

## TECHNICAL REFERENCE

### SOURCES OF FUND AND FINANCIAL LIABILITIES

#### Funding Framework

As a statutory body, sources of funding and the ability to meet liabilities and commitments as they arise are established in the PIDM Act. It is imperative for us to have adequate financial resources to effectively administer and operate a robust and sound Deposit Insurance System as well as Takaful and Insurance Benefits Protection System. The availability of financial resources is critical to ensure that we can meet our obligations with a high degree of confidence as and when the need arises. As a financial consumer protection authority, we have an inherent exposure to losses resulting from protecting deposits held by member banks as well as takaful and insurance benefits provided by insurer members.

Our funding framework explicitly highlights the need for adequate financial resources to effectively carry out our mandate as well as to address the risks to which we are exposed. The main objectives of its funding framework are to:

- a. ensure the availability of sufficient financial resources to fund our day-to-day operations; and
- b. accumulate reserves to ensure our ability to meet future obligations to depositors as well as takaful certificate and insurance policy owners.

The funding framework, which takes into consideration our role as one of the financial safety net players as well as our legislative powers relating to sources of funding, also provide clear objectives for internal and external sources of funding.

#### Internal Funding

Our internal funds are built through the accumulation of net surpluses from our operations. Annual net surplus is credited into and accumulated in the respective Funds as reserves to meet future obligations that may arise from providing the financial consumer protection systems. Expenses are credited against the respective Funds on the costs allocation basis as described in Note 2.2(e)(2) to the financial statements and there is no commingling between the Funds.

#### Target Fund Framework

Target fund refers to the level of internal funds we aim to accumulate to cover the expected net losses arising from any intervention and failure resolution activities. The target fund framework provides the basis in assessing the adequacy of the current levels of the funds and as a means to systematically specify the target levels for the respective funds.

#### Target Fund Modelling Approach

A comprehensive review of the target fund frameworks for the Deposit Insurance Funds (DIFs) and Takaful and Insurance Protection Funds (TIPFs), i.e. General Insurance Protection Fund (GIPF), Life Insurance Protection Fund (LIPF), General Takaful Protection Fund (GTPF) and Family Takaful Protection Fund (FTPF) was undertaken in 2022 to align the target fund with the various resolution options being developed.

In developing the target funds, we have adopted both the statistical modelling as well as a discretionary approach in determining the range of our target fund:

##### a. Statistical modelling approach

We have adopted the Value-at-Risk (VaR) statistical model in developing the target fund framework. Under this statistical modelling approach, VaR is determined to assess our exposure to net losses based on estimates of the member institution's default probability and the correlations of default, exposure at default, and the possible recoveries in any given intervention and failure resolution action on a non-viable member institution. To determine the sufficient level of funds to cover the net losses, given a specified confidence level, we leveraged on the Monte Carlo simulation used in the VaR statistical model. Simulations using a significant number of loss scenarios to build up a statistical loss distribution were run from the model to ascertain the target fund level that will be able to cover losses in a specified time horizon with a specified confidence level. For the target funds for TIPFs specifically, PIDM had assessed on a consolidated basis by aggregating the net losses of all the individual protection funds from the Monte Carlo simulations to arrive at a consolidated target fund level and range.

**b. Discretionary approach**

In determining the target fund range, we also took into consideration other qualitative factors such as our mandate and legislative powers, the banking, insurance and takaful industry’s landscape and operating environment as well as the financial system’s regulatory and supervisory regime in Malaysia. These qualitative factors are either directly reflected within the statistical model or used in the determination of the target fund level.

