



BERMUDA MONETARY AUTHORITY

CONSULTATION PAPER

ECONOMIC BALANCE SHEET FRAMEWORK

FOR LONG-TERM INSURERS

AUGUST 2012

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I. INTRODUCTION

1. This consultation paper outlines the economic balance sheet (“EBS”) framework proposed by the Bermuda Monetary Authority (the “Authority”), which is based on a flexible principles-based approach accompanied by supporting guidelines. The proposals in this paper apply to Bermuda long-term business insurers (Class C, D and E), and would also include an insurance group or Bermuda group¹ for which the Authority is the group supervisor.

2. For the purposes of this paper:

“group supervisor” as defined under section 27A of the Insurance Act 1978 (the “Act”);

“insurance business” as defined under section 1 of the Act;

“insurance group” as defined under section 1 of the Act;

“insurer” includes “reinsurer” and “insurance” includes “reinsurance” and “insurer” also includes “insurance group” and Bermuda group;

“international accounting standards” refers to internationally recognised standards of accounting including International Financial Reporting Standards (“IFRS”) and U.S. Generally Accepted Accounting Principles (“GAAP”);

“long-term business” as defined under section 1 of the Act; and

“principle of proportionality” or “proportionality” refers to flexibility under the supervisory framework depending on the nature, scale, and complexity of the insurer.

3. The insurance industry and other interested parties are invited to submit their views on the proposals set out in this paper. Comments should be sent to the Authority and addressed to policy@bma.bm no later than Friday, 5th October 2012.

¹ “Bermuda group” has the meaning as set forth in the Authority’s *Guidance Note on Designated Insurer (May 2012)* and *Insurance Group Supervision Statement of Principles (May 2012)*.

II. BACKGROUND

4. In August 2010, the Authority issued a discussion paper (the “DP”),² which considered the introduction of an EBS framework and proposed changes to regulatory reporting. The EBS framework is aimed at providing a consistent and accurate valuation basis for preparing regulatory reporting in line with proposed international standards. Revisions to the regulatory reporting framework are designed to facilitate the Authority’s review and understanding of individual insurers and the Bermuda insurance sector as a whole, and enable it to make valid comparisons between individual insurance entities. The DP set out the background to these proposed changes, elaborated on their rationale, and posed several questions concerning the implementation of an EBS framework and revised regulatory reporting scheme.

5. The DP was principally aimed at general business insurance, and recognised that there are special considerations in developing an EBS framework for Long-Term insurers that are not present in, or as relevant to, general business insurance. In particular, the valuation of longer duration liabilities is much more sensitive to assumptions concerning discount (interest) rates, risk margins, the inclusion (or otherwise) of an illiquidity premium, the impact of options and guarantees, the definition of contract boundaries, and the extent to which future premiums and expenses are included.

6. In light of comments received on the DP and the acknowledgement of significant differences in the approaches to an EBS framework in the general business and long-term contexts, the Authority has decided to issue separate consultations on the EBS framework for general business and Long-Term insurers.

7. A fundamental premise of the EBS framework for both general business and Long-Term insurers is an endorsement of the idea that assets and liabilities should be valued on a consistent economic basis: that this would reduce or eliminate, where possible, accounting mismatches where no underlying economic mismatches exist, thereby providing a more accurate picture of an entity’s solvency position and enhancing overall protection for policyholders. This fundamental premise can be expressed as an

²The DP is entitled *Economic Balance Sheet and Proposed Changes to Regulatory Reporting* and is situated on the BMA website, www.bma.bm/uploaded/565-100907_Economic_Balance_Sheet_DP_-_Final_Draft_published_.pdf

overarching principle guiding the Authority’s development of the EBS framework and reporting scheme for both groups of insurers.

