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The realities of implementing the PAA approach

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An unexpected challenge for General Insurers

The initial reaction to IFRS 17 was that most General Insurers could, and probably should, elect to use the Premium Allocation Approach (PAA). PAA seemed to offer a way to reduce implementation costs for insurers while retaining useful information for users of financial statements. In theory, the PAA approach appears to be considerably simpler than the General Measurement Model (GMM) and Variable Fee Approach (VFA), as no contractual service margin is required and the disclosures are less complex. However, in practice, there are many significant complexities.

Our experience in dealing with a range of general insurance and life insurance providers has identified a number of operational challenges that relate to both direct contracts and the associated reinsurance treaties. In this whitepaper, we highlight 25 significant challenges that General Insurers should be aware of when implementing the PAA approach.

Premium Allocation Approach

PAA is a simplified approach allowed for the measurement of the insurance contracts for the remaining coverage period (pre-claims). It is conceptually similar to current practice and generally provides a workable solution for P&C insurers. The eligibility criteria for PAA is that it should provide a "reasonable approximation" of the GMM approach or the contract duration is less than or equal to one year.

The devil is in the detail

1. Necessary data is not readily available

In some key areas, General Insurers (GIs) have identified that the data they require under PAA to calculate the LIC (Liability for Incurred Claims) and LRC (Liability for Remaining Coverage) is not readily accessible through their existing platforms that are used to meet the current IFRS 4 standard and which typically operate on an Unearned Premium Reserve (UPR) basis.

Under UPR, insurance and contract data are typically aggregated at a relatively high level whereas PAA is more of a transactional approach requiring contract data at a lower level of detail. Whilst Life Insurers are more familiar with managing their data at this more detailed level due to the longer-term nature of the risks involved, GIs are less familiar and as a result need to define how to map their existing data (and new IFRS 17 data) to this new requirement. Some examples of these types of data are outlined below.

a. **LRC and LIC data**: GIs generally retain their premium data at an aggregated level (e.g. due from 3rd party intermediaries) and therefore face the challenge of sourcing their future premium cashflows at a gross and contract level and then integrating this data into the LRC and LIC calculations. For IFRS 17, the LIC calculations are based on 'Accident Year' but data may only be available on an 'Underwriting Year' basis – converting this data to 'Underwriting Year' may be a complex process.

b. **IFRS 17 group basis**: IFRS 17 requires the LRC and LIC calculations to be performed at the IFRS 17 group basis. The resulting disclosures and reporting must also be performed at this level. GI's often only have their contract data at an aggregated or loss reserving level as per IFRS 4. Consequently, they are performing analysis to identify how to source this data and integrate it into their IFRS 17 calculations. We would mention that several of our PAA clients are developing the concept of a 'sub-portfolio' for IFRS 17 grouping, sitting between 'portfolio' and 'cohort'. For regulatory purposes they are planning to model at this level, however for MI purposes they will look to model at cohort/contract level.

c. **LRC, LIC and expected future cashflows**: Under the current standard, GIs typically do not use the concept of expected future cashflows generated from payment patterns given the short duration of the contracts in their business. Under IFRS 17, they will be required to define future payment patterns relating to future claims. These future payment patterns will need to be applied to define the expected future claims cashflows and then discounted back, unless of course the settlement period is greater than one year from its occurrence.

2.   IFRS 17 requires complex allocations

The GI market typically operates on the basis of reserving (loss) class which is an aggregated level currently supporting the Unearned Premium Reserve (UPR) basis. This is a highly aggregated view and translating this down to a level prescribed for IFRS 17 will require complex allocation processes. Several of our clients quote several hundred reserving classes and have seen the number of allocations (both cost & insurance) required increase significantly under IFRS 17.

3.   Differences in LRC calculations

Calculating the LRC under PAA may, at first glance, seem to be similar to the current UPR calculations but in practice there are significant differences to consider. UPR calculations often take the premium receivable (see 4 below) and assess the unearned proportion prospectively. By contrast PAA takes a transactional, retrospective approach – premium received less insurance revenue for the period to date based on expected premium receipts and the assumed pattern of exposure emergence, passage of time or other measure. This means new data and calculation methods will be needed for the LRC.

