FINANCIAL ANALYSIS OF PRE AND POST - MERGER OF HDFC BANK WITH CBOP

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Summary: *In today's competitive world Mergers and Acquisition is one of the important corporate level strategies. There are various reasons like creating synergy, achieve economies of scale, expand operations and cut costs etc. due to which the entities adopt this strategy. The purpose of our research paper is to go behind the scene highlighting those forces which are playing active role in the mergers and acquisition of Centurion Bank of Punjab and Housing Development Finance Corporation Bank in year 2008. This paper discusses two time slots, one pre and second post-merger period. In these time slots five years before and after merger has been studied by doing financial analysis of the two banks on the basis of following Ratios like, debt equity ratio, financial coverage ratio, net profit margin ratio, return on net worth ratio, credit to deposit ratio etc. The data pre and post-merger was collected and its impact on financial position of HDFC Bank was studied by applying Time Dummy model through SPSS software to test the statistical significance which helps to know that Merger had a positive effect on financial health of the Bank. The results found suggest that the bank has gained efficiency and is able to pass benefits to all stakeholders in the society. Thus it can be said that the banks benefitted from this venture.*
Keywords*: Mergers & Acquisition, Banking Industry, Statistical Significance, Time Dummy Model, SPSS.*

ФІНАНСОВИЙ АНАЛІЗ ДО ТА ПІСЛЯ ОПЕРАЦІЇ ПОГЛИНАННЯ БАНКУ «CENTURION BANK OF PUNJAB» БАНКОМ «HOUSING DEVELOPMENT FINANCE CORPORATION»

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Анотація. *У сьогоднішньому конкурентному світі злиття та поглинання є одними з важливих стратегій корпоративного рівня. Існують різні причини, такі як створення синергії, досягнення економії за масштабами, розширення операцій та скорочення витрат тощо, через що суб'єкти господарювання приймають цю стратегію. Мета нашого дослідження полягає в тому, щоб визначити ті сили, які відіграють активну роль у злитті та придбанні Centurion Bank of Punjab та Housing Development Finance Corporation Bank у 2008 році. У цій статті обговорюються два часові інтервали: попередній період і другий період після злиття. У цих часових інтервалах протягом п'яти років до і після злиття було проведено фінансовий аналіз двох банків на основі наступних співвідношень, таких як коефіцієнт фінансової забезпеченості, коефіцієнт фінансового забезпечення, коефіцієнт корисності чистого прибутку, коефіцієнт віддачі від чистої вартості, коефіцієнт кредитування до депозиту тощо. Дані попереднього аналізу і аналізу після злиття було зібрано. Вплив на фінансове становище банку Housing Development Finance Corporation було визначено з використанням часової начальної моделі (Time Dummy Model) за допомогою програмного забезпечення SPSS для перевірки статистичної значимості, яка допомагає зрозуміти, що злиття мали позитивний вплив на фінансове здоров'я банку. Отримані результати свідчать про те, що банк набув чинності та здатний передавати переваги всім зацікавленим сторонам у суспільстві. Таким чином, можна сказати, що банки отримали вигоду від цього підприємства.*
Keywords*: злиття та поглинання, банківський сектор, статистична значимість, Time Dummy Model, SPSS.*

Introduction: Mergers and Acquisitions have gained substantial importance in the present day Corporate World as it is one of the best processes of Capital Restructuring. Restructuring usually means major alterations and modifications in the corporate strategies and beliefs. This strategic alliance is adopted with an aim of getting a competitive edge over competitors, eventually creating a new economic paradigm. The increasing popularity of mergers can be attributed to breaking of trade barriers and high-end competition. This expansion is either done through absorption or consolidation. The present case is also one such example of consolidation. This type of set up was a horizontal merger and was mainly taken up to meet the competition from foreign banks, Policies of Government of India, Inflation, gaining synergy etc.

Need of the study: The Merger between HDFC & CBOP Bank was one of the biggest in Indian Banking Sector. It proved beneficial in taking CBOP out of financial crises and financially strengthened HDFC. Therefore, through our research, we tried to study reasons behind the merger and its effect on financial position of HDFC Bank.

