

Ind AS 117 Insurance Contracts standard establishes principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the Standard. The objective of Ind AS 117 standards is to ensure that an entity provides relevant information that faithfully represents those contracts. This information gives a basis for users of financial statements to assess the effect that insurance contracts have on the entity's financial position, financial performance and cash flows.

It should be noted that certain contracts underwritten by insurance companies may not fall within the scope of IND AS 117 as defined by the standard. Thus, an insurance contract currently issued by an insurance company needs to be appropriately classified into applicable Ind AS standards i.e. recognised and subsequently measured in compliance with identified relevant standards.

The Government of India has established agriculture insurance schemes, Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS), which are implemented by Insurance companies with the objective of promoting the welfare of farmers. These schemes exhibit certain characteristics that distinguish them from traditional insurance contracts, such as those seen in motor insurance. This discussion paper focusses on the following aspects of Crop insurance portfolio within the Indian Insurance industry:

1. Applicability of Ind AS 117 for recognition, measurement and presentation for PMFBY / RWBCIS schemes
2. Contract boundary applicable for insurance and reinsurance contracts issued for Government Crop insurance scheme (PMFBY/RWBCIS) within the Indian market
3. Level of Aggregation for onerosity i.e. whether it should be undertaken at the level of COI / cluster / season / whole portfolio
4. Role of State / GOI specifically under surplus sharing model wherein the losses / profits are shared by the State / GOI

Note - *The considerations towards point 2, 3 and 4 are only applicable if the PMFBY / RWBCIS products can be classified as insurance contracts under Ind AS 117 standards.*

Background:

The agriculture crop insurance scheme aims to provide comprehensive risk cover for crops of farmers against all non-preventable natural risks from pre-sowing to post-harvest stage. The agriculture insurance scheme currently offers insurance coverage through two major products:

- “Area based approach” called Pradhan Mantri Fasal Bima Yojana (PMFBY)
- “Parametric based approach” called Restructured Weather Based Crop Insurance Scheme (RWBCIS)

The scheme is structured / designed at the state level and operationalised across different clusters within the state in-line with the Operational guidelines (OG) issued by Government of India (Department of Agriculture & Farmer Welfare and Ministry of Agriculture & Farmers Welfare). The scheme is implemented by State through tenders for up to 3 years and in no case less than 1 year in-line with the Operational guidelines. However, the farmer enrolment is undertaken at the beginning of each season during the scheme tenure, where the insurance company has the obligation to provide coverage to each farmer meeting the criteria as per the OG, however farmer has a right to choose coverage as and when needed.

The State Governments/ Union Territory (UT) Administrations, in consultation with the State Level Coordination Committee on Crop Insurance (SLCCCI) finalizes the coverage to be offered under each of the products based on the need of the specific crop/area in their State/UT. Insurance companies participate in the tender quoting their premium rate for the notified crops per season (Kharif and Rabi) at the Insurance Unit Area. The lowest weighted average premium quoted by an insurer for a given cluster across the Kharif and Rabi seasons for the tender tenure is awarded the cluster for scheme implementation. In case of long tenure (currently up to 3-years) tenders, the premium rates are fixed during the currency of tender for farmers sowing the notified crop during the season and agreeing to avail insurance. Thus, the pricing by an insurance company is done at a cluster level. The farmers sowing the notified crops in the notified insurance unit needs to enrol under the scheme at the beginning of each season (unless State has implemented Universal coverage) of the scheme tenure and a Certificate of Insurance is issued to each farmer each season.

