Singapore Gated Participating (“Par”) Products

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0.1	06 Mar 2019	Initial Version
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This IFRS17 Working Paper aims to facilitate discussion among actuaries and other stakeholders to capture the range of opinions on the application of IFRS17 in the Singapore context and is not meant to serve as mandatory practice notes.

Any interpretation of IFRS17 set out in this Paper represents a plausible treatment given the text of IFRS17. However, it shall neither be construed as the only possible treatment nor the agreed interpretation for Singapore insurers. Users of this Working Paper shall be mindful that differences in the exact fact pattern and operating context facing each insurer may drive different interpretations. Users shall also be mindful that for the same fact pattern and operating context, there is scope for the substance of same transaction to be articulated differently depending on how the transaction is analysed. (For example, in substance, cash flows from a call option with strike price $X on an asset is equivalent to the combined cash flow from the underlying asset and a put option with strike price $X on the asset, less cash of $X.) Differences in articulation can give rise to a range of plausible treatments. An insurer remains responsible for justifying its choice of treatment after discussion with its auditor. Opinions expressed in the working papers are not representative of that of the Singapore Actuarial Society.

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1. Background and Introduction of Singapore Gated Par

Singapore operates in a gated Par environment where in order to safeguard policyholders' interest, insurance regulations cap the amount distributable to shareholders from profits of the par fund at maximum 1/9th of the value of bonuses allocated to par policyholders (which is usually referred as **Shareholder Transfer**). This helps to align shareholders' interest closer to that of policyholders and prevent excessive distribution to shareholders. Singapore Gated Par is strictly ring-fenced under the regulation and shareholder can only get maximum $1/9^{th}$ of the value of bonus declared to policyholder as earning; any amount of surplus can only be sitting in Par fund, and not transferred to shareholder fund as shareholder's earning if there is no bonus declared to policyholder.

Proper exercise of discretion is expected when allocating bonus to policyholders, taking into account the need to ensure fairness and equity among different classes and generations of policyholders as well as to maintain the participating fund's overall solvency. In addition, there is a need to ensure that returns to policyholders are maximized while not exposing the fund to excessive risks.

The types of risks faced by the Participating Fund which are passed back to policyholders and shareholders in the proportion of 90:10 (maximum to shareholders) include the following:

- Investment
- Expenses
- Distribution costs
- Mortality
- Dread disease
- Other morbidity risks
- Persistency
- Reinsurance
- Business risks, namely
    i. Provision of guarantees to policyholders
    ii. Demographic changes
    iii. Marketing practices
    iv. Meeting policyholders' reasonable expectations
    v. Regulatory changes
    vi. Catastrophic events and epidemic diseases

The Monetary Authority of Singapore (MAS) issued MAS Notice 320 on Participating Fund Management with the aim to achieve higher internal governance standards and to ensure greater consistency in participating fund management over the term of par policies and among different insurers operating in Singapore. (For details of MAS Notice 320, please refer to Section 6 Appendix.)

The Shareholders' Profit and Responsibilities are detailed below:

- Allocation of profit to shareholders
  Under the allocation rule by the MAS, shareholders can receive up to 10% share of the profits distributable from the participating fund, while the rest are allocated to policyholders. For any year, the profits distributable to policyholders are the cash bonus paid out during that year, terminal bonuses paid out during that year and the cost of reversionary bonuses declared calculated on Minimum Condition Liability (MCL) basis. For that particular year, the profits distributable to shareholders are maximum 1/9 of the amount allocated to policyholders.

The shareholders' profits are credited to a surplus account within the participating fund. Shareholders may withdraw the balance in the surplus account if it is not used to meet capital requirements. This account will also keep track of any future capital support that shareholders may provide to satisfy the fund's capital needs.

