



---

## Working Capital Management And Its Impact On Profitability Of Indian Banking Sector

**Dr. Onkarnath** MBA, PhD, Mewar Institute of management.

[onkarnathsingh1978@gmail.com](mailto:onkarnathsingh1978@gmail.com)

**Ritesh Trivedi** Intergrated academy of management and technology, Ghaziabad.

[cmaritesh6@gmail.com](mailto:cmaritesh6@gmail.com)

**Sakshi Ruhela** Intergrated academy of management and technology, Ghaziabad.

[Sakshi0002019@gmail.com](mailto:Sakshi0002019@gmail.com)

**Onima Ranjan** United Institute of Management, Greater Noida.

[Onima.ranjan@gmail.com](mailto:Onima.ranjan@gmail.com)

---

### Abstract

Working Capital management is one of the core areas of managing the business. This paper will make an endeavor to study the impact of changes in working capital on the profitability of Indian Banking Sector. The period of study entails a period of four years from 2016 – 2020. To make this study independent as well as dependent variables have been used. The variables used in the study are Non Performing Asset (NPA) and Return on Assets (ROA). Current Ratio, Profitability Ratios and Debt to Liability Ratio are used as control variables. The analysis is done for two major public sector banks of India i.e. The State Bank of India and Punjab National Bank and two major private sector banks i.e. ICICI Bank and HDFC Bank. The variables are based on data for four years viz. 2016-2020 for these banks. The research method used is correlation analysis and ratio analysis. The result shows that NPA and ROA have a negative relationship. Also Debt ratio has a positive relation with Profitability ratios to an extent. Banking sector is a core sector with direct impact on the economic health of the country. The aim of the study is to give recommendations that will help in managing this key sector in a better way. This research also paves way for similar research which will help the sector go forward.

**Keywords:** Profitability, Working Capital Management, Correlation.

### I. INTRODUCTION

Managing of Working Capital is a key factor in all economic institutions. Working Capital is the difference between Current Assets and Current Liabilities, and an essential for running a business. A well managed working capital ensures sufficiency of funds for operations as well as meeting the cost of short term debt. Working Capital Management majorly involves managing Stock, and debtors and creditors of business along with Cash. While managing these variables balance has to be maintained between liquidity, risk and profitability.

The banking sector in India is one of the fastest growing sector with public sector and private sector giving their own set of advantages. The changing scenario of less governance and the emergence of digital system have completely changed the business scene. With more options the customer base has also seen a paradigm shift, leading to a boom which has contributed positively to the growth of new India.

The banking sector is the backbone of the commerce and trade all over the world and particularly very important for a growing economy like India. It is a sector that is augments for all the other sectors, and provides their service to public (Retail Banking) and Corporate (Corporate Banking). The government has recognized this factor and has opened it up for more for the private sector with control from Reserve Bank of India. This has led to new private sector banks opening up and also the recent consolidation of the public sector banks by clubbing small banks into big banks.

This has been done to consolidate the Non performing Assets.

Working capital management and profit have a working relation and much research has been done on it in different sectors. However, banking sector which comes under services has not been researched enough on this topic. Hence, literature is very scarce taking this sector in consideration. The main purpose of taking up this research topic is finding out "The impact of Working Capital on the Banking Sector". The main aim is to showcase the importance of this key finance element in the sector and find out the impact factor.

The study focuses on analyzing the literature available on the topic in other sectors and also the theory base for the same. All possible variables have been considered, and proper research methods have been employed for envisaging a reasonable sample size and related information.

The last section is concentrated on analyzing the results of available data empirically. Regression analysis has also been used to show the effect of Working Capital Management on the sector as a whole.

## **II. REVIEW OF LITERATURE**

In 2008 a study was done by J P Singh and Shishir Pandey. It studied the impact of Working Capital on Profitability of Hindalco Industries Limited. Secondary data was taken from annual reports of the company from 1990 to 2007 and was used to research the topic. Research method used in the paper was correlation coefficients, regression analysis and ratio analysis. The results from the research highlighted a significant impact of regression

analysis i.e. receivables turnover ratio, liquid ratio, current ratio and working capital to total assets ratio on the profits of Hindalco industries Limited.