Section 1 - Applicability of Ind AS 117 standards to PMFBY / RWBCIS schemes

The coverages offered under each of the PMFBY product and RWBCIS product along with other features is summarised below:

1. **PMFBY product**

The following coverages are offered under the PMFBY product:

- **Basic cover** – is the mandatory minimum cover to be offered by states/UT and it mitigates the risk of yield loss to standing crops (sowing to harvesting) on an area-based approach. The underlying perils include drought, dry spells, flood, inundation, wide-spread pest and disease attack, landslides, natural fire due to lightening, storm, hailstorm, and cyclone etc. If the actual yield per hectare of the insured crop for the Insurance Unit (calculated on basis of requisite number of crop cutting exercises (CCE) or a combination of CCE & YES-TECH or other technology derived yield estimates, as the case may be) in an insured season, falls short of the specified threshold yield for the season, all insured farmers growing that crop in that Insurance Unit area are deemed to have suffered a shortfall of similar magnitude in yield.

- **Add-on covers** - any combination of add-on coverages can be included with the base cover by the State Government under the scheme design basis needs. The add-on coverages include prevented sowing, mid-season adversity, localised losses and post-harvest losses, wild animal attack etc.

Further, the loss/damage for localized calamities and post-harvest losses, when offered, will be assessed at the level of the individual insured farm and hence intimation of loss by the farmer/designated agencies or nodal departments is essential. For remaining risks, lodging of intimation for claims by insured farmers / designated agencies or nodal departments for such wide-spread calamities is not essential.

2. **RWBCIS product**

RWBCIS aims to mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from adverse weather conditions relating to rainfall, temperature, wind, humidity etc. The weather parameters act as “proxy” for crop yields in compensating the cultivators for deemed crop losses. Pay-out structures i.e. Term Sheets are developed to the extent of losses deemed to have been suffered keeping the weather triggers as per requirement of the crop and comparing it with actual weather data for the specific period. The following weather perils are offered under the RWBCIS product:

- Rainfall – Deficit Rainfall, Excess rainfall, Unseasonal Rainfall, Rainy days, Dry-spell, Dry days
- Temperature – High temperature (heat), Low temperature
- Relative Humidity
- Wind Speed
- A combination of the above etc.
- **Add-on coverage** from perils such as hailstorm, cloudburst and high wind speed etc.

Further, the loss payout to the farmers is undertaken based on weather data received from weather stations – common for a defined area – called Reference Weather Unit Area. Intimation of loss by the farmer/designated agencies or nodal departments is not essential.

PMFBY / RWBCIS recognised as insurance contracts under Ind AS 117 Standard

The agriculture insurance crop scheme has received a total of ~150mn farmers applications under PMFBY and RWBCIS products covering 62.85mn hectares of area across 22 states / 505 districts / 1.5 lakhs insurance units. Thus, given the size and scale of such scheme the PMFBY operational guidelines has outlined few operational simplifications under scheme in

comparison to traditional insurance products for ease of administration. The pertinent paragraphs from the operational guidelines that affirm the classification of these schemes as insurance products are as follows:

- Para 3.1 – *All farmers including sharecroppers and tenant farmers growing the notified crops in the notified areas are eligible for coverage. However, farmers should have **insurable interest** on the insured crops and lands. Such farmers are required to submit necessary documentary evidence of land records prevailing in the State (Records of Right (RoR), Land Possession Certificate (LPC) etc.) and/or applicable contract/ agreement details/ other documents notified/ permitted by concerned State Governments/UT Administrations pertaining to sharecroppers/tenant farmers and the same should be defined by the respective States/UTs in the notification itself. 'Principle of Insurance interest' applicable to insurance contracts is satisfied at each farmer level and considered while structuring the scheme.*
- Para 18.5.8 - *In order to provide proper benefits to the farmers and to compensate them as per **near actual loss experience**, crop(s) shall be notified at the lowest level i.e. Village/Village Panchayat. As outlined in the paragraph the intention of the scheme is to provide compensation for actual losses and the operational guidelines aims to balance the underlying basis with practicality of implementing such a large welfare scheme.*
- Para 18.5.3 - *CCE experimental plots shall be chosen using smart sampling technology for selected major crops and conventional random sampling for other crops and the secrecy of the selected plot, subject to disclosure to relevant stakeholders under these Guidelines, should be maintained by all concerned until the CCE is actually conducted in order to rule out potential **moral hazards**. 'Moral hazard' or loss minimisation applicable to insurance contracts is satisfied and considered while structuring the scheme.*
- Para 18.5.13.7 - *Insurance Companies should be given complete access to co-witness the CCEs, the digital images of the CCEs and relevant data in the requisite format (electronic/physical) by the State/UT Government on a real time basis. Further, the **insurance company also has a right to challenge the CCE yield data** within seven days of receipt as per para 19.2.*
- Para 5.5 – *in respect of PMFBY product, **loss/damage for localized calamities and post-harvest losses will be assessed at the level of the individual insured farm and hence intimation of loss by the farmer/designated agencies or nodal departments is essential.** Thus, for events which are expected to be low frequency affecting small number of farmers / areas the insurance “**principle of indemnity**” is satisfied.*