- Fund solvency requirements
  Under local RBC requirements, in the event that the market value of its assets falls short of its MCL, shareholders must provide capital support to the participating fund to meet the shortfall. This is achieved by deducting from the surplus account an amount equal to the shortfall. Should there be insufficient balance in the surplus account for such a deduction, a top up of the surplus account must be made from the shareholders' fund through a transfer of assets to the participating fund. The shareholders can transfer back 100% of any capital residing in the surplus account once the capital is no longer required to meet any solvency shortfall.

In addition, Singapore Actuarial Society issued Standard of Actuarial Practice SAS SAP L01 – Appointed Actuaries (Section 5 – Participating Fund Allocation Investigation) and Standard of Actuarial Practice SAS SAP L03 for Appointed Actuaries on Participating Fund Management for Life Insurance Business. (For details of these Standards, please refer to Section 6 Appendix.)

2. IFRS17 Standards

This paper focuses on the various topics below for Singapore Gated Par. For other topics that affect Singapore Gated Par (e.g. non-directly attributable expense and reinsurance), please refer to the respective SAS papers for more details.

No.	Sections	Relevant Paragraphs
1	VFA eligibility	IFRS17 Standard B74, B77, B101 - B108 (Please also refer to SAS paper "Measurement Model")
2	Risk Adjustment	IFRS17 Standard 37, 119, B86-89, B91-92
3	Contractual Service Margin	IFRS17 Standard 38, 40, 41, 45, B110 - B118
4	Coverage Unit	IFRS17 Standard 28, B119, BC280, BC282 TRG Paper a05 (May 2018) 18-20, 32-40, C8, C9
5	Cost of Guarantee	IFRS17 Standard 33, B39, B44, B76, BC152 TRG Paper a07 (May 2018) S38
6	Level of Aggregation & Mutualisation (Risk Sharing)	IFRS17 Standard 14-24, 33, B68, B70, B71 TRG Paper a10 (September 2018)
7	Discount Rate & Bonus	IFRS17 Standard 33, 36, B72-B85, BC20, BC185-BC205
8	Surplus Account	*Not specifically mentioned under IFRS17*

3. Interpretation of Standards

- VFA eligibility

  Please refer to SAS paper “Measurement Model”.

- Risk Adjustment (RA)

  RA reflects the compensation required to bear the non-financial risks arisen from the uncertainty of timing and amount of cash flow faced by the entity (as opposed to policyholder). Therefore RA for Singapore Gated Par contracts applies to shareholder (the entity) and no RA is needed for policyholder.

  The standard does not specify a particular technique to determine the risk adjustment, but the entity is required to disclose the confidence level used to determine the RA for non-financial risk.

- Contractual Service Margin (CSM)

  CSM is a measurement of expected unearned future profit that the entity will recognize as it provides services in the future. The standard specifies methodology to calculate initial CSM, subsequent CSM and CSM roll-forward from one period to the next. The amortization of CSM recognized in the P&L of the period as insurance revenue reflects the service that has been provided in the period.

- Coverage Unit (CU)

  CU is determined for a group of insurance contracts as a driver to release the CSM into profit for respective reporting periods. The number of CU in a group is the quantity of coverage provided by the contracts in the group, determined by considering for each contract the quantity of the benefits provided under a contract and its expected coverage duration.

  As discussed in May 2018 TRG meeting (Agenda paper 05), for contracts which fall within the scope of VFA, the CU should be determined by reflecting both insurance and investment-related benefits provided by the contracts. In addition, IASB has decided to propose an amendment to the standard to clarify that expected coverage duration for insurance contracts with direct participation features should consider both insurance and investment-related services.

- Cost of Guarantee

  Please refer to SAS paper “Options and Guarantees”.

- Level of aggregation & mutualisation

  The standard and TRG paper allows CSM to be measured at a higher level than annual cohort, if the accounting outcome is the same in all circumstances, i.e. regardless of how assumptions and experience develop over the life of contract. The company needs to demonstrate that the same accounting outcome is achieved at a higher level and at annual cohort level, if a higher level is chosen for CSM measurement.

