RECOVERY PERFORMANCE OF HOUSING FINANCE COMPANIES IN KARNATAKA - A COMPARITIVE STUDY

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1. Introduction

The Profitability and financial viability of banking and non-banking financial institutions are directly related to the quality of loans and advances and the recovery performance of the institution. Multiple factors determine the performance of the financial institutions, vis-à-vis capital structure, type of borrowings, quality and quantity of information systems, nature of the investment, asset and liability management practices, skills and commitment of officials, nature of rules and regulations governing the operations of business enterprises and so on.

Despite of various regulatory mechanisms by the Reserve Bank of India, a range of direct and indirect factors leads to abnormalities in working of the financial institutions. One such anomaly arises due to inadequate credit risk evaluation and management practices of FIs. The negative consequences of it have a strong bearing on the financial health of the business. Loans and advances constitute more than 80 percent of the asset size of the FIs. Early detection and containment of non-performing assets at its initial stage are the critical components of rigorous/sound NPA management system.

As on 31st of March 2000, the 'Past Due' (i.e. interest and/ instalment of principal payment outstanding for more than 30 days plus 4 quarters) concept of recognising NPA was dispensed with 'due date of payment/ Out of Order' methodology. However on March 2004, the benchmark of 180 days in default of principal and interest payment of an asset as a "Non-Performing Asset", was reduced to 90 days. These prescriptive norms recommended by Narasimham Committee on Financial Sector Reforms are referred to as "Prudential norms of Capital Adequacy and the Regulatory Norms pertaining to Income Recognition and Asset Classification and Provisioning" (G.K. Murthy, 2006). Assets will be classified as non-performing when the borrower of loans fail to repay the monthly instalment (that includes interest component and the principal component) of the loan for a certain

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time period vis. 90 days in case of financial institutions governed by Reserve Bank of India. Along with-the growth in institutional mechanism for housing finance in the country, there had been significant modifications in the composition of major institutional settings in housing finance sector. Housing Finance Companies (HFCs) which once dominated the market were overtaken by the commercial banks (CBs) who duly entered into the formal housing finance market several years after HFCs were on the strong footings. However, the banks started lending aggressively to the housing needs of its customer only since 1998 based on the directive of Reserve Bank of India (RBI).

Consequently, the prominence of banks has been on rise every year since FY 2003. On the contrary, the HFCs as a group, which were observing a gradually lowering housing finance market share year on year, there had been a significant pressure on their profitability due to thinning of their profit margins due to severe competition. This resulted in many small HFCs either getting merged with its respective parent organizations (particularly the bank-sponsored HFCs) or getting liquidated. Hence, due to fierce competition in the market, better operational efficiency had become significant for the survival and growth of HFCs in the country, especially during the period of globalization.

The housing finance companies of India which had emerged out from the impact of Sub-prime crises 2008 had undergone through the process of changes over the past decade due to rising competition from commercial banks, introduction of Goods and Service Tax and Real Estate Regulation Act, demonetization, IL&FS and Dewan Housing Finance company embargo, impact of Covid-19 pandemic, raise in unemployment, rising inflation, transfer of regulatory powers of HFCs from NHB to RBI, implementation of Indian Accounting Standards, introduction of innovative products, surge in implementation of new technology products and technology oriented delivery channels in addition to geo-political tensions, changing fiscal and monetary policies, political instability. The negative consequences of the aforesaid structural and cyclical changes in addition to the housing finance companies internal risk factors like; disproportionate share of finances to households, changes in interest rates, small capital base, domestic credit (Glogowski 2008, Angela and Irina 2015, Islamoglu 2015, Fajar and Umanto 2017) had exposed the HFCs to the risk of NPA. However, the remedies for these risks are lying only with the management's ability to quantify the amount of risk and take suitable position.

The preventive and curative measures like strengthening of supervisory and regulatory mechanisms by HFCs, viz. adoption of better credit standards, Time-bound liquidation or resolution of stressed assets through existing legal mechanism like, IBC 2016, Lok-Adalats, SARFAESI Act, DRTs, Asset Quality Review (AQR), Banking Regulation (Amendment)

Ordinance, Prompt Corrective Action (PCA), foreclosure suit on mortgage, CRILC, civil suit, summary procedures,JLF Mechanism or by appointing an overseeing Committee (OC) to cease piling of NPAs is vital for improving the balance sheet position of BFIs and for an efficient and effective allocation of capital (Klein 2013, U.R. Patel 2017). In addition the HFCs must adhere to early warning signals, management/ banking related signals, financial warning signals and special mention accounts (G.V.B. Prasad and Veena 2011).

