

ENGLISH TRANSLATION

ATTACHMENT

Decision of the Board of Directors of
PT Kliring Penjaminan Efek Indonesia

Number : KEP-104/DIR/KPEI/1225

Date : 29 December 2025

INITIAL MARGIN, VARIATION MARGIN, AND DEFAULT FUND

CONTRIBUTION ADMINISTRATION PROVISIONS

I. Scope of Administration

I.1. In order to ensure the smoothness and security of the PUVA Transaction Clearing and Settlement, KPEI, in its function and role as CCP, administers Initial Margin, Variation Margin, and Default Fund Contribution.

I.2. The administration as referred to in provision Number I.1. shall include:

I.2.1. Deposit fulfillment and withdrawal management of Initial Margin, Variation Margin, and Default Fund Contribution.

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I.2.2. Recording of Initial Margin, Variation Margin, and Default Fund Contribution ownership.

I.2.3. Management of coupon distribution and payment of Initial Margin principal redemption proceeds in the form of securities.

I.2.4. Deposit return management.

I.2.5. Investment management of Initial Margin and Default Fund Contribution.

I.2.6. PUVA Transaction risk management.

II. Deposit Fulfillment and Withdrawal Management of Initial Margin, Variation Margin and Default Fund Contribution

II.1. Deposit fulfillment shall be carried out in order to fulfill:

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II.1.1. Initial Margin;

II.1.2. Variation Margin; and

II.1.3. Default Fund Contribution.

II.2. The CCP Member must fulfill the deposit as referred to in Number II.1. with the following provisions:

II.2.1. Deposit that can be accepted by KPEI as fulfillment of the Initial Margin are funds and/or securities.

II.2.2. Deposit that can be accepted by KPEI as fulfillment of the Variation Margin are funds.

II.2.3. Deposit that can be received by KPEI as fulfillment of the Default Fund Contribution are funds.

II.2.4. Deposit in the form of funds must use Rupiah currency.

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II.2.5. Deposit in the form of securities must use Government Securities (SBN), both in the form of Government Securities and Government Sharia Securities (SBSN), in Rupiah currency and can be traded on the secondary market.

II.2.6. Funds and/or securities that become deposit must have the status of the property of the CCP Member, and be free from all forms of engagements, disputes, and not be burdened with material collateral to other parties.

II.2.7. Deposit shall be submitted to the Collateral Account, where the source may originate from:

II.2.7.1. The CCP Member Operational Account at BI-RTGS or BI-SSSS;

II.2.7.2. Settlement Account;

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II.2.7.3. Default Fund Account;
and/or

II.2.7.4. Customer's Collateral
Account.

II.3. KPEI has the authority to ensure the sufficiency of the deposit as referred to in provision Number II.1. for the purpose of implementing PUVA Transaction Clearing and Settlement.

II.4. Fulfillment and withdrawal of deposit intended for Initial Margin, Variation Margin, and/or Default Fund Contribution can be carried out by the CCP Member by providing instructions on the system provided by KPEI at 07.00 WIB to 16.00 WIB, namely:

II.4.1. fulfillment instructions or deposit withdrawal instructions intended for Initial Margin or Variation Margin;
and/or

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II.4.2. fulfillment instructions or deposit withdrawal instructions intended for Default Fund Contribution.

II.5. In the event that a CCP Member fulfills and withdraws deposit for Initial Margin, Variation Margin, and/or Default Fund Contribution outside the time specified in provision Number II.4., the CCP Member submits a request for an extension of time for fulfillment and withdrawal of deposit to KPEI via electronic media when the extension of time for fulfillment and withdrawal of deposit for Initial Margin, Variation Margin, and/or Default Fund Contribution will be carried out.

II.6. In the event that a CCP Member submits a request for an extension of time for fulfillment and withdrawal of deposit to KPEI as referred to in provision Number II.5., the CCP Member will be charged a fee as referred to in the Rule Book on Fee Imposition Provisions.

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II.7. In the event of a deposit in the form of securities, KPEI has the right to carry out its own valuation of the deposit fulfillment based on the current value through the application of haircut and Concentration Limit.

II.8. The current value as referred to in provision Number II.7. refers to the price published by the securities pricing agency determined by KPEI.

II.9. In the event that the current value of the securities pricing agency as referred to in provision Number II.8. is not available, then KPEI uses the current value available from the securities pricing agency.

II.10. Haircut as referred to in provision Number II.7. is determined by KPEI from time to time through announcements to the CCP Member.

II.11. Concentration Limit as referred to in provision Number II.7. is carried out to determine the maximum limit on the type and

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value of securities issued by an issuer that can be accepted as deposit.

II.12. The CCP Member must release and hold KPEI harmless from any claims, lawsuits, disputes, or legal disputes arising with any party related to the deposit made to fulfill Initial Margin, Variation Margin and/or Default Fund Contribution.

II.13. The deposit withdrawal as referred to in provision Number II.4. can be carried out based on KPEI validation, with the following provisions as relevant:

II.11.1. deposit is not frozen (free collateral);

II.11.2. Minimum Cash Maintenance remains fulfilled;

II.11.3. obligations under the DHK PUVA on the settlement date have been fulfilled by the CCP Member; or

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II.11.4. there are excess funds from the amount of the required Default Fund Contribution adjustment value as referred to in Number VII.5.8.

III. Recording of Initial Margin, Variation Margin, and Default Fund Contribution Ownership

III.1. KPEI records the Initial Margin, Variation Margin and Default Fund Contribution ownership of each CCP Member in the relevant accounts.

III.2. Initial Margin, Variation Margin, and Default Fund Contribution ownership are recorded separately between one CCP Member and another CCP Member.

III.3. Each CCP Member can only monitor the results of the recording of its own Initial Margin, Variation Margin and Default Fund Contribution through the system provided by KPEI.

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IV. Management of Coupon Distribution and Payment of Principal Redemption Proceeds on Initial Margin in the Form of Securities

IV.1. Management of coupon distribution and payment of principal redemption proceeds of securities intended to fulfill the Initial Margin by KPEI to the CCP Member, as owners of securities, includes the following actions:

IV.1.1. recording and distribution of coupon distribution; and

IV.1.2. payment of principal redemption proceeds of securities.

IV.2. Distribution of coupon distribution and payment of principal redemption proceeds of securities as referred to in Number IV.1. is carried out by KPEI to the CCP Member's Operational Account at BI-RTGS.

