COMPARATIVE ANALYSIS OF THE NON PERFORMING ASSETS OF BANKS IN INDIA – STRUCTURAL EQUATION MODEL

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ABSTRACT

Loans granted by banks have to be repaid. The due amount which remains unpaid is overdues. As per guidelines of the Reserve Bank of India (RBI), a period of 30 days is allowed for payment of due amount, thereafter the amount is declared as overdues. The term overdue means the difference between total demand for the period and the collection. In respect of term loans, the banks are required to refund the overdues separately for interest and principal in order to examine whether a particular loan falls under the category of NPAs. There are 26 public sector banks in India. Of these, 19 are nationalized banks, 6 belong to SBI and its associate group and one bank (IDBI Bank) is another PSBs. In Pvt.SBs, majority of the share capital are possessed by the private individual. There are 28 Pvt.SBs in India. Of these, 15 banks are old private sector banks (OPSBs) and 13 banks belong to new private sector banks (NPSBs).

Key words: Structural Equation Model, Nonperforming Assets of Banks, Banking system

INTRODUCTION

The banking system in India is significantly different from that of other Asian nations because of the country's uniqueness in geographic, social, and economic scenario. India has a large population and land size, a diverse culture, and extreme disparities in income, which are marked among its regions. There are high levels of illiteracy among the people but, at the same time, the country has a large reservoir of managerial and technologically advanced talents. About 35 percent of the population resides in metro and urban cities and the rest is spread in several semi-urban and rural centres. The country's economic policy framework combines socialistic and capitalistic features with a heavy bias towards public sector investment. India has followed the path of "growth-led exports" rather than the "expected growth" of other Asian economies, with emphasis on self-reliance through import substitution. These features are reflected in the structure, size, and diversity of the country's banking and financial sector.

The banking sector plays an important role in the development of Indian economy. Before the dawn of independence, the development of the banking sector was not satisfactory. Initially the East India Company established the banks namely Bank of Calcutta in 1806, Bank of Bombay in 1840, and Bank of Madras in 1843. Later in 1921, these banks were amalgamated and Imperial Bank of India was formed. Soon after independence, the banking sector underwent a remarkable change. Moreover, the government was unable to control the commercial banks and divert the funds in accordance with the expectation of the government. Hence, these banks were brought under the control of government during 1969. As a result in 1980, 14 major commercial banks were nationalized and another 6 banks were nationalized in 1980. In 1993, New Banks of India merged with Punjab National Banks (PNB), which brought the number of nationalized banks in India to 19. It was a state sponsored commercial banking institutions, entrusted with the specific task of providing bank facilities to the low income group of sections and enlarging the branch network. It has also been entrusted with the responsibility of branch expansion in remote areas. So, the bankers introduced new and innovative schemes in the year 2005-06, that is, appointed the Business Correspondence / Business Facilitator (BC/BF) model to serve the poor people.

This paper analyses the NPAs of PSBs and Pvt.SBs in India, by using growth rate, standard deviation and structural equation model (SEM) to identify their performance.

STATEMENT OF THE PROBLEM

Finance is the lifeblood of a business and is also a problem to business. A business cannot move without adequate finance. Every business house requires money for which they approach the banks for the finance, and the banks provide loan to the business institutions after assessing the repayment capacity and other aspects of business units. Lending money is one of the core functions of banks. By deploying money in the form of loans and advances, banks earn interest which is the dominant source of income for them. The banks adopt cautions in lending money. Scientific appraisal of the project, timely disbursement and proper monitoring of credit pave way for better credit management in banks.

SIGNIFICANCE OF THE STUDY

In our present day’s highly competitive and dynamic scenario, Indian banks too are introducing newer approaches for extending credit to their customers. The banks in India have to contend with a credit market, which has become highly selective in respect of pricing of loan products and quality of services.

Banks are the catalyst of economic development of all the countries whether developed or developing. In India, banks have been playing a unique role in mobilizing savings, credit disbursement, investment and providing other services; therefore they are the heart of our financial system. As per the report released by the RBI, the commercial banks deposited amount touched around Rs 59,09,100 crores, outstanding bank credit amount to Rs.46,11,900 crores and investment of Rs. 17,37,800 crores as on march 2012. The ability of the banking system to perform its tasks efficiently and in harmony with our need and economic goals depends on a large measure on the wise management of its resources.

