Pacific Business Review International
Volume 7, Issue 3, September 2014

Impact of IFRS Adoption Compared with IGAAP on Activity Based Ratio: An Analysis Based on Selected Indian Companies

Prof. Surajit Das
Asst.Professor
Institute of Management Study
KOLKATA

Abstract

In this study, the main purpose is to examine the impact of International Financial Reporting Standards (IFRS) adoption by Indian firms on Activity Based Ratios. The study employs an innovative design known as "same firm-year" research design (2011-12) to know this impact. Gray Index was used to find the impact of IFRS adoption on Activity Based ratios of six Indian companies while, Paired sample t test were used to test the statistical significance of the differences in mean between ratios under IFRS and Indian Generally Accepted Accounting Principles (IGAAP) respectively. The main finding from the study is that IFRS adoption has caused a negative impact on most of the Activity Based of Indian firms, but the impact was not statistically significant and through t test it was found that there is no difference between IGAAP and IFRS.

Keywords:

IFRS, IGAAP, t test, Same Firm-Year

Introduction

The profitability of a business depends on 2 factors (i) the rate of return on (ii) the turnover of different components. These two things are measured by the ratios of different relevant component, called Activity ratio. Activity ratios sometimes referred to as operating ratios or management ratios which are used to measure a firm's ability and efficiency to convert different figures within its balance sheets into cash or sales. These ratios are relevant to measured whether a company's management is doing a good enough job of generating revenues, cash, etc. from its resources. The activity ratios, along with other accounting ratios, are used to determine the relative strength of a company compared to its competitors. The information used to calculate an activity ratio is found on a company's balance sheet or income statement. In India, balance sheet and income statement prepared as per Indian account standard .The Core Group of Ministry of Corporate Affairs of India (MCA) has recommended convergence to IFRS in a phased manner from April 1, 2012. Till then, an Indian corporate having global aspirations should consider voluntary adoption of IFRS.

IFRS issued by the International Accounting Standards Board (IASB) .Now it is being recognized as the premier global reporting standards of accounting information world over. Today, more than hundred nations permit the use of IFRS in their countries. Many countries have already announced their willingness to adopt IFRS in their countries. This is becoming the most popular and commonly accepted financial reporting model around the world, such as, European Union, Australia, New Zealand and Russia. The importance of IFRS grew as they provide greater comparability of financial information for investors and also encourage them to invest across borders. Studies show that, IFRS adoption help in lowering the cost of capital for the companies and benefits more efficient allocation of capital.

Concept of IFRS

International Financial Reporting Standards (IFRS) are designed as a common global language for business affairs so that company accounts are understandable and comparable across international boundaries.

It consists of

- International Financial Reporting Standards (IFRSs)—developed by the IASB;
- International Accounting Standards (IASs)—adopted by the IASB;
- Interpretations originated from the International Financial Reporting Interpretations Committee (IFRICs); and
- Standing Interpretations Committee (SICs).

Road map for IFRS adaptation in India

In India ICAI proposed the phased approach for implementing IFRS at2011. That time they have proposed the guide line for this event. [Appendix – A]

But due to some legal difficulties and some new changes in International standard that will be coming up very soon, up to 2014 it is not possible to implemented IFRS in India. As per a CA institute official" Since the international accounting standards board is expected to come up with new standards on important areas like leasing, financial instruments, we don't want our corporate to face hardships. So we have suggested that IFRS may be adopted from April 1, 2015," (**The Hindu, Business line, 2013**).

As per Corporate Affairs Ministry, they proposed a new road map for implementing IFRS in India. [Appendix – B].

In this paper I have tried to examine the impact of IFRS on Activity based ratios of Indian Companies those who have already adopted IFRS voluntarily and try to provide a path to the other Indian firms those who will be adopting IFRS in near future.

