
Housing Finance and Housing

A view from India
and beyond



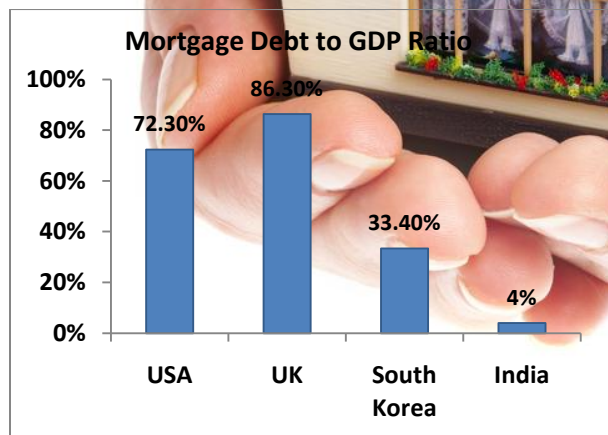
Working Proposal
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Dr V Chandrasekar, Professor, Executive Advisor, ISB
Katyayini Krishnamoorthy, Research Associate

I. Introduction

Every individual household unit desires a home and it is the single largest asset most households invest in. Hence, the cost and availability of housing finance are critical components determining how well housing markets function across the globe.

Various studies have shown that real estate cycles in developed housing markets of USA and UK are sensitive to the availability and cost of credit. The residential mortgage debt to GDP ratio for the year 2007 was 86.3% for UK, this shows the sheer scale at which these markets function. Even the recently liberalised market of South Korea has a mortgage to debt ratio of 33.4%. In comparison to these markets the mortgage to GDP ratio in India stood at only 4%.



With a fast moving economy and growing demand due to higher incomes, the housing finance market in India has grown and changed significantly during the past decade.

The total home loan disbursements grew from RS 29359.29 crore in 2001-2002 to Rs 51672.7 crore in 2003-2004. The total home loan disbursements grew from RS 29359.29 crore in 2001-2002 to Rs 51672.7 crore in 2003-2004.

The Housing finance sector in India has no doubt, experienced unprecedented change in its structure from its formulation stage. The structure of the Indian housing finance market rapidly changed with the arrival of commercial banks in the late nineties. These banks with their aggressive marketing and pricing strategies have now overtaken the housing finance companies with a 65.5% share in the in the total loan disbursements.

With the liberalisation of the housing finance sector and developments like the introduction of mortgage backed securities in the markets, we are increasingly moving towards the market structures which exist in the more mature markets.

On the other hand, rapid urbanisation and increasing growth for housing demand is causing housing shortage in India. The total housing shortage in India for the year 2007-2008 is estimated as 78.7 million units. This shortage is even more pronounced in the urban centres of the country. Government estimates show that there is a shortage of around 26.53 million units for the years 2007-2012, 90% of which is in the lower income and affordable housing segment.

II. Approach

This paper intends to study the structure of the newly liberalised housing finance market of India and analyse its affect on the Indian housing market.

The first section of the paper will introduce housing finance markets around the world. The paper will first analyse the history, structure and current trends in the housing markets of two developed economies namely: USA and the UK. Secondly the paper will analyse the interaction of the housing finance market and housing demand in the above countries. A comparative analysis with international housing finance markets will improve our comprehension of the Indian market and the challenges it faces.

The second section of the paper will present a clear picture of the structure, composition and functioning of housing credit markets in India.

The third section of the paper will analyse the relationship between Housing finance variables such as House disbursements and Interest rates and Housing demand variables such as Housing sales and Housing demand for a city in India namely; Hyderabad.

The last section of the paper will discuss policy initiatives which could help boost the Indian housing and housing finance markets.



Section I: Housing Markets Around the World

USA

The housing finance system in the United States is a marvel in its size, scope and efficiency. It is both huge and highly developed offering a large number of products to its consumers with varied repayment options. Due to its sheer size, the United States housing finance sector has over the years has grown towards becoming very critical to two sectors of the national economy; one the housing industry and the other being the larger financial system of the United States.

History:

The US housing finance system is perhaps one of the oldest in world which has evolved in the past 180 years from an informal/communal arrangement to the most sophisticated and extensive financial intermediation systems of the world.

The first institutional arrangement was in the form of a 'communal solution' to housing finance known as 'Terminating Building Societies (TBS)', which originated in 18th century England. The concept involved a small number of people from a town with pooled savings providing funds to one another for constructing houses. The members of the society controlled credit and funding risks among themselves. A TBS ceased to exist once all members received the loans. Over the years, TBS evolved to

'Permanent Building Societies', then to 'Building and Loans' and eventually to 'Saving and Loans' institutions.

During the 1870s, the first mortgage banks were formed to lend in the expanding Midwestern and Western states. These institutions originated and serviced loans with the funds raised by selling mortgage-backed bonds (MBBs). MBBs provided both the issuers and buyers of the security and scale economies in loan origination, servicing, and funding.

The turmoil during the great depression resulted in causing three major changes in the Housing Finance System; - the introduction of fixed rate mortgages with longer term maturity and low down payment, the development of a system of direct and indirect support from the federal government, and a linking of the public and the private sectors.

The Roosevelt's administration (1933-1945) as one of the measures to the crisis introduced two new institutions: The Federal Housing Administration (FHA) to provide insurance against mortgage defaults against lenders and Fannie Mae (The Federal National Mortgage Association) to provide a secondary market for FHA insured mortgages.

The market for mortgage-backed securities (MBSs) was formed in the early 1970s and took off in the 1980s. The expansion of MBS

issuances stimulated the integration of the mortgage market with capital markets and broadened the institutional base for mortgage funding. In the 1990s, following the success of the United States MBSs started picking up worldwide; as many as 24 countries in 6 continents have issued some forms of mortgage-backed securities (MBSs) since then to fund mortgages.

Current Structure:

The complex system of the United States housing finance market includes private financial intermediaries such as banks, thrift institutions, mortgage bankers and mortgage investors, government sponsored enterprises (GSEs), such as Fannie Mae, Freddie Mac and the Federal Home Loan Banks (FHL Banks) and government supported organizations, such as the Federal Housing Finance agency (FHFA) Federal Housing Administration (FHA), Rural Housing Service (RHS), Veterans Affairs (VA) and Ginnie Mae.