Scope of the Study: This study is restricted to merger between HDFC Bank and Centurion Bank of Punjab. The Pre- Merger and Post-Merger financial ratios have been compared for 5 years before the merger and 5 years after the merger.

Objectives of the Study: 1) To compare Pre-Merger financial Performance of the HDFC Bank and CBOP 2) To analyze Post-Merger Financial Performance of HDFC Bank.

Literature Review.

D. Subrahmanya (2012) analyzed the impact of mergers and acquisition on Indian financial service industry and its technological development. This research was carried out in two phases out of which the first phase dealt with the financial performance after merger and acquisition and second in evaluating the technological development since merger. In order to draw appropriate results he used various parameters like ratio analysis, data envelopment approach and concluded that there was significance difference in majority of business and productivity as well as the operating performance of the banks have also improved in post merger.

Nedunchezhian & Premlatha (2014) examined Analysis of Pre and Post Merger Public Sector Bank Efficiency: A DEA Analysis. The main objective of their research was to study about pre and post merger performances of the banks with its competitor and the effectiveness of the mergers. For the purpose of their study, the researchers used Data envelopment Analysis (DEA), Performance analysis and Profit Efficiency Analysis and sample size of five public sector banks merged during 2002-2007. From the findings the researchers concluded that the post merger efficiency of the banks is more as compared to the pre merger efficiency thus proving merger has a positive impact on the banking industry.

Afza & Yusuf (2014) examined Impact of mergers on efficiency of banks in Pakistan. The main objective of their research was to study the effect of merger on the efficiency of the banks by comparing pre and post merger periods. For the purpose of their study they used stochastic frontier analysis. The study concluded that pre merger cost efficiency was 93.83% as compared to post merger which was 94.15% which concluded that mergers lead to improvement in cost efficiency of the banks concerned.

Shakya (2014) examined mergers and acquisitions in Indian Banking Sector. The main objective of their research was to examine specific regulatory issues associated with mergers and acquisitions in Indian banking sector and policies of RBI related to mergers in banking sector. His research dwells into the core reasons behind RBI, monopolizing the banking merger regulations and the Tabled banking Regulation (Amendment) Bill.

Monika (2014) examined mergers and acquisitions in Indian banking sector-A comparative study on pre-post merger. The main objective of the study was to assess the overall financial performance and value implications of recent mergers and acquisitions in Indian banking system. In order to support the research, the researcher has used ratios such as gross profit margin, net profit margin, operating profit margin and so on. From the findings researcher concluded that mergers prove to have a positive impact on return on equity except net profit ratio and so much so help in innovation and technological improvement.

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Kema (2011) examined Post-Merger Profitability: A Case of Royal Bank of Scotland (RBS). The objective of the study was to analyze whether merger of the banks improves the profitability. The sample of study includes financial reports of Royal Bank of Scotland (RBS) and ABN AMRO Bank. For the purpose of analysis of this study t- test was used. he research concludes that financial performance of RBS in the areas of profitability, liquidity, and cash flows has been quite satisfactory before the merger deal.

Vyas (2010) examined post-merger financial performance analysis ICICI bank and Erstwhile bank of Rajasthan ltd. The objective of the research was to make a comparative analysis of the impact of merger on financial performance of the selected entity of BFSI industry in India. This research was mainly based on secondary data. For the purpose of analysis paired sample t-test was used. The earnings growth after merger was found at a much higher rate in value addition to shareholder.

Sinha & Kaushik (2009) examined post merger and acquisition of selected financial sector organizations in India. The main objective of the research is to study whether the performance of the banks have improved after mergers and acquisition or not. For the purpose the study rank test and ratio analysis has been performed. The sample is of 17 banks that got merged between the years 2000 – 2008. Earnings available to shareholders and debt to equity ratio showed significant change in pre and post merger financial position of the companies. The acquiring firms were able to generate value creation in one or the other form.

Ostland & Lindblad (2008) examined Cross border mergers and acquisitions in the banking sector: A Swedish Perspective. The main objectives of their research were to study the effect of globalization on their clientele and effect of cultural differences on the management as well as on efficiency. For the purpose of their study, they adopted theoretical approach along with research approach which involved thorough practical research and maintaining proper execution and quality at the same time. From the findings the researchers concluded that during their interview with the Swedish banks, interviewee stated that they wanted to reach a larger consumer base which lead to increase their hold and would increase competitiveness in the Swedish market.

