

# Impact Assessment of Housing and Vehicle Loan Freeze on Performance of Commercial Banks of Bhutan

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## Abstract

*Loan freeze by financial institutions (FIs) for improving liquidity position is a recent phenomenon in Bhutan. All commercial banks except Bhutan Development Bank Limited were prohibited to disburse housing and vehicle loans since March 2012. These loans, being main loan portfolio, their freeze impacted net profits earned, business growth, and satisfying customers' needs. However, other loans were being disbursed, generating meager income and compelled commercial banks to reinvent, where their strategies included cash reserve ratio, increasing interest rate of deposits, etc. Due to freeze of loans, interest earned was decreased in comparison to interest paid, necessitating deposit interest rate escalation to retain old customers, to attract new customers and to improve liquidity. Some banks, in this process, stressed out on interest rates while Druk PNBL increased rates to 11 percent with 1% hike. Most banks levied 10 percent interest on housing loans except BDBL which charged 13 percent on rural housing and agriculture loans. Thus, to improve liquidity and meeting future contingencies, banks sacrificed current revenues which affected business growth.*

**Keywords:** Loan freeze, liquidity position, cash reserve ratio (CRR), Bhutan financial switch, credit to deposits ratio (CDR), average yield on advances, current account deficit (CAD), Indian National Rupee (INR), Ngultrum (Nu.), Gross Domestic Product (GDP)

## 1. Introduction

Bhutan is a tiny Himalayan country of 7, 38,000 people and peculiarly of a small economy. Banks play catalytic role in its economic development by providing services such as accepting deposits, business loans, vehicle loans, mortgage lending, and basic investment products like saving accounts and deposit certificates. For improving liquidity position, Royal Monetary Authority stopped issuance of housing and vehicle loans by financial institutions, is recent phenomenon causing panic among loan seekers. Further, economic growth was adversely affected as it was obligatory on banks' to maintain credit deposit ratio at 60% [1]. Banks found it very difficult to follow RMA stipulations.

**Scope of study:** The impact of loan freeze on performance of prominent Bhutan commercial banks, Bhutan National Bank, Bank of Bhutan, Bhutan Development Bank, Druk Punjab National Bank and Tashi Bank.

## 2. Selected Financial Institutions of Bhutan

A brief description of RMA and banks under study is described as follows:

### 2.1. Royal Monetary Authority (RMA)

RMA, the Bhutan's central bank established in 1982 and its banking functions are being accomplished through Ministry of Finance, State Trading Corporation of Bhutan and Bank of Bhutan. RMA's main objectives are formulating and implementing monetary policy to achieve and maintain price stability as well as promotion of financial sector and economic growth. Its secondary objectives are: (a) to formulate and apply financial regulations and prudential guidelines to ensure stability and integrity of financial system, (b) to promote an efficient financial system comparable to international best practices, (c) to promote/supervise and, operate national/international payment and settlement system including electronic transfer of funds by FIs, other entities and individuals, and (d) to promote sound practices and good governance in financial service industry to protect against systemic risk. To achieve these objectives, RMA issues currency; acts as banker, adviser and financial agent to government and banker to banks; regulates payment and settlement system, and makes foreign exchange regulations; issues licenses to FIs.

### 2.2. Tashi Bank

Tashi Bank was incorporated on March 12, 2010 as private bank under Companies Act of Kingdom of Bhutan 2000 having only two branches, at Phuntsholing and Wangdue Phodrang. Its objective is to foster competition for provision of customer services, domestic savings and investments.

### 2.3. Bhutan Development Bank Limited (BDBL)

It was incorporated, in 1988, by Royal Charter with Asian Development Bank assistance to function as development finance institution, Royal Government of Bhutan (RGOB) holding 93.50% of paid up share capital. It functions with head office at Thimphu and western, central and eastern regional offices at Paro, Trongsa and Trashigang respectively having 29 branches and 2 sub-branches. It is the only bank focusing on small farmers by providing seasonal, small and medium term loans. This bank is also involved in introduction of outreach banking in rural areas by field officers visiting farmers for giving loans, deposit collections, withdrawals at fixed time and place. It supplies working capital to industrial and agro-based ventures; provides micro, small and medium financing for development and modernization of agricultural, commercial and industrial enterprises, to enhance income for improving living standard, and private sector development for poverty alleviation.