Federal laws and federal financial institution requirements focus on some of the private market activity as well as providing insurance against consumers' loss of deposits. There are multiple players in each area who compete with one another. The government-sponsored enterprises (GSEs, including Fannie Mae, Freddie Mac, and FHL Banks) and private-label mortgage-backed security (MBS) issuers all compete to provide liquidity enhancement. FHA, PMI, GSEs, and other secondary market conduits compete for default insurance. Many institutions

compete for deposits, mortgage origination, and servicing.

The Mortgage structure:

Mortgages available to the consumers are offered in a large number of varieties. A borrower can choose among different maturities with 15 and 30-year mortgages being the most common. The interest rate can be fixed, adjustable or a combination of the two as in the case of hybrid ARMs. The principal can be amortized in several ways: conventional, balloon payment, negative amortization, interest-only, etc. Another variable is the size of the mortgage — conventional, jumbo or super jumbo. There are also second mortgages and home equity loans available to consumers.

Mortgage products:

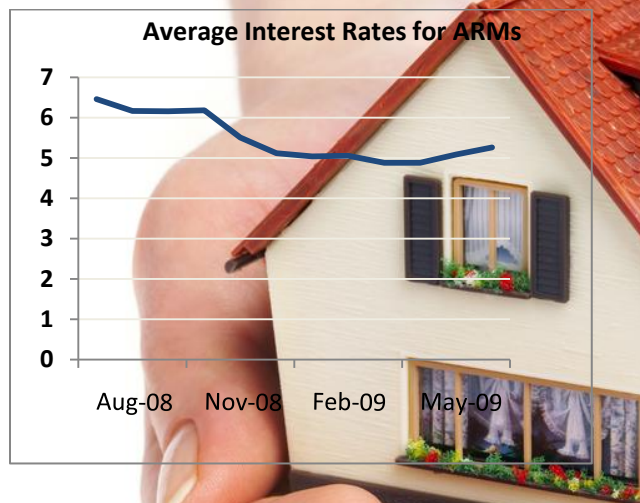
Fixed Rate Mortgages- Fixed-rate mortgages are designed so that borrowers pay equal monthly instalments, consisting of interest and principal, over the term of the mortgage. The standard terms are 15 and 30 years, the latter being the oldest and most common.

Fixed-rate mortgages are fully amortized, that is, the amortization schedule is designed so that after the last scheduled monthly payment of the loan, the outstanding mortgage balance is zero.

Adjustable Rate Mortgages: The other common type of mortgage structure is the adjustable-rate mortgage (ARM). ARMs typically have a 30-year term. The mortgage rate of ARMs is reset periodically; for

example, every six months, one year or five years.

The interest rate of an ARM is equal to an index / reference rate such as the 1-year Treasury rate plus a premium, or a margin, which usually remains constant throughout the life of the loan. To encourage borrowers to accept ARMs, mortgage originators tend to offer an initial rate less than the prevailing fully indexed rate, more commonly known as a teaser rate.



Hybrid ARM: The features of a fixed-rate mortgage and an ARM can be combined in the form of a hybrid ARM. There are two types of hybrid loans: those that begin as a fixed-rate loan and convert to an ARM and those that begin as an ARM and convert to a fixed rate.

Jumbo Mortgage: A jumbo mortgage is one whose principal exceeds the maximum of so-called conforming mortgages that the government-sponsored enterprises, Fannie Mae and Freddie Mac, are authorized to buy. Jumbo mortgage loans are a higher risk for

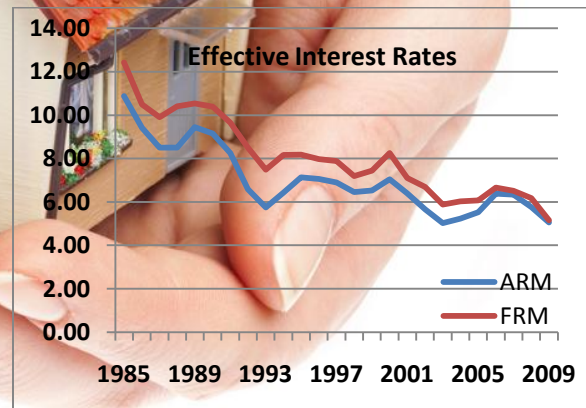
lenders / investors, hence command a higher interest rate.

Second Mortgage and Home Equity Loan:

Second mortgages and home equity loans are loans in which the borrowers use the equity in their homes as collateral. The equity of the home is the difference between the estimated value of the home and the remaining principal of the first mortgage. A home equity loan can refer to either a lump sum loan or a revolving line of credit.

Current Terms on mortgages:

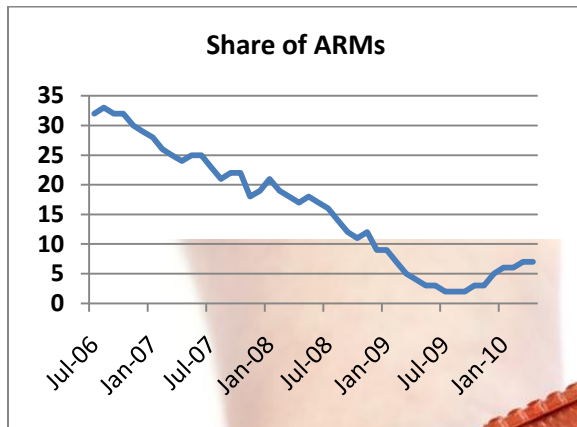
Interest rates: Effective interest rates have reduced during the last two years, mainly due to the downturn. They currently average at 5.05% for ARMs and 5.15% for FRMs.



Source: FHFA

Loan type: Fixed rate mortgage have always been preferred to ARM mainly due to the elimination of interest rate risks. FRMs have always constituted more than 60% of the total loans. The share of ARMs have drastically reduced from a peak of 32% in 2004 to a measly 5-6% in the past two years,

which can be attributed to the fluctuations in i-rates and the downturn.



