulated institution’s prescribed capital amount. Paragraph 30 specifies the matters to be included in the RCM.

11. APRA will not provide approval for use of the IMB Method unless a regulated institution has and maintains an advanced and stable approach to risk management. APRA will make an assessment of the regulated institution’s approach to risk management at the time of application under this Prudential Standard and on subsequent review of the RCM. This assessment will be based on information provided as part of the application under this Prudential Standard, as well as the information available through APRA’s normal supervisory processes, including the regulated institution’s **business plan**.[2]

12. APRA will not provide approval for use of the IMB Method unless a regulated institution has and maintains a prudent approach to capital management, as demonstrated through the regulated institution’s **Internal Capital Adequacy Assessment Process** (ICAAP). APRA will make an assessment of the adequacy of the regulated institution’s approach to capital management, including target capital, as demonstrated in the ICAAP at the time of application under this Prudential Standard and on subsequent review of the RCM. This assessment will be based on information provided as part of the application under this Prudential Standard as well as the information available through APRA’s

[2] Refer to *Prudential Standard CPS 220 Risk Management* (CPS 220).

normal supervisory processes, including the regulated institution's business plan.

Quantitative standards

13. The regulated institution's prescribed capital amount must be an amount of capital sufficient for the regulated institution's probability of default to be 0.5 per cent or less. Default means the inability to meet claim payments or other liabilities, excluding liabilities that form part of the regulated institution's capital base, as and when they fall due. In determining the prescribed capital amount, the RCM must allow for:

    (a) business written over a one year time horizon;

    (b) catastrophe risk losses and operational risk losses occurring over the one year time horizon; and

    (c) the run-off of underwriting, reserving, credit and market risks to extinction.

    APRA does not require any specific form or structure for the RCM, provided it is satisfied that the result is no less conservative than that specified in this paragraph. It is possible for the RCM to allow for the items listed above without being structured in precisely that form.

Model governance

14. APRA will not provide approval for use of the IMB Method unless it is satisfied with the regulated institution's governance arrangements for the ECM and RCM. Key requirements for the governance arrangements include:

    (a) integration of the ECM with the **risk management framework** and ICAAP;

    (b) adequate resourcing, skills and objectivity of the team that is responsible for the development and review of the ECM;

    (c) approval by the **Board** or relevant Board committee of the development and use of the ECM;

    (d) adequate control processes for the development of the ECM, for calibrating and updating the model at least annually, for changing the model and for applying the RCM;

    (e) comprehensive documentation of the model (both the ECM and RCM);

    (f) adequate linkages between the output of the ECM and the capital management of the regulated institution;

    (g) regular reporting, to the relevant Board committees, Board and senior management, of results from the ECM and RCM and issues arising related to the ECM and RCM; and

(h) adequately documented independent review of the RCM (including those aspects of the ECM that are directly relevant to the RCM), which may be undertaken by an internal group (e.g. internal audit) or by an appropriately qualified external party. The party performing the review must be independent of the normal business operations of the regulated institution and must not have been significantly involved in the development and calibration of the ECM or the RCM. The scope and frequency of independent review must be agreed with APRA and must address both the governance and technical sufficiency of the ECM and RCM.

Model use

15. APRA will not provide approval for use of the IMB Method unless it is satisfied that the ECM plays an integral role in the regulated institution's management and decision-making processes, and that this use is embedded in the regulated institution's operations. APRA's consideration of model use will include, but will not be limited to, some of the indicators set out in Attachment A.

Model sufficiency

16. APRA will not provide approval for use of the IMB Method unless it is satisfied that the regulated institution's ECM and RCM are sufficient to give a reliable measure of required capital for regulatory purposes.

17. A regulated institution's ECM and RCM must adequately capture all the material risks of the regulated institution's portfolio and business including the following risk categories:

(a) catastrophe risk – natural or man-made events that produce insurance losses from many insureds at the same time;

(b) underwriting risk – the possibility that future insurance exposures (both from business in force and future business) will be loss making;

(c) reserving risk – the possibility that the provisions for claims outstanding will be inadequate to meet the ultimate costs when the business is run off to extinction;

(d) market risk – the risk arising from all aspects of the value of investments and currencies, including interest rate changes, market price changes, counterparty default, exchange rates and liquidity of investments;

(e) credit risk – the risk of loss arising from failure to collect funds from creditors, including reinsurers and intermediaries; and

(f) operational risk – the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. This includes legal risk[3] but excludes strategic or reputational risk.

18. APRA may direct a regulated institution in relation to the manner in which each of these material risk categories are dealt with in the regulated institution's ECM and RCM, including, but not limited to, altering the matters to be covered under each category and permitting categories to be dealt with in a cumulative manner. APRA may allow a transition period for compliance with a direction.