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V. Deposit Return Management

V.1. KPEI returns the deposit intended as fulfillment of Initial Margin, Variation Margin, and Default Fund Contribution to the CCP Member in the event that:

V.1.1. there is an order from the competent authority or institution; or

V.1.2. there is a revocation of membership status of the CCP Member.

V.2. After the deposit has been returned to the CCP Member as proven in a document determined by KPEI, KPEI has no legal responsibility or legal obligation whatsoever for the deposit that has been returned.

VI. Investment Management of Initial Margin and Default Fund Contribution

VI.1. KPEI can invest in Initial Margin and Default Fund Contribution, taking into account

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market risk, liquidity risk, and credit risk.

VI.2. Investment in Initial Margin are only made in instruments in the form of funds.

VI.3. Investment in Initial Margin and Default Fund Contribution can be made by KPEI in accordance with the investment policy prepared by the CCP Clearing and Risk Management Committee.

VI.4. KPEI imposes a fee quotation on investment returns, the amount of which is regulated based on the Rule Book on Fee Imposition Provisions.

VI.5. Profits from the investment as referred to in provision Number VI.1 will be given to the CCP Member after fees have been deducted based on the Rule Book on Fee Imposition Provisions.

VII. PUVA Transaction Risk Management

VII.1. Trading Limit

VII.1.1. Trading Limit aims to ensure transaction limit that can be carried out by the CCP Member.

VII.1.2. KPEI calculates and determines the Trading Limit for each CCP Member based on an assessment of the total amount of deposit in the Collateral Account and the exposure of the relevant CCP Member.

VII.1.3. KPEI conveys the results of Trading Limit calculation to the CCP Member through the system provided by KPEI.

VII.1.4. The CCP Member registers for the PUVA Initial Contract by taking into account the Trading Limit determined by KPEI. If based on

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KPEI's calculation, the CCP Member does not have sufficient Trading Limit as determined by KPEI, then KPEI may refuse the PUVA Initial Contract Registration by the CCP Member.

VII.1.5. The CCP Members may re-register the PUVA Initial Contract if they have submitted additional deposit and the Trading Limit is declared sufficient by KPEI.

VII.2. Initial Margin

VII.2.1. Initial Margin is used by KPEI in order to mitigate potential losses and/or manage losses incurred by the CCP Member if the CCP Member is in the Event of Default.

VII.2.2. KPEI may impose additional Initial Margin based on KPEI's risk assessment.

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VII.2.3. The Initial Margin amount is calculated by KPEI based on the maximum potential loss by referring to historical data through the use of the VaR (Historical Value at Risk) method at a certain level of confidence for each PUVA Transaction product as referred to in the Rule Book on PUVA Transaction Clearing and Settlement Provisions.

VII.2.4. The CCP Member must maintain a certain value or portion of the Initial Margin in the form of funds (Minimum Cash Maintenance) of at least:

VII.2.4.1. 50% (fifty percent) of the total Initial Margin; or

VII.2.4.2. IDR1,000,000,000 (one billion rupiah), whichever is greater.

VII.3. Variation Margin

VII.3.1. Variation Margin is fulfilled by the CCP Member for exposure resulting from changes in market prices.

VII.3.2. The Variation Margin amount is calculated based on the change in the current Mark-to-Market value to the Mark-to-Market value on the previous PUVA Clearing Day.

VII.3.3. Determination of Mark-to-Market as referred to in provision Number VII.3.2. is carried out by calculating the current value of the transaction position of each CCP Member based on the current market data.

VII.3.4. Based on the calculation as referred to in provision Number VII.3.2., KPEI determines the

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Variation Margin value for each
PUVA Transaction product.

VII.3.5. The Variation Margin value is
determined by KPEI at least 1
(one) time at the end of the
trading time on the PUVA Clearing
Day.

VII.4. Margin Call

VII.4.1. If there is any CCP Member who has
exposure greater than the deposit
value in the Collateral Account,
then KPEI will submit Margin Call
to the CCP Member concerned.

VII.4.2. The CCP Member who receives Margin
Call must submit an additional
deposit, such that the deposit
value becomes equal to or greater
than the exposure of the CCP
Member.

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VII.4.3. Submission of Margin Call to the CCP Member is carried out in the following manner:

VII.4.3.1. Intraday Margin Call is submitted by KPEI at any time during the trading time on the PUVA Clearing Day; and

VII.4.3.2. Interday Margin Call is delivered by KPEI at the same time as the DHK PUVA is issued.

VII.4.4. The CCP Member who receives Margin Call must settle the Margin Call on the PUVA Clearing Day, with the following provisions:

VII.4.4.1. Intraday Margin Call must be fulfilled no later than the end of the trading time on

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the PUVA Clearing Day;
and

VII.4.4.2. Interday Margin Call must be fulfilled 1 (one) PUVA Clearing Day after the day on which the interday Margin Call is submitted no later than 12.00 WIB.

VII.4.5. In the event that the CCP Member cannot fulfill the Margin Call, then:

VII.4.5.1. If the intraday Margin Call is not fulfilled during the trading time on the PUVA Clearing Day, the CCP Member cannot register the PUVA Initial Contract until the

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intraday Margin Call
is fulfilled.

VII.4.5.2. If the specified time
limit has passed as
referred to in
provision Number
VII.4.4.1., then the
intraday Margin Call
will become interday
Margin Call.

VII.4.5.3. If the interday Margin
Call is not fulfilled
by the specified time
limit, the CCP Member
will be declared in
the Event of Default
as regulated in the
Rule Book on Event of
Default Management
Provisions.

VII.5. Stress Test, Default Fund, and Default Fund Contribution

VII.5.1. Stress testing is carried out by calculating the Mark-to-Market value for each CCP Member portfolio in a market stress scenario determined by KPEI.

VII.5.2. The market stress scenario used can be in the form of:

VII.5.2.1. historical scenario, which refers to market stress events that have occurred in the past; or

VII.5.2.2. hypothetical scenario, which refers to KPEI's assessment.

VII.5.3. KPEI has the authority to determine the amount of Default Fund and Default Fund Contribution

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in carrying out risk management functions.

VII.5.4. Default Fund Contribution can be used by KPEI in order to manage losses of the CCP Member if the CCP Member is in the Event of Default as regulated in the Rule Book on Event of Default Management Provisions.