David C. Cheng (2006) examined 'Financial determinants of Bank Takeovers' he found that several studies have examined the determinants of bank merger pricing. Those studies focus on the characteristics of the target and downplay the characteristics of acquirer. Their study found that the purchase price is a negative function of the target's capital to asset ratio. The only variable used in their model is the ratio of acquirer to target assets.

Stavros Peristiani (2005) studied whether the merger and acquisition improve the scale efficiency of U.S banks. He examined the pre and post merger performance of acquiring banks and scale efficiency. For this purpose various parameters like T-test, regression analysis were used and it was found out that US banks failed to improve their efficiency in post merger period as no proper evidence was available to support hypothesis of significant improvement in the efficiency.

Sufian & Fazlan (2004) examined the efficiency effects of bank mergers and acquisitions in the developing economy: Evidence from Malaysia. The main objectives of the researchers were to investigate the effects of merger on the efficiency of Malaysian Banks. In order to support their research, they adopted the technique of Data Envelopment Analysis (DEA) and Constant Returns to Scale (CRS). From the findings the researchers conclude that by applying DEA, Malaysian Banks exhibit overall efficiency of 95.9% and minimal waste of 4.1% which further suggests that during the merger year overall efficiency deteriorates significantly but is better than pre-merger year whereas in post merger year overall efficiency increases which is better than pre-merger period.

Nirmala & Aruna (2003) examined Literature Review of mergers and acquisitions. The objective of the study was to improve competitiveness of companies through gaining greater market share, broadening the portfolio to reduce business risk, and capitalizing on economies of scale. This research is based on secondary source of data. For the purpose of analysis of this study paired t-test was used. The research concluded that there is a negative correlation that exists between cost inefficiency index and bank mergers.

Fuentes & Sastre (1998) examined Mergers and Acquisitions in the Spanish banking Industry. The main objective of their research was to study the effect of mergers and acquisitions on profit generating capacity and level of efficiency in comparison with control groups. In order to support their research, researchers adopted various indicators namely Profit generating capacity, Efficiency and productivity, Indicators of market shares and total assets growth, Indicator of business structure and indicators of capital adequacy. From the findings the researchers concluded that though there were certain cost reductions but it didn't reflect immediately in the profit and loss account of the banks but contributed to increase in competitiveness and capital adequacy ratios leading to growth in investment.

Research Methodology:

(Research Design)

Type of Research: The research design used for the study is descriptive research.

Research Tools: Dummy Variable Model using SPSS has been used to analyze data.

Sources of Data: The research has been conducted with the help of secondary data. The secondary data may be defined as the data that has been collected by someone other than the user. Entire research is dependent upon secondary data which has been collected from moneycontrol.com and capitolline.com.

(Sample Data)

Sample Size: The Study is based on the merger of Housing Development Finance Corporation (HDFC) Bank & Centurion Bank of Punjab (CBOP). To study the impact of the merger of HDFC Bank and CBOP sample data has been taken for 10 years. The data has been divided into pre- merger period *(2003 – 2007)* and post- merger period *(2009 – 2013).*

Sampling Technique: Convenient sampling has been used as a sampling technique.

Sampling Unit: Sampling unit for the research is banking sector of India.

Sampling Selection: For the purpose of the research HDFC Bank and CBOP has been selected as their merger was one of the major mergers in Indian banking industry.

Hypothesis: For the purpose depicting the significance of Financial Ratios, Hypothesis has been formulated:

H0 = There is no significant difference between pre and post ratio of acquirer bank.

H1= There is significant difference between pre and post ratio of acquirer bank.

DATA ANALYSIS

1. Debt Equity Ratio

SPSS Output: (The Table No 1 Shows the SPSS Output of Dummy Variable Test on Debt Equity Ratio)

Model	Value	Significance	R Square
Constant	10.092	.000	.448
Time Dummy	-1.658	.034	

Before Merger = 10.092 – 1.658 * 0 = 10.092

After Merger = 10.092 – 1.658 * 1 = 8.434

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average current ratio of banks. H1: There is significant difference between pre average and post average current ratio of banks.	.034	Accept H1

At 5% level of significance, we find both Intercept and Time Dummy to be significant as the value is less than 0.05. Thus the merger of HDFC Bank and CBOP has some **positive** impact on the debt equity ratio of HDFC Bank as it has reduced by 1.658 after the merger.

