Report of the Committee on the Development of Housing Finance Securitisation Market

September 2019

Letter of Transmittal

5th September, 2019

Shri Shaktikanta Das
Governor
Reserve Bank of India
Mumbai

Dear Sir:

We hereby submit the report of the Committee on the Development of Housing Finance Securitisation Market.

Yours sincerely,

Harsh Vardhan
Chairman

Bindu Ananth
Member

Chandan Sinha
Member

Pranjul Bhandari
Member

Sanjaya Gupta
Member

Encl: As above

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Terms of Reference of the Committee

- To review the existing state of mortgage backed securitisation in India, including the regulations in place, and to make specific recommendations on suitably aligning the same with international norms;
- To analyse the prevalent structures for mortgage backed securitisation transactions in India including legal, tax, valuation, and accounting related issues, and suggest modification to address requirements of both originators and investors;
- To identify critical steps required for standardisation of mortgage backed securitisation practices such as conforming mortgages, mortgage documentation standards, digital registry for ease of due diligence and verification by investors;
- To assess the role of various counterparties, including the servicers, trustees, rating agencies, etc in the securitisation process and suggest measures required, if any to address the key risk viz structural, fiduciary, and servicer risk;
- To recommend specific measures for facilitating secondary market trading in mortgage securitisation instruments, such as broadening investor base, and strengthening market infrastructure ;
- To analyse inter-linkages between securitisation and other related financial market segment. Instruments and recommend necessary policy interventions to leverage these inter-linkages; and
- To identify any other issue germane to the subject matter and make recommendations thereon

Committee Members

Dr Harsh Vardhan, Senior Advisor, Bain & Co
Chair

Shri Chandan Sinha, Additional Director, CAFRAL
Member

Ms Bindu Ananth, Chair & Trustee, Dvara Trust
Member

Ms Pranjul Bhandari, Chief Economist India, HSBC
Member

Shri Sanjaya Gupta, MD & CEO, PNB Housing Finance Ltd
Member

Shri Naresh Takkar*, Former MD & CEO, ICRA
Member

The Committee held 7 meetings between 12 June and 30 August, 2019

(*Shri Takkar did not attend any meetings after the second meeting of the Committee)

Acknowledgements

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- K Chakravarty of the National Housing Bank

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Abbreviations

ABS	Asset-Backed Securitisation/Securities
AFS	Available for Sale
AIF	Alternative Investment Fund
ALM	Asset Liability Management/Asset Liability Mismatch
ARC	Asset Reconstruction Company
AUM	Assets under Management
BCBS	Basel Committee on Banking Supervision
CCIL	Clearing Corporation of India Ltd.
CDS	Credit Default Swap
CERSAI	Central Registry of Securitisation Asset Reconstruction And Security Interest Of India
CLTV	Combined Loan-To-Value (Ratio)
CMBS	Commercial Mortgage-Backed Security
CRT	Credit Risk Transfer
DA	Direct Assignment
DTI	Debt-to-Income
EIS	Excess Interest Spread
EPFO	Employees' Provident Fund Organisation
EWS	Economically Weaker Section
FHFA	Federal Housing Finance Agency
FHLMC	Federal Home Loan Mortgage Corporation
FIMMDA	Fixed Income Money Market and Derivatives Association Of India
FLCE	First Loss Credit Enhancement
FNMA	Federal National Mortgage Association
GFC	Global Financial Crisis
GNMA	Government National Mortgage Association
GNPA	Gross Non-Performing Asset
GSE	Government-Sponsored Enterprises
GST	Goods and Services Tax
HFC	Housing Finance Company

HTM	Held-to-Maturity
InvIT	Infrastructure Investment Trust
IRDAI	Insurance Regulatory and Development Authority of India
KHFC	Korea Housing Finance Corporation
LAP	Loan Against Property
LIG	Low Income Group
LTV	Loan-to-Value
MBS	Mortgage-Backed Securitisation/Securities
MGP	Mortgage Guarantee Programme
MHP	Minimum Holding Period
MIG	Middle Income Group
MRR	Minimum Retention Requirement
NBFC	Non-Banking Finance Company
NHB	National Housing Bank
NSE	National Stock Exchange
NSEL	National Spot Exchange Limited
OTC	Over-the-Counter
PFRDA	Pension Fund Regulatory and Development Authority
PGB	Profits and Gains from Business
PTC	Pass-through Certificates
QM	Qualified Mortgage
PTI	Payment-to-Income
RBI	Reserve Bank of India
REIT	Real Estate Investment Trust
RMBS	Residential Mortgage-Backed Security
SARFAESI	Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest
SEBI	Securities Exchange Board of India
SLCE	Second Loss Credit Enhancement
SPV	Special Purpose Vehicle
TC	Titularizadora Colombiana, Colombia
UMPD	Uniform Mortgage Data Program

Chapter 1: Executive Summary & List of Recommendations

1. Housing development and democratised home ownership are important economic and social policy objectives in India. Economic development and rising per capita income has created a new aspirational India. Owning a home is an essential part of Indian aspirations. Housing is also one of the key priority areas for governments, both at the Centre and the States, since the Independence and will continue to remain so. Housing development is a key driver of broader economic and community development, employment creation, asset creation, and wealth accumulation.
2. Despite policy focus and sustained government efforts, India still suffers from a housing shortage that could increase with a rising population. Analyst and Government of India estimates suggest that India will need anywhere between 8 crore to 10 crore additional housing units by 2022; the costs of building these additional units could be from ₹100 lakh crore to ₹115 lakh crore. To meet the ambitious target of 'Housing for All' by 2022, enhanced efforts will be needed on issues that relate to housing, as also those that relate to finance for housing.
3. India has predominantly private ownership of housing (i.e. the state does not provide it). Buying a house is the largest expenditure for most homeowners and hence needs access to credit. Increasing home ownership will require wider and easier access to credit, i.e. loans for home buying. Presently, in India, housing finance companies (HFCs) and commercial banks are the main providers of home loans. For these providers to be able to meet the growing demand for home loans, they must have funding (or liability) sources that keep up with the growth of loans. Banks' main funding source is deposits (time and demand) that they use to mobilise household savings. HFCs, on the other hand, are wholesale funded in that they rely primarily on banks and, to some extent, on debt capital markets for sourcing liabilities. Refinance provided by the National Housing Bank (NHB) is also a source of funding, especially for smaller HFCs.
4. The home loan business of HFCs is highly concentrated with the top five HFCs accounting for over 85 per cent of the loans. These large HFCs have access to bond markets in addition to banks' borrowing and refinance as their source of funding. However, of the hundred or so HFCs, those beyond the top ten are almost entirely reliant on banks and NHB refinance for funding. These smaller HFCs play a critical role in providing home loans to economically weaker sections in dispersed geographies. In order for the home loan business to grow, lenders, especially the small and medium sized HFCs, will need access to a diverse set of capital pools to source funding.

5. Home loans have a unique characteristic that creates challenges for the lenders. They have long maturity that can go up to 30 years. For the lender, such long maturity assets need matching maturity liabilities to avoid the asset liability mismatch problem. Most of the funding sources of banks and HFCs have maturity of up to five years. Growth of home loans, thus, presents a growing, structural asset liability management (ALM) challenge for the lenders. In addition to being a source of funding, securitisation could be an instrument that allows lenders to address, at least partially, the ALM challenge.
6. Securitisation involves pooling of loans and selling them to a special purpose vehicle (SPV) which then issues securities called pass-through certificates (PTCs) backed by the loan pool. For lenders of home loans, securitisation would involve pooling of home loans. Securitisation is a mechanism to convert illiquid loans on the lenders' balance sheet into tradeable securities. Creation of tradeable securities allows wider pools of capital, especially those that have longer maturity liabilities (e.g. insurance and pension funds) to invest in housing loans. A well-developed securitisation market can emerge as a reliable complement to other sources of funding for home loan lenders. Experience from countries with developed securitisation markets shows that securitisation tends to be countercyclical; volumes go up when liquidity in the overall capital markets is low and vice versa. A well-developed securitisation market can thus reduce volatility in funding for lenders.
7. The Reserve Bank of India (RBI) provides regulatory oversight over securitisation transactions in India. It issued guidelines in 2006 and 2012 that together define the regulatory framework for securitisation. These guidelines cover two types of transactions within the ambit of securitisation – direct assignment (DA) and pass through certificates (PTC). The common feature of these two types of transactions is that they both involve pooling of loans and selling them to a counterparty, therefore transferring credit risk. However, in case of DA, no intermediary (ie an SPV) is involved nor are any securities issued. Thus, DA is more in the nature of a 'loan sale' and will not be considered as securitisation as per the most widely accepted definition.
8. Securitisation volumes in India have grown significantly since 2006 when RBI issued its first securitisation guidelines. The total volume of securitisation has grown from ₹23,545 crore in 2006 to ₹266,264 crore in 2019. The growth, especially in the last decade, has been dominated by DA transactions, and PTC share of the total volume in 2019 was just about a quarter. The skew towards DA is even stronger in home loans where less than 10 per cent of the home loan securitisation transactions (~two per cent of all securitisation transactions) by volume are PTC.

9. Characteristics of a DA model dominated securitisation is that most transactions are customised, bilateral transactions where the originator and the investor engage in extensive discussions and diligence on the loan pools that are securitised. Such customised, bilateral transactions rule out the possibility of 'arm's length' capital pools (eg mutual funds, insurance, and pension funds) from participating. Further, information about the transactions (valuation, pool performance, prepayment levels, etc) remains in the private domain and is not available to market participants. For wider pools of capital to participate in securitisation, the transaction has to be efficient and transparent.
10. Review of the status of securitisation for housing finance reveals some clear priorities for its development - (1) Banks represent a very large capital pool, which will remain very important for housing finance securitisation. However, it is important for the overall development of the securitisation market to balance banks' participation between the direct assignment (DA) model and the pass-through certificate (PTC) model (2) banks' pursuit of securitisation is currently motivated primarily by the need to acquire priority sector compliant loan pools. For broader development of securitisation, capital pools must have economic incentives beyond just regulatory compliance (eg the priority sector lending obligations) and should invest in housing loan pools of all types (3) investor base for housing finance securitisation must be broadened, especially to include pools with longer maturity funds such as pension and insurance.
11. Enhancing efficiency of securitisation transaction requires elimination or minimising of transaction costs. These costs arise from several sources including legal and regulatory requirements, activities and documentation, structure of the transaction itself, uncertainty in taxation, accounting standards, etc. In order to reduce the transaction costs, all these issues have to be carefully assessed making sure that any steps taken to reduce the transaction costs do not increase risks.
12. Lack of transparency in any transaction is an outcome of lack of standardisation and inadequate disclosures. As discussed earlier, securitisation in India hitherto has been dominated by customised, bilateral DA transactions that have very little standardisation and almost no disclosures. Lack of standardisation is also prevalent in the underlying home loan business where the documentation and the data related to the loans vary greatly across lenders. Development and scaling up of securitisation will depend on standardisation of the process, the documents, the data, and the disclosures related to the transaction.
13. Recent decision of moving the regulatory functions for HFCs from the NHB to RBI would, over the course of time, align and converge regulatory framework

for banks and HFCs related to the home loan business. It will also provide an opportunity to take significant steps towards standardisation of the securitisation process across banks and HFCs.

14. The perspective of enhancing efficiency and transparency of securitisation transaction guided the Committee's thinking. It looked at the entire life cycle of the transaction and all the parties involved in it. The recommendations are divided into three buckets - those related to the originator of the transaction, the investor in the transaction, and some enablers that do not directly impact securitisation but can help it develop.

The list of the recommendations is below:

I. Originator-related Recommendations

1. Stamp Duty

   (a) The Central government can exempt a mortgage-backed securitisation transaction from Stamp Duty in the same manner that assignment stamp duty towards asset reconstruction companies (ARCs) and stamp duty for factoring transactions (which also entail assignment of receivables) have been exempt; or

   (b) Stamp duty on assignment of mortgage pools in a securitisation should be standardised and capped at a reasonable level across all states.

2. Registration Requirements:

   (a) The Central Government can exempt the transfer of mortgage debt from compulsory registration under the Transfer of Property Act, 1882 and the Registration Act, 1908 based on the rationale that the mortgage loans are essentially movable assets unlike the underlying security and hence transferring them should not require registration as the underlying mortgages are, wherever mandatorily required, anyway registered.

   (b) In order to ensure that public records are maintained for such exempt transactions, a requirement to register such transactions through a digital registry such as Central Registry of Securitisation Asset Reconstruction and Security Interest of India (CERSAI) with a nominal registration fee can be considered.

3. Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) benefit for enforcing security interest should be extended, through a notification, to securitisation trustee in a mortgage-backed securitisation transaction and its agents (for collection).

4. Regulatory treatment for DA and PTC should be distinct with separate guidelines prescribed for DA and PTC transactions. Guidelines on securitisation should apply only to PTC transaction and not DA transactions, which should not be treated as securitisation.

5. Regulatory treatment should be distinct for mortgage-backed securitisation (MBS) and other asset-backed securitisation. RBI should issue clear and separate guidelines for mortgage-backed securitisation.

6. Assigned assets should be eligible for securitisation by the assignee as long as the underlying mortgage pool satisfies all the other relevant regulatory conditions for securitisation.

7. For mortgage-backed securitisation, the minimum holding period should be reduced to six months/six-monthly instalments (permanently).

8. For mortgage-backed securitisation, the minimum retention requirement (MRR) should be reduced to five per cent or equity (non-investment grade) tranches, whichever is higher. Any first loss credit enhancement provided by the originator will be included in the MRR. If the equity tranche and credit enhancement together are less than five per cent, then the difference must be held *pari passu* in other tranches.

9. Home loans pricing should be linked to an external, objectively observable benchmark (such as the repo rate). Lenders should be mandated to publicly disclose the external benchmark that is used to price floating rate loans and the periodicity of repricing.

10. For mortgage-backed securitisation, first reset in credit enhancement should be allowed at 25 per cent of repayment of the underlying pool and subsequent reset at every 10 per cent further repayment.

11. It would be prudent to implement Basel III guidelines for securitisation exposures along with the rest of the Basel III package as and when it is implemented in India, after understanding the implications of the revised risk

weight prescriptions that continue to rely on external ratings, through an impact analysis.

12. RBI should align its securitisation guidelines to the standards set by IndAS. Specifically, the guidelines related to the accounting for upfront profits in securitisation transactions should be aligned.

13. RBI should continue to use its own standards of true sale to determine de-recognition for the purposes of computing capital requirement for the originator, even if under IndAS the assets are not de-recognised.

14. The post securitisation risk capital requirements for the originators should be capped at a level that it would have to maintain if the underlying pool had not been securitised.

15. Section 115JB of the Income Tax Act, 1961 should incorporate a carve-out in respect of EIS recognised as income as per IndAS; instead, such income should be deemed to be recognised in the books over a period of time until the transaction is complete and the exact extent of EIS is known.

16. The tax administration may issue a circular clarifying that originators, as hitherto, may be allowed to offer EIS to tax on the basis of the revenue recognition schedule provided.

17. The tax administration may also issue a circular clarifying that no part of EIS is to be treated as servicing fees and hence attract GST.

II. Investor related recommendations

18. Banks should be allowed to classify mortgage-backed securities with the original maturity of over a predefined threshold (eg five years) or as per the declared intent at the time of acquiring the securities, under the Held to Maturity (HTM) category.

19. A separate and specific limit of five per cent should be allowed for MBS in the provident fund, pension fund and insurance investment guidelines. EPFO, PFRDA, and IRDAI should issue notifications for these new limits.

20. Regulatory directions on Repurchase Transactions (Repo) should include PTCs issued through a mortgage-backed securitisation transaction as eligible securities.

21. Credit Default Swap (CDS) guidelines should include PTCs issued in a mortgage-backed securitisation transaction as eligible reference obligation.

22. Income received by the securitisation trustee should continue to be exempt from income-tax.

23. Investments in the PTCs should be regarded as having been made in debt instruments and tax treatment on receipts from PTCs should be consistent with nature of receipts; ie interest should be taxed as per the applicable provisions of the Income Tax Act, 1961 and principal repayments should remain untaxed (since there is no income element involved).

24. PTCs issued in mortgage-backed securitisation should be on par with corporate bonds. As with such bonds, interest payments made to resident investors in listed PTC should not be liable for tax withholding. Interest payments to non-resident investors in PTC should be aligned with the tax withholding rate that applies to interest income earned by non-resident holders of units of Real Estate Investment Trusts or Infrastructure Investment Trusts (which is five per cent currently).

25. PTCs issued in mortgage-backed securitisation should be mandatorily listed if the securitisation pool is larger than ₹500 crore.

26. Financial sectors regulators should prescribe standardised methods for valuation of PTCs of mortgage-backed securitisation that are based only on the characteristics and the performance of the pool and are not influenced by the financial status of the originator.

III. Enabler Recommendations

27. Any law for resolving bankruptcy of financial firms must ensure that the assets underlying a securitisation transaction, as well as any exposures in the form of credit enhancement, should be bankruptcy remote and not become a part of firms’ liquidation or resolution process under the law.

28. Standardisation:

    a) Loan documentation must be standardised for housing loans. Documents for the three alternative forms of underlying mortgages (equitable mortgage that is registered, equitable mortgage that is not registered, and registered (legal) mortgage) should be standardised and adopted by all lenders

    b) Housing loan related data and the format of capturing that data must be standardised so that aggregation of this data becomes easy for the purpose of creation of loan pools

    c) Minimum standards for loans qualifying to be securitised must be defined. Loans conforming to these standards would be eligible to be pooled for securitisation.

29. Loan servicing process should be standardised and be adapted by all mortgage lenders. A Master Servicing agreement describing the standardised servicing process should be developed and adhered to by all lenders.

30. NHB should undertake efforts to establish the loan origination standards (at least for the affordable housing loans) on a priority basis and set up the infrastructure for obtaining and disseminating pool performance data for all securitisation transactions.

31. An intermediary to promote housing finance securitisation with the primary functions of standard-setting and market making should be established by NHB.

Chapter 2: Overview of Housing and Housing Finance

I. Introduction

Housing is a fundamental need of human existence. It is one of the key priority areas for governments, both at the Centre and the States, since the Independence and will continue to remain so. Housing development is a key driver of economic and community development, jobs, and wealth accumulation.

A house is not merely a place to live and build a life; it is also one of the most significant assets for a family. An investment in a house roots a family to a location, giving them a significant stake in the economic and social development of the local area. The house can also be an appreciating asset and can create a wealth-effect allowing families to stretch themselves somewhat in times of need or increase in consumption.

It is important to recognise that housing policies of the day can have a significant bearing on the trajectory of their prices and hence on the relative incentives and security coverage for various stakeholders like owners, lenders, builders, etc.

The development of a housing and housing finance market entails the conversion of a physical unit of infrastructure into a bundle of economic rights and liabilities that are standardised. The standardisation of economic agreements and legal architecture can lead to the creation of a tradeable market in such rights and liabilities. The rights in a property can create significant economic value and allow various players like lenders, tenants, service providers, etc. to take economic interest in a property. Standardised loan agreements also allow pooling, sharing and diversification of risks by bringing together different types of borrowers in a portfolio. This reduces the costs of ownership and increases the purchasing ability, as lenders have comfort in financing home-equity owners.

II. Current Status of Housing in India

Like any other market, housing comprises many segments that have their unique characteristics and requirements. The various segments of housing, in the context of India, are commonly defined as ‘Economically Weaker Section’ (EWS), ‘Low Income Group’ (LIG) and ‘Middle Income Group (MIG) and above’ (MIG+). These segments are typically defined either with the income range of the principal home-owner or the loan value taken; the two variables tend to be correlated. The typical EWS, LIG and MIG+ segments have annual incomes of up to ₹three lakh, between ₹three lakh and ₹three lakh, and above ₹six lakh, respectively. The loan value cut-off in each segment is ₹10 lakh, between ₹10 lakh and ₹25 lakh, and above ₹25 lakh, respectively. This segmentation also provides a good sense of the typical profile of the borrower/homeowner in each category.

RBI’s definition of a housing loan to qualify as priority sector lending is ‘Loans to individuals up to ₹35 lakh in metropolitan centres (with a population of 10 lakh and above) and loans up to ₹25 lakh in other (non-metro) centres for purchase/construction of a dwelling unit per family, provided the overall cost of the dwelling unit in the metropolitan centre and at other centres does not exceed ₹45 lakh and ₹30 lakh, respectively.'

The current housing finance market in terms of value and numbers of houses has two divergent segments in terms of value and numbers. The total value of housing finance is large in the high-value segment that has relatively low numbers of houses while the very large number of houses in the informal or low-value housing tend not to command large market value. The total value of housing in India is estimated to be ~₹150 lakh crore, which is far greater than the market capitalisation of equity markets. Housing continues to remain one of the largest investment avenues for the citizens of India.

In spite of its large numbers, the current housing base does not meet housing needs of all citizens of India leaving many of them in either poor-quality housing, or in some cases, without housing altogether. The shortage of housing is material both in terms of number of houses and the value of housing as detailed in Table 1. The stock of housing in India requires significant upgrades especially as incomes rise with economic growth. Poor or non-justiciable legal and economic rights to the property can lead to shortage and poor quality of housing.