4.   Calculating 'premium received' vs 'premium receivable'

Under the Standard, PAA calculations should be performed on a "**premium received**" basis as opposed to the current "**premium receivable**" approach used in UPR calculations. It should also be noted that some confusion could arise in using these two terms interchangeably. This may result in challenges for current administration and finance systems. Additionally, there is also the need to match actual cash receipts to actuarial calculations. This could be problematic for many insurers, as could accounting for premiums due but not yet collected.

Hence, robust transactional-based calculations and new systems may be needed to support PAA calculations as opposed to UPR calculations. One insurer we are talking to spent tens of millions of dollars on a new policy administration system that was based on premium receivables - not received and now it requires expensive changes.

5.   Grouping of contract rules for separately managed portfolios

Under IFRS 17, there is a specific grouping of contract rules for separately managed portfolios, onerous or not, and underwriting cohorts. Once allocated, an individual contract must remain in the same group throughout its exposure and settlement term. This requires the allocation and storage of the IFRS 17 group mappings by individual contracts as well as the allocation of individual cashflow items to the same group. This again requires new processing functionality.

6.   All claims must be 'expected to be paid within one year'

Although the PAA approach only strictly applies to the LRC, it can simplify the treatment of LIC in certain circumstances e.g. it can be used if **all** the claims are "**expected to be paid within one year**" of their incurrence, thus avoiding discounting. But even this poses a number of questions:

- What does "expected to be paid in one year" actually mean in practice?

- Is it the measure 100% percent of claims, the vast majority or some given percentage?

7.   Calculating the risk adjustment for the LIC

If an insurer adopts a GMM type approach, then a risk adjustment is needed for incurred claims and onerous contracts. So the question arises what methodology is used to calculate the risk adjustment - a cost of capital basis, TVaR, VaR or factor approach? Current GI actuarial systems might not support the selected approach so a new modelling capability may be required. Insurers are also looking to align their risk adjustment methodology with that used under Solvency II (risk margin - 6% cost of capital approach). In any case, liabilities for incurred claims still have all the implied locked-in discount rates, financing effects, disclosure requirements, detailed journal entries and so on. Even if the PAA approach is adopted there will still need to be a risk adjustment based on the fulfilment cash flows.

A further factor is that typically the risk adjustment will be calculated as an aggregated number at reserving class level and will require allocation to IFRS 17 grouping level. This requires complex allocations drivers and processes. The overall result is that there will be a significant increase in the volume of data that has to be transmitted to finance for IFRS 17 accounting and disclosure purposes.

8.   Each type of contract will have it's own payment pattern

For the LIC, claim payments patterns are an important element – these basically forecast the future claims cash flows. Each type of contract will have their own distinct payment patterns – derived from historical claims data, loss development triangles etc.

The generation of the fulfilment cash flows is not straightforward and based on an input payment pattern (variable by product/peril) and the timing of the claim. The pattern describes, for a given type of claim, the profile of the expected claim payments to occur over the coming months/years. The problem is that during any accident period there is likely to be a time lag between the claim event occurring (and payments) and the current reporting period. For example, the accident year might be 2016 but the reporting period is at at the end of 2017 – potentially a delay of up to two years. Thus, when applying the pattern, the payments already made need to be considered as the need is the future perspective. Thus, the application of the payment pattern is changed on the basis of a fixed set of rules.

So new calculation routines will be required to generate the claims cash flows for the LIC and will need to be regenerated at each reporting period. The question therefore arises as to where these cash flows are generated. Are they generated by changing the existing actuarial models, within an allocation engine or is this process undertaken in the ETL layer?