19. It is not necessary for the ECM and RCM to capture risks outside the risks specified in paragraph 17, such as strategic or reputation risks. However, material risks that are not captured in the ECM and RCM must continue to be managed under the risk management framework of the regulated institution.[4]

20. For each component of risk, the ECM must utilise a distribution with appropriate shape and tail characteristics. In combining components of risk, the model must make appropriate allowance for correlation between risks, particularly correlations in the tail of distributions. A regulated institution wishing to incorporate diversification assumptions in respect of operational risk must demonstrate an adequate process for estimating dependencies (particularly for extreme losses) and must apply conservatism in its assumptions that is commensurate with the uncertainty of those assumptions.

21. The operational risk module of the ECM must consider all of the following four elements:

(a) relevant internal event data (for which the regulated institution must maintain a suitably comprehensive operational risk event recording system);

(b) relevant external event data;

(c) scenario analysis; and

(d) the business environment and internal control systems.

22. The RCM must divide the insurance business into a sufficiently fine partition of business segments to reflect the major types of business that have different risk characteristics, and this partition must be reasonably aligned with the regulated institution's operational structure.

---

3 Legal risk includes, but is not limited to, exposures to fines, penalties or punitive damages resulting from regulatory actions, as well as ordinary damages in civil litigation, related legal costs and private settlements.

4 CPS 220 requires a regulated institution to have a risk management framework to manage the risks arising from its business.

Partial models

23. A regulated institution may apply to APRA for approval to use the IMB Method to calculate certain elements of its prescribed capital amount, or the prescribed capital amount for some business segments, while using the **Standard Method** for the remaining elements or segments. APRA will consider applications that omit small or newly acquired business segments from the ECM, with Standard Method calculations for the omitted segments included in the RCM. Other partial use of the IMB Method will be approved only in exceptional circumstances.

24. A regulated institution must provide APRA with appropriate information, both at the time of the initial application for approval to use the IMB Method and subsequent to obtaining IMB Method approval, on any parts of the business activities of the regulated institution for which it is proposed to use the Standard Method to calculate the prescribed capital amount.

Application and review process

25. A regulated institution wishing to apply for approval to use the IMB Method must consult with APRA at an early stage. To assist APRA in assessing the readiness of a regulated institution to commence the approval process, APRA has developed a series of self-assessment indicators which are set out in Attachment A.

26. APRA will consider a regulated institution's self-assessment without seeking evidence or verification (which occurs later in the application and assessment process). If the self-assessment reveals major deficiencies, APRA will advise the regulated institution of further progress that is needed before the regulated institution continues with the application seeking approval to use the IMB Method.

27. APRA's approval to use the IMB Method to determine the prescribed capital amount will be subject to a comprehensive model review process including:

    (a) submission by the regulated institution of a detailed application for approval, with comprehensive information about the ECM and RCM, its governance and use, and the risk management environment of the regulated institution; and

    (b) one or more on-site visits by APRA to the regulated institution to discuss the detail of the ECM and RCM, risk management systems, and surrounding governance and organisational structure and controls.

28. If it is satisfied that the criteria specified in this Prudential Standard have been met, APRA will approve the use of the IMB Method and consequently the RCM to determine the regulated institution's prescribed capital amount. Approval is given by APRA modifying relevant requirements in GPS 110 pursuant to section 32(3A) of the Act. Modification may include requirements to be met on a continuing basis, including specifying that the prescribed capital amount determined using the RCM will be subject to a minimum that is expressed as a

percentage of the Standard Method calculation. During the first two years of the use of the IMB Method by a regulated institution, that minimum is to be 90 per cent of the amount determined using the Standard Method.

29. Use of the IMB Method does not relieve a regulated institution from complying with the following aspects of the capital standards:

    (a) measurement of capital requirements as detailed in *Prudential Standard GPS 112 Capital Adequacy: Measurement of Capital*, including:

        (i) the eligibility of capital instruments;

        (ii) regulatory adjustments to the capital base; and

        (iii) the minimum levels set out with respect to the types of capital used;

    (b) asset risk charges on reinsurance assets related to a non-APRA-authorised reinsurer under the default module as specified in *Prudential Standard GPS 114 Capital Adequacy: Asset Risk Charge*; and

    (c) the treatment of holdings in related companies representing retained profits that are equity accounted.

    In order to avoid double-counting, any assets which are dealt with in accordance with paragraphs (a) to (c) above in the RCM, may be treated as risk-free or risk-reduced, in a manner agreed with APRA.

30. The RCM submitted to APRA for approval must include:

    (a) an adequate specification of the version and assumptions of the relevant ECM;

    (b) any particular parameters and other implementation rules applied in using the RCM to determine prescribed capital amount;

    (c) any adjustments required to achieve consistency with the Standard Method as specified in paragraph 29;

    (d) the addition of Standard Method prescribed capital amount calculations for any business segments or other elements of the prescribed capital amount calculation not included in the ECM;

    (e) the procedure for determining the prescribed capital amount based on the RCM at reporting dates other than the date as at which the annual calibration is undertaken;

    (f) the application of any minima or other conditions imposed by APRA; and

    (g) any other relevant matters that APRA may require.