**Risks and Sensitivity of the Target Fund Modelling**

The process of estimating the target fund level is subject to uncertainty as the inputs to the model are based on sets of assumptions. Hence, the model is predicated upon, and is sensitive to several key factors as follows:

**Table 1: Key Sensitive Factors of the Target Fund Modelling**

<b>Operating environment</b>
<p>The model is based on the assumption that the environment in which member institutions operate does not deviate significantly in the foreseeable future. This includes economic conditions and the risk profile of individual member institutions, the financial industry’s landscape as well as the regulatory and supervisory regime. Significant or drastic changes to these characteristics or other similar characteristics may result in a different target fund level within certain ranges than previously required. Nevertheless, the operating environment will be reviewed and validated against the model annually.</p>
<b>Mandate and powers</b>
<p>The mandate and powers are set out in the PIDM Act, which, among others, enable us to intervene and resolve a troubled member institution promptly to minimise losses to the financial system. The target fund modelling and estimation were made based on the current mandate and powers set out in the PIDM Act. Any significant changes to our mandate and powers may affect the modelling assumptions and therefore the estimation of the target fund level. However, no significant changes to our mandate and powers in are expected in the near future.</p>

The target fund is not static and is reviewed and validated annually to ensure its relevance and to reflect any changes in the assumptions or inputs used.

**Key Input Variables for the Statistical Model**

The statistical model determines the expected loss using the following key input variables:

**Table 2: Key Input Variables and Assumptions for the Target Fund Modelling**

Probability of Default (PD)	The potential default rate of member institutions depending on their risk profile.
DIFs and TIPFs	Average cumulative default rates as reported by External Credit Assessment Institutions in their annual default study. The average cumulative default rates are benchmarked against PIDM’s internal rating assessments.
Exposure At Default (EAD)	EAD represents the financial exposure to PIDM in resolving the member institutions.

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DIFs	<p>The EAD is estimated based on two (2) resolution strategies:</p> <ul style="list-style-type: none"> <li><i>i. Reimbursement</i> The EAD is estimated using the total insured deposit of each member bank, to reflect the amount that PIDM is exposed to payout the depositors.</li> <li><i>ii. Transfer</i> The EAD is estimated based on funding needs due to shortfall of assets over liabilities and capital requirements to execute a whole business or an asset and liability transfer</li> </ul>
TIPFs	<p>The EAD is estimated based on four (4) resolution strategies:</p> <ul style="list-style-type: none"> <li><i>i. Transfer of Business</i> The EAD is estimated based on the gap resulting from shortfall of assets over liabilities (estimated from the reverse stress test), operational and contingency costs, as well as opportunity and borrowing costs, of each insurer member.</li> <li><i>ii. Run-off</i> The EAD is estimated using the cost of covering the shortfall of assets net of earned investment income, cost of run-off manager, operational and contingency costs, as well as opportunity and borrowing costs, of each insurer member.</li> <li><i>iii. Liquidation</i> The EAD is estimated using claim and premium/contribution liabilities (including the capital risk charge) as well as expense liabilities (only for general takaful), liquidation cost, operational and contingency costs, opportunity and borrowing costs, of each insurer member.</li> <li><i>iv. Recapitalisation</i> The amount of EAD is estimated based on the capital injection needed from PIDM to restore the capital position to the minimum regulatory capital requirement level.</li> </ul>
Loss Given Default (LGD)	<p>LGD is defined as the net loss to PIDM after taking into account recoveries in a given default situation.</p>
DIFs	<p>The LGD is estimated based on two (2) resolution strategies as follows:</p> <ul style="list-style-type: none"> <li><i>i. Reimbursement</i> The difference between the payout amount and recoveries by PIDM from the assets of the failed member bank including the borrowing cost to fund resolution action.</li> <li><i>ii. Transfer</i> The difference between the funding provided by PIDM to support transfer strategy (including the borrowing cost) and the subsequent recoveries by PIDM.</li> </ul>

### TIPFs

The LGD is estimated based on four (4) resolution strategies as follows:

- i. Transfer of Business and Run-off*  
No recoveries is expected as the sale proceed belongs to shareholders.
- ii. Liquidation*  
Different LGD is applied for different class of insurer members assets.
- iii. Recapitalisation*  
A certain percentage of sunk costs is being applied as the LGD.

### External Funding

We may raise external funds through either borrowing from the Government, capital markets or such other sources as deemed necessary and appropriate. The PIDM Act empowers the Minister of Finance to provide loans to us to meet our obligations. Such borrowings would be based on such terms and conditions as the Minister of Finance will determine. Funding from the capital markets, namely through the issuance of debt securities by us, is also an option when the environment or market is conducive to do so.