9.   Electing an OCI option could significantly impact data systems

Under PAA there is the choice to elect an OCI option for changes in discount rates and this could have significant impact on data, systems, and processes as insurers will need to:

- Store discount rates applicable at the date each claim is incurred which is more complex for IBNR/IBENR claims
- Calculate the impact of changes in discount rates at each reporting date
- Record the cumulative impact of discount rate changes for each claim over time

10.   No contracts are deemed onerous at initial recognition "unless the facts indicate otherwise"

Under PAA it is automatically assumed that no contracts in a portfolio are onerous at initial recognition, "unless the facts indicate otherwise" and this is likely to be undertaken on a pricing basis. The wording "facts and circumstances indicate" suggests that it is not necessary to explicitly test for onerous contracts. Thus, an explicit test is only needed when there is reason to believe that the contract grouping may be onerous. This is clearly a matter of judgement, primarily for the actuaries, but it remains to be seen how insurers interpret this requirement in practice. Of course, an onerous contract liability cannot arise for incurred claims, since these are not part of the LRC coverage and are already valued at current fulfillment value under a GMM type approach.

11.   Identifying onerous contracts at the necessary level of granularity

For most GI insurers, it will be problematic to easily identify groups of onerous contracts at the level of granularity required for IFRS 17 reporting via current loss reserving processes as this takes place a risk/peril type rather than portfolios. Once a group of contracts is identified as onerous, it should be tested at each successive valuation, unless and until it proves non-onerous, after which the "likelihood of changes in the facts and circumstances" should dictate whether it needs to be retested.

This will require new approaches – either by utilising pricing data or by using some form of granular reserving process based on the present value of cash flows calculated at higher levels of granularity. An insurer will also have to consider what the triggers are for facts and circumstances.

12.   Methodology for computation of the loss component

Several of our clients are struggling with precisely what methodology to use for the computation of the Loss Component. They believe the Standard is unclear and have developed two approaches – a complex method based on Fulfilment Cash Flows and a simpler LRC based approach. Even now they are unsure which approach to use.

13.   Multi-year contracts will not qualify for the PAA approach

Currently many general insurers sell multi-year contracts especially in the engineering, construction and surety lines of business. The current liability for unexpired risk measurement has been done using UPR less DACs because of the cancellation or repricing clauses. Multi-year contracts typically will not qualify for the PAA approach. These contracts must be carefully assessed before deciding on what approach can be used to measure the insurance liability. Under IFRS 17, insurers will have to consider the business in a new way to identify any onerous elements that they have to account for separately.

14.   Modelling acquired claims liabilities

Another complexity of PAA is the modelling of acquired claims liabilities, such as those taken on through a portfolio transfer. Several of the larger insurers we are talking to are actively planning acquisitions, so this is a real issue.

The Standard permits PAA to be applied to those policies written by a general insurer that moves into the claim settlement period, but not to those policies acquired (not those originally written) by the insurer that are already in a claim settlement mode. Thus, insurers intending to apply the PAA approach to all contracts issued may well have to build systems/processes to support a GMM type approach purely to model contracts that they expect to acquire.

Short & long term contract approaches
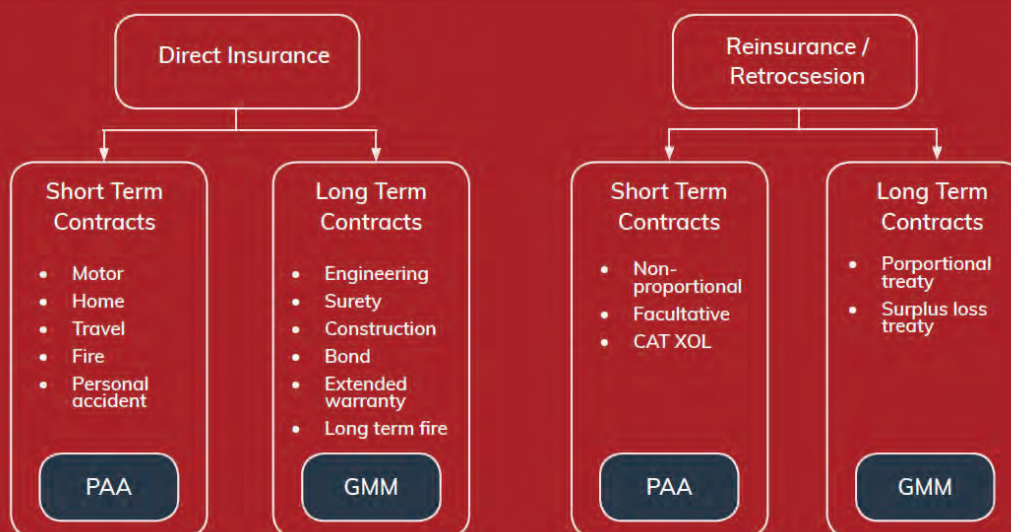
📁 Reinsurance Contracts