OBJECTIVES OF THE STUDY

This study is undertaken with the following objectives:

1. To evaluate the Gross and Net NPA of the banks in India.
2. To compare the level of NPAs through SEM model.

3. To offer suggestions based on findings of the study.

RESEARCH METHODOLOGY

The study was purely based on the secondary data. These were collected from annual accounts of the RBI report, books, magazines, journals and the like. Moreover, unstructured interview schedule has been prepared by the researcher and the discussions were also held with various branch managers and the special officers of the bank, to collect the relevant information relating to effective credit management.

SAMPLE COMPOSITION

The study covers the credit portfolio of all scheduled Commercial Banks in India except foreign banks and Regional Rural Banks (RRBs). Thus, the study includes the following groups of commercial banks:

a) State Bank of India and its associate banks (SBI & its associate banks) ,
b) Nationalized Banks (NBs),
c) Old Private Sector Banks (OPSBs) and
d) New Private Sector Banks (NPSBs).

For this purpose, the detailed information were also collected from the various special issues of RBI publication from the RBI bulletin, as this study was restricted to the private and public sector banks in India.

PERIOD OF THE STUDY

This study covers a period of 11 years commencing from 2002 – 03 to 2012-13.

REVIEW OF LITERATURE

Kamal Das (2009)[1] in his article, “Loan Recovery and Management of Non Performing Assets” has analyzed the factors responsible for the growing NPAs in banks. He also pointed out that long tradition of political consensus in India along with required legislation, fund support and prompt actions will help to resolve the crisis of minimizing the loss. It is also essential to quickly identify the problem and approach professionally. The lessons from past experience will also help in the long way to reduce NPAs in banks.

Shweta Joshi (2009)[2] in his article entitled, “Finlegal Recovery Management System” pointed out the impact of NPAs, as follows:

1. mounting NPAs hamper the growth and reputation of the bank,
2. has an adverse impact on the profitability of the banks,
3. the average yield on advances goes down,
4. Confidence of general public on cooperative banks gets eroded.

Srinivasan Umashankar (2010)[3] pointed out that the following measures have contributed to reduce the amount of NPAs and thereby there is a significant improvement in NPA ratio in banks.

1. Improved legal framework and implementation of the SARFAES Act 2002.

2. Emergence of a secondary market for loans. Creation of conducive business recovery environment thereby impacting favourably the debt repayment capacity of borrowers.

S. Rajamohan (2012)[4] in his paper elucidates the ratio relating to NPAs rating model as per the provisions of the RBI. Through this he concluded that out of 25 parameters considered for NPAs management, the bank has 58 points. By comparing this with the rating model specified by the RBI, the PSB falls under 51 percent to 80 percent range and graded as 'A' category which means the management of NPAs are very good.

S. Rajamohan (2013)[5] in this article felt that the NPAs are a big problem to Indian banking industry. Willful default, improper processing of loan proposals, poor monitoring and so on are the causes for accounts becoming NPAs. He concluded that the following are measures to reduce NPAs.

a. the recovery should be linked with employees performance appraisal and every bank as well as each branch must choose its own method to a end task.
b. organizing recovery camps with the help of local revenue authorities and grama phanchayat can yield good results.
c. strengthening the debt recovery tribunals with adequate staff members and legal support can be considered. Borrowers having small loans for recovery are not coming under DRT. So the DRT should deal with all types of loans and their geographical coverage should be extended.
d. banks should get some amount of operational freedom for lending.

NON PERFORMING ASSET OF THE BANKS – ANALYSIS

GROSS NPAs OF PVT.SBs AND PSBs IN INDIA

The NPAs are the common problem to every bank for the day today banking business; this problem accrued both for the PSBs and Pvt.SBs. because, the PSBs should strictly adhere to the government rules and regulations. They have to provide loans and advances even without securities to uplift the rural poor which in turn becomes NPAs due to non – repayment of the advances. At the same time, PSBs meet huge problem due to NPAs. The total Gross NPAs of PSBs and Pvt.SBs are presented in Table 1.