VII.5.5. KPEI determines the amount of Default Fund and Default Fund Contribution using the following procedure:

VII.5.5.1. KPEI establishes, maintains, and manages Default Fund to overcome losses that are greater than the amount of the Initial Margin that has been provided by the CCP Member in the Event of

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Default from the CCP Member.

VII.5.5.2. Default Fund established by KPEI is calculated based on the assumption of managing an Event of Default by at least one CCP Member who has the largest exposure to conditions arising from the scenarios as referred to in Number VII.5.2.

VII.5.6. Default Fund Contribution from each CCP Member is calculated using the following formula:

$$DFC_i = MAX (DFCMin, DFCDyn)$$

Description

- DFC: Default Fund Contribution.

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- i : the relevant CCP Member.
- DFC_i : Default Fund Contribution from the relevant CCP Member.
- MAX : maximum value of DFC_{Min} and DFC_{Dyn} .
- DFC_{Min} : minimum Default Fund Contribution.
- DFC_{Dyn} : dynamic Default Fund Contribution.

The formula for the amount of the Default Fund formed is:

$$DF = \sum_i DFC_i$$

Description

- DF : Default Fund established by KPEI.
- $\sum_i DFC_i$: The sum of all Default Fund Contributions from all CCP Members.

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VII.5.7. KPEI determines a minimum Default Fund Contribution/DFCMin of IDR5,000,000,000 (five billion rupiah).

VII.5.8. KPEI determines a dynamic Default Fund Contribution/DFCDyn as the proportion between the largest maximum loss of the CCP Member in relation to the largest total maximum loss of all CCP Members against the Default Fund.

VIII. Annex

The Annexes to the Rule Book on the Administration of Initial Margin, Variation Margin, and Default Fund Contribution are complementary in nature and explain each other in accordance with their functions and constitute an inseparable part of the Rule Book on Initial Margin, Variation Margin, and Default Fund Contribution Administration Provisions, which consists of:

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VIII.1. Annex A - Implementing Provisions of
the Rule Book on Initial Margin,
Variation Margin, and Default Fund
Contribution Administration
Provisions.

ANNEX A

**IMPLEMENTING PROVISIONS OF THE RULE BOOK ON INITIAL MARGIN, VARIATION MARGIN, AND DEFAULT
FUND CONTRIBUTION ADMINISTRATION PROVISIONS**