In the year 2011 Shishir Pandey and Vikas Kumar Jaiswal researched a topic. The topic was “The effect of working capital management on profitability of manufacturing firms”. The study was done for five years 2005-2010. The method used was correlation and regression. The result showed a negative relation between profitability and debtor’s collection period, inventory turnover and creditors collection period.

In 2012 the effect of working capital management on Indian manufacturing firm’s profitability was researched by Arunkumar O.N. and T.Radharamanan. Data for the period of five years from 2005 to 2010 was used for analyzing through correlation and regression analysis. The results of research shows that in correlation analysis profitability has negative relationship between profitability and debtor day, inventory day and creditor day. And a result of regression analysis shows that there is positive relationship between number days of inventory and number of days of account payables.

Analysis of impact of Working Capital Management on Profitability of ACC Cements was done by Dr. Ashok Kumar Panigrahi in 2012. The data was collected from the website of the company as well as the website moneycontrol.com. The data was collected for the period 2001 to 2010. The methodology used was correlations coefficient, multiple correlation analysis and multiple regression analysis. The research exhibited a moderate relationship between Working Capital Management and Profitability.

In 2015 a study was done by Kruti A. Patel (2015) on the topic “ The relationship between Working Capital and Profitability of Indian Oil Corporation”. The study was done taking secondary data for the years 2010 to 2014. The methodology used was Pearson correlation coefficient and SPSS was used for analysis. The study showed a significant negative relationship between Working Capital and Profitability of Indian Oil Corporation. The analysis also exhibited a negative relation between liquidity and profitability.

### **III. STATEMENT OF PROBLEM:**

A country’s financial system’s efficiency depends on performance and efficiency of the banking system. The different reforms brought about from time to time have the motive to increase the profitability and efficiency of Banks in India. Before the introduction on Private Sector in Banking the profitability was at “Nadir”. The greater autonomy to the banks have resulted in operational efficiency and with competition kicking in, efficiency of operations have also increased. Keeping in view the above this study has been taken up, in order to throw some light on the present scenario of banking in India.

### **IV. OBJECTIVE OF THE STUDY**

- Ø Study the background and attributes typical to the Banking Sector
- Ø Analyzing the data in relation to Working Capital management and Profitability of Banks (Public Sector and Private Sector).

Ø Making inferences based on the statistical analysis of data showing the relation between Profitability and Working Capital Management.

## V. RESEARCH METHODS EMPLOYED

Secondary data has been used for analysis in this research paper. The research entails interpretation of the Working Capital Management Practices in Punjab national Bank, State Bank of India, ICICI Bank and HDFC bank and its effect on the profitability of these organizations. The data period taken for study is of five years from 2016 to 2020. Published Annual Reports of the aforesaid banks have been used as an authentic source of data for analysis and research.

The Balance Sheet and profit and loss Account is the data base from which following ratios are calculated. (1) Return on Assets (2) Average Collection Period (3) Inventory Conversion period (4) Current Ratio (5) Total Liabilities to Total Assets Ratio (6) Cash Conversion cycle and (7) Various Profitability ratios.

**Table 1 : Abbreviations, Variables and Formulae**

<b>Variables (Dependent)</b>	<b>Abbreviation</b>	<b>Formulae</b>
<b>Return on Assets</b>	<b>ROA</b>	<b>Net Income/Total Assets</b>
<b>Variables (Independent)</b>		
<b>Average Collection Period</b>	<b>ACP</b>	<b>(Account Receivable/Net Sales)x365</b>
<b>Inventory Conversion Period</b>	<b>ICP</b>	<b>(Inventory/Cost of Sales)x365</b>
<b>Average Payment Period</b>	<b>APP</b>	<b>(Account Payable/Cost of Sales)x365</b>
<b>Cash Conversion Cycle</b>	<b>CCC</b>	<b>ACP+ICP-APP</b>
<b>Liability to Asset Ratio</b>	<b>LAR</b>	<b>Total Liabilities/Total Assest</b>
<b>Current Ratio</b>	<b>CR</b>	<b>Current Assets/Current Liabilities</b>
<b>Control Variables</b>		
<b>Net Profit</b>	<b>NP</b>	<b>(Net Profit/Sales)x100</b>
<b>Return on Investment</b>	<b>ROI</b>	<b>Net Income/Capital Employed</b>