2. Financial Charge Coverage Ratio

SPSS Output: The Table No 2 Shows the SPSS Output of Dummy Variable Test on Financial Charge Coverage Ratio

Model	Value	Significance	R Square
Constant	1.642	.000	.700
Time Dummy	-1.000	.003	

Before Merger = 1.642 –1.000* 0 = 1.642

After Merger =1.642 –1.000 * 1 = 0.642

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average Current ratio of banks. H1: There is significant difference between pre average and post average Current ratio of banks.	.003	Accept H1

At 5% level of significance, we conclude that both the Intercept and Time Dummy are significant as the value is ***less than 0.05***. The merger of HDFC Bank and CBOP has **negative** impact on financial charge coverage ratio as it has ***reduced by 1.000*** after the merger.

3. Net Profit Margin

SPSS Output: The Table No 3 Shows the SPSS Output of Dummy Variable Test on Net Profit Margin

Model	Value	Significance	R Square
Constant	15.846	.000	.087
Time Dummy	-1.004	.409	

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average current ratio of banks. H1: There is significant difference between pre average and post average current ratio of banks.	.409	Accept Ho

At 5% level of significance, we conclude that both the Intercept and Time Dummy are insignificant as the value is ***more than 0.05.*** The result clearly indicates that the merger of HDFC Bank and CBOP ***does not have any impact*** on the Net Profit Margin of HDFC Bank.

4. Return on Net worth

SPSS Output: The Table No 4 Shows the SPSS Output of Dummy Variable Test on Return on Net Worth

Model	Value	Significance	R Square
Constant	23.038	.000	.849
Time Dummy	-6.974	.000	

Before Merger =23.038 – 6.974* 0 = 23.038

After Merger =23.038 – 6.974* 01= 16.064

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average Current ratio of banks. H1: There is significant difference between pre average and post average Current ratio of banks.	.000	Accept H0

At 5% level of significance, we conclude that both the Intercept and Time Dummy are significant as the value is ***less than 0.05***. The merger of HDFC Bank and CBOP has ***negative*** impact on return on net worth of HDFC Bank as it has ***reduced by 6.974*** after the merger.

5.Credit to Deposit Ratio

SPSS Output: The Table No 5 Shows the SPSS Output of Dummy Variable Test on Credit/Deposit Ratio

Model	Value	Significance	R Square
Constant	60.094	.000	.588
Time Dummy	14.566	.010	

Before Merger = 60.094 + 14.566* 0 = 60.094

After Merger = 60.094 + 14.566* 1 = 74.66

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average Current ratio of banks. H1: There is significant difference between pre average and post average Current ratio of banks.	.010	Accept H1

At 5% level of significance, we conclude that both the Intercept and Time Dummy are significant as the value is ***less than 0.05***. The merger has ***positive impact*** on credit/deposit ratio as it has ***increased by 14.566*** after the merger.

6. Investment to Deposit Ratio

SPSS Output: (The Table No 6 Shows the SPSS Output of Dummy Variable Test on Investment to Deposit Ratio)

Model	Value	Significance	R Square
Constant	55.942	.000	.790
Time Dummy	-17.496	.001	

Before Merger = 55.942 –17.496* 0 = 55.942

After Merger = 60.094 – 14.566* 1 = 45.528

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average Current ratio of banks. H1: There is significant difference between pre average and post average Current ratio of banks.	.001	Accept H0

At 5% level of significance, we conclude that both the Intercept and Time Dummy are significant as the value is ***less than 0.05***. The merger has ***negative impact*** on investment to deposit as it has ***reduced by 17.496*** after the merger.

