



**BERMUDA MONETARY AUTHORITY**

**FINANCIAL GUARANTY LIABILITIES AND BERMUDA STATUTORY  
RETURNS**

**CLARIFICATION OF GUIDANCE NOTE 4**

**April 2008**

## FINANCIAL GUARANTY LIABILITIES AND BERMUDA STATUTORY RETURNS

This note clarifies the determination of the loss and loss expense provision (line 17) and unearned premium provision (line 16) for Bermuda statutory financial statements for *financial guaranty business*<sup>1</sup>.

### Summary

The line 17 amount should reflect the *present value of future cash flows* associated with all financial guaranty contracts attaching prior to the balance date where anticipated losses are estimated over the lifetime of contracts<sup>2</sup>, with appropriate probabilistic allowance for potential adverse scenarios.

The remainder of this note sets out current guidelines and practice and recommended approach in more detail.

### Bermuda Statutory Reporting

#### *Loss Provision*

Class 3 and Class 4 insurers in Bermuda are required to provide annual certification of their loss and loss expense provision by an approved *Loss Reserve Specialist (LRS)*<sup>3</sup>. Guidance Note 4 (“GN 4”) issued by the Bermuda Monetary Authority sets out guidance for Loss Reserve Specialists. This note clarifies the application of GN 4 to financial guaranty business.

As described in GN 4, insurers are required to reflect an adequate amount for gross<sup>4</sup> unpaid loss and loss expenses for all losses incurred prior to the balance date. This includes reported but unpaid, and incurred but not reported (“IBNR”) losses, and unpaid expenses likely to be incurred in connection with the investigation, adjustment and settlement of such losses. Line 17 amounts are net of recoverables from outward reinsurance<sup>5</sup>.

Line 17 may be discounted in certain circumstances, such as when the LRS is of the opinion that the amounts and dates of payments are reasonably ascertainable.

#### *Unearned Premium Provision*

Line 16 of Bermuda statutory statements reflects the unearned premium provision (“UPP”), which is the portion of premium relating to risks which have been written prior to the balance date for which cover has not expired. The UPP is determined in accordance with generally accepted accounting principles (“GAAP”), where premium is earned in proportion to the risk profile of the underlying coverage. The UPP can be considered to represent the sum of (i) an insurer’s provision for losses currently expected to

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<sup>1</sup> Terms in italics are defined in the Attachment

<sup>2</sup> That is, on a written, not an earned, basis

<sup>3</sup> Usually an actuary

<sup>4</sup> Prior to consideration of reinsurance recoverables

<sup>5</sup> Provided such recoverables are considered collectible

be incurred subsequent to the balance date relating to those unexpired risks and (ii) anticipated future underwriting profits.

In the case where associated future losses on unexpired risks are considered likely to exceed the UPP, accounting principles require that the loss and loss expense provision (line 17) be augmented by a premium deficiency provision (“PDP”). The intended outcome is that the UPP plus the PDP will be sufficient to pay expected claims on unexpired risks. The PDP may be discounted.

We note that it is current industry practice that future contracted premiums (installment premiums) for financial guaranty business are not reflected in a company’s U.S. GAAP financial statements.

### **Reserving for financial guaranty business**

Historically, for financial guaranty business, loss provisions have been determined using either or both deterministic and stochastic methodologies. Deterministic methods include provisions estimated as case reserves plus a percentage of premium (or exposure), or via the use of standard actuarial methodologies such as the Stanard–Buhlman method<sup>6</sup>.

Stochastic approaches include simulation exercises where underlying independent variables (default rates, interest rates etc.) are randomly selected from assumed distributions and a range of liability outcomes modeled, with ultimate losses (and hence reserves) selected as some pre-determined percentile of those modeled outcomes.

A number of companies use a deterministic approach for the portion of the portfolio for which no losses are anticipated, and stochastic methods for reported losses.

### **U.S. GAAP accounting for financial guaranty business**

U.S. GAAP (FAS 60, FAS 5) specify that case reserves be established where there is (inter alia) reasonable expectation that losses will arise. For financial guaranty insurance business, practice has been that case reserves are established based upon contractual default, and any IBNR<sup>7</sup> established on a portfolio basis.