Lastly, the revised operational guidelines specifically call out that the **use of technology has been built in for better administration and coordination** for the involved parties as per Section 2.1.

The coverages provided under each of the PMFBY and RWBCIS product satisfy the Ind AS 117 standards criteria of an insurance risk (Para B2) at farmer level i.e. *A contract under which one party (the issuer) accepts significant insurance risk from another party (the policyholder)*

by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

Following additional arguments for RWBCIS scheme, aligns it with the definition of an insurance contract under Ind AS 117:

- The scheme specifies indices related to crops and geography, such as at the village or district level, to provide compensation that closely reflects actual losses. Payments are determined by weather parameters tailored to the policyholder's crop and location. The crop cycle is segmented into phases according to plant growth stages, with the sum insured apportioned to each phase reflecting the risk of insured events during that time. This aspect of the scheme is recognized as an insurance contract under standard paragraph reference B26 (k), which includes contracts that compensate based on specific physical variables affecting the contract party.
- Compensation under the scheme is calculated using term sheets that correlate deviations in weather parameters with crop yield for each type of crop and its respective location. The guidelines' Paragraph 5.2.3 clarifies that the scheme compensates for substantial weather-related crop losses, ensuring that payments correspond to significant damages.

The RWBCIS's reliance on weather indices for claim initiation exempts it from the scope of Ind AS 117 paragraph B13, as it requires the occurrence of particular adverse weather conditions directly associated with the crop to trigger claims. The scheme's design aims to indemnify farmers against financial losses due to expected crop damage from adverse weather, using these parameters as a surrogate for crop yield loss.

Considering the above aspects, one can conclude that the objective of the schemes is to provide insurance coverage to farmers and in substance can be considered as insurance contracts under Ind AS 117. The amendments / simplifications / deviations have been undertaken to ensure that the scheme operates efficiently and insurance coverage and is affordable to farmers.

PMFBY / RWBCIS not recognised as insurance contracts under Ind AS 117 Standards

As per the Ind AS standard para B2, insurance contract has been defined as *a contract under which one party (the issuer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.* Further as suggested in para B13 of the Ind AS 117 standards, *some contracts require a payment if a specified uncertain future event occurs, but do not require an adverse effect on the policyholder as a precondition for the payment. This type of contract is not an insurance contract even if the holder uses it to mitigate an underlying risk exposure. The definition of an insurance contract refers to an uncertain future event for which an adverse effect on the policyholder is a contractual precondition for payment. A contractual precondition does not require the entity to investigate whether the event actually caused an adverse effect, but it does permit the entity to deny the payment if it is not satisfied that the event did cause an adverse effect.*

Under the PMFBY / RWBCIS scheme, farmer's application can be rejected at the time of registration (or underwriting) on account of fraud, non-insurable interest etc. but the scheme does not empower an insurance company to investigate / reject any claims outside the scope of operational guidelines. In respect of the basic cover offered under PMFBY product and RWBCIS product, claim intimation by the farmer is not a requirement and once a yield loss (or weather related trigger under RWBCIS product) is established basis CCE sample an insurance company cannot assess damage / loss at a farmer level or risk who is insured under the scheme.