Review of Literature

Implementation of IFRS in India is still quite a limited area for research. Because still it's not mandatory in India as per ICAI. But the recent activity of ICAI and Ministry of Corporate Affairs suggest that it will be implemented in India very soon **India Briefing, (2014)**. 'The corporate affairs ministry is likely to notify within a month all sections and rules of the new Companies Act and start immediately thereafter the process of converging Indian accounting standards with the International Financial Reporting Standards (IFRS), which have to be implemented from April 2015 for companies with a net worth of more than Rs 1,000 cr. The ministry has said, 'let the Companies Act get notified and then we will take up the convergence of IAS-IFRS'," said K Raghu, president of the Institute of Chartered Accountants of India, the accounting regulator which had written to the corporate affairs ministry and given a revised road map for the implementation of IFRS from next April '**The Economic Times (2014**). But apart from India or better to say Asian countries the other countries of the globe have already adopted IFRS (near about 110 countries, **ASA & ASSOCIATES LLP**).**Ibiamke.et.al (2014)** disclosed how financial ratios have been effect by IFRS adaptation in Nigeria. They found that IFRS adaptation does not differ significantly but through gray Comparability Index they show that IFRS negatively effect on financial ratios. **Irena Jindrichovska & Dana Kubisckova (2014)** found some positive result on financial ratios by adopting IFRS on Czech Republic. **Yhlas Sarbetor (2013)** carried a study to find out how IFRS impact on financial ratio in U.K market. They revealed that IFRS does not make any significant difference on financial ratio of U.K firms. **Balios Dimitrios.et.al (2013)** studies the impact of IFRS on ratio of listed and new listed Companies of Athens Exchange. They found that there is no significant effect from the adaptation and implementation of IFRS in Greace.Other way they found a strong relationship between local GAAP and IFRS. **Ying Wang & Michael Campbell (2012)** revealed that there was no change on financial figure of Chinese Companies through Tobin's Q Test. **Ahmet aca & Rafet Akta (2007)** imparted the impact of IFRS on financial ratio when the Turkish listed firms adopt it first time. They found that IFRS adaptation did not have significant effect on Turkish firm. **Susana Callao (2007)** has done a research on the effect of IFRS adaptation on the comparability and relevancy of financial reporting in Spanish Firm. They stated that most of the ratios significantly differ due to application of IFRS.**Gray, S. (1980).** Proposed a index to quantify the impact of different national accounting practices on profit measurement .He called it conservatism index: 1 - [(RA – RD) / |RA|], Where RA = adjusted profits and RD disclosed profits. Measuring the disclosed profit in French, German and UK against the profits adjusted for international financial analysis, Gray found that French and German companies results were more conservative than the results of the UK companies. In India ICAI proposed the phased approach for implementing IFRS in 2011.But due to some difficulty and legal obligation they postponed the transition date.”The deadline of April 1, 2011 for compliance is highly unworkable and unfair given the present situation of ongoing flux and rethinking in the global arena and lack of harmonization among several agencies in India” – FICCI **India Today(2011**). **B.kapoor & Jyoti Rahul (2013)** demonstrate some issues and challenges faced by India for implementing IFRS.They have also suggested some prospective area if the Indian Company adopt IFRS. **Shobana Swamynathan & Sindhu (2013**) unveil how the harmonization of Indian accounting practices with IFRS impact on cash flow predictability and persistence. They found that harmonization of IFRS with Indian AS increase cash predictability and high cash flow operation persistence.**Dr Anirban Ghatak (2012)** shows how IFRS impact on valuation of Merger and Acquisition on Indian banks. He found that purchase method under IFRS- 3 maintain uniformity and value of goodwill will not show same result under IFRS. **Titas Rudra & Dipnoan Bhattacharjee (2012)** disclosed that how IFRS influence on Earning Management. They stated that high quality accounting standard does not necessarily means high quality financial information reporting and thus lead low earning management.

My review of related literature reveal that adaptation or implementation of IFRS does not affect significantly for some countries and positively effect on some countries. In this paper I have tried to find out how the International accounting standard effect on Activity ratios of Indian firms when they have voluntarily adopt it.

Objectives

My review of literature disclosed that where a country changed her accounting language from local standard to IFRS.The financial figure also changed. So, on the basis of this concept, the objectives of this study are:

1. To find out whether adaptation of IFRS significantly impact on Assets Turnover Ratio or not.
2. To find out whether adaptation of IFRS significantly impact on Fixed Assets Turnover or not.
3. To find out whether adaptation of IFRS significantly impact on Return on Assets or not.
4. To find out whether adaptation of IFRS significantly impact on Net Profit Margin or not.
5. To find out whether adaptation of IFRS significantly impact on Receivable Turnover or not
6. To find out whether adaptation of IFRS significantly impact on return on Equity or not
7. To find out whether IFRS is more conservative compare to IGAAP or not through Gray Comparability Index for all the Activity based ration.