### 2.4. Bank of Bhutan (BOB)

It is incorporated by Royal Charter in 1968, and the oldest public sector commercial bank. Having started banking services with 20 account holders and paid up capital of Nu.2.5 million; BOB enjoyed the distinction of serving as nation's central bank before RMA's inception. However, it could not grow due to low convertibility of national currency but later with State Bank of India collaboration through BOB reconstitution by Royal Charter of 1972. Till 1997, BOB's managing directors were appointed by SBI. Since management of BOB is fully vested in RGOB with 26 branches, 3 extension counters and paid up of capital Nu. 400 million; it provides loans for agriculture, animal husbandry, consumer items, housing, purchase of shares, trade and commerce, transport, education and vehicle as mortgage loans.

### 2.5. Bhutan National Bank Limited (BNBL)

It came into existence in July 1980, as Unit Trust of Bhutan, with initial capital Nu. 2.5 million, contributed by RGOB and Royal Insurance Corporation of Bhutan Limited (RICBL). It functioned as RICBL's subsidiary. In 1995, it was converted into a commercial bank with Asian Development Bank's

(ADB) technical assistance. From 1996, BNB's equity was offered to public making it only financial institution, 28.58% of it being owned by public. In 1997, RGOB divested 40 % of its equity to ADB and Citibank making it only institution in country being partially owned by FIs and by March 2001, reduced board nominees to optimize private sector participation and facilitate competition, dynamism, and professionalism. By 1996, BNBL was computerized using Micro Banker. It launched, in 2004, first ever ATMs at Thimphu and Phuentsholing for convenient banking and in 2007, introduced debit card point of sale terminals; and SMS and Internet banking in March and November 2009 respectively. On 12<sup>th</sup> April 2011, it offered recurring deposits and Rupee denominated prepaid card, and on 2<sup>nd</sup> December 2011, Bhutan Financial Switch.

## **2.6. Druk Punjab National Bank Ltd. (PNBL)**

Druk PNBL started operations in January 2010 by opening Thimphu branch. Druk PNBL is first banking sector joint venture of Punjab National Bank of India and local promoters to bring in foreign direct investment. PNB with Nu.300 million capital and 4800 branches is among India's largest nationalized banks. 51% share of Druk PNBL is owned by PNB, 19% by Bhutanese promoters and 30% mobilized through initial public offering in Bhutan. The Druk PNBL crossed business above Nu.500 Crores and developed a base of more than 20000 customers in very first year of operations. The Druk PNBL has introduced customer friendly and technology based services such as internet banking, ATMs, SMS alert, mobile banking and Maestro debit card.

## **3. Literature Review**

### **3.1. Impact of credit freeze**

The central bank of Curacao and Sint Maarten (CBCS) (autonomous Caribbean countries within kingdom of the Netherlands) announced to introduce credit freeze for commercial banks to tackle mounting debts on balance of payments and downward trend in foreign currency reserves. The Curacao Bankers' Association blamed Sint Maarten as in Sint Maarten, most of credit given was in the form of consumptive loans which have greatest effect on imports and subsequently affect balance of payments. The Economic Research Department found that double-digit annual growth rates of private credit on Curaçoa had been a major driver of island's current account deficit (29.2% of GDP). The reserve requirement ratio had increased from 7.75% in September 2011 to 10.75% in January 2012; to reduce excess liquidity with banks. But these efforts were unsuccessful, as private loan growth continued to accelerate, as most of capital and consumption goods are imported by Curacao's Island. The CBCS eventually resorted to a complete freeze of private credit limiting size of banks' loan portfolios. However, loan commitments for financing of projects that strengthen Island's economic base were excluded [2].

President of Construction Association of Bhutan said that all business sectors will have huge impact with housing and vehicle loan freeze. With stoppage of these loans, construction industry and car dealers have been affected most as without business, they will be defaulting on loans which they have already taken and interest imposed by banks will keep piling up [3].

### **3.2. Impact of liquidity constraint on commercial banks**

Research conducted on need for Global Solutions found, that the commercial banks under pressure in developed countries may not be able to lend as much as they have done in the past. Investors are, increasingly, factoring in risk of some emerging market countries defaulting on their debt [4]. It is stated, important reason why banks do not lend is, the debt overhang problem and if banks have existing debt, then investing new capital to make new loans is found to be costly because profits from new loans are used to pay old creditors. This led banks to make fewer loans than optimal [5].