Source: Freddie Mac

Size, tenure and LTV: The size of most loans averages around \$300,000. The average tenure lasts for 27 years and the LTV ratios have averaged 75%.

Typical Terms of a Mortgage	
Contract Rate	4.80%
Charges	0.87%
Effective rate	4.92%
Tenure	27.5 Years
Loan Size	\$220,000
LTV	74.3

Source: FHFA as on July 2010

Relationship between US Housing finance and Housing demand

Quarterly data ranging from the year 1998-2009 was used for the model. Housing demand was represented by New home Sales in the country for the specified period. Mortgage disbursements and effective interest rates for the above period were used as variables representing housing finance. The model also included housing price growth as an independent variable.

The results showed that Housing finance variables have significant effects on housing demand in the USA.

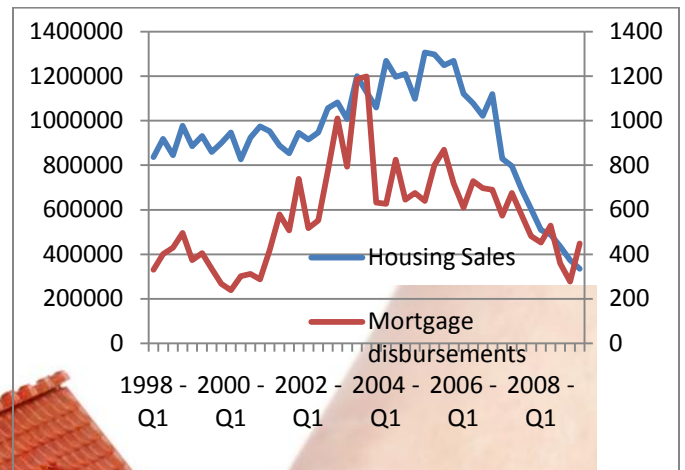
The model showed an R-square of 0.9048.

Housing disbursements seem to have a positive relationship with housing sales. Interest rates on the other hand move in the opposite direction of housing sales.

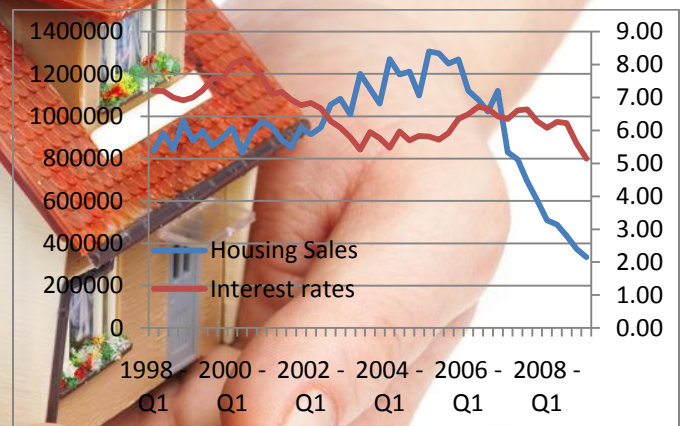
Housing price growth had a negative relationship with housing sales. Effects of inflation on Housing sales were found to be insignificant.

The data illustrates that increased interest rate scenarios discouraged people to buy homes in the US. The other detriment was an increase in home prices. Improved disbursements also increased housing sales. Both these factors show that affordability and funding play an important role in determining housing demand in the US markets.

Housing Sales and Mortgage Disbursements



Housing Sales and Interest Rates



Model Specifications

Variable	Estimate	t value
Intercept	1008017	5.51
Mortgage Originations in \$ Bn	185.1883	2.35
Effective Interest Rates	-50705	-2.16
Inflation	12781	1.12
House Price Growth	22509	14.77

United Kingdom

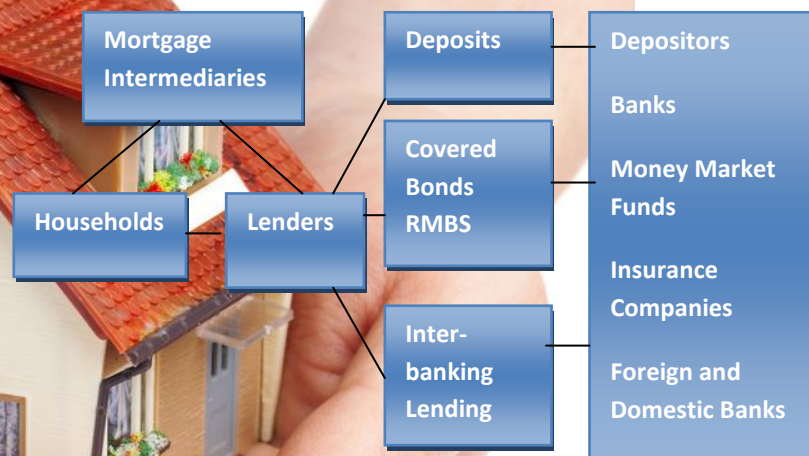
History: Housing finance sector in the UK was formally instituted with the formation of Building societies in 18th century England. A building society is a financial institution, owned by its members, that offers banking and other financial services, especially mortgage lending.

The first Building Society was formed in Birmingham in 1774. Like the United States, the first few building societies in England were fully terminating; they would be dissolved when all members had a house. Permanent Building Societies came into existence in the late 1830s, where the society continued on a rolling basis, continually taking in new members as earlier ones completed purchases.

Building societies still form an integral form of the housing finance system; however, in recent decade's demutualization and large scale consolidation have caused a major shift in the market share with the major commercial banks now supplying two-thirds of all mortgages. At the start of 2008, there were 59 building societies in the UK with total assets exceeding £360 billion. However, by the end of 2008 the number of building societies in the UK fell by a fourth due to a series of mergers brought about by the financial crisis.

Structure of the Housing Finance System:

Housing finance in the UK is provided to borrowers by a variety of institutions, including banks, building societies, housing associations and local authorities. The housing finance system currently provides mortgages to 11.7 million households in the UK and disburses around £12.6 billion in gross lending.



