Challenge to Housing Finance Companies in India: An Efficiency Perspective

Abhijit Sinha*

ABSTRACT

The role of housing finance is undoubtedly very vital in the light of the huge demand-supply gap that exists in India. Due to rapid urbanization and the government's stress on 'Housing for all', the housing sector in the country has been getting a new focus. In this background, the present empirical study looks at the performance of selected housing finance companies by considering data for the period 2016 to 2019 during which the Indian economy has faced headwinds. The study considers the efficiency aspect of the companies by applying the two-output, two-input Super-efficiency Data Envelopment Analysis model under the assumption of variable returns to scale. The researcher finds that there is enough scope for improvement in efficiency in the case of a majority of the competitors. Hence, with Covid-19 already creating panic all across the globe, it is vital for the companies to pull up their socks and improve all aspects of performance which definitely includes efficiency.

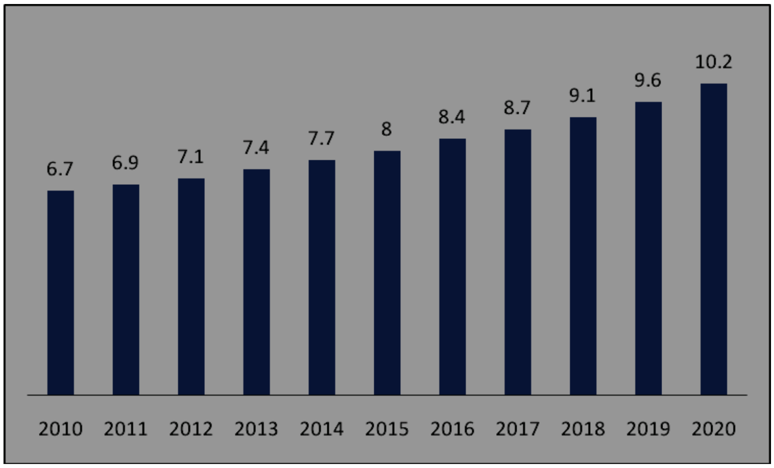
Keywords: *Housing Finance Companies, Efficiency, Super-efficiency*

INTRODUCTION

It is known to all that every human being has three basic needs to fulfill which are food, clothing and shelter. The UN Conference on Environment and Development (1992) had stated that 'Access to safe and healthy shelter is essential to a person's physical, psychological, social and economic wellbeing and should be a fundamental part of National and International action'. When we talk of the third one, the sector that comes to our mind is the housing sector and automatically our attention is drawn towards the financiers who are engaged in providing credit for affording purchases of houses by people of different income groups. The importance of this sector is undoubtedly a critical one and hence the governments have paid attention to the prosperity of the sector. The housing sector is considered to be a driver of the growth of an economy and creates a huge linkage effect as well. With the rapid pace of urbanization in the cities and towns, there is an increasing rise in the shortage of housing facilities which in 2012 stood at 18.78 million units. One of the key opportunities that the sector enjoys is the relatively low mortgage to GDP ratio in the country (refer to chart 1).

**Associate Professor in Commerce, Vidyasagar University, West Bengal*

Chart 1
Mortgage to GDP ratio in India



Source: CSO, Analyst estimates
Note: 2019 and 2020 are estimated figures

If we look at the table below, it is evident that India is far way behind the other countries in terms of mortgage penetration which points to the huge opportunities in terms of housing finance.

Table 1
Mortgage penetration in other countries

Country	%	Country	%
Denmark	114	Taiwan	40
UK	75	South Korea	36
US	68	Malaysia	32
Singapore	56	Thailand	20
Hong Kong	45	China	18
Germany	42	India	9