We have also seen a number of complications when measuring and accounting for reinsurance in the PAA world, although in practice many of these may also apply to GMM treaties. For example, even if the underlying direct contracts are modelled under PAA, the treaty under which they are reinsured may be modelled under GMM. Insurers have initially focussed on GMM and PAA in their projects and are only now delving into the details of reinsurance and it will be interesting to see how market best practice emerges over the coming twelve months.

*The recent 'Exposure Draft' published by the TRG proposes a number changes to reinsurance but these have not yet been adopted – so the following may be subject to change.

15.   Data Latency

Reinsurance is characterised by time delays in the receipt of information required for measurement claims reporting and cash flows. Data issues are frequently more prevalent e.g. for ceded reinsurance contracts, the insurer has to rely on the reinsurer for information on recoveries, profit commission etc. Similarly, for inwards reinsurance contracts, the entity is further removed from the underlying risks and is reliant on the ceding company for data on the underlying insured risks. This means that there is frequently more use of approximations, both in terms of the data and modelling approach.

16.   Inconsistent contract boundaries with underlying direct contracts

Contract boundaries for reinsurance might be inconsistent with those of the underlying direct contracts e.g. provisions in the reinsurance treaty concerning rate adjustment, recapture etc may lead to different contract boundaries. As an example, if a contract allows the reinsurer issuing the reinsurance an annual full and unilateral right to adjust reinsurance premiums without restriction, it is likely to be considered a one-year contract by the issuing entity. However, for the assuming entity, it likely would be modelled as a longer duration contract reflecting the best estimate of the behaviour of the issuing company with respect to future rate adjustments.

17. Assessment of contract onerousness neglects impact on reinsurance

The assessment of whether a contract or set of contracts is onerous is currently made without consideration of the impact on reinsurance. Therefore, a contract which is onerous on a gross basis, but not onerous net of reinsurance is considered onerous for the purposes of IFRS 17. This can lead to a mismatch between the recognition of losses for an assumed contract (day one recognition of losses) and its off-setting by an insurance contract (recognised over the lifetime of the contract). With a direct contract that is onerous, the ceding insurer must recognise a loss component through the profit and loss statement immediately, whereas the relief from a corresponding reinsurance contract must be deferred over the coverage period.

18. Maintaining dynamic links between direct & reinsurance contracts is crucial

Maintaining the dynamic links between direct and reinsurance contracts is also critical - this requires a one to many relationship and tracking the impact of onerous direct contracts on reinsurance treaties. New processes to link new business to the relevant reinsurance treaty may be required.

## 19. Varying requirements for recognition of reinsurance treaties

The requirements on recognition of a group of reinsurance treaties held are different depending on whether the reinsurance contract held covers them on a proportionate or non-proportionate basis. A group of proportionate reinsurance contracts held is recognised at the later of:

- the beginning of the coverage period of the group;
- the initial recognition of any underlying insurance contract.

This means an insurer will not recognise a group of proportionate reinsurance contracts held until it has recognised at least one of the underlying insurance contracts. A group of non-proportionate reinsurance contracts held is recognised at the beginning of the coverage period of the group.