I. REGULATORY GUIDELINES ON CREDIT RISK MANAGEMENT OF HOUSING FINANCE COMPANIES [NBFC-HFC (Reserve Bank) directions 2022]

In the interest of the public and such housing finance companies, the RBI under section 30, 30A, 32 and 33 of NHB Act 1934 and section 45L and 45MA of RBI Act 1934, regularly issues regulations or directions for the conduct of business in accordance to the needs of the society. RBI guidelines on credit risk management practices by HFCs pertain to the following;

- Liquidity Risk Management Framework and on Maintenance of Liquidity Coverage Ratio (LCR) to promote resilience of HFCs towards potential liquidity disruptions.
- Maintenance of Loan to Value against security of shares, single product - gold jewellery
- For adhering to the guidelines; (a) Know Your Customer (KYC) guidelines 2016, (b) Monitoring of frauds in NBFCs (Reserve Bank) Directions, 2016, (c) Information technology framework for the NBFC sector, June 2017, (d) Reserve Bank of India (Transfer of Loan Exposures) Directions, 2021, (e) Reserve Bank of India (Securitisation of Standard Assets) Directions 2021, Reserve Bank of India (Regulatory Framework for Microfinance Loans) Directions 2022 and other guidelines or directions to be issued by the government and RBI from time to time for the operations of financial institutions to prevent the conduct of business against the interest of the depositors and investors in a prejudicial manner.
- For maintenance of minimum risk weighted assets of 15 percent on an ongoing basis.
- Guidelines on disclosure of material facts pertaining to on-balance sheet and off-balance sheet items.
- Asset Classification into four classes and the Provisioning requirements for different class of assets.
- Guidelines on demand or call loans, disbursement of housing loans to the individual borrowers and requisites for ensuring due diligence in deployment of funds.
- Regulatory restrictions and limits on issue of dividends and the eligibility for declaring the dividends by taking into cognizance the level of NPA in the loan book.

- Loan to Value (LTV) Ratio for housing loans upto 75 percent as the case may be.
- Instructions for HFCs on concentration of credit/ investment including the capital market exposure and for the follow-up of fair practice code.
- Guidelines on lending to the companies or group of companies which are into real estate business.
- For constitution of; audit committee, Nomination and Remuneration Committee, Risk Management Committee besides Asset Liability Management Committee on the company's board and for the nomination of Chief Risk Officer (CRO).
- Application of the Code for sanctioning of loan including those sanctioned on digital platform and their processing.
- Submission of data to Credit Information Companies (CICs) - Format of data to be submitted by Credit Institutions
- Reporting the details of Wilful Defaulters

Objectives of the Study

1. To study the trends in Housing Loan Disbursements of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL
2. To analyse the trends in Non-Performing Assets of selected Housing Finance Companies of the State.
3. To examine the relationship between Return on Assets and Non-performing Assets of HFCs.
4. To assess the Asset Quality performance of selected housing finance companies.
5. To compare the recovery performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL

Hypothesis of the Study

H1: There is a significant difference between housing loan disbursements of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

H2: There is a significant difference between Non-performing Assets of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

H3: There is a relationship between disbursement of housing loan and Non-performing assets of housing finance companies.

H4: There is a significant relationship between profitability and Non-performing Assets of housing finance companies.

H5: There is a significant difference between Asset Quality Performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

H6: There is a significant difference between Recovery Performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

SELECTION OF HOUSING FINANCE COMPANIES

Housing Finance Companies to be certified as "Housing Finance Institutions" under section 2(1)(iv)(m) of SARFAESI Act 2002, should have more than 20 crore in assets and retail housing loans of at least 50 crore. As on 31st March 2021, there are 101 housing finance companies in India. 70 HFC have assets size of above 100 crore (Appendix I) and retail housing loan of more than 50 crore as on March 2020. Thus these (Appendix I) housing finance companies have been considered as housing finance institutions under SARFAESI Act 2002.

Karnataka state geography was classified into 4 divisions, i.e., Bangalore division, Mysore division, Belgaum Division and Gulbarga Division. These divisions include all the districts in Karnataka as per "Human Development Division Planning, Programme Monitoring and Statistics Department, Government of Karnataka and Government of Karnataka: Economic Survey Planning, Programme Monitoring and Statistics Department, Bangalore". Top Housing finance companies classified based on asset size and those having branches in all the 4 divisions of Karnataka state were considered for study purpose. Only Housing Development and Finance Corporation Limited, LIC Housing Finance Limited, Can-Fin Housing Finance Limited and ICICI Home Finance Limited have branches in all the 4 divisions of Karnataka state. These 4 housing finance companies will be considered for study purpose.

STUDY TIME FRAME AND DATA COLLECTION

The secondary data for the study have been collected from the annual reports and other annual publications of Housing Development and Finance Corporation Limited, LIC Housing Finance Company Limited, Can-Fin Homes Limited and ICICI Home Finance Limited from F.Y. 2011-12 to F.Y. 2020-21 (10 years).

Review of Literatures

S. Das (1999), analysed the importance of housing in the economy and its contribution to GDP, GCF and employment generation and to understand the role and performance of 11 HFCs in the growth of Indian housing sector during 1992 to 1997 at the time when private housing investment to that of the overall private investment in the economy was very low and formal sector institutions provide around 25 per cent of the required investment in the housing sector. Using Strength - Soundness - Profitability- Performance (SSPP) framework, it was observed that the financial performance of HFCs are strong, sound, and profitable and the growth in profits was found satisfactory. Author through the study suggested for the joint venture of HFCs and NGOs for down marketing of loans and its recovery would be a feasible solution and stressed on need for vibrant secondary mortgage market, effective foreclosure laws and rationalising the stamp duties.

