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CONSULTATION PAPER ON
PROPOSED ENHANCEMENTS TO
THE DIFFERENTIAL LEVY SYSTEMS FRAMEWORK
FOR INSURANCE COMPANIES

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PART A: INTRODUCTION

1.0   BACKGROUND

1.1   In line with our mandate to administer a takaful and insurance benefits protection system and to provide incentives for sound risk management in the financial system, Perbadanan Insurans Deposit Malaysia ("PIDM") implemented the Differential Levy Systems ("DLS") Framework for insurance companies[1] in 2013.

1.2   The DLS Framework's primary objectives are to provide incentives for insurance companies to maintain sound risk management practices and to introduce greater fairness in the levy assessment process.

1.3   PIDM is committed to continuously enhance the effectiveness of the DLS Framework. In line with this, the DLS Framework is reviewed at least every three (3) years to:

(a)   ensure that the existing criteria and indicators used are still current and relevant;

(b)   address feedback received and issues encountered in its implementation; and

(c)   assess the impact of changes and developments in the operating and regulatory environment on the DLS Framework.

2.0   OBJECTIVES OF THIS CONSULTATION PAPER

2.1   The purpose of this consultation paper ("CP") is to seek views and comments on the proposed enhancements to the DLS Framework. In line with PIDM's strategies and values, the consultative approach is adopted to ensure that the enhanced DLS Framework is relevant and effective.

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[1] Insurance companies refer to all insurance companies registered under the Financial Services Act 2013, except reinsurance companies and Danajamin Nasional Berhad. All insurance companies conducting general insurance or life insurance business are subject to the DLS Framework.

2.2 This CP focusses on the proposed changes to the **Guidelines on Differential Levy Systems Framework for Insurance Companies** issued on 31 January 2019[2] ("DLS Guidelines"). The proposed changes to the DLS Guidelines will be reflected in the Malaysia Deposit Insurance Corporation (Differential Premium Systems in respect of Insurer Members) Regulations 2012.

3.0 CONSULTATION PROCESS

3.1 PIDM invites written feedback and comments on this CP. To facilitate PIDM's assessment, please support each comment with clear rationale, suggestions, accompanying evidence and/or illustration, where appropriate.

3.2 Responses to this CP shall be submitted by **24 May 2019** to:

Senior General Manager
Risk Assessment and Resolution Division
Perbadanan Insurans Deposit Malaysia
Level 12, Axiata Tower
No. 9, Jalan Stesen Sentral 5
Kuala Lumpur Sentral
50470 Kuala Lumpur

(Please state **"Enhancements to DLS"** at the top left hand corner of the envelope for written comments posted to PIDM.)
Or Email: dls@pidm.gov.my
Enquiries: Puan Izrin Irina Khairil Anuar 03-2173 7558
Puan Wendy Leong Li Wen 03-2173 7404
Puan Siew Shwu Ying 03-2265 6432
Encik Azman Mokhtar 03-2173 7596

3.3 PIDM will collate the comments on this CP. PIDM's response to the comments may be made public. If you do not wish for any of your comments to be made public, please indicate accordingly in your submission.

3.4 The enhanced DLS Framework is planned for implementation in the assessment year 2020.

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[2] The revised DLS Guidelines were issued on 31 January 2019 to mainly cater for the submission of reporting forms online through PIDM's portal.

PART B: PROPOSED ENHANCEMENTS

4.0 OVERVIEW

4.1 In reviewing the DLS Framework, PIDM carried out a series of industry engagements and data testing, and collaborated with the technical committee of industry associations to discuss the proposed enhancements.

(a) Industry Survey

A survey was issued in 2017 to obtain insurance companies' feedback on the areas for enhancement. The feedback received were useful for PIDM's preliminary review of the DLS Framework amidst changing economic environment and regulatory developments.

(b) Focus Group Discussions

Following the survey, some insurance companies were invited for discussion on their feedback and recommendations. The discussions were constructive and the insurance companies were supportive of the proposal to introduce new indicators in the DLS Framework.

(c) Engagement with Technical Committee of Life Insurance Association of Malaysia ("LIAM") and Malaysian Takaful Association ("MTA")

PIDM then initiated meetings and consultation with the technical committee of LIAM and MTA to discuss and formulate concepts to align the industry's feedback with the DLS Framework's objectives.