8. Other desirable characteristics that guide the development of the EBS framework for either general business or Long-Term insurers include:

- a. **Consistency with International Regulatory and Accounting Standards:** to ensure Bermuda is consistent with international best practice, the EBS framework and reporting scheme should be consistent with the work of the International Association of Insurance Supervisors’ (“IAIS”). In order to reduce the burden on insurers, the EBS framework should also take into account the direction of the work being performed by the accounting standard bodies, such as the International Accounting Standards Board (“IASB”) and the Financial Accounting Standards Board (“FASB”).
- b. **Consistency with Solvency II:** to be deemed equivalent to Solvency II the Bermuda EBS requirements should be established in a broadly consistent manner recognising, where appropriate, unique characteristics of the Bermuda market.
- c. **Proportionality:** the EBS framework and reporting scheme adopted should be commensurate with the nature, scale and complexity of the risks undertaken by the insurer. In particular, calculation methods, assumptions, modelling techniques, and data requirements should be adopted in a proportional manner.
- d. **Materiality:** the calculation methods, assumptions, modelling techniques, and data requirements adopted should incorporate those risks facing an insurer such that their omission or modification would influence the final EBS determination.
- e. **Governance and Review:** a sound system of governance and review undertaken by suitably qualified persons should be in place to oversee and approve the processes involved in the EBS determination.

9. Delays in the roll out of Solvency II and the work on convergence of standards of FASB and IASB, present some practical challenges to the implementation of the EBS framework for both general business and Long-Term insurers. The Authority does not propose waiting for the finalisation and possible alignment of international standards, but instead proposes developing a flexible principles-based approach supported by guidelines. It is anticipated that insurers preparing financial statements under the Solvency II rules, future IFRS, or under U.S. GAAP will be able to comply with the EBS reporting requirements (subject, in the latter cases, to the application of certain prudential filters). It is

acknowledged that, subsequent to finalisation, some future revision may be needed to the guidelines to appropriately reflect developments in international and regulatory standards.

10. In developing an EBS framework for long-term business, the following areas have been identified as significant in warranting additional consideration:

a. Valuation of technical provisions

The valuation of long-term business liabilities requires a different approach from the valuation of general business liabilities (though there is a desire to see consistency in applicable high level principles across the sectors). The following issues are addressed in the development of the framework proposals in section III of this paper:

- i. Discount rate: given their greater duration, long-term liabilities are more sensitive to assumptions relating to the underlying interest yield. Selection of an appropriate discount rate is important, and consideration must be given to balancing the need for consistent cross-insurer valuation and identifying a measure that does not result in undue volatility and risk of procyclicality;
- ii. Embedded options and guarantees: these are often a feature of life insurance products but their valuation is not always captured by traditional actuarial practices. As pointed out in the DP, the Authority maintains its stance that the economic valuation should appropriately take into account the value of options and guarantees;
- iii. Contract boundaries: there are currently varied definitions of the contract boundary in the different regulatory and financial reporting regimes. In determining the definition for the Bermuda market, consideration needs to be given to the extent to which future premiums are recognised and to the extent the risk assumed can be reassessed and re-priced;
- iv. Assumptions: given the nature of long-term business, the valuation exercise will necessarily be sensitive to the underlying assumptions adopted. Accordingly, consideration will need to be given to the appropriate list of assumptions including, *inter alia*, reliance on expert judgment and the processes therein involved, the management actions, and associated policyholder behaviour; and
- v. Risk margin: the calculation of a risk margin, i.e. the compensation required by the insurer to bear the risk that ultimate cash flows exceed those expected, is of particular importance to Long-Term insurers, given the longer-dated nature of the business.

b. Valuation of assets and other liabilities

The major focus for long-term business will be on the technical provisions for the liability side of the balance sheet. Consideration in the valuation of assets and other liabilities should be broadly consistent across the general and long-term business sectors.

III. PRINCIPLES AND GUIDANCE

11. The following set of principles, developed by the Authority, underlies the development of the EBS framework. This is an integral part of the modernisation of the regulatory regime for insurers.

12. In developing these principles, the Authority has taken into account the latest regulatory and accounting developments, as well as the IAIS *Insurance Core Principles* and principles underlying the Solvency II insurance contracts project.

13. The Authority does not expect the principles in this paper to change over time, however, it is intended that the guidance will be further refined as accounting and international best practice develop and converge.

OVERARCHING PRINCIPLES

1. The valuation of assets and liabilities should be on a consistent economic basis.

- 1.1 Accounting mismatches in the absence of real underlying economic mismatches within the business should be avoided.
- 1.2 The economic value should reflect a prospective valuation of the future cash flows of the assets and liabilities, allowing for the riskiness of the cash flows and the time value of money.
- 1.3 It is recognised that in certain cases, insurers are long-term investors in assets and can avoid potential mark-to-market volatility of assets. The valuation of assets and liabilities should take this into account.