1. Trading Limit

1.1 The CCP Member Trading Limit Hierarchy and Aggregation

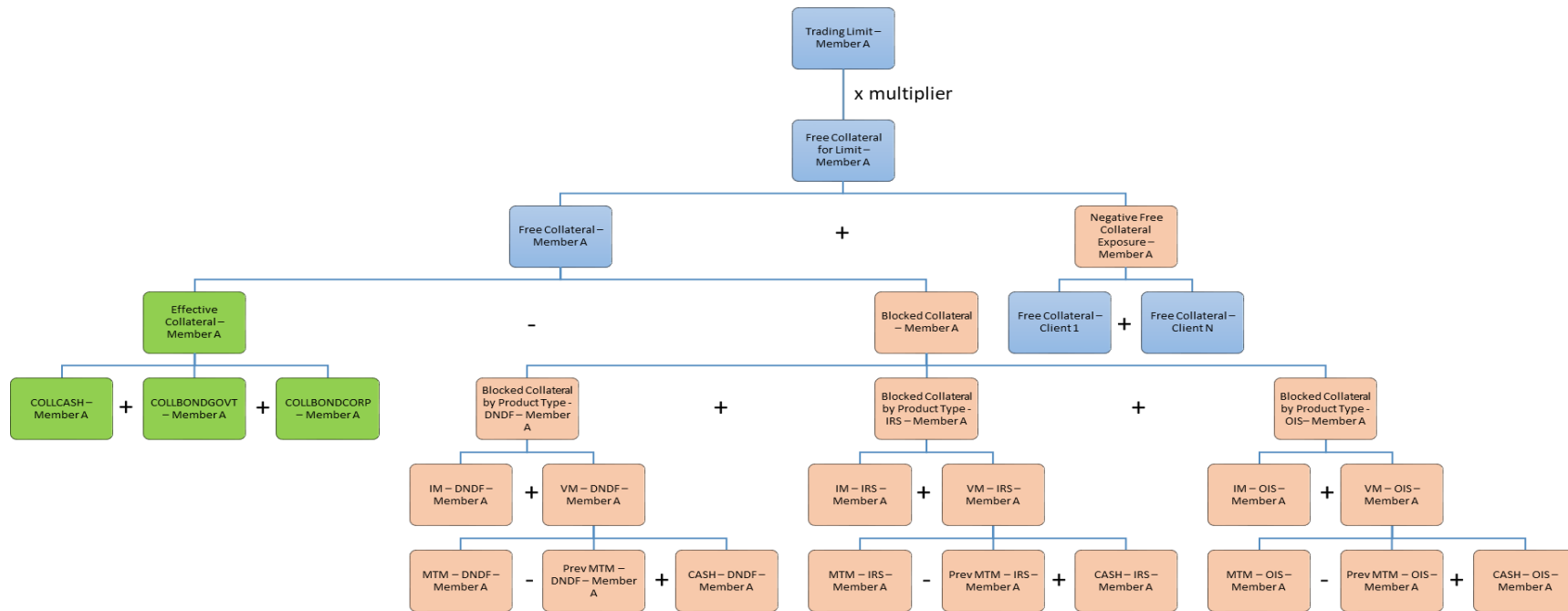


Figure 1. Trading Limit Hierarchy and Aggregation - Member

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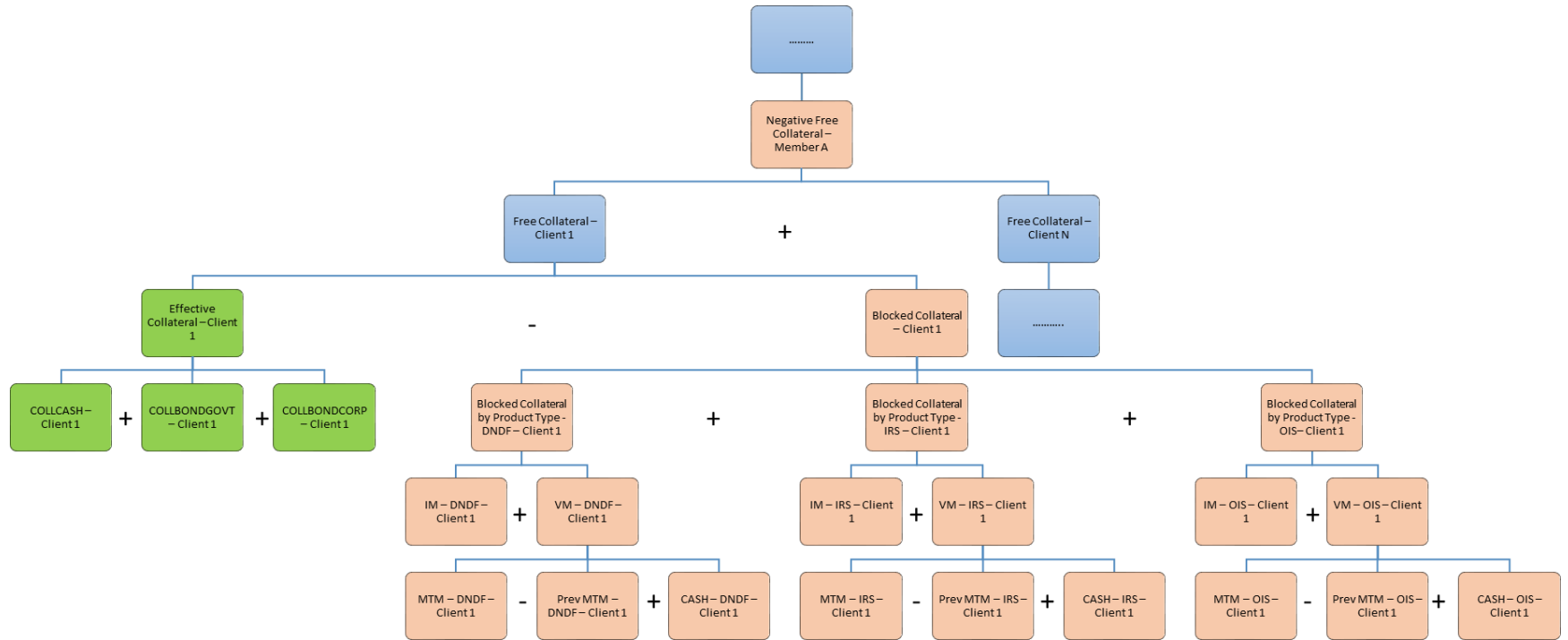


Figure 3. Free Collateral Client Hierarchy and Aggregation under Negative Free Collateral Exposure in the Trading Limit Member Hierarchy

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1.2 Trading Limit Sufficiency Validation

Trading Limit sufficiency validation shall be carried out upon:

1. receipt of initial contract clearing to ensure that the CCP Member has sufficient Trading Limit, amounting to a certain percentage of the transaction notional; and
2. after the initial contract is validated and novated, the Risk Management System (RMS) recalculates the portfolio exposure to produce the current Trading Limit,

Illustration:

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| Time | Trade | Notional | Trading Limit Requirements | Remaining Trading Limit | Status |
|-------|--|-----------------|----------------------------|-------------------------|----------|
| 09.00 | RMS sends Bank ABCD Trading Limit of 8,500,000,000 | | | | |
| 09.05 | IRS-1 | 100,000,000,000 | 2,000,000,000 | 6,500,000,000 | Accepted |
| 09.06 | OIS-1 | 100,000,000,000 | 2,000,000,000 | 4,500,000,000 | Accepted |
| 09.10 | DNDF-1 | 100,000,000,000 | 4,000,000,000 | 500,000,000 | Accepted |
| 09.12 | DNDF-2 | 100,000,000,000 | 4,000,000,000 | -3,500,000,000 | Pending |
| 09.15 | RMS calculates exposure on a portfolio basis and sends an update to Bank ABCD Trading Limit of 5,000,000,000 | | | | |
| 09.15 | DNDF-2 | 100,000,000,000 | 4,000,000,000 | 1,000,000,000 | Accepted |

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| Product | Trading Limit requirement percentage* |
|---------|---------------------------------------|
| IRS | 2% |
| OIS | 2% |
| DNDF | 4% |

TL Validation:

Trading Limit - (Notional Amount * Certain %)

If Notional* certain % > TL Avail → **trade rejected**

If Notional* certain % < TL Avail → **trade accepted**

**the percentages above are merely examples in this simulation.*

2. Initial Margin Parameter

The parameter used in calculating the Initial Margin for PUVA products shall be as follows:

| Parameter | Interest Rates | | FX |
|-----------|----------------|-----|------|
| | IRS | OIS | DNDF |
| | | | |

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| | | | |
|------------------|---------|---------|---------|
| Lookback Period | 2 Years | 2 Years | 2 Years |
| Holding Period | 5 Days | 10 Days | 5 Days |
| Confidence Level | 99% | 99% | 99% |
| Decay Factor | 97% | 97% | 97% |

In developing the PUVA Risk Management System, the above parameter will be configurable in nature such that KPEI can make adjustments according to its risk appetite.

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Buy Transaction Illustration:

| No | Historical Market Data | Adjustment | New Historical Market Data | MTM Buy with New Market Data |
|-----|------------------------|---|----------------------------|------------------------------|
| 1 | 0.37 | Parameters: Return with Holding Period 5 Days Variances, Weighted Adjusted Return, Decay Factor | 0.5333300 | 533,330,000,000.00 |
| 2 | 0.36 | | -0.8336900 | (833,690,000,000.00) |
| 3 | 0.77 | | -0.1425300 | (142,530,000,000.00) |
| 4 | 0.76 | | 0.6691200 | 669,120,000,000.00 |
| 5 | 0.21 | | -0.9100800 | (910,080,000,000.00) |
| 6 | 0.15 | | -0.2194400 | (219,440,000,000.00) |
| 7 | 0.28 | | -0.7274000 | (727,400,000,000.00) |
| 8 | 0.44 | | 0.7805800 | 780,580,000,000.00 |
| 9 | 0.09 | | -0.2128900 | (212,890,000,000.00) |
| 505 | 0.71 | | 0.2682500 | 268,250,000,000.00 |

| Initial Margin | |
|----------------|--------------------|
| Buy | 903,204,900,000.00 |

99% Percentile of MTM Buy

505 Days



Lookback period is 505 days (2 years)