The illustration below shows the key structures of the private sector housing finance in the UK. In relation to the retail side of the mortgage market, households receive mortgages directly from lenders, or buys through mortgage intermediaries. Currently 60 per cent of products are sold through intermediaries. Lenders can include banks, which provided 60 per cent of loans in 2007, building societies, which provided 19 per cent and specialist lenders, which provided 21 per cent. This compares to 1999, when banks only provided 67 per cent

of loans, building societies 26 per cent and specialist lenders only 7 per cent.

The terms of product: Mortgages in the UK normally have a 25-year term. In terms of loan structure, the stock of mortgages outstanding is roughly evenly split between repayment (annuity) and interest-only.

A key development in the UK housing finance market over the past five years has been an increase in the popularity of short-term, primarily 2-year fixed-rate mortgages.

Fixed-rate mortgages have increased from around 30 per cent of all loans at the beginning of 2004 to 75 per cent by the second quarter of 2007, and despite falling back recently; still represent two-thirds of all new mortgages. The primary factor behind the increasing popularity of short-term fixed-rate mortgages has been the decline in the difference between the levels of 2-year fixed-rates compared to discounted variable rates.

The loan to value ratio across the UK has been falling since the financial crisis. Rising house prices and low interest rates caused a steep increase in the average loan to value ratios before the crisis. The median loan-to-value ratio in 2003 was 89% for first-time buyers and 70% for movers, but it was possible to get loans of 100% of the property's value, or even more. This regime of high LTVs continued till the 2007 when LTVs drastically fell due to the credit crunch.

The average LTV for house purchase in the UK is around 76% currently.¹

Secondary Mortgage market: UK mortgages were funded by retail deposits, with only a limited amount of secondary or wholesale funding, till two decades back. This has gradually changed as the principles of securitisation – transforming illiquid loans into tradable securities – have been applied to mortgage finance. UK lenders access secondary funding markets mainly by issuing two types of financial product to investors:

- **Residential mortgage-backed securities (RMBS):** where lenders package together a pool of mortgages and transfer them to a special purpose vehicle from which claims are sold to investors.

- **Covered bonds:** securities that are backed by a pool of mortgage assets, but with certain features to ensure that they are very high quality. In particular, the investor has a claim on the pool of assets and the issuer. Covered bonds have been traditionally bought as low risk investments.

UK secondary market funding to date has been overwhelmingly through RMBS rather than covered bonds, which are relatively new in the UK. In 2007 the outstanding stock of RMBS was £201 billion, compared with a stock of covered bonds of £49bn. This balance contrasts with secondary market funding in the EU. UK RMBS account for 50 per cent and covered bonds account for only 4 per cent of their respective EU markets.

¹ July 2010.

Relationship between UK Housing finance and Housing demand

Quarterly data ranging from the year 1995-2009 was used for the model. Housing demand was represented by Home Sales in the country for the specified period. Gross mortgage lending and effective interest rates for the above period were used as variables representing housing finance. The model also included housing price growth and inflation as independent variables.

The results showed that Housing finance variables have significant effects on housing demand in the UK. However, the relationships were very different from that of the housing markets in the US.

The model showed an R-square of 0.7262.

The relationship between gross mortgage lending and housing sales was observed to be significant and positive.

Whereas, Unlike the US markets, the relationship between interest rates and sales were also positive for the above period.

Housing price growth also had a positive relationship with sales, which is indicative of the fact that UK home consumers were buying homes as an investments betting on further increase in prices for capital gains.

Lastly, inflation the model indicates that inflation has detrimental effects on home sales in the UK.

Theoretically, interest rates should have a negative relationship with home sales.

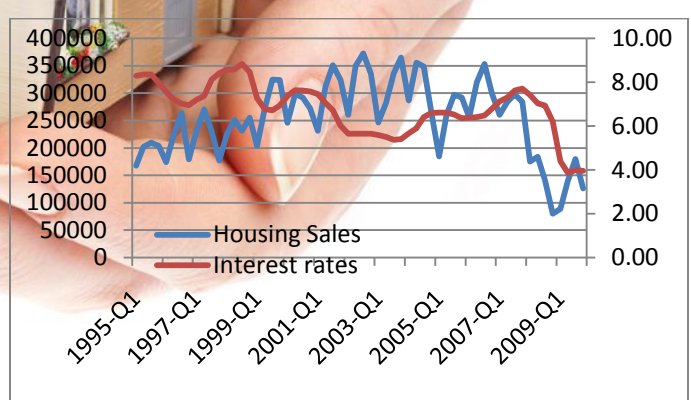
However, the model shows the contrary, this could be due to the following:

- UK home consumers betting on higher prices and hence ignoring higher rates.
- The data shows that during financial turmoil i-rates and sales were both down and both up otherwise.

Housing Sales and Gross Lending



Housing Sales and Interest Rates



Model Specifications

Variable	Estimate	t value
Intercept	85154	2.15
Gross Lending in £ mn	1.34052	6.43
Effective Interest Rates	18951	4.09
Inflation	-25092	-3.00
House Price Growth	13899	5.28

India

The Housing finance sector in India has no doubt, experienced unprecedented change in its structure from its formulation stage. Indian Housing finance has far moved from the stages of being a solely government provided service during the 1970's to a very competitive sector with more than 45 housing finance entities providing housing loans worth Rs 781,000 million to home buyers across India.

History: The housing finance revolution in India can be divided into five distinct phases:

Phases of Indian Housing Finance		
Phase I	Before 1970	Government domination.
Phase II	1970-1980	HUDCO and HDFC established.
Phase III	1980-1990	Establishment of NHB
Phase IV	1990-2000	Liberalisation of interest rates.
Phase V	2000 to Present	High Growth.

The first phase began before 1970 when the sole provider of any house building support was the government of India through its various social schemes for public housing. The government implemented these schemes through state housing boards which were responsible for allocating serviced land and houses to individuals based on social equity principles.