Banks' profitability improves by holding liquid assets up to a point beyond which it diminishes. Holding liquid assets makes banks more resilient to liquidity shocks, reducing negative externalities imposed on other economic agents, and on the other hand, holding too many imposes significant cost in terms of reduced profitability. Their final result revealed that Canadian banks may have needed to hold less liquid assets over the estimation period than did U.S. banks, in order to optimize profits [6].

### 3.3. Reasons for freezing loans

Central bank of Kenya retained base lending rate at 18% for six straight months to push down inflation and reduce high rate of borrowing amongst commercial banks yielding desired results including decreased inflation, sustained exchange rate stability, and gradual slow down of private credit growth. But in present study, RMA suspended housing and vehicle loans of commercial banks to reduce private credit [7].

It is most likely that credit expansion misdirects spending and investment pattern. Credit expansion implies increase in money supply which actually does not make more resources available. In credit expansion, consumption increases beyond what it would have been leading to reduced savings. However, credit expansion generates great profits for financial sector. Increased money supply filters to economy via large banks making loans to small business and consumers. In Icelandic case, their main domestic mal-investment was made in housing due to credit expansion which had lead to economic freeze in Iceland [8].

## 4. Research Methodology

The present research is exploratory to know reasons for vehicle and housing loans freeze and study impact on services of commercial banks. It also attempts to co-relate identified parameters and consequences of loan freeze.

The research design adopted is field research method (personal survey) and questionnaires. Both primary and secondary data have been used. The data were collected from RMA and five commercial banks using questionnaires and personal interviews in Thimphu and Phuntsholing. Secondary data were collected through internet, reports, newspapers and published bank accounts.

Various ratios, described below, are used to analyze data which have, further, been explained through tabulation, graphical presentation, etc.

$$i) \quad \text{Credit Deposit Ratio: Credit Deposit Ratio} = \frac{\text{Net Loans}}{\text{Total Deposits}} \times 100$$

60% and above CDR is considered ideal for the commercial banks to maintain the liquidity position in banks.

$$ii) \quad \text{Average Yield on Advances :Average Yield on Advances} = \frac{\text{Interest Earned}}{\text{Average Advances}} \times 100$$

$$iii) \quad \text{Cost of Deposits Ratio : Cost of Deposit} = \frac{\text{Interest Paid}}{\text{Average Deposits}} \times 100$$

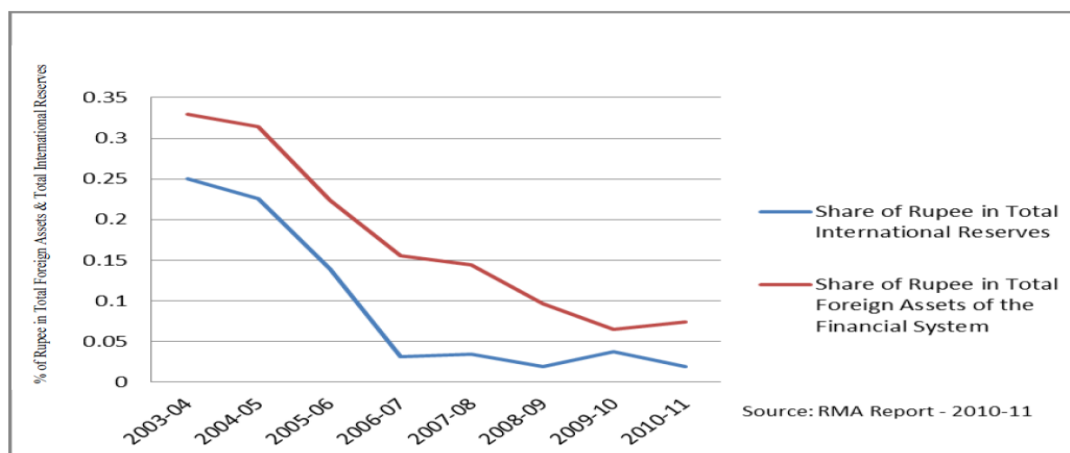
$$iv) \quad \text{Gross Rate of Return: Gross Rate of Return} = \frac{\text{Net Profit}}{\text{Total Deposits} + \text{Total Loans}} \times 100$$

$$v) \quad \text{Business Per Employee:} \frac{\text{Loans} + \text{Deposits}}{\text{Number of Employees}}$$

