

Query No. 8

Subject: *Revenue recognition in case of mortgage guarantee company.*¹

A. Facts of the Case

1. A company (hereinafter referred to as the 'company') is incorporated under the provisions of the Companies Act, 1956 and registered as a non-banking financial company (NBFC) with the Reserve Bank of India ('the RBI'). The company is engaged in the business of providing mortgage guarantees (MGs). In addition to being regulated as an NBFC, the company is also governed by the 'Mortgage Guarantee Companies (Reserve Bank of India) Guidelines, 2008', issued by the RBI. The shareholders of the company include National Housing Bank, Genworth Financial Mauritius Holdings Limited, International Finance Corporation and Asian Development Bank.

2. The company was set up with the objective of conducting the business of issuing mortgage guarantees. Mortgage guarantee (also known as mortgage insurance in some parts of the world) is a financial product which compensates lending institutions/ banks/ housing finance companies for losses, to an agreed extent, that may arise when a home owner defaults on a mortgage. In return for issuing mortgage guarantees, the company charges a fee. This fee can be received up-front at the time of issuance of the guarantee or spread over a number of installments and is non-refundable. The pricing of the mortgage guarantee is based on the mix of the portfolio characteristics and historic loan performance. The querist has separately clarified that the company calculates the fee as a percentage of the principal outstanding of the mortgage loan (in respect of which a mortgage guarantee is being issued) on the date from which the mortgage guarantee is applicable to the loan. The company till date has only issued mortgage guarantees where the fee has been received upfront (i.e., single premium). In case the fee is to be received in installments, it is proposed that the fee will be received in equal installments over the first 3 years and will be advised to the lender upfront. Since the fee (that is received in installments) relates to the entire life of the mortgage guarantee, it is intended that the fee would be amortized over the life of the guarantee, in the same manner as the fee that is received upfront. In this regard, the querist has supplied a copy of MG contract for a single upfront fee for the perusal of the Committee.

3. The querist has stated that key concepts, relating to mortgage guarantee business, as defined in the RBI Mortgage Guarantee Guidelines are:

"Mortgage guarantee" means a guarantee provided by a mortgage guarantee company for the repayment of an outstanding housing loan and interest accrued thereon up to the guaranteed amount to a creditor institution, on the occurrence of a trigger event;

"Borrower" means any person or any entity who has been granted a housing loan by any creditor institution or any other entity which may be specified by Reserve Bank of India from time to time;

¹ Opinion finalised by the Committee on 7.7.2016.

"Creditor institution" means a bank or housing finance company; and

"Mortgage guarantee contract" means a tri-partite contract among the borrower, the creditor institution and the mortgage guarantee company, which provides the mortgage guarantee.

4. As per Consultative Document issued by Basel Committee on Banking Supervision in August 2013, *“Mortgage Insurance (MI) is also called mortgage default insurance, mortgage credit insurance, mortgage guaranty insurance, mortgage indemnity insurance, and lenders’ mortgage insurance. MI protects lenders against losses when loans default – i.e. when outstanding debt exceeds the foreclosure proceeds. The borrower pays the insurance premium, but the lender is the policy beneficiary, and the amount of loss coverage is usually capped as a proportion of lost loan principal.”* (Emphasis supplied by the querist.)

5. The querist has stated that the company is obliged to make good credit losses (up to the guarantee cover issued) when the guarantee is invoked by the lending institution (creditor) on the loan being classified as non-performing in the books of the creditor institution. For practical purposes, the loss emergence pattern is built by the company by applying forecasting techniques to historical data of actual loss sustained. The forecasting techniques, inter alia, incorporate economic assumptions, which impact the loss development, such as, unemployment rates, interest rates and expected changes in house prices. These techniques provide a scientific approach to estimate the pattern in which the guarantee loss would materialise and devolve upon the company.