For framing the conceptual framework of the research and also the Literature used across studies, various standard books of the subject, newspaper, journals and Website

information have been used. For evaluating Working Capital Management and Profitability of four banks various statistical tools are used. The statistical tools that are used are Regression analysis, multiple regression analysis, Correlation analysis, T test, F test and analysis of variance (ANOVA) and Descriptive Analysis.

## VI. SCOPE OF RESEARCH

The research paper focuses on the Banking Industry only. To study it thoroughly the sample is taken from two largest Public Sector Banks and two largest Private Sector Banks. The Annual Report of these organizations for five years from 2016 to 2020 is the database used. To reiterate the study only covers the banking Industry, since it has a distinctive kind of Working Capital Management.

## VII. HYPOTHESIS

Ratios indicate the performance efficiency of the Banking Sector. The following assumptions (Hypotheses) have been made:

- a) Increase in Current Ratio shows the growth of the Bank
- b) Increase in Liquid ratio shows the increasing Liquidity.
- c) Operating Profit Ratio indicates increase/decrease in the profitability.

## VIII. SCOPE OF THE RESEARCH:

Analysis of Financial Statements is done in order to find out the trends and relations between variables like Growth, Profitability, Liquidity and Solvency. Here Ratio Analysis is used to show a few of these variables and its effect on the various organizations. Comparisons and calculations showcase the difference in the strengths and weakness of the various sectors in the same industry.

**Data Source:** Data is taken from published Annual Reports of the Organizations on their respective Websites. All the data is from a secondary source.

**Technique used:** Ratio Analysis is the technique used in analysis of the secondary data.

## IX. ANALYSIS AND INTERPRETATION

### CURRENT RATIO

YEAR	CURRENT ASSET	CURRENT LIABILITY	CURRENT RATIO
2015-2016	325,979.37	155,235.19	2.09990641
2016-2017	418,892.84	167,138.08	2.50626811
2017-2018	488,817.81	145,597.30	3.35732744
2018-2019	540,710.56	163,110.10	3.31500355
2019-2020	694,807.39	181,979.66	3.81804972

**State Bank of India**

YEAR	CURRENT ASSET	CURRENT LIABILITY	CURRENT RATIO
2015-2016	107,838.71	56,779.55	1.899253
2016-2017	125,440.07	82,529.61	1.51994
2017-2018	108347.19	54,132.19	2.00153
2018-2019	111133.48	64,462.11	1.724012
2019-2020	182398.39	63,362.83	2.878634

#### **Punjab National Bank**

YEAR	CURRENT ASSET	CURRENT LIABILITY	CURRENT RATIO
2015-2016	138,247.62	99,951.07	1.383152977
2016-2017	155,896.18	105,158.94	1.48248147
2017-2018	162,148.45	108,368.04	1.496275562
2018-2019	195,133.41	116,504.41	1.674901491
2019-2020	206,539.46	147,509.19	1.400180287

#### **ICICI Bank**

YEAR	CURRENT ASSET	CURRENT LIABILITY	CURRENT RATIO
2015-2016	91,181.92	89,462.35	1.019221158
2016-2017	159,793.78	106,295.00	1.503304765
2017-2018	130,521.59	120,221.32	1.085677565
2018-2019	140,549.81	130,312.21	1.078562093
2019-2020	165,396.29	145,200.11	1.139092043

#### **HDFC Bank**

Inference from the above Analysis:

1. State bank of India is exhibiting a year on year increase in current ratio, suggesting that the largest bank of India is on a growth path.
2. Punjab National Bank has seen a dip in current ratio in 2018-2019, indicating the written off debts of yester year. After that PNB saw an increase indicating good growth in 2019-2020.
3. ICICI has seen a dip in the current ratio in 2019-2020 indicating the lack of growth the Bank has to go through due to bad investments by the bank.
4. HDFC consolidated its position in 2016-2017 and hence shows a spurt in current ratio. Otherwise there has been a steady increase in the bank's current ratio indicating stable growth.