2. The valuation of the EBS should take into account proportionality and materiality.
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- 2.1 The insurer should take a proportionate approach to economic valuation whereby the insurer's greatest focus should be on those risks, parameters, and assumptions that are most material for the valuation.
- 2.2 Parameters and assumptions should be considered as material if their omission or misstatement could influence the decision-making or the judgment of the users of the EBS, including those of the supervisor.

DATA

3. The data used to support the development of the EBS should be relevant, complete, and reliable.

- 3.1 Data includes both policyholder data used in actuarial models and other data (e.g. experience analyses, market information) used to set the assumptions and parameters for the valuation.

- 3.2 The insurer is responsible for ensuring that:
- a. relevant data is not excluded from the valuation process without justification;
 - b. the data used is free from material errors;
 - c. data used from different time periods for the same estimation are consistent;
 - d. the data used is up to date and consistent with the assumptions underlying the actuarial and statistical techniques that are applied to them in the calculation of the liabilities;
 - e. the data is available at a sufficient level of granularity and includes sufficient historical information to identify trends and assess the characteristics of the underlying risk;
 - f. the data is credible for its intended use, for example in assumption setting, and the insurer understands the sources and any limitations to the use of the data;
 - g. the data appropriately reflects the risks to which the insurer is exposed with regard to its obligations; and
 - h. where external data is used, the insurer understands the sources and any limitations within the data, and can justify why the external data is considered more suitable than internal data.
- 3.3 Documentation sufficient to demonstrate that the data quality standards of 3.2 are met should be maintained for supervisory review. A directory of all data used in the calculations of the technical provisions should be maintained and specify the source, characteristics and usage of the data in those calculations.

VALUATION OF ASSETS

4. Financial assets should be reported on an economic basis.

- 4.1 A key objective is to avoid creating artificial mismatches; so the asset valuation must be considered in the context of the liability valuation, as described below.
- 4.2 Assets should be valued consistently with international accounting standards.
- a. Market values should be based on quoted market prices in active markets where possible. Other valuation methods, such as mark-to-model, should make maximum use of relevant market inputs.
 - b. Goodwill should be recorded at zero value.
 - c. Deferred Acquisition Cost (“DAC”) is eliminated (with a corresponding adjustment to liabilities).
 - d. Intangible assets should be recognised only if it is probable that the expected future economic benefits will flow to the insurer and that the cost of the assets can be measured reliably. The assets must be separable, and there should be evidence of exchange transactions for the same

- or similar assets indicating it is saleable in the market place. Intangible assets should be recognised at fair value. If a fair value measurement of an intangible asset is not possible, then such an asset should be valued at nil.
- e. Deferred tax assets should be recorded based on international accounting standards and adjusted for changes required to determine EBS. Amounts expected to be recovered in more than one year would be discounted using risk-free rates.
 - f. Fixed maturity investments, equity investments, investment property, and short-term investments should be recorded at fair value.
 - g. Investments in non-controlled affiliates should be recorded at fair value or the equity method of accounting subject to prudential filters (e.g. the elimination of goodwill and other non-admitted assets) and impairment testing.
 - h. Funds withheld will be recorded based on the consideration received or expected to be received.
 - i. Other assets should be recorded at fair value if they have a “readily realisable value”.
- 4.3 Typically market prices are expected to be used, although an amortised cost method may be appropriate in certain circumstances if it could be demonstrated that the insurer has maturity strong asset management programme, which may include demonstrating the ability and willingness to hold the assets to maturity.
- a. The situations in which this may be applicable would depend, in part, on the predictability of the underlying liability cash flows.
 - b. Assets valued on an amortised cost basis should be evaluated for adequacy, at least annually, taking into account any material impairment to the assets.
 - c. The valuation of assets and liabilities should be on a consistent economic basis (i.e. if the amortised cost method is used then this would be reflected in the discount rate used for the valuation of liabilities – see Principle 8.5).

VALUATION OF TECHNICAL PROVISIONS

5. Technical provisions should be valued at economic value using best-estimate, probability-weighted cash flows with an additional risk margin.

- 5.1 For the valuation, unbiased current assumptions should be used. These should be based on a combination of relevant, credible experience, as well as expert judgment as to potential future trends and developments e.g. mortality trends.
- 5.2 The assumptions are used to derive a probability associated with each future cash flow. The intention is not to deliberately overstate or understate the expected value for the best-estimate.