3. Variation Margin

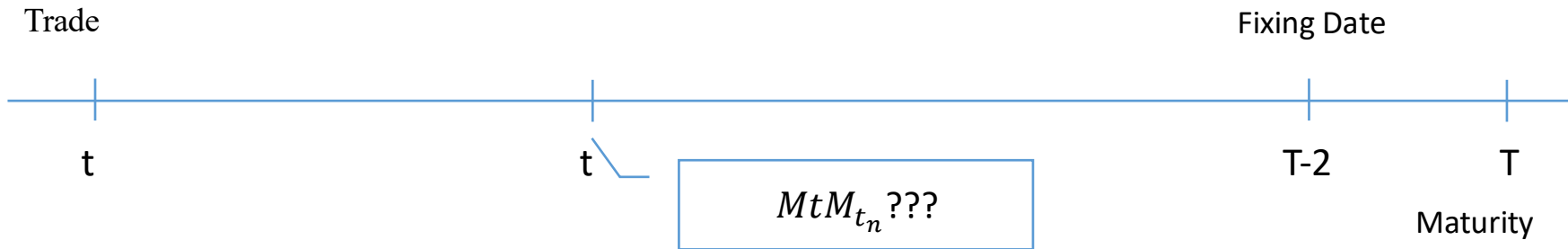
Variation Margin measures the change in gain/loss of a position based on daily mark to market (MTM) changes. Variation Margin must be fulfilled by the CCP Member. Variation Margin is calculated using the following formula:

$$\text{Variation Margin} = \text{Mark to Market}_{t_0} - \text{Mark to Market}_{t-1}$$

The mark to market (MTM) calculation uses a specific method for each PUVA product

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3.1 Mark to Market - DNDF



DNDF Mark to Market at t_n (MtM_{t_n}) where $t_0 < t_n < T$ is the Present Value (PV) of the difference between the DNDF Rate determined at the time of transaction ($DNDF(t_0, T)$) and the theoretical DNDF Rate which is calculated when t_n ($DNDF(t_n, T)$), multiplied by Transaction Notional (N)

$$MtM_{t_n} = N \times (DNDF(t_0, T) - DNDF(t_n, T)) \times Discount Factor_{t_n}^T$$

$$DNDF(t_n, T) = JISDOR_{t_{n-2}} \times (1 + Implied Yield(t_n, T) \times Accrual Fraction)$$

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3.1.1 Mark to Market - DNDF - Implied Yield

1. Implied Yield is the yield/interest rate implied by an instrument's quoted price with settlement in the future (future/forward delivery date)
2. Implied Yield is calculated using the following formula:

$$\text{Implied Yield} = \left(\frac{\text{DNDF or NDF Quotes}}{\text{Spot}} - 1 \right) \times \frac{1}{\text{Accrual Fraction}}$$

3. By knowing the Implied Yield of various tenors, we can determine the DNDF Rate for other Tenors by using interpolation or extrapolation calculations:

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$$y = y_0 + \frac{y_1 - y_0}{x_1 - x_0} (x - x_0)$$

where: y = the desired rate

y_0 = reference rate 1

y_1 = reference rate 2

x_0 = daycount fraction of reference 1

x_1 = daycount fraction of reference 2

x = daycount fraction of the desired rate

Implied Yield Calculation Example:

If it is known on 1 March 2021 that the IDR/USD spot data and DNDF quotations are as follows, the Implied Yield can be calculated:

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| Data | Quotes | Implied Yield |
|--------------|---------------|----------------------|
| IDR/USD Spot | 14,000 | - |
| DNDF 1M | 14,050 | 4.15% |
| DNDF 3M | 14,200 | 5.59% |

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3.1.2 Mark to Market - DNDF - Market Data

1. Data used in DNDF Mark to Market calculations is as follows:

| Data | Formula | Source |
|---------------------|---|-------------------------------------|
| Implied Yield 1W | $\left(\frac{NDF\ 1W\ Quotes}{JISDOR} - 1\right) * \frac{360}{7}$ | Refinitiv → Internal Calculation |
| Implied Yield 1M | $\left(\frac{DNDF\ 1M\ Quotes}{JISDOR} - 1\right) * \frac{360}{30}$ | Refinitiv → Internal Calculation |
| Implied Yield 3M | $\left(\frac{DNDF\ 3M\ Quotes}{JISDOR} - 1\right) * \frac{360}{90}$ | Refinitiv → Internal Calculation |

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| | | |
|---------------------|--|-------------------------------------|
| Implied Yield 6M | $\left(\frac{NDF\ 6M\ Quotes}{JISDOR} - 1\right) * \frac{360}{180}$ | Refinitiv → Internal Calculation |
| Implied Yield 1Y | $\left(\frac{NDF\ 12M\ Quotes}{JISDOR} - 1\right) * \frac{360}{360}$ | Refinitiv → Internal Calculation |
| JISDOR | - | BI |

KPEI uses DNDF data for 1M and 3M tenors, while for 1W, 6M and 1Y tenors, it uses Offshore Non-Deliverable Forward (NDF) quotation data.

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2. Discount Factor used in DNDF Mark to Market calculations

KPEI uses IndONIA and Compounded IndONIA data, as well as Government Bond Yield, to calculate the Discount Factor, as follows:

| Tenor | Data | Source |
|-----------|--------------------------------------|----------------|
| Overnight | INDONIA | BI / Refinitiv |
| 1W | <i>Compounded</i> IndONIA 1W | Refinitiv |
| 1M | <i>Compounded</i> IndONIA 30 days | BI / Refinitiv |
| 3M | <i>Compounded</i> IndONIA 90 days | BI / Refinitiv |

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| | | |
|----------|---------------------------------------|----------------|
| 6M | <i>Compounded</i> IndONIA 180 days | BI / Refinitiv |
| 1Y - 30Y | Government Bond Yield | IBPA |

Compounded IndONIA 1W is calculated using the following formula:

$$\text{Compounded IndONIA between } X \text{ and } Y = \left(\frac{\text{IndONIA Index } Y}{\text{IndONIA Index } X} - 1 \right) \times \frac{360}{d}$$

The calculation result will be rounded to the nearest 5 (five) decimal places (Example: 0.00001%).

Where: Y = end date of the interest period for a 1W tenor
X = start date of the interest period for a 1W tenor

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d = number of calendar days in the interest period
for a 1W tenor

Example of Compounded IndONIA 1W calculation:

a. The start date of the interest period falls on a
business day.

- Compounded IndONIA 1W for 12 June 2025.