## 5. Findings and Analysis

### 5.1. Reasons of housing and vehicle loan freeze

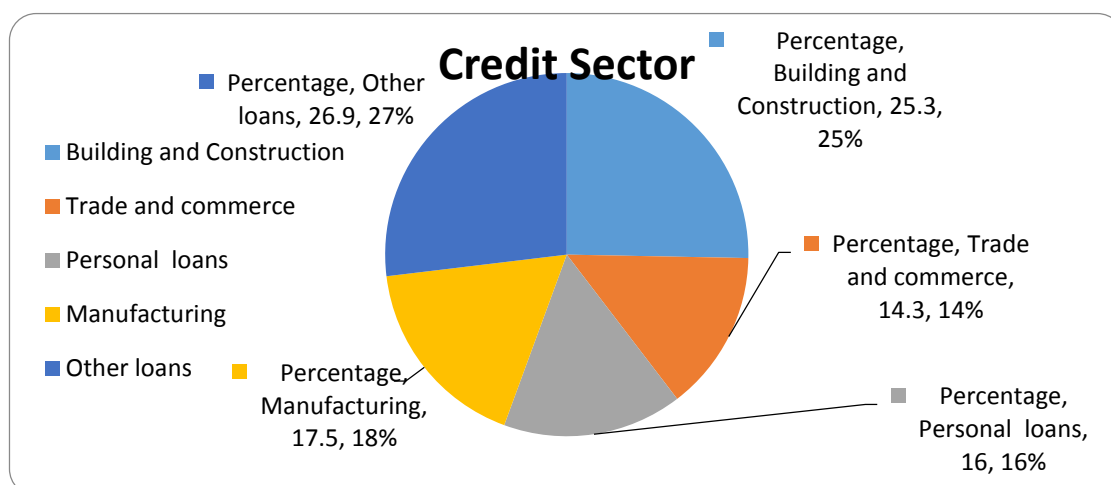
- a. Commercial banks faced liquidity constraints, so loans were stopped to tackle risks of future asset-liability mismatches.
- b. One of the main reasons, identified by RGOB's task force was Bhutan enjoying unlimited convertibility to maintain Ngultrum-INR peg, and high credit growth especially towards housing and construction as also import of fuel and motor vehicles as important contributor to INR crunch.
- c. A rapid expansion of money supply created excess liquidity with banks which created rapid growth in import credit.
- d. India being biggest trading partner, Bhutanese economy is overwhelmingly dependent on India for trade, in 2010-2011, where total Rupee denominated transactions in current and capital accounts were of INR 175.4 billion (inflow 81.1 and outflow 94.3 billion). Net inflows from India, however, sharply declined from (-) 7.65% of GDP in 2009 to (-) 18.2% of GDP in 2010; CAD dipped to (-) 22.2% of GDP at end of fiscal 2010-11, where net imports exceeded net exports; resulting in acute shortage of INR and forced RMA to sell US\$ 200 million to meet Indian current account payment obligations. This period witnessed declining share of rupee (Figure-1) in international currency reserves and foreign assets. By February 2012 INR shortage became acute and RMA stopped replenishing Rupee requirements of commercial banks and introduced administrative measures including monitoring demand, prioritizing spending and provision of Rupee liquidity for essential imports and suspended import of private vehicles and construction materials for new buildings[9].



**Figure 1:** Declining share of rupee in international reserves and foreign Assets: 2003-2011

Bhutanese banks, except BOB, were left with no money and faced liquidity crunch. BNB's credit-deposit ratio reached 82%, 75% for Druk PNB and 67% for Tashi Bank against 63% limit set by RMA; reserve banks must maintain with RMA [10]. World Bank categorized Bhutan as 'moderate risk of distress' meaning debts manageable but if continues to increase, chance of economy becoming insolvent. Bhutan's debt to GDP ratio was 89%. Nearly 60% of Bhutan's external debt is denominated in INR, making it most important foreign currency. Of total liabilities, rupee debt stands at Nu 45 Billion of which 71% is on hydropower [11].