Rameshbhai, P H (2016), in their study made to understand the development of Housing finance in India in order to analyse various problems facing housing finance business in the country, the contribution made by banks and HFCs to overcome the housing challenges in the country and the supervisory role of National housing bank. By analysing the regulatory and risk management framework in housing finance industry both internationally and in India and comparatively analysing various schemes, terms and financial performance of 12 housing Finance Companies listed on BSE during 2007 to 2015 through financial ratio analysis of profitability, efficiency criteria, total returns, per share return and liquidity of HFCs, it was observed that; shortage of funds, inadequate mortgage and securitisation laws, traditional thinking of Indians and unhealthy competition among housing finance agencies were observed to be the major problems of housing finance sector in India.

Manoj P K (2010), in the study conducted to review the development of housing finance institutions in India, their composition, problems and challenges faced by HFCs in particular, through the analysis of the operating performance of HFCs and CBs, assigning benchmarks based on their relative performance. Through the study, it was observed that; (a) the relative share of HFCs to that of CBs gradually came down from 66 percent in 2001 to 37% in 2008 due to active participation of CBs in housing finance with a highest y-o-y growth of 175 percent in 2003, (b) cost to income ratio to be having an inverse relationship with operational efficiency using the ROE decomposition analysis. The author opined; operating efficiency of FIs could be improved by reducing Interest cost, staff cost, establishment cost and management of asset and liability, balance sheet, NPA through better due diligence and suggested ROE decomposition analysis to be the better measure of profitability (operational efficiency) of the financial institutions.

N D Mandal (2020) examined the asset quality management practices of Indian commercial banks (PSBs and PVBs as on 31st of March 2018) during 2007-08 to 2017-18, to develop a means for better management of asset quality. The study was set to identify the causes for the deterioration in asset quality of banks and its impact on financial performance of banks and on the shareholders' wealth. Further the authors, analysed the effectives of the recovery channels for AQM and the relevance of CMAs. The first set primary data for the study was collected from 62 bank managers of PSBs and PVBs and the second being to the management accountants under institute of CMA of India through a structured questionnaires. Using Principal Component Analysis, Step wise Regression, F test, Linear Regression and Mann Whitney U test it was observed that; (i) priority sector lending is the main cause for rise in NPA, (ii) repeated announcement of loan waiver and political interventions, (iii) deteriorating asset quality performance of PSBs, (iv) ineffectiveness of CBs in AQM, (v) use of creative accounting practices to mask NPAs as standard assets, (vi) undue means in loan sanctioning process and so on. The author suggested forbetter Corporate Governance practices for reducing the stress due to NPA.

S.Kumar (2021) made an attempt to identify the reasons responsible for rise in NPA and to identify the problems of NCLT, DRT, DART and other tribunals with legal framework that is making recovery burden. The descriptive study was carried to identify an effective legal framework and more stringent law to mitigate pretentious defaulters and to develop a mechanism for better risk management. Indian Statues and Debates, judgment of various High Courts and Supreme Court were referred for primary data collection purposes. Through the critical analysis of legal aspects, the author suggested policy makers, viz. Government, Bank management, legal authorities to; improve the Forensic Audit Techniques, repair the accountability of Senior Bank officials, Reforms in MIS and IT, develop strict punitive measures for Autonomous Vigilance Agency and strengthen "IBC, 2016", DRT(s) and DRAT, NCLT(s) and NCLAT. Further the author suggested for reform under Fugitive Economic Offenders Act 2018.

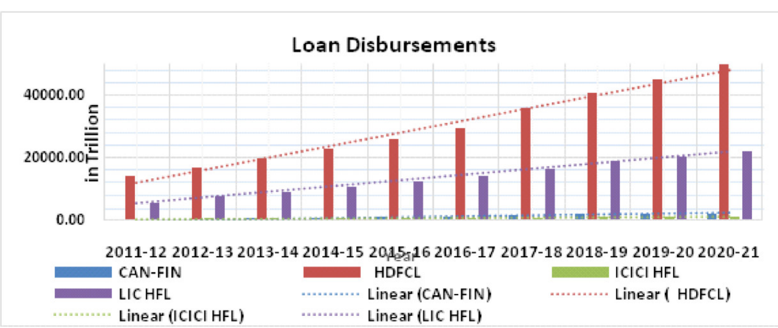
PERFORMANCE OF HOUSING FINANCE COMPANIES IN KARNATAKA

I. TRENDS IN HOUSING LOAN DISBURSEMENTS OF HOUSING FINANCE COMPANIES

Commercial banks and Housing finance companies contribute more than 98 percent of the housing loan disbursed by financial institutions in the country. Of which, Banks loans constitute around 60 percent and HFCs holds around 40 percent of the total market share of Housing finance institutions in the country.