Source: Dalal Street Investment Journal
Figures relate to 2015

In addition to the low mortgage to GDP ratio, the other interesting aspect that is going to drive the housing finance business in the coming years is the increasing ratio of household debt to the country's GDP. Recent data shows that there is a substantial rise in the ratio between January 2017 and January 2020 from 10.5% to 12% which shows the increasing tendency among households to resort to debt for meeting their needs. In line with the overall macro situation, the housing finance business is also, therefore, tracing a rising trajectory. With regard to housing loans offered by these companies, as per an RBI report, the non-performing asset is maximum for the low-income category for which the loan ticket size is up to Rs. 2 lacs and 4.4% for the loan ticket size up to Rs. 5 lakhs. Thus, the ratio shows a declining trend as the ticket size increases. Overall, the poor loan category stands at a comfortable of 1.1%. This is the trend despite the decline in the interest rate on all forms of loans due to a series of reductions in the repo rate by the RBI to boost the staggering economy which is still cleaning the wounds due to demonetization programme and passage of GST. Thus, the low-interest rate regime is an opportunity for all housing finance companies. However, in this regard, it is pertinent to mention that since the RBI observed that the benefit of lowering the interest rate was not getting passed to the loanee, since October 1, 2019, financial intermediaries (excepting RRBs) are required to link interest rate on retail and MSME loans to any of the four external benchmarks which are repo rate / 3-month Treasury bill yield published by the Financial Benchmarks India Pvt. Ltd. (FBIL) / 6-month Treasury bill yield published by FBIL or any other market benchmark rate published by FBIL. However, it can be noted that despite the low-interest rates that are prevailing in the Indian market, during the last few years, builders have been facing the acute problem of unsold properties that are creating hurdles to their already highly leveraged balance sheets. Thus, the business environment is providing both challenges and opportunities to the housing finance companies. In such circumstances, it is apt to find out the efficiency of the housing finance companies because with poor efficiency the survival might become questionable. The time has come where the fittest businesses will survive.

The relevance of efficiency for analysis can be obtained in the contribution by Berger, Hunter and Timme (1993) which shows that efficiency is not a standalone performance parameter but is connected to profitability and hence used in the study of financial services (Berger & Mester, 2003). The study is designed as follows. Section 2 discusses the different works of literature that are relevant to the field of the study and points to the research gap. Section 3 highlights the research objectives. Section 4 elaborates on the research design whereas section 5 discusses the findings based on analysis and the last section ends with the conclusion of the study.

LITERATURE REVIEW

There are several works of literature available in the area of housing finance which, however, are dispersed with regard to the area of discussion without any real focus. A brief description is given on the academic contributions already made. Rekha & Gangamaa (2019) looks at the performance of different housing loans in the country. Prabhita and Krishnan (2018) make a comparative assessment of the performance of commercial banks and housing finance companies with regard to housing loans. Saritha and Narsaiah (2018) in a separate study look at how customers perceive the loan policy and interest rates of HDFC apart from understanding the influential factors behind satisfying customers. The different hurdles that come in the way of granting housing loans are elaborated in the contribution by Piyush et al. (2016). The development of housing finance in India and the different issues that the sector is confronting in the era of liberalization have been discussed in the studies of Manoj (2006) and Shankar (2014). Dasgupta (2015) in another study makes an analysis of HDFC with regard to the growth and performance of housing loans. Pal & Hossain (2014) in their study on the housing finance sector of Bangladesh looks at the overall commercial market and the different sources to support property purchases. Rao (2013) and Palany (2004) look at the prospects of the housing finance sector which emerged with increasing demand for housing needs. The regulatory environment of the housing sector that has posed opportunities and challenges for housing finance companies is given importance in the study of Jasmin et al. (2012). Ghosh (2012) looks deeply into the appraisal process of granting housing loans by the Indian Overseas Bank. Kamal and Ahmed (2016) in their discussion look into the role of each of the tiers in the three-tier structure in the housing finance sector of Bangladesh. Bandopadhyay and Saha (2011) look at the factors that drive demand for housing loans by making an in-depth study of more than thirteen thousand loan accounts obtained from banks and HFCs. The study by Bhalla et al. (2009) looks at the changing competitive structure in the housing finance sector. Bhalla et al. (2008) in the analysis of the housing finance sector looks at the developments that it has experienced which have led to the growth in demand for housing loans in the country. Warnock and Warnock (2008) in their study on the position of housing demand in different economies highlight the issue of inadequate financing support in the emerging economies. Singh et al. (2006) look into the various housing loan schemes that are available for customers with a key focus on the performance of LIC Housing Finance for the period 1995 to 2005. The issue of the housing shortage is also pointed by Pal (2005). Varghese (2004) mentions about the inadequate financial support available to customers in housing finance which calls for the need to have more institutions that can help to fill in the gap. Gupta (2005) in the study of the housing finance sector points to the importance of both public and private sector lenders.