7. Interest Expended to Interest Earned Ratio

SPSS Output: The Table No 7 Shows the SPSS Output of Dummy Variable Test on Int. Expended to Int. Earned Ratio

Model	Value	Significance	R Square
Constant	45.838	.000	.495
Time Dummy	5.858	.023	

Before Merger = 45.838 + 5.858* 0 = 45.838
After Merger = 45.838 + 5.858* 1 = 51.696

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average Current ratio of banks. H1: There is significant difference between pre average and post average Current ratio of banks.	.023	Accept H1

At 5% level of significance, we conclude that both the Intercept and Time Dummy are significant as the value is ***less than 0.05***. The merger has ***positive impact*** on interest expended to interest earned ratio as it has ***increased by 5.858*** after the merger.

8. Interest Expended to Total Funds

SPSS Output: The Table No 8 Shows the SPSS Output of Dummy Variable Test on Int. Expended to Total Funds

Model	Value	Significance	R Square
Constant	3.264	.000	.522
Time Dummy	1.398	.018	

Before Merger = 3.264 + 1.398 * 0 = 3.264
After Merger = 3.264 + 1.398 * 1 = 4.662

Hypothesis	P Value	Accept / Reject
Ho: There is no significant difference between pre average and post average Current ratio of banks. H1: There is significant difference between pre average and post average Current ratio of banks.	0.18	Accept H1

At 5% level of significance, we conclude that both the Intercept and Time Dummy are significant as the value *is less than 0.05*. The merger has *positive impact* on credit/deposit Ratio as it has *increased by 1.398* after the merger

S.No.	Ratio	SPSS Output		Hypothesis
		Significant	Insignificant	
1.	Debt Equity Ratio			Accept H1
2.	Financial Charge Coverage Ratio			Accept H1
3.	Net Profit Margin			Accept Ho
4.	Return on Net Worth			Accept H1
5.	Credit to Deposit Ratio			Accept H1
6.	Investment to Deposit Ratio			Accept H1
7.	Int. Expended to Int. Earned Ratio			Accept H1
8.	Interest Expended to Total Funds			Accept H1
	Total	7	8	

Conclusion: Thus by applying the dummy model through SPSS, we can say that yes, the merger has proved to be a profitable venture for HDFC Bank financially although for CBOP it was a win - win situation. The statistical analysis done on ratios shows that there is a significant impact of merger on HDFC Bank after 2008

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Стаття надійшла: 24.04.2017 р.
Рецензент: д.е.н., проф. Дмитрієв І.А.
Рецензент: д.е.н., доц. Горовий Д.А.

УДК 658.5
JEL Classification: G 30

БЮДЖЕТУВАННЯ ГРОШОВИХ ПОТОКІВ ЯК МЕТОД ФІНАНСОВОЇ ЛОГІСТИКИ

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Анотація: *Стаття присвячена особливостям застосування одного з сучасних методів фінансової логістики – бюджетуванню. Бюджетування є сучасним видом фінансового планування, починаючи від стратегічного, строком на один фінансовий рік, який враховує альтернативні варіанти управління грошовими потоками, так і поточного з поквартальною, помісячною та однодобовою деталізацією.*

В статті запропоновано методику сполучення стратегічного річного та квартального поточного бюджетів грошових потоків у вигляді подвійного бюджету, який складається з двох частин. Короткостроковий бюджет строком на один квартал містить альтернативні варіанти, взяті зі стратегічного річного бюджету-прогнозу формування і використання грошових потоків, який є орієнтиром для виконання поточного бюджету грошових коштів підприємства. Другою частиною є індикативний стратегічний бюджет строком на один рік, який містить альтернативні варіанти використання грошових потоків.

Фінансова логістика є технологією управління, планування і контролінгу грошових потоків на основі інформації про рух цих потоків. Фінансова логістика в управлінні грошовими потоками забезпечує ефективне регулювання та їхню збалансованість.

Фінансова логістика підприємства, яка за основну мету ставить повне і своєчасне забезпечення його операційної та інвестиційної діяльності фінансовими потоками у визначених обсягах, термінах і джерелах фінансування за мінімальною вартістю ресурсу. Найкращим методом досягнення цієї мети є метод бюджетування.

Ключові слова: *фінансова логістика, бюджетування, грошові потоки, стратегічний бюджет, поточний бюджет, індикативний бюджет.*