H1: There is no significant difference between housing loan disbursements of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

LOAN DISBURSEMENTS	CAN-FIN Homes Limited	Housing Development Finance Corporation Limited	ICICI Home Finance Limited	LIC Housing Finance Limited
				In Rs. Trillion
2011-12	267.44	14042.17	469.94	5380.85
2012-13	402.00	16957.08	643.06	7711.81
2013-14	584.40	19655.44	664.76	9063.40
2014-15	823.13	22770.01	770.75	10765.65
2015-16	1064.31	25865.82	872.20	12435.29
2016-17	1331.31	29333.95	897.26	14349.58
2017-18	1574.30	35726.03	964.59	16511.41
2018-19	1838.20	40602.65	1332.84	19024.98
2019-20	2070.78	45090.28	1311.77	20251.75
2020-21	2210.62	49829.80	1375.78	22100.91
Mean	**1176.85**	**29987.32**	**930.30**	**13759.56**
Std. Dev.	**758.53**	**12327.60**	**316.59**	**5646.25**
Variance	**575370.70**	**151969706.93**	**100228.79**	**31880140.98**
CAGR	**0.26**	**0.15**	**0.13**	**0.17**
F - Calculated	**40.84**	Calculated F- value (40.84) is more than the table value (2.87). Therefore we Accept H_1, i.e. "There is a significant difference between loan disbursements of HDFCL, LIC HFL, CAN-FIN and ICICI HFL" at 5% confidence interval.		
P-value	**0.000**			
F - critical	**2.87**			



From the above analysis, it can be stated that; there is a significant difference between housing loan disbursements of HDFCL, LIC HFL, Can-Fin Homes and ICICI HFL, i.e. P = 0.05. In order to understand which particular housing finance companies disbursements are higher than other, Post-hoc analysis with Bonferroni method was used. Further, the alpha value was adjusted from the previous (p-value: 0.05) to 0.0083 to account for multiple hypothesis and to eliminate the chances of type 1 error (false-positive).

TEST	ALPHA
ANOVA	0.05
Post-hoc test (Bonferroni corrected)	0.0083

Post-hoc analysis with Bonferroni method revealed that, housing loan disbursed byHDFCL (29987.32 +/- 12327.60) was significantly higher compared to LIC HFL (13759.56 +/- 5646.25, P < 0.008), Can-Fin (1176.85 +/- 758.53, P < 0.008) and ICICI HFL (930.30 +/- 316.59, P < 0.008). ICICI Home Finance Limited has disbursed the lowest compared to other 3 housing finance companies with 930.30 +/- 316.59, P < 0.008.

The Compound annual growth rate of housing loan disbursed by housing finance companies for the last 10 years are as follows; Can-Fin (0.26), LIC HFL (0.17), HDFCL (0.15) and ICICI HFL (0.13).

II. NON-PERFORMING ASSETS OF HOUSING FINANCE COMPANIES

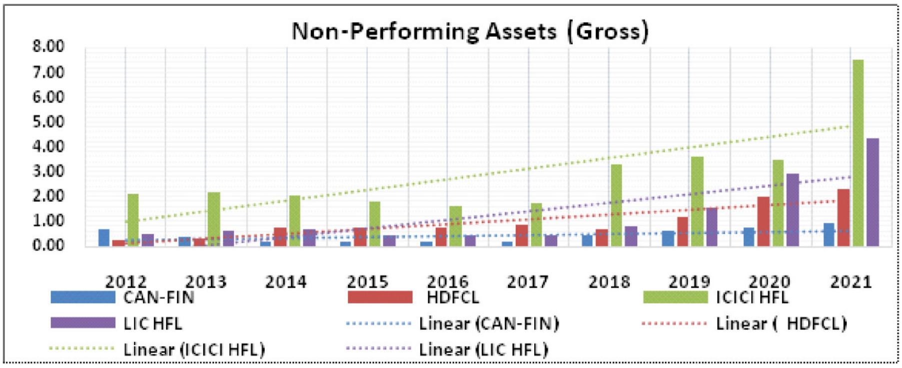
The NPAs are treated as on impediment in the development of financial sector of the country. Further the NPAs, reduces the productivity of the financial institutions. The Narasimham Committee on Financial Sector Reforms submitted the study report titled; prudential norms on Capital Adequacy and the Regulatory Standards concerning to Income Recognition, Asset Classification and Provisioning emphasised on the need for the regulatory mechanism for recognition of income on financial assets, particularly loan assets and the classification of such assets based on their reliability.

Many reasons are attributed for growth in volumes of NPAs in HFCs, which can be categorised into two dimensions - External and Internal. Credit appraisal mechanisms, sanction of loan and post-sanction supervision, risk management practices of HFCs, credit recovery processes followed by the HFC and the motivation level of the employees in monitoring and recovery of bad loans being the internal factors that need to be resolved by the respective HFC's management. Political, legal, economy and regulatory mechanisms effecting in the housing finance sector and ethical values of the society are the external factors determining the growth of NPAs. Mounting NPAs are the major cause of concern to the management of HFCs, the government and the regulator.

H2: There is a significant difference between Non-performing Assets of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

GROSS NPA	In Percentage			
	CAN-FIN Homes Limited	Housing Development Finance Corporation Limited	ICICI Home Finance Limited	LIC Housing Finance Limited
2011-12	0.71	0.26	2.11	0.49
2012-13	0.39	0.30	2.15	0.61
2013-14	0.21	0.77	2.04	0.67
2014-15	0.17	0.74	1.84	0.46
2015-16	0.19	0.78	1.62	0.46
2016-17	0.21	0.90	1.73	0.44
2017-18	0.43	0.71	3.33	0.79
2018-19	0.62	1.19	3.61	1.56
2019-20	0.76	1.98	3.49	2.95
2020-21	0.91	2.33	7.48	4.37
Mean	**0.46**	**1.00**	**2.94**	**1.28**
Std. Dev.	**0.27**	**0.67**	**1.77**	**1.34**
Variance	**0.07**	**0.45**	**3.12**	**1.79**
CAGR	**0.03**	**0.28**	**0.15**	**0.27**
F - Calculated	**8.41**	Calculated F- value (36.36) is more than the table value (2.84). Therefore we accept H_2, i.e. There is a significant difference between Non-Performing Assets (Gross) of HDFCL, LIC HFL, CAN-FIN and ICICI HFL		
P-value	**0.000**			
F - Critical	**2.47**			