## LIQUID RATIO

YEAR	LIQUID ASSETS	CURRENT LIABILITY	LIQUID RATIO
2015-2016	156,979.37	155,235.19	1.011235726
2016-2017	165,892.84	167,138.08	0.992549633
2017-2018	147,817.81	145,597.30	1.015251038
2018-2019	166,710.56	163,110.10	1.022073802
2019-2020	182,807.39	181,979.66	1.004548475

### State Bank of India

YEAR	LIQUID ASSETS	CURRENT LIABILITY	LIQUID RATIO
2015-2016	57,838.71	56,779.55	1.0186539
2016-2017	82,440.07	82,529.61	0.99891506
2017-2018	58,347.19	54,132.19	1.07786495
2018-2019	71133.48	64,462.11	1.10349289
2019-2020	62398.39	63,362.83	0.98477909

### Punjab National Bank

YEAR	LIQUID ASSETS	CURRENT LIABILITY	LIQUID RATIO
2015-2016	98,247.62	99,951.07	0.98295716
2016-2017	105,896.18	105,158.94	1.00701072
2017-2018	102,148.45	108,368.04	0.94260679
2018-2019	116,133.41	116,504.41	0.99681557
2019-2020	147,539.46	147,509.19	1.00020521

### ICICI Bank

YEAR	LIQUID ASSETS	CURRENT LIABILITY	LIQUID RATIO
2015-2016	91,181.92	89,462.35	1.01922116
2016-2017	109,793.78	106,295.00	1.03291575
2017-2018	120,521.59	120,221.32	1.00249764
2018-2019	130,549.81	130,312.21	1.00182331
2019-2020	145,396.29	145,200.11	1.0013511

### HDFC Bank

Inference from the above Analysis:

1. All the banks have Liquid ratio close to 1:1 which is the perfect ratio.
2. In case of Private Sector Banks (ICICI BANK, HDFC BANK) the gap between current and liquid assets is less as compared to Public Sector Banks (SBI, PNB) where there is a large gap.

## Reference:

1. A Study on Financial Analysis of Punjab National Bank, Divya Sri. G1, Sathya. K2 B.Com Student1, Assistant Professor2 Department of Commerce Sri Krishna Adithya College of Arts and Science, Coimbatore, India. IJESC, 2019 Volume 9 Issue No.3
2. Vyas, R. (1992), "Profitability of Commercial Banks in India: A Comparative Study of Public Sector Banks, Private Sector Banks and Foreign Sector Banks Operating in India", A Ph.D. Thesis submitted to Institute of Management Studies, Devi Ahilya Vishwavidyalaya, University of Indore, M.P.
3. Nayar, N. (1992), "Profitability and Profit Planning in Commercial banks", A Doctoral Thesis submitted to Punjabi University, Patiala.
4. A. M. Adam, "Sample size determination in survey research," *Journal of Scientific Research and Reports*, vol. 26, no. 5, pp. 90–97, 2020.
5. J. Peng and Z. Zhou, "Working capital optimization in a supply chain enterprise," *European Journal of Operational Research*, vol. 277, no. 3, pp. 846–856, 2019.
6. R. P. Boisjoly, T. E. Conine, and M. B. McDonald, "Working capital management: financial and valuation impacts," *Journal of Business Research*, vol. 108, pp. 1–8, 2020.
7. S. Dhole, S. Mishra, and A. M. Pal, "Efficient working capital management, financial constraints and firm value: a tax-based analysis," *Pacific-Basin Finance Journal*, vol. 58, pp. 101–212, 2019.
8. E. Brigham and M. Ehrhardt, *Financial Management: Theory and Practice*, South-Western Cengage Learning, Boston, MA, USA, 13rd edition, 2011.
9. S. G. Mun and S. Jang, "Working capital, cash holding, and profitability of restaurant firms," *International Journal of Hospitality Management*, vol. 48, pp. 1–11, 2015.
10. R. Sheaba and A. A. Haftu, "The impact of working capital management on Firm's performance (A case study on endowment fund for rehabilitation of Tigray (E.F.F.O.R.T) manufacturing companies)," *International Journal of Commerce and Management Research*, vol. 3, no. 9, pp. 29–39, 2017.
11. Ali, A. 1994. The incremental information content of earnings, working capital from operations, and cash flows. *Journal of Accounting Research* (Spring): 61-74.
12. Appuhami, R. 2009. Corporate investments and the dual-role of working capital: Evidence from Thailand. *Journal of Applied Management Accounting Research* (Winter): 53-62.
13. Beyer, R. 1949. Pricing products to yield planned return on plant and working capital investments. *N.A.C.A. Bulletin* (October): 143-152.
14. Doggett, R. E. 1980. Managing working capital. *Management Accounting* (December): 19-20, 22, 24.
15. Hobbs, J. B. 1966. Double-entry and working capital analysis. *The Accounting Review* (October): 763-767.