20. Accounting for changes to reinsurance treaties

There are also challenges to changes in reinsurance treaties as currently changes are dealt with as an addendum as opposed to a new contract. Under IFRS 17, these changes would have to be carefully assessed to determine whether these are accounted for as a new contract or a modification.
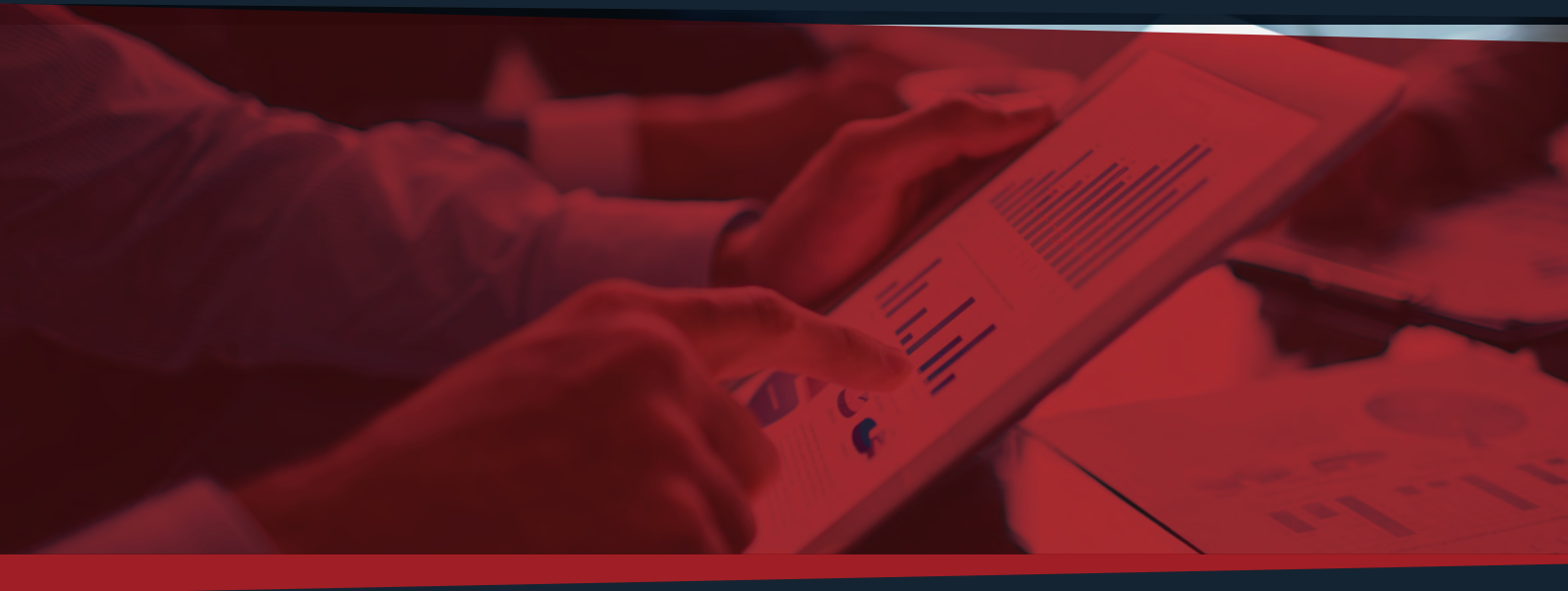
21.   Level of aggregation of the unit of account

For some reinsurance contracts held, applying the requirements in IFRS 17 will result in a group that comprises a single contract. Level of aggregation and IFRS 17 requirements in terms of unit of account is an issue for reinsurers. The granularity of the data from ceding companies has always been a struggle for reinsurers looking to match their needs for actuarial modelling.

22.   Counter-party credit risk models required to generate cash flows

IFRS 17 requires a counter-party credit risk element to be included as a cash flow. Thus, insurers will need to access counter-party credit risk models (Expected Credit Loss models) to generate the relevant cash flows for valuing the reinsurance treaty.

23.   Inconsistencies between insurance & reinsurance create accounting mismatches

The inconsistencies between insurance and reinsurance accounting can create a number of accounting mismatches, meaning that the financial statements may not appropriately reflect the net risk position after reinsurance and, as a consequence, result in a distorted profit recognition pattern. Mismatches can occur due to a number of factors.