*FAS 133* requires that certain financial guaranty contracts are carried at *fair value* for the purposes of U.S. GAAP. This is estimated by reference to market price (or market proxies in the case where no market price exists). This process is referred to as “*marking to market*” or “*marking to model*” and applies to financial guaranty insurance contracts where the insured instrument is a *credit default swap (CDS)*.

There has been discussion on whether market (or modeled market) price appropriately reflects economic value of liabilities attaching to CDS contracts for financial guaranty insurers. Recent and anticipated write-downs of asset values and potential defaults related to securitized sub-prime loans underwritten by financial guaranty insurers have significantly impacted market prices for the underwritten instruments,

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<sup>6</sup> The reader is referred to James P. McNichols’ paper *Monoline Insurance & Financial Guaranty Reserving*

<sup>7</sup> IBNR is often referred to as “unallocated reserves” by financial guaranty insurers

dramatically increasing estimated liabilities determined by reference to market (or modeled market) price.

## **Summary of Recommended Approach**

### *1. Liabilities to reflect Economic Value*

For the purposes of companies determining liabilities relating to financial guaranty business, line 17 should reflect expected losses<sup>8</sup> determined in accordance with generally accepted actuarial practice; that is, as the present value of future cash flows associated with anticipated losses from all contracts attaching prior to the balance date. For this purpose “contracts” includes all financial guaranty contracts, including contracts covering CDS instruments, regardless of the U.S. or other accounting treatment applying. Cash flows should take into account outwards amounts (claim payments, allocated and unallocated claim expenses) net of inwards amounts (future premium, reinsurance, salvage and subrogation recoveries).

Expected losses should be determined by considering probability and associated magnitude of loss under a number of scenarios across an entire portfolio, where there is due allowance for potential adverse outcomes in demographic and economic assumptions, including but not limited to type of business, contract term, actual and anticipated defaults, interest rate levels and credit rating deterioration of issued obligations. The line 17 amount should include case reserves, IBNR and the PDP for all contracts assumed and in force at the balance date.

The component of the line 17 provision which is deemed to be associated with the unearned portion of exposure should be the amount in excess of (i.e. shown net of) the provision for unearned premium (line 16).

### *3. Allowance for future premiums*

Future contracted premiums (installment premiums) which under current U.S. GAAP are not recognised in the financial statements may be included in the unearned premium provision (line 16) and if so included can offset associated projected liabilities (line 17), with appropriate and prudent allowance for lapse and other risks of non-payment. Such allowance may be achieved via the use of a higher discount rate, a percentage deduction in the estimated amount<sup>9</sup>, or some other appropriate method. The associated matching asset can also be recognised as written premium receivable on the balance sheet.

### *4. Discounting using risk free rate*

Nominal cash flows should be discounted at a rate or rates reflecting *risk free* returns<sup>10</sup>.

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<sup>8</sup> *Expected losses* in this context reflects the *mean* (average) of foreseeable outcomes

<sup>9</sup> E.g., S&P apply a 15% deduction to the present value of future installment premium

<sup>10</sup> This is distinct from GN 4 and is applicable to financial guaranty business only

### *5. Allowance for possible catastrophic outcomes*

It is expected that the determination of liabilities will give reasonable allowance for potential adverse development. This may be achieved by a probabilistic approach, stress testing expected outcomes by varying underlying assumptions, or by the use of stochastic models. In particular, the determination of liabilities should allow for the contingency reflected in current market pricing of insured financial guaranty liabilities. Current market conditions (i.e. at financial year end 2007) imply that historical experience is not sufficient in itself as a basis for arriving at the assumptions used to estimate these liabilities. Any report underlying actuarial certification of line 17 amounts should discuss the allowance for adverse outcomes.

### *6. Additional considerations may apply on significant downgrade, run-off or wind-up*

This recommended approach assumes that the reporting company continues to underwrite business. If a company is significantly downgraded or goes into run-off or wind-up, other factors not considered in this note may impact liabilities. In such instances, a financial guaranty insurer may separately wish to set aside a provision to cover the cost of the possibility of being required to meet collateral or other requirements in the future.

## **Capital Requirements**

The Bermuda Monetary Authority is considering developing, in consultation with stakeholders, guidelines on capital levels to be maintained by financial guaranty insurers. In the meantime, it is expected that financial guaranty insurers will determine required capital levels by reference to statutory solvency standards, anticipated losses under potential adverse scenarios and aggregate exposure. For example, capital levels may be set by use of models which determine required capital at a level of 99% TVAR<sup>11</sup> over an appropriate time horizon.