- 5.3 At each valuation date, the insurer should consider whether the assumptions used are still appropriate and be able to justify any changes (or non-changes) in assumptions.
- 5.4 While probability-weighted cash flows generally should come from a stochastic analysis, it might be proportional in certain circumstances to use a deterministic process using best-estimate assumptions.

Fully hedgeable technical provisions

- 5.5 Where technical provisions are fully hedgeable they may be valued at the market value of the corresponding instruments with identical cash flows. An additional risk margin need not be calculated.

6. The cash flow projection used in the calculation of the best-estimate should take account of all future cash in- and out-flows required to settle the insurance obligations attributable to the lifetime of the policy.

- 6.1 The lifetime of the policy is defined to continue up to the point at which:
- a. the insurer is no longer required to provide coverage;
 - b. the insurer has the right or the practical ability to reassess the risk of the particular policyholder and, as a result, can set a price that fully reflects that risk;
 - c. the insurer has the right or the practical ability to reassess the risk of the portfolio that contains the contract and, as a result, can set a price that fully reflects that risk of that portfolio.
- 6.2 The cash flows expected to be taken into account in the valuation should be based on unbiased current estimates and would include:
- a. future best-estimate premium payments;
 - b. benefit payments to cedants, policyholders and beneficiaries including an allowance for any discretionary benefits e.g. certain contracts are designed with the right to participate in the performance of a specified pool of assets;
 - c. expenses, including any payments to intermediaries, claim costs, servicing costs, and investment costs;
 - d. payments to and from reinsurers or other providers of risk mitigation; and
 - e. other cash flow items which are expected to be charged to policyholders or required to settle the obligations.
- 6.3 Technical provisions should not be subject to a surrender value floor equal to the total surrender values payable if all policies were to surrender immediately.

7. The valuation should take into account potential management actions and potential changes in policyholder behaviour.

- 7.1 The size of the technical provisions could be influenced by the policyholder's decision to exercise options open to him as well as management's ability to exercise its discretion.
- 7.2 Management actions should be reflected in the valuation of the technical provisions, provided that the management actions:
- a. are clearly documented;
 - b. have been approved by senior management;
 - c. are consistent with representations made to policyholders;
 - d. reflect the time and cost required to implement; and
 - e. are consistent with past evidence of similar actions in similar circumstances.
- 7.3 Policyholder behaviour should reflect:
- a. analysis of previous data on policyholder actions, if available;
 - b. analysis of the degree to which it would be in the policyholder's interest to exercise the available option;
 - c. changes in the operating environment e.g. if the level of guarantees is increasing in the market then policyholders are more likely to lapse and purchase a new product (and vice versa); and
 - d. potential interaction with management actions.
- 7.4 It is intended that the analysis of policyholder behaviour (which includes the possibility of recaptures for reinsurance transactions) should be prospective; thereby requiring some degree of expert judgment.

8. In the calculation of technical provisions, estimated future cash flows should be adjusted for the time value of money. The discount rate should be based on the risk-free curve and may be adjusted to reflect risk characteristics of the liabilities.

- 8.1 The starting point for the risk-free curve should be the swap yield curve appropriate to the currency of the cash flows at the valuation date.
- 8.2 If the swap yield curve is not of an adequate duration, then other reference points, such as government bond yields, should be used.
- 8.3 Extrapolation and interpolation of the yield curve is possible, but the insurer would need to justify the approach as reasonable.

- 8.4 No adjustment to take account of the insurer's own credit standing should be made in the valuation of technical provisions.
- 8.5 In certain circumstances, the valuation rate may be adjusted to reflect the specific nature of the liabilities. For example, certain product structures (mainly those with highly predictable cash flows) may allow the insurer to be a long-term investor of assets targeted to closely match those cash flows, such as investment grade corporate bonds. These product structures may allow the insurer to earn additional returns over the long-term compared to the specified risk-free rate and avoid the mark-to-market volatility of the underlying assets. In such cases the insurer can adjust the valuation interest rate for the selected liabilities to be equal to the yield on the assets dedicated to back those liabilities, adjusted for expected asset defaults. This should give an excess return over the normal risk-free rate.

However, in order to do so, the insurer will need to provide supporting information on:

- i. the quality of the asset portfolio and the analysis (historic and prospective) of the allowance for expected defaults;
- ii. the justification as to why the insurer is not materially exposed to changes in market value of the assets supporting the selected liabilities; and
- iii. the governance arrangements surrounding the management of the assets dedicated to the selected liabilities, which should demonstrate a strong asset liability cash flow management programme, which may include demonstrating the ability and willingness to hold the assets to maturity.