16. Mann, O. A. 1918. Working capital for rate-making purposes. *Journal of Accountancy* (November): 340-342.
17. Staubus, G. J. 1966. Alternative asset flow concepts. *The Accounting Review* (July): 397-412. (JSTOR link). (The asset flow concepts include: 1. Earnings, 2. the working capital concept of funds flow from operations, 3. the net quick asset version of funds flow from operations, and 4. a literal cash flow from operations).
18. Wolf, R. 2015. Free up cash: These cross-functional best practices can help your company manage working capital effectively to meet the challenges of a global economy. *Strategic Finance* (September): 39-45.
19. Arunkumar, O., Ramanan, T. (2013). Working capital management and profitability: A sensitivity analysis. *International Journal of Research and Development: - A Management Review*, 2(1), 51-58.
20. Baltagi, B. (2005). *Econometric analysis of panel data*. West Sussex: Wiley.
21. Bose, B. (2013). The impact of working capital management practices on firm's profitability. *International Journal of Applied Research and Studies*, 2(6), 1-15.
22. Filbeck, G., Krueger, T. (2005). Industry related differences in working capital management. *Journal of Business*, 20(2), 11-18.
23. Kaur, H., Sing, S. (2013). Managing efficiency and profitability through working capital: An empirical analysis of BSE 200 Companies. *Asian Journal of Business Management*, 5(2), 197-207.
24. Sharma, A., Kumar, S. (2011). Effect of working capital management on firm profitability, empirical evidence from India. *Global Business Review*, 12(1)159-173.
25. Venkatraman, N., Ramanujana, V. (1987). Measurement of business economic performance: An examination of method convergence. *Journal of Management*, 13(1), 109-122.
26. Padachi, K., 2006, "Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms", *International Review of Business Research Papers*, Vo.2 No. 2. October, pp. 45 -58.
27. Myers, S., 1977. Determinants of corporate borrowing. *Journal of Financial Economics*, Vol.5(Iss.2), pp.147-175
28. Taqi, M., 2013. Financial Appraisal and Analysis of Minerals and Metals Trading Corporation (MMTC). *Journal of Management and Social Sciences*, Vol.9(Iss.1), pp.49-66.
29. Windaus, D., Sentence, A., Cooter, N. and Terry, C., 2014. Cash for Growth – PwC's global working capital survey 2014. [online] PwC. Available at: <<http://www.pwc.com/gx/en/working-capital-management-services/publications/>> [Accessed 2 March 2015].
30. Fazzari, S.M. and Petersen, B.C. (1993) Working capital and fixed investment: new evidence on financing constraints. *RAND Journal of Economics* 24(3): 328-342
31. Ganesan, V. (2007) An analysis of working capital management efficiency in telecommunication equipment industry. *Rivier Academic Journal* 3(2): 1-10.