- Discount rate

  a) Discount rate for different types of cash flows
  The standard requires cash flows that vary based on the returns on underlying items and cash flows that do not to be discounted using different set of discount rates (para B74).

  Alternatively, the standard permits the use of appropriate discount rate for both types of cash flows, for example using stochastic modelling technique or risk-neutral measurement technique.

  b) Market-consistent discount rate
  IFRS17 requires the entity to discount cash flows using current, market-consistent discount rates that reflect the time value of money, the characteristics of the cash flows and the liquidity characteristics of the insurance contracts (para BC192).

- Surplus Account (Insurance Act, para 17)

  Singapore insurers that write Participating policies are required to establish and maintain a Surplus Account under the Insurance Act. Surplus Account is owned by shareholders and the amount in Surplus Account is recognized as capital to support the Par fund solvency requirement.

  Each year, profit allocated to shareholders (subject to 1/9th cap) is transferred from Par fund into Surplus Account. Insurer can choose to transfer a portion or all balance in Surplus Account to Shareholders' fund, if it is not required for the Par fund solvency requirement.

  In the event if the insurer chooses to allocate less than maximum 1/9th to shareholders in any particular accounting period, the insurer shall not allocate the difference between the amount actually allocated and the 1/9th amount allowed to the surplus account in any subsequent accounting period.

4. How it applies to Singapore

As Singapore Gated Par is strictly ring-fenced under the regulation and shareholder can only get maximum $1/9^{th}$ of the value of bonus declared to policyholder as earning as mentioned in Section 1, the application of IFRS17 standard on Singapore Gated Par is as below.

- VFA eligibility

  For measurement model, as mentioned in SAS paper "Measurement Model", most of Singapore Gated Par would be expected to qualify for VFA (with exception for some products with features or contract-specific circumstances that could change the assessment result and therefore the measurement model will be GMM. Different companies' interpretation of "substantial" might also lead to different assessment outcome of whether the products are eligible for VFA.):

  - There is generally a clear contractual link between benefit and the underlying item, where the underlying item is the Par fund which is ring-fenced to back the obligation to Par fund policyholder as required by Insurance Act. Hence the link between policyholder benefit and underlying item is enforceable and Gated Par contracts pass this criterion. (B101a)

  - Most Par products offered in Singapore are savings type products which provide mostly investment related service and the products are expected to pay out benefits close to the underlying asset share throughout the policy term, except for the early policy years when the guaranteed sum assured bites. The 90 / 10 gating ratio ensures that policyholder receive substantial share of the Par fund return. Therefore Gated Par contracts in Singapore are likely to pass this criterion. (B101b)

  - At policy inception, most Par policies are priced at profit, and it would be expected under most scenarios that guarantees would not be biting for significant periods of time. The non-guaranteed payout to policyholder is generally substantial and is affected by the Par fund investment performance. Hence Gated Par contracts in Singapore are likely to pass this criterion. (B101c)

- Risk Adjustment (RA)

  RA reflects the compensation that the entity requires for bearing the uncertainty that arises from non-financial risk, and hence, RA reflects the entity's risk appetite to uncertainty about the amount and timing of the future profit.

  The release of RA over the period is recognised in P&L. Insurance revenue recognized in a period can be analysed as a sum of a few components, and one of these components is release of RA for non-financial risk.

  Applying to Singapore Gated Par context, RA represents the PfAD of earnings (change in PV Shareholders transfer) due to non-financial risks and reflects the pass-through ability of Gated Par, subject to the company's Par fund management policy. For example, 90% of the risks are shared to policyholder on 90:10 basis. Besides, RA also reflects the burn through cost due to non-financial risks, if there is any.

Alternatively, RA can also be derived based on policyholder's cash flows, which is similar for other non-participating products. As the non-guaranteed bonus for Par policies could be adjusted under adverse scenario down to a supportable level, the RA computed based on the policy cash flows will effectively reflect the portion of non-financial risk that is borne by the entity.