Table 1: Shortage of Housing Units in India

	2007	2012
Shortage and requirement (mn)		
EWS	21.8	10.6
LIG	2.9	7.4
MIG and above	0.0	0.8
Total	**24.7**	**18.8**
Value of units, LTV to be financed by HFCs, SCBs (Rs Lakh Cr)		
EWS	10.9	5.3
LIG	2.9	7.4
MIG and above	0.2	4.1
Total	**14.0**	**16.8**
Total (US$ tn)	**0.2**	**0.2**
Construction costs (Rs Lakh Cr)		
EWS	10.9	5.3
LIG	2.2	5.6
MIG and above	0.1	1.6
Total	**13.1**	**12.5**
Total (US$ tn)	**0.2**	**0.2**

Source: Planning Commission, Kotak Institutional Equities

Shortage of housing is pervasive across all states and all segments even as the intensity of the shortage may vary. It is noteworthy that the states that have higher per-capita incomes tend to have lower housing shortages. However, even such states have a significant unmet need for housing upgrades. Table 2 details the projected housing requirement across the various economic segments. As can be seen, the quantity of housing and the value of housing shortages are meaningfully different across all segments. Depending on the projection, the requirement can vary between ₹100 lakh crore and ₹115 lakh crore.

Table 2: Projected Housing Requirement by 2022

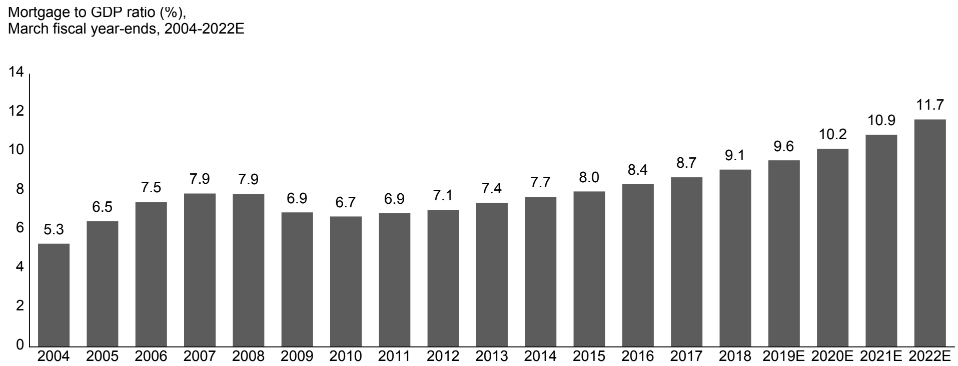
	Analyst estimate	Govt of India estimate
Shortage and requirement (mn)		
EWS	33.6	45.0
LIG	44.0	50.0
MIG and above	6.4	5.0
Total	**80.0**	**100.0**
Value of units, LTV to be financed by HFCs, SCBs (Rs Lakh Cr)		
EWS	25.2	33.8
LIG	88.0	100.0
MIG and above	51.2	40.0
Total	**164.4**	**173.8**
Total (US$ tn)	**2.3**	**2.5**
Construction costs (Rs Lakh Cr)		
EWS	26.9	36.0
LIG	55.0	62.5
MIG and above	19.2	15.0
Total	**101.1**	**113.5**
Total (US$ tn)	**1.4**	**1.6**

Source: Planning Commission, analyst estimates

III. Penetration of Housing Finance Across Segments

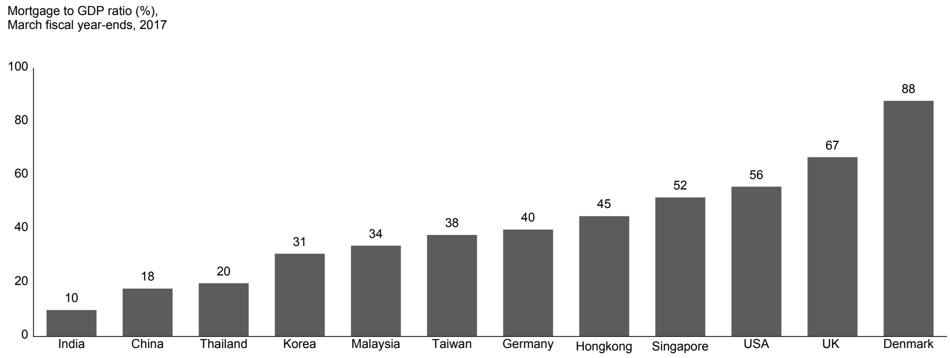
One of the key ownership methods for houses is through home loans (ie mortgages). Mortgages have become a popular means of facilitating the purchase of a house across all segments – even though the needs and product requirements vary significantly across the segments. India has a very low mortgage-to-GDP ratio compared to other countries. This ratio is expected to grow significantly over the next few years (charts below provide the details).

Chart 1: Mortgage-to-GDP Ratio - India



Source: CSO, analyst estimates

Chart 2: Mortgage-to-GDP Ratio – Country Comparison



Source: HDFC, European Mortgage Federation, Hofinet, analyst estimates

Table 3 provides estimates of mortgage financing in various housing market segments by 2022. These estimates suggest that the market is large in the MIG+ segment driven by the bigger ticket-sizes and similarly it is large in LIG due to the larger number of houses. These estimates also suggest that EWS category could continue to see low credit penetration even though the objective of the Governments at both Centre and States will be to address this market failure. The total incremental demand of ₹50 lakh crore to ₹60 lakh crore suggests significant growth considering the total outstanding home loan amount at the end of FY2019 was ₹20 lakh crore. By the end of FY2022, the total outstanding home loans are expected to reach ₹35 lakh crore, which is over 20 per cent compounded annual growth over the FY2019 number.

Different segments also have different providers catering to the housing market; the real estate developers in one segment typically do not serve other segments. The geographical catchment area, even within a city, may be meaningfully different across the various segments. The income profile across segments also materially varies not just in terms of the income level but also the volatility or riskiness of the income. Given these differences, specialized providers have emerged to cater to the unique needs in the different segments.

Table 3: Estimates for Aggregate Demand for Housing (*rupees in lakh crore*)

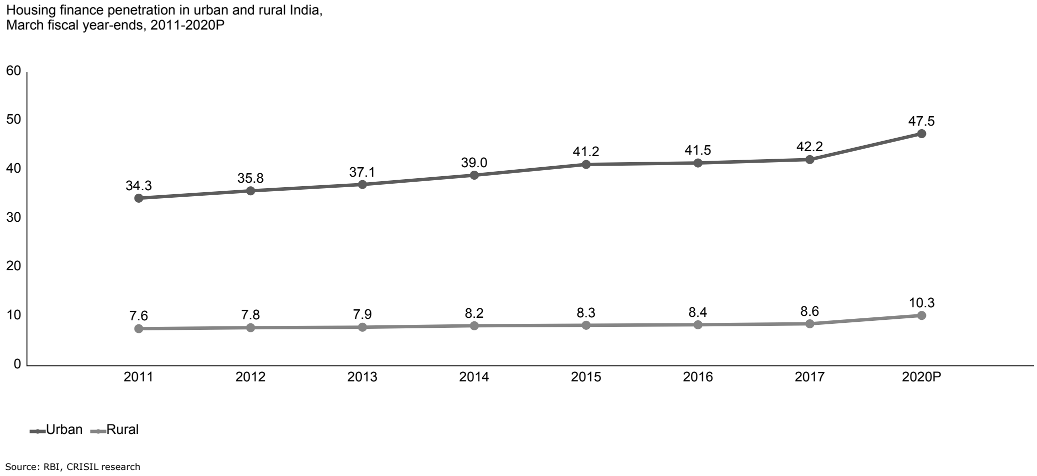
	Analyst estimate	Govt of India estimate
Units required (mn)		
EWS	36	45
LIG	38	50
MIG and above	5	5
Total	**79**	**100**
Value of units (Rs Lkh Cr)		
EWS	27	34
LIG	56	75
MIG and above	40	40
Total	**123**	**149**
LTV (%)		
EWS	40	40
LIG	50	50
MIG and above	65	65
Credit penetration (%)		
EWS	40	40
LIG	80	80
MIG and above	85	85
Aggregate loan demand (Rs Lakh Cr)		
EWS	4	5
LIG	23	30
MIG and above	22	22
Total	**49**	**58**

Source: Kotak estimates

The penetration of housing finance differs across segments and each segment is served very differently by banks and HFCs. The housing finance market is relatively well-served in the MIG+ segment by commercial banks and some larger and more matured housing finance companies. As we move to the LIG and EWS, we find the proportion of loans given by HFCs, especially smaller HFCs, increases. Some of these loans are bought by banks from the HFCs to meet their priority sector lending obligation. However, in terms of disbursements, HFCs take the lead in the non-MIG+ segments.

There is also a difference in the penetration of housing finance between urban and rural areas. While the finance penetration in rural areas has lagged behind, it is catching up. This trend suggests that rural areas could have a relatively greater share of future growth in housing finance.

Chart 3: Finance Penetration in Urban and Rural India, 2011–2020



IV. Providers of Housing Finance: Banks, HFCs

In India, home loans are provided mainly by commercial banks and housing finance companies. HFC as a model came into being in the early 1980s and were pioneers in home loans. Commercial banks entered this business in a significant way in early 2000's. Rapid growth of housing loans in banks' portfolio over the last two decades has resulted in these loans becoming a significant component of the overall loan portfolio of banks. By financial year 2019 total home loans outstanding in the banking system were ~₹11.5 lakh crore, representing around 58 per cent of the total home loans outstanding. HFCs, on the other hand, had outstanding home loans of ₹8.5 lakh crore, around 42 per cent of the total home loans.

Chart 4: Market Share of Banks and HFCs in Home Loans, 2011–2019

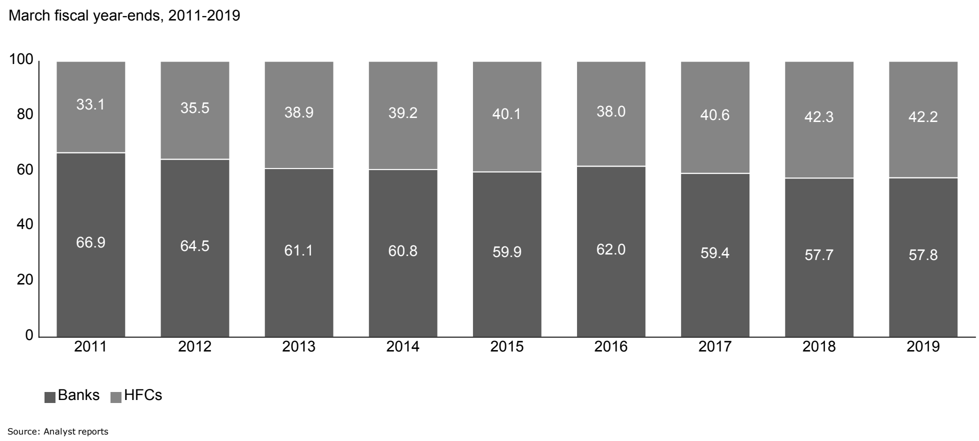


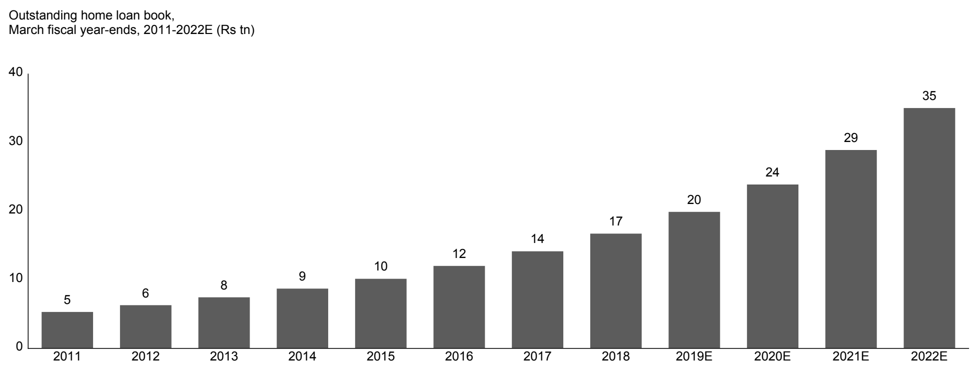
Chart 4 shows the market share of home loans outstanding between banks and HFCs over the years. As can be seen, the HFCs have gained the market share. Banks also purchase housing loan portfolios from other intermediaries and so the stock of loans outstanding may not reflect the proportion of disbursements.

Even though these numbers appear large and growing, as discussed above, India has a low mortgage-to-GDP ratio, compared even to peer developing countries. This reflects the low penetration of housing finance that can be attributed to several reasons; it also points to a very large opportunity for growth. Since HFCs address more over 40 per cent of the mortgage market, the recent liquidity challenge in non-banking finance companies (NBFCs) and HFCs may create a temporary blip in the secular growth story.

V. Growth in Housing Finance

Given the unmet demand for housing and low penetration of mortgages in India, the housing market, and the financing market associated with it, is expected to see secular growth over the next many years. According to analysts' estimates, home loan outstanding is expected to increase from ~₹20 lakh crore in FY2019 to ₹35 lakh crore by FY2022. Chart 5 details the total projection of the mortgage market over the next few years.

Chart 5: Outstanding Home Loans, 2011–2022E (*in rupees lakh crore*)

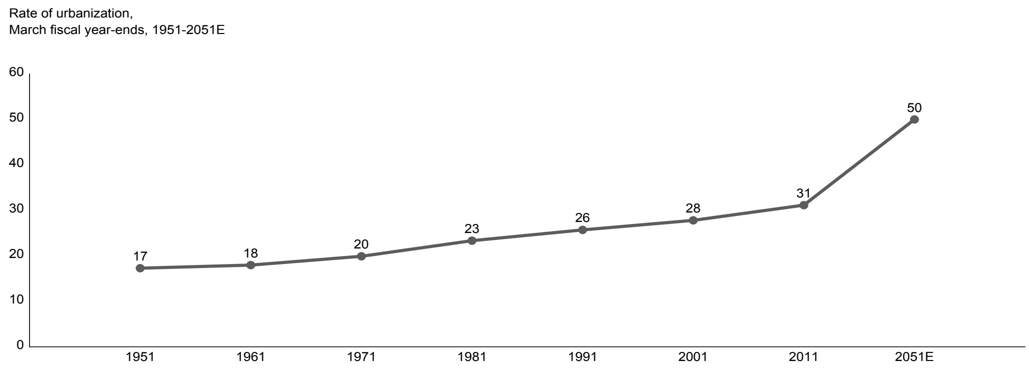


Source: Analyst projections

In addition to rapid growth, another important change in the housing market over the next decade will be the impact of increased urbanisation. Chart 6 details the levels of urbanisation in India over the last many census years and the projections going forward. As Indian cities expand to take in more people, business will start to shift towards the current peri-urban areas. This shift has given rise to the affordable housing finance segment, with more than 100 institutions, comprising both banks and HFCs as of March 2018. In terms of volumes, HFCs in the affordable new housing segment had a total outstanding of ₹41,363 crore as of March 2019. This represents a 19 per cent year-on-year (YoY) growth compared to the previous year. However, it should be noted that growth in this segment has slowed down from an annualised YoY growth rate of 96 per cent in March 2016 to only 19 per cent in March 2019.

In terms of composition, home loans comprised 62 per cent of the affordable housing portfolio, while LAP and construction finance comprised 20 per cent and 15 per cent, respectively. The NPA levels of the AH sector has been consistently higher than the overall NPA level of the HFCs. From a GNPA level of two per cent in March 2014, it reached a peak of five per cent as on December 2018. Some improvement can be seen since then, with the ratio dropping to 4.7 per cent as of March 2019. However, this improvement was largely supported by write offs and sale of NPAs by some HFCs. (All data in the paragraph above from Indian Mortgage Finance Marker report of ICRA, June 2019)

Chart 6: Rate of Urbanisation, 1951–2051E

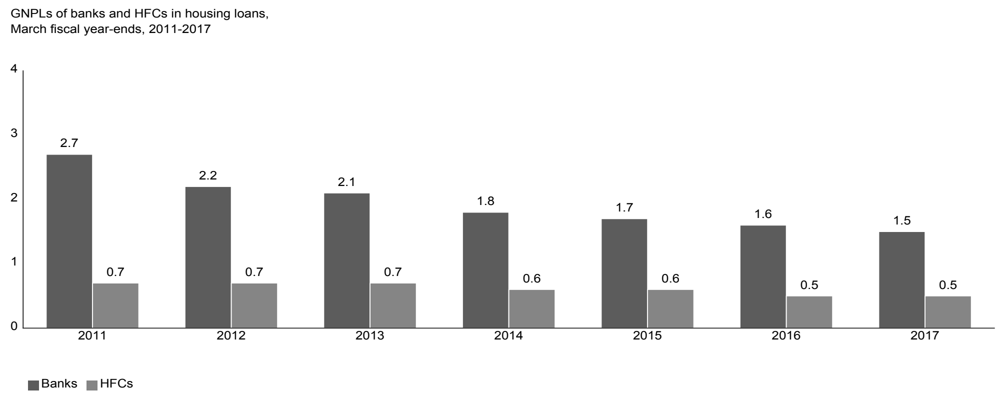


urce: National Housing Board's Report on Trend and Progress of Housing in India, 2018

VI. Funding Models of Banks and HFCs

Home loans are important and attractive products for banks and HFCs for several reasons. They have grown steadily at over 17 per cent for the last decade. They are secured and since the value of the property generally tends to increase over time, the security cover for the home loans increases. Over economic cycles, home loans have had among the lowest non-performing asset (NPA) levels among all classes of loans.

Chart 7: GNPAs of Banks and HFCs in Housing Loans, 2011–2017



Source: RBI, CRISIL research

For banks, there is the added attractiveness of some (smaller ticket size) home loans qualifying as priority sector lending. Finally, given the lower risk weights on home loans (currently between 50 per cent and 75 per cent, depending on the size of the loan and the loan to value ratio), they deliver good return on equity (RoE) for the lender despite very competitive pricing.

Balancing these attractive features, home loans also present some challenges for the lenders. The most important challenge is posed by the long maturity of these loans. Most home loans have maturity of 15 to 20 years at the time of origination. For younger borrowers, the maturity can go up to 25 or even 30 years. While prepayments are quite common, even after adjusting for prepayments, home loans have a maturity of 8 to 10 years making them the longest maturity assets for banks and HFCs. In addition to the long maturity, prepayments and balance transfers also create competitive pressure as well as a degree of uncertainty regarding maturity of home loans.

The challenge posed by longer and somewhat unpredictable maturity of home loans is better understood in the context of the funding model of banks and HFCs. Primary source of funding for banks are deposits – time (term or fixed) deposits and demand deposits, which includes current and savings account, commonly referred to as CASA accounts. Of the total deposits in the Indian banking system presently, term deposits account for ~58 per cent, savings account deposits for ~33 per cent and current account deposits ~nine per cent. Savings accounts grew rapidly post demonetisation in 2016. If one looks at the data for the financial year 2016, the share of term, savings, and current deposits were 63 per cent, 28 per cent and 9 per cent, respectively. About 85 per cent of term deposits of banks have maturity of less than five years. Even if we assume 'behavioural' maturity of around 3 years for savings accounts (as most banks do for the purpose of their asset-liability management analysis), over 90 per cent of all deposits of banks have a maturity of less than five years. In fact, the weighted average maturity of banking system deposits works out to around 2.5 years.

Unlike banks, HFCs are wholesale funded, i.e. they do not have access to public deposits. Table 4 provides details of the funding mix of HFCs as a group. It shows that about 40 per cent of funding for HFCs is from banks (including debentures issued to banks) and ~30 per cent is from debentures issued to non-banks (e.g. mutual funds). Thus, the main source of funding is bank borrowing. Only a handful of HFCs are permitted to raise public term deposits. However, the share of funding raised through public deposits for HFCs is below 10 per cent.

This data is for all HFCs - there are over 100 registered HFCs. Of these, only the top ten or so have the ratings and market standing to have reliable and stable access to debt capital markets ie placing debentures with funds or individuals. Majority of smaller HFCs rely on bank borrowing as their only source of funding. They also have access to refinance facilities of the National Housing Bank. Bank lending to HFCs generally has a maturity of less than five years.

Thus, for both banks and HFCs home loans present an asset liability mismatch problem – the maturity of assets (ie home loans) is much longer than that of liabilities. The challenge is much more acute for HFCs, especially those that are not among the top ten, where the only source of funding for them is banks and if for any reason this source dries up, they cannot grow their home loan books.

Table 4: Composition of Borrowings of all HFCs, 2016–2018

	Rs crore			Proportion		
	2016	**2017**	**2018**	**2016**	**2017**	**2018**
NHB borrowings	26,440	36,347	39,259	4.3	4.8	4.2
Foreign borrowings	9,398	14,135	15,291	1.5	1.9	1.6
Banks	166,744	163,090	223,079	27.0	21.6	23.7
Debentures	247,864	334,383	405,261	40.1	44.2	43.1
- subscribed to by banks	*73,258*	*98,559*	*122,592*	*11.9*	*13.0*	*13.0*
- subscribed to by others	*174,606*	*235,824*	*282,669*	*28.3*	*31.2*	*30.1*
Other borrowings	93,093	121,923	164,332	15.1	16.1	17.5
Public deposits	74,222	86,573	93,143	12.0	11.4	9.9
Total	**617,761**	**756,451**	**940,365**	**100.0**	**100.0**	**100.0**

Source: National Housing Board's Report on Trend and Progress of Housing in India, 2018

If ambitious targets of housing and housing ownership have to achieved, then banks and HFCs have to build funding models that have larger capacity ie can raise much larger quantum of funding, that are stable and reliable and with longer maturity. Securitisation can play an important role in allowing lenders to address the maturity mismatch issue. For smaller HFCs, securitisation can be a critical source of funding in situations where bank funding is constrained. Securitisation can contribute to making access to home loans wider and easier, thus supporting the achievement of targets of housing and home ownership.