Where an insurer uses a discount rate based on underlying assets held, it should be noted that a higher risk margin may result (see Principle 9).

Consultation Question 1: *In discussions with industry participants, the Authority has noted some concern with respect to the impact that economic valuation may have on the volatility of the balance sheet and regulatory capital. What specific concerns do insurers have and what specific measures might address the issue of volatility?*

Consultation Question 2: *Principle 8.5 above allows for adjustments to the valuation rate. Is your company likely to seek an adjusted valuation rate and, if so, for which products and what would be the rationale for the adjustment? What criteria should the Authority be looking for regarding a 'strong asset liability cash flow management programme' to justify the adoption of an adjusted valuation interest rate?*

9. Unhedgeable technical provisions should include a risk margin to reflect the uncertainty associated with probability-weighted cash flows. The risk margin should, generally, be the compensation the insurer requires to bear the risk that the ultimate cash flows could exceed those expected.

9.1 For the risk margin the following characteristics are expected:

- a. the greater the uncertainty associated with the cash flow, the larger the risk margin;
- b. risks which are more material, all else being equal, will result in a larger risk margin;
- c. risks that persist for longer, all else being equal, will result in a larger risk margin; and
- d. similar risks should give rise to similar risk margins.

9.2 For the risk margin, the cost of capital approach should be used.

- a. The risks to be taken into account are non-hedgeable risks such as insurance risk, credit risk, operational risk, and market risk associated with assets held to maturity.
- b. The cost of capital rate to be used is 6%.
- c. The calculation should be based on the regulatory capital requirement calculated under the Bermuda Solvency Capital Requirement or an approved model.
- d. The risk margin can be calculated at an aggregate level; the insurer may, where appropriate, make reasonable allowance for the effects of diversification within the insurance entity when calculating the risk margin.

9.3 The risk margin should be calculated on a net of reinsurance basis.

10. Best-estimate calculations should be performed on a policy-by-policy approach but grouping may be used if this does not materially misrepresent the underlying risk and does not significantly misstate costs.

10.1 Typically, grouping would occur in order to reduce the complexity where multiple computations are required in order to assess the probability-weighted cash flows.

10.2 This might, for example, be utilised for stochastic scenarios in the valuation of options and guarantees.

10.3 The insurer should be able to provide documentation, upon request of the Authority, on the policy grouping that describes:

- a. why the grouping was necessary;
- b. the process used in the grouping; and
- c. the checks performed to ensure that the grouping does not materially change the risk characteristics of the portfolio.

11. When calculating best-estimates, the undertaking should identify and take into account all material financial guarantees and contractual options included in the insurance policies.

- 11.1 The value of options and guarantees would be influenced by the prevailing economic conditions and the likelihood of the policyholder to exercise the option.
- 11.2 In order to properly value financial options, the insurer would typically need to examine a number of different scenarios.
- 11.3 For the simpler and less material options, the analysis may be based on simplified methods, such as closed form solutions or the analysis of selected scenarios. However, for more complex and material options, a range of stochastic scenarios may be required.
- 11.4 For valuation purposes, the stochastic scenarios used are typically calibrated to market prices.

LIABILITIES OTHER THAN TECHNICAL PROVISIONS

12. Liabilities other than technical provisions should be valued on an economic basis, consistent with international accounting standards.

- 12.1 In practice this means fair value will be used.
 - a. Current and deferred tax liabilities should be recorded based on international accounting standards adjusted for changes required to determine the economic balance sheet. Amounts expected to be paid in more than one year would be discounted using risk-free rates.
 - b. Reinsurance balances payable should be recorded at amount due. Amounts due in over one year would be subject to discounting using risk-free rates.
 - c. Financial liabilities and embedded derivatives should be recorded at fair value excluding an insurer's own credit spread to its own debt.