Methodology

In this section, demonstrate the research sample together with the method of data collection, measurement of variable and the method of statistical analysis.

Sources of Data and Sample size: Activity Based ratios are often used in accounting practices, especially for decision making process. Apart from that ratios provide useful information about the financial position and performance of the Company. In this research included six Indian companies who have adopted IFRS voluntarily till 2014. As per the previous discussion we see that ICAI issued notification and prescribe road map for implementing IFRS in India. But still it's not possible to implement IFRS in India compulsorily. Some Companies [see Appendix C] adopt IFRS for their own interest. In this paper ratios have been calculated based on figures obtained from financial statement that are constituted according to the two set of accounting standards, Indian GAAP and IFRS for the same year (2011-12).ICAI and Ministry of Corporate Affairs jointly announced the initial year for adopting IFRS, that is 2011-12.For that reason I have selected this specific financial .

Variable and hypothesis: In this study, the selected variables were collected from the Company's Balance Sheet and Income Statement. The selected variables help to calculate the ratios related to the Company's Activity. Six financial ratios have been considered in this analysis. Descriptive statistics are presented for each ratio to describe the features of the collected data. It includes measurement of central tendency, measurement of variability and measurement of dispersion.

The following hypothesis has been formulated to determine whether there is any difference between IFRS and Indian GAAP for preparing the financial statement.

H_{01}: There is no statistically significant difference of Assets Turnover Ratio calculated on local GAAP based and IFRS based financial statement.

H_{02}: There is no statistically significant difference of Fixed Assets Turnover calculated on local GAAP based and IFRS based financial statement.

H_{03}: There is no statistically significant difference of Return On Assets calculated on local GAAP based and IFRS based financial statement.

H_{04}: There is no statistically significant difference of Net Profit Margin calculated on local GAAP based and IFRS based financial statement.

H_{05}: There is no statistically significant difference of Receivable Turnover calculated on local GAAP based and IFRS based financial statement.

H_{06}: There is no statistically significant difference of Return on Equity calculated on local GAAP based and IFRS based financial statement.

A paired sample t- test was used for testing the hypothesis of this study. The decision rule is to reject the null hypothesis if the calculate value fall outside the critical value of t or if the p – value is less than 0.025.Finally for analyzing whether IFRS is more conservative or not for presenting the Activity based ratios. Or to find out whether IFRS negatively or positively affect the Activity based number, I have considered Gray Comparability Index (conservatism Index) [**S.J Gray-1980**].Here it is:

Index of comparability =1- (Number of IFRS – Number of local GAAP)/ Number of local IFRS.If the median of the Index value below +1.0, mean IFRS is more conservative and it negatively affect financial statement while index value is less than +1.0 depict the opposite.

Results and Findings

H_{01}: There is no statistically significant difference of Assets Turnover Ratio calculated on local GAAP based and IFRS based financial statement.

For Assets Turnover ratio, t test shows the t and p values, these are p value- 0.35558, t value - -1.016. Since the calculated t is less than critical value (2.57) and the p value is more than 0.025, we accept the null hypothesis. This leads to the conclusion that IFRS adaptation does not

COMPANY	RATIO(I GAAP)	RATIO(IFRS)	INDEX
Assets Turnover Ratio			
1	0.748551944	1.172137075	0.638621506
2	2.53914004	2.436108918	1.042293315
3	1.082580177	1.077637975	1.004586143
4	0.159144634	7.495968075	0.021230698
5	0.272563125	0.669602991	0.407051832
6	6.164631236	5.601286081	1.100574251
TOTAL	10.96661116	18.45274112	
Mean	1.827768526	3.075456853	
Median	0.915566061	1.804122997	0.821603825
Standard Deviation	2.290738363	2.818919573	
Skewness	1.793197474	0.983565403	
Kurtosis	3.137500303	-0.870358895	
Maximum	6.164631236	7.495968075	
Minimum	0.159144634	0.669602991	
Paired sample t-test	p value =0.355813,t value= -1.016		

not significantly affect the Assets Turnover ratio.

H_{02}: There is no statistically significant difference of Fixed Assets Turnover calculated on local GAAP based and IFRS based financial statement.