VII. Conclusion

Housing is an economic and social priority for any society. The Indian government has publicly announced its aspirations of creating shelter for all by 2022 – the 75th year of India's independence. Achieving this ambitious goal will require significant public and private investments. While the government will continue to create housing in both rural and urban areas for people, such construction will cater only to a small proportion of the underlying demand. A large proportion of the demand will have to be met by the private sector - private individuals buying from private builders and financed by various banks and HFCs. Creating a vibrant mortgage market and allowing a secondary market where mortgages can be sold to the appropriate risk-taking entities, will support the development of a stable funding model for the lenders, thereby significantly increasing the number of people who can access funding to own their homes. Such democratisation of home ownership will give people an incentive to be invested in their community.

Many players will play a critical role in such democratisation including both banks and HFCs as the originators of the mortgage product. The emergence of specialised HFCs for the low-income and informal segments of the economy is an important trend that must be encouraged given the need for alternative under-writing approaches. Sustainable funding models will be especially critical here because these entities will, at least initially, have weak balance sheets, even if they have strong operations and under-writing. There are parallels here to the experience of Micro Finance NBFCs whose growth in the last decade has been fuelled by diversification of liabilities, including securitisation.

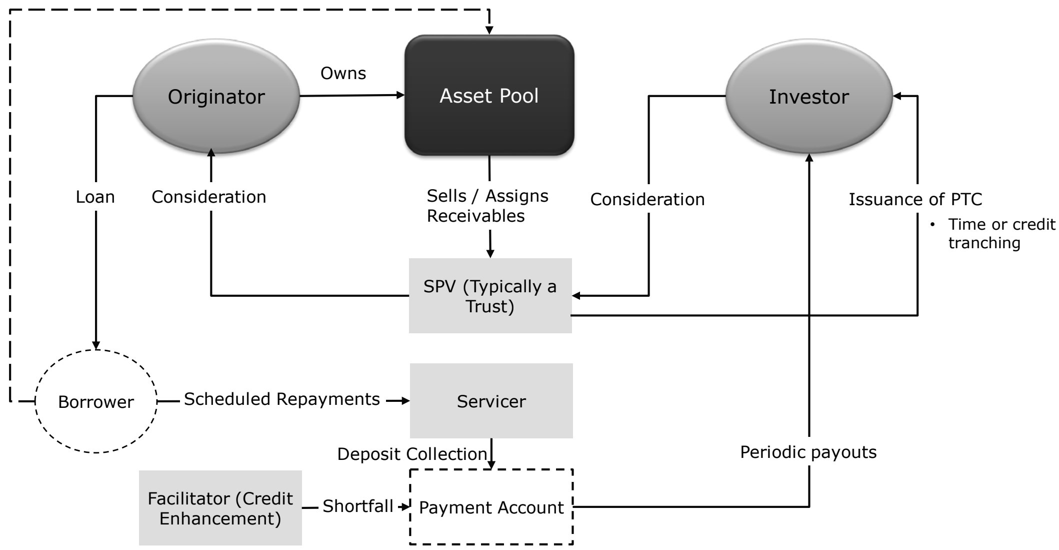
While the relative shares of the banks and HFCs continue to change over time, HFCs are and will continue to remain especially critical in the unbanked segment. The funding sources for both entities hence need to be stable and reliable for achieving their business objectives while meeting the social objective of 'Housing for All'.

Chapter 3: Securitisation for Housing Finance: Opportunities and Challenges

I. Introduction

A securitisation transaction involves pooling loans of a kind, selling them to a special purpose vehicle (SPV), and issuing securities (pass-through certificates or PTCs) backed by the pool of loans. The flow chart in Chart 8 depicts a typical securitisation transaction.

Chart 8: A Typical Securitisation Transaction



Key parties to any securitisation transaction are:

- **The Originator** is the entity that has made the original loan and is entitled to the receivable towards interest and principal repayments from the borrower. The originator is the entity that typically initiates the securitisation transaction and is a major beneficiary of it.
- **The Borrower (alternatively called the Obligor)** is the individual (or an enterprise) that has taken a loan from the originator and entered into contractual agreement with the originator to repay the interest and the principal. In case of secured loans, the Borrower also provides a collateral (a physical asset) as a security for the loan. In case of housing loans, the house that is bought with the loan is typically the collateral.
- **The Investor** is the entity (or individual) that buys the securities issued (ie the PTCs) by the SPV as a part of the securitisation transaction and could include banks, mutual funds, insurance companies, pension funds, alternate investment funds, etc.

- **The Special Purpose Vehicle (SPV)** is an entity specifically created for the securitisation transaction. It buys the pool of assets from the originator and issues securities to the investor. It can be a company, a partnership firm, or a trust. Most commonly, the SPV is a trust.
- **Facilitator for credit enhancement** is an entity that provides credit enhancement to the securities issued by the SPV in order to improve their ratings. Any shortfall in the cash flows from the securitised pool is made up by funds from the credit enhancement facilitator.
- **Servicer** is the entity that services the loan pool after it has been securitised. Servicing primarily involves collecting interest and principal repayments from the borrowers, dealing with delays or defaults, enforcing security interest where necessary and operational issues such as issuing statements and tax certificates to borrowers. Servicing can be provided by a third party servicer, which is an independent entity that provides this service. However, in India, in almost all cases of securitisation, the originator continues as the servicer.

In addition to the key parties depicted in the flow-chart and described above, some other entities play an important role in the securitisation transaction. They include:

- **Rating agencies** who provide the credit rating for the securities issued, and in the process of doing so, determine the extent and the nature of credit enhancement needed in order to support the ratings.
- **Trustees (of the SPV Trust)** oversee the performance of all the parties and supervise the distribution of cash to the investor.

The asset pool is created by pooling loans that are similar in nature, and regulations impose a homogeneity condition on the loan pool. Securitised loans could include unsecured loans such as micro finance loans, or secured loans such as housing loans, auto loans, etc.

All securitisation transactions have some essential features:

- Under securitisation regulations, the sale of the asset pool from the originator to the SPV must be a **'true sale'** so that all the benefits and obligations of the underlying loans are transferred to the SPV and the loans in the pool are removed from the balance sheet of the originator. The originator can continue to remain the 'servicer' for the SPV, collecting repayments from the borrowers in the pool but bears no risk and gets no reward from the performance of the pool, except for the part it retains as per regulatory requirements.
- The transaction is **'bankruptcy remote'** which means that in the event that the originator of the loans in the pool becomes insolvent and undergoes bankruptcy process, the asset pool that underlies a securitisation transaction, is excluded from the process of resolution or liquidation of assets of the originator.

- All the payments to the security holder are **'pass through'** from the underlying pool. The special purpose vehicle (SPV) does not alter the payments and merely collects them and allocates them to the various classes of security holders as per the norms laid down as a part of the securitisation transaction.
- Securitisation structure often includes **credit enhancement** arrangement that is needed to improve the credit rating of the securities that are issued. The nature and the extent of credit enhancement is determined by the rating agencies as a part of the rating process of the PTCs. Credit enhancement can be of two types – external or internal.

  External credit enhancement is one where the exposure of credit risk is created on counter-parties other than the borrowers of the loan. Such credit enhancement can be provided through a cash collateral where a cash deposit is made into an account which is accessed only by the trustee of the securitisation who can draw on it to make up for any shortfall in the investor payouts. Alternatively, the external enhancement is provided through a guarantee issued by a bank or a corporate. The trustee for the securitisation sends a notice to the guarantor in the event of any shortfall in the investor payouts and the guarantor is expected to make up the shortfall.

  Internal credit enhancement is one where the enhancement arises from the structure of the securitisation transaction. There are two ways such enhancements can be provided – through subordination and over-collateralization and through 'excess interest spread'. Subordination is achieved in a securitisation transaction when the securities are issued in 'tranches' with different seniorities of claim on the cash flows from the underlying loan pool. The senior tranches have first claim on the cash flows. The junior tranches, thus, by subordinating their claim on the cash flows enhance the credit quality of the senior tranches. Subordination is commonly referred to as 'credit tranching'.

  'Excess interest spread (EIS)' arises if there is a positive difference in the payments received from the pool and the payouts committed to the investors ie the cash-flows from the pool exceed the payouts to the investors. Any such difference in the cash flows accrues with the originator and can be used to meet any shortfall in payouts to the investor that may arise later, as a part of credit enhancement.

  Credit enhancement is often structured in a tiered manner where the 'first loss' credit enhancement is triggered before the 'second loss' credit enhancement. It is quite common for the originator to provide the first loss credit enhancement (FLCE) through cash collateral and to get a third party (a bank or an insurer) to provide the second loss credit enhancement (SLCE) through a guarantee. In such a setup, any short fall in the payouts will be first met by the FLCE and only when it is exhausted the SLCE is invoked.

- Issuance of securities (the pass through certificates) could occur in separate tranches. The tranches can be of two type – time tranches and credit tranches. Time tranches are securities issues with varying maturities. Credit tranching is based on subordination that is a form of internal credit enhancement and involved issuance of securities with varying seniority of claims on the underlying cash flows (discussed above). In India, credit tranching is quite common while time tranching is rare.

II. Overview of securitisation regulation in India

Securitisation is relatively recent in India. Until 2006, there were no formal regulatory guidelines for securitisation. There were no formal securitisation transactions prior to 2006. Reserve Bank of India issued its first securitisation guidelines in February 2006. These guidelines were foundational in that they set out the broad framework for securitisation. Specifically, the 2006 guidelines:

- Described the securitisation process and the role and obligations of all key participants – originators, SPV, credit enhancement and liquidity providers
- Established baseline criteria for true sale, SPV construction, credit enhancement, liquidity provision, underwriting, representations and warrantees, etc
- Defined prudential norms for investments in securities issued by SPV
- Set out accounting treatment and income recognition norms
- Set out disclosure requirements for all the parties

In 2008, the world faced a financial crisis that had its roots in the American housing and housing finance markets. The whole process of securitisation and the role of agencies engaged in it came under scrutiny as the financial sector regulators across the world reacted to the gaps and shortcomings in regulations revealed by the crisis. Although, Indian financial sector did not suffer any direct impact from the global financial crisis, Indian financial sector regulators tweaked regulations to avoid similar crisis from occurring in the country.

RBI issued modified securitisation guidelines in May 2012 that were intended to be a revision and extension of the 2006 guidelines. These guidelines:

- Establish the minimum retention requirement (MRR) and minimum holding period (MHP) standards.
- Established the limits on total retained exposure by the issuer
- Provided guidelines on the treatment of profits booked upfront
- Refined disclosure norms

- Established standards for loan origination, due diligence, stress testing and credit monitoring
- Provided baseline guidelines for DA transactions

One important feature of these guidelines is that it includes two different types of transactions under securitisation – the Direct Assignment (DA) transaction and the Pass-through Certificate (PTC) transaction. A DA transaction involves originator entity pooling loans and then selling them to another entity. Essentially, both DA and PTC transactions involve transfer of credit risk in a loan pool between two entities. However, there are two crucial differences between DA and PTC transactions. In a DA transaction, no intermediary (such as an SPV) is involved and the transaction is between the seller of the loan pool (ie the originator) and the buyer (ie the investor). Further, no securities are issued in a DA transaction. DA transaction, thus, does not fit within the generally accepted definition of securitisation.

The MRR and MHP were the most important features of the 2012 guidelines and were influenced by the global financial crisis. MRR defines the minimum amount of ownership of the pool that the originator must retain in a securitisation transaction. It is, in essence, the originator's 'skin in the game' even after most of the risk in the loan pool has been transferred. MHP defined the minimum length of time that a loan must stay on the books of an originator before it can become a part of a pool that will be securitised. MHP is essentially an instrument to avoid 'originate to distribute' model being followed by an originator; making a loan and immediately securitising it.

The 2006 and 2012 guidelines together describe the regulatory regime governing securitisation in India. In addition to these major regulations, there have been a few others that dealt with specific aspects of securitisation. Most notably, July 2013 guidelines defined the rule of reset of credit enhancement over the life of the securitisation transaction and the January 2018 guidelines laid out the rules for foreign investors for investing in securities.

In 2015, the Basel Committee on Banking Supervision issued comprehensive framework for securitisation. This framework (called the Basel III securitisation framework) aims to provide standards for financial sector regulators for treatment of securitisation transactions. If broadly convers three aspects – (1) definition of the requirements for credit risk transfer on originator that should result in de-recognition of the asset pool underlying securitisation from the originator's balance sheet (2) computation of capital requirements for entities that have exposure to securitisation, and (3) capital treatment for what it calls 'simple, transparent, and comparable (STC)' securitisation. Only Europe has adopted the Basel standards with some modification to capital requirements for securitisation exposure. Several other jurisdictions (eg Australia) have adopted some aspects of the framework while the US and China have not adopted these standards at all. We discuss the issue of implementation of the Basel framework in India later in this report.

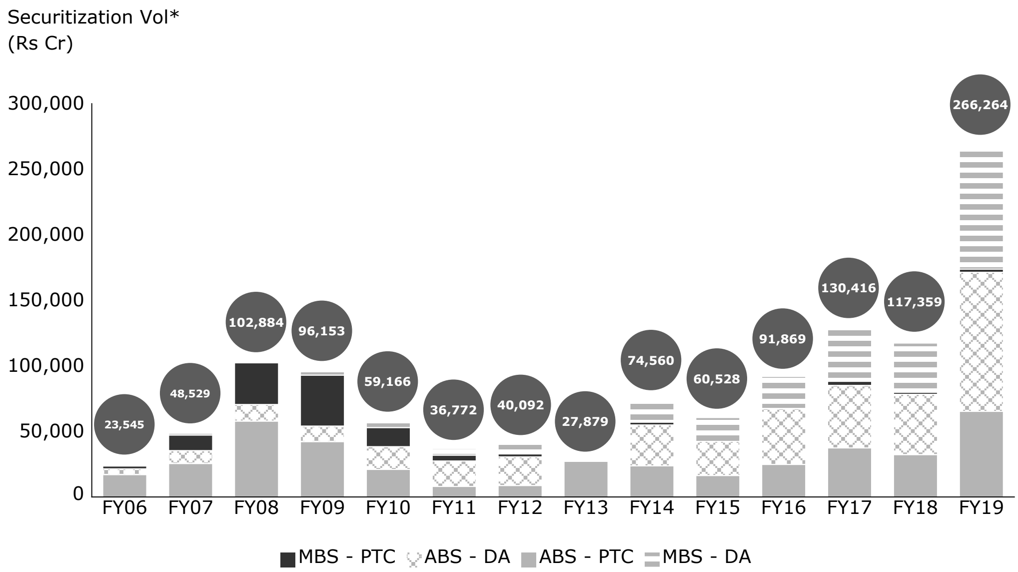
III. Growth of Securitisation in India

Since the first securitisation guidelines were issued in 2006, the volumes of securitisation have seen significant growth in India. The total volume of securitisation increased from ₹23,545 crore in financial year 2005–06 to ₹266,264 crore in the financial year 2018–19, an eleven–fold growth in 13 years.

While the overall securitisation volumes have grown strongly in the last few year, the growth was driven largely by DA transactions. PTC's are less than a third of the overall securitisation volume. In the financial year 2019, which saw very strong growth in securitisation, primarily driven by liquidity challenges in the NBFC / HFC segment, only about a quarter were PTC transactions. Of these, mortgage backed PTCs were merely ~two per cent.

Large proportion of DA transactions suggests that the buyers / investors in these transactions would be entities with balance sheets – mostly banks and some NBFCs. Other pools of capital – mutual funds, insurance, pension funds, and individuals have not been significantly participating in securitisation. This is especially true for mortgage-backed securitisation, where there is virtually no participation of the non-bank capital pools.

Chart 9: Growth of Securitisation in India, 2006–2019



* Includes unrated transactions
Source: ICRA

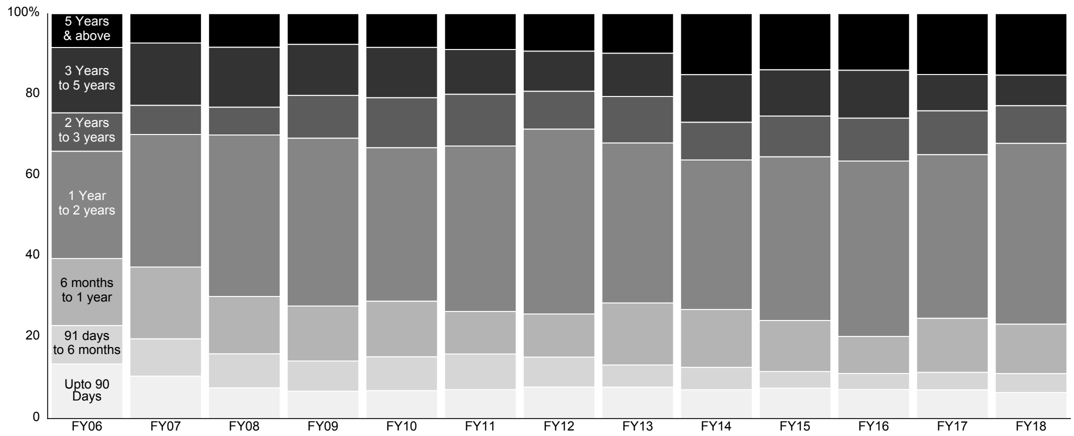
IV. Securitisation for Housing Finance (Home Loans)

Buying or building a home is the largest expense for most individuals. Borrowing money for home buying is, thus, very common. In India, commercial banks and housing finance companies (HFCs) have been the providers of home loans.

Home loans are the longest maturity assets issued by any lender. Most home loans have a contractual maturity of 15 to 20 years and it can go as high as 30 years for younger borrowers. While prepayment of the home loan is very common, even after adjusting for prepayments, these home loans could have actual maturity of eight to 10 years, which is still the longest in the loan books of most lenders.

Long maturity of home loans creates a structural asset liability management (ALM) challenge for the lenders – lenders do not have funding sources that can match such a long maturity of these loans. HFCs, which rely on a mix of bank borrowings and bond issuance, can borrow with maturity that does not typically exceed five years. Banks have access to public deposits but even for them a large proportion of these deposits have contractual maturity of less than three years. As the share of home loans in the overall credit book of banks grows over the coming years, even banks will start facing increasing pressure to manage this ALM challenge.

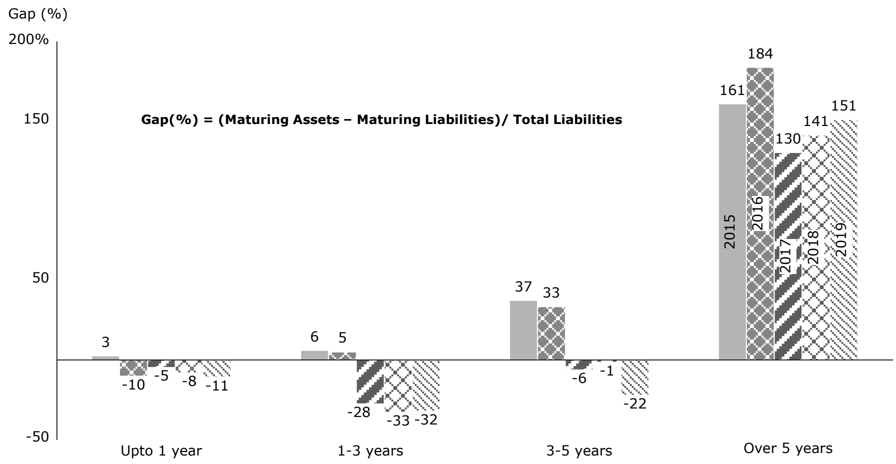
Chart 10: Maturity Pattern of Term Deposits of Indian Banks, 2006–2018



Source: RBI, Kotak Institutional Equities

Chart 10 depicts maturity profile of term deposits of Indian banks over the last 13 years. It clearly shows that long term deposits – over the maturity of five years are just about 15 per cent of the total deposits, and deposits with maturity of less than two years are nearly two thirds of the total term deposits. Thus, the banking sector liabilities are predominantly short term relative to the maturity of the home loans.

Chart 11: HFCs' Asset Liability Management



Note: Data for top 4 HFCs accounting for about 70% of the HFC housing finance
Source: Company disclosures, Kotak Institutional Equities

Chart 11 shows the asset liability maturity profile of a sample of housing finance companies. It is clear that they are funding long-term assets through short-term liabilities and this trend has become more pronounced in the last few years. Presently there are over 100 registered HFCs in India. Of these, top five have over 85 per cent share of the housing loans from HFCs. There is a long tail of several small HFCs who primarily focus on servicing economically weak and geographically dispersed customer segments. These small NBFC do not have access to debt capital markets and rely almost entirely on funding from banks. The ALM challenge faced by them is even more acute than that for the larger HFCs and hence diversifying the sources of funding is much more critical for them.

This structural ALM challenge can be addressed by the lenders in two ways. The first is pricing – making most loans 'floating rate' reduces the pricing risk posed by asset liability mismatches. It also reduces the probability of pre-payment in the event of downward movement in interest rates, relative to 'fixed rate' loans.