The second phase starts with the establishment of the public housing company, Housing and Urban Development Corporation (HUDCO). HUDCO was created to assist and promote housing and urban

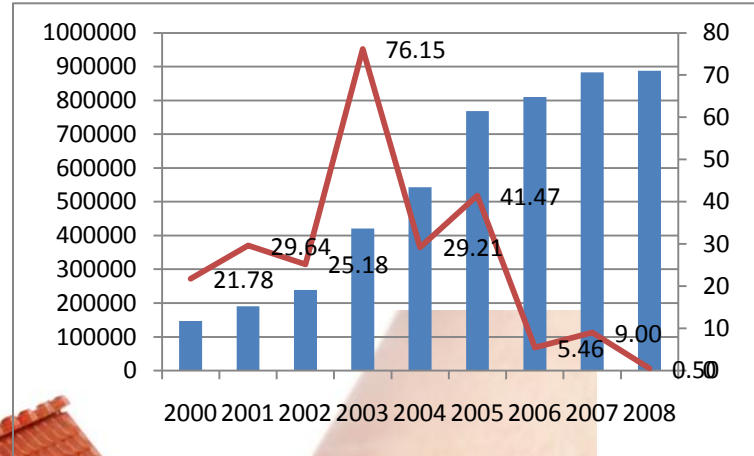
development programs with government agency. HUDCO still plays an important role in implementing government initiatives such as the Valmiki Ambedkar Awas Yojna, was launched by Govt. Of India in 2001-02 to provide shelter or upgrade the existing shelter for people living below poverty line in urban slums. Another important private player, Housing development finance Company HDFC, was created in 1977. HDFC pioneered in individual lending based on market principles. HDFC today, is one of the largest home loan providers of the country and its success displayed that financing homes can be a very profitable business.

The third phase covers the decade of 1980, which is marked by the establishment of the country's housing finance regulator- National Housing Bank in 1987. The era also government involvement in directing various agencies like insurance companies, commercial banks(Under priority lending requirements which allowed banks to allocate 1.5% of their incremental deposits to housing under RBI guidelines.), provident funds and mutual funds to invest part of their increment sources on housing.

Two Insurance companies LIC and GIC started supporting the sector both directly through their newly established housing finance companies and indirectly by investing a proportion their net accretions in socially oriented schemes.

Growth in Housing Finance Disbursements

The fourth phase is the era after liberalisation and is characterised by dramatic changes in pricing of loans. Before 1994, the pricing of home loans were regulated by the NHB based on a differential rates charged according to the size of the loan. This policy was amended in 1994 and providers were free to charge market rates for loans above Rs 25000. The fourth phase saw a dominance of fixed interest rates, but variable rate offers started emerging at the end of the decade.



Source: NHB

Housing Loans Disbursed by Banks		
Bank Group	1990-1991	1992-1993
SBI	479.1	634.4
Nationalised Banks	4,192.3	1923.0
Private Banks	334.5	82.9
Foreign Banks	50.2	419.9
Total	5,056.1	3,060.2

Source: NHB 1996

With the growth and profitability in housing finance evident, commercial banks gave more impetus to this sector, aggressively increasing their market share. Banks overtook housing finance companies in the market capturing 72% of the market in 2006 from a previous share of 27% at the beginning of this phase in 2001.

The fifth Phase of rapid growth in the sector started after the millennium. Home loan disbursements rapidly grew during the first few years of this phase. The lower interest rate regime, rising disposable incomes, stable property prices and fiscal incentives made housing finance attractive business. Home loan disbursements grew to Rs 768191.90 million in 2005 from Rs 147012.00 million in 2001. The year 2003 witnessed an annual growth rate of 76% in loan disbursements.

The latter part of this phase witnessed a slowdown in the rate of growth in home loan disbursements. High lending rates coupled with high property prices led to a slowdown in housing loan demand. The growth rate reduced to 5.46% in 2006 slowing drastically from the rates of 41.5% in the previous year. The recession in 2008 and the consequent correction in house prices are expected to reduce the size of disbursements in 2009 by 1%.

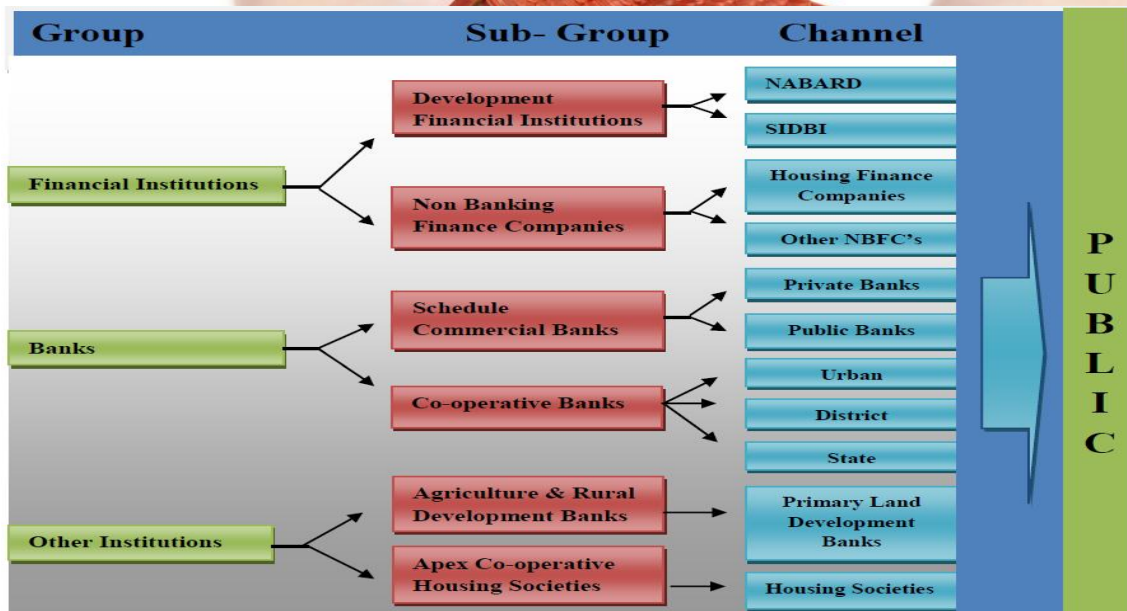
The Structure of the Housing Finance System:

Currently, housing finance in India is provided to the public by five different groups of institutions namely;

- Scheduled Commercial Banks
- Scheduled Co-operative Banks
- Agricultural and Rural Development Banks
- Housing Finance Companies
- State Level Apex Cooperative Housing Finance Societies.

overtook housing finance companies in the market capturing 72% of the market in 2006 from a previous share of 27% at the beginning of this phase in 2001.