Building and construction loans accounted for 25.3%, highest among all loan portfolios (Figure-2), and was chiefly responsible for draining out INR and causing suspension of construction loans.

**Figure 2.** Sector-wise loan advances

Source: Kuensel, September 15, 2012

## 5.2. Impact of housing and vehicle loans freeze

In banking business, loans constitute main asset contributing banks' incomes. Housing and vehicle loans are prime portfolios to augment income of commercial banks except BDBL. All commercial banks suspended housing and vehicle loans; other FIs also stopped loans for indefinite period wanting INR. BNB stopped all loans, Tashi Bank suspended housing and vehicle loans, although, BDBL was providing housing and vehicle loans on selective basis. These moves were to mitigate concentration of loan risk in particular sectors and also improve liquidity of FIs, said deputy governor of RMA [12]. Problems of banks go far beyond minimum reserve ratio and now banks are completely broken [13]. When booming loan portfolios were stopped commercial banks passed through problems such as banks could not lend ultimately hitting bottom line hard and interruptions made lending unproductive, customers' growth went down and banks feared loss of valued and dedicated clients.

**Table 1.** Banks' Performance before and after loan freezing

Particulars	Years(before freezing)	Year (after freezing)	
	2010	2011	2012
1. Total loans and advances (Nu. billion)	30.78	41.47	50.83
2. Total Deposits (Nu. billion)	53.88	52.43	51.23
3. Credit Deposits Ratio (%)	57.13	79.1	99.23
4. Net Income (Nu. billion)	0.75	1.44	0.53
5. Interest Earned (Nu. billion)	3.14	4.14	6.73
6. Interest Paid (Nu. billion)	1.29	1.39	2.82
7. Business per Employee (Nu. billion )	0.06	0.06	0.07
8. Average Yield on Advances (%)	10.2	11.46	14.58
9. Cost of Deposit Ratio (%)	2.39	2.62	5.44
10. Gross Rate of Return Ratio (%)	0.89	1.59	0.52
11. Tax Paid (Nu. billion)	0.45	0.59	0.57

Source: Annual Reports of selected commercial banks [14]

Using various performance parameters, results have been tabulated in Table -1 and discussed as follows.

- a) In 2010, **total loans and advances** stood at Nu. 30.78 billion, increased to 41.47 billion, and Nu. 50.83, for 2011 and 2012 respectively. Increase in total loans and advances during 2011 and 2012 accounted for Nu. 10.69 billion and Nu. 9.36 billion compared to 2010, 2011. Total loans and advances in 2012 decreased by Nu. 1.33 billion, this decrease was directly attributed to housing and vehicle loan freeze.
- b) **Total deposits** stood at Nu. 53.88 billion, Nu.52.43 billion and Nu.51.23 billion for 2010, 2011 and 2012 respectively. These decreased by Nu.1.45 billion in 2011 and Nu. 1.2 billion in 2012. The reason for decrease from 2010 to 2011 was due to fall in time deposits growth. While in 2012, total deposits further came down by Nu.1.2 billion due to non-availability of funds with banks and people resorting to hoarding of savings to operate business.
- c) **Credit deposit ratio(CDR)** was 57.13% and 79.10% for 2010 and 2011 respectively. In 2012, it shot to 99.23%. In 2010, against a deposit of every Nu. 100, commercial banks lent Nu. 57.13 which went up to Nu. 79.10 in 2011. In 2012, this ratio soared to Nu.99.23. Thus, CDR increased by 22.05% and by 20.13%, in 2011 and 2012. The rationale behind increase of CDR for 2010 to 2011 can be, there was no restriction in giving loans and advances. However, in 2012, increase in CDR was caused due to decrease in deposits. CDR of BDBL in 2012 reached all time high of 190%.
- d) **Net income** for 2010 and 2011, before freezing of loans, was Nu.0.75 billion and Nu.1.44 billion respectively. However, after freezing, it remained meager Nu.0.53 billion for 2012. It can be observed that net income for 2011 increased by Nu. 0.69 billion as compared to 2010. However, net income decreased from Nu.1.44 billion to Nu.0.53 billion for 2012, registering a net decrease of Nu.0.91 billion. This fall in net income is, primarily, owing to moratorium on housing and vehicle loans. The loan freeze increased interest rate on deposits and, at the same time, caused decline in deposits in 2012. Moreover, BDBL, in 2012, suffered losses, which decreased net income for 2012 for banks under study.
- e) In 2010 and 2011, prior to loans freeze, **total net interest earned** by banks under study, stood at Nu. 3.14 billion and 4.14 billion respectively whereas it was Nu. 6.73 billion, after freeze in 2012. It was expected, net interest earned would decrease after loan freezing but actually it went up. This was due to three specific reasons. First, commercial banks had frozen vehicle and housing loans only. Secondly, interest rates were increased on other loans. Thirdly, BDBL still gave housing loans to rural people.
- f) **Interest paid** to customers, before loans freeze, was Nu.1.29 billion and 1.39 billion for 2010 and 2011 respectively, and for 2012, after freeze, it was Nu. 2.82 billion. It can be observed, increase in interest paid was Nu. 0.1 billion and Nu. 1.43 billion from 2010 to 2011 and 2011 to 2012 respectively. Reason for steep rise in interest paid in 2012 was a consequence of loan freeze. Banks increased interest rates to attract more deposits in precarious financial position.
- g) Before freeze, in 2010 and 2011, **annual business per employee** was Nu. 0.06 billion and in 2012, after freeze, it was higher at Nu.0.07 billion. It was expected, business per employee in 2012 will be lower than in 2010 and 2011. Despite stoppage of housing and vehicle loans, reason for increased business, banks concentrated on other products to retain customers and maintain profits such as issue of shares, letters of credit, bank guarantees, increased interest rate on other loans and remittances.
- h) **Average yield on advances** measures total yield/interest/dividend a bank will get from loans and advances which represents earnings on investment. Average yield on advances for 2010, 2011 (before freezing) and 2012 (after freezing) were 10.25%, 11.46% and 14.58% respectively. For 2011, average yield on advances increased by 1.26 percent over 2010 and for 2012 increase was 3.12 %. Increase of average yield on advances is much higher for 2012