From the above analysis, it can be stated that; there is a significant difference between housing loan disbursements of HDFCL, LIC HFL, Can-Fin Homes and ICICI HFL, i.e. P <= 0.05. In order to understand which particular housing finance companies disbursements are higher than other, Post-hoc analysis with Bonferroni method was used. Further, the alpha value was adjusted from the previous (p-value: 0.05) to 0.0083 to account for multiple hypothesis and to eliminate the chances of type 1 error (false-positive).



TEST	ALPHA
ANOVA	0.05
Post-hoc test (Bonferroni corrected)	0.0083

Post-hoc analysis with Bonferroni method revealed that, Gross Non-performing Assets of ICICI HFC (2.94 +/- 1.77) was significantly higher compared to LIC HFL (1.28 +/- 1.34, P < 0.008), HDFCL (1.00 +/- 0.67, P < 0.008) and Can-Fin (0.46 +/- 0.27, P < 0.008). The Gross NPA of ICICI Home Finance Limited was the highest of other 3 housing finance companies with a mean value of 2.94.The Compound annual growth rate gross NPA of housing finance companies for the last 10 years are as follows; Can-Fin (0.46), LIC HFL (1.28), HDFCL (1.00) and ICICI HFL (2.94).

H3: There is a significant relationship between disbursement of housing loanand Non-performing assets of housing finance companies

Housing Finance Company	Calculated F - Value	P-Value	Remarks
LIC Housing Finance Limited	12.6567	0.0074	Significant
ICICI Home Finance Limited	8.9448	0.0173	Significant
Housing Development Finance Corporation Limited	37.6495	0.0003	Significant
Can-Fin Homes	2.5985	0.1456	Not Significant

Using simple linear regression for analysing the relationship between disbursement of housing loan and Non-performing assets of HFCs, it was found that; there is a significant relationship between disbursement of housing loan and Non-performing assets of LIC HFL, HDFCL and ICICI HFL. Though, there is a positive relationship between disbursement of housing loan and Non-performing assets of Can-Fin Homes, the relationship is not significant, i.e. it could be understood that there are other factors that are impacting the trend in non-performing assets of Can-Fin Homes Limited.

Calculated F - Value	P-Value
2.31	**0.16**

Further, considering the total housing loan disbursements of all HFCs and the Gross NPA of all HFC in India the calculated f-value (2.31) is less than the table value 3.48 at 5 percent confidence interval, i.e. we Reject, the hypothesis (H3) stating; "there is a significant relationship between disbursement of housing loan and Non-performing assets of housing finance companies". Thus it could be understood that, the increase in housing loan disbursements by HFCs has no significant relationship with Non-performing assets of the company. Therefore,it would be necessary to assess the recovery performance of HDFCL, LIC HFL, Can-Fin Homes and ICICI HFL (see. IV section below).

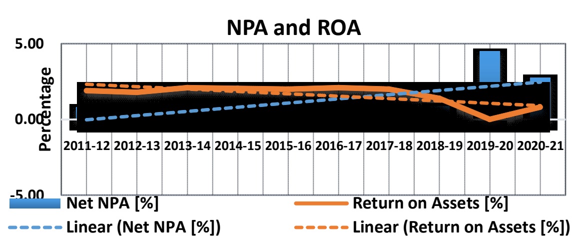
The government and the RBI has taken various measures to ease down the quantum of growth in NPA, viz. Corporate Debt Restructuring mechanism, Establishment of Debt-Recovery Tribunal (DRTs), establishment of Asset Reconstruction Companies (ARCs), initiation of Lok Adalats, Securitization of Assets and so on. HFCs must comply with the stricter norms set by the regulator and must operate within the guidelines set by the regulators, vis-à-vis following the prudential norms concerning asset classification, provisioning according to the classification of NPAs, abiding to the capital adequacy and the exposure requirements, accounting for recoveries and disclosure requirements.

RETURN ON ASSETS

NPAs are a drain on profitability of BFIs, having an adverse impact on capital adequacy affecting the financial sources and the image of the financial institution. HFCs need to catch up with the recent developments in loan assets by ensuring proper appraisal, examination and follow-up of loans and make speedy credit decisions. The HFCs must meet the regulatory requirements and meet the expectations of the stakeholders through maximization of returns/ wealth.

H4: There is no significant relationship between Return on Assets and Non-performing Assets of HFCs.