6. The querist has also stated that it is also important to distinguish mortgage guarantees from a more commonly known guarantee product generally issued by banks. Bank guarantees are most often issued by banks to provide assurance that certain financial or commercial obligations of their customer will be met by the customer. Bank guarantees typically have a shorter tenor (as compared with Mortgage Guarantee) of anywhere between 6 months to 36 months. A bank guarantee is issued primarily to protect against risk of non-performance of contractual obligations. The risk cover provided under a bank guarantee is uniform and the assumption is that if the guarantee is invoked, the same becomes a crystallised liability, of the bank’s customer who will repay the same to the bank in the same manner as a funded loan obligation. On the other hand, mortgage guarantee is a financial product intended to be used as a credit risk mitigation tool. The tenor of a mortgage guarantee matches the tenor of the underlying loans and could extend beyond 15 – 20 years. Losses are estimated using stochastic models and based on data of delinquencies in mortgage loans historically.

7. The RBI guidelines also specify that ‘guarantee’ means a contract of guarantee as defined in the Indian Contract Act, 1872 (9 of 1872). However, as per the RBI Notification dated 8th August 2014, mortgage guarantees issued by a mortgage guarantee company may be taken as contingent liabilities for the purpose of calculating the risk weights, and not as financial and other guarantees. The querist has also separately clarified that as per the RBI Guidelines, the mortgage guarantee is considered as an off balance sheet exposure and is recognised as a contingent liability in the financial statements. The same is measured depending on the underlying exposure of the MG firm to the housing loans forming part of the guarantee. For e.g., if on a loan of Rs.100, a mortgage guarantee of 20% cover is issued then

the exposure of the MG Firm will be Rs. 20 (i.e. 20% x Rs.100).

Current accounting guidance on revenue recognition:

8. Recognition of guarantee fee income is one of the key accounting considerations for a mortgage guarantee company which requires addressing of questions as to when and how much of the fee should be recognised as income by the company in an accounting period. The following paragraphs describe the relevant regulatory and statutory guidance on accounting in this regard.

9. Being a mortgage guarantee company (MGC), the company is required to follow the prudential norms issued by the RBI for such companies. As per paragraph 3 (ii) of the Mortgage Guarantee Companies Prudential Norms (Reserve Bank) Directions, 2008 ('the Prudential Norms'), "A mortgage guarantee company shall account the premium or fee on the mortgage guarantee contracts as an *income in the profit and loss account in accordance with the Accounting Standards* issued by the Institute of Chartered Accountants of India. The amount of unearned premium shall be shown as a separate line on the liability side of the balance sheet." (Emphasis supplied by the querist.)

10. Since the prudential norms do not specify any particular basis/method of revenue recognition for premium (or fee) on mortgage guarantee contracts and leave this to be determined as per accounting standards, reference is made to Accounting Standard (AS) 9, 'Revenue Recognition'. According to the querist, as the concept of mortgage guarantee has been newly introduced in India, there is no authoritative guidance or established industry practice on application of the requirements of AS 9 to mortgage guarantee contracts. Hence as is the practice, references may be drawn to acceptable GAAPs and practices in other jurisdictions, to take help on how AS 9 can be evaluated with reference to above.

11. Accounting for fee from mortgage guarantee insurance (similar product) in other jurisdictions

a. The general standard governing revenue is International Accounting Standard (IAS) 18 'Revenue' (Existing standard)/ International Financial Reporting Standard (IFRS) 15 'Revenue from Contracts with Customers' (proposed effective from 1 January, 2018).

b. IAS18 scopes out insurance contracts within the scope of IFRS 4 'Insurance Contracts'. In Canada and Australia, mortgage insurance is treated as an insurance contract, and hence, the revenue accounting for this product is scoped out of IAS 18. Similarly, IFRS 15 (effective from 1 January, 2018) has a scope exclusion for insurance contracts, i.e. contracts within the scope of IFRS 4 'Insurance Contracts' are excluded from IFRS 15.

c. Even though mortgage insurance is considered as an insurance contract under IFRS, there is no specific guidance for revenue recognition for such contracts under IFRS 4.

d. An overview of internationally prevalent revenue recognition practices has been provided by the querist as below:

