WORKING CAPITAL MANAGEMENT A PROXY TO EXAMINE FIRM PROFITABILITY: EVIDENCE FROM INDIAN HOUSING FINANCE COMPANIES

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ABSTRACT

An ultimate goal of this investigation was to exactly discover the association between Working Capital Management (WCM) and its profitability of Indian Housing Finance Companies (HFCs). WCM is foreseen to upgrade the estimation of the business and its Profitability enrichment. In this investigation Return on Assets (ROA) used as dependent variable and few independent variables are utilized to measure the profit of organizations. The financial information was collected from annual reports of HFCs for a period of ten years from 2011 – 2020 is considered for investigation as a secondary source. The regression analysis technique utilizes to analyse the whole financial information of selected Housing Finance Companies. The end results are shown that there is no correlation between profitability and WCM of the HFCs.

Keywords: Working Capital, Housing Finance Companies, Return on Assets, Current Assets, Current Liability, Total Asset

I. INTRODUCTION

The primary goal of this investigation is to concentrate on exploring the various components of working capital management of the organizations and discovering their association on the profitability of organization among Indian Housing Financing Companies (HFCs) during the study period from 2011 to 2020. The working capital management (WCM) of the firms covers not only the current assets administration, in tune with the administration's attitude towards risk and presenting itself at an acceptable level of current assets that balances liquidity and profitability standards, and also the management to investment the selected level of current assets, once again taking into consideration the elevation of management towards risk. Deloof Marc has used an empirical test for sample companies. It was seen that the vast majority of organizations have been investing a huge amount of money on its management of working capital (Deloof, 2003). The working capital management decision is absolutely implies the decision on a firm’s profitability (Adekola et al., 2017; Mannori and Mohammad, 2012; Deloof, 2003).

Previous studies, discoveries, affirmed that exchange off between amount of working capital and its profit, Besides, there is an unfavorable relationship between the return on assets and components of working capital, while the return on assets is insistently related to the stock period of change and development of sales (Evci and Sak, 2018).

Proficiently, the management of working capital acknowledges a remarkable activity in the overall business technique to produce an incentive for the financial expert. Working capital is taken into consideration because the final results of the deferral among the value for the acquiring of raw materials and the collection for the ability of the finished goods. Research investigates extent to develop effectiveness and cost effectiveness of 145 organizations by improving exam boundaries of examination. The exam tests the association between the liquidity score and the profitability estimated based on the compensation for liquid assets and the income from the average of total assets (Harsh and Sukhdev, 2013).
On the off chance that you are thinking about a review of the organization's financial strategies, the organization can utilize short term or long term debt to fund on business activities. By utilizing long term debt to help with its business activities, the organization has follows moderate financing strategies, whereas the organization utilizes progressively current liabilities to fund its tasks. Around then, the organization follows a fantastic finance strategy and also the related relationship is employed as a substitute for estimating the finance strategy. Financing strategy measures through Total Current Liabilities with respect to Total Assets, the most noteworthy extent suggests that it reasonably uncovers the aggressive policy to point out the impact of working capital management approaches on the organization profit is used to investigation of return on asset (Soukhakian and Khodakarami, 2019). It will likewise be seen that the manufacturing firms have a significant connection between various components of working capital and profitability. Working capital has greater effects on its profitability documentation of the substantial business (Anandasayan et al., 2014).

II. OBJECTIVES OF THE STUDY

- To check the association between firm management of working capital and on its Profitability
- To assess the impact on the ratio of CATA and on its profitability
- To evaluate the impact on the ratio of CLTA on its profitability
- To determine the impact on the ratio of debt-to-equity on its profitability
- To analyze the company's size in any way with its profitability

III. THEORETICAL FRAMEWORK

3.1 Return on Asset (ROA)

Return on Assets could be a profit index that assesses the entire total income made by all total assets for an amount of contrastive your net revenue with average total assets. ROA estimates how well an organization will handle with its advantages for generating profit over some stretch of time. This indicator will permit both management and investors to perceive how well an organization is transforming its investment into profits. The return on assets quantifies the firm’s most recent profitability, a measure of what the assets are satisfied with being profitable, if this rate is higher than the performance is good (Gitman, 2004; Edmond et al., 2012). The higher ROA is better for investors as it indicates that the organization can earn more net income, if it properly managing its assets. Generally, a positive value of return on assets also indicates an upward trend in earnings. It was discovered that there was a positive influence of working capital on its Return on Assets of the organization. If you have to invest a sufficient amount of working capital have enough profit for assets which influences the increase in profitability of organizations (Kumar, 2017).