COMPANY	RATIO(I GAAP)	RATIO(IFRS)	INDEX
Fixed Assets Turnover			
1	0.443094241	0.436896962	1.014184759
2	2.087518834	1.968435764	1.060496295
3	0.222168485	0.227623677	0.976034162
4	0.777691476	7.082683442	0.109801812
5	0.372159996	0.277776302	1.339783103
6	5.702863702	5.141306698	1.109224568
TOTAL	9.605496734	15.13472285	
Mean	1.600916122	2.522453808	
Median	0.610392858	1.202666363	1.037340527
Standard Deviation	2.120933433	2.919431128	
Skewness	1.966779812	0.966435057	
Kurtosis	3.82763784	-0.934374316	
Maximum	5.702863702	7.082683442	
Minimum	0.222168485	0.227623677	
Paired sample t-test	p value =0.432497153,t value -0.853		

For Fixed Assets Turnover ratio, t test shows the t and p values, these are p value- 0.43249, t value – 0.853. Since the calculated t is less than critical value (2.57) and the p value is more than 0.025, we accept the null hypothesis. This leads to the conclusion that IFRS adaptation does not significantly affect the Fixed Assets Turnover ratio. Yhlas Sarbetor (2013) disclosed more or less same result for activity base ratios when he carried a study on impact of IFRS ratio in U.K market.

H_{03}: There is no statistically significant difference of Return On Assets calculated on local GAAP based and IFRS based financial statement.

COMPANY	RATIO(I GAAP)	RATIO(IFRS)	INDEX
Return On Assets			
1	0.014222079	0.187781167	0.075737513
2	0.060341005	-0.01261239	-4.784264027
3	0.309814324	0.319755871	0.968908945
4	1.361861653	-0.015459919	-88.08983199
5	3.611157361	0.215732853	16.73902383
6	0.089077152	0.100689421	0.8846724
TOTAL	5.446473573	0.795887003	
Mean	0.907745596	0.132647834	
Median	0.199445738	0.144235294	0.480204957
Standard Deviation	1.418370559	0.133424137	
Skewness	1.867954928	0.119369022	
Kurtosis	3.294801277	-1.368480825	
Maximum	3.611157361	0.319755871	
Minimum	0.014222079	-0.015459919	
Paired sample t-test	p value =0.234247476,t value =1.352		

For Return on Assets, t test shows the t and p values, these are p value- 0.2342, t value 1.352. Since the calculated t is less than critical value (2.57) and the p value is more than 0.025, we accept the null hypothesis. This leads to the conclusion that IFRS adaptation does not significantly affect the Return on Assets.

H_{04}: There is no statistically significant difference of Net Profit Margin calculated on local GAAP based and IFRS based financial statement.

COMPANY	RATIO(I GAAP)	RATIO(IFRS)	INDEX
Net Profit Margin			
1	0.010645965	0.187514618	0.056774051
2	0.153214261	-0.030725156	-4.986606411
3	0.335398845	0.344581069	0.9733525
4	0.216732974	-0.115887058	-1.870208609
5	0.984268334	0.144455363	6.813650324
6	0.549127794	0.563990254	0.973647665
TOTAL	2.249388172	1.093929091	
Mean	0.374898029	0.182321515	
Median	0.276065909	0.165984991	0.515063275
Standard Deviation	0.349310123	0.248103704	
Skewness	1.184785047	0.464115292	
Kurtosis	1.247129007	-0.359753344	
Maximum	0.984268334	0.563990254	
Minimum	0.010645965	-0.115887058	
Paired sample t-test	P value=0.250457935,t value=1.299		

For Return on Assets, t test shows the t and p values, these are p value- 0.2342, t value 1.352. Since the calculated t is less than critical value (2.57) and the p value is more than 0.025, we accept the null hypothesis. This leads to the conclusion that IFRS adaptation does not significantly affect the Return on Assets.

H_{05}: There is no statistically significant difference of Receivable Turnover calculated on local GAAP based and IFRS based financial statement.