31. Once the modification under subsection 32(3A) comes into effect, the regulated institution must determine the prescribed capital amount in accordance with the approved RCM until APRA varies or revokes its approval.

32. APRA may, at any time by notice in writing to the regulated institution, vary or revoke its approval[5], including where APRA determines that:

    (a) the regulated institution has not complied with this Prudential Standard; or

    (b) it is appropriate having regard to the particular circumstances of the regulated institution to make the variation or revocation.

33. Where a regulated institution becomes aware that it is not complying with this Prudential Standard or with the modification of GPS 110, the regulated institution must as soon as practicable notify APRA and provide a plan for a timely return to compliance. Failure to notify APRA, provide an acceptable plan, satisfactorily implement the plan or demonstrate that the non-compliance is immaterial will result in reconsideration by APRA of the regulated institution’s eligibility to use the IMB Method. For the period of any non-compliance APRA may require the regulated institution to hold additional regulatory capital or take other action.

Annual Internal Model Report

34. A regulated institution with approval to use the IMB Method must provide an ‘Internal Model Report’ to APRA annually (or more or less frequently as specified by APRA). An annual Internal Model Report must be submitted to APRA on or before the date that the **Insurance Liability Valuation Report** is due to be submitted to APRA in accordance with *Prudential Standard GPS 320 Actuarial and Related Matters*. Where an Internal Model Report is required at an interval other that a 12 monthly interval, the Internal Model Report must be submitted within the timeframe specified by APRA. The scope of the Internal Model Report must be agreed between the regulated institution and APRA prior to its preparation.

Material changes

35. A regulated institution with approval for use of the IMB Method must advise APRA in advance of any material changes to the ECM or surrounding controls that are relevant to the RCM. APRA may require the regulated institution to make a new approval application, including independent review in the same manner as required under paragraph 14(h), in circumstances including:

    (a) material changes to the model or parameters;

    (b) material changes to the business of the regulated institution, e.g. material acquisitions or disposals; or

    (c) such other circumstances as APRA may determine.

---

5 Refer to subsection 32 (3CA) of the Act.

Disclosure

36. GPS 110 requires regulated institutions to disclose certain information about capital adequacy. If a regulated institution uses the IMB method, the disclosure must satisfy the criteria outlined in GPS 110 and must include a statement disclosing the use of the IMB Method. The disclosure must include the relevant prescribed capital amount calculations using both the IMB Method and the Standard Method. APRA does not expect this disclosure to give rise to a need for external audit of the RCM.

Adjustments and exclusions

37. APRA may, by notice in writing to a regulated institution, adjust or exclude a specific requirement of this Prudential Standard in relation to that regulated institution.

Determinations made under previous prudential standards

38. An exercise of APRA's discretion (such as an approval, waiver or direction) under a previous version of this Prudential Standard continues to have effect as though exercised pursuant to a corresponding power (if any) exercisable by APRA under this Prudential Standard.

Attachment A

Paragraph 15 of this Prudential Standard relating to the use test, and paragraph 25 of this Prudential Standard relating to the application process refer to the indicators listed in this Attachment.

Indicators

1. Inclusion of all the major risk types in the regulated institution's risk management framework. Relation between the risk appetite of the regulated institution and its capital requirements and expected shareholder returns. Linkages with external credit ratings.

2. Inclusion of definitions and methodologies for all significant risk types that are applied consistently across business units in the regulated institution's risk management framework. Usage of a coherent framework for measuring all risk types.

3. Existence of risk tolerances, risk limits and delegations across the organisation, and the extent to which they are established by reference to the information referred to in paragraphs 1 and 2 of this Attachment.

4. The extent to which the regulated institution has developed and is using a Board-approved economic capital model as an integral part of its capital management framework and separately from any regulatory need.

5. A Board-approved process for determining a 'cost of capital' and required hurdle rate(s) of return for evaluating business strategies, opportunities and product pricing. The extent to which this information is applied consistently across all the business units.

6. The extent to which the evaluation of new business initiatives (including acquisition and expansion plans) is based on projected returns and the economic capital required to support these initiatives. The extent to which the economic capital is based on the economic capital model and other considerations.

7. The extent to which the setting and monitoring of the product pricing is influenced by the economic capital allocated and the required returns relative to that capital.

8. The extent to which capital allocation for business units and products is based on the underlying risks as reflected in the economic capital model. Demonstration that the assessment of business unit performance is based on return on allocated capital and/or other risk-based measures.

9. The extent to which performance and incentive remuneration of key executives is influenced by risk based measures, including economic capital allocation.