(d) Positional and Trend Analysis

PIDM conducted extensive data testing based on recent data and analysed the trends. The thresholds for each indicator were tested based on current developments in the business environment. Further reviews and tests were performed on the distribution of the results of the indicators taking into consideration the average industry performance and peer positioning of the insurance companies.

(e) Consultation with Bank Negara Malaysia ("BNM")

As part of its comprehensive review process, PIDM also consulted BNM to seek their views from supervisory perspective.

4.2   Based on PIDM's review, the DLS Framework methodology and criteria remain relevant and current in meeting its objectives. Insurance companies will continue to be assessed based on a combination of quantitative and qualitative criteria. Nevertheless, several enhancements and refinements are proposed under the quantitative criteria as set out below.

Introduction of New Indicator		
Existing Indicator	**Proposed New Indicator**	**Business Type**
Investment Yield ("IY")	Asset Matching and Return ("AMR") A matrix between: a) Asset Liability Duration Matching ("ALDM"); and b) IY.	Life Insurance Business

Refinement of Existing Indicators		
Existing Indicator	**Proposed Refinement**	**Business Type**
IY[3]	▪ To replace "total assets" with "total investment assets". ▪ To include changes in gross "fair value through other comprehensive income" ("FVOCI") reserves as part of the net capital gains/losses component. ▪ To replace the Malaysian Government Securities ("MGS") 5-year spot rate as the benchmark with the MGS 3-7 year Bond Index Return ("BIR").	Life Insurance Business
Mean-Adjusted Return Volatility ("MARV")	▪ To exclude changes of the gross Available-for-Sale ("AFS") reserves from the net capital gains/losses component. ▪ To provide further clarification on the "other income/outgo" component under operating profit.	General Insurance Business

Please refer to Appendix I: Proposed Enhanced DLS Framework.

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[3] Under the proposed enhancements, IY will be a sub-indicator of the AMR indicator.

4.3   No changes are proposed in respect of the qualitative criteria. The levy categories, reporting reference date and source of information also remain unchanged.

5.0   ASSET MATCHING AND RETURN - A Matrix of Asset Liability Duration Matching and Investment Yield

5.1   The existing DLS Framework for life insurance business assesses insurance companies from the profitability and business sustainability perspectives. PIDM proposes an asset based indicator for a more holistic assessment of the insurance companies' risk profile.

5.2   Assets are important component of life insurance business as it is generally a long tail business that requires adequate levels of assets to meet its long term obligations. Given that long tenure assets and insurance liabilities are interest rate sensitive, inadequate assets to match liabilities due to non-parallel movement would eventually result in financial health deficit. Hence, it is important to measure the asset-liability matching position of the business.

5.3   Investment returns are also important to ensure that insurance companies generate sufficient and sustainable returns to meet policy owners' reasonable expectations and internal investment target returns. However, investment objectives are often linked to insurance companies' business mix profile. This means that long term business would require insurance companies to invest in long term assets, foregoing high investment returns and vice versa.

5.4   As business profile and investment returns are the two (2) main considerations in setting a strategic asset allocation, PIDM proposes to introduce the AMR, which measures both ALDM and IY in a matrix. The AMR measures the ability of a life fund to strategically invest its assets to match the exposure from its insurance liabilities while maintaining an appropriate level of investment returns.

5.5   The proposed matrix and score range are as follows:

Asset Liability Duration Matching

Investment Yield		100% ≤ ALDM < 200%	80% ≤ ALDM < 100% OR 200% ≤ ALDM < 300%	ALDM < 80% OR ALDM ≥ 300%
	IY ≥ BIR	Score 1	Score 2	Score 4
	IY < BIR	Score 2	Score 3	Score 4

Note: BIR refers to the Bond Index Return based on the Malaysian Government Securities index.