GOVERNANCE

13. Insurers shall have effective systems and controls to ensure that valuation estimates of their assets and liabilities are appropriate and reliable.
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- 13.1 Insurers shall establish, implement, and maintain clearly defined policies and procedures for the process of valuation, including:
 - a. the description and definition of roles and responsibilities of the personnel involved with the valuation;
 - b. the collection, analysis and use of data along with the steps taken to ensure that the data is relevant, complete and accurate;
 - c. a validation between the extract data (e.g. policyholder or asset extracts) and the results of the valuation process. For example, confirmations that the premiums, face amounts, and fund

- values from the policy extracts are consistent with the output of the actuarial models and other sources of information such as public accounts;
- d. the actuarial and statistical methodologies for the calculation of the technical provisions;
 - e. determination of the assumptions including the derivation of the yield curve used;
 - f. parameterising and running of the model;
 - g. quality controls; and
 - h. documentation.
- 13.2 Certain aspects of the valuation process will depend on the expertise of persons with relevant knowledge, experience, and understanding of the risks inherent in the insurance business and involve expert judgment. In such cases, the insurer should document the use of expert judgment and indicate the steps used to validate the conclusions based on such judgment.
- 13.3 Insurers shall validate the calculation of technical provisions, at least once a year, or when there are indications that the data, assumptions, or methods used in the calculation or the level of the technical provisions are no longer appropriate. The technical provisions included in the EBS would, when fully operational, be subject to certification by the insurer's Approved Actuary.
- 13.4 Insurers shall ensure that the persons overseeing the validation process are sufficiently qualified with regard to their knowledge and experience to carry out the validation process.

IV. TIMETABLE FOR THE MOVE TOWARDS AN ECONOMIC BALANCE SHEET

14. The previously published DP set out a two phased approach for the transition to an EBS framework. However, for Long-Term insurers, the Authority favours a different – though similarly measured – approach. To that end, in late 2012, the Authority proposes to conduct a test run of revised reporting on a “test group” of Class C, D and E insurers on a voluntary basis based on the reporting period ending 31st December 2011. This will be followed by trial runs of revised reporting in 2013 and 2014 for all Class E Long-Term insurers. Class C and D insurers are welcome to participate on a voluntary basis, with the expectation that those insurers participating in the initial test run will continue to participate in the subsequent trial run phase.

15. The reporting framework will then be more formally applied to Class E Long-Term insurers with a soft launch of revised statutory reporting in 2015 for reporting periods ending 31st December 2014. (It should be noted that this will be the last year when concurrent formal statutory reporting will be required for Class E insurers under current rules). The soft launch, will serve as a “dry run” of the new statutory reporting framework in the year prior to the formal migration to EBS statutory reporting. During this phase insurers may continue to comply on a “best-efforts” basis and need not provide management or board attestation/certification.

16. Full formal adoption for class E insurers is proposed for the reporting period ending 31st December 2015 (to be submitted in 2016). At this point reporting under current statutory rules will cease.

17. The reporting transition timetable for all Class C and D insurers will operate from 2014 on an identical basis to the timetable for Class E insurers but delayed by one year (see Table 1 - Long-Term Business Reporting Timetable). It is recognised that the nature, scale and complexity of Class C and D insurers varies greatly and individual insurers are invited to discuss with the Authority, at their earliest opportunity, any proposals for applying proportionality (as outlined in paragraph 8c of this paper) in the adoption of the EBS framework, where appropriate.

18. It should be noted that the above proposals mean that there will be a period of dual reporting, where insurers will participate in the trial run and soft launch phases and continue to report under the current statutory requirements. This period of “parallel reporting” will provide insurers and the Authority with the necessary time to gain experience and comfort with the new reporting standards, prior to the migration to formal regulatory reporting.

19. In the initial test and trial run phases, insurers will be expected to aim for an economic valuation on a “best-efforts” basis, and the Authority realises that there is likely to be some reliance placed on approximations. A full economic valuation is the goal when EBS is formally introduced to statutory reporting, but this will, of course, be subject to the principle of proportionality and materiality (e.g. an insurer may rely on current general purpose accounting treatments for the valuation of immaterial assets or where such treatment is consistent with economic valuation). It should also be noted that the Authority will retain the power to modify reporting requirements in exceptional cases.

20. It is recognised that for some insurers, the move to an EBS may involve additional effort and is likely to iteratively develop over time. Insurers are encouraged to discuss their plans for the development of the EBS with the Authority.

21. As part of transitional arrangements, in preparing the EBS, insurers would be permitted to leverage existing systems, processes, and capabilities to meet current reporting requirements to the extent reasonable and practicable. Some possible transitional simplifications are suggested in section V of this paper.