Assume that the adverse experience is fully shared between policyholder and the entity on 90:10 basis, RA derived from change in PV Shareholders transfer and RA derived from policyholder's cash flows are the same.

Example:
Assume that under the adverse scenario, guaranteed cash flows to a Par policy increase by 10%, and adverse experience is fully shared on 90:10 basis.

	PH Gtd CF	PH NonGtd CF	Total PH CF	SH Transfer	Total PH and SH CF	Total asset
Base scenario	100	90	190	10	200	200
Adverse scenario (before adjustment)	110	90	200	10	210	200
Adverse scenario (after adjustment)	110	81	191	9	200	200

Figure 1: Example of risk adjustment calculation

RA (change in PV Shareholders transfer) : 10 – 9 = 1
RA (policyholder's cash flows) : 191 – 190 = 1

- Cost of Guarantee (CoG)

  As mentioned in SAS paper "Options & Guarantees", companies in Singapore should account for CoG on Par products due to minimum guaranteed benefits. CoG should be managed based on the company's internal Par Fund Management Policy and the fulfilment cash flow will reflect the actual Par fund management practices. CoG might be managed outside of the Par fund and is borne by shareholder only, or might be managed within Par fund and is shared between policyholder and shareholder if it is justifiable, according to the company's internal Par Fund Management Policy. CSM will be measured and adjusted subsequently based on the fulfilment cash flow which includes the guarantee costs.

- Coverage Unit (CU)

  For Par contracts that fall under VFA, CU should represent both insurance and investment services in determining the 'quantity of benefits provided'. In the *Example 15-Endowment Policy* provided in May 2018 TRG meeting (Agenda paper 05), one method of CU will be by using the amount payable on death (i.e. including the surrender value). This method implies that the investment service is represented by surrender value, and the insurance service is represented by the difference between death benefit and surrender value.

  For Par contracts, benefits used to determine CU are expected to consider both guaranteed and non-guaranteed portions as the policyholder enjoys these coverages on total basis. This is also more reflective of the quantity of service provided to differentiate two contracts with the same level of guaranteed benefit but varying levels of non-guaranteed benefits. Note that using asset share as CU requires careful consideration as the asset share amount can be lower than the coverage amount and may even be negative for initial policy years.

More judgement is required to weigh the quantity of benefits when there are multiple benefit types provided (e.g. Par contracts that provide death, TPD and critical illness benefits). It is also common in the industry for Par contract to provide different types of benefits for different phases of the coverage. For the retirement-like product that focuses on the regular payouts to the policyholder, typically some level of death benefit is provided during the accumulation period and survival benefit (including cash bonus) is provided during the payout period.

The challenge of determining appropriate CU across multiple benefits is not unique to Par contracts. A more detail discussion on this area is covered in a separate SAS paper on CU.

- Contractual Service Margin (CSM)

CSM represents the unearned profit the entity will recognises as it provides services in the future, and CSM at the end of reporting period represents the profit that has not yet been recognised in P&L because it relates to the future service to be provided.

Under Singapore Gated Par, profit is measured as Shareholder Transfer. Initial CSM is the present value of Shareholder Transfer <u>less</u> Risk Adjustment <u>less</u> Cost of Guarantee (see diagram below). Subsequent CSM is measured according to the IFRS17 standard, with rollforward of CSM consisting of the entity's share of the change in the fair value of the underlying items, the amount recognised as insurance revenue because of the transfer of services in the period according to the coverage unit chosen, and changes in fulfilment cash flows relating to future service.