Years	Net NPA [%]	Return on Assets [%]
2011-12	0.80	1.90
2012-13	0.70	1.80
2013-14	0.60	2.10
2014-15	0.50	2.05
2015-16	0.50	2.00
2016-17	0.50	2.10
2017-18	0.60	2.00
2018-19	0.86	1.40
2019-20	4.49	0.01
2020-21	2.74	0.82
CAGR	0.15	-0.09
Mean	1.23	1.62
Standard Deviation	1.33	0.69
Variance	1.77	0.48



Adjusted R^2	F	F-significance	β-coefficient
94.12	145.011	0.000002 [5%]	-0.51

As on 31st march 2021, NPA and ROA of overall HFCs was 2.74 and 0.82 percent respectively with mean of 1.23 and 1.62 and standard deviation of 1.33 and 0.69 respectively. 10 year CAGR (2011 to 2021) of NPA and ROA of HFCs are 0.15 and -0.09 respectively. The NPA rose almost 3.60 post F.Y 2018-19 due to unprecedented crisis impacting the housing sector of India, However, the uptick in NPA, started declining in preceding year.

From the above calculations (Simple Linear Regression), it could be observed that; the obtained P-value (0.000002) is less than 0.05; i.e. at 5 percent significance level; we reject null hypothesis. Viz, "There is no significant relationship between return on assets of HFCs and NPAs of HFCs." With adjusted 'R' square of 94 percent, that is, the change in NPA performance have 94 percent impact on return on asset performance of the HFCs. There is a negative relationship, meaning; the increase in NPA by 0.1 percent leads to decrease (-0.51) in return on assets of HFCs.

III. ASSET QUALITY PERFORMANCE OF HOUSING FINANCE COMPANIES

Asset quality of financial institutions, most specifically of banking and non-banking financial institutions arise due to the rise in number of defaulters, weak lending norms, natural constraints and political stigma, poor governance and financial burden Praveen (2019) which have a negative correlation with interest rate, inflation rate, per capita GDP and negative correlation with bank size Bhatti and Goyal (2017). However, the recent studies have found that, 'rise in lending to the non-priority sector, leading to a major chunk of NPAs to the Banks Bharthi & Thilagavathi (2018).The problem of rise in NPA can be addressed by implementation of immediate precautionary measures, proper restructuring and reshaping of the Government norms, implementation of effective Management Information System (MIS), strengthening of credit norms, sound credit management policy, disbursements to the genuine solvent borrowers and expedition of recovery process, use of maximum skill, care and diligence before the sanctioning of loans to the priority sector (Praveen 2019; Bharthi & Thilagavathi 2018; Malepati & Gowri 2017). Thus, the resulting impact of NPA on profitability, liquidity and public faith Praveen (2019) can be reduced.

H5: There is no significant difference between Asset Quality Performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

Asset quality of financial institutions can be computed by using (a) Net NPA to Net Advances, (b) Total investment by total assets, (c) Net NPA to Total Assets, (d) Net NPL to Total Loans, (e) Net NPL to total equity, (f) Allowances for loan loss to total Loans, (g) Provisions for loan loss to total loans and so on, (Pandain (2017), Gupta (2018), Lekhi (2017))

However, in the current study; (a) Net NPA to Net Advances, (b) Total investment by total assets, (c) Net NPA to Total Assets, and (d) Net NPL to total equityhave been considered for assessing asset quality performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

ASSET QUALITY PERFORMANCE OF HOUSING FINANCE COMPANIES

ASSET QUALITY MEASURES	INFERENCE	HDFC Ltd	LIC HFL	Can-Fin Homes	ICICI HFL	P-Value
Net NPA to Net Advances	Lower the value, higher the credit efficiency.	$0.96_{(1)}$	$1.02_{(4)}$	$0.99_{(3)}$	$0.97_{(2)}$	0.415
Total Investment by Total Assets	Higher the value, higher the inefficiency in use of asset	$0.13_{(4)}$	$0.06_{(1)}$	$0.12_{(2.5)}$	$0.12_{(2.5)}$	0.801
Net NPA to Total Assets	Lower the ratio, better is the performance	$0.83_{(1)}$	$0.95_{(3)}$	$0.98_{(4)}$	$0.86_{(2)}$	0.000
Net NPL to total equity	More the ratio, more capital a bank require to overcome loss.	$5.84_{(1)}$	$11.14_{(3)}$	$8.35_{(2)}$	$14.75_{(4)}$	0.000

It could be observed from the above table on asset quality performance of housing finance companies. Mean scores with comparative ranks, the asset quality performance ofHDFCL was found to be better among 4 HFCs due to better performance in terms of; Net NPA to Net Advances, Net NPA to Total Assets and Net NPL to total equity. However, Total Investment by Total Assets of HDFCL was more depicting inefficiency in use of asset. The asset quality performance of ICICI HFC was found to be better compared to LIC HFL and Can-Fin homes.Of the 4 HFCs, Can-fin Homes is a least performer in terms of asset quality.