TABLE 1

GROSS NPAS OF PVT.SBs AND PSBs IN INDIA

(Rs. in Crores)

	PSBs		PVT.SBs		Total	
Year	Amt	GR (%)	Amt	GR (%)	Total	GR (%)
2002- 03	52807(81.76)	-	11782(18.24)	-	64589(100)	-
2003-04	51537(83.23)	-2.4	10381(16.77)	-11.89	61918(100)	-4.14
2004-05	48399(84.64)	-6.09	8782(15.36)	-15.4	57181(100)	-7.65
2005-06	41378(84.12)	-14.51	7811(15.88)	-11.06	49189(100)	-13.98
2006-07	41378(84.18)	0.00	7774(15.82)	-0.47	49152(100)	-0.08
2007-08	38602(80.69)	-6.71	9239(19.31)	18.84	47841(100)	-2.67
2008-09	39749(75.39)	2.97	12976(24.61)	40.45	52725(100)	10.21
2009-10	44039(72.28)	10.79	16888(27.72)	30.15	60927(100)	15.56

2010-11	57301(76.72)	30.11	17384(23.28)	2.94	74685(100)	22.58
2011-12	71047(79.81)	23.99	17972(20.19)	3.38	89019(100)	19.19
2012-13	76235(79.33)	7.3	19865(20.67)	10.53	96100(100)	7.95
TOTAL	563415	-	140854	-	704269	-
AVG	51133.7	-	12804.92	-	63939	-
STDEV	12589.03	-	4475.3	-	16223.75	-

	US (β)	SD error	Beta	T	Sign
(Constant)	337.0	.316		1.194	.000
PSBs	1.000	.000	.776	1.091	.001
Pvt.SBs	1.709	.000	.274	3.858	.001

Source: www.rbi.org.in. (Figures in brackets indicate percentage to total)

Table 1 shows the amount of the NPAs of the commercial banks in India. The amount of NPAs in PSBs had decreased from Rs. 52807 crores in 2002-03 to Rs.44039 crores in 2009-10; thereafter it had increased in the last three years from Rs.57301 crores to Rs.76235 crores. Similarly the NPAs of Pvt.SBs had decreased from Rs.11782 crores in 2002-03 to Rs. 7774 crores in 2006-07, and after that it had increased slowly to Rs.19865 crores in 2012-13. The total gross NPAs of the PSBs and Pvt.SBs had been decreased from Rs.64589 crores in 2002-03 to Rs.47841 crores in 2006-07. Regarding the percentage of NPAs, there were negative trends in first six years from 2002-03 to 2007-08, and after that it was moving upward from 2.97 percent in 2008-09 to 30.11 percent in 2010-11. Similarly in the Pvt.SBs during the first five years there were negative trends, subsequently from 2007-08 it had moved upward. Regarding the total gross NPAs about 80 percent to 84 percent were incurred by the PSBs and only the rest of these were incurred by Pvt.SBs in all the years of the study.

The beta coefficient value of the PSBs is .776 and the Pvt.SBs is .274. If the beta value is high, the risk also is very high. Hence the PSBs incurred more NPAs than the Pvt.SBs. The gross NPAs are highly significant at one percent level in both the PSB and Pvt.SB. It is concluded that the gross NPAs play a major and serious role in both Pvt.SBs and PSBs.

NET NPAs IN PSBs AND PVT.SBs IN INDIA

The term Net NPAs refers to the difference between the gross NPAs and Provision. The NPA is a burden to the banks. That is why the banks try to reduce it. Due to the growth of NPAs the banks goodwill is spoiled. Table 2 shows the growth rate of NET NPAs of PSBs and Pvt.SBs in India.

TABLE 2

GROWTH OF NET NPAs IN PSBs AND PVT.SBs

(Rs. In crores)

	PSBs		PVT.SBs		Total	
Year	Amt	GR (%)	Amt	GR (%)	Total	GR (%)
2002- 03	13265 (65.84)	-	6882 (34.16)	-	20147 (100)	-
2003-04	12354 (74.95)	-6.87	4128 (25.05)	-40.02	16482 (100)	-18.19
2004-05	16542 (79.71)	33.9	4212 (20.29)	2.03	20754 (100)	25.92
2005-06	23561 (88.14)	42.43	3171 (11.86)	-24.72	26732 (100)	28.8