Score Range	ALDM	IY	Score
Score 1	100% ≤ ALDM < 200%	IY ≥ BIR	20
Score 2	100% ≤ ALDM < 200%	IY < BIR	14
	80% ≤ ALDM < 100% OR 200% ≤ ALDM < 300%	IY ≥ BIR	
Score 3	80% ≤ ALDM < 100% OR 200% ≤ ALDM < 300%	IY < BIR	7
Score 4	ALDM < 80% OR ALDM ≥ 300%	IY ≥ BIR	0
	ALDM < 80% OR ALDM ≥ 300%	IY < BIR	

5.6   PIDM views an ALDM of 100% as the ideal position, where assets and insurance liabilities match perfectly. Although an ALDM position greater than 100% may be viewed favourably, holding excessive assets could be unfavourable as asset value drops much greater than liabilities value if interest rates trend upwards. Hence, PIDM proposes a ceiling limit for the score range. This is also consistent with BNM's interest rate capital charges in its Risk Based Capital Framework for Insurers ("RBC Framework").

Asset Liability Duration Matching

5.7   ALDM assesses the estimated value of an insurance company's assets over its insurance liabilities for a specific reporting period. It emphasises exposure to the risk of future mismatch between assets and insurance liabilities under a stressed interest rate environment. ALDM estimates the percentage (%) of the dollar duration of assets against the dollar duration of insurance liabilities. Dollar duration measures movement in the value of assets or insurance liabilities due to changes in interest rates. It is vital for insurance companies to ensure that their insurance liabilities are adequately covered by matching assets.

5.8   The proposed ALDM formula is as follows:

$$\text{ALDM} = \frac{\text{ADD}}{\text{LDD}}$$

Asset Dollar Duration ("ADD")	$= \dfrac{(A2 - A1)}{[2*(A0)*(Y/10000)]} * A0$

Liability Dollar Duration ("LDD")	$= \dfrac{(L2 - L1)}{[2*(L0)*(Y/10000)]} * L0$

A0 = the base value of asset
A1 = the asset's value when its interest rate/yield rises by Y basis points
A2 = the asset's value when its interest rate/yield falls by Y basis points
L0 = the base value of liability
L1 = the liability's value when its interest rate/yield rises by Y basis points
L2 = the liability's value when its interest rate/yield falls by Y basis points
Y/10000 = interest rate/yield changes (in 2 decimals)
Note: For the calculation of ALDM, Y=100

5.9   The data requirements for ALDM computation are as follows:

Data Requirement	Source of Information	Remarks
A0/L0 Both asset and liability valued at base value interest rate/yield	RBC Framework – Reporting Form: Life Insurance Fund – (iii) Interest Rate Risks, Form C1-2 (aggregate base value[4] for all life insurance funds[5] within Malaysia)	The asset component is to be computed based on all assets that are exposed to interest rates as defined in *BNM/RH/PD 032-12 Risk-Based Capital Framework for Insurers Appendix II section 4.*
A1/L1 Both asset and liability valued at base value interest rate/yield + 100bps	Other supporting information	The liability component is to be computed based on Guaranteed Insurance

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[4] As defined in BNM/RH/PD 032-12 Risk-Based Capital Framework for Insurers Appendix II section 4.
[5] Aggregated base value for both asset and liability from Ordinary Life Participating Fund, Ordinary Life Non-Participating Fund, Annuity Funds as well as Investment-Linked Operating Fund forms only.

A2/L2		Liabilities as defined in *BNM/RH/PD 032-12 Risk-Based Capital Framework for Insurers Appendix VII*.
Both asset and liability valued at base value interest rate/yield - 100bps		
		The stress factor is ±100bps on interest rate/yield.
		The data includes Ordinary Life Participating Fund, Ordinary Life Non-Participating Fund, Annuity Funds as well as Investment-Linked Operating Fund only.

Investment Yield

5.10   For IY as a sub-indicator of AMR, PIDM proposes minor refinements taking into consideration the industry's views and financial reporting developments as summarised below.

Proposed Refinements	**Rationale for changes**
To replace "total assets" with "total investment assets" in the denominator.	IY measures the quality of investment assets. Therefore, the yield should be measured against income generating assets instead of total assets, which include non-investment assets.
To include changes in gross FVOCI reserves as part of the net capital gains/losses component.	This change is due to the adoption of the Malaysian Financial Reporting Standard ("MFRS") 9 - *Financial Instruments* - where FVOCI is one of the classifications for investment assets. This change aims to measure investment returns in totality.