Floating rate pricing, however, does not address the funding challenged posed by the asset liability mismatch. For this, maturity of assets has to be matched by the maturity of liabilities in order to ensure stable funding of the loan book. For home loans, thus, the lender needs liabilities that can have maturity matching the effective maturity of home loans, which could be eight to 10 years. However, as the data above shows neither HFCs nor even banks have such long maturity sources of liabilities. There are two mechanisms that this maturity mismatch can be addressed – by accessing long maturity liabilities with other types of financial institutions to fund home loans and by reducing the 'holding period' maturity of the home loans. Both these mechanisms can be delivered through securitisation.

In the financial system, the institutions that has the longest maturity liabilities are life insurers and pension funds. Both insurance companies and pension funds can invest their funds into securities issued through securitisation of home loans. A well-developed secondary market can impart liquidity to these securities that will also reduce the holding period maturity for the investor.

Thus, in addition to emerging as a reliable source of funding to complement existing sources, securitisation of home loans can play a crucial role in addressing the structural asset liability management challenge faced by lenders of home loans. This will be critically important for small and new HFCs, especially those that focus on the lower income customer segment.

Securitisation for housing finance will mean pooling of housing loans (home loans), selling them to a SPV, and then issuing securities backed by these loans to investors. There are some critical differences between securitisation of housing loans (more commonly called 'mortgage-backed securitisation (MBS)') and that for other kind of loans such as micro finance loans, auto loans, etc.

- Home loans are generally of much longer maturity (up to 25 years) than these other loans which mature typically within five years
- The underlying security for home loans is much stronger and is on stronger legal foundations through creation of the mortgage than for the other types are loans which are either unsecured or are secured with a charge on moveable assets
- The value of underlying security ie the property in the case of MBS generally appreciates increasing the security cover for the PTCs over their life unlike other asset backed securities where the value of the underlying security depreciates over the life of the loan
- The ratio of loan to value (LTV) for home loans generally tends to be lower than for other classes of loans such as vehicle loans
- The performance of home loans as an asset class in terms of levels of non-performing assets (NPAs) across business cycles is much better than other types of loans

Given these differences, if can be argued that securities issued through securitisation backed by housing loans are a fundamentally different asset class from securitisation for other types of loans, and should be treated differently.

V. Committee's Approach

The mandate for this Committee is to comprehensively review securitisation for housing loans and make recommendations for its development and growth. The Committee has taken a longer-term view where securitisation can develop as a reliable, stable, safe, and large source of funding for housing loan providers. Data on securitisation in India clearly highlights two skews – (1) the domination of DA transactions, especially in housing loans, and (2) the domination of banks (and some large NBFCs) as investors. As has been explained earlier, DA is not a true securitisation transaction. The preponderance of DA as preferred model of securitisation can be attributed to the need for banks as investors to build their loan book; DA assets become a part of the loan book while investments in PTCs are a part of the investment book. Furthermore, a significant proportion of DA transactions are motivated by the banks' need to acquire asset pools that qualify under the priority sector obligations. On the originator side, the transactions are often driven by liability side considerations, more so during times of funding constraints. Some of the recent regulatory developments like co-origination of loans with banks and finance from banks for on-lending to certain sectors are likely to mitigate their funding needs.

Development of securitisation for housing finance must address this skew in the current securitisation model. It must (1) create economic incentives for participants to pursue securitisation all types of housing loans and not just those that fall under the priority sector definition, (2) move the participants away for DA to PTC, and (3) attract broader pools of capital beyond banks. Securitisation should develop as a reliable source of funding a complement and not a substitute to the current funding sources.

With these overall objectives in mind, the perspective that guided the Committee's thinking on mortgage-backed securitisation is that of **promoting efficiency and transparency** of the transaction so that all the participants find it in their economic interest to pursue the transaction.

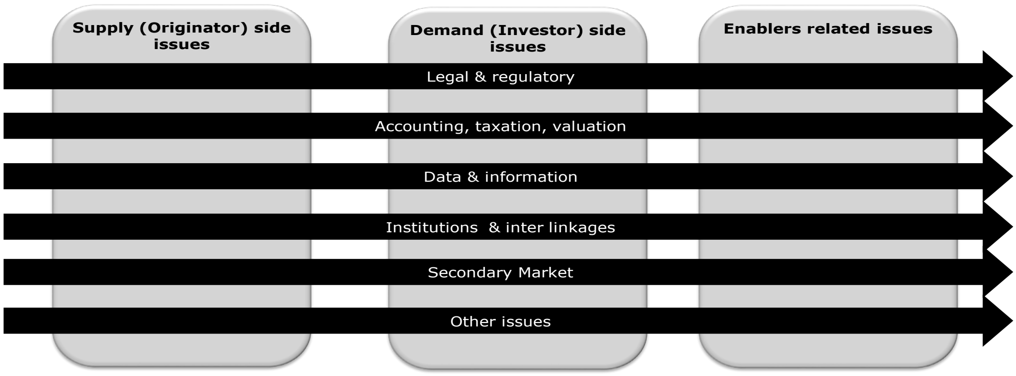
Increasing efficiency in a securitisation transaction will mean reducing transaction costs. Transaction costs arise from the intrinsic nature of the transaction –activities and documentation, actual financial costs involved in providing credit enhancement, etc. Transaction costs also arise from legal and regulatory requirements that the transaction must meet. The Committee's approach was to look at all the possible sources of transaction costs and make recommendations to minimize them without compromising on the robustness of the transaction. The Committee was acutely aware of the risks inherent in a securitisation transaction and ensured that while making recommendations to reduce transactions costs the risks in the transaction will not be amplified.

Transparency in the securitisation transaction is critical for all the stakeholders in the transaction – the originator, the investor, the trustees, regulators, rating agencies, etc – to develop confidence in it. Presently, almost all securitisation transaction in India, whether under DA or PTC, are customized bilateral transactions between the originator (the seller) and the investors (the buyer). The buyer performs extensive diligence on the securitisation pool that the seller offers and they engage in extensive discussion on valuation. Such bilateral transactions are not scalable. They also rule out from participation those 'arms–length' capital pools that have neither the appetite nor the ability to engage in such an extensive diligence process. In order to scale and be a relevant source of funding, securitisation process must attract broader capital pools. It has to match the level of transparency in the issuance of other instruments such as equity and bonds. The Committee reviewed all aspects of securitisation from the point of view of enhancing transparency and considered opportunities of standardisation as well as disclosures as instruments of transparency.

The committee, thus, took a comprehensive view of the entire life cycle of securitisation. In addition to looking at the issues faced by the originators and the investors, the Committee also looked at some enablers that do not directly affect a securitisation transaction but could significantly influence the development of securitisation in India. In addition to short-term issues, the Committee also reviewed longer term institutional development issues that will have to be addressed in order to realise the growth and development of housing finance securitisation.

The conceptual approach of the Committee is depicted in Chart 12.

Chart 12: Conceptual Framework



There are two main stakeholders in a securitisation transaction – the originator and the investors. In addition to the issues faced by these main stakeholders, there are other enablers that can influence the securitisation transaction. Across these three broad buckets run a wide range of topics that the Committee reviewed – legal and regulatory issues, accounting and taxation related issues, issues related to secondary market development, issues related to data and information, etc

An alternative to securitisation is the so-called **'covered bond',** which has gained some popularity, especially in Europe. A covered bond is a bond that is secured by a pool of assets on the originators balance sheet. Like in securitisation a distinct pool of assets (ie loans) that is ring-fenced from the rest of the assets of the originator provides security to the bond. However, unlike securitisation, the pool remains on the balance sheet of the originator and is not transferred to an SPV.

The most attractive feature of the covered bond is that it allows banks to issue secured debt. In most jurisdictions (including India), banks as depository institutions are not permitted to issue secured debt. In the aftermath of the global financial crisis, most banks in the US and Europe witnessed significant downgrades in their ratings making it very hard for them to access funding through unsecured bond issuances. Covered bonds provided an avenue to issue bonds with much higher ratings as they were backed by a distinct and high rated pool of assets.

The Committee carefully considered if it should review covered bond issuance and make any recommendation. It decided not to do so for two reasons; First, banks in India have not faced a challenge in bond issuance that should lead them to demand an instrument like covered bond. Prohibiting or permitting secured debt issuance by banks is a much a larger regulatory issue that did not fall within the remit of the Committee. Second, HFCs have been permitted issuance of secured debt and have been doing so, and hence issuance of covered bonds does not add any significant flexibility to their funding model.

The Committee primarily focused on PTC model of securitisation. While many of the recommendations made with PTC transaction in mind can be extended to the DA transactions, the Committee did not review issues that specifically arise only in the DA transactions. Securitisation for housing finance could include pooling of housing loans as well as loan against property (LAP) where the property is residential. For the purpose of the Committee's discussions, the focus has been on pooling of home loans (mortgages) and not LAP. **This report uses the term mortgage-backed-securitisation (MBS) interchangeably with securitisation for housing finance.**

In Chapter 4, we review international experience in mortgage-backed securitisation and draw some lessons for India. In Chapters 5 and 6 we provide a summary of all the key issues related to originators and investors in a securitisation transaction, and make recommendations that will drive efficiency and/or transparency in the transaction. Chapter 7 reviews the important enablers that could play a catalytic role in the development of mortgage-backed securitisation in India. Chapter 8 offers an implementation path, essentially identifying the agencies that need to act on specific recommendations.

Chapter 4: International Experience in Developing a Housing Securitisation Market

I. Introduction

Many markets around the world are ahead of India in the development of their mortgage-backed securities (MBS) market. Their experiences and the path of development have been diverse. A few have started and soared, some have not taken off sustainably, and the others have learnt important lessons and made changes along the way. The 2008 global financial crisis (GFC), in particular, was a watershed event, which forced many regulatory and system wide changes across MBS markets.

The evolution of MBS in other countries provides a rich source of experience and learning for India. In this chapter, we focus on five specific issues, which any country trying to develop its MBS market will have to grapple with. These issues are:

- Structure, state support and catalysts for take-off
- Secondary Market Models
- Accompanying regulation
- Data and process standardisation
- Qualifying criteria for securitisation

Within each issue, we discuss the experience of select countries, such as the US, South Korea, Malaysia and Colombia. Our study helps us filter specific implications for developing India's MBS market. Towards the end of the chapter, we summarize our **key lessons for India** from the international experience.

II. Structure, State Support and Catalysts for Take-off

Securitisation is an intermediated transaction. The intermediary plays a crucial role in executing the transaction, and core functions vary by country.

We focus on the specific intermediary model adopted by a host of countries that have experienced some success in growing the MBS market. We discuss the different kinds of state assistance, ranging from state ownership to tax breaks, and highlight their pros and cons. We identify the factors that tend to act as catalysts to enable the sector to take off.

We divide this section into three models of MBS with varying state guarantee - (A) strong state guarantee, (B) weak or implicit state guarantee, and (C) no state guarantee.

II.A. Strong State Guarantee:

The Case of United States of America (US)

The US is an important case study as it highlights possible pitfalls that led them into the 2008 global financial crisis (GFC). They are also a good study for the changes that were made post-2008, on the back of which, the market for MBS has revived.

The three main MBS agencies in the US are Fannie Mae (Federal National Mortgage Association, FNMA), Freddie Mac (Federal Home Loan Mortgage Corporation, FHLMC), and Ginnie Mae (Government National Mortgage Association, GNMA). These 'agencies' are government or government-sponsored enterprises (GSE) created by the Congress to 'support the mortgage market'. Together, they cover ~90 per cent of the US MBS market. The remaining 10 per cent, known as 'non agency', are intermediated by private sector players without implicit/explicit state guarantee.

The agencies provide credit guarantees to mortgage investors, effectively replacing the borrower's credit with their own. Any MBS facilitated by one of these three entities is called 'Agency MBS'. The agencies charge a fee to provide this credit wrap, which essentially functions like an insurance premium. If the borrower defaults, the agency will make up the shortfall in the investor payout.

These agencies were in spotlight during the global financial crisis. Many believed them to have contributed to its start and spread. Careful analyses of the causes and consequences of the crisis revealed that poor consumer protection allowed risky, low-quality mortgage products, and predatory lending to proliferate. Inadequate regulatory regime failed to keep the system in check. A complex securitisation chain lacked transparency, standardisation, and accountability. Inadequate capital and lack of credit risk transfer left financial institutions unprepared to absorb the losses. Also, the servicing industry was ill equipped to serve the needs of borrowers, lenders, and investors, once housing prices fell. Recognition of these shortcomings resulted in significant reforms to the functioning of these agencies as well as the regulatory oversight over them.

State support. Ginnie Mae is formally a part of the U.S. Government. Securities guaranteed by Ginnie Mae have an *explicit* guarantee from the US government. Fannie Mae and Freddie Mac are not part of the US government, but because they are created by Congress, they are referred to as government-sponsored enterprises (GSEs). Securities guaranteed by Fannie Mae or Freddie Mac are said to have an *implicit* guarantee from the U.S. Government.

On September 6, 2008, Fannie Mae and Freddie Mac were taken into conservatorship by the Federal Housing Finance Agency (FHFA).

Catalyst for take-off. Despite the 2008 crisis, the Agency MBS market in the US is large, at US $6.7 trillion in March 2019. (The non-agency MBS market is about US $0.5

trillion). Prior to the 2008 crisis, the main catalyst for their growth was the explicit and implicit state guarantees.

Since the crisis, several important changes have been made, which have allowed the MBS market to develop again. Some of the changes are as follows:

- Taking the Fannie Mae and Freddie Mac into conservatorship brought in stability right after the fallout, albeit at a large fiscal cost
- The Dodd–Frank Wall Street Reform and Consumer Protection Act, 2010 has modernised the regulatory structure, making it much stricter than before. One of the steps is to mandate a 5 per cent credit risk retention, so that the sponsor has skin in the game.
- Tightly defined 'Ability to Repay' criteria and 'Qualified Loans' have harmonized and upgraded data and process standards
- A new credit risk transfer policy has ensured that any particular intermediary, for example the Fannie Mae, does not sit on too much credit risk

What makes the US case interesting is the revival of the sector from a deep crisis. The reform steps that were taken post the crisis led to revival of the MBS market.

The Case of Republic of Korea

The Korea Housing Finance Corporation (KHFC) was established on March 1, 2004, to provide reliable, long-term housing finance services. Since its inception, it has played an important role in promoting the primary and secondary mortgage market in the country.

KHFC securitises long term, fixed rate, '*bogeumjari*'[1] and conforming loans. It issues mortgage-backed securities and provides guarantee for housing finance. MBS are issued in 8 tranches – with 1-year, 2-year, 3-year, 5-year, 7-year, 10-year, 15-year and 20-year maturity - and are listed in the Korea exchange. It guarantees timely payment of the principal and interest. KHFC's MBS are rated AAA, based on the corporation's payment guarantee and the indemnification for loss provisions under the KHFC Act, 2011.

KHFC purchases Mortgage Loans that participating banks have originated in strict compliance with KHFC's underwriting policies. It can require originating institutions to repurchase loans that violate the agreed underwriting policies.

State Support. The Korean model is in some ways similar to the early years of the development of the MBS market in the US, which benefited from the support of GSEs like Fannie Mae. The government and Bank of Korea (BOK) wholly provided the capital

[1] When these loans were started, they were unique in the sense that they catered to long term mortgage financing needs of home owners. The erstwhile loans tended to be of shorter duration.

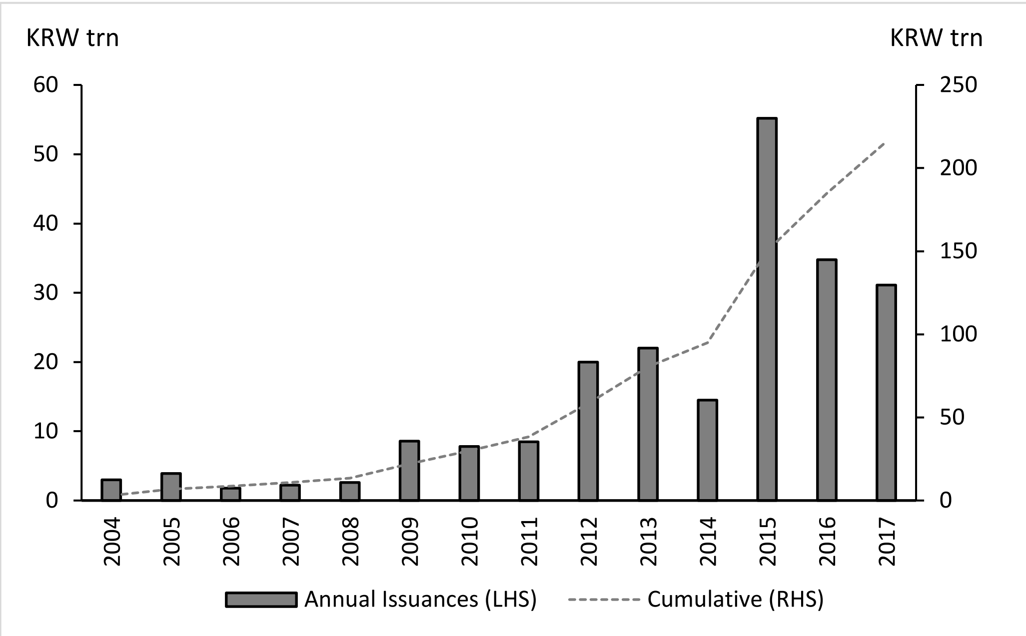
for the corporation. KHFC is a government owned entity, about one-third owned by Bank of Korea, and about two-thirds owned by the government.

KHFC has an *explicit* government guarantee, with the KHFC Act requiring the government to cover the agency's annual losses.

Catalysts for take-off. The fact that the corporation is owned by the government and has explicit state guarantee instilled confidence in the investors to invest in MBS. KHFC's introduction of long-term fixed rate mortgage loans to fulfil borrowers' unmet demand helped in promoting the primary mortgage market.

KHFC did not face issues during the GFC (when some other non-US intermediaries had gotten into some trouble) because (1) it was still a nascent market having only been formed in 2004, and (2) it has strict prudential norms and only loans that met certain standards were taken up for securitisation. In the pre-2008 US, in contrast, subprime loans had also entered the securitisation pool.

Chart 13: Korea Housing Finance Corporation's Mortgage-backed Securities Issuances



Source: KHFC Annual report, 2017

II.B. Implicit State Guarantee

The Case of Malaysia

Cagamas Berhad (Cagamas), the National Mortgage Corporation of Malaysia, was established in 1986 following a recession and liquidity crunch, which restricted credit flow to housing. The vision was to promote the broader spread of home ownership and grow the secondary mortgage market in Malaysia. Cagamas is the largest non-government issuer of debt in Malaysia. Its securities are rated AAA by the Malaysian Rating Agency.

Cagamas purchases both conventional and Islamic loans, and funds the purchase through the issuance of conventional and Islamic debt securities. Loans are purchased either with-recourse to the originator (PWR); or without-recourse to the originator (PWOR). The Mortgage Guarantee Programme offers 'first loss' protection on a mortgage portfolio while the mortgage assets remain on the originators' books.

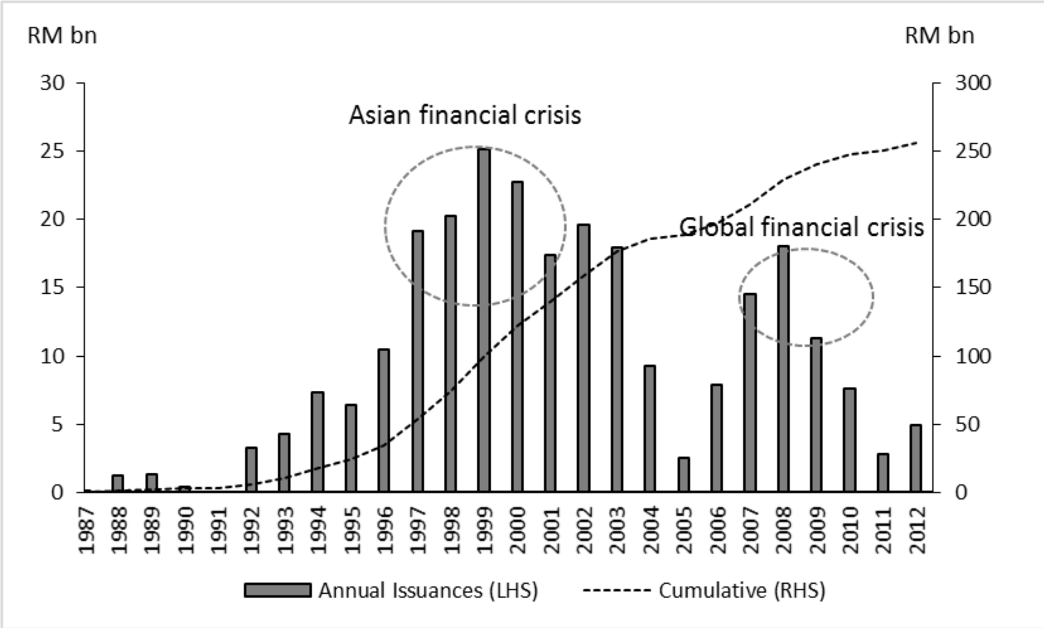
State support. The Central Bank of Malaysia has a 20 per cent ownership stake in Cagamas. As of March 2019, commercial banks owned 76.7 per cent, while investment banks owned the remaining 3.3 per cent (source: Cagamas Annual report, 2018). With the central bank's shareholding, bonds issued by Cagamas carry an *implicit* state guarantee.