3.2 Ratio of Current Assets to Total Assets (CATA)

The higher magnitude relation of current assets to total assets will be indicates to reduce the profits quickly, because as a result of the profit of current assets is lower than that of fixed assets. In addition to that a few current assets (like an account receivable) may cause bad debts, which will eventually be discounted causes to reduce profits. The hostile investment policy variable estimated from the TCA/TA proportion, validating that the association between traditionalist investment strategies and the profitability of the company shows the negative relation. Therefore, the decision to adopt traditional investment strategies will negatively affect the company’s profitability (Vahid et al., 2012).

3.3 Ratio of Current Liabilities to Total Assets (CLTA)

The quantitative relation of current liabilities to total assets displays the extent to that an organization has used its short term financial obligations to finance its total assets. Indicates what is the sum financed by creditors on the total assets of the organization's enterprise. This indicator is used by investors to assess whether or not the organization has enough money to meet its entire short term financial obligation, and also to assess whether the organization can pay a reasonable return on its investment. When talking about a company's financial strategies, a company can use to fund the both short-term and long-term commitment to its activities. When using a long-term commitment to fund its activities, the company follows the traditional financing strategy however the company gradually uses its current obligations to finance its activities. At this point, the company follows a strong financing strategy and the related index proxy is used to quantify the financing strategy. The financing strategy is evaluated by the ratio of current liabilities to total assets (CLTA).
3.4 Ratio of Debt-Equity (DE)

Debt typically has a lower cost of capital contrasted with equity, fundamentally due to its rank on account of liquidation. Along these lines, numerous organizations may want to utilize debt over equity for capital financing. Sometimes, the debt-to-equity estimation might be constrained to incorporate only short-term and long-term debt. Frequently, it only incorporates some type of extra fixed payments. Together, the complete debt and total equity of an organization combine to equal its total capital, which is additionally represented as all total assets. As with any ratio, the debt-to-equity ratio has additional meaning and understanding compared to similar calculations for different historical financial periods. This expanding impact increases additional risk to the organization and increases costs due to higher interest and debt costs. The debt-to-equity ratio can be confusing unless it is used along with industry averages and financial information to decide how an organization uses debt and equity compared to its industry. Organizations that take capital seriously may have a higher debt-to-equity ratio, while service firms will have lower ratios. A progressive sign indicates that if a DE ratio is established, it will be expanding the ratio of CATA. Since both are liquidity ratios, the consequences indicate that companies will be prepared to use their own assets to satisfy their current assets (Zafar et al., 2016). There is a negative relationship between the borrowed capital and profitability (Shin and Soenen, 1998) and it was also found, there is a negative correlation exit between ROA and DR (Akinlo, 2012).

3.5 Size of Firm (Ln)

The size of firm affects the profitability on its investment of working capital management. Small firms endure the effects of high debt interest rates; they may exhibit a more delicate positive and spreading a negative trend in the U-shaped relationship. In addition, these organizations’ break-even points may emerge in good time and must be less than the initial investment goal of the full sample. Either way, big organizations acknowledge less rate of interest and put invest in cutting edge ventures. Thus, their working capital management and U-shaped relationship can trigger a positive trend and decrease negative trend (Mahmood et al., 2019). Firm Size means how much an organization holds of assets. The firm’s volume, degree to their capacities in creating and developing countries that is enormous to the organizations working in developing markets. In developing markets, the organizations are regularly low size with poor contact to longer period capital markets. Those organizations are probably going to rely upon extra genuine owner financing, trade on debt and short time debt subsidizing to their attractive savings cash, receivables and inventories.