22. It is proposed that, for the purposes of the test and trial runs, the Authority will provide a standard risk-free rate curve of adequate duration for the purposes of cash flow discounting. Rates will be provided for the following major currencies: U.S. Dollar, Euro, Japanese Yen, British Pound and Canadian Dollar. Insurers may use alternative rates, as long as the insurer can provide a rationale for such an approach and evidence that this is consistent with the principles.

Consultation Question 3: *Insurers comments are sought with respect to the above proposal, particularly as to whether the scope should be widened, where insurers may be materially exposed to other currencies.*

23. The 2012 test run will provide the Authority with input on the practical issues faced by the move to an EBS, and help ensure that insurers are provided with the appropriate options, simplifications and transitional arrangements where necessary. The Authority will seek to solicit test run participants of an appropriate number and diversity to ensure that the impact of the EBS for all significant lines of business can be adequately assessed.

24. It is the Authority's expectation that, even where an insurer may not participate in the voluntary testing process, work should begin internally to prepare for the introduction of EBS. Where challenges with implementation or other concerns arise as a consequence of such internal work, the Authority anticipates that insurers would, at an early opportunity, share information with the Authority to assist the development of the EBS framework.

25. Ultimately the EBS will contribute, in conjunction with the Long-Term BSCR, to the calculation of regulatory capital. Recalibration of the BSCR may be required but, given that the Long-Term BSCR is currently undergoing a trial run, any amendments as a consequence of EBS introduction would be premature at this time. Any future recalibration will be informed by the results of the forthcoming EBS test and trial runs.

26. For the purposes of the test run and the first year of the trial run, there is no expectation that a corresponding income statement should be prepared, given that the primary regulatory focus of the EBS is one of solvency. Based on the analysis of the test and first year trial run results and industry consultation, proposals will be made in the future as to the form of other primary financial statements for regulatory reporting purposes, with a view to the reporting of an income statement in the second year of trial run.

27. Where a reinsurer currently reflects mirror reserves on its balance sheet, it is suggested that a similar adjustment would be permissible to the economic balance sheet to mirror reserves of the U.S. ceding insurer.

Consultation Question 4: <i>Insurers' comments are sought as to the appropriate method of reflecting a mirror reserve related adjustment to the economic balance sheet.</i>

TABLE 1 - LONG-TERM BUSINESS REPORTING TIMETABLE

Report filed:	2012	2013	2014	2015	2016	2017	2018
							
Class E	Test Run Voluntary participation of test group Compliance with principles and guidance or transitional measures	Trial Run Compliance with principles and guidance or transitional measures	Trial Run Compliance with principles and guidance or transitional measures	Soft launch Compliance with principles and guidance or transitional measures	Statutory reporting Compliance with principles and guidance Audited	Statutory Reporting ongoing	Statutory Reporting ongoing
	Current Statutory Reporting				Migration to EBS Statutory Reporting		
Class C and D	Test Run Voluntary participation of test group Compliance with principles and guidance or transitional measures	Trial Run Voluntary participation Compliance with principles and guidance or transitional measures	Trial Run Compliance with principles and guidance or transitional measures	Trial Run Compliance with principles and guidance or transitional measures	Soft launch Compliance with principles and guidance or transitional measures	Statutory reporting Compliance with principles and guidance Audited	Statutory Reporting ongoing
	Current Statutory Reporting					Migration to EBS Statutory Reporting	
Policy framework			Principles, Guidance and transitional reporting measures to be published	Revision to Insurance Accounts Regulations 1980 and underlying policy			

Note: For insurance or Bermuda groups, the timetable for the application of EBS reporting remains under consideration and will be communicated in due course.

V. TRANSITIONAL MEASURES

28. In order to support the industry in its move to an EBS, the Authority is considering a range of possible arrangements to help insurers leverage existing systems, processes, and capabilities; the natural starting point would be the use of existing GAAP or IFRS numbers as reported to the Authority. These are meant to support insurers in the early stages of a transition to an EBS, although it is clearly acceptable if insurers wish to move forward faster in their efforts to comply with the stated principles and guidance.

29. The Authority has included transitional examples in this paper based on U.S. GAAP, as the majority of long-term business on the island originates from the U.S. and these insurers would normally file under U.S. GAAP. These examples can be found in Table 2 on the following page. If an insurer currently reports under IFRS or another GAAP, then a similar approach should be taken, leveraging existing reporting where possible.