2006-07	24963 (86.11)	5.95	4028 (13.89)	27.03	28991 (100)	8.45
2007-08	18860 (79.96)	-24.45	5647 (23.04)	40.19	24507 (100)	-15.47
2008-09	17490 (70.22)	-7.26	7418 (29.78)	31.36	24908 (100)	1.64
2009-10	14561 (69.12)	-16.75	6505 (30.88)	-12.31	21066 (100)	-15.42
2010-11	15145 (68.32)	4.01	7023 (31.68)	7.96	22168 (100)	5.23
2011-12	17836 (74.04)	17.77	6253 (25.96)	-10.96	24089 (100)	8.67
2012-13	21033 (76.43)	17.92	6485 (23.57)	3.71	27518 (100)	14.23
TOTAL	195610	-	61752	-	257362	-
AVG	17782.7	-	5613.8	-	23396.5	-
STDEV	4068.36	-	1465.16	-	3683.76	-
		US (β)	SD error	Beta	T	Sign
(Constant)		90.067	.825		.530	.000
PSBs		1.000	.222	1.002	6.473	.001
Pvt.SBs		.220	.081	.911	1.021	.001

Source: www.rbi.org.in. (Figures in brackets indicate percentage to total)

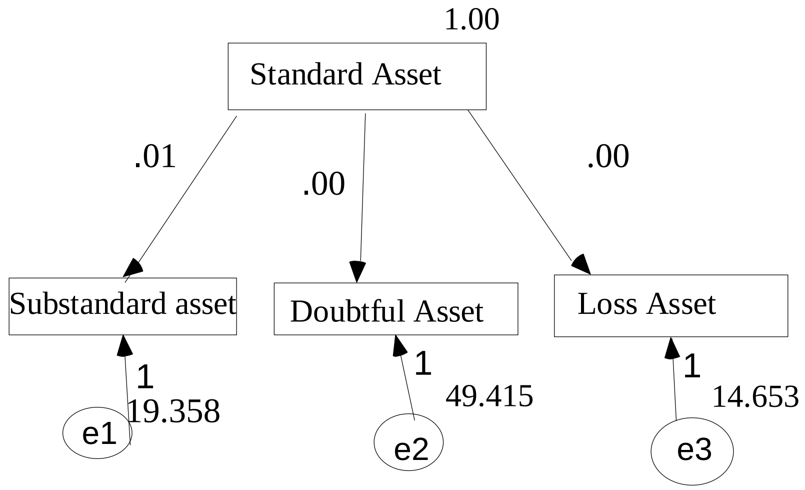
Table 2 shows the level of Net NPAs of the Pvt.SBs and PSBs during the years 2002-03 to 2012-13. The PSBs had ups and downs during the study period which were between Rs. 12354 crores in 2003-04 and Rs.21033 crores in 2012-13. Similarly the Net NPAs of the Pvt.SBs had more fluctuations from Rs.3171 crores in 2005-06 to Rs. 7418 crores in 2010-11. The total Net NPAs of the CBs also shows fluctuations in trend during the period of the study. Regarding the growth rate the Net NPAs of the Pvt.SBs and PSBs show both positive and negative trends during the study period. When the PSBs and Pvt.SBs are concerned, there were negative trends in four years and in the remaining years were in positive trends. The negative growth rate is a good sign to the banks.

The PSBs growth rate varied between – 24.45 percent to 42.43 percent and the Pvt.SBs banks growth rate varied between -40.02 percent in 2002-03 and 40.19 percent in 2007-08. The standard deviation of the PSBs is 4068.36 crores and the Pvt.SBs is 1465.1 crores. The PSBs show the beta value of 1.002, and the Pvt.SBs show the beta value of .911 percent. So there is significant relationship between the NPAs and Pvt.SB and PSB. The value is within the table value at one percent significant level. It is concluded that the PSBs have more risk than the Pvt.SBs with regard to net NPAs.

NON PERFORMING ASSETS OF THE COMMERCIAL BANKS – SEM MODEL

The banks are established with the aim of rendering services to the customers rather than earning profit. The banks offer various kinds of loans and advances under schedule 9 of banking balance sheets which are bill finance, demand loans, term loans, secured advances, unsecured advances, priority sector advances, public sector advances, advances outside India, advances due from banks and so on. When the borrowers fail to remit the loans amount at the proper time, it becomes NPAs of the banks. NPAs are the black mark of the banks. Banks hesitate to have the NPAs and it requires more policies and procedures to reduce the NPAs. There are four classifications of NPAs, each one has its own significance. These are classified based on the delay in repayment of the loans. Among these assets there are influences over one with another asset. In order to know the level of influence, the structural equation model (SEM) has been used.