3.6 Net Operating Profit Margin Ratio (NOPMR)

Net operating income is an appropriate measure of organizational profit, when the profit is high, it implies that the performance is acceptable, and therefore, the profits will increase in the organization. In any case, if the profit is less, it implies that the indirect expenses of the organization will increase. Numerous methods can be utilized to determine the profit of an organization, such as net operating margin, net income and return on assets. The overall revenue indicates to the distinctive financial plans adopted by organizations not to an issue in the operating procedures. In this way, if the overall revenue in an organization is low, this may prompt a high pace of profit for the investments of owners on account of the financial influence. Then again, if the pace of return is high, this demonstrates a decent presentation of the organization, high overall gains and a remarkable development. It is inferred that the financial performance of the chose organizations evaluated through Return on Assets ratio is halfway acceptable. If there should be an occurrence of between the organizations and it is not adequate to get huge profit for their assets in the event of between the years during the investigated time period. Yet it is not significant according to the net profit ratio and return on assets, The chose organizations are neglecting to get their estimated net profit during the study period and the associations moreover neglect to get an a decent return on their assets.

IV. METHODOLOGY, SAMPLE DESIGN AND EMPIRICAL MODEL

4.1 Methodology

This paper study adapts the various components of working capital Management (WCM) and attempts to set up relationships between these components and profitability of Indian Housing Finance Companies (HFCs). The study period has been considered for a 10 years that is from 2011 to 2020. The whole information considered in this examination of secondary sources, mainly from annual reports of selected HFCs, which are published in respective organization websites.

4.2 Sample Design
In this study, five Indian HFCs were selected, namely Life Insurance Company Housing Finance Co., Ltd. (LICHFL), Dewan Housing Finance Co., Ltd. (DHFL), Housing Development Finance Co., Ltd. (HDFCL), Can Fin Homes Limited (CFHL) and GIC Housing Finance Co., Ltd. (GICHFL). These five HFCs are playing vital role in the housing business in India and occupied various positions in the top ten HFCs in doing housing finance business in India. In this investigation descriptive and correlation analysis has been used to find out an empirical model and test the relationship between the WCM and its profitability of HFCs.

4.3 Empirical Model

By using SPSS version 25.0 for multiple regression analysis, in this connection developed one empirical model equation to contemplate the effect of WCM on the HFC profitability. The practice of working capital management from the perspective of Sri Lanka they utilized multiple regression analysis technique to accurately determine the limits of industry best practices and measure the company's degree of separation from that limit. The target of the investigation was to seek after extra exploration instead of to uncover all the components related to WCM in the Sri Lanka perspective. The authors accept that the asset requirement might be a significant hindrance to use of working capital by firms (Bei and Wijewardana, 2012). The regression coefficient among the self-employed group shows that the adjustments in the measure of housing finance are affected by the thought about independent variables. The fitted regression model is only critical at the five percent level. On account of consolidated information, there are no significant factors that impact the measure of home finance. It shows that an expansion in one unit in the above factor won't increment the measure of housing finance. The change in housing finance is improved by the considered independent variables. The regression model is not fitted at 5% level of (Srinivasakumar, 2020).

4.4 Hypothesis

H1: Changes in CATA positively influence on ROA
H2: Changes in CLTA positively influence on ROA
H3: Changes in DE positively influence on ROA
H4: Changes in Ln positively influence on ROA
H5: Changes in NOPMR positively influence on ROA

4.5 Model Equation

\[
ROA_{it} = \beta_0 + \beta_1 \text{CATA}_{it} + \beta_2 \text{CLTA}_{it} + \beta_3 \text{DE}_{it} + \beta_4 \text{Ln}_{it} + \beta_5 \text{NOPMR}_{it} + \epsilon_{it}
\]

Here \( \beta_0 \) is intercept, \( \beta_1, \beta_2, \beta_3, \beta_4, \) and \( \beta_5 \) are the coefficients of variables