In addition to the ownership by the Central Bank, Cagamas has seen explicit support through incentives given by the government and regulators, particularly at the initial stage. For instance, funding provided to Cagamas was exempt from the statutory reserve requirement calculations for banks initially, making funding attractive. Cagamas bonds qualify as eligible liquidity for central bank operations. AAA-rated MBS issued by Cagamas enjoy a favorable regulatory treatment.

Cagamas has also played a countercyclical role, providing liquidity during times of crises (Chart 14). This has been led by the implicit guarantee it provides.

Catalyst for take-off. While the actual funding provided by Cagamas is only about a quarter of the mortgage market in Malaysia (Leong, 2018), the clarity that loans can be securitised anytime, gives comfort, and has been an important driver of mortgage deepening in the country.

Chart 14: CAGAMAS's Countercyclical Role



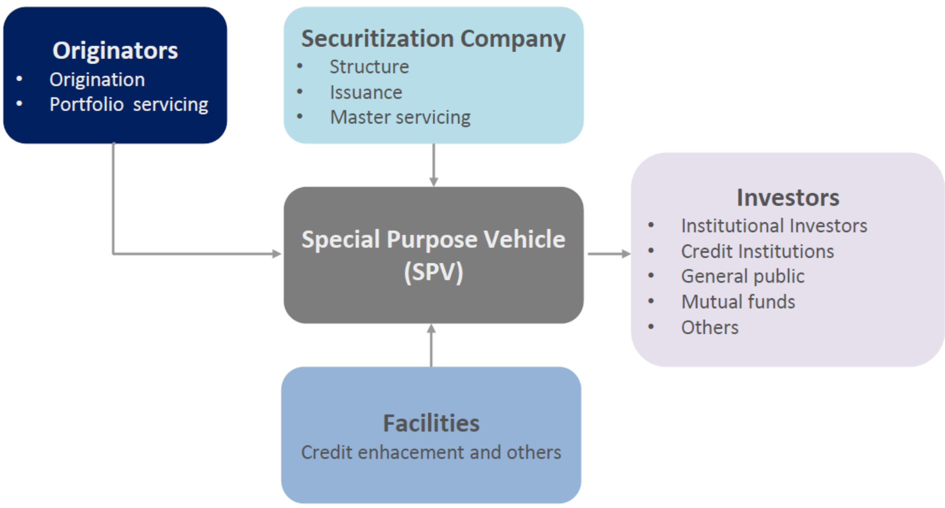
Source – Cagamas Annual Report 2018

II.C. No State Guarantee

The Case of Colombia

Considered a success story, the Titularizadora Colombiana (TC) was created in 2001, after a major mortgage crisis. Five banks got together and created TC. It is a fully private enterprise, supervised by financial regulators.

Chart 15: Titularizadora Colombiana in Colombia: A Clear and Simple Model



Source: – Titularizadora Colombiana

TC's strength lies in clear, simple and predictable rules. The maximum loan-to-value (LTV) ratio is at 80 per cent and the maximum payment-to-income (PTI) ratio is at 30 per cent for mortgage loans. TC selects the originator and the servicers, scores loans, structures the MBS, and plays the master servicer role.

It follows standard structuring across junior, mezzanine and senior tranches. Investors tend to find comfort in the replicated, simple and transparent structuring (Chart 15). Clear and standardised information for investors and educative tools (prepayment and default scenarios) also help. Since its inception, TC has had a positive effect on the mortgage markets; bought in transparency, better data and standards.

By 2018, TC had securitised a total of US$7 billion (52 issuances), and had an outstanding stock of US$1.5 billion.

As with Cagamas, the TC has played a strong counter-cyclical role. Its peak issuance was in 2010, as the Global Financial Crisis contagion spread through to Latin America.

State support. TC is not a government sponsored enterprise, and has no state guarantee or capital associated with it. State support was limited to an income tax exemption to MBS in the first 10 years which was subsequently taken away.

Catalyst for take-off. The mortgage pool was initially made of performing and stress-tested assets, which bought in confidence. The tax benefits in early days also helped, as did the simplicity in data standards and structure. High yielding mortgage portfolios were also a positive.

Despite its early success, over the last few years, banks have been using less of securitisation, as alternative funding sources have developed. The absence of HFCs has limited the growth of the mortgage market. TC has been trying to diversify by issuing MBS for non-bank lenders, CMBS, ABS for consumer loans, etc.

III. Secondary Market Models

In this section, we focus on the array of roles that intermediaries tend to undertake across countries. To avoid overlap, we focus on the specifics that were not covered in the previous section.

The Case of United States of America

In the US, mortgages are classified into several categories based on their characteristics. The broadest distinction is between government insured mortgages and conventional mortgages. Conventional mortgages, which do not have government insurance, can be broken further down into two groups - conforming and non-conforming mortgages. Conforming loans conform to established standards, and are therefore eligible to be purchased by Government Sponsored Enterprises (GSEs), i.e. Fannie Mae and Freddie Mac.

GSEs purchase conforming mortgages from lenders, pool them and issue securities backed by the mortgages to investors. MBS guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae are known as Agency MBS, while those issued by private companies and not guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae are known as non-agency MBS or private label securities; as discussed earlier, agency MBS are around 90 per cent of the MBS market in US. GSEs effectively transfer interest rate and prepayment risk to the investors. However, the credit risk is retained by them. Even before the GFC, the GSEs had been managing this credit risk in a number of ways[2].

However, despite the use of these credit risk management tools, Fannie Mae and Freddie Mac experienced high mortgage credit losses during the GFC period, leading to the conservatorship of the two GSEs in September 2008.

This experience highlighted the need to find more effective ways to **mitigate credit risk**, and the US has taken some important steps, since, to achieve this. The mitigation has, in part, been achieved by significantly increasing and redesigning the guarantee fees, strengthening fraud detection, and setting more stringent qualifying criteria for purchasing loans. Of all the steps undertaken, the Credit Risk Transfer (CRT) program of the GSEs has been amongst the most important remedy for the above problem. This entails transferring risk more efficiently to the private sector by creating a new financial market for the pricing and trading of mortgage credit risks.

Private-label or non-agency securities are often used to finance non-conforming mortgages, or those that are generally not purchased by the GSEs, primarily because of their size or credit quality. The primary issuers of private-label MBS are mortgage bankers, commercial banks, thrift institutions, and finance companies.

Virtually all private-label or non-agency securities use some form of credit enhancement. The GSEs rely less heavily on credit enhancements than non-agency issuers. Because of their charters and their agency status, Freddie Mac and Fannie Mae securities are considered to be AAA rated. In contrast, private-label issuers typically do not provide a corporate guarantee for their issues, and to achieve AA and AAA status, private-label issuers must provide additional credit enhancement.

Some form of credit enhancement (like senior-subordinated structure, excess spread, overcollateralization, monoline insurance) is virtually always used in both commercial

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[2] The methods included (i) retaining a portion of the borrower payments as a fee for providing credit guarantee service; (ii) sharing the credit risk from high LTV mortgages with mortgage insurers (Under their charters, GSEs cannot purchase mortgages with loan-to-value ratios exceeding 80 per cent unless those loans have additional credit enhancement. This requirement is generally met by requiring mortgage borrowers to obtain private mortgage insurance or PMI.); (iii) setting qualifying standards governing which mortgages they will guarantee; and (iv) setting representations and warranties under which the seller must repurchase the loan at par (e.g. in the case of mortgage fraud or significant misrepresentation of loan terms).

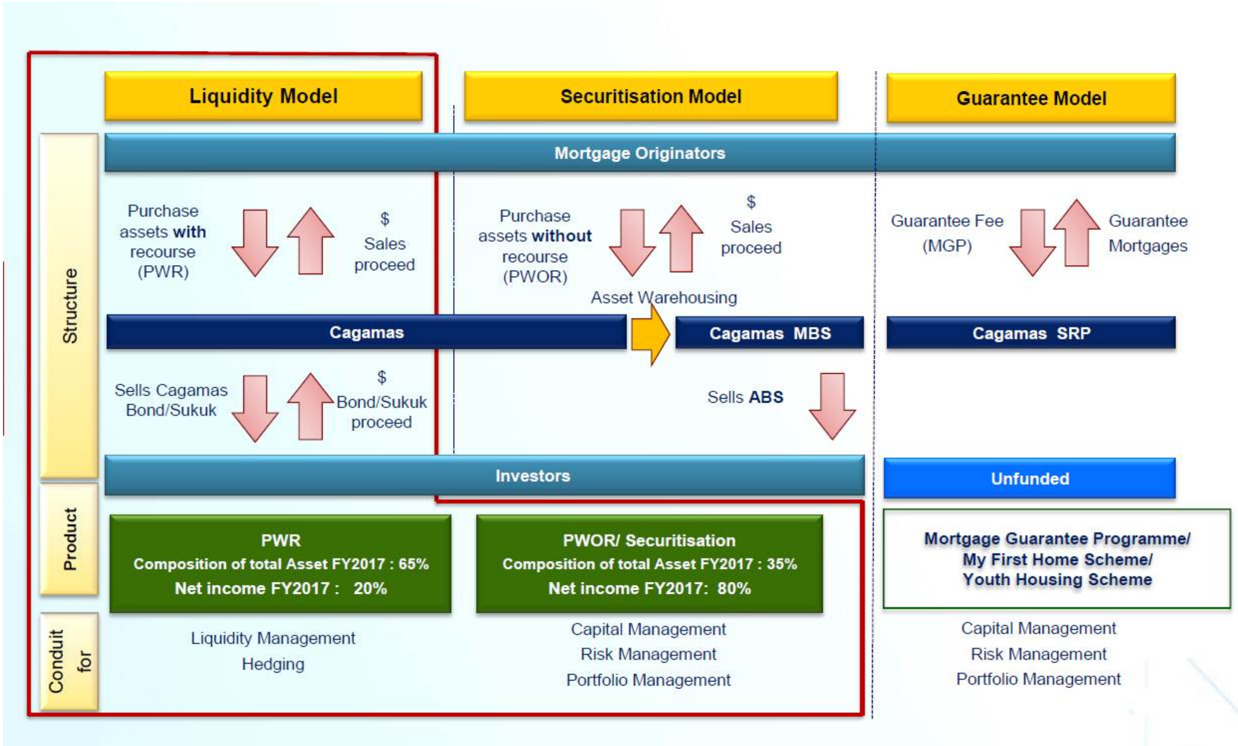
(CMBS) and residential (RMBS) issuances, and the most common form used is the senior/subordinate structure.

It must be noted that the non-agency MBS market has not really picked up post the 2008 financial crisis.

The Case of Malaysia

Cagamas has contributed to the building of a sustainable housing finance system in Malaysia by continuously applying innovations to its business model to meet the liquidity and capital needs of financial institutions. Cagamas is now a full-fledged mortgage corporation that encompasses a liquidity model, a securitisation model and a guarantee model to promote home ownership.

Chart 16: CAGAMAS' Distinct Three-part Model



Source: Cagamas

Under the liquidity model, Cagamas purchases housing loans with recourse (PWR) to the primary lender i.e. the latter is responsible for any risk arising from the default of the borrower. The PWR scheme addresses the maturity mismatch problem by effectively freeing liquidity so that financial institutions may grant more housing loans at affordable costs. In times of tight liquidity, financial institutions can easily sell their housing loans to Cagamas within a short turnaround time (of seven business days).

Under the securitisation model, Cagamas purchases conventional and Islamic receivables without recourse for default risk (PWOR). Sellers get the principal of the receivables up front and receive the excess spread as servicer fee upon collection of loan instalments. In addition to funding, the PWOR scheme enables housing loan originators to transfer credit and interest/profit rate risk in their entirety to provide full capital relief. The PWOR scheme has a much faster turnaround time of three weeks compared to the two to three months required for other types of ABS issuance, and it offers flexible transaction sizes.

Under the guarantee model, Cagamas offers mortgage guarantee as a 'first loss' protection on residential mortgage portfolio of the Financial Institutions. From the homebuyer's perspective, the guarantee serves as a useful facility to enable them to obtain up to 100 per cent financing to own their first home. The Mortgage Guarantee Program (MGP) helps housing loan originators transfer some of their credit risk, free up capital for more financing, and manage their portfolio concentration risk. By reducing credit risk on their housing loan/ financing portfolios, banking institutions can improve their capital adequacy ratios.

Cagamas funds its purchases through the issuance of corporate bonds and *sukuk* (Islamic bonds) in the form of fixed and floating rate bonds. All corporate bonds and *sukuks* issued by Cagamas are unsecured, and rank *pari passu*.

IV. Accompanying Regulation

Two important regulatory provisions apply to MBS in India, which have significant impact on the economics of the transaction for the originator - the Minimum Retention Requirement (MRR) and the Minimum Holding Period (MHP) rules. We discuss the experience with such similar regulations in other countries.

The MRR (referred to by other names in different countries, but the same in principle) has become common since the global financial crisis, and is meant to ensure that the originators of mortgage loans have continued stake ('skin in the game') in securitised assets. They are incentivized to maintain high standards of due diligence in loan origination and investor interests are not compromised.

Here are some of the MRR norms across the world -

In United States - Since the GFC, the rules require both public and private securitisation transactions to retain not less than five per cent of the credit risk of the assets underlying any MBS issuance.

However, there are well-defined exemptions from the retention ratio:

- Exemption for federally insured or guaranteed residential mortgage loan assets
- Exemption for mortgages sold to Fannie Mae and Freddie Mac for securitisation, so long as Fannie Mae or Freddie Mac are operating under FHFA conservatorship with capital support from the US government
- Exemption for mortgage-backed securities that are made up of 'qualified residential mortgages' exclusively.

In the EU - 5 per cent of the nominal value of tranches are sold (for vertical slice) or five per cent of the securitised exposure (for other retention options). However, securitisation exposures guaranteed by government authorities are exempted from the rule.

In Japan - five per cent of nominal value of securitised exposures or equivalent amount of credit risk. An exemption from this rule is possible, if an investor judges that the underlying assets of securitisation were not originated inappropriately.

Thus, at 10 per cent, and with no exemptions, India's MRR rules are significantly stricter than in other countries.

The MHP norm prescribes a minimum period for which a loan is held in the books of the originator, before being a part of the securitisation pool. The intent is to allow the portfolio to demonstrate some repayment performance, so that risk profile of the pool is visible to the investor.

No country has an explicit MHP mandate prescribed by the regulator. However, in many instances, the credit rating agency requires some MHP before giving a qualifying rating that is necessary for securitisation.

V. Data, Process, and Standardisation

One of the key learnings since the GFC is the importance of simple, clear and standardised data and processes. In this section, we review the efforts made by the US since the GFC, on standardizing data through the lifecycle of a mortgage loan.

The Case of United States since the GFC

Since May 2010, Fannie Mae and Freddie Mac have been working on standardizing data and information held by the mortgage industry. A key component of data standardisation is the **Uniform Mortgage Data Program (UMDP)**.

UMDP has four primary forms that are used to share data. The information made available via these forms is stored in four, distinct, datasets: Uniform Loan Application Dataset (ULAD) **-** captures the profile of the borrower, Uniform Appraisal Dataset (UAD) - captures the profile of the property, Uniform Closing Dataset (UCD) - captures final loan details, and Uniform Loan Delivery Dataset (ULDD) - captures data which qualifies loans for securitisation. (For details of the forms, refer to appendix 1).

Ability to Repay (ATR) and Qualified Mortgage (QM) Rules. One of the immediate benefits of collecting data through the Uniform Residential Loan Application (URLA) form is that it becomes easier for lenders to determine the ability of the borrower to repay the loan. This helps in process standardisation - helping make better loan decisions and determining the regulatory norms applicable to the loan.

Under the Dodd–Frank Wall Street Reform and Consumer Act, 2010 the Consumer Financial and Protection Bureau issued the 'Ability to Repay (ATR)' and 'Qualified Mortgage Rule' norms in January 2013.

In practice, the Ability to Repay rule requires that a lender makes good-faith effort to determine that the borrower has the ability to repay the mortgage. A reasonable, good-faith ATR evaluation must include eight ATR underwriting factors:

1. Current or reasonably expected income or assets (other than the value of the property that secures the loan) that the consumer will rely on to repay the loan
2. Current employment status (if lender relies on employment income when assessing the consumer's ability to repay)
3. Monthly mortgage payment for this loan
4. Monthly payment on any simultaneous loans secured on the same property
5. Monthly payments for property taxes and insurance that lender requires the consumer to buy, and certain other costs related to the property such as homeowners association fees or ground rent
6. Debts, alimony, and child-support obligations
7. Monthly debt-to-income ratio or residual income, that lender calculated using the total of all of the mortgage and non-mortgage obligations listed above, as a ratio of gross monthly income
8. Credit history

Information collected through these forms also makes it easier for lenders to determine whether it is a **Qualified Mortgage**, which is defined as the class of mortgage that meets the borrower and lender standards outlined in the Dodd - Frank regulation (for a technical definition of QMs, refer to appendix 2).

A borrower who obtains a qualified mortgage is presumed to have the ability to repay. Further, there is an exemption from the risk retention requirement for securitisation that consists solely of qualified residential mortgages.

Data updates are also important in the issuer-investor relationship. In order to ensure transparency to the investors, GSEs disclose loan-level attributes (LTV ratio, DTI ratio, borrower credit score, loan amount, property type, etc.) at the time securities are issued, and update the information on a monthly basis, based on the mortgage data reported by the servicers.

VI. Qualifying Criteria for Securitisation

Data standardisation opens up the way for process standardisation, including the standardisation of the qualifying criteria by which a mortgage can be securitised. This can have immense benefits, providing clarity early on, on whether a mortgage qualifies for securitisation. The case of the US post the GFC is particularly interesting, which has combined standardisation with flexibility.

The Case of United States since the GFC

Fannie Mae and Freddie Mac have exhaustive guidelines for loans to be qualified as conforming loans. Some of the factors that they consider are - LTV, Combined LTV (CLTV) ratios (‘LTV ratios’); credit score; occupancy; loan purpose; loan amortization type; property type and number of units; product type (if applicable); debt-to-income (DTI) ratio; and financial reserves.

The Eligibility Matrix provides the comprehensive requirements for conventional mortgages eligible for delivery to Fannie Mae (see Chart 17). The Uniform loan delivery dataset (ULDD, explained above) helps in determining the eligibility of the loan.

The system is **automatic and instantaneous** in the sense that as soon as the lending bank puts in the mortgage details it is considering, it gets a clear answer whether the loan will qualify for securitisation. And if not, the reason is also made clear.

The system, while **rules based, also has some flexibility embedded within it**. The qualifying norms cover various permutations of the different qualifying criteria. For instance, a high debt-to-income ratio can be compensated by a higher credit score, for the same LTV ratio.

Chart 17: A Snapshot of the Eligibility Matrix, Fannie Mae

Standard Eligibility Requirements - Manual Underwriting
Excludes: Refi Plus, HomeStyle Renovation, and HomeReady

			Maximum DTI ≤ 36%		Maximum DTI ≤ 45%	
Transaction Type	**Number of Units**	**Maximum LTV, CLTV, HCLTV**	**Credit Score/LTV**	**Minimum Reserves**	**Credit Score/LTV**	**Minimum Reserves**
Principal Residence						
Purchase Limited Cash-Out Refinance	1 Unit	FRM: 95% ARM: 90%	FRM: 680 if > 75% FRM: 620 if ≤ 75% ARM: 680 if > 75% ARM: 640 if ≤ 75%	0	700 if > 75% 640 if ≤ 75%	0
			660 if > 75%	6	FRM: 680 if > 75% FRM: 620 if ≤ 75% ARM: 680 if > 75%	2
	2 Units	FRM: 85% ARM: 75%	680 if > 75% 640 if ≤ 75%	6	700 if > 75% 660 if ≤ 75%	6
					680 if > 75% 640 if ≤ 75%	12
	3-4 Units	FRM: 75% ARM: 65%	660	6	680	6
					660	12
Cash-Out Refinance	1 Unit	FRM: 80% ARM: 75%	680 if > 75% 660 if ≤ 75%	0	700 if > 75% 680 if ≤ 75%	0
			660 if > 75% 640 if ≤ 75%	6	680 if > 75% 660 if ≤ 75%	2
	2-4 Units	FRM: 75% ARM: 65%	680	6	700	6
					680	12
Second Home						
Purchase Limited Cash-Out Refinance	1 Unit	FRM: 90% ARM: 80%	680 if > 75% 640 if ≤ 75%	2	700 if > 75% 660 if ≤ 75%	2
					680 if > 75% 640 if ≤ 75%	12
Cash-Out Refinance	1 Unit	FRM: 75% ARM: 65%	680	2	700	2
					680	12
Investment Property						
Purchase	1 Unit	FRM: 85% ARM: 75%	680 if > 75% 640 if ≤ 75%	6	700 if > 75% 660 if ≤ 75%	6
					680 if > 75% 640 if ≤ 75%	12
	2-4 Units	FRM: 75% ARM: 65%	660	6	680	6
					660	12
Limited Cash-Out Refinance	1 Unit	FRM: 75% ARM: 65%	660	6	680	6
					660	12
	2-4 Units	FRM: 75% ARM: 65%	680	6	700	6
					680	12
Cash-Out Refinance	1 Unit	FRM: 75% ARM: 65%	700	6	720	6
					700	12
	2-4 Units	FRM: 70% ARM: 60%	700	6	720	6
					700	12

Source – Fannie Mae

VII. Lessons for India

Experience of the countries discussed above provides us with important learnings for India. In fact, India has the opportunity to select the best practices from each of the successful countries. Here, we highlight some lessons that could inform the development of a stable and sustainable MBS market in India -

- **State guarantee with safeguards**: A state guarantee (implicit or explicit) is often necessary, but it must come with structures that transfer risk away from the books of the state sponsored intermediary, so that the intermediary does not, at any point hold excessive risk, as Fannie Mae and Freddie Mac did pre-2008.
- **State support with limits:** State support, if necessary, should aim to help when the industry is at a nascent stage, and come with a sunset clause. Colombia's

income tax break for the first 10 years is a good example. Without the sunset clause, there is a risk of not letting the industry stand on its feet, nor weigh risks correctly.