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<sup>11</sup> Tail variance at risk

## **Attachment – Definitions**

### **1. Financial Guaranty**

Financial Guaranty is a form of credit protection for investors in debt obligations. Typical investment instruments include asset-backed securities (ABSs), mortgage-backed securities (MBSs), collateralized debt obligations (CDOs), collateralized mortgage obligations (CMOs), collateralized bond obligations (CBOs), collateralized loan obligations (CLOs), and credit default swaps (CDSs).<sup>12</sup>

### **2. Present value of future cash flows**

Expected cash flows are probability-weighted cash flows that conceptually reflect the average of all possible outcomes.<sup>13</sup> The present value of these cash flows is the discounted value of aggregate outward less inward future cash flows.

### **3. Loss Reserve Specialist**

A person approved by the Bermuda Monetary Authority as qualified to provide an opinion as to the adequacy of an insurer's loss and loss expense provision for its General Business as reported in its statutory financial statements.<sup>14</sup>

### **4. U.S. Financial Accounting Standard No. 133 (FAS 133)**

This Statement establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities. It requires that an entity recognise all derivatives as either assets or liabilities in the statement of financial position and measure those instruments at fair value.<sup>15</sup>

### **5. Fair Value**

Fair value is the price that would be received to sell an asset (or paid to transfer a liability) in an orderly transaction between market participants at the measurement date.<sup>16</sup>

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<sup>12</sup> Source: National Association of Insurance Commissioners: Guideline #1626 – Financial Guaranty Insurance Guideline – <http://www.NAIC.org>

<sup>13</sup> Source: Financial Accounting Standards Board: Financial Accounting Series: Exposure Draft – Accounting For Financial Guarantee Contracts: An interpretation of FASB Statement No. 60 - <http://www.fasb.org>

<sup>14</sup> Source: Bermuda Monetary Authority Insurance Department: Guidance Note #4 – Role of the Loss Reserve Specialists - <http://www.bma.bm>

<sup>15</sup> Source: Financial Accounting Standards Board: Statement of Financial Accounting Standards No: 133 – Accounting For Derivative Instruments and Hedge Funds - <http://www.fasb.org>

<sup>16</sup> Source: Financial Accounting Standards Board: Statement of Financial Accounting Standards No: 157 – Fair Value Measurements - <http://www.fasb.org>

## 6. **Mark-to-Market**

The act of recording the price or value of a security, portfolio or account to reflect its current market value.<sup>17</sup>

## 7. **Mark-to-Model**

The term used to define the pricing of a specific investment position or portfolio based on internal assumptions or financial models. This contrasts with traditional mark-to-market valuations, in which market prices are used to calculate values as well as the losses or gains on positions.<sup>18</sup>

## 8. **Credit Default Swap**

A credit default swap (CDS) is a credit derivative contract in which one party (protection buyer) pays a periodic fee to another party (protection seller) in return for compensation for default (or similar credit event) by a 'reference entity' or 'reference obligation'. Credit default swaps are financial instruments designed to allow for the transfer of pure credit risk from one counterparty to another. This allows the credit risk of the financial instrument to be transferred without actually transferring legal ownership of the asset.<sup>19</sup>

## 9. **Risk Free (Discount) Rate**

The Treasury curve and the London Inter-Bank Offer Rate (LIBOR) curve are two widely used proxies for a risk-free rate.<sup>20</sup>

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<sup>17</sup> Source: Investopedia – Financial Terms – Mark to Market <http://www.investopedia.com/terms/m/marktomarket.asp>

<sup>18</sup> Source: Investopedia – Financial Terms – Mark to Model - [http://www.investopedia.com/terms/m/mark\\_to\\_model.asp](http://www.investopedia.com/terms/m/mark_to_model.asp)

<sup>19</sup> Source: National Association of Insurance Commissioners: SVO Research Quarterly - Introduction to Credit Default Swaps – <http://www.NAIC.org>

<sup>20</sup> The Journal of Fixed Income – June 1999

<http://www.ijournals.com/JFI/DEFAULT.ASP?Page=2&ISS=8206&SID=319232>