compared to 2011. Average yield on advances for 2012 is higher due to increased interest rates being charged. Loans were frozen for new whereas old customers with sanctioned construction loans were not stopped mid-way. However, these loans were given at higher interest rates.

- i) **Cost of deposit** is interest rate paid by FIs of funds deployed. Interest paid on deposits divided by average deposits, consisting of current, savings and term deposits. In 2010, cost of deposit was 2.39%, for 2011 it was 2.62% and for 2012 it is 5.44%. In 2011, CDR increased by 0.23%. However, after housing and vehicle loans freeze, in 2012, it increased by 2.82%. In other words, CDR, for every Nu.100 loans given, commercial banks paid interest at 2.39% in 2010 (before freeze). In 2011 (before freeze), paid 2.62% interest and in 2012 (after freeze), paid at 5.44%. CDR before freeze was low. The reason of sharp increase in CDR was necessitated to encourage deposits by offering higher interest rates.
- j) **Gross Rate of Return** means total income generated from total loans and advances and customers' deposits. The gross rate of return for 2010 and 2011, before loans freeze, was 0.89 percent and 1.59 percent which in 2012, after freeze came down to 0.52%. Before freezing, they earned handsome profits while net profits decreased substantially affecting gross rate of return in freeze aftermath.
- k) **Tax revenues** of government also decreased due to loan freeze which affected development activities. In 2010, tax paid by commercial banks was Nu. 0.45 billion, in 2011 tax paid was Nu. 0.59 billion and in 2012, after loans freeze, tax paid remained Nu. 0.57 Billion. In 2012, tax paid decreased by Nu. 0.02 billion as compared to 2011 due to low income. While in 2011, tax paid was higher as compared to 2010 because in that year tax had increased by Nu. 0.14 billion. As a result of decreased tax revenues, economic growth rate also decelerated.
- l) **Profit** is the difference between amount earned and amount spent in operating business. For commercial banks, housing and vehicle loans freeze reduced profits. These loans had been prime source of income of banks, contributing more than half profits i.e. 60%-80%.
- m) Due to non-disbursal of loans, customers become dissatisfied halting **banks' organizational growth**. Services were reinvented to enhance satisfaction level.