Over the last few years, the share of housing finance companies (HFCs) has increased in the industry on account of robust disbursements growth, supported by greater presence in urban centres and increasing loan size, along with stable asset quality.



The National Housing Bank engages in providing financial assistance in the form of refinance to the above lending institutions against the home loans they provide to their customers.

Major Players: As described earlier, in the current market structure, commercial banks outsize the HFC's in market share. Banks

The major players in the Indian housing finance market are the following:

HDFC: Housing Development Finance Corporation Limited (HDFC) was incorporated in 1977 as India's first specialised housing finance institution. It also offers property-related services and deposit products. HDFC has a diversified and stable resource base comprising fixed deposits, bank borrowings, debentures,

bonds, securitisation, and foreign currency borrowings. Deposits constituted around 23 per cent of its total borrowings as of March 2009.

HDFC Disbursements and Outstanding							
(Rs billion)	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Disbursements	99.5	127	162.1	206.8	261.8	328.7	396.5
Outstanding loans	217.5	279.7	360.1	449.9	565.1	730	838

Source: HDFC

HDFC's disbursements and outstanding loans posted a CAGR of 25.6 per cent and 24.6 per cent, respectively, between 2003-04 and 2008-09. Total disbursements during 2008-09 were Rs 396.5 billion against Rs 328.7 billion in the previous year, representing a growth of 20.6 per cent. HDFC's outstanding loans rose to Rs 838.6 billion from Rs 730 billion in the previous year, representing a growth of 14.9 per cent.

LICHFL: LIC Housing Finance Limited (LICHFL) was incorporated in 1989. The company was listed in 1994. The company mainly provides housing loans, where it provides long-term finance to individuals for purchase / construction / repair and renovation of new / existing flats / houses. In 2008-09, it disbursed loans to the tune of Rs 87.6 billion, a growth of almost 24 per cent over 2007-08. It is listed on the BSE, NSE and the Luxembourg Stock Exchange.

LICHFL Disbursements and Outstanding							
(Rs billion)	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Disbursements	29.9	41.0	46.5	49.0	51.2	70.7	87.6
Outstanding loans	77.8	98.9	124.2	148.7	175.6	219.0	276.8

GIC Housing Finance Limited: GIC Housing Finance Limited (GICHFL) was incorporated in 1989 as 'GIC Grih Vitta Limited', with the objective of providing shelter to all in view of

the government's national housing policy. The primary business of GICHFL is granting housing loans to individuals and to persons/entities engaged in construction of houses/flats for residential purposes.

GICHFL's disbursements recorded a CAGR of 6 per cent, while outstanding loans posted a CAGR of 18.9 per cent between 2003-04 and 2008-09.

Can Fin Homes Limited: Can Fin Homes Limited (CFHL) was promoted in 1987 by Canara Bank in association with financial institutions, including HDFC and UTI. CFHL is the first bank-sponsored housing finance company in India. The company also diversified by launching non-housing finance products like premises loan for practising professionals (venture), mortgage loans (net worth) and loan against rent receivables.

CFHL's disbursements registered a negative CAGR of 5.1 per cent, while outstanding loans recorded a CAGR of 9.7 per cent between 2003-04 and 2008-09. However, as compared to the previous year, disbursements increased by 20.2 per cent in 2008-09 and outstanding loans remained unchanged.

The product:

For the purpose of knowing more about the housing finance market in India, the centre conducted a survey across 17 major housing finance Institutions in India. These institutions represent more than 90% of the market share; hence we believe that the results obtained are very insightful.

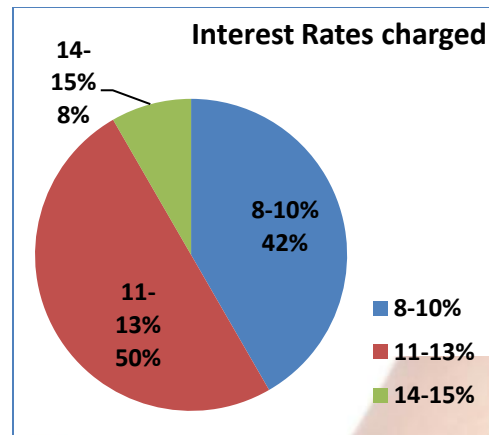
The survey intended to capture the scale of demand for home loan products, the products and incentives offered to customers, target customer base, government policies and support in place, and sentiments on the current market conditions and future prospects.

Interest Rates:

Unlike other countries, floating rate mortgages constitute 80% of the market share in India.

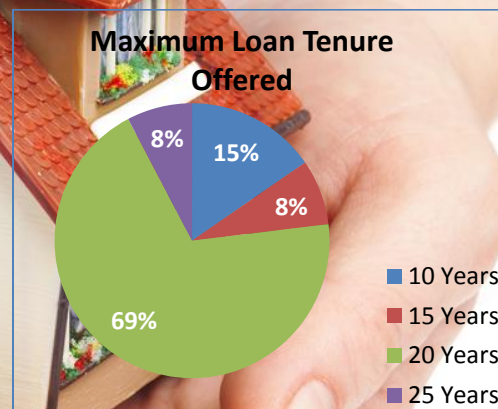
All institutions surveyed said that Variable interest rates are more popular in their banks. This is mainly because finance providers in India incentivise floating rate loans by keeping a huge spread (sometimes 275 bps) between fixed rate and floating rate loans.

The average interest rates varied from 8-15%. Most banks offered rates which were tied to the BPLR.