30. In certain cases where insurers' U.S. GAAP capabilities may need to be developed, then insurers could also look to leverage other potential sources of information such as:

- a. U.S. statutory (where cash flow testing is required for all products);
- b. C3 Phase 1 and C3 Phase 2 for annuities; and
- c. internal reporting metrics, such as embedded values and economic capital calculations.

31. General observations on the use of U.S. GAAP as a starting point for the economic balance sheet include:

- a. DAC assets and unearned revenue items need to be eliminated;
- b. U.S. GAAP expenses exclude overhead which needs to be reflected; and
- c. the use of these transition measures does not exempt insurers from the governance and documentation requirements stated in the principles.

TABLE 2 – EXAMPLES OF TRANSITIONAL MEASURES

Product	Current capabilities	Key differences to principles	Possible simplifications
Term	- Typically insurers use net premiums and locked in assumptions with PADs. However they should have some view on best-estimate assumptions for loss recognition testing - Assets likely to be recorded at market value on balance sheet (available for sale) - Insurers typically have an actuarial model to perform cash flow projection	- Developing explicit cost of capital risk margin - Current discount rate for loss recognition testing likely to be based on asset yields less allowance for defaults and investment expenses - Likely to be using simplified discount rate rather than full yield curve	Use loss recognition test demographic assumptions as proxy for best-estimate
Universal Life with secondary guarantees	- Reserve is account balance plus reserve for guarantees - Normally expect an actuarial model for valuing the secondary no lapse guarantee - No lapse guarantee typically valued under SOP 03-1 (real world) - For guarantee testing, the assumptions are current best-estimate - Assets likely to be recorded at market value on balance sheet (available for sale) - Calculation typically uses grouped data - Policyholder behaviour considered in guarantee valuation and DAC amortisation	- Interest rate guarantee may not be valued (would be consistent with principles if credited rate was expected to stay constant regardless of the scenario) - Developing explicit cost of capital risk margin - Real world instead of risk neutral scenarios used. A move to risk neutral scenarios has more focus on low interest rate environment and insurers would need to ensure models reflect management	- Potentially set defaults equal to credit spreads in RW scenarios to approximate RN scenarios. - If unable to perform stochastic calculation then possibly roll up policies at guarantee rate and discount on risk-free yield curve

Product	Current capabilities	Key differences to principles	Possible simplifications
		actions and policyholder behaviour in these scenarios.	
Long-term care / disability	• Similar to Term	• Similar to Term	• Similar to Term
Payout annuities	• Insurers typically have an actuarial model to perform cash flow projection • Assets likely to be recorded at market value on balance sheet (available for sale) • Reserve based on assumptions with PADs that are locked-in at policy inception • Assumptions used for loss recognition testing typically best-estimate	• Developing explicit cost of capital risk margin Current discount rate for loss recognition testing likely to be based on current asset yields less defaults and investment expenses • Likely to be using simplified discount rate rather than full yield curve	• Base matching premium adjustment on yields used in the U.S. GAAP calculation
Deferred Annuities	• U.S. GAAP reserve equal to account value so sophisticated actuarial models not strictly necessary. • Major writers of this product likely to have sophisticated pricing models • DAC amortisation is based on a projection of gross profits, which is typically based on a projection model.	• Stochastic cash flow models and assumptions may already exist for purposes such as pricing, US statutory, embedded values or economic capital) • Developing explicit cost of capital risk margin	• If unable to perform stochastic calculation then possibly roll up policies at guarantee rate and discount on risk-free yield curve
GMAB / GMWB	• Treated as embedded derivative under U.S. GAAP so stochastic actuarial models	• Risk neutral scenarios should not allow use of own credit risk	

Product	Current capabilities	Key differences to principles	Possible simplifications
	required. Valued using risk neutral scenarios allowing for own credit risk. - Assets would typically be valued at market value (hedge assets = trading, other assets = available for sale). - Uses best-estimate assumptions - Risk margins are required so assumptions often contain PADs - Policies are grouped typically for stochastic calculations	- May already have results available excluding own credit risk for hedging or disclosure purposes - Padded assumptions compared to best-estimate - Developing explicit cost of capital risk margin	
GMDB / GMIB	- Insurers would have stochastic actuarial model to perform SOP 03-1 but based on real world scenarios - Demographic assumptions are best-estimate	- Real world instead of risk neutral scenarios used - Developing explicit cost of capital risk margin	BMA provide a set of risk neutral scenarios for test.