IndONIA Index 12 June 2025 = 1.353283511

IndONIA Index 5 June 2025 = 1.351794053

$$\begin{aligned} \text{Compounded IndONIA 1W for 12 June 2025} &= \left(\frac{\text{IndONIA Index}_{12 \text{ Jun } 2025}}{\text{IndONIA Index } X_{5 \text{ Jun } 2025}} - 1 \right) \times \frac{360}{7} \\ &= \left(\frac{1.353283511}{1.351794053} - 1 \right) \times \frac{360}{7} \\ &= 5.66660\% \end{aligned}$$

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- b. The start date of the interest period falls on a holiday
- Compounded IndONIA 1W for 13 June 2025
- IndONIA Index 13 June 2025 = 1.353486523
- IndONIA Index 6 June 2025 = not available (holiday), so it must first be calculated using the latest IndONIA Index published by BI (IndONIA Index 5 June 2025)

IndONIA Index 5 June 2025 = 1.351794053

IndONIA Index 6 June 2025 =

$$\begin{aligned} \text{IndONIA Index 5 June 2025} \times \left(1 + \left(\text{IndONIA 5 June 2025} \times \frac{(6 \text{ June 2025} - 5 \text{ June 2025})}{360} \right) \right) \\ = 1.351794053 \times \left(1 + (5.70270\% \times \frac{1}{360}) \right) \\ = 1.352008188 \end{aligned}$$

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$$\begin{aligned} \text{Compounded IndONIA 1W for 13 June 2025} &= \left(\frac{\text{IndONIA Index}_{13 \text{ Jun } 2025}}{\text{IndONIA Index}_{6 \text{ Jun } 2025}} - 1 \right) \times \frac{360}{7} \\ &= \left(\frac{1.353486523}{1.352008188} - 1 \right) \times \frac{360}{7} \\ &= 5.62339\% \end{aligned}$$

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Mark to Market Illustration:

a. Mark to Market Day One

| MTM Trade Bank_Day 1 | |
|-----------------------------|--------------------------|
| Notional (USD) | 1,000,000.00 |
| Exchange Rate | 15,600.00 |
| Spot Rate | 15,446.00 |
| Implied Yield | 0.0011030 |
| Theo. DNDF/Forward Rate | 15,463.04 |
| BuySell | BUY |
| Delivery Date | 17/09/2024 |
| Receive | 15,463,037,499.69 |
| Pay | 15,600,000,000.00 |
| Discount Factor | 0.998564735 |
| Receive | 15,440,843,936.61 |
| Pay | (15,577,609,859.38) |
| Mark to Market | (136,765,922.769) |

Description:

- Exchange Rate = Contract Rate
- Spot Rate = JISDOR Rate
- Theoretical Forward Rate = Spot Rate x Implied Yield
- Receive = Notional (USD) x Forward Rate
- Pay = Notional (USD) x Exchange Rate
- Mark To Market = Receive Discounted + Pay Discounted

- VM Day One = MTM Day One
- VM Day Two = MTM Day Two - MTM Day One
= (151,026,061.967) - (136,765,922.769)

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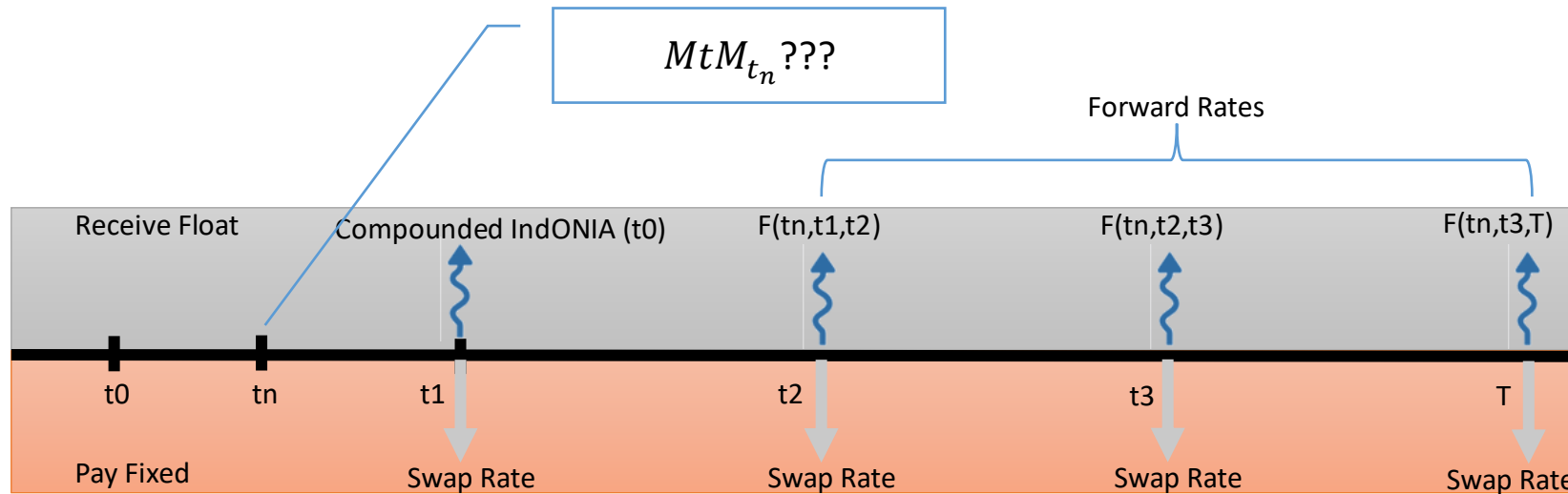
b. Mark to Market Day Two

= (14,260,139.197)

| MTM Trade Bank_Day 2 | |
|-----------------------------|--------------------------|
| Notional (USD) | 1,000,000.00 |
| Exchange Rate | 15,600.00 |
| Spot Rate | 15,447.00 |
| Implied Yield | 0.0001154 |
| Theo. DNDF/Forward Rate | 15,448.78 |
| BuySell | BUY |
| Delivery Date | 17/09/2024 |
| Receive | 15,448,782,583.61 |
| Pay | 15,600,000,000.00 |
| Discount Factor | 0.998734574 |
| Receive | 15,429,233,295.07 |
| Pay | (15,580,259,357.04) |
| Mark to Market | (151,026,061.967) |