- *Accounting for mortgage insurance in Canada* –As mentioned earlier, there is

no specific revenue recognition guidance in IFRS 4. Hence, at the time when many entities were adopting IFRS, they continued with prior accounting practices, which are typically based on local/regulatory accounting practices that were previously being followed. In Canada, the Office of the Superintendent of Financial Institutions (OSFI) is the primary regulator and as part of their capital standards, denote how the Unearned Premium Revenue (UPR) should be recognised for mortgage insurance contracts. As per OSFI “*Unless an entity can demonstrate sufficient industry experience to develop their own recognition curve the Company is required to follow the revenue pattern as set-out by OSFI*”. The table provided by OSFI has been attached as Appendix 1 at the end of this document. Some companies like Genworth, Canada have a customized curve today (based on the experience in Canada) that is similar to the curve provided by OSFI.

- ***Accounting for mortgage insurance in Australia*** - As compared to Canada, the Australian regulator (the Australian Prudential Regulation Authority) has not issued any specific guidance on revenue recognition. However, the Australian Accounting Standard Board has issued AASB 1023 which addresses the accounting for ‘General Insurance Contracts’. This standard supplements the lack of guidance in IFRS 4 (adopted as AASB 4) with specific requirements for accounting (in Australia) for these insurance contracts. AASB 1023 states that “*Premium Revenue shall be recognized, over the life of the general insurance contract, in accordance with the pattern of the incidence of risk expected under the general insurance contract*”.
- ***Accounting for mortgage insurance in UK*** - Insurance contracts in UK are governed by FRS 103 (Insurance contracts - Consolidated accounting and reporting requirements for entities in the UK and Republic of Ireland issuing insurance contracts) with effect from 1st January, 2015. Like IFRS 4, FRS 103 does not give any guidance on revenue recognition. Hence, guidance on the insurance contracts premium recognition is provided in the Statement of Recommended Practices (SORP) on accounting for insurance business.

As per SORP (Guidance note issued by the Association of British Insurers), written premiums are recognised as earned premiums over the period of the policy having regard to the incidence of risk. Time apportionment of the premium is normally appropriate if the incidence of risk is the same throughout the period of cover. If there is a marked unevenness in the incidence of risk over the period of cover, a basis which reflects the profile of risk should be used. The proportion of the written premiums relating to the unexpired period of these policies will be carried forward as an unearned premiums provision at the balance sheet date. Accordingly, Genworth in UK recognises premium on the basis of incidence of risk.

- ***Accounting for mortgage insurance in USA*** - There is no authoritative regulatory guidance governing such Mortgage Insurance contracts under US GAAP. Since, there was no specific guidance, industry convention has developed over a period of time, i.e. recognising revenue in relation to incidence of risk/ losses incurred.

The approach followed by the industry *is generally consistent (and not the only basis)* with the revenue recognition guidance contained within U.S. GAAP for warranty

contracts contained in Accounting Standards Codification (ASC) 605-20-25-3, which states: “Sellers of extended warranty or product maintenance contracts have an obligation to the buyer to perform services throughout the period of the contract and, therefore, revenue shall be recognized in income over the period in which the seller is obligated to perform. That is, revenue from separately priced extended warranty and product maintenance contracts shall be deferred and recognized in income on a straight-line basis over the contract period *except in those circumstances in which sufficient historical evidence indicates that the costs of performing services under the contract are incurred on other than a straight-line basis. In those circumstances, revenue shall be recognized over the contract period in proportion to the costs expected to be incurred in performing services under the contract.*”

(Emphasis supplied by the querist.)

12. *Revenue Recognition under Indian context:*

- a. AS 9 states the following with regard to recognition of revenue from services:

“7.1 Revenue from service transactions is usually recognised as the service is performed, either by the proportionate completion method or by the completed service contract method.