Bhattacharya (2003) laments the inadequacy in financial support provided by housing finance companies. Financial intermediation in the housing sector is not found adequate because of high-interest rates and limited sources of funds (Bhattacharya, 2003). This is true both for the financing of the developers and purchasers. The importance of the housing sector is evident from the comments of Mistry (2002) where the corporate head of HDFC mentions that such a sector has forward and backward linkages with more than two hundred fifty industries. The investigation by Suthankar (2000) points to the problem of housing that is very serious among the urban poor in spite of more than thirty programmes that are designed to uplift their living conditions. After the liberalization of the Indian economy, Muthuram (1999) considers the government's policy as a way for banks to diversify their portfolio. The opportunities for HFCs are clear from the study by Paul (1998) where the author mentions the need to built a huge stock of affordable housing for the Indian masses which will create scope to these institutions to get a share of the growing industry. Parekh (1998) mentions the need to have a formal financial institutional network in the country. Kurana (1998) in the study looks at the housing sector and problems associated with housing loans following the New Economic Policy that led to the liberalization of the Indian economy. Patel (1996) explains how loan disbursement towards the housing sector is part of the priority sector lending practice of banks. Sharma (1996) identifies housing as a key problem for policymakers in India and mentions that government and political determination will be the main factors that will drive the satisfaction of housing demand in the country. Mathurn (1993) points to the key role that finance companies will have to play in India because of the huge financial burden that arises from the acquisition of houses in the country.

Research gap

The review of earlier studies shows that the housing finance sector has not been explored much by researchers. Moreover, there is no such research contribution in the field of housing finance which has considered the application of efficiency measurement using DEA. Thus, the present research plugs the gap and gives new insights to readers and practitioners who are interested / engaged in this field of study.

OBJECTIVE OF THE STUDY

The aim of the study is to determine the different measures of efficiency viz. technical, pure technical and scale efficiency for the sample housing finance companies that can facilitate in decision-making.

RESEARCH DESIGN

Research method

The present study looks at the performance of selected listed housing finance companies for the period 2016 to 2019. This period is purposively taken as the Indian economy had been experiencing headwinds after the demonetization exercise and passage of the GST. Moreover, the housing sector was facing hiccups due to the dual issues of low demand and slowdown in all forms of economic activities. In this backdrop, the researcher studies the efficiency level by considering the top nine housing finance companies. Due to the non-availability of data for 2020 in a few cases, the data period is restricted to 2019. The analysis is made from the angle of efficiency with the help of the Data Envelopment Approach (DEA), a non-parametric tool that has several advantages as pointed by Yang (2009), Sufian (2007) and Favero & Papi (1995). Some of them are the ability to handle inputs and outputs at the same time, no need to specify a functional form to the data and the ability to generate many data points in spite of a low number of decision-making units. The basic idea in this technique is to generate an envelope (known as the efficient or best practice frontier) and with the help of the linear programming technique, arrive at the relative efficiency level of the different units. For the purpose of this research, the investigator applies the output-oriented DEA model under the radial approach. It is pertinent to mention that in DEA applications, since more than one entity can lie on the efficient frontier (implying a relative efficiency of one), the super-efficiency model is applied which allows to differentiate among those who lie on the envelope. The extent of inefficiency is measured by the distance of the inefficient players from the frontier/envelope. The lower is the ratio, the higher is the inefficiency. Three efficiency measures are computed viz. technical (or overall) efficiency, pure technical (or managerial) efficiency and scale efficiency.