\( \epsilon_{it} \) = Random error term for the \( i \)th firm at \( t \) time

\( ROA_{it} \) = Return on Asset for the \( i \)th firm at \( t \) time

\( \text{CATA}_{it} \) = Current Assets to Total Assets Ratio for the \( i \)th firm at \( t \) time

\( \text{CLTA}_{it} \) = Current Liabilities to Total Assets Ratio for the \( i \)th firm at \( t \) time

\( \text{DE}_{it} \) = Debt to Equity Ratio for the \( i \)th firm at \( t \) time

\( \text{Ln}_{it} \) = Firm Size for the \( i \)th firm at \( t \) time

\( \text{NOPMR}_{it} \) = Net Operating Profit Margin Ratio for the \( i \)th firm at \( t \) time

V. RESULTS AND DISCUSSION

Table 1 shows the average mean of the ROA is 0.015 of total assets only and SD is 0.0056 it is demonstrated that there is exceptionally less deviation of ROA among all factors. The ordinary assessing of the investment strategy estimated through ratio of current assets to total assets (CATA) with a mean of 0.35, recommending that the HFCs crush preservationist investment strategy, as they were investing more sum on current assets. The normal value of the financing strategy derived from the average estimate the ratio of current liabilities to total assets (CLTA) is 0.21, indicating that HFCs have a sensible financing strategy by using the ratio of CLTA. The SD of the ratio of CLTA is 0.14, which also shows a small deviation. The normal mean of debt equity ratio is 7.08, it estimates HFCs are contributing more amount of outsiders funds than the own funds on its assets, it discovers that HFCs need less working capital for their operations. The mean value of firm size 10.4, it implies the size of firm shows impact on its working capital to measure the profitability. The normal mean of Net Operating Profit Margin Ratio (NOPMR) is 15.15 percent, it demonstrates that return on total sales is 15.15 percent and SD is showing 5.61, it shows that there is immense variation in profits in all HFCs during the examination time period.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>DESCRIPTIVE STATISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>ROA</td>
<td>0.0157</td>
</tr>
<tr>
<td>CATA</td>
<td>0.3522</td>
</tr>
<tr>
<td>CLTA</td>
<td>0.2123</td>
</tr>
<tr>
<td>DE</td>
<td>7.075</td>
</tr>
<tr>
<td>Ln</td>
<td>10.467</td>
</tr>
<tr>
<td>NOPMR</td>
<td>15.1539</td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>Table 2</th>
<th>CORRELATION MATRIX OF BETWEEN THE VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROA</td>
</tr>
<tr>
<td>ROA</td>
<td>1</td>
</tr>
<tr>
<td>CATA</td>
<td>-0.180</td>
</tr>
<tr>
<td>CLTA</td>
<td>0.332*</td>
</tr>
<tr>
<td>DE</td>
<td>-0.525**</td>
</tr>
<tr>
<td>Ln</td>
<td>-0.082</td>
</tr>
<tr>
<td>NOPMR</td>
<td>0.908***</td>
</tr>
</tbody>
</table>

*Significant at the 0.05 level (2-tailed).
**Significant at the 0.01 level (2-tailed) and N = 50
Before to evaluating the empirical model, the model data were tested the multicollinearity shown in the table 2. In such manner, it is imperative to check the level of relationship among the variables which are utilized in this investigation. The independent variables should be correlated, low correlated or uncorrelated between each variable to check for increased multicollinearity. In this examination ROA and CATA, DE, Ln is negatively related. In any case, ROA is positively correlated with CLTA and NOPMR, with correlation coefficients 0.332 and 0.908 respectively. A multicollinearity issue happens if the correlation between two variables surpasses more than 0.90 (Hair et al., 2006). The ROA and NOPMR are powerfully correlated with a correlation coefficient of 0.908, which will cause positive multicollinearity issue if both are remembered for a similar regression model. Lastly, while in perception CLTA positively correlated with all variables except CATA, in light of the fact that CLTA negatively correlated with CATA.