- (i) ***Proportionate completion method***—Performance consists of the execution of more than one act. Revenue is recognised proportionately by reference to the performance of each act. The revenue recognised under this method would be determined on the basis of contract value, associated costs, number of acts or other suitable basis. For practical purposes, when services are provided by an indeterminate number of acts over a specific period of time, revenue is recognised on a straight line basis over the specific period *unless there is evidence that some other method better represents the pattern of performance.*
- (ii) ***Completed service contract method***—Performance consists of the execution of a single act. Alternatively, services are performed in more than a single act, and the services yet to be performed are so significant in relation to the transaction taken as a whole that performance cannot be deemed to have been completed until the execution of those acts. The completed service contract method is relevant to these patterns of performance and accordingly revenue is recognised when the sole or final act takes place and the service becomes chargeable.”

(Emphasis supplied by the querist.)

Further, as per an illustration to AS 9:

“3. *Financial service commissions*

A financial service may be rendered as a single act or may be provided over a period of time. Similarly, charges for such services may be made as a single amount or in stages over the period of the service or the life of the transaction to which it relates. Such charges may be settled in full when made or added to a loan or other account and settled in stages. The recognition of such revenue should therefore have regard to:

- (a) whether the service has been provided “once and for all” or is on a “continuing” basis;
- (b) the incidence of the costs relating to the service;
- (c) when the payment for the service will be received. In general, commissions charged for arranging or granting loan or other facilities should be recognised when a binding obligation has been entered into. *Commitment, facility or loan management fees which relate to continuing obligations or services should normally be recognised over the life of the loan or facility* having regard to the amount of the obligation outstanding, the nature of the services provided and the timing of the costs relating thereto.”
(Emphasis supplied by the querist.)

b. Paragraph 20 of IAS 18, inter alia, states that “**when the outcome of a transaction involving the rendering of services can be estimated reliably, revenue associated with the transaction shall be recognised by reference to stage of completion ...**”. Paragraph 24 of IAS 18, inter alia, states, “The stage of completion of a transaction may be determined by a variety of methods. An entity uses the method that measures reliably the services performed. Depending on the nature of the transaction, the methods may include:

- (a) surveys of work performed;
- (b) services performed to date as a percentage of total services to be performed; or
- (c) the proportion that costs incurred to date bear to the estimated total costs of the transaction. Only costs that reflect services performed to date are included in costs incurred to date. Only costs that reflect services performed or to be performed are included in the estimated total costs of the transaction.” (Emphasis supplied by the querist.)

c. While applying the above referred principles of AS 9, a key accounting consideration is the determination of the pattern in which revenue should be recognised. The performance obligations associated with a mortgage guarantee contract continue during the lifetime of the guarantee and do not cease at any particular point of time unless the guarantee is exhausted or cancelled. As such, the revenue arising on account of mortgage guarantee fee should be amortized over the life of the guarantee using proportionate completion method, rather than at a point in time (whether upfront or under completed service contract method).

With respect to proportionate completion method, the standard provides that “The revenue recognised under this method would be determined on the basis of contract value, associated costs, number of acts or other suitable basis. For practical purposes, when services are provided by an indeterminate number of acts over a specific period of time, revenue is recognized on a straight line basis over the specific period *unless there is evidence that some other method better represents the pattern of performance.*”
(Emphasis supplied by the querist.)

There can be a view that under Indian GAAP, the period of guarantee and the net amount guaranteed should form the basis of revenue recognition. In other words, the revenue should be recognised either on a straight-line basis (if the amount of exposure on

account of amount guaranteed remains uniform over the guarantee period) or based on proportion of outstanding guarantee obligation at the end of each year. Thus, if in a contract, the repayment terms are uniform and hence the guaranteed amount reduces uniformly, the guarantee fee will be recognised in the proportion of guarantee outstanding at the end of each reporting period, i.e., in a declining proportion basis.

However, it is important to consider that *in a mortgage guarantee contract, the risk cover provided is not uniform*. Though the company is obliged to make good credit losses when the guarantee is invoked, the risk of loss (i.e. the loss emergence pattern) does not mirror a uniform and straight line pattern but instead arises in an unequal pattern.* Hence, the revenue should be amortised based on the loss emergence curve. In other words, the measure of performance can be considered to be the pattern of expected loss rather than period of guarantee or the net amount guaranteed. (Emphasis supplied by the querist.)