FIGURE 1
NPAs OF THECOMMERCIAL BANKS IN INDIA - SEM



Source: Secondary data. Used Amos 5 version

The figure 1 shows the outcome of SEM analysis; here the researcher has taken standard asset as the dependent variables and the independent variables are substandard asset, doubt asset and loss asset. Among the independent variables, doubtful asset is a major influencing variable towards the standard assets of the banks.

OUTCOME OF THE SEM

The SEM is a model for analyzing a number of dependent and independent variables. In connection with that Table 3 explains the result of NPAs of the banks.

TABLE 3
NPAs OF THECOMMERCIAL BANKS IN INDIA - SEM

Variables	*Values*	*Significance*	*Result*
Chi square	7.795		The model is highly fit to the analysis for this study.
P – Value	0.001	>0.05 is model fit	
GFI	1.000	> 90% model shows the goodness of analysis	
AGFI	0.960		
CFA	0.920		
RMR	0.010	Error may be <0.10 is > 10 %	
RMSEA	0.001		

Source: www.rbi.org.in. Used Amos 5 version statistical software.

It is observed from Table 3 that the level of assets of the banks through the SEM analysis of the commercial banks, their standard assets and the other assets which lead to the level of bank assets constructed as variables for the Structural Equation Model (SEM). The Chi-square value is more than the 0.05 percent (7.795 percent) at 5 percent level, which shows that the model which constructed is fit; normally if the model has to be fit, the P value should be greater 5 than percent level. The Goodness of Fit Index (GFI) is 1.000 percent indicates that the model is good for analysis.

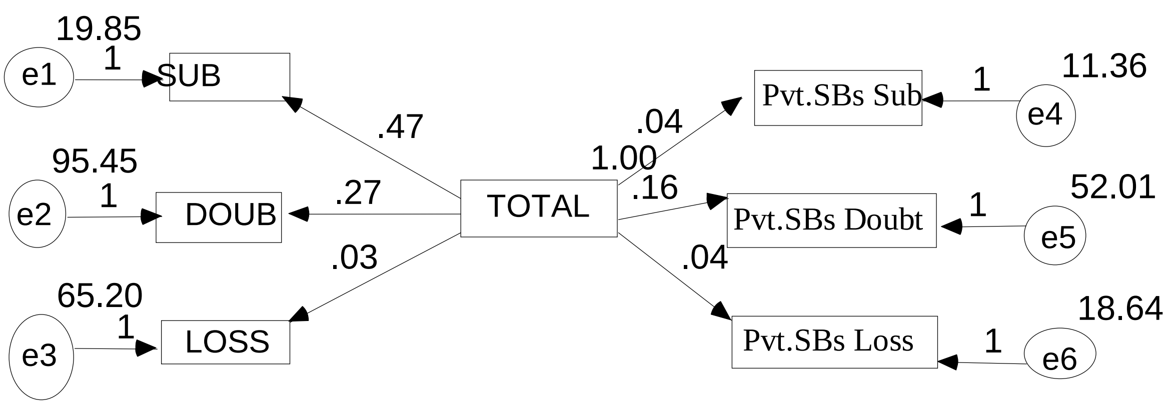
The Confirmatory Factor Analysis (CFA) .920 indicates that the model is highly suitable and shows good result. The Root Mean Square of Residual is (RMR) 0.010 and shows that error value is smaller which is less than 10 percent and Root Mean Square Error of Approximation (RMSEA) is 0.001 which indicates that it lies between the confidence interval of less than 0.06 to 0.08. Hence the analysis shows that the standard asset of the bank as well as other three assets as variables have significant influence on total asset of the banks.

NPAs OF THE PVT.SBs AND PSBs IN INDIA – SEM

The banking industry with good banking practices can accelerate the pace of economic development of a country. In the earlier days, the bankers were acting like money lenders and the poor people were totally neglected from their financial services and at the same time the services rendered by banks were not adequate and prompt. At last all these activities came to an end in 1969. Thereafter, the banks realized the importance of the people and extend their support. Hence, the banks rendered their services effectively and promptly as much as possible to its customers. In any business, success depends upon the relationship between the concern and its customers. In banking, the business relationship between banks and its customers is a vital one because it is not a one- time transitory relationship, but relatively a permanent one and it must be continued forever. The banks provide information about the various products and services to the customers.