### TABLE 3
**REGRESSION MODEL SUMMARY**

<table>
<thead>
<tr>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>SE</th>
<th>Change in R²</th>
<th>Change in F</th>
<th>df1</th>
<th>df2</th>
<th>Change in Sig. F</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.971</td>
<td>0.944</td>
<td>0.937</td>
<td>0.0014</td>
<td>0.944</td>
<td>146.97</td>
<td>5</td>
<td>44</td>
<td>0</td>
<td>1.526</td>
</tr>
</tbody>
</table>

*Predictors: (Constant), CATA, CLTA, DE, Ln, NOPMR
Dependent Variable: ROA

The variation rate of the dependent variable (ROA) measured by R², this variation be predicted from the independent variables like CATA, CLTA, DE, Ln and NOPMR are shown in the table 3. It is indicated that the determined coefficient value of R² is 0.944. It is revealed that all independent variables, variation caused by changes in profitability by 0.944, the change in R² statistic exactly same with predicted model R² value. The Durbin Watson statistics value is 1.526, which is less than 2 that indicates positive autocorrelation between the variable.

### TABLE 4
**RESULTS OF REGRESSION COEFFICIENTS FOR STUDY MODEL**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.006</td>
<td>0.002</td>
<td>2.989</td>
<td>0.05</td>
<td>Tolerance</td>
</tr>
<tr>
<td>CATA</td>
<td>-0.002</td>
<td>-0.116</td>
<td>-3.057</td>
<td>0.004</td>
<td>0.896</td>
</tr>
<tr>
<td>CLTA</td>
<td>-0.005</td>
<td>-0.119</td>
<td>-2.045</td>
<td>0.047</td>
<td>0.376</td>
</tr>
<tr>
<td>DE</td>
<td>-0.001</td>
<td>-0.38</td>
<td>-6.561</td>
<td>0</td>
<td>0.384</td>
</tr>
<tr>
<td>Ln</td>
<td>0</td>
<td>0.102</td>
<td>2.628</td>
<td>0.012</td>
<td>0.854</td>
</tr>
<tr>
<td>NOPMR</td>
<td>0.001</td>
<td>0.849</td>
<td>21.896</td>
<td>0</td>
<td>0.853</td>
</tr>
</tbody>
</table>

Dependent Variable: ROA

The hypotheses of the study have been tested and analyzed through t value. The significance level in this study is considered 0.05 (2-tailed test). Thus, the table value (critical value) of t is ±1.96. To test the hypothesis accepts or reject decision rule by comparing the calculated t value and critical value of t, if the calculated t value is more than or less than the table value is presented in the table 4. The above table reveals the relationship between the dependent variable and the independent variable. These estimations are indicating that the measure of increments in ROA score that would be predicated by a one unit increment in the dependent variables (CATA, CLTA, DE, Ln and NOPMR).

H1 is there is the positive influence of changes in CATA on its profitability of HFCs (measured by ROA) is rejected, on the grounds that the absolute determined value of t for CATA is 3.057 (since two tailed) and critical value of t in this investigation is 1.96, thus the determined value shows more than the critical value, so H1 is rejected. Hence, there was no significant impact of changes in CATA on HFCs profitability (estimated by ROA).
In another manner, additionally closed with a level of significance (P-value) considered in this examination is 0.05 by a determined level of significance is 0.004 (P-value), thus the determined value less than the considered P-value, so H1 rejected with this technique also. The regression coefficient of CATA is -0.002 statistically not significant and it indicates that a negative relationship with the determined probability (P-value) during this examination.

H2 is there is the positive influence of changes in CLTA on its profitability of HFCs (Assessed through ROA) is rejected. Absolute determined value of \( t \) for CLTA is 2.405 (since two tailed) and critical value of \( t \) in this assessment is 1.96. So determined value greater than the critical value, hereafter, this hypothesis is rejected. It was concluded that any changes in CLTA ratio there is no significant influence on profitability of HFCs. According to other manner the P-value is considered in this investigation is 0.05 and determined the value of P-value for CLTA is 0.047, accordingly, determined P-value is less than considered P-value of 0.05, so H2 also rejected in this situation too. The regression coefficient value of CLTA is -0.005 statistically not significant, in this manner it was reasoned that there is a negative correlation with the determined P-value.