Whilst the situation may vary considerably between insurers, it would be unwise to assume that these issues are immaterial and potentially contained. This is due to the fact that even an individual reinsurance contract could be material in the context of the overall balance sheet, potentially leading to a considerable mismatch between the value placed on reinsurance and the value placed on the underlying risks. This issue could also have significant implications on a strategic and operational level, as well as impacting areas such as the transfer of risk, tax, capital, and Solvency II for European operations.

Factors causing accounting mismatches

1. Discount rates used to calculate CSM may differ

2. The pace at which CSM runs off may differ between reinsurance & underlying contracts

3. Differences in contract boundaries

4. Reinsurance contracts' dates of recognition differ from corresponding insurance contracts

5. Measurement model not applied consistently for underlying/corresponding contracts

6. Currency impacts on contracts covering risks written in multiple currencies

24.   The bespoke nature of treaties is difficult to model & account for

Some elements of reinsurance valuation may also cause technical calculation challenges such as profit based commissions or sliding scale commission arrangements. Additionally, most reinsurance treaties are by nature bespoke, and thus difficult to measure and account for. Under IFRS 4 such treaties were modelled using approximations which probably will not work under the more specific valuation requirements of IFRS 17.

25.   Increased complexity in dealing with intragroup reinsurance

Many large general insurers also have inter-group reinsurance arrangements. The complexity of dealing with the elimination of intragroup reinsurance on consolidation will increase considerably under IFRS 17. For example, the cost of retrospective reinsurance is recognised up- front but gains on reinsurance deferred. Entities in different territories may also have different accounting standards to take into consideration.

Divergent treatment of reinsurance contracts issued by the reinsurer within the same group, compared to the underlying insurance contracts issued by the primary insurer within the same group, may impact profit and the capacity to pay dividends at individual controlled entity level.

📊 Conclusion

IFRS 17 is a complex set of regulations and regardless of whether the insurer elects to use the GMM or the PAA approach for their GI business, they will need to establish appropriate levels of governance, including strict controls, auditability and evidence, and robust, efficient systems and processes. Data quality is, as ever, critical particularly as new levels of granularity will be needed for complex cost and insurance (remaining coverage and incurred claims) allocations to portfolios, cohorts and contracts. There is also the need to calculate and store expected data (CFCs for the LIC) and store data on actual transactions and opening balances by the same grouping of contracts, while making sure that actuarial and finance systems are connected.

Whilst the PAA approach is simpler than GMM and VFA in practice, all GI insurers will probably need some form of building block capability. This in no way reduces the need for improved governance and data management processes. Thus, the systems impact should also not be underestimated. Equally from a reinsurance perspective, a requirement to model gross and track cashflows for assumed and held business separately, and then eliminate mismatches on consolidation (particularly for more complex groups) may push existing actuarial and finance platforms to their limit. Consequently, we have seen several insurers resigning their actuarial close process. Perhaps then IFRS 17 is an opportunity to automate the integration into accounting systems, increasing automation generally and remove the need for low level data manipulation.

IFRS 17 will also have a significant impact on the running of the business e.g. the Combined Ratio in GI insurance which is an important metric and will change due to the need to:

- Discount for both claims and reserves

- Decide whether to include a risk adjustment, and on what basis

- Understand the impact of earned premiums replaced by revenue – e.g. there are some changes (reinstatement premiums will now appear as a claims item)

The patterns of insurance earning will also change due to discounting, the risk adjustment and different earnings patterns. Also the requirement to recognize onerous contracts immediately may result in more losses from contracts being recognised than are currently, potentially resulting in more volatility in the P&L. Insurers consistently writing some onerous contracts may see a reduction in net assets as losses are recognized earlier.

To summarise, IFRS 17 will present new challenges for GI insurers and their reinsurers in terms of both management and regulatory reporting and in the impact on key metrics and KPIs by which they run the business. Most insurers will require new actuarial models and processes, the ability to automate an increasing number of cost and insurance allocations and new accounting treatments.

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