- **Countercyclical role of state supported intermediaries:** Most countries with evolved MBS markets have state sponsored intermediaries that have played a catalytic role in its development. These also have another benefit that may be useful for India – securitisation by these intermediaries tend to be countercyclical – growing rapidly in a difficult market situation and slowly when the markets are stable. Malaysia's Cagamas is a good example of this.
- **Simple structures, standardised process and data:** Colombia's success and the US' revival of the MBS market post GFC, have a lot to do with simple and predictable rules and structures of securitisation, as well as homogenous data and process standards. Bringing in clarity via these seem to be a prerequisite for the take-off and sustainability of the MBS market.
- **Grading loans early on.** As done in the post-GFC US, grading a loan at inception can have many advantages – it can provide clarity on whether the loan will be eligible for securitisation, make clear early on what the regulatory treatment will be, and provide transparency on loan details to investors.
- **Clear, exhaustive and flexible guidelines:** Most countries have clear, exhaustive, and flexible guidelines that provide oversight on securitisation transactions. Qualifying criteria for mortgages that can be securitised, regulatory treatment of securitised pools (both for the originator and investors), and the process of securitisation, are clearly laid out. Exemptions to the rules are provided on a clear objective basis.
- **Moving fast:** Following a turmoil in the sector the MBS market should be revived/started quickly, as happened in Colombia. A gradual approach means that the market finds a different way to function, and may not be able to adjust to a new financial product later.
- **High quality governance and oversight:** The intermediary must not dilute the standards for risk taking, even when under pressure. This requires high standards of governance and oversight. The success of South Korea has much to do with strict adherence to the qualifying criteria for loan securitisation.
- **Promoting innovation.** Within the secondary mortgage framework, Cagamas has the flexibility to innovate and develop new asset classes (e.g. Sukuk for institutional investors such as insurance companies and pensions), while not losing sight of its social role in promoting home ownership in the country.
- **Evaluating the regulatory 'package'**: The objective of both the MRR and the MHP is to reduce the risk that ultimately gets passed on to the investor. As such, both should be looked at together as a package.

- **Importance of the role of HFCs:** HFCs play a key role in mortgage penetration. Colombia does not have a set of vibrant HFCs, and that has limited the size of its MBS market.

Chapter 5: Originator Side Issues & Recommendations

I. Introduction

Originator of a mortgage-backed securitisation is the entity that has originated the underlying mortgage loan. In India, such an entity could be a bank or a housing finance company (HFC). The originator typically initiates the securitisation transaction. A well-developed and stable securitisation market can be a very important source of funding for the originator and can enable better management of the originator's balance sheet. It is also an instrument to diversify, across different capital pools, credit risk in home loans.

In order to make securitisation an attractive source of funding for the originator it is critical to minimise the transaction costs in securitisation. It is also important that there is complete clarity for all the participants in the transaction on legal, accounting, taxation, and regulatory aspects of the transaction. In this chapter, we comprehensively review all aspects that affect the originator in a securitisation transaction and make recommendations to provide a clearer and more robust foundation to the transaction while minimising costs associated with it.

II. Legal Issues

Securitisation transaction involves a 'true sale' of a pool of assets to an intermediary that then issues securities backed by the pool to investors. In case of mortgage-backed securitisation, the sale of loan pools involves issues of transferring the underlying securities ie the mortgage. The main legal issue that arises relates to the stamp duty and registration of pool of (mortgage) loans when they are assigned or transferred from the originator to the SPV. There are two ways in which the transaction can take place; transferring or assigning only the receivables from the loan without transferring the underlying security interest or transferring both the receivables and the underlying security interest.

In the first type of transaction, the originator only assigns the future receivables from the loan to the SPV and does not transfer the underlying security interest ie the mortgage to the SPV. Stamp duty becomes applicable on such assignment. The amount of the stamp duty depends on the state in which the transfer document is executed. Currently a few states (eg Rajasthan, Punjab, Delhi, Gujarat) cap the stamp duty as a reasonable level. As a result, these states have become the preferred locations for executing the transfer documents. In such a transaction, there is a possibility that the security will fall away, since the debt and the security has been separated. Further, such a structure works as long as the originator continues to be the servicer and is not a feasible structure in the event of the originator ceasing operations; the SPV has no legal rights to enforce the underlying security. The servicer risk from the originator, thus, is amplified under this structure.

In the second type of transaction, where the securitisation occurs along with the transfer of underlying security interest, the document effecting the transfer has to be registered as per the provisions of the Registration Act of 1908 as mortgage debt is considered to be an immoveable property. The transfer instrument has to be registered in a sub-registrar office where whole or some proportion of the property to which such document is related, is situated (Section 28 of the Registration Act). Such registration attracts registration fee, which has been capped only in a limited number of states. Thus, registrar offices in these states, where the stamp duty is also capped, become the preferred locations for securitisation. The registrar's office then has to send the transfer documents to all the other registrars' offices in other states in whose jurisdiction the other underlying mortgages fall as per section 65 of the Registration Act. If this step is taken by the registering office, then the sub-registrars who receive the document may demand differential stamp duty and registration fees to be paid again, thereby putting at risk the structuring done by the parties to minimise the stamp duty and registration fee.

Stamp duty and registration fees are transaction costs for securitisation. In order to encourage its development, these costs should be minimised and be predictable. Presently there are only a few states where this is the situation. In order to develop a uniform, nationwide, common legal foundation for securitisation, state and central governments have to address the issue of stamp duty and registration.

Recommendations

1. **Stamp duty**

   (a) The Central government can exempt a mortgage-backed securitisation transaction from Stamp Duty in the same manner that assignment stamp duty towards asset reconstruction companies (ARCs) and stamp duty for factoring transactions (which also entail assignment of receivables) have been exempt;

   or

   (b) Stamp duty on assignment of mortgage pools in securitisation should be standardised and capped at a reasonable level across all states.

2. **Registration requirements**

   (a) The Central government can exempt the transfer of mortgage debt from compulsory registration under the Transfer of Property Act, 1882 and the Registration Act, 1908 based on the rationale that the mortgage loans are essentially movable assets unlike the underlying security and hence transferring them should not require registration as the underlying mortgages are, wherever mandatory, anyway registered.

(b) In order to ensure that public records are maintained for such exempt transactions, a requirement to register such transactions through a digital registry such as Central Registry of Securitisation Asset Reconstruction and Security Interest of India (CERSAI) with a nominal registration fee can be considered.

3. **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) benefit for enforcing security interest should be extended, through a notification, to securitisation trustee in a mortgage-backed securitisation transaction and its agents (for collection).**

III. Regulatory Issues

RBI guidelines of 2006 and 2012 provide the regulatory framework for securitisation in India. Several aspects of this regulatory framework can be modified to encourage mortgage-backed securitisation.

III.A. Regulatory guidelines for Direct Assignment (DA) and Pass-Through Certificate (PTC)

Current guidelines issued by the RBI (2006, 2012) treat both the DA and PTC transaction as securitisation. DA transaction is in the nature of a 'loan sale' and does not create tradeable securities, which is at the heart of any securitisation. Thus, DA transactions are not securitisation transactions. Clubbing the two types of transactions and to develop common regulatory framework for both can be confusing and impose undue restrictions. It will therefore be useful to separate the two and treat only the PTC transactions as securitisation. This is not to say that DA should not be permitted, but that it should be treated under separate set of guidelines. PTC is the true securitisation transaction that would deserve separate regulatory treatment and encouragement.

Recommendation

4. **Regulatory treatment for DA and PTC should be distinct with separate guidelines prescribed for DA and PTC transactions. Guidelines on securitisation should apply only to PTC transaction and not DA transactions, which should not be treated as securitisation.**

III.B. Separate treatment for ABS and MBS in regulation

Currently regulations on securitisation make no distinction between asset-backed and mortgage-backed securitisation. Some aspects of regulations change depending on the maturity of the underlying loans. However, it can be argued that there is a significant difference in the nature of securitisation when the underlying pool is either unsecured (eg in case of micro finance loans) or secured with movable assets (eg in case of commercial or passenger vehicle loans) than when the pool is mortgage loans. Key factors driving this difference are:

- Home loans are generally of much longer maturity (up to 25 years) than other loans (eg micro finance, auto, credit card loans) which mature typically within five years
- The underlying security for home loans is much stronger and is on stronger legal foundations through creation of the mortgage than for the other types are loans which are either unsecured or are secured with a charge on moveable assets
- The value of underlying security ie the property in the case of MBS generally appreciates increasing the security cover for the PTCs over their life unlike other asset backed securities where the value of the underlying security depreciates over the life of the loan
- The ratio of loan to value (LTV) for home loans generally tends to be lower than for other classes of loans such as vehicle loans
- The performance of home loans as an asset class in terms of levels of non-performing assets (NPAs) across business cycles is much better than other types of loans

Recommendation

5. **Regulatory treatment should be distinct for mortgage-backed securitisation (MBS) and other asset-backed securitisation. RBI should issue clear and separate guidelines for mortgage-backed securitisation**

III.C. Removing prohibition on securitisation of assigned assets

Currently assigned assets are not eligible for securitisation. This means that if a company transfers a pool of loans to another company under DA, then the assignee company cannot use that pool for further securitisation. This also may become an issue if one company merges into another, then the loan book of the merging company could become ineligible for further securitisation. This will restrict the use of securitisation as a funding source.

Recommendation

6. **Assigned assets should be eligible for securitisation by the assignee as long as the underlying mortgage pool satisfies all the other relevant regulatory conditions for securitisation**

III.D. Minimum holding period (MHP) requirement

The RBI guidelines on securitisation prescribe minimum holding period (MHP) which is the minimum period for which the originator must hold the assets on its books before they can be included in a securitisation pool. This requirement was 12 months (12 monthly instalments) for home loans, which was reduced temporarily to six months (six monthly instalments) in response to the liquidity issues that emerged in late 2018. The rationale for imposing a minimum holding period to discourage 'asset flipping' by the originator where the loan is put into a securitised pool immediately after it has been sourced. Such a model of 'originate to distribute' could wrongly incentivise the originator to dilute underwriting standards. However, the minimum retention requirement (MRR) ensures that the originator will continue to have a stake in the quality of underlying portfolio thus allaying concerns of higher risk with lower holding period. It is important to view MHP and MRR as a package (along with other provisions such as the 'qualifying mortgage standards') that together aligns the originator interest in the quality of the loan pool. On the other hand, lowering the MHP does not meaningfully reduce the quality of information regarding the performance of the pool but it does create incentive for the originator to pursue securitisation.

Recommendation

7. **For mortgage-backed securitisation, the minimum holding period should be reduced to six months/six-monthly instalments (permanently).**

III.E. Minimum retention requirement (MRR)

RBI guidelines demand the originator retains a certain minimum amount of the interest in asset pool that is securitised to ensure that it has a 'skin in the game' and continue to efficiently service the pool as a servicer. Currently this MRR is at 10 per cent of the pool. There is also a maximum limit of 20 per cent on retention. As elaborated in Chapter 4, most jurisdictions, including those that have more evolved mortgage-backed securitisation markets, limit MRR to five per cent and there are further concessions to go below this level depending on the characteristics of the pool (eg in the case of US, government guaranteed pools are effectively exempt from MRR). It may be useful to link the MRR to the risk profile of the underlying pool and the securities that are issued. Such a risk based MRR would ensure that there is continued sharing of the risk by the originator. It also will allow for fine distinction between pools of varying quality; pools with higher quality will require lower MRR and those with lower quality will require higher MRR.

Recommendation

8. **For mortgage-backed securitisation, the minimum retention requirement should be reduced to five per cent or equity (non-investment grade) tranches, whichever is higher. Any first loss credit enhancement provided by the originator will be included in MRR. If the equity tranche and credit enhancement together are less than five per cent, then the difference must be held *pari passu* in other tranches**

It is important to note that the MHP and MRR described here are <u>regulatory minimums</u>. The parties to the securitisation transaction (including the intermediary) can agree on more stringent requirements in their mutual interest.

III.F. Credit enhancement

Securitisation involves credit enhancement for the PTCs in order to improve their ratings. While the enhancement can be provided by a third party, it is customary, especially in the nascent stage of market development, for the originator to provide the 'first loss protection' through a cash collateral while getting a third party guarantee as a 'second loss protection'. Cash collateral for enhancement creates a net cost for the originator and hence any reduction in the amount of enhancement needed improves the economics of the securitisation transaction for the originator.

Extent of enhancement is a function of three main risks – credit risk in the underlying pool, basis risk in the pricing of the underlying pool, and servicer risk in the originator. Of these, credit risk is essentially a function of the construction of the underlying loan pool and the underwriting standards for the loans in the pool. Once the pool is constructed, the extent of enhancement needed on account of credit risk is crystallized. Basis risk arises due to differences in the basis and the movement of reference rate for the pricing of loans and the PTCs. Reference rate for pricing the loan is determined by the originator while the reference rate for pricing the PTCs depends on the investor. This basis risk can be reduced if the loan pricing is linked to an objective external benchmark so that the difference can be priced in at the time of initiating the transaction. The servicer risk issue is separately discussed.

Currently enhancement is allowed to be reset after 50 per cent of the underlying pool has been repaid for any type of securitisation. For MBS, given the longer maturity of the loans, this threshold is too long. It results in the originator providing excess enhancement than is needed for a considerable period of time. Initial reset at 25 per cent and subsequently at every 10 per cent repayment could be considered in order to reduce the credit enhancement cost to the issuer.

Recommendations

9. **Home loans pricing should be linked to an external, objectively observable benchmark (such as the repo rate). Lenders should be mandated to publicly disclose the external benchmark that is used to price floating rate loans and the periodicity of repricing**
10. **For mortgage-backed securitisation, first reset in credit enhancement should be allowed at 25 per cent of repayment of the underlying pool and subsequent reset at every 10 per cent further repayment.**

III.G. Implementation of the Basel securitisation framework in India

As mentioned in Chapter 3, Basel Committee on Bank Supervision issued a new framework for securitisation in 2015. Few jurisdictions have implemented this framework fully. The framework essentially provides (1) definition of the requirements for credit risk transfer on originator that should result in de-recognition of the asset pool underlying securitisation, (2) computation of capital requirements for entities that have exposure to securitisation, and (3) capital treatment for what it calls 'simple, transparent, and comparable (STC)' securitisation.

Both the requirement for credit risk transfer and capital requirement for securitisation exposure under this framework are informationally intense. The approaches to compute capital requirement are ordered into hierarchies with internal rating based approach being the first choice, followed by external rating based approach and standardised approach. The preferred internal ratings based approach, which can be adopted only in jurisdictions where banks have been permitted to use internal ratings based approach for capital adequacy purposes, requires the investor with a securitisation exposure to use its own data and models for determining adequate capital for that exposure. The models for determining credit risk transfer are also very sophisticated that require exhaustive data on various parameters of the securitisation transaction.

Current regulatory framework for securitisation is based on the Basel II standardized approach along with the use of external ratings for securities. The capital requirement for originator and investor (if under capital regulation ie banks and NBFCs) in the transaction are as defined in the Basel II guidelines. Indian securitisation market is nascent and lacks adequate information base to migrate to the internal rating based model under Basel III. The external rating based approach in Basel III, which would be the approach that could be adopted in India considering that no bank has authorisation to use internal ratings based approach to compute capital adequacy requirements, differs from that in Basel II primarily on the risk weights that are assigned to securities based on ratings. In principle, the Basel III external rating based approach is similar to Basel II that is being followed currently. Considering the nascent stage of securitisation, it will be premature to move to the more granular risk weights prescribed in the external rating based approach under the Basel III framework without properly understanding the impact of the same on the balance sheets of the investors to whom the framework would apply. It may be useful for to conduct an impact analysis of moving to Basel III prescribed risk weights before implementing them.

Recommendation

11. **It would be prudent to implement Basel III guidelines for securitisation exposures along with the rest of the Basel III package as and when it is implemented in India, after understanding the implications of the revised risk**

weight prescriptions that continue to rely on external ratings, through an impact analysis

IV. Accounting Issues

IV.A. IndAS accounting guidelines with RBI's income recognition guidelines

RBI has announced that the IndAS standards will be adopted by Indian banks, even though the implementation of the same has been deferred till further notice. They have already been adopted by NBFCs and HFCs. One major source of contradiction between the existing RBI guidelines and IndAS is in the treatment of upfront profits in securitisation transaction. The RBI guidelines mandate that any upfront profits that are realized at the time of initiating the securitisation transaction be transferred to a reserve and be amortized over the life of the transaction. IndAS 109, on the other hand, mandates the issuers to recognise any such upfront profits in the income statement immediately. Clearly, the current RBI guidelines are more conservative than the IndAS standard. However, since the IndAS standards have already been adopted by NBFCs and HFCs and will be adopted by banks in due course, it is important that the regulatory guidelines be aligned to the accounting standard.

Recommendation

12. **RBI should align its securitisation guidelines to the standards set by IndAS. Specifically, the guidelines related to the accounting for upfront profits in securitisation transactions should be aligned.**

IV.B. De-recognition of assets in securitisation and capital requirements

Securitisation involves transfer of assets from the originator to the SPV along with all the risk and rewards associated with those transferred assets. In many securitisation transactions, the originator provides credit enhancement to the transferred pool of loans. Such credit enhancement creates ambiguity under IndAS in terms of de-recognition of assets and could result in the entire assets remaining on the originators' balance sheet as the standard of 'transfer of risk' are not met. Credit enhancement could be interpreted as the originator retaining significant risk of the pool. Not derecognizing the asset could mean that the originator will have to provide risk capital on such assets (in addition to the credit enhancement). RBI has clearly provided its own guidelines on 'true sale' of the asset pool and compliance with these guideline results in de-recognition of the assets from a regulatory standpoint, primarily in computation of capital requirements. Any ambiguity on the capital requirements could become a serious impediment to securitisation. Hence, it is important that the current regulations continue.

Recommendation

RBI should continue to use its own standards of true sale to determine de-recognition for the purposes of computing capital requirement for the originator, even if under IndAS the assets are not de-recognised

Securitisation transaction is expected to provide capital relief to the originator as it is removing risk from its balance sheet. At the very least, the transaction should not increase the amount of capital for the originator as it would become a major disincentive. It is important to note that the investors in the securities issued, if a capital regulated entity (ie a bank or an NBFC) will also provide capital from the exposure to securitisation.

The 2006 regulatory guidelines capped the post securitisation risk capital of the originator to a level that it would have to hold if there was no securitisation. This provision ensured that the post securitisation capital would not be higher and hence will not act as a penalty and a disincentive for the originator. This provision was later omitted from the master circular and should be reinstated.

Recommendation

13. **The post securitisation risk capital requirements for the originators should be capped at a level that it would have to maintain if the underlying pool had not been securitised.**

V. Taxation Issues

V.A. Income tax treatment of Excess Interest Spread (EIS) for HFCs:

Accounting standards prescribed under the IndAS regime can lead to taxation issues on Excess Interest Spread (EIS). The IndAS requirements effectively accelerate revenue recognition of the EIS, on the basis of its net present value. Under the Income-tax Act, 1961 ('ITA'), income is taxable upon accrual; EIS, which is linked to realization of underlying interest should not to be regarded as having accrued to the originator until its realization. Furthermore the EIS is a part of credit enhancement which further delays the accrual and remains uncertain until the credit enhancement is effectively discharged. This position is largely consistent with the accounting treatment prescribed under the Securitisation Guidelines of the RBI and has been generally accepted by the Revenue authorities.

Since the EIS revenue would be booked in the year of securitisation, the book profits of the originator (if an HFC) in the year of securitisation would be enhanced without a corresponding increase in the HFC's profits for tax purposes. This could result in the HFC originator being subject to Minimum Alternate Tax ('MAT') based on its book profits. Since banks are not adopting IndAS this issue will not arise if a bank is the originator, thus creating an uneven playing field.

Recommendation

14. **Section 115JB of the Income Tax Act, 1961 should incorporate a carve-out in respect of EIS recognised as income as per IndAS; instead, such income should be deemed to be recognised in the books over a period of time until the transaction is complete and the exact extent of EIS is known**
15. **The tax administration may issue a circular clarifying that originators, as hitherto, may be allowed to offer EIS to tax on the basis of the revenue recognition schedule provided**

V.B. GST claim on EIS

Indirect tax authorities have raised queries in the past to justify why the entire EIS should not be treated as servicing fees and be subject to service tax / GST. EIS, as discussed earlier, is an interest rate differential that is part of credit enhancement. Clearly, it is not a part of servicing fees and hence should not be treated as such.