Proposed Refinements	Rationale for changes
To replace the MGS 5-year spot rate as the benchmark with the MGS 3-7 year BIR.	The BIR is a more holistic measurement of investment performance as it comprises investment income and capital gains/losses over a period. It is computed by taking the difference between the index value as at the last trading date of December for the two (2) years immediately preceding the current assessment year and the index value as at the last trading date of December for one (1) year immediately preceding the current assessment year, as published by Bond Pricing Agency Malaysia Sdn Bhd ("BPAM").

5.11   The proposed refined IY formula is as follows:

$$IY = \frac{2 \times (I + C)}{\text{Total investment assets (t)} + \text{Total investment assets (t-1)} - (I + C)} \times 100\%$$

Note:
"Total investment assets" include investment properties, loans, investments, foreign assets, cash and deposits as well as other invested assets, which generate returns or are held for speculation in anticipation of future increase in value.
I = Investment income
C = Capital gains or losses including changes in gross AFS/FVOCI reserves

5.12   The illustration for the AMR computation is set out below.

Illustration for AMR computation:

Insurance Company XYZ recorded the results below for calendar year 2017, with an IY of 5%. Based on information from BPAM, the BIR calculation is as follows:

[5600] Bond Index Performance

Index	TR BPAM All Bond Index
Principle	Conventional
Aggregate	Government Related
Index Type	Government
Tenure	3Y ~ 7Y

The table above is extracted from BPAM.

Bond Index as of 30.12.2016 = 147.551

Bond Index as of 29.12.2017 = 154.273

$$\text{BIR 2017} = \frac{(154.273 - 147.551)}{147.551} * 100$$

$$= 4.56\% \text{ (rounded to 2 decimals)}$$

The ALDM computation:

Scenario	Asset Value (RM mil)	Liability Value (RM mil)
Base value	100	80
Interest rate/yield +100bps	96	75
Interest rate/yield - 100bps	104	85

$$\text{ADD} = \frac{(104 - 96)}{(2*100*0.01)} * 100$$
$$= \text{RM 400 mil}$$
$$\text{LDD} = \frac{(85 - 75)}{(2*80*0.01)} * 80$$
$$= \text{RM 500 mil}$$
$$\textbf{ALDM} = \textbf{RM 400 mil/RM 500 mil} * 100$$
$$= \textbf{80\%}$$

With a score of 80% for ALDM and an IY of 5%, Insurance Company XYZ's AMR indicator is placed at Score range 2 which is 14%.

	100% ≤ ALDM < 200%	80% ≤ ALDM < 100% OR 200% ≤ ALDM < 300%	ALDM < 80% OR ALDM ≥ 300%
IY ≥ 4.56%	Score 1	Score 2	Score 4
IY < 4.56%	Score 2	Score 3	Score 4

Score Range	Score
Score 1	20
Score 2	14
Score 3	7
Score 4	0

Feedback 1:

1. Please provide feedback on the following:

    a) Does the AMR indicator provide a more holistic assessment of insurance companies' risk profile?

    b) Is the proposed measurement approach i.e., the matrix and score range for the AMR indicator appropriate?

    c) What are your views on the proposed refinements to the IY indicator?

2. The proposed AMR indicator is assessed at the total life insurance fund level and combines both ALDM and IY. PIDM seeks feedback on the following:

    a) The proposed AMR indicator at the aggregate level does not address the non-fungibility between the various life insurance funds. What are your views and proposals to address this issue?

    b) Does your company compute ALDM and IY at the life insurance sub-fund level? Please elaborate.

    c) Is there any standardised approach across the industry to compute ALDM and IY at the life insurance sub-fund level? If yes, please explain.

    d) What are the potential challenges if the AMR indicator is computed at the life insurance sub-fund level and how should these challenges be addressed?

    e) If the AMR indicator is computed at the life insurance sub-fund level, how best can the overall company level assessment be made?

3. PIDM also seeks your views on the hedging of interest rate volatility via derivatives:

    a) Does your company use derivatives to manage interest rate risk? If yes, what is the percentage (%) of its aggregate notional amount against its total investment assets (as defined in paragraph 5.10 of this CP)?

    b) What are the implications on hedging instruments to your company, arising from MFRS 9?

c) If your company currently does not undertake derivative transactions, would your company be considering the use of derivatives for hedging purpose in the future?

d) Should PIDM take into consideration the hedging of interest rate volatility via derivatives as part of the AMR indicator or any other indicator? Please explain.