ENGLISH TRANSLATION

3.2 Mark to Market - IRS



IRS Mark to Market when t_n (MtM_{t_n}) is the Net Present Value (NPV) of all future cash flow payments:

$$MTM_{t_n} = PV_{Floating Leg} - PV_{Fixed Leg}$$

$$MTM_{t_n} = N \times \sum_{j=1}^n r_j \times Accrual Fraction_j \times Discount Factor_j - N \times Swap Rate \times \sum_{i=1}^n Accrual Fraction_i \times Discount Factor_i$$

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3.2.1 Mark to Market - IRS - Forward Rates Calculation

Forward Rates:

1. Forward Rates are estimates of interest rates that will occur in the future
2. Forward Rates are calculated using the concept of no arbitrage opportunity

Example:

If the spot data is known to be: Compounded IndONIA 6M = 5.32077 % and Compounded IndONIA 1Y = 5.49962 %, then the investment results for 1 year with the Compounded IndONIA 1Y interest rate must produce the same value as the investment for 6 months with the Compounded IndONIA 6M

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interest rate which is rolled over into the Interest rate of Forward Rates 6M. Mathematically (ACT/360):

$$(1 + \textit{Compounded IndONIA 1Y})^{360/360} = (1 + \textit{Compounded IndONIA 6M})^{180/360} \times (1 + \textit{Forward Rates 6M})^{180/360}$$

$$(1 + \textit{Forward Rates 6M})^{180/360} = \frac{(1 + \textit{Compounded IndONIA 1Y})^{360/360}}{(1 + \textit{Compounded IndONIA 6M})^{180/360}}$$

$$\textit{Forward Rates 6M} = \left(\frac{(1 + \textit{Compounded IndONIA 1Y})^{360/360}}{(1 + \textit{Compounded IndONIA 6M})^{180/360}} \right)^{360/180} - 1$$

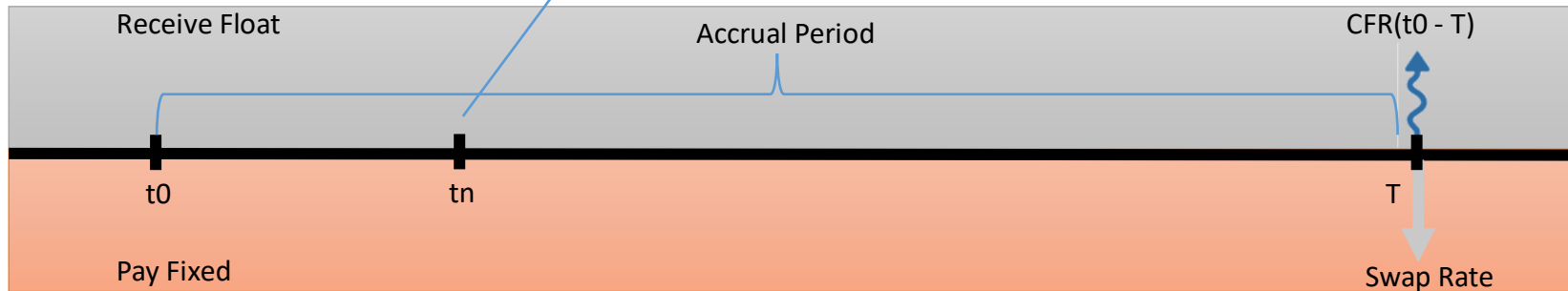
$$\textit{Forward Rates 6M} = \left(\frac{DF(6M)}{DF(1Y)} \right)^{360/180} - 1$$

$$= 5.6788\% \quad \rightarrow \quad \textit{Forward Rate can be bootstrapped from the Discount Curve}$$

ENGLISH TRANSLATION

3.3 Mark to Market - OIS

$MtM_{t_n} ???$



Mark to Market OIS when t_n (MtM_{t_n}) is the Net Present Value (NPV) of all cash flow payments in the future:

$$MTM_{t_n} = PV_{Floating Leg} - PV_{Fixed Leg}$$

$$MTM_{t_n} = (N * CFR_{t_0,t_n} * Accrual Fraction_{t_0,T} * Discount Factor_{t_n,T}) - (N * Swap Rate * Accrual Fraction_{t_0,T} * Discount Factor_{t_n,T})$$

$$MTM_{t_n} = N * Accrual Fraction_{t_0,T} * Discount Factor_{t_n,T} (CFR_{t_0,t_n} - Swap Rate)$$

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3.4 Mark to Market - IRS & OIS - Market Data

1. Yield Curve used in MtM IRS & OIS calculation is as follows:

| Tenor | Data | Source |
|----------|-----------------------|----------------|
| 1D | INDONIA | BI / Refinitiv |
| 1W | Compounded IndONIA 1W | Refinitiv |
| 1M | Compounded IndONIA 1M | BI / Refinitiv |
| 3M | Compounded IndONIA 3M | BI / Refinitiv |
| 6M | Compounded IndONIA 6M | BI / Refinitiv |
| 1Y | Compounded IndONIA 1Y | BI / Refinitiv |
| 2Y - 30Y | Government Bond Yield | IBPA |