## 6. Conclusion

Main reason of vehicle and housing loans freeze was liquidity crunch, for resolving INR crisis and maintaining sound cash reserve ratio. RMA mandates CRR of 5%. Building materials and vehicle spare parts are imported. Loans and advances were frozen for imported products which are not essential for survival. So, due to freeze of key portfolios, housing and vehicle loans, revenue (interest) generated was decreased as compared to interest paid to depositors, causing increase in interest rate for deposits to retain old customers, to attract new customers and to improve liquidity. With suspension of loans, some banks were stressed out on interest rates while Druk PNBL increased rates to 11 percent with 1% hike. Most banks levied a uniform 10 percent interest on housing loans except BDBL which charged 13 percent on rural housing and agriculture loans. Thus, to improve liquidity and meeting future contingencies, banks sacrificed current revenues which affected business growth. Bhutanese banks are solely dependent on deposits, loans and advances, but after freeze, loans and advances grew at lower rate decreasing total deposits simultaneously. CDR also registered slight fall in increment rate. Net income came down despite unsustainable increase in interest rate on loans and advances in 2012. The total interest paid, business per employee and yield on advance ratio also increased. Cost of deposit increased while gross rate of return and amount of tax paid to government decreased in 2012 as compared to previous year.



## 7. Recommendations

Loan freeze, for a longer duration, cannot be suitable for banks' profitability. Without credit, people cannot construct and import vehicles which will obstruct country's economic development. Commercial banks should maintain reasonable amount of liquid assets to take advantage of higher interest rates. RMA should frame long term guidelines for banks to ensure profitability and liquidity for country's economic development.

## References

1. Dorji, M. (2012). *RMA governor Slams Media reports, Said Individuals Fueled the Rupee Shortage not the Private Sector Alone*. The Bhutanese. Retrieved on 15/8/2012 from <http://www.thebhutanese.bt/rma-governor-slams-media-reports-said-individuals-fueled-the-rupee-shortage-not-the-private-sector-alone/>
2. Goldstein, I. (nd). *Credit freeze*. Retrieved on 16/10/2012 from <http://finance.wharton.upenn.edu/~itayg/Files/Credit%20Freeze%20-%20IMF-Slides.pdf>
3. <http://www.businessbhutan.bt/?p=2925>, retrieved on 29/8/2012, at 8:08 am, retrieved on 29/8/2012
4. Walubengo, N. (2012). *Interest rates are too High*. Retrieved on 8/9/2012 from <http://www.afriquejet.com/central-bank-of-kenya-base-rate-freeze-2012040536440.html>
5. Graham, E. B. (2010). *The Impact of Liquidity on Bank Profitability*. Retrieved on 16/10/2012 from [http://www.banque-france.fr/fondation/fr/telechar/seminaires/Bordeleau\\_Graham\\_WP\\_Liquidity\\_Profitability.pdf](http://www.banque-france.fr/fondation/fr/telechar/seminaires/Bordeleau_Graham_WP_Liquidity_Profitability.pdf)
6. <http://www.afriquejet.com/central-bank-of-kenya-base-rate-freeze-2012040536440.html>, retrieved on 8/9/2012
7. <http://www.rma.org.bt/index.jsp>, retrieved on 8/28/2012
8. Howden, P. B. (2011). *Deep freeze: Iceland's Economic Collapse*. Retrieved on 4/10/2012 from [http://mises.org/books/deep\\_freeze\\_howden.pdf](http://mises.org/books/deep_freeze_howden.pdf)
9. Rashid, H. (2012). *Understanding the Causes of the Rupee short fall: A macroeconomic Policy challenge for Bhutan and the Way Forward*. Retrieved on 16/10/2012 from <http://www.gnhc.gov.bt/wp-content/uploads/2012/06/Rupee-analysis-by-DESA.pdf>
10. <http://www.businessbhutan.bt/?p=2925>, retrieved on 29/8/2012.
11. [www.rabobank.com/economics](http://www.rabobank.com/economics), retrieved on 15/10/2012.
12. <http://www.bbc.co.uk/news/world-south-asia-12480709>, retrieved on 8/9/2012.
13. <http://www.bbc.co.uk/news/world-south-asia-12480709>, retrieved on 8/9/2012.
14. Annual Reports of Bank of Bhutan 2010, 2011; Bhutan National Bank Limited 2010, 2011; Druk Punjab National Bank limited 2010, 2011; Tashi Bank 2010, 2011; & Royal Monetary Authority of Bhutan 2010, 2011.