6.0 MEAN-ADJUSTED RETURN VOLATILITY

6.1 MARV continues to be an important criterion to monitor volatility in earnings trend.

6.2 The primary objective of MARV is to assess the downside risk of operating profits arising from business operations. PIDM proposes that changes in gross AFS reserves be excluded from the MARV formula as reserves movement is not part of operating profit.

6.3 Further clarification will be provided in the DLS Framework on the "other income/outgo" component. This component should only include income or outgo arising from business operations.

6.4 The proposed refined MARV indicator is set out below:

$$\text{MARV} = \frac{\text{Semi standard deviation of operating profit or loss over 3 years}}{\text{Mean operating profit or loss over 3 years}}$$

Note:
Operating profit or loss refers to the profit or loss arising from day-to-day business operations, which includes earned premium income, net claims incurred, management expenses, net commission, net investment income, net bad or doubtful debts/bad debts recovery, net capital gains or losses **(excluding changes in gross AFS reserves)** and other income or outgo **(excluding any income or expenses arising from the recognition of deferred taxation or any income or expenses not arising from day-to-day business operations for example, Day-1 adjustments due to the adoption of new accounting standards).**

Feedback 2:
PIDM seeks feedback on the proposed refined MARV formula.

PART C: FUTURE ENHANCEMENTS

7.0   PROFITABILITY MEASURE FOR LIFE INSURANCE BUSINESS

7.1   Profitability is an important measure of an insurance company's sustainability. Under the present DLS Framework, IY is one of the indicator that assesses the earnings performance of a life insurance business. For future enhancements, PIDM would like to explore the possibility of introducing a profitability indicator, in particular, based on the surplus arising for life insurance business. This will be facilitated by BNM's revised reporting manual on the sources of surplus arising for life insurance business issued in July 2018, which would enhance the consistency in reporting.

> **Feedback 3:**
> PIDM seeks feedback on the potential approaches of measuring profitability based on surplus arising for life insurance business. Please provide recommendations and explain.

8.0   BUSINESS CONCENTRATION RATIO

8.1   Business Concentration Ratio measures the proportion of single premium policies against the regular premiums business to promote an appropriate composition of the two businesses to generate continuous future stream of income. Part of the component in the single premium business is the Yearly Renewable Term ("YRT") products such as medical policies. The premium for these products are payable yearly for one-year coverage. Although YRT is renewable every year, different YRT products may exhibit some characteristics of single or regular premium products.

8.2   Presently, YRT premiums is classified as single premium business and we understand that BNM is enhancing the reporting forms to declassify YRT separately from single and regular premium. PIDM proposes to exclude the YRT product from the single premium component in the Business Concentration Ratio once BNM's revised reporting form is effective.

> **Feedback 4:**
> PIDM would like to seek for your feedback and comments on the above proposal.

Perbadanan Insurans Deposit Malaysia
3 May 2019

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APPENDIX I: PROPOSED ENHANCED DLS FRAMEWORK

Criteria Approach	**Quantitative**	**Qualitative**
Weightages	**60%**	**40%**

Criteria Components

Quantitative:

	All Insurance Companies	
Capital	Free Capital Index ("FCI")	
	General Insurance Business	Life Insurance Business
Operational & Sustainability Measures	• Gross Premium Growth Rate (20%) • Business Diversification Ratio (25%) • Receivable Ratio (15%) • Combined Ratio (25%) • **Mean-Adjusted Return Volatility (15%)**	• New Business Growth Rate (15%) • Business Concentration Ratio (25%) • Business Conservation Ratio (25%) • **Asset Matching Return (20%)** • Expense Ratio (15%)

Qualitative:

All Insurance Companies
- BNM Supervisory Rating (Composite Risk Rating)
- Other Information

Scoring Approach

Quantitative — **Matrix Approach**:
The combined score of the capital measure and the operational and sustainability measure, will determine the position of an insurance company in the quantitative criteria matrix. The position of the insurance company in the matrix would determine the quantitative score of DLS Framework which carries a maximum score of 60%.

Qualitative:
The Supervisory Rating holds a maximum score of 35%, while the remaining score of 5% is assigned to 'Other Information'.