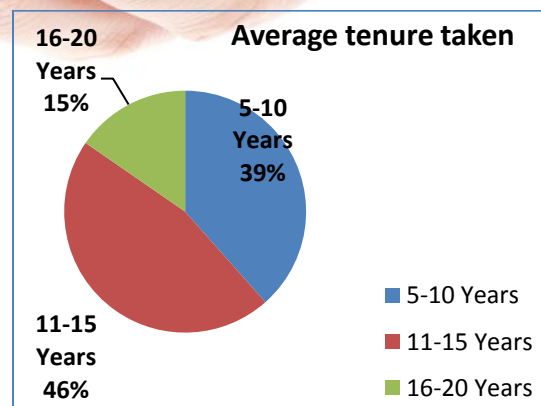


Loan tenure:

The survey showed that most banks offered loan tenure of 20 years.

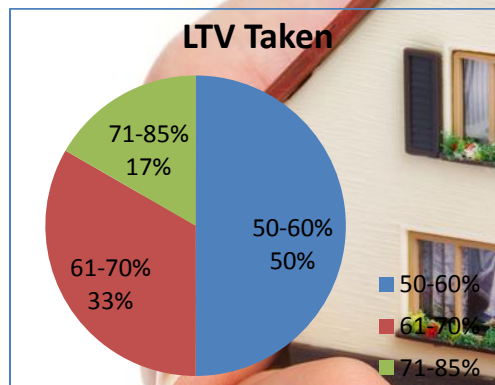
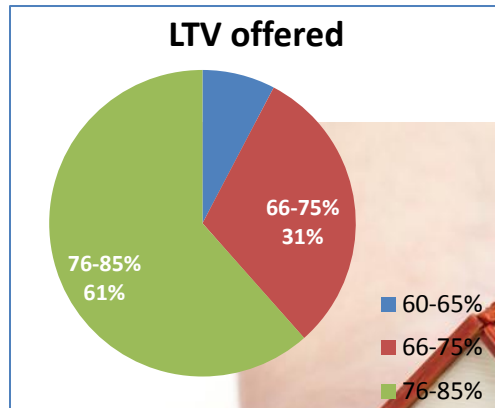


The costumers chose to take a shorter tenure.



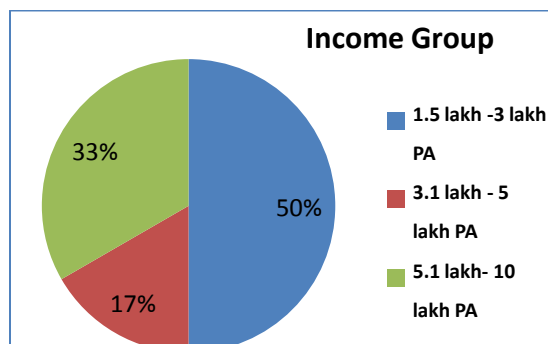
Loan to value ratio:

Even though banks offer a loan which is 75-80% of the value, most consumers prefer taking a loan for half the value of the house.



Borrower profile:

The survey showed that most consumers belong to the age group of 35-40 years. The average income group of the borrower is seen to be around 4.2 lakhs per annum.



Tax Incentives by the government:

Tax sops given by the government for housing loans have been instrumental in driving growth in this sector. The government allows tax benefits to both the home loan consumer and the lender.

A home loan consumer is allowed tax deductions on the following:

- **Interest paid on home loan:** As per Sec 24 (b) of the Income Tax Act, 1961, annual interest payments up to Rs 1,50,000 on housing loans can be claimed as a deduction from taxable income.
- **Principal repayment of home loan:** As per Sections 80 C read with section 80 CCE of the Income Tax Act, 1961 principal repayment up to Rs 1,00,000 on home loan is allowed as a deduction from gross total income.

The lender is also allowed tax deduction. Under Section 36 (1) (viii) of the Indian Income Tax Act 1961, with respect to any special reserve created and maintained by a financial corporation engaged in providing long-term finance for construction or purchase of houses in India for residential purposes, a maximum amount of 20 per cent (earlier it was 40 per cent) of the profits derived from such business (computed under the head 'profits and gains of business or profession') and carried to such special reserve is tax deductible. This deduction is available only up to twice the total amount of the company's paid-up share capital and its general reserves.

Relationship between India Housing finance and Housing demand

To measure the relationship between housing finance and housing demand, we analysed the city of Hyderabad (purely selected for the availability of data).

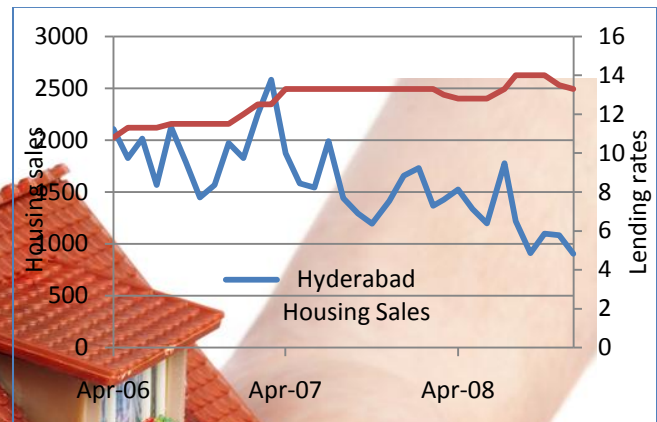
Hyderabad is the capital of the Indian state of Andhra Pradesh. It is the largest city in Andhra Pradesh and the sixth largest city in India with a population of 3.63 million. Hyderabad has developed into one of the major hubs for the information technology industry in India which has earned it the additional sobriquet "Cyberabad". In addition to the IT industry, various biotechnology and pharmaceuticals companies have set up their operations in Hyderabad.

Hyderabad experienced a boom in real estate prices with the arrival of IT companies and increase in income growth. However, with the global meltdown and the Telengana issue, the real estate prices in Hyderabad have drastically corrected since their 2005 levels.

Monthly data ranging for two years 2006-08 was used for the model. Housing demand was represented by home Sales in the city of Hyderabad for the specified period. Housing sales registration data was used to measure housing sales in Hyderabad. Interest rates (BPLR) for the above period were used as variables representing housing finance.