(*Loss emergence typically peaks between the third year and the fifth year of origination of a loan. This is in contrast to the guarantee obligation which reduces as per the terms of the Mortgage Guarantee (MG) Contract and the behavioral characteristics of individual home loans backed by MG.)

It may be noted that in following the loss emergence approach, the company would take into account the impact of external factors such as unemployment rates, interest rate changes and volatility in the housing prices in order to provide for a scientific and systematic approach for revenue recognition. In order to ensure that this accounting treatment is consistent with the changes in economic circumstances over time, the loss emergence assumptions, as well as the pattern in which expenses are incurred would need to be reviewed and adjusted periodically, based on the company's experience and updated loan credit history (of mortgage loans).

- d. Thus, on an overall consideration of the above, the company believes that revenue can be recognised with reference to pattern of estimates of losses incurred. This is also consistent with the approach followed internationally (as summarised earlier).

13. Overall analysis:

- a. Mortgage guarantee as a product in India is new. The business is regulated by the RBI as a NBFC, which also requires the company to follow Accounting Standards issued by the ICAI. AS 9 does not have any explicit guidance for accounting for mortgage guarantee. However, it requires commissions charged for arranging loans/other facilities to be recognised over the period of the loan, having regard to obligations outstanding, nature of services provided and timing of costs related thereto.
- b. As per the RBI, mortgage guarantee is a guarantee under the Indian Contract Act.
- c. Both under US GAAP and IFRS, various jurisdictions are amortising revenue using loss emergence pattern over the period of the mortgage insurance contract. Such accounting is primarily driven *either due to requirement of the respective insurance*

regulator and/ or industry practices (including guidance for accounting for warranty contracts).

- d. Since mortgage guarantee is a similar product to mortgage insurance, and given the guidance in AS 9 (in relation to timing of costs, etc.), guidance can be borrowed from international practices.
- e. The performance obligations associated with a mortgage guarantee contract continue during the lifetime of the guarantee and do not cease at any particular point of time unless the guarantee is exhausted or cancelled. As such, the revenue arising on account mortgage guarantee fee should be amortized over the life of the guarantee (and not recognised upfront).
- f. Since the loss emergence** in connection with the guarantee do not mirror a uniform and straight line pattern and they arise in an unequal pattern; revenue should not be amortised on a straight line basis. The amortisation should be based on the loss emergence curve/pattern.

(**Estimation of loss emergence is explained in Appendix 2)

- g. In case the fee can be amortised as per loss emergence curve, the method of amortisation should take into account the impact of external factors such as unemployment rates, interest rate changes and volatility in the housing prices in order to provide for a scientific and systematic approach for revenue recognition. In order to ensure that this accounting treatment is consistent with the changes in economic circumstances over time, the loss emergence assumptions would need to be reviewed and adjusted periodically, based on the companies' experience and updated loan credit history (of mortgage loans).

B. Query

14. In light of the analysis mentioned above and in accordance with prevalent international revenue recognition practices (as mentioned in paragraph 11), the company believes that revenue should be recognised as per the pattern of loss emergence. This, in the opinion of the querist, is the most appropriate approach for the MG business in India. Hence, the querist has requested the concurrence of the Expert Advisory Committee in this regard.

C. Points considered by the Committee

15. The Committee notes that the basic issue raised in the query relates to timing of recognition of mortgage guarantee fee. The Committee has therefore, considered only this issue and has not examined any other issue that may arise from the Facts of the Case, such as, recognition of liability in respect of the mortgage guarantees issued at the reporting date, etc.