Additionally, Ind AS 117 para B27 (g) gives a particular example of contracts which are not insurance contract under the standard i.e. *contracts that require a payment that depends on a climatic, geological or any other physical variable not specific to a party to the contract (commonly described as weather derivatives)*.

The basic cover offered under PMFBY product make claim payments linked to the threshold yield (physical variable) for a given notified crop and this is not specific to each farmer insured under the insured unit but on the average yield assessed on sample basis using CCEs. Similarly, under the RWBCIS product the claim payments are linked to weather related triggers defined over an area-based approach. Payment takes place on occurrence of triggered weather perils and the insurers are required to payout irrespective of the actual loss suffered from the adverse weather event. The PMFBY operational guidelines clearly states that CCEs / weather triggers are proxy indicators and doesn't necessarily imply a given loss at all times for each and every farmer. The schemes have been designed in such a way that the farmer loss condition is not verified for basic cover and can be interpreted from the operational guidelines of the scheme. Increasingly, with adoption of technology, the physical yield assessment undertaken on survey basis is being replaced with image-based assessment (or other non-physical variable e.g. normalized difference vegetation index (NDVI)) through satellites which is expected to further increase the basis risk. Few states are relying completely on use of technology, while others are increasing their reliance on technology. Thus, loss to the individual farmer cannot be assessed by an insurance company for the basic cover offered under the scheme.

Considering the above aspects, one can conclude that PMFBY product and RWBCIS provide coverages which are not linked to the actual losses suffered by each beneficiary of the scheme and hence does not satisfy the definition of insurance contract under Ind AS 117. The PMFBY product and RWBCIS product offering reflects characteristics of financial contracts and needs to be recognized and subsequently measured under Ind AS 109 standards.

Section 2 – Contract Boundary under PMFBY / RWBCIS scheme

As mentioned above, the PMFBY / RWBCIS scheme is implemented by the State Government in-line with the Operational guidelines through a tendering process. The tender document specifies the contract terms and conditions including the cancellation clauses and thus the Certificate of Insurance along with the tender forms the basis which the insurance contract is bound with the implementing insurer. Further, as per the tender terms and conditions an insurer can cancel the contract only under specific set of situations e.g. black-listing / de-empowerment of Insurer by IRDAI or GoI, failure to maintain solvency margin, failure to perform the core responsibilities as per contract by either parties etc. Additionally, termination of agreement by either the insurer or State Government due to any other reason not listed above will attract an additional penalty of up to 5% of the total estimated premium for unexpired period under the tender agreement.

The Ind AS 117 Para 34 sets out the principles for ascertaining the contract boundary conditions - include cash flows during which the entity has obligation to provide insurance contract services. This implies that the contract boundary at the initial recognition shall extend towards the expiration period mentioned in the tender document due to limited cancellation rights of the Insurer as the Insurance company has obligation to provide insurance contract service throughout the tender period.

Accordingly, since the contract boundary is longer than one year, PMFBY / RWBCIS is not automatically eligible for PAA as per Ind AS 117 para 53, and a PAA eligibility test will need to be carried out before the contracts can be measured under PAA.

If tender conditions are modified during the tenure, then insurers do acquire rights to cancel the policy without any material obligations and thus the contract boundary can be re-evaluated during the reporting period.

In respect of reinsurance contract held for the Crop portfolio underwritten by the insurance companies, the reinsurance contracts tenure within the Indian markets are aligned with the tenure of the tenders. However, the contracts typically have an annual review clause which allows them to change the underlying terms of the contract if the performance of the portfolio deteriorates. Thus, aligned with Para 34 of the Ind AS 117 standards, reinsurers have the practical ability to reassess the risks at each policy anniversary and, as a result, can set a price or level of benefits that fully reflects those risks. Thus, the contract boundary in such cases will be annually or equivalent to the tenure at which the review can be undertaken rather than the contract tenure. In the event, that reinsurance contracts do not have any such clauses, the contract boundary would be same as the underlying contract tenure.