Recommendation

16. **The tax administration may also issue a circular clarifying that no part of EIS is to be treated as servicing fees and hence attract GST**

Chapter 6: Investor-side Issues and Recommendations

I. Introduction

PTCs issued under MBS create a new asset class for investors. As discussed earlier, MBS is different from other types of asset-backed securitisation. For investors, the risk – reward trade off in an MBS could be an attractive alternative to bonds. Broad spectrum of investor classes – mutual funds, life and general insurance, pension and provident funds, individuals, banks, and NBFC can all be investors in mortgage-backed securities. However, so far most these investors have made negligible investments in mortgage-backed securities, with the possible exceptions of banks. Even banks have mostly participated in the DA transactions and not PTCs. It can also be argued that this is a supply side issue – lack of significant volumes of issuance of mortgage-backed securities. Consequently, there is a general lack of awareness and interest in these securities.

Development of the housing finance securitisation will be accelerated when it could attract wider investor pools, and specifically those with longer maturity liabilities such as life insurance and pension funds. The total assets under management (AuM) of debt schemes of mutual funds in India, presently, is around ₹12 lakh crore. The life insurance business has AuM of ~₹37 lakh crore of which ~₹five lakh crore is invested in corporate debt securities. General (non-life) insurers have ~₹four lakh crore in AuM of which ~₹1.25 lakh crore is in corporate debt securities. Employees Provident Fund (EPF) and exempt provident funds together have an AuM of ~₹15 lakh crore. These are very large and growing pools of capital that hitherto have not invested in mortgage-backed securities.

In addition to domestic capital, Indian mortgage-backed securities can also attract foreign capital. The current environment of very low interest makes investors across the world hungry for high-quality assets that give reasonable returns. It is interesting to note that at the time of writing of this report, over 25 per cent of bonds across the world trade at negative yields. A well-developed and stable Indian MBS market can attract large amount of long-term international capital.

In this chapter, we review range of issues that influence investors' ability and appetite for investments in mortgage-backed securities. We make recommendations that will address these issues and encourage wider investor classes to invest in them.

II. Regulatory Issues

II.A. Banks as Investors

Data and discussion in Chapter 3 clearly shows that DA is the predominant mode of securitisation where the originators are mostly NBFCs and HFCs and the investors are commercial banks. Banks have the largest pool of (debt) capital in India and hence it is likely that they will remain an important participant in securitisation as investors.

Presently, banks are primarily using securitisation to acquire loans that qualify as priority sector loans. For home loans, those that are below the size threshold defined by the RBI (currently ₹35 lakh in metro areas, and ₹25 lakh in other areas) meet the priority sector criteria. HFCs, especially those that focus on the affordable segment originate such loans and sale pools of them to banks. In addition to helping banks meet their priority sector lending obligations, there are two other reasons that banks prefer the DA mode rather than PTC for such transactions. First, banks like to show growth of their loan books which DA accomplishes. If banks were to buy PTCs they will become a part of the bank's investment book and not loan book. Second, in a DA transaction, banks conduct extensive diligence on the loan pool, essentially cherry picking loans that constitute the pool so that they have very high level of comfort with the credit quality of the pool. If banks were to participate in an 'arm's length' PTC issuance and not a customized bilateral transaction, they will not be able to conduct such extensive diligence. Increasingly, banks are also factoring in loan servicing issues while selecting the loans in the pool so that they can take over the servicing of the loans in the event the originators ceases operations.

In order to develop the PTC model of securitisation for home loans, it will important to nudge banks away from DA towards PTC. Since pursuit of priority sector loans will continue to be an important objective for banks, the PTCs will have to qualify towards the priority sector obligation the same way as the pool transferred under DA does, which the current regulations permit. Banks' comfort with an 'arm's length' PTC issuance without a proprietary diligence would develop as various aspects of the transactions are standardised along with greater disclosures about the transactions. These issues of standardisation and disclosures are discussed in detail in Chapter 7.

Under current regulations, if banks invest in mortgage-backed securities, they become a part of the 'Available for Sale (AFS)' category of investments. AFS category investments are mandated to be marked-to-market, which acts as a dis-incentive. Considering the long maturity of the MBS, there is merit in permitting banks to categorise these securities as 'Held to Maturity (HTM)', which do not require marking to market. Regulations can specify a minimum maturity threshold or rely on declared intent at the time of acquiring these securities in order to be classified as HTM.

Recommendation

17. **Banks should be allowed to classify mortgage-backed securities with the original maturity of over a predefined threshold (eg five years) or as per the declared intent at the time of acquiring the securities, under the Held to Maturity (HTM) category**

II.B. Investment Guidelines for Provident Funds and Insurance Companies

Investments of provident funds and insurance companies are governed by the guidelines issued by EPFO and Insurance Regulatory and Development Authority of

India (IRDAI). Current provident funds guidelines that were issued through a notification in May 2015, permit investments in MBS for funds. MBS are includes in a class of 'Asset backed, Trust Structured, and Miscellaneous' investments and an overall limit of five per cent is imposed on this class. Similarly, investment guidelines issued by IRDAI in August 2016 for insurance companies limits investments in asset backed securities with housing or infrastructure loans underlying at 10 per cent of the total.

Considering the potentially much larger size of MBS and fundamental differences in its character compared to other asset-backed securities or structured obligations, there is a strong case for a separate limit to be prescribed for MBS.

Recommendation

18. **A separate and specific limit of five per cent should be allowed for MBS in the provident fund, pension fund and insurance investment guidelines. EPFO, PFRDA, and IRDAI should issue notifications for these new limits.**

II.C. Repurchase Transactions

Repurchase transactions (repo) allow investors to create short-term liquidity using the securities they own. In the absence of liquid secondary markets, availability of repo arrangement is a critical source of creating such short-term liquidity.

RBI has issued directions in July 2018 relating to the permissible repurchase transactions. These directions define all the securities that can be used for a repurchase (repo) transaction (Section 3 of the directions). This definition does not include pass-through-certificates (PTCs) as eligible securities. Highly rated PTCs are no different from debt securities and debentures, which are eligible. Permitting repo's on PTC will help create liquidity for their holders and hence increase their attractiveness to the investor.

Recommendation

19. **Regulatory directions on Repurchase Transactions (Repo) should include PTCs issued through a mortgage-backed securitisation transaction as eligible securities.**

II.D. Credit Default Swaps

Credit Default Swaps (CDS) enable investors to get a protection against any credit downgrades of their investments. For MBS, this is particularly relevant for the mezzanine tranches that are typically rated just above investment grade (BBB or A) that issuers find hard to sell. Investors in such mezzanine tranches could obtain credit protection through CDS. In 2013, RBI issued guidelines for CDS. These guidelines define 'reference obligations' for which CDS are permitted. Such reference obligation includes rated debt securities that are both listed and unlisted, including those that are issued by SPVs created for infrastructure assets. However, PTCs issued from mortgage pools are not included.

Recommendation

20. **Credit Default Swap (CDS) guidelines should include PTCs issued in a mortgage-backed securitisation transaction as eligible reference obligation.**

III. Taxation Issues

III.A. Tax Treatment of the Income Received by Securitisation Trustee

Securitisation trust is a pass-through structure that means all the gains and losses from the underlying pool are passed on to the investors by the trustee. The transaction, from a tax standpoint, is as if the investors have directly invested in the underlying loan pool. This implies that distributions received by an Investor from the trustee should be deemed to be of the same character and nature as the trustee would have received it. Income received or accrued but not distributed by the trustee during a financial year, is deemed credited to each Investor's account at the end of the relevant financial year; any losses incurred by the trustee are passed on to the Investors.

The pass-through treatment for the trustee has been drawn from the tax framework accorded to Alternative Investment Funds ('AIFs'). However, the operating context of a securitisation trustee is materially different from that of an AIF. Two specific issues arise as follows:

1. **Income classification**: There is lack of clarity on how interest income received by a securitisation trustee should be characterized – ie, should it be treated as 'Profits and Gains from Business' ('PGB') or as 'Income from Other Sources'? Since this characterization, by virtue of the pass-through nature, is passed on to the Investors, this classification has material consequences in terms of loss offsets, and, in the case of non-resident investors, the rate at which tax is levied on income allocated to such investors by the trustee.

   In the case of non-resident investors, if the income is characterized as PGB, the investors could be liable to tax at the rate of 40 per cent. Alternately, investors investing through a jurisdiction, which has a tax treaty with India, may be able to claim exemption from Indian tax on the grounds that PGB is not taxable in India since the Investor does not have a permanent establishment in India. Thus, there is a possibility of widely divergent tax outcomes is which is not desirable.

2. **Asymmetrical tax imposition**: Credit tranching and pre-payment could create asymmetry in taxes for the investors. Investors participating in senior tranches would likely be serviced by primarily from interest receipts. A majority of the distributions to such Investors would constitute taxable income under the current taxing framework. However, from the perspective of the Investors, they would have received a return on their investment in the senior tranche (which

ought to be taxable) and would also have received a return of the amount (ie principal) they invested in the tranche (which ought not to be liable to tax).

Recommendations

21. **Income received by the securitisation trustee should continue to be exempt from income-tax.**
22. **Investments in the PTCs should be regarded as having been made in debt instruments and tax treatment on receipts from PTCs should be consistent with nature of receipts; ie interest should be taxed as per the applicable provisions of the Income Tax Act, 1961 and principal repayments should remain untaxed (since there is no income element involved).**

III.B. Withholding Taxes

Income Tax Act requires a securitisation trustee to withhold tax at the following rates from any income distributions made by it to investors resident in India: 25 per cent if the recipient is an individual or a Hindu Undivided Family (HUF), and 30 per cent if the recipient is a person other than an individual or an HUF.

The rate of tax withholding is very high when compared to the tax withholding that applies to interest payments on corporate bonds or other debt. Generally, interest on debt attracts tax withholding at 10 per cent; no tax withholding obligations apply to interest payments on listed corporate bonds made to resident taxpayers. Finally, no tax withholding is required from interest payable to specified entities such as banks, insurance companies, and mutual funds. The high rate of tax withholding makes investment in PTC relatively unattractive.

Recommendation

23. **PTCs issued in mortgage-backed securitisation should be on par with corporate bonds. As with such bonds, interest payments made to resident investors in listed PTC should not be liable for tax withholding. Interest payments to non-resident investors in PTC should be aligned with the tax withholding rate that applies to interest income earned by non-resident holders of units of Real Estate Investment Trusts or Infrastructure Investment Trusts (which is five per cent currently)**

IV. Listing

Listing of securities is the first step in creating a secondary market for them. Deep and liquid secondary markets are critical to developing an investor base. SEBI has recently proposed that listing will be mandatory condition for a mutual fund to invest in any debt security. For insurance companies, only listed securities are treated as 'approved securities' whereas unlisted securities fall into the category of 'other investments' which has more stringent limits. Currently, a tiny fraction of PTCs issued through securitisation are listed. Regulatory requirements of listing have been streamlined and the costs of listing are also negligible. Thus, the reluctance to listing is clearly not due to onerousness of procedures or costs. The main reason is that presently most of the securitisation transactions are bilateral deals between the originator and the investor (most transactions have a single originator and investor) who do not see much value from listing.

In order to attract a wider range of capital pools such as insurance and provident fund, listing will be critical. Therefore, listing for MBS should be made mandatory. In order to exclude small size transactions that may continue to remain bespoke transactions between the originator and the investor, a size threshold for this requirement should be specified and reviewed periodically.

Recommendation

24. **PTCs issued in mortgage-backed securitisation should be mandatorily listed if the securitisation pool is larger than ₹500 crore.**

V. Valuation

For any investor in PTCs, it is important to know their fair market value. For mutual funds it would be necessary to know the fair market value for computation of NAVs. For banks, PTCs are classified currently under 'available for sale' category of investments, which are required to be marked to market. When the PTCs are unlisted or listed but are not traded actively, there is no market price available. In such situations, some robust methodology of valuation has to be approved by the regulators. Currently, the market practice is to use the NBFC / HFC credit spreads provided by FIMMDA as the basis of determining value of the PTCs. However, given the nature of securitisation, the creditworthiness and hence the credit spreads of the originators have no bearing on the performance of the securitised asset pool. Right approach would be to base the valuation on the performance of the underlying pool ie discounting the future cash flows from the pool at an appropriate discount rate determined by the rating of various tranches and adjusting for credit enhancement and prepayment.

Recommendation

25. **Financial sectors regulators should prescribe standardised methods for valuation of PTCs of mortgage-backed securitisation that are based only on the characteristics and the performance of the pool and are not influenced by the financial status of the originator.**

Chapter 7: Enablers

I. Introduction

Previous chapters of this report focused on key issues related to parties directly involved in a securitisation transactions – originators and investors. In this chapter, we focus on issues that do not directly impact a securitisation transaction but could act as enablers or catalysts in promoting the development of mortgage-backed securitisation. Addressing these issues will create a more robust legal and institutional foundation for mortgage-backed securitisation to grow.

II. Legal Foundations for Bankruptcy Remoteness of Securitisation

An essential characteristic of securitisation is that it is bankruptcy remote. This means that in the event that an originator, who has created the loan pool underlying the securitisation, becomes insolvent and undergoes bankruptcy resolution, the pool is excluded from the estate of the originator during liquidation or resolution. This feature ensures that the investors in the PTCs do not have to worry about the financial condition of the originator once the pool has been sold to the securitisation trustee (except the issues that arise from the continued role of the originator as a servicer of the loans)

Bankruptcy process operates under a bankruptcy law. In India, the Insolvency and Bankruptcy Code (IBC) is the bankruptcy law that was enacted in 2016. This law applies only to bankruptcy of **non-financial** firms and does not apply to financial firms such as banks, non-banking and housing finance companies. Since the originators in a securitisation will always be a bank, an NBFC, or an HFC, the IBC will not be an applicable law in the event of their bankruptcy.

Given their large number and size, a bankruptcy law for financial firms is necessary. There is a strong possibility that the central government will enact such a law in the future. It will be important to enshrine the bankruptcy remoteness of securitisation transactions in any such future law. Not only the loan pool but also any enhancement provided by the originator (eg a cash collateral through a deposit account) should be made bankruptcy remote. Any uncertainty with respect to bankruptcy remoteness of the transaction could discourage investors from participating in the transaction.

Recommendation

26. **Any law for resolving bankruptcy of financial firms must ensure that the assets underlying a securitisation transaction, as well as any exposures in the form of credit enhancement, should be bankruptcy remote and not become a part of the firms' liquidation or resolution process under the law.**

III. Standardisation

III.A. Documents and data standardisation

One key learning from developed MBS markets is the importance of standardised process and data capture at the time of making the underlying loans. Standardisation is a critical pre-requisite for transparency in the transaction. Process standardisation involves defining standards for:

- Loans that can qualify for being a part of the loan pool that is securitised. These standards are often referred to as 'qualifying mortgages'. Such standards include:
  - Limit on the ticket size
  - Maximum loan to value ratio
  - Maximum payment to income ratio
  - Minimum credit score
  - Permissible features of loans relating to mode and frequency of interest payments, etc
- Loan document- content and formats
- Loan application data that is gathered and formats for storing the data

In India, none of these aspects is standardised. Standardisation will go a long way in not only promoting securitisation but also in the development of investor base, as standardised data capture and disclosure would make the whole process much more transparent. As smaller HFCs continue to expand serving economically weaker sections in geographically dispersed areas, standardisation of the process will become even more important.

Recommendations

27. Standardisation:

(a) Loan documentation must be standardised for housing loans. Documents for the three alternative forms of underlying mortgages (equitable mortgage that is registered, equitable mortgage that is not registered, and registered (legal) mortgage) should be standardised and adopted by all lenders

(b) Housing loan related data and the format of capturing that data must be standardised so that aggregation of this data becomes easy for the purpose of creation of loan pools

(c) Minimum standards for loans qualifying to be securitised must be defined. Loans conforming to these standards would be eligible to be pooled for securitisation

III.B. Loan servicing

Another important area of standardisation is **loan servicing**. Continued servicing of loans that includes collection of repayments, addressing borrower issues (such as issuance of tax certificates and loan account statements) custody of mortgage documents, etc remains with the originator even after securitisation. This arrangement creates a 'servicer risk' in the securitisation transaction. In the event that the originator ceases to function due to its insolvency or is unable to perform its loan servicing function effectively for any other reason, then the investors face the risk of default or delay in cash flows. Servicer risk increases the transaction costs of securitisation through increase in credit enhancement. It also discourages some investors who lack capabilities to take over servicing in the event the originator fails.

In most developed MBS markets, independent loan servicing institutions exist that provide loan servicing to the originator right from inception of the loan or can take over loan servicing in the event an originator who is also is the servicer, ceases to function. Such third party servicers have not developed in India yet. Hence, servicer risk can be mitigated by transferring the servicing of loans from the originator to another mortgage lender who may have the operational capability to take over the servicing, such as another HFC or a bank.

A critical pre-requisite for making the loan servicing transferrable, is its standardisation. If the loan servicing process is standardised then it becomes easier to transfer it seamlessly across servicers. In many markets, loan originators confirm adherence to a 'master servicing agreement' as a part of securitisation process. Similar master services agreements can be developed and adapted in India.

Recommendation

28. **Loan servicing process should be standardised and be adapted by all mortgage lenders. A Master Servicing agreement describing the standardised servicing process should be developed and adhered to by all lenders.**

III.C. Promoting standardisation

Standardisation can be driven by a well-established intermediary (like Fannie Mae in the US), a self-regulatory organization (such as Indian Banks Association for Banks and Association of Mutual Funds of India for mutual funds in India), or through regulations. In this report, **we include this as a part of the role of the intermediary that we discuss later in this chapter**. Until such an intermediary is established, the standardisation efforts could be pursued through collaborative efforts by the lenders or through regulations.

NHB, as a part of its development agenda can play a pivotal role in driving standardisation. It can provide a platform for lenders – banks and HFCs – to make collaborative efforts at developing standards. NHB can then act as a custodian of the standards and ensure adherence to it as a part of its supervisory role. Given the imperatives of resources for the newer and smaller HFCs, standardisation in mortgage origination along with availability of pool performance data on an ongoing basis can provide impetus to securitisation and thereby aid the recycling of funds to support the agenda of affordable housing for all.

Recommendation

29. **NHB should undertake efforts to establish the loan origination standards (at least for the affordable housing loans) on a priority basis and set up the infrastructure for obtaining and disseminating pool performance data for all securitisation transactions.**

IV. Setting up an intermediary for mortgage-backed securitisation

Given the existing challenges to housing finance securitisation in India, the Committee extensively discussed the need for long-term measures for the orderly development of the MBS market. The key question that the Committee grappled with was: whether there was a market failure that needed additional Government intervention or if these could be resolved by market participants on their own. The Committee also carefully studied international experiences in this regard, particularly moral hazard issues arising from Government intervention in housing markets.

The Committee concluded that the issue of (lack of) standardisation appears to be an important constraint for India. This is with respect to the underlying mortgage loans, under-writing guidelines followed by originators and also servicing standards followed by originator/servicers. In theory, standardisation can be achieved by market participants coming together and adopting these voluntarily. The other end of the spectrum is regulation mandating the same. The Committee felt that the best option to drive such standardisation in the near to medium term would be a credible intermediary that can not only evolve these standards with industry inputs but also commit capital to securities that adhere to these standards.

The Committee noted that the primary tool used by National Housing Board (NHB) today for market development is refinance. It was felt that market development, particularly to accelerate the growth of smaller HFCs and create robust funding sources requires new mechanisms to be established and functions to be performed.

The Committee therefore, proposes the creation of a new intermediary. The mission of this new intermediary would be the creation of a deep and vibrant market for MBS in India. The intermediary itself would aim to be commercially sustainable and not threaten the stability of the broader financial system through its activities.

Recommendation

30. An intermediary to promote housing finance securitisation with the primary functions of standard-setting and market making should be established by NHB.

Detailed recommendations on the ownership, the governance, and the functions of such an enterprise are described below.

IV.A. Ownership and Governance

The three options discussed by the Committee for the intermediary were to conduct this role through (i) the National Housing Bank (NHB) directly (ii) Indian Mortgage Guarantee Corporation, or (iii) a new organisation. Weighing up these options, the Committee recommends that the intermediary be created as an NBFC, a majority owned subsidiary of NHB to start with and regulated by the RBI.

(i) The rationale for this draws from the fact that the NHB already has the broad mandate for development of this market and the proposed functions are permissible under the National Housing Bank Act, 1987. Thus, creating the intermediary as a subsidiary of the NHB has the following merits: it can be regulated by RBI;

(ii) it can expand its capital base to support growing business by raising capital from other (private) investors in the future;

(iii) it allows separation from the lending/refinance activities of NHB; and

(iv) leverage the expertise and talent within the NHB while allowing to acquire and develop new talent.

It is also proposed that this entity would have 51 per cent ownership by the government through the NHB initially. The government ownership in the entity would then be gradually reduced to 26 per cent over a period of five years. The remaining capital of 49 per cent may be initially raised from multilateral agencies. Going forward, the shareholding should be diversified to include representatives of the originator community such as Housing Finance Companies (HFCs) and Scheduled Commercial Banks and representatives of the MBS investor community including insurance companies. The stakes of originator investors should be capped at five per cent to avoid conflicts of interest. Such an ownership and governance model would build buy-in and trust for the entity in the market, create a robust framework for decision-making, as well as enable the emergence of a sustainable business model.