16. At the outset, the Committee notes that internationally, mortgage guarantee contracts are considered as insurance contracts. The Committee further notes that for revenue recognition under mortgage guarantee contracts, international practices do not follow any specific accounting literature, primarily due to such transactions being scoped out of International standard on

revenue (i.e., IAS 18) and that the International practices/conventions of revenue recognition have largely developed over a period of time with a sufficient and reliable data related to incidence of risks in relation to guarantee business being available over a period. However, the Committee notes that since the issue under consideration has been raised from the perspective of GAAPs prevailing in India and since the issue is in respect of revenue recognition, the principles enunciated in this regard under AS 9, 'Revenue Recognition', should be applied to the mortgage guarantee contract undertaken by the company in the extant case. In this regard, the Committee notes that AS 9 does not have a scope exclusion similar to IAS 18. Since the company in the extant case is an NBFC registered with the RBI, the Committee is of the view that revenue recognition of mortgage guarantee fee from mortgage insurance contracts should be governed by AS 9 only. Accordingly, the Committee notes the requirements of Accounting Standard (AS) 9, 'Revenue Recognition', notified under the Companies (Accounting Standards) Rules, 2006, which provide as follows:

“7.1 Revenue from service transactions is usually recognised as the service is performed, either by the proportionate completion method or by the completed service contract method.

- (i) **Proportionate completion method**—Performance consists of the execution of more than one act. Revenue is recognised proportionately by reference to the performance of each act. The revenue recognised under this method would be determined on the basis of contract value, associated costs, number of acts or other suitable basis. For practical purposes, when services are provided by an indeterminate number of acts over a specific period of time, revenue is recognised on a straight line basis over the specific period unless there is evidence that some other method better represents the pattern of performance.
- (ii) **Completed service contract method**—Performance consists of the execution of a single act. Alternatively, services are performed in more than a single act, and the services yet to be performed are so significant in relation to the transaction taken as a whole that performance cannot be deemed to have been completed until the execution of those acts. The completed service contract method is relevant to these patterns of performance and accordingly revenue is recognised when the sole or final act takes place and the service becomes chargeable.”

“3. *Financial service commissions*

A financial service may be rendered as a single act or may be provided over a period of time. Similarly, charges for such services may be made as a single amount or in stages over the period of the service or the life of the transaction to which it relates. Such charges may be settled in full when made or added to a loan or other account and settled in stages. The recognition of such revenue should therefore have regard to:

- (a) whether the service has been provided “once and for all” or is on a “continuing” basis;

- (b) the incidence of the costs relating to the service;
- (c) when the payment for the service will be received. In general, commissions charged for arranging or granting loan or other facilities should be recognised when a binding obligation has been entered into. Commitment, facility or loan management fees which relate to continuing obligations or services should normally be recognised over the life of the loan or facility having regard to the amount of the obligation outstanding, the nature of the services provided and the timing of the costs relating thereto.”

From the above, the Committee notes that when a number of activities are performed over a period of time revenue needs to be recognised over a period proportionately by reference to performance of each act considering the contract value, associated costs, number of acts, etc. However, for practical purposes revenue is recognised on a straight line basis over the specified period of time unless there is evidence that some other method better represents the pattern of performance. Further, with regard to financial service commissions, for example, in respect of loan management fee, AS 9 provides that revenue should be recognised over the life of the loan or facility having regard to the amount of the obligation outstanding, the nature of the services provided and the timing of the costs relating thereto. With regard to the pattern of performance in the extant case, the Committee notes that the performance is the assurance or guarantee provided by the company to compensate for losses incurred on outstanding housing loan obligations over the period of loan obligations. Thus, as the loan obligations reduce over the period of the guarantee, guarantee obligations of the company also reduce and that reflects the pattern of performance of the company in the extant case. Therefore, the Committee is of the view that pattern of performance in the extant case is directly linked with outstanding obligations amount over the guarantee period. Further, the Committee also notes that mortgage guarantee fee received is calculated with reference to the principal outstanding of the mortgage loan and is being received upfront without any linkage to the period in which the losses or costs are expected to be incurred. Thus, the receipt of fee is also not linked with the period in which the associated costs/losses are incurred over a period. Hence, the Committee is of the view that the revenue in the extant case should be recognised over the period of guarantee in proportion to the outstanding guarantee obligations.