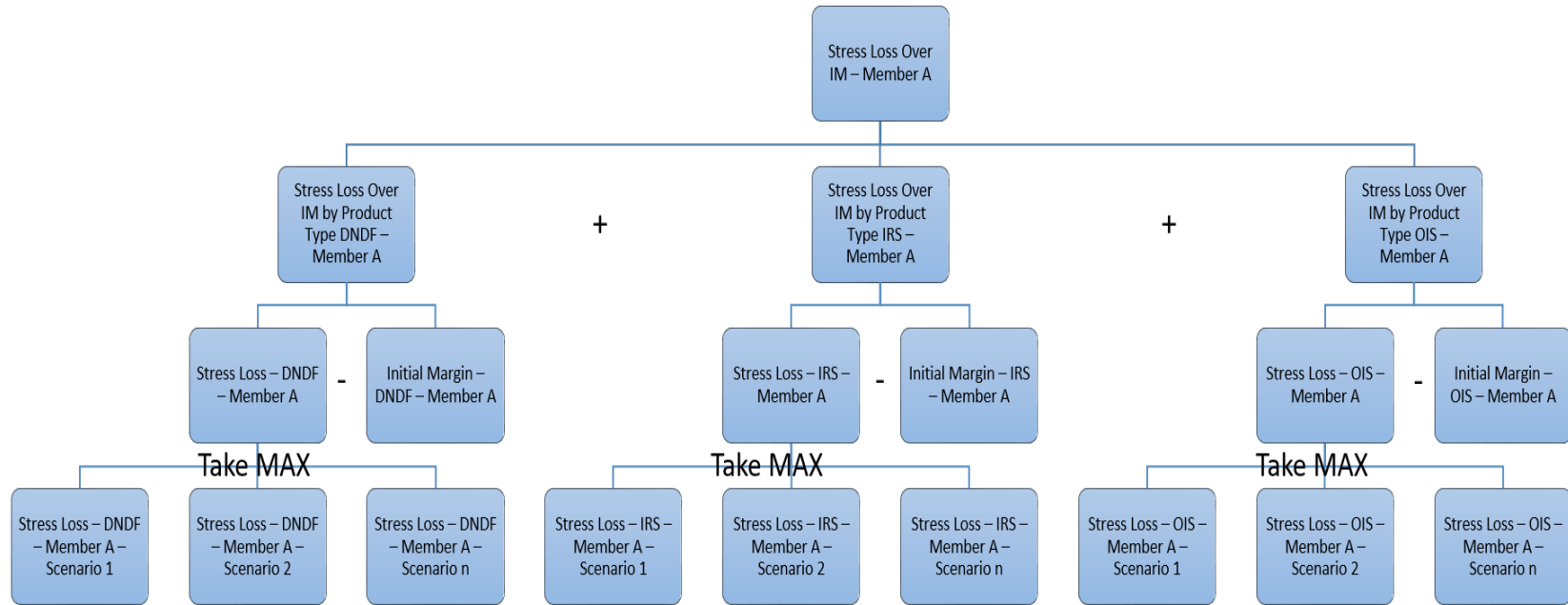
4. Stress Test and Default Fund Sizing

4.1 Stress Loss Over Initial Margin

1. Stress Loss Over Initial Margin is a calculation of the potential exposure of a portfolio in a market stress scenario
2. Calculation of Stress Loss and calculation of Initial Margin in the calculation of Stress Loss Over Initial Margin is carried out by first establishing a portfolio consisting of Member and Client positions
3. Calculation of Stress Loss Over Initial Margin is carried out daily

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4.2 Stress Loss Over Initial Margin - Hierarchy & Aggregation



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Illustration of Stress Loss Over IM for Member A on Day 1:

| | Stress Loss | Stress Loss Max | Initial Margin | Stress Loss Over IM |
|------------|---------------|-----------------|----------------|---------------------|
| Scenario 1 | 6,000,000,000 | 6,000,000,000 | 1,000,000,000 | 5,000,000,000 |
| Scenario 2 | 3,000,000,000 | | | |
| Scenario 3 | 2,000,000,000 | | | |
| Scenario 4 | 1,500,000,000 | | | |
| Scenario 5 | 2,500,000,000 | | | |
| Scenario 6 | 3,500,000,000 | | | |
| Scenario 7 | 4,000,000,000 | | | |
| Scenario 8 | 4,500,000,000 | | | |

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4.3 Default Fund Sizing

Determination of Default Fund requirements is carried out periodically, namely every 3 (three) months, based on aggregated daily Stress Loss Over Initial Margin calculation data.

The following is an illustration of a simulation of the Default Fund Contribution calculation:

1. First, KPEI will calculate the Default Fund Size based on at least 1 (one) largest CCP Member in a certain period

| | | | | | |
|--|-------------------------|-------------------------|-------------------------|-------------------------|--|
| | Stress Loss Over | Stress Loss Over | Stress Loss Over | Stress Loss Over | |
| | IM Member 1 | IM Member 2 | IM Member 3 | IM Member N | |

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| | | | | | |
|-----------------|---------------|---------------|----------------|--------------------------|----------------|
| Day 1 | 5,000,000,000 | 7,000,000,000 | 6,500,000,000 | 1,000,000,000 | |
| Day 2 | 5,500,000,000 | 6,500,000,000 | 7,500,000,000 | 8,000,000,000 | |
| Day 3 | 4,500,000,000 | 3,000,000,000 | 14,000,000,000 | 600,000,000 | |
| Day 4 | 5,000,000,000 | 6,000,000,000 | 2,000,000,000 | 8,000,000,000 | |
| . | . | . | . | . | |
| . | . | . | . | . | |
| . | . | . | . | . | |
| . | . | . | . | . | |
| Day N | 6,000,000,000 | 7,000,000,000 | 8,000,000,000 | 4,000,000,000 | |
| MAX Over | | | | | |
| Day 1 - | 6,000,000,000 | 7,000,000,000 | 14,000,000,000 | 8,000,000,000 | |
| Day N | | | | | |
| | | | | SLOIM #1 | 14,000,000,000 |
| | | | | Default Fund Size | 14,000,000,000 |

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*SLOIM = Stress Loss Over IM (Initial Margin)

2. Next, KPEI will calculate the amount of Default Fund Contribution for each CCP Member as explained in the next section.

4.4 Default Fund Contribution

Determination of Default Fund Contributions for each CCP Member is carried out proportionally based on the proportion of the Maximum Stress Loss Over Initial Margin of each CCP Member during the calculation period to the Default Fund Size of all CCP Members during the calculation period.

| | Stress Loss Over Initial Margin | Total Stress Loss Over Initial Margin | Proportion | Default Fund Size | Minimum Default Fund Contribution | Proportional Default Fund Contribution | Default Fund Contribution |
|--|--|--|-------------------|------------------------------|--|---|--------------------------------------|
|--|--|--|-------------------|------------------------------|--|---|--------------------------------------|

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| | Max @ Day 1 - Day N | | | | | | |
|----------|------------------------|----------------|-----------------|----------------|---------------|-----------------|------------------|
| | (a) | (b) = SUM (a) | (c) = (a) / (b) | (d) | (e) | (f) = (c) x (d) | (g) = MAX (e, f) |
| Member 1 | 6,000,000,000 | 35,000,000,000 | 17% | 14,000,000,000 | 5,000,000,000 | 2,400,000,000 | 5,000,000,000 |
| Member 2 | 7,000,000,000 | | 20% | | | 2,800,000,000 | 5,000,000,000 |
| Member 3 | 14,000,000,000 | | 40% | | | 5,600,000,000 | 5,600,000,000 |
| Member N | 8,000,000,000 | | 23% | | | 3,200,000,000 | 5,000,000,000 |