The banks offer different kinds of loans and advances which are brought under schedule 9 of banking balance sheets. The loans are to be repaid; if it is not recovered by the banks, it becomes NPAs. The PSBs and Pvt.SBs face problem of NPAs. They take strenuous efforts for the recovery of NPAs. The SEM has been used in order to analyse the relationship between these banks and their classes of NPAs. The SEM is an important tool to ascertain the relationship. Figure 2 shows the comparative analysis of the NPAs of the Pvt.SBs and PSBs

FIGURE 2
NPAs OF THE PVT.SBs AND PSBs IN INDIA – SEM



Source: AMOS version5

The figure 2 shows the outcome of SEM analysis of the NPAs of the Pvt.SBs and PSBs in India. The total asset is taken as the dependent variables and the independent variables are substandard asset, doubtful asset and loss asset of the private and public sector banks. Among the independent variables doubtful asset is a major factor influencing towards the total assets of the Pvt.SBs and PSBs.

OUTCOME OF THE SEM

This model is used to analyse the relationship of dependent and independent variables. In connection with that Table 4 shows the kind of relationship between the assets of Pvt.SBs and PSBs.

TABLE 4

NPAs OF THE PVT.SBs AND PSBs IN INDIA – SEM

Variables	*Values*	*Significance*	*Result*
Chi square	25.601		The model is highly fit for the analysis for this study.
P – Value	0.001	>0.05 is model fit	
GFI	1.000	> 90% model shows the goodness of analysis	
AGFI	-0.950		
CFA	1.000		
RMR	0.001	Error may be <0.10 is > 10 %	
RMSEA	0.080		

Source: Primary Data

Table 4 displays that the model of total assets by the Pvt.SBs and PSBs, the substandard asset, doubtful asset and loss asset are constructed as variables for the SEM. The Chi-square value is more than the 0.05 percent (25.601 percent) at 5 percent level, which shows that the model is fit. The P value is greater than 5 percent level for which it is fit. The GFI is 1.000 percent which indicates that the model is good for analysis. The CFA 1.000 indicates that the model is highly fit and shows its correctness. The RMR is 0.001 and shows that error value is smaller which is less than 10 percent and RMSEA is 0.080 and it lies between the confidence interval of less than 0.06 to 0.08.

Hence it is concluded that the commercial banks maintained credit management in an effective and efficient manner and at the same time both the banking sectors doubtful assets have high level influencing factor towards the total asset of the banks. So banks need to convert the doubtful asset into standard asset of the banks.

SUGGESTIONS OF THE STUDY

The following are the suggestions given after the research study

1. Loans must be sanctioned within the limit of repaying capacity of the borrowers.
2. Intensive analysis and proper evaluation of loan proposal should be done while sanctioning the loans. Reasons for demand, tenure, loan amount, required documents for loan proposal should be assessed and evaluated properly.
3. Banks should strengthen pre-sanction appraisal system and fine tune the norms for credit appraisal and evaluation.

4. The PSBs and Pvt.SBs may lend liberally the bill finance for the establishment and expansion of the business ventures.
5. The banks may provide short term loan to the business houses in order to increase their working capital position.
6. Banks should have proper awareness of the adverse impact of NPAs on profitability of banking activities.
7. Frequent proposal contact with borrowers and persuasive measures by recovery staff members should be done in order to reduce NPAs.

CONCLUSION

The problem of NPAs is really very alarming in the Indian Banking industry. Wilful default, improper processing of loan proposals, poor monitoring and so on are the causes for accounts becoming NPAs. NPAs affect the accounts of the banks in several ways such as interest income, profits, provisions against NPAs and the like. Hence, an efficient management information system should be developed. The bank staff members should be trained in the proper documentation and charge of securities and must be motivated to take measures in preventing advances turning into NPA. PSBs must pay attention to their functioning to compete with the Pvt.SBs. Banks should be well versed in proper selection of borrowers/projects in analyzing the financial statement

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