D. Opinion

17. On the basis of the above, the Committee is of the opinion that revenue in the extant case should be recognised over the period of guarantee in proportion to the outstanding guarantee obligations, as discussed in paragraph 16 above and therefore, the Committee does not concur with the view of the querist to recognise revenue as per the pattern of loss emergence.

Appendix 4-A: Capital Required: Mortgage Insurance

4. Unearned premiums

- a) An insurer shall maintain unearned premiums on the scales prescribed below, unless OSFI is satisfied that there is sufficient historical loss emergence data to reliably identify the loss emergence pattern. For business insured prior to January 1, 2009, the difference between the two amounts, on an after-tax basis, is to be deducted from capital available.

Completed Policy Duration in Years	Unearned Premium Reserve as Percent of Single Premium Policy Reserve in Years					
	5 or less	over 5 and less than 10	over 10 and less than 15	over 15 up to 25	over 25 up to 30	over 30 up to 40
0	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
1	75.00%	80.00%	85.00%	88.00%	88.50%	89.00%
2	50.00%	60.00%	65.00%	70.00%	70.50%	71.00%
3	25.00%	40.00%	45.00%	52.00%	52.50%	53.00%
4	12.50%	20.00%	30.00%	35.00%	35.50%	36.00%
5	0.00%	10.00%	18.00%	23.00%	23.50%	24.00%
6		5.00%	10.00%	14.00%	16.00%	16.50%
7		3.00%	6.00%	8.00%	12.00%	12.25%
8		2.00%	4.00%	6.00%	8.00%	8.25%
9		1.00%	2.00%	3.00%	5.00%	5.50%
10		0.00%	1.50%	2.50%	3.00%	3.50%
11			1.00%	2.00%	2.50%	2.75%
12			0.50%	1.50%	2.00%	2.10%
13			0.25%	1.00%	1.50%	1.70%
14			0.125%	0.50%	1.00%	1.30%
15			0.000%	0.40%	0.50%	0.90%
16				0.35%	0.45%	0.70%
17				0.30%	0.40%	0.65%
18				0.25%	0.35%	0.50%
19				0.20%	0.30%	0.40%
20				0.15%	0.25%	0.35%
21				0.12%	0.22%	0.32%
22				0.09%	0.19%	0.29%
23				0.06%	0.16%	0.26%
24				0.03%	0.13%	0.23%
25				0.00%	0.10%	0.20%
26					0.08%	0.18%

Loss emergence curve

Globally, revenue is recognised on the basis of pattern in which losses are incurred.

- a. India does not have any loss distribution data for various vintages for one or more lenders across life of loan pools of various origination years in its public domain information. The Company intends to follow either one of the following two options for determining the loss emergence pattern/ loss curve.
- b. As a first option, since, no such data is available for the India Mortgage Industry, the Company proposes to follow **the 180+ DPD** (loans crossing 180 delinquency bracket), as a surrogate for arriving at the loss emergence curve. The company has engaged with Indian credit bureau CIBIL, for tracking the delinquency pattern of mortgage portfolio in last 7 years and plans to leverage the trend of 180+ derived from CIBIL data as a proxy for estimating the Indian loss emergence pattern. *The company also intends to get this evaluated with the help of an actuary.*
- c. As a second option, the Company intends to use a 10-yr loss emergence curve being used by Genworth, UK. Per the Company, this is so because, standard mortgage term and interest rate structure in U.K is similar in India (Standard mortgage term is 20 years and interest rate structure is Variable). Also, the UK loss emergence curve is conservative and peaks earlier than other economies (U.S; Mexico, Canada, Japan & Australia)
- d. Also, the general experience on borrower behavior is that while the loan tenor is 15-20 years, most prepay within 10-12 years, since the pre-payment penalties outweigh the interest costs. The loss emergence curve for the business considers the aspect of pre-payment of loans in a portfolio, determined considering an average life of the loan of 10 years.
- e. Residential Mortgage Backed Securities (RMBS, or mortgage loans) pool data observed in India. Based on analysis of RMBS pools rated by ICRA, the company observed that almost 83% of pool is amortised in 7-8 years leading to the conclusion that average life of pools in India is 10 years.
