

## Developments and the Current State of Financial System in Nepal

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# Developments and the Current State of Financial System in Nepal

Bhim Prasad Bhusal<sup>†</sup>

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## 1 . Introduction

Nepal began its formal financial system with the establishment of the first government owned commercial bank, Nepal Bank Ltd (NBL, hereafter) in 1937. This was the first step in Nepal's financial development (Sharma, 1987). Later the country started to formalize the financial sector, which until then was dominated by traditional system such as landlords, local money lenders, merchants and unorganized and limited government oriented central system. After the establishment of NBL, the financial system has experienced several phases in its development process. Until the establishment of the central bank, NBL functioned as a role of central bank and commercial bank. The financial system has only been supervised only after the establishment of the central bank, Nepal Rastra Bank (NRB), in 1956. For the first few years of its establishment, i.e., until the mid of 1960s, Nepal Rastra Bank engaged in policy formulations and regulation of the financial system.

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Before the early 1970s, the financial system in most of the developing countries was based on repressed and highly controlled systems, rather than more open and liberal systems. This kind of system was unable to attract opportunities for private sector investment in the economy. Therefore, some policy transformations in financial system were aimed at including the private sector in the economic activities. Then many countries started to liberalize their economies through the changes in their policies. Similarly, the World Bank and International Monetary Fund also advocated for further liberalization process and they put liberalization as conditionality for aid to promote the growth rates in developing countries. Then these institutions started to assist developing countries under liberalization policies with financial and technical aid. From this decade there was a trend of implementing the measures of liberalization in the financial system of developing and developed countries. This trend has also influenced to bring changes in the financial system of Nepal through the policy reforms.

A number of reasons pushed Nepal to follow liberalization policies from the 1980s. Primarily, at the beginning of this decade, Nepal suffered from some domestic and foreign sector problems, such as high loss of the public enterprises and problems in the balance of payments (BOP). In addition, the financial system was highly controlled and such system resulted to the limited number of financial institutions; only two commercial banks, two development banks, and few insurance companies before 1984 (Nepal Rastra Bank, 2009). It is a characteristic of very low and slow development of financial sector. This helped to make the realization of a situation not to rely the whole economy on public sector but to attract the private sector. Therefore, it can be said that realization of attracting private sector investment in the economy, international financial liberalization trend, controlled financial system of the country and financial resources deficiencies pressurized Nepal to proceed with financial liberalization system. Then Nepal started to liberalize financial sectors from 1984 starting with the elimination of entry barriers in the banking sector (Choudhary and Shrestha, 2006). When Nepal started the liberalization process, there was a dramatic increase in financial intermediaries and initiation of various new financial institutions. And the financial system has expanded more broadly and deeply. Since 1984, it has been passed more than two and half decades of financial reforms, there have been carried several changes in the system and several studies relating to the financial development and its impact on economic growth and development have been carried out. This study is different to other studies in the sense that it documents policy initiatives and performance of the financial system simultaneously.

This study briefly aims at exploring the development of financial system in terms of intermediation and institution and its performance in different stages of policy initiatives. In this regard, it focuses on major policy changes and their impact on the monetary indicators. This paper organized as follows. The next section sheds light on the brief historical development of

financial system in Nepal, that categorizes into three different phases called primitive phase (1937-1956), controlled and regulatory phase (1956-1984) and modern liberalized phase (1984 onwards). Similarly, section 3 gives the present framework of financial system in Nepal, section 4 explores the performance of financial system under liberalized environment, and section 5 provides preliminary empirical results. Then last section concludes.

## 2 . Brief Historical Development of Financial System

The present situation of banking system in Nepal has been a continuous development process from the establishment of NBL in 1937 to all the way to present. Within this period several steps were taken to develop financial system have been taken places at policy level. More importantly, the process of financial development can be explained by classifying it in the following three stages.