The above hypothesis [H5] was divided and was analysed as follows. Using ANOVA test, it was observed that;

HYPOTHESIS	REMARKS
There is a significant difference between Net NPA to Net Advances of HDFCL, LIC HFL, Can-Fin Homes and ICICI HFL	REJECTED
There is a significant difference between Total Investment by Total Assets of HDFCL, LIC HFL, Can-Fin Homes and ICICI HF	REJECTED
There is a significant difference between Net NPA to Total Assets of HDFCL, LIC HFL, Can-Fin Homes and ICICI HFC	ACCEPTED
Note: Post-hoc Testusing Bonferroni method revealed that, Net NPA to Total Assets of Can-Fin (0.9797 +/- 0.0076) was significantly higher compared to LIC HFL (0.9527 +/- 0.0163), ICICI HFL (0.8581 +/- 0.1147) and HDFCL (0.8311 +/- 0.0093).	
There is a significant difference between Net NPL to total equity of HDFCL, LIC HFL, Can-Fin Homes and ICICI HFL	ACCEPTED
Note: Post-hoc Test using Bonferroni method revealed that, Net NPL to total equity of LIC HFL (11.0861 +/- 0.9087) was significantly higher compared to ICICI HFL (15.0387 +/- 3.0969), Can-Fin (8.2846 +/- 1.4781) and HDFCL (5.6621 +/- 1.3060).	

IV. RECOVERY PERFORMANCE OF HOUSING FINANCE COMPANIES

In India, The Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act, Debts Recovery Tribunals (DRTs), Asset Reconstruction Company (ARC), Board for Industrial and Financial Reconstruction (BIFR) and Corporate Debt Restructuring (CDR) were established for fast-track settlement of distressed assets of BFIs. Wherein, SERFAESI Act was introduced for encouraging the lenders for securitization of their security interest for increasing the rate of disbursement.

At the end of March 2017-18, there was a significant decline in Net NPA to Net advances of HFCs to 0.60 percent from 0.80 in F.Y. 2011-12, due to the improvement in the recovery of NPAsas well as the growth in disbursements of HFCs. When looked at the composition of NPAs, the substandard assets of HFCs had a sharp decline till F.Y. 2015-16, but rose to a large extent in upcoming financial years to unprecedented situations, the doubtful assets declined to the large extent, even though of fluctuating tendenciesobserved between F.Y. 2013-14 to F.Y. 2018-19. Finally the loss assets of HFCs saw a systematic decline over the past decade which can be attributes to the corporate debt restructuring (CDR) framework, Effectiveness of DRTs, Lok Adalats and altogether the efforts of HFCs, RBI, NHB and Legal mechanisms in this regard. However, this is to go a long way ahead.

H6: There is a significant difference between Recovery Performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL.

RECOVERY MEASURES	F	P - Value	F - Critical	LEVEL OF SIGNIFICANCE
STANDARD ASSETS TO TOTAL LOANS AND ADVANCES	1.569	0.216	2.866	There is a significant difference between HFCs
SUB-STANDARD ASSETS TO STANDARD ASSETS	5.119	0.005	2.866	There is no significant difference between HFCs
DOUBTFUL ASSETS TO SUB-STANDARD ASSETS	3.135	0.037	2.866	There is no significant difference between HFCs
LOSS ASSETS TO DOUBTFUL ASSETS	3.069	0.0404	2.866	There is no significant difference between HFCs

From the above analysis using Anova, except one case, viz. Standard Assets to Total Loans and Advances, the other three measures, viz. sub-standard assets to standard assets, doubtful assets to sub-standard assets and loss assets to doubtful assets provide sufficient support for Rejecting Hypothesis 6 (H6). That is, "There is a significant difference between Recovery Performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL".

Therefore, it would be necessary for us to understand which among the four HFCs perform (recovery performance) better than other HFCs, viz. in case of Standard Assets to Total Loans and Advances;

1. Post-hoc Test using Bonferroni method revealed that, Sub-standard Assets to Standard Assets of Can-Fin (99.5% +/- 0.28%) was significantly higher compared to LIC HFL (98.31% +/- 4.45%), HDFCL (97.42% +/- 1.99%) and ICICI HFL (96.52% +/- 4.31%).

Years	Standard Assets to Total Loan and Advances [Can-Fin Homes]	Standard Assets to Total Loan and Advances [HDFCL]	Standard Assets to Total Loan and Advances [ICICI HFL]	Standard Assets to Total Loan and Advances [LIC HFL]
2011-12	99.29%	92.94%	84.63%	85.66%
2012-13	99.62%	95.67%	99.17%	99.71%
2013-14	99.79%	99.30%	97.96%	99.87%
2014-15	99.83%	99.01%	98.16%	99.79%
2015-16	99.81%	99.12%	99.05%	99.80%
2016-17	99.79%	96.88%	98.93%	99.71%
2017-18	99.57%	96.73%	97.19%	99.97%
2018-19	99.38%	99.06%	96.99%	100.00%
2019-20	99.23%	97.79%	97.25%	99.20%
2020-21	99.08%	97.67%	95.83%	99.39%

2. Post-hoc Testusing Bonferroni method revealed that, Sub-standard Assets to Standard Assets of Can-Fin (0.19% +/- 0.13%) was significantly higher compared to HDFCL (0.51 +/- 0.38), LIC HFL (0.52% +/- 0.58%) and ICICI HFL (1.25% +/- 1.04%).