Choice of input and output variables
There is a varied opinion about variables that should be considered as the input and output variables (Berger and Humphrey, 1997). The following points are kept in mind while making the selection:
i. The outputs should be non-negative (Sarkis & Weinrach, 2001)
ii. The number of inputs and outputs should be based on the following two rules given by Cooper et al. (2007) as mentioned in the study by Bala & Kumar (2011)
a) $n \geq p \times q$, where n is the number of DMUs, p is the number of inputs and q is the number of outputs
b) $r = 3\,(p+q)$, where r is the total number of observations.

The research uses a two-input, two-output model with employee cost and finance cost as the inputs and operating income and other income as the outputs.

ANALYSIS AND FINDINGS

Descriptive statistics

Table 4
Descriptive statistics of variables

Variable	Min.	Max.	Mean	Std. dev.	Skewness	Kurtosis
empl_cost	22.59	3394.00	393.99	728.16	3.41	11.83
fin_cost	548.00	29525.00	6127.66	7526.09	1.70	2.42
op_income	874.00	95693.00	12972.33	22210.18	2.68	6.84
other_income	.01	1578.00	148.18	364.77	3.04	8.78

Source: Computed by the researcher

The above table points to the summary statistics of the variables considered for the study. The figures show that there is a wide fluctuation in the variables for the sample taken for the research. In terms of all the relevant variables, it is seen that the range is huge which is due to HFCs of different sizes. All the variables are positively skewed.

Super-efficiency score
The table below highlights the position of the different housing finance companies in terms of their efficiency score. Since technical efficiency cannot differentiate between companies that lie on the 'best practice' frontier, the super-efficiency method is applied. Among the top HFCs, HDFC and LIC Housing Finance are found to be the best-performing companies, with the former being the best. For the remaining players, there is a lack of consistency in the trend. Dewan Housing Finance which came up in the news in 2019 as a defaulter in repayment to lenders shows the worst performance in the sample housing companies. For the other inefficient players, the overall trend is positive with increasing efficiency over the years.

Table 5
Superefficient Technical Score of Housing Finance Companies

HFC	2016	2017	2018	2019
Canfin Home	0.594	0.580	0.901	0.955
Dewan Housing	0.544	0.506	0.794	0.656
GIC HF	0.622	0.614	0.945	0.848
GRUH	0.641	0.613	0.896	0.772
HDFC	1.655	1.722	1.768	1.794
HUDCO	0.768	0.744	0.841	1.152
Indiabulls HF	3.683	4.652	7.614	0.637
LIC HF	1.353	0.909	1.610	1.523
REPCO Housing	0.656	0.611	0.773	0.620
No. of efficient players	3	2	3	4
% of efficient players	33%	22%	33%	44%

Source: Computed by the researcher

Managerial efficiency score

The following table gives an idea about the efficiency of managing the resources and capabilities that are available with the manager. For the efficient companies, the score is one or more whereas, for the others, it is less than one. Thus, the performance of Canfin Homes, GIC Housing Finance, HDFC, HUDCO and LIC Housing Finance is at a commendable level. The other players are found to be relatively inefficient in the group. For example, in the case of Gruh Finance, in 2019, the efficiency is 85.6% which implies that there is a scope of improvement to the extent of 16.82%. One interesting aspect in the result is that the poor performance of Dewan Housing is clearly reflected in the efficiency results which points to poor managerial skills and this has also been rightly proved when the company defaulted in timely repayment of its dues which resulted in its share price nose-diving in the stock exchanges.