H3 is there is the positive influence of change in DE on its profitability of HFCs (Assessed through ROA) likewise rejected shown in the table-4. It is clear from the above outcomes the absolute determined estimation of \( t \) for DE ratio is 6.561 and critical value is 1.96, so determined estimation of \( t \) more prominent than the critical value, subsequently H3 also is rejected. It reveals that any changes in DE ratio there is no significant effect on profitability of HFCs. Similarly it is tried in another procedure additionally for better conclusion with P-value. The determined P-value is 0.00 and the considered P-value is 0.05, so determined P-value is less than the considered P-value, henceforth H3 is rejected in this case also. The result of regression coefficient of DE is 0.001 statistically not significant and it shows a negative correlation with the probability of the sampled HFCs for the investigation. It concludes that there is no significant influence of changes in DE on the profitability of HFCs.

H4 is there is the positive influence of change in Ln (Size of Company) on the profitability of HFCs (Measured through ROA) also rejected shown in the table-4. It is evident from the above results the determined \( t \) value of Ln (Size) is 2.628 and critical value of \( t \) is 1.96, so determined value of \( t \) greater than the critical value, hence, H4 is rejected. It shows that any change in Ln will not have a significant influence on the profitability of HFCs. Similarly, the calculated P value of Ln is 0.012, and the considered P-value is 0.05, so the calculated P-value is less than the considered P-value of this study, so H4 is also rejected in this technique. The result of regression coefficient shows that Ln has an insignificant with a probability value of 0.012 in this study. It concludes that there is no significant influence of changes in Ln on the HFCs profitability.

H5 is there is the positive influence of changes in NOPMR on its profitability of HFCs (Assessed through ROA) is rejected. The calculated value of \( t \) for NOPMR is 21.90 and critical value of \( t \) in this examination is 1.96, so determined value greater than the critical value hence, H5 hypothesis is also rejected. It shows that any changes in NOPMR will not have a significant influence on HFC's profitability. In another way this hypothesis tested with P-value, the predetermined in P-value is considered in this examination is 0.05 and calculated P-value for NOPMR is 0.00. Hence, the calculated P-value is less than the predetermined P-value therefore, this hypothesis is rejected. The regression coefficient of NOPMR is 0.001 statistically not significant even though there positive relationship with the calculated P-value.

In a regression analysis VIF means variance inflation factor quantifies how much the variance of the estimated coefficients is inflated. A value of VIF greater than 5 may indicate that a particular variable has multicollinearity (Studenmund and Cassidy, 1992; Nastiti et al., 2019), but VIF value shows less than 5 then it is satisfactory value, it indicates that there is some multicollinearity in our data, in this examination all independent variables VIF value is less than 3 only. Therefore, all independent variables have strong multicollinearity.

VI. LIMITATIONS

This paper is pondering the some components of working capital to explore the company’s profitability. It is not possible to consider all components of working capital in this study, hence, the results estimated based on the said variables only used to analyze working capital management and on the profitability of HFCs should have some extent of correlation between them. The present examination utilized on published secondary information and subsequently the confinement of the published annual reports of respective companies may have suitable in this investigation. This study concentrated on a few HFCs only, the commercial banks are also playing a vital role in Indian housing finance business, but commercial banks are not taking into consideration for this study. Because
of huge data taking into consideration to analyze the regression results might have increased the variability of end results.

VII. CONCLUSION

This article examines how HFCs managing it’s working capital to generate the profitability. The result of this inspection is helpful for the short-term investment of HFCs and their money arrangements. As the results of this survey show, all the independent variables considered in this survey and the changes in their profitability have no significant impact. The predetermined hypotheses were rejected in this survey. No relationship between working capital and its profitability of HFC’s, so profitability is estimated based on total revenue. HFCs can significantly expand their profits by adequately managing their organization’s working capital. At long last, it is prescribed that HFC attempt to keep up a decent balance between assets and liabilities, which is essential for HFC to force executives of any organization to make money.

REFERENCES