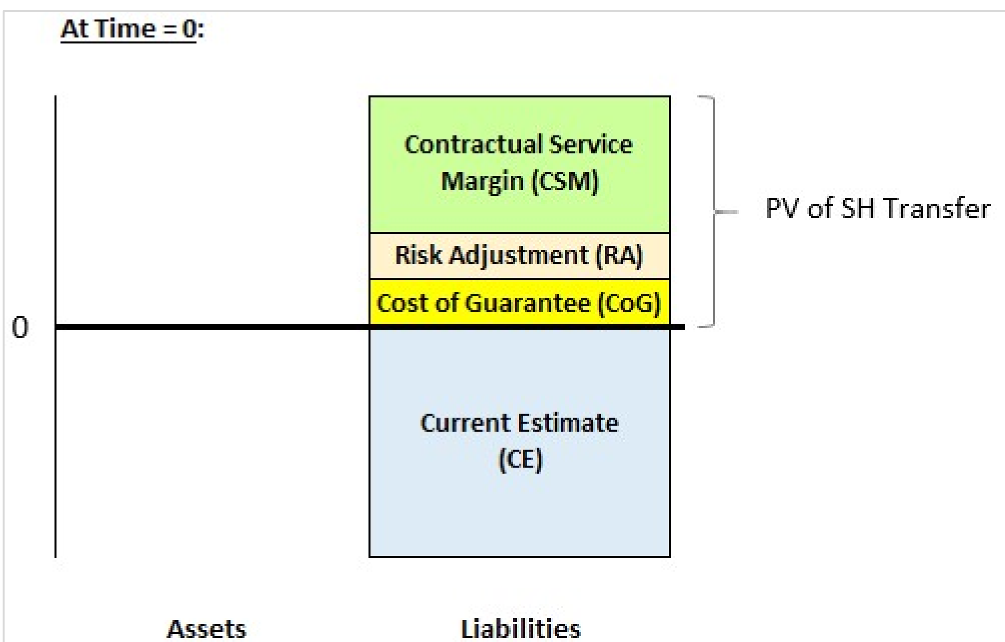

Figure 2: Relationship between initial CSM and Shareholder Transfer

If there is any estate that arises throughout the projection, the treatment depends on the company's internal Par Fund Management Policy. If the estate is distributed based on 90:10 basis, 90% will form part of CE, and 10% will be part of PV of SH Transfer. If the estate is distributed 100% to policyholders, it will be part of CE.

- Level of Aggregation & Mutualisation (risk sharing)

  For Singapore Gated Par, bonus management assumes cross-subsidizing within a Par Fund/Par Sub-fund and mutualisation is achieved (different products & cohorts are managed together under a common fund to share the risks). The Par Sub-fund is a group of policies managed together with risk sharing and applies the same investment strategy, with experience variance shared among the whole Par Sub-fund. It is the company's decision to segregate the Par Sub-funds according to the company's Par Fund Management Policy.

  According to the IFRS17 standard, the company shall divide a portfolio of Par contracts issued into a minimum of three cohorts by profitability. Besides, the company shall not include contracts issued more than one year apart in the same group for measurement purpose. However, the standard allows the company to measure CSM at a higher level of aggregation instead of group or portfolio level, if the company can justify that the same accounting outcome is achieved under a higher level of aggregation and at group or portfolio level. For Singapore Gated Par, same accounting outcome may or may not be achieved when CSM is measured at a higher level of aggregation, because:

  - According to the IFRS17 standard, fulfilment cash flow can be estimated at a higher level of aggregation than annual cohort, and then allocate the resulting fulfilment cash flow to the annual cohort. Since for Singapore Gated Par, mutualisation and risk sharing might be done at Par Sub-fund level instead of annual cohort level, fulfilment cash flow may be determined at a higher level of aggregation.
  - With gated rule running off surplus / deficit, it is not possible to have an onerous policy but with bonus payment to policyholder; hence there is no onerous contract at issue that will cause accounting outcome at higher level of aggregation to be different.
  - Loss component (if any) setup and run-off can be done at Par Sub-fund level instead of annual cohort level, given mutualisation and bonus management is done at Par Sub-fund level.
  - Under VFA, there is no lock-in discount rate that causes difference among annual cohorts.
  - CSM amortization (which is dependent on the coverage unit chosen) may or may not be different when contracts are grouped differently, depending on the amortization methodology chosen by the company.
  - When stochastic model is used for fulfilment cash flow determination, the accounting outcome on annual cohort grouping and higher level of aggregation might not be the same.