COMPANY	RATIO(I GAAP)	RATIO(IFRS)	INDEX
Receivable Turnover			
1	4.626096259	1.41340867	3.27300685
2	3.09615672	3.036080754	1.019787341
3	6.121946706	6.05017301	1.011863082
4	2.976075195	13.44472807	0.221356295
5	11.65386671	28.27123311	0.412216427
6	99.64775825	100.2087875	0.994401397
TOTAL	128.1218998	152.4244111	
Mean	21.35364997	25.40406852	
Median	5.374021483	9.747450541	0.983132239
Standard Deviation	38.48880445	37.94059659	
Skewness	2.412553422	2.1128931	
Kurtosis	5.852860425	4.578650589	
Maximum	99.64775825	100.2087875	
Minimum	2.976075195	1.41340867	
Paired sample t-test	p value =0.255007299,t value= -1.285		

For Receivable Turnover, t test shows the t and p values, these are p value- 0.2550, t value 1.285. Since the calculated t is less than critical value (2.57) and the p value is more than 0.025, we accept the null hypothesis. This leads to the conclusion that IFRS adaptation does not significantly affect the Receivable turnover ratio.

H_{06}: There is no statistically significant difference of Return on Equity calculated on local GAAP based and IFRS based financial statement.

COMPANY	RATIO(I GAAP)	RATIO(IFRS)	INDEX
Return On Equity			
1	0.01760518	0.290176436	0.060671
2	0.141555656	-0.031536047	-4.48869
3	0.372887052	0.366484185	1.017471
4	3.26295075	-0.000719373	-4535.82
5	4.359069479	0.393966953	11.06456
6	0.122590455	0.148021116	0.828196
TOTAL	8.276658572	1.166393269	
Mean	1.379443095	0.194398878	
Median	0.257221354	0.219098776	0.444433
Standard Deviation	1.918623252	0.184327279	
Skewness	1.091985505	-0.246140387	
Kurtosis	-1.047141713	-2.243625817	
Maximum	4.359069479	0.393966953	
Minimum	0.01760518	-0.031536047	
Paired sample t-test	p value=0.187133 ,t value=1.527		

For Return on Equity, t test shows the t and p values, these are p value- 0.1871, t value 1.527. Since the calculated t is less than critical value (2.57) and the p value is more than 0.025, we accept the null hypothesis. This leads to the conclusion that IFRS adaptation does not significantly affect the Return on Equity.

In case of Activity based ratios, above table shows that 90% ratios (Return on Assets, Net profit margin, Return on Equity) have mean value higher mean under IGAAP rather than IFRS and Index median value less than 1+, except Fixed Assets Turnover ratio (1.03).The other ratios having value less than 1.These are Return on Assets (0.8216), Receivable Turnover (0.9831), Net profit margin (0.515), Return on Equity (0.444).This indicates that most of the Activity based ratios are negatively affected by the transition of IFRS. Ibiamke .et. al (2014) disclosed the same result by using Gray Comparability Index in Nigeria, that is IFRS negatively effect on Financial ratios during the end of the recession. But it is not statistically significant.

Conclusions

These findings led the conclusion that IFRS adoption does not have a significant effect on the Activity based ratio of Indian firms. Comparing ratios based on IFRS figures with those based on IGAAP is not fully appropriate so it is the suggestion to the future analyst's for the further research is to adopt a cautious approach when examining Activity based ratio during the transition to IFRS.They can also adopt any non parametrical test to prove the hypothesis.

References

Journal and Research paper

Ahmet Agca, Rafet Akta., 2007. First Time Application of IFRs and Its Impact on Financial Ratios: A Study on Turkish Listed Firms, *Problems and Perspectives in Management / Volume 5, Issue 2.*

B. Kapoor and ,Jyoti Ruhela., *February 2013.* IFRS Implementation “ISSUES AND CHALLENGES FOR INDIA”, *VSRD International Journal of Business and Management Research, e-ISSN : 2231-248X, p-ISSN : 2319-2194, Vol. 3 No. 2 / 103*

Balios Dimitrios, Eriotis Nikolaos, Paraskevopoulos Konstantinos , Vasiliou Dimitrios., May, 2013. The impact of IFRS on ratios of listed and new listed companies of Athens Exchange, *International Journal of Business and Social Research (IJBSR), Volume -3, No.-5*

Dr. Anirban Ghatak., 2012 Impact of IFRS on the Valuation of Mergers and Acquisition of Banks in India. *The international Journal's, Research Journal of Social Science and Management.* ISSN: 2251-1571.