It is important to ensure the composition of the Board of the proposed intermediary enables transparent and effective decision-making. Ensuring a good mix of executive, non-executive and independent board positions will be an important factor influencing the effectiveness of the Board. The Companies Act, 2013 includes requirements for every listed company to have a minimum of one-third of directors to be independent[1]. SEBI requires at least 50 per cent of a listed company's board to consist of non-executive directors, and additionally require that independent directors make up one-third or a half of the Board depending on the Chairperson selected[2]. This shows the reliance on Independent Directors as a way to add neutrality and expertise to the functioning of the organisation. It is important for the board to be driven by independent directors, as opposed to investor-directors in order to ensure orderly market development while being disciplined about risk-taking.

Table 5: Comparing NHB's Current Role with the Proposed Intermediary's Role[3]

National Housing Bank	Proposed Intermediary (majority-owned subsidiary of NHB)
Functions	
• Promoting establishment & support of housing finance institutions • Loans and advances for housing to HFCs, Banks, Coops, Rural Dev Banks • Loans for housing development and slum clearance projects	• Establishing standards for the securitisation process, documents, data, and disclosures • Market making for MBS PTCs • Credit enhancements for MBS PTCs • Information repository for MBS transactions
Regulation	
• The general superintendence, direction and management of the affairs and business of NHB vest, under the NHB Act, with a Board of Directors	• In addition to Board oversight, it must be formally regulated by RBI as a financial institution. It should adopt IndAS from the start.
Governance	
• Board with Chairman & MD (both can be one) + up to 13 directors • 7 State directors, 6 others • All appointed by Govt apart from 2 RBI director and two of private shareholders • Questions decided by majority vote, and Chairman has casting vote	• Board led organization, to follow norms of listed companies • Separation of Chairman & MD • Chairman nominated by NHB but not a deputed executive • MD to be appointed by the Board and compensation decided by the Board based on performance • No representative of the regulator • Audit committee, Risk committee (CRO reporting directly into the risk committee/Board), ALCO and compensation committee.

IV.B. Capital Structure

The entity will start with ₹500 crore as initial capital. As noted above, the government ownership in the intermediary through the NHB is recommended to be 51 per cent initially, to be gradually brought down to 26 per cent over a period of five years. In addition to the above-mentioned liability structure, the intermediary would be allowed to invest in each pool it securitises to the extent of five per cent of the pool or five per cent of its own capital base, whichever is lower. An overall aggregate limit of 50 per cent of capital of the intermediary can be set as the limit for market making activities.

IV.C. Functions of the intermediary

The intermediary is expected to perform the following functions in the MBS market.

a. **Establish criteria** for assessment of asset quality of loan pools receiving support from intermediary. Specifically, the intermediary will:
    - Establish underwriting guidelines that the originator will need to conform in order to qualify the loans they originate to be part of the securitisation pool
    - Establish guidelines for the creation of the pool – including minimum size, seasoning, rating, etc

b. **Structure and perform market making**
    - Structure transactions according to investor requirements and ensure all legal and regulatory conditions are complied with
    - Set up Issuer SPVs and Trusts to enable transactions to come to market.
    - Invest in a part of the transaction in order to be able to perform market making activities by providing two way quotes for the securities issues; the extent of investments will be within limits established and will be solely used to support the market making activities

c. **Facilitate trading**
    - Enable trades on an existing platform (eg debt market segment of NSE), buy and sell down of PTCs and create a secondary market for the trades. This could also assist the information repository function (as further described in see 11.IV.C.d below).
    - Provide liquidity to the MBS PTCs through reverse repo (when permitted) particularly during market discontinuities.
    - Provide unfunded guarantees taking the second loss position in securitised pools to enhance the rating of the pool.

d. **Set up an information repository**
    - Set up a repository of all pool/loan level information for securitisations that it supports; including information on individual security obtained by the information gathered from its market making function

- Link the repository function into existing repositories. Relevant existing data utilities and infrastructures, such as the Information Utilities under the Indian Bankruptcy Code, CCIL's trade repository for OTC markets and NSEL's repository for corporate bonds would be relevant utilities for linking

e. **Ensure standardisation of process and disclosures among originators**: Through its mortgage criteria, information repository and other functions the GSE could drive standardisation of processes and disclosures among originators.

IV.D. Creating benchmark criteria for conforming mortgages

The National Housing Bank (NHB) has facilitated many issues of Residential Mortgage Backed Securities (RMBS) in India. They have facilitated 14 transactions thus far with an aggregate amount of ₹862 crore[4]. Additionally, they have also provided credit enhancement by way of guarantee to some of these transactions[5]. To identify originator and assets for securitisation, NHB specifies certain 'pool selection' criteria. However, a comparison of these criteria with those of Fannie Mae, in the US, reveals that the criteria are limited and inflexible. Appendix [II] and [III] of this Report set out an overview of the conforming mortgage criteria currently employed by the NHB and by Fannie Mae in the US[8,9]. The committee recommends that the intermediary, when selecting loan pools for securitisation, expands on the criteria used by NHB to include metrics measuring the credit worthiness of the borrower, reason for taking loan and type of loan taken. Allied to the mortgage criteria, the GSE should also indicate servicing standards or milestones/ processes recommended for the servicing of conforming loans. This could help improve and drive standardisation of servicing practices in the market. Further, the committee also recommends that the criteria be flexible enough to ensure that loans are not rejected when found wanting in only one dimension.

Chapter 8: Implementation Roadmap

I. Introduction

Chapters 5 to 7 of this report describe the issues considered and the recommendations made by the Committee. The issues and the recommendations are categorised according to the party in a securitisation that the issue relates to ie originator and investor as also some enablers. Implementation of the recommendations needs action on part of several agencies. In this chapter, we classify the recommendation according the agencies/ institutions that will have to act in order to implement them. Recommendations for which action is needed on part of multiple agencies have been listed under each of them.

II. Central and State governments

1. Stamp duty:

   (a) The Central government can exempt a mortgage-backed securitisation transaction from Stamp Duty in the same manner that assignment stamp duty towards asset reconstruction companies (ARCs) and stamp duty for factoring transactions (which also entail assignment of receivables) have been exempt, or

   (b) Stamp duty on assignment of mortgage pools in a securitisation should be standardised and capped at a reasonable level across all states.

2. Registration requirements:

   (a) The Central Government can exempt the transfer of mortgage debt from compulsory registration under the Transfer of Property Act, 1882 and the Registration Act, 1908 based on the rationale that the mortgage loans are essentially movable assets unlike the underlying security and hence transferring them should not require registration as the underlying mortgages are, wherever mandatorily required, anyway registered.

   (b) In order to ensure that public records are maintained for such exempt transactions, a requirement to register such transactions through a digital registry such as Central Registry of Securitisation Asset Reconstruction and Security Interest of India (CERSAI) with a nominal registration fee can be considered.

3. Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) benefit for enforcing security interest should be extended, through a notification, to securitisation trustee in a mortgage-backed securitisation transaction and its agents (for collection).

4. Any law for resolving bankruptcy of financial firms must ensure that the assets underlying a securitisation transaction, as well as any exposures in the form of

credit enhancement, should be bankruptcy remote and not become a part of the firms' liquidation or resolution process under the law.

5. An intermediary to promote housing finance securitisation with the primary functions of standard-setting and market making should be established by NHB

III. Reserve Bank of India

1. Regulatory treatment for DA and PTC should be distinct with separate guidelines prescribed for DA and PTC transactions. Guidelines on securitisation should apply only to PTC transaction and not DA transactions, which should not be treated as securitisation.
2. Regulatory treatment should be distinct for mortgage-backed securitisation (MBS) and other asset-backed securitisation. RBI should issue clear and separate guidelines for mortgage-backed securitisation.
3. Assigned assets should be eligible for securitisation by the assignee as long as the underlying mortgage pool satisfies all the other relevant regulatory conditions for securitisation.
4. For mortgage-backed securitisation, the minimum holding period should be reduced to six months/six-monthly instalments (permanently).
5. For mortgage-backed securitisation, the minimum retention requirement (MRR) should be reduced to five per cent or equity (non-investment grade) tranches whichever is higher. Any first loss credit enhancement provided by the originator will be included in MRR. If the equity tranche and credit enhancement together are less than five per cent, then the difference must be held *pari passu* in other tranches.
6. Home loans pricing should be linked to an external, objectively observable benchmark (such as the repo rate). Lenders should be mandated to publicly disclose the external benchmark that is used to price floating rate loans and the periodicity of repricing.
7. For mortgage-backed securitisation, first reset in credit enhancement should be allowed at 25 per cent of repayment of the underlying pool and subsequent reset at every 10 per cent further repayment.
8. It would be prudent to implement Basel III guidelines for securitisation exposures along with the rest of the Basel III package as and when it is implemented in India, after understanding the implications on the revised risk weight prescriptions that continue to rely on external ratings, through an impact analysis
9. RBI should align its securitisation guidelines to the standards set by IndAS. Specifically, the guidelines related to upfront profits in securitisation transactions should to be aligned.

10. RBI should continue to use its own standards of true sale to determine de-recognition for the purposes of computing capital requirement for the originator, even if under IndAS the assets are not de-recognised.
11. The post securitisation risk capital requirements for the originators should be capped at a level that it would have to maintain if the underlying pool had not been securitised.
12. Banks should be allowed to classify mortgage-backed securities with the original maturity of over a predefined threshold (eg five years) or as per the declared intent at the time of acquiring the securities, under the Held to Maturity (HTM) category.
13. Regulatory directions on Repurchase Transactions (Repo) should include PTCs issued through a mortgage-backed securitisation transaction as eligible securities.
14. Credit Default Swap (CDS) guidelines should include PTCs issued in a mortgage-backed securitisation transaction as eligible reference obligation.
15. PTCs issued in mortgage-backed securitisation should be mandatorily listed if the securitisation pool is larger than ₹500 crore.
16. Financial sectors regulators should prescribe standardised methods for valuation of PTCs of mortgage-backed securitisation that are based only on the characteristics and the performance of the pool and are not influenced by the financial status of the originator.

IV. Financial Sector Regulators

1. A separate and specific limit of five per cent should be allowed for MBS in the provident fund, pension fund and insurance investment guidelines. EPFO, PFRDA, and IRDA should issue notifications for these new limits
2. PTCs issued in mortgage-backed securitisation should be mandatorily listed if the securitisation pool is larger than ₹500 crore.
3. Financial sectors regulators should prescribe standardised methods for valuation of PTCs of mortgage-backed securitisation that are based only on the characteristics and the performance of the pool and are not influenced by the financial status of the originator.

V. National Housing Bank

1. Standardisation:
   (a) Loan documentation must be standardised for housing loans. Documents for the three alternative forms of underlying mortgages (equitable mortgage that is registered, equitable mortgage that is not

registered, and registered (legal) mortgage) should be standardised and adapted by all lenders

(b) Housing loan related data and the format of capturing that data must be standardised so that aggregation of this data becomes easy for the purpose of creation of loan pools

(c) Minimum standards for loans qualifying to be securitised must be defined. Loans conforming to these standards would be eligible to be pooled for securitisation.

2. Loan servicing process should be standardised and be adapted by all mortgage lenders. A Master Servicing agreement describing the standardised servicing process should be developed and adhered to by all lenders
3. An intermediary to promote housing finance securitisation with the primary functions of standard-setting and market making should be established by NHB.
4. NHB should undertake efforts to establish the loan origination standards (at least for affordable housing loans) on a priority basis and set up the infrastructure for obtaining and disseminating pool performance data for all securitisation transactions.

VI. Tax Administration

1. Section 115JB of the Income Tax Act, 1961 should incorporate a carve-out in respect of EIS recognised as income as per IndAS; instead, such income should be deemed to be recognised in the books over a period of time until the transaction is complete and the exact extent of EIS is known.
2. The tax administration may issue a circular clarifying that originators, as hitherto, may be allowed to offer EIS to tax on the basis of the revenue recognition schedule provided.
3. The tax administration may also issue a circular clarifying that no part of EIS is to be treated as servicing fees and hence attract GST.
4. Income received by the securitisation trustee should continue to be exempt from income-tax.
5. Investments in the PTCs should be regarded as having been made in debt instruments and tax treatment on receipts from PTCs should be consistent with nature of receipts; ie interest should be taxed as per the applicable provisions of the Income Tax Act, 1961 and principal repayments should remain untaxed (since there is no income element involved).
6. PTCs issued in mortgage-backed securitisation should be on par with corporate bonds. As with such bonds, interest payments made to resident

investors in listed PTC should not be liable for tax withholding. Interest payments to non-resident investors in PTC should be aligned with the tax withholding rate that applies to interest income earned by non-resident holders of units of Real Estate Investment Trusts or Infrastructure Investment Trusts (which is five percent currently).

Appendix 1: Uniform Mortgage Data Program (UMDP)

Uniform Mortgage Data Program has four primary components -

a) Uniform Loan Application Dataset (ULAD) - Captures the profile of the borrower

The Uniform Residential Loan Application (URLA) is a standardised document used by borrowers to apply for mortgages. It supports collection of loan application details that are needed for underwriting. The Uniform Loan Application Dataset (ULAD) is the corresponding dataset for the URLA.

b) Uniform Appraisal Dataset (UAD) - Captures the profile of the property

Uniform Appraisal form contains standardised ratings and definitions for the 'Condition' and 'Quality' of the property and 'Updated/Remodeled' status. The Uniform Appraisal Dataset (UAD) defines and standardizes all fields that need to be filled.

c) Uniform Closing Dataset (UCD) - Captures loan details

The Uniform Closing Dataset (UCD) is a common industry dataset to convey information on the Consumer Financial Protection Bureau's (CFPB) Closing Disclosure. A Closing Disclosure is a five-page form that provides final details about the mortgage. It includes the loan terms, projected monthly payments, and how much borrower will pay in fees and other costs to get the mortgage (closing costs).

d) Uniform Loan Delivery Dataset (ULDD) - Captures data which qualifies loans for securitisation

The Uniform Loan Delivery Dataset (ULDD) is the common set of data elements required by Fannie Mae and Freddie Mac for loan deliveries. Loan Delivery is a web-based application through which lenders submit loans to Fannie Mae for whole loan sale and MBS Pools.

Appendix 2: Qualified Mortgages (QM) in the US

A Qualified Mortgage (QM) is a defined class of mortgages that meet certain borrower and lender standards outlined in the Dodd-Frank regulation. If a lender makes a Qualified Mortgage available to the borrower it means the lender met certain requirements and it's assumed that the lender followed the ability-to-repay rule.

As described below, a loan that meets the product feature requirements can be a QM under any of three main categories: (1) the general definition; (2) the 'GSE-eligible' provision; or (3) the small creditor provision.

Mandatory product feature requirements for all QMs

Points and fees are less than or equal to three per cent of the loan amount (for loan amounts less than $100k, higher percentage thresholds are allowed)

No risky features like negative amortization, interest-only, or balloon loans

Maximum loan term is less than or equal to 30 years

Three main categories

1. **General definition category of QMs** - Any loan that meets the product feature requirements with a debt-to-income ratio of 43 per cent or less is a QM
2. **'GSE-eligible' category of QMs** - Any loan that meets the product feature requirements and is eligible for purchase, guarantee, or insurance by a GSE, FHA, VA, or USDA is QM regardless of the debt-to-income ratio (this QM category applies for GSE loans as long as the GSEs are in FHFA conservatorship and for federal agency loans until an agency issues its own QM rules, or January 10, 2021, whichever occurs first)
3. **Small creditor category of QMs** - If lenders have less than $2 billion in assets and originate 500 or fewer first mortgages per year, any loan they make that meets the product feature requirements and that they hold in portfolio is a QM as long as they have considered and verified a borrower's debt-to-income ratio (though no specific DTI limit applies).

EXTRA NOTE: Even if a loan is not a qualified mortgage, it can still be an appropriate loan. Lender can originate any mortgage (whether or not it is a QM) as long as lender makes a reasonable, good-faith determination that the consumer is able to repay the loan based on common underwriting factors.

Appendix 3: NHB eligibility criteria for home loans to qualify for securitisation

The home loans should satisfy the following standards for being considered for selection in the Mortgage Pool offered for securitisation:

1. The borrower should be individual(s).
2. The home loans should be current at the time of selection/securitisation.
3. The home loans should have a minimum seasoning of 12 months (excluding moratorium period).
4. The Maximum Loan to Value (LTV) Ratio permissible is 85 per cent. Housing loans originally sanctioned with an LTV of more than 85 per cent but where the present outstanding is within 85 per cent of the value of the security, will be eligible.
5. The Maximum Instalment (EMI) to Gross Income ratio permissible is 45 per cent.
6. The loan should not have overdues outstanding for more than three months, at any time throughout the period of the loan.
7. The Quantum of Principal Outstanding Loan size should be in the range of ₹0.50 lakh to ₹100 lakhs.
8. The pool of housing loans may comprise of fixed and/or variable interest rates.
9. The Borrowers have only one loan contract with the Primary Lending Institution (PLI).
10. The loans should be free from any encumbrances/charge on the date of selection/securitisation. The sole exception to this norm being loans refinanced by NHB (In such cases, the loans may be securitised subject to the originator substituting the same with other eligible housing loans conforming with the provisions of the refinance schemes of NHB).
11. The Loan Agreement in each of the individual housing loans, should have been duly executed and the security in respect thereof duly created by the borrower in favour of the PLI and all the documents should be legally valid and enforceable in accordance with the terms thereof.
12. The Bank/HFC has with respect to each of the housing loans valid and enforceable mortgage in the land/building/dwelling unit securing such housing loan and have full and absolute right to transfer and assign the same to NHB.

The Pool selection criteria may be modified by NHB from time to time at its sole discretion.

References

Chapter 4

1. Segoviano, Miguel; Jones, Bradley; Lindner, Peter and Blankenheim, Johannes, 'Securitisation: Lessons Learned and the Road Ahead', Monetary and Capital Markets Department, IMF Working Paper, 2013
2. Davies, Michael; Gyntelberg, Jacob and Chan, Eric, 'Housing finance agencies in Asia', Monetary and Economic Department, BIS Working Papers, 2017
3. Revisions to the guidelines on transfer of assets through securitisation and direct assignment of cash flows, RBI, 2012
4. Ability-to-Repay and Qualified Mortgage Rule Assessment Report, Bureau of Consumer Financial Protection, United States of America, 2019
5. Global Markets Analysis Report, Ginnie Mae, July 2019 https://www.ginniemae.gov/data_and_reports/reporting/Documents/global_market_analysis_jul19.pdf
6. Leong, Datuk Chung Chee, 'Malaysia's Housing Finance Solutions', Cagamas, 2018 https://www.cagamas.com.my/sites/default/files/article/030918_%20ADB%20Manila.pdf
7. Korea Housing Finance Corporation (KHFC) Annual Reports, various years
8. Cagamas Annual Reports, various years
9. India Securitisation Report, Vinod Kothari Consultants, 2019
10. Uniform Mortgage Data Program, Fannie Mae, website: https://www.fanniemae.com/singlefamily/uniform-mortgage-data-program
11. Uniform Residential Loan Application form, Fannie Mae, website: https://www.fanniemae.com/content/guide_form/1003rev.pdf
12. Uniform Residential Appraisal Report, Fannie Mae, website: https://www.fanniemae.com/content/guide_form/1004.pdf
13. Closing Disclosure form, Consumer Financial Protection Bureau, website: https://files.consumerfinance.gov/f/201311_cfpb_kbyo_closing-disclosure.pdf
14. Uniform Loan Delivery Dataset, Fannie Mae, website: https://www.fanniemae.com/content/technology_requirements/uldd-implementation-guide-appendix-a-update.pdf
15. Eligibility Matrix, Fannie Mae, website: https://www.fanniemae.com/content/eligibility_information/eligibility-matrix.pdf
16. Fannie Mae's official website, www.fanniemae.com
17. Freddie Mac's official website, www.freddiemac.com
18. Ginnie Mae's official website, www.ginniemae.gov
19. Cagamas Berhad's official website, www.cagamas.com.my

20. Titularizadora Colombiana's official website, https://www.titularizadora.com/
21. Korea Housing Finance Corporation's official website, https://www.hf.go.kr/ehf/index.do

Chapter 7

1. See section 149 of the Companies Act, 2013, Accessed August 16, 2019, http://www.mca.gov.in/SearchableActs/Section149.htm
2. Where the Chairperson is an Executive Director or Promoter at least half of the board should comprise of Independent Directors. Where the Chairperson is a Non-Executive Director, then at least a third of the board should comprise Independent Directors. See further, SEBI Circular on Amendment to Corporate Governance in Listed Entities, CIR/CFD/POLICY CELL/2/2014, Accessed August 16, 2019, https://www.sebi.gov.in/sebi_data/attachdocs/1397734478112.pdf
3. See NHB Website, Accessed on August 08,2019 - https://nhb.org.in/securitisation/
4. Ibid
5. As gleaned from the call with Mr. Verma, Former CMD of NHB
6. See NHB Website, Accessed on August 08,2019 - https://nhb.org.in/details-2/
7. Refer Appendix II.
8. See the NHB's Eligibility Criteria for Home Loans to Qualify for Securitisation Matrix f, Accessed August 08,2019 - https://nhb.org.in/details-2/
9. See Full Eligibility Matrix for Fannie Mae guaranteed mortgages, Accessed August 08,2019 - https://www.fanniemae.com/content/eligibility_information/eligibility-matrix-042517.pdf