Table 6
Managerial Efficiency Score of Housing Finance Companies

HFC	2016	2017	2018	2019
Canfin Home	0.857	0.844	0.936	1.081
DewanHousing	0.558	0.520	0.796	0.660
GIC HF	1.000	1.000	1.000	1.000
GRUH	0.866	0.857	0.927	0.856
HDFC	4.009	4.135	5.369	12.635
HUDCO	0.837	0.837	0.851	1.230
Indiabulls HF	9.601	14.384	16.053	0.640
LIC HF	1.409	0.933	2.064	1.891
REPCO Housing	1.000	1.000	1.000	1.000
No. of efficient players	4	4	5	6
% of efficient players	44%	44%	55%	66%

Source: Computed by the researcher

Scale efficiency

The scale efficiency score is a measure of the performance with regard to the scale size of firms. A score of one point to an optimal scale size is also known as the most productive scale size (MPSS). In this aspect, it is evident from the calculations that none of the housing firms are operating at a desirable scale. In other words, either they are suffering due to over-utilization or under-utilization of resources. The improper scale represents that there is improper management of the resources and the expenses that are being incurred on various heads.

Table 7
Scale Efficiency Score of Housing Finance Companies

HFC	2016	2017	2018	2019
Canfin Home	0.693	0.687	0.963	0.883
Dewan Housing	0.974	0.973	0.998	0.994
GIC HF	0.622	0.614	0.945	0.848
GRUH	0.741	0.715	0.966	0.903
HDFC	0.413	0.416	0.329	0.142
HUDCO	0.917	0.889	0.989	0.937
Indiabulls HF	0.384	0.323	0.474	0.994
LIC HF	0.960	0.974	0.780	0.805
REPCO Housing	0.656	0.611	0.773	0.620
No. of efficient players	NIL	NIL	NIL	NIL

Source: Computed by the researcher

Returns to scale

This aspect of the result points to the returns to scale for the different housing companies. An increasing return to scale shows that the change in output is more than the change in input. On the contrary, decreasing returns implies that the change in output is less than the change in input. This is an important result for managers because they can understand their real position and get an idea about whether to go for a forward movement or a backward movement on the 'production' curve. The efficiency results show that most of the HFCs exhibit increasing returns to scale. However, leading players like HDFC and LIC Housing Finance are seen to operate at decreasing returns. Thus, it is necessary for the companies to reposition their production levels so that they can operate at the most productive scale size that will automatically result in an improved efficiency level.

Table 8
Returns to scale of Housing Finance Companies

RTS	2016	2017	2018	2019
Canfin Home	Increasing	Increasing	Increasing	Increasing
Dewan Housing	Increasing	Increasing	Increasing	Increasing
GIC HF	Increasing	Increasing	Increasing	Increasing
GRUH	Increasing	Increasing	Increasing	Increasing
HDFC	Decreasing	Decreasing	Decreasing	Decreasing
HUDCO	Increasing	Increasing	Increasing	Increasing
Indiabulls HF	Decreasing	Decreasing	Decreasing	Increasing
LIC HF	Increasing	Increasing	Decreasing	Decreasing
REPCO Housing	Increasing	Increasing	Increasing	Increasing
% of players operating at MPSS	Nil	Nil	Nil	Nil

Source: Computed by the researcher

CONCLUSION

The housing sector in the country has been gaining importance with time due to the emphasis of the government to provide 'Housing for all'. The Indian housing market shows a wide gap between the demand and supply for housing facilities. The role of financers in such a market is a vital one as it creates products that are offered to customers so that they come forward to take housing loans and are able to make the purchases. In this background, where the demand for housing loans is on the rise due to vital reasons, the present research looks at the performance level of selected housing finance companies in India from the perspective of efficiency by considering data for the period 2016 to 2019. The efficiencies that are considered are technical, managerial (or pure technical) and scale efficiency. The application of DEA shows that though there is an overall moderately good position of the industry players, there are few companies for which the efficiency level is comparatively quite low. Moreover, in all the cases, it is observed that the companies are suffering from scale inefficiency problems that need to be controlled for better efficiency results. Thus, the corporate heads should take appropriate strategies in order to ensure that the efficiency levels can be improved. The findings of the research are very relevant in today's scenario as the pandemic has caused serious damage to the entire globe and all industries. Since banking and other financial intermediaries play a very important role in ensuring the stability of the financial system, it is very important to know their efficiency levels so that necessary measures can be taken in order to ensure their survival and business prosperity in the post-COVID situation.

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