Years	Sub-Standard Assets to Standard Assets [Can-Fin Homes]	Sub-Standard Assets to Standard Assets [HDFCL]	Sub-Standard Assets to Standard Assets [ICICI HFL]	Sub-Standard Assets to Standard Assets [LIC HFL]
2011-12	0.09%	0.09%	0.49%	0.12%
2012-13	0.13%	0.10%	0.45%	0.35%
2013-14	0.06%	0.52%	0.62%	0.18%
2014-15	0.08%	0.33%	0.64%	0.05%
2015-16	0.08%	0.43%	0.50%	0.10%
2016-17	0.10%	0.39%	0.62%	0.08%
2017-18	0.34%	0.30%	2.24%	0.38%
2018-19	0.34%	0.71%	1.58%	0.95%
2019-20	0.38%	1.32%	1.82%	1.56%
2020-21	0.32%	0.89%	3.58%	1.45%

3. Post-hoc Testusing Bonferroni method revealed that, Doubtful Assets to Sub-standard Assets of ICICI HFL (7.89 +/- 4.22) was significantly higher compared to HDFCL (10.94% +/- 5.40%), Can-Fin (17.13% +/- 14.19%) and LIC HFL (25.54% +/- 22.94%).

Years	Doubtful Assets to Sub-standard Assets [Can-Fin Homes]	Doubtful Assets to Sub-standard Assets [HDFCL]	Doubtful Assets to Sub-standard Assets [ICICI HFL]	Doubtful Assets to Sub-standard Assets [LIC HFL]
2011-12	54.86%	18.78%	11.61%	25.38%
2012-13	15.86%	18.04%	16.78%	7.26%
2013-14	24.09%	4.45%	7.33%	26.39%
2014-15	11.09%	11.33%	4.29%	82.34%
2015-16	11.59%	6.88%	6.11%	31.92%
2016-17	9.39%	11.29%	6.28%	38.56%
2017-18	12.14%	12.22%	1.61%	9.86%
2018-19	6.12%	5.70%	9.05%	5.85%
2019-20	9.08%	4.82%	5.93%	8.40%
2020-21	17.02%	15.92%	9.87%	19.43%

4. Post-hoc Testusing Bonferroni method revealed that, Loss Assets to Doubtful Assets of LIC HFL (7.82% +/- 5.60%) was significantly higher compared to HDFCL (14.70% +/- 5.38%), Can-Fin (17.60% +/- 10.21%) and ICICI HFL (17.73% +/- 10.82%).

Years	Loss Assets to Doubtful Assets [Can-Fin Homes]	Loss Assets to Doubtful Assets [HDFCL]	Loss Assets to Doubtful Assets [ICICI HFL]	Loss Assets to Doubtful Assets [LIC HFL]
2011-12	24.46%	18.66%	25.58%	22.32%
2012-13	30.53%	18.65%	12.80%	5.61%
2013-14	8.43%	9.20%	22.26%	3.14%
2014-15	14.25%	10.91%	34.74%	4.81%
2015-16	3.46%	18.65%	27.07%	5.98%
2016-17	21.49%	15.03%	18.75%	7.47%
2017-18	12.00%	16.32%	22.87%	9.65%
2018-19	35.88%	23.15%	4.90%	10.07%
2019-20	13.61%	10.56%	6.33%	5.81%
2020-21	11.88%	5.89%	1.95%	3.31%

Conclusion

Through the empirical study it was observed that; (a) there exists a significant difference in the level of loan disbursements and gross non-performing assets of four HFCs, (b) there is a significant relationship between disbursement of housing loan and Non-performing assets of LIC HFL, HDFCL and ICICI HFL, (c) there are other factors (other than disbursements of loan) that are impacting the trend in non-performing assets of Can-Fin Homes Limited, (d) the increase in housing loan disbursements by HFCs has no significant relationship with Non-performing assets of the company, (e) the increase in NPA by 0.1 percent leads to decrease (-0.51) in return on assets of HFCs., (f) the asset quality performance of HDFCL was found to be better among 4 HFCs due to better performance in terms of; Net NPA to Net Advances, Net NPA to Total Assets and Net NPL to total equity. However, Total Investment by Total Assets of HDFCL was more depicting inefficiency in use of asset, (g) The asset quality performance of ICICI HFC was found to be better compared to LIC HFL and Can-Fin homes, (h) Of the 4 HFCs, Can-fin Homes is a least performer in terms of asset quality, (i) There is a significant difference between Recovery Performance of HDFCL, LIC HFL, CAN-FIN Homes and ICICI HFL, (j) Sub-standard Assets to Standard Assets of Can-Fin was significantly higher compared to LIC HFL, HDFCL and ICICI HFL, (k) Sub-standard Assets to Standard Assets of Can-Fin was significantly higher compared to HDFCL, LICHFL and ICICI HFL, (l) Doubtful Assets to Sub-standard Assets of ICICI HFL was significantly higher compared to HDFCL, Can-Fin and LIC HFL, and (m) Loss Assets to Doubtful Assets of LIC HFL was significantly higher compared to HDFCL, Can-Fin and ICICI HFL.

NPA would stay given that, the concept of NPA management would endure to be of relevance forever to the banking and non-banking financial institution and its stakeholders regardless to the past, present or the future. For an early recovery of bad loans, it would be necessary for HFCs to set up of additional technical forums for proper evaluation of projects, perfection of collateral, adequate post-lending monitoring, ensuring assets backing with promoter guarantees and insurance covers, speeding up of secured debt collection through SARFAESI, speeding up the working of DRTs and effective use of OTS.

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