Gray, S. (1980). The impact of international accounting differences from a security-analysis perspective: some European evidence, *Journal of Accounting Research*, 18(1): 64-76.

Ibiamke, Nicholas Adzor, Ateboh-Briggs, Patricial B., *March 2014*. Financial Ratios Effect of International Financial Reporting Standards (IFRS) Adoption in Nigeria**,** *International Journal of Business and Management Invention ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X, PP.50-59.*

Irena Jindřichovská, Dana Kubíčková ., February 2014. Impact of International Financial Reporting Standards (IFRS) Adoption on Key Financial Ratios: The Case of the Czech Republic, *Journal of Modern Accounting and Auditing,* ISSN: 1548-6583, ISSN: 1548-6583, Vol. 10, No. 2, 133-146.

Shobana Swanynathan, Sindhu**.,** May 2013. Harmonization of Indian Accounting Practices with IFRS: Analysis in terms of Cash flow Predictability and Persistence, IJCEM *International Journal of Computational Engineering & Management*, ISSN (Online): 2230-7893, Vol. 16 Issue 3.

Susana Callao, Jos´e I. Jarne, Jos´e A. La´ınez., 2007. Adoption of IFRS in Spain: Effect on the comparability and relevance of financial reporting, *Journal of International Accounting, Auditing and Taxation*, 16 (2007) 148–178

Titas Rudra and Dipanjan Bhattacharjee., 2012**.** Does IFRs Influence Earnings Management? Evidence from India, *Journal of Management Research***,**ISSN 1941-899X, Vol. 4, No. 1: E7

Ying Wang, Michael Campbell., Spring 2012. Effects of IFRS implementation on China publicly listed companies: Evidence using Tobin's Q , *Journal of Business Administration Online.*

Yhlas Sovbetov., September 2013. THE Impacts of IFRS Adoption on Key Financial Ratios in U.K Market-*Over FTSE 100 Firms Through 2003-2007 Years, Unpublished.*

Print Media

Shruti Srivastava Oct 20, 2013. Indian companies likely to shift to IFRS from April 2015, Indian Express.

India Briefing .,April 10, 2014 IFRS Convergence: Audit Season in India.

Anuradha Shukla ., January 12, 2011 . IFRS to miss the April '11 deadline, Mail Today.

Carlos Martin Tornero .,21 March 2014 . India to pass IFRS convergence after election. The Accountant.

Nabeel Ahmed., October 27, 2013. Will India align with IFRS?, The Hindu.

Corporate Media

IFRS news - PwC: *www.pwc.com*

IFRS news-Deloitte:*www.deloitte.com*

Regulatory body

Ind AS (IFRS) Implementation Committee | ICAI - Institute of Chartered Accountants of India

www.icai.org

Implementation of Indian Accounting Standards converged with **IFRS., 4nov2010.**Ministry of Corporate Affairs. www.mca.gov.in

APPENDIX-A: Earlier Road map for IFRS adaptation in India

Phase	Date	Coverage
Phase 1	Opening Balance sheet as of 1 April 2011	Companies that are part of NSE 50 (Nifty 50).
		Companies that are part of BSE Sensex (BSE 50).
		Companies whose shares or other securities are listed on a stock exchange outside India.
		Companies, listed or not, having net worth exceeding INR1,000 crore.
Phase 2	Opening Balance sheet as of 1 April 2013	Companies not listed in phase 1 and having net worth exceeding INR500 crore.
Phase 3	Opening Balance sheet as of 1 April 2013	Listed companies not covered in the earlier phases

Source: PWC, 2010

APPENDIX-B: Proposed new road map for implementing IFRS

Phase	Date	Coverage
Phase 1	Opening Balance sheet as of 1 April 2015	net worth of over Rs 1,000 crore
Phase 2	Opening Balance sheet as of 1 April 2016	net worth of Rs 500-1,000 crore
Phase 3	Opening Balance sheet as of 1 April 2017	all other companies (including listed ones)

Source: The Hindu Business line, 2013

APPENDIX-C: List of Companies, adopt IFRS

1	WIPRO
2	ROLTA INDIA
3	INFOSYS
4	GREAT EASTERN ENERGY CORPORATION
5	DABUR INDIA LTD
6	NOIDA TOLL BRIDGE LTD