- Discount Rate & Bonus

  The standard requires all cash flows within the contract boundary of each contract to be included in the measurement. As such, non-guaranteed cash flows for Par contracts have to be included. However, the bonus rate used in the projection of non-guaranteed cash flows may be affected by the discount rate used.

  a) Discount rate for different types of cash flows
     For Par contract, there are cash flows that do not vary with underlying items such as expense and guaranteed benefits outgo. On the other hand, cash flows that vary with underlying items can be interpreted as the non-guaranteed portion. The standard does not provide further guidance on how to determine these two sets of discount rates. It only sets the principle that the discount rate used should be reflective of the characteristics of the cash flows.

Alternatively, the standard permits the use of appropriate discount rate for both types of cash flows, for example using stochastic modelling technique or risk-neutral measurement technique.

Please refer to SAS paper "Discount Rate" for more details.

b) Market-consistent discount rate
The requirement to derive market-consistent discount rate either using top-down or bottom-up approaches will most probably cause deviation from Par fund's fund-based yield (real world best estimate return).

If the discount rate is the same as the fund-based yield, potentially no further adjustment to the bonus rates is needed. This will minimize the difference between the actual Shareholders Transfer under RBC and the release in CSM, as the difference will be timing in nature. Accounting treatment on this variance will need to be considered.

However, if a lower discount rate is used, bonus rates assumed during the pricing based on best estimate fund-based yield may not be sustainable. Therefore, a downward adjustment to the bonus rates may need to be applied to reflect the lower expected investment return. This gives rise to a lower CSM at inception compared to the present-value of Shareholders transfer on original bonus rates.

Throughout the term of the contract, if the insurer earns the best estimate fund-based yield and declared actual bonuses based on original bonus rates, there will be experience variance between actual declared bonuses and those assumed in CSM valuation. In this situation, actual shareholders transfer on actual bonuses is likely to be higher than release in CSM, in which CSM is valued at lower bonus rates (resulting in actual higher than expected). Accounting treatment on this variance will need to be considered. One possible outcome is that it will result in a persistent positive experience adjustment every year going forward.

- Surplus Account

Under the Insurance Act, the surplus account is used to support the Par fund's liabilities in the event when the policy assets fall below the policy liabilities. Thus under most circumstances, Surplus Account can be seen as equivalent to that of the surpluses in other insurance funds.

Due to the introduction of CSM and CU concept under IFRS17, it is very likely that the CSM release will be different from actual Shareholder Transfer allocated to Surplus Account for each financial period. Hence, retained earnings (equity) under IFRS17 may be different from Surplus Account balance. This may have other implications such as dividend payment to shareholders (e.g. when retained earnings is less than Surplus Account balance) because dividend payment is generally restricted to the level of retained earnings in equity).

5. Challenges and Next Steps

Open questions to the group on topics not covered above:

- Treatment of non-directly attributable expense, e.g. options to include in FCF or not include in FCF?

- Treatment of reinsurance: reinsurance experience is shared with PH as well; how to reflect this sharing mechanism in the P&L and CSM for gross and ceded part?

- Combination of contract: how to measure profit when Par base and NP rider are considered as one contract? Or, is there a ground to argue they are different contracts because they are written in different fund?

6. Appendix

Singapore MAS Notice 320:

MAS 320 Par Fund Management.pdf

SAS Standard of Actuarial Practice:

SAS-SAP-L01-Effective-01Jan18.pdf SAS-SAP-L03-Effective-01Jan18.pdf