The results showed that lending rates had significant effects on housing demand in the Hyderabad during the period. However the model showed a low R-square of 0.3370.

Housing Sales and Lending Rates



The model showed a significant inverse relationship between lending rates and home sales in Hyderabad. This means that high lending rates were accompanied by low sales in Hyderabad.

Model Specifications

Variable	Estimate	t value
Intercept	4620.48102	5.79
Effective Interest Rates	-261.41373	-3.87
Stock market index	0.02075	0.97

Section III: Policy Recommendations to improve Mortgage Disbursements in India

Housing shortage in India is a serious issue. Rapid urbanisation and changes in socio economic scenario have caused the demand for housing to grow at a very rapid pace. The total housing shortage in India for the year 2007-2008 is estimated as 78.7 million units.

There have been various policy initiatives taken by the government to decrease the gap between the number of households and housing units available in the country. In this regard, the National Housing and Habitat Policy (NHP) 1998, was framed to ensure surpluses in housing stock with quality and cost effective options to poor and vulnerable groups and removing legal, financial and administrative barriers for facilitating access to land, finance and technology etc. Other flagship schemes such as the Indira Awas yojana, Valmiki Ambedkar Awas Yojana, two million housing programme, EWS housing schemes etc provide support to ensure affordable housing for all.

Even with various housing policies in place, housing units in India have always fallen short of the number of households in India. One of the means suggested to achieve the goal of housing for all is the housing finance system. A more widespread and affordable housing finance system in India could provide millions of households the capacity

to own a house. Studies have shown that in well developed mortgage markets, lower interest rates and easy availability of credit have impacts on housing prices and housing sales.

Even though, countries like the US and UK are criticised for having huge mortgage debts, India's housing finance system is at its infancy in comparison to other housing finance markets of the world. We can easily move more towards higher levels of mortgage debt to improve housing availability.

Based on discussions with various housing finance institutions across the country, we found the following changes are needed to improve the mortgage disbursement situation in India.

Increasing tax Benefits: Most housing finance institutions agree that extending the presently available tax benefits would make home loans and hence buying a house more affordable. HFI's suggest that deductions from taxable income on interest payments should be increased to at least Rs 2, 00,000 from Rs 1, 50,000.

Improving Land records and property data systems:

Land records and property data are not easily available and hence verifying the

property documents is not an easy task. If this data system can be improved and be easily available online to banks and HFI's. *An online depository for title records* will help in reducing the transactions cost and also the premium charged on interest rates.

Securitisation: The HFIs need continuous funding to match the demand for housing loans. The HFIs must be provided with continuing access to through innovative methods. Loan securitization is the only long-term solution to the problem of raising resources for HFIs, the main providers of housing loans in the country. Through securitization, the HFIs can recycle the amounts they have advanced by raising cash from their loan assets as soon as these are created. Mortgage backed securities (MBSs) can help increase the depth of the fixed income debt market while at the same time channeling resources from the capital market to the housing sector. Securitization will also improve the HFIs capital ratios and give them healthier balance sheet. Further, HFIs can alter their risk asset profile through securitization by disposing of the riskier assets in their portfolio.

Advantages of Securitization

- Through securitization, the loan originator should be able to mobilize funds at a low cost, and thus reduce its lending rates and make housing loans more affordable to home buyers.
- Securitization involves various specialists such as administrators, credit enhancers, issuers, and pool issuers. Specialization

promotes efficiency and reduces the transaction cost as funds for housing finance come from a broader range of lenders, interest rates on mortgage will tend to decline, making the loans cheaper in the long-run.

- The large investor base will give rise to special mortgage products for lower and middle income investor groups.
- Securitization will help the HFIs to grant mortgages for longer maturity and to introduce alternative mortgage instruments based on higher loan to value ratio than at present.
- Specialization will make it possible to transfer risks between sectors and to minimize the cost of such risks.
- The risks associated with housing finance, now limited to the housing sector, will be distributed among a greater number of players as securitization and a secondary market develop. Even though one may argue about the havoc the secondary markets played in the US, one has to remember the scale at which these markets functioned in the USA.

Using technology for Credit screening:

There is a need for developing individual credit rating systems in India. Even though, data on individual loan consumers is impossible, developing credit rating system for individuals will prove to be very beneficial.

This can help consumers with better credit criterions to fetch more affordable rates compared to consumers with past defaults.

HFI's suggest provision of a unique id for individuals which can help banks access credit history.

Another way of reducing risk premium could be the use Credit Scoring. Credit scoring can be formally defined as a statistical (or quantitative) method that is used to predict the probability that a loan applicant or existing borrower will default or become delinquent (Mester, 1997).

Credit scoring models are developed by analyzing statistics and picking out characteristics that are believed to relate to creditworthiness. Hence the available data with the HFI's can be used to measure characteristics which separate the defaulters from the prompt consumers. And hence, the interest rates can be differentiated.

Encouraging Housing Micro- Finance:

According to CRISIL Research, housing shortage in India is estimated at 78.7 million units by the end of 2007-08, marginally down from 79.5 million in 2000-01.

The same research showed that this shortage is mainly concentrated in the economically weaker section (EWS) and low-income group (LIG), both collectively constituting more than 90 per cent of the shortage.

As per government estimates, out of the total urban population, 21 per cent live in slums and 35 per cent have only one room to stay.

However, these sections fall completely out of the reach of Housing finance companies and banks. This is mainly because of the following reasons:

- Assessing credit risk: Most of the individuals in this group are employed in the unorganized sector; hence have no pay slips or income tax returns to show a flow of funds.
- Lower profit margins: The total amount of the loan is really small; however the transactions costs are high.
- Lack of clarity on recoveries: Since most of the homes bought have no clear land titles repossession is difficult.

Even though, the government has introduced schemes such as the Indira Awaas yojana, Golden Jubilee Rural Housing Finance Scheme etc.

There are very few market based forces that provide microfinance for housing. There is a need for policy based initiatives such as clearing up land title systems which will definitely facilitate micro finance in this sector.

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