Section 3 – Level of Aggregation considerations and onerosity contract testing

As per Para 14 of Ind AS 117 standards, an entity shall identify portfolios of insurance contracts. A portfolio comprises contracts subject to similar risks and managed together. Contracts within a product line would be expected to have similar risks and hence would be expected to be in the same portfolio if they are managed together.

The agriculture insurance scheme currently offers insurance coverage via two different product offerings via principle of “Area based approach” called PMFBY and “parametric based approach” called RWBCIS. The PMFBY product provides insurance coverage in respect of shortfall in crop yield outcomes for crop such as wheat, soya-bean, paddy etc. whereas the RWBCIS product provides coverage basis weather related indices e.g. rainfall, temperature, humidity etc. for crops such as commercial / horticultural crops. Thus, the underlying risks under each of the products are not expected to be similar. Further, in terms of managing the risks, an insurance company under PMFBY needs to co-observe crop cutting experiments (CCEs) or undertake claim surveys in the event of localised losses whereas under RWBCIS the readings from weather station are used to ascertain the claim payouts. Thus, the risks under each of the two products are managed differently. We recommend that the level of aggregation needs to happen for each product separately i.e. PMFBY and RWBCIS.

As described above, an insurance company ascertains pricing for a notified crop within a given cluster at a season level. Thus, a group of farmers sowing the same notified crop within the cluster are considered on collective basis and the whole cluster is managed together i.e. claims management, exposure to similar agro-climatic zones resulting in loss etc. Thus, the onerosity testing needs to be undertaken at each cluster level implemented by the insurance company within a State.

Lastly, the cup-and-cap model is a risk sharing model under PMFBY product offering and thus can be considered within PMFBY product for level of aggregation. Alternatively, if cup-and-cap portfolio forms a material part of the overall crop business an insurance company can choose to model it as a separate group of insurance contract under the PMFBY product level of aggregation.

Section 4 – Role of State / GOI

In India, agriculture is a State subject but forms a key part of the GOI welfare policy given the large part of employment is created around agriculture and its importance to manage inflation. The contours of the crop insurance scheme is designed and governed by the Operational guidelines issued by the Department of Agriculture & Farmer Welfare, Government of India and central government premium subsidies are only provided if the State governments implements an insurance scheme aligned with the Operational Guidelines issued.

Thus, both the State and central government play a facilitating role by subsidizing premiums, scheme administration i.e. issuing notifications on insured crops / areas, insurance coverage etc. GoI/State/UT releases share of premium subsidy as well as claims liabilities under Cup and Cap models (60:130, 80:110) and profit and loss sharing model. Hence, GoI/State/UT has risk participation in these models. The farmer enrolled into the scheme are the ultimate beneficiary and the state government being the master policyholder. However, under 60:130 model and profit and loss sharing model, State/UT and GoI equally share the surplus or losses as per risk participation rules defined in the tender document. Insurance companies are liable to fully discharge their claim liabilities to the farmers even when the loss ratio exceeds the upper threshold and subsequently receive the State/GoI share of claim liability. Under 80:110, State/UT only have the risk participation and GoI has no risk participation.

In these surplus sharing models, as per the tender terms and conditions the state is also a beneficiary under the insurance contract (i.e. receives a quantum of claim payment) if the overall cluster level loss ratio is below a particular lower limit threshold. Thus, within the insurance contracts of surplus sharing model an investment-return service is provided as insurance company is required to repay amounts to the policyholder, other than claims for insured events, this satisfies in some circumstances existence of an investment component in the case of risk sharing model as per the Ind AS standard para 117.

Further, in case of PMFBY surplus contracts the investment component and the insurance component are highly interrelated as the investment component cannot be measured until the insurance component is known. Additionally, lapse or maturity of an insurance component within the PMFBY surplus contract also causes lapse and maturity of the investment component. Thus, one can conclude that the investment component within the PMFBY surplus contract is a non-distinct investment component and need not be separated from the insurance contract at initial recognition.