### 2.1 *Primitive Phase of Formal Financial System (1937-1956)*

When formal banking system has started with the opening of a commercial bank NBL, in 1937, with the joint contribution of government share 51% and private share 49%, it began to capture the illegal banking activities were held in the market. This bank had played a role of central bank as well as a commercial bank at that time. The primary functions of NBL in the beginning were to accept deposits, provide loans and banking services to the public. Similarly, in the beginning it came up against challenges to attracting people to the banking system as the existing system prevailed by traditional local money lenders, land lords and merchants who were charging high cost of money to the people as well as it had to develop full confidence on Nepalese currency (Demetriades and Luintel, 1996). Because the exchange rate instability between India and Nepal caused the loss of confidence in Nepalese rupees (Maskey, 2000). Single bank financial system could expand 12 branches of NBL until the establishment of central bank (World Bank, 2002). Therefore, the financial system during this period was much unstable and fluctuating in terms of currency and was in very much primitive phase of financial development.

### 2.2 *Controlled and Regulatory Phase (1956-1984)*

The second phase of financial system here is defined as that period which started from the establishment of the central bank and that imposed regulatory and controlled policies until mid of 1980s. The modern banking system has been started, when NRB, the central bank, was established. Then it has directed the policies to develop financial system. Under this objective, exchange rate management became its first responsibility that can stabilize the currency market between Nepal and India and between Nepal and other countries. From the starting of the

central bank system in 1956 through the mid 1980s, the Nepalese financial system followed regulatory and controlled trend that was also prevailed in other developing countries. The system was dominated by limited banks, few non-bank financial institutions and insurance companies.

The bank based financial system from the very beginning of its development, had run under controlled policies commenced by the central bank together with government. However, several policies had been implemented to develop banking as well as non-bank financial system during this period.

### 2.2.1 Policy Implementation

Nepal experienced the controlled policies with the start of central banking system in its financial system until the early 1980s. Principally, in repressed system households and firms of rural sectors have limited access to the financial system and it is limited to local money lenders and landlords under which they practice their power to the market to charge high rate of money creating high cost of funds. To develop non-monetized sectors, the central bank launched different financial policies a regulatory and controlled environment. The forms of repressed policy were quantitative restrictions on credit, credit allocation to the selective sectors, presence of only state owned banks and financial institutions, interest rate regulations. Some of these policies during the repressed period are explained here.

As a first action, NRB issued currency in 1959 and to control free flow of Indian currency it regulated the Foreign Exchange Act (1962). Similarly, the central bank also prepared the policy of restricting credit supply at the same time. So, to impose restrictions to the credit supply, commercial bank imposed ceilings on lending, and it was a part of financial program supported by IMF (Agheveli, *et al.*, 1979). However, the central bank had never been given priority of credit control through the interest rates. As a part of this policy central bank has implemented the Credit Control Regulation Act (1966). These two Acts; the Foreign Exchange Act and the Credit Control Regulation Act were very important to remedy the prevailing dual currency system and making Nepalese currency as a legal tender (Sharma, 1987). Since 1966, the central bank started to operate as strong interventionist through regulating active interest rate policy. The saving and lending rates are supposed to be very important instruments for banks. Therefore, initiation of bank rate policy was very important for central bank supervision through which it regulated the credit of commercial banks.

In 1966, the central bank had implemented another tool of monetary policy called minimum reserve requirement ratio for commercial banks. Another qualitative instrument of credit control operation called selective credit control also has implemented from 1975. This policy made it compulsory to invest at least 5% of commercial banks' deposits to the priority sectors

confined by government. The confined priority sectors were agriculture, small size enterprises and small cottage industries.

In the second step, NRB had taken the policy of 'Banking Development Plan' to expand the bank branches because only one bank was insufficient to develop the financial system at the expected level. Then under the government subsidy and compensating the losses born by bank branches central bank targeted to achieve a national banking density one bank per 30 thousands people by 1977 (Demetrides and Luintel, 1996). Under the policy of expanding banking system, a second commercial bank, Rastriya Banijya Bank, had established under the full ownership of government in 1966 and Agriculture Development Bank in 1968. The Agriculture Development Bank was established to extend credit to cooperatives, farmers, individuals and small enterprises. It was owned by the government, Nepal Rastra Bank and with small percent by farmers. This bank accepts deposits from the public and supplies the short term working capital. In addition to its agricultural and commercial functioning it initiated Small Farmers Development Programs to provide credit to small group of farmers (Ferrai, *et al.*, 2007). There had been taken various other activities to develop other non-banking financial institutions such as establishment of Provident Fund in 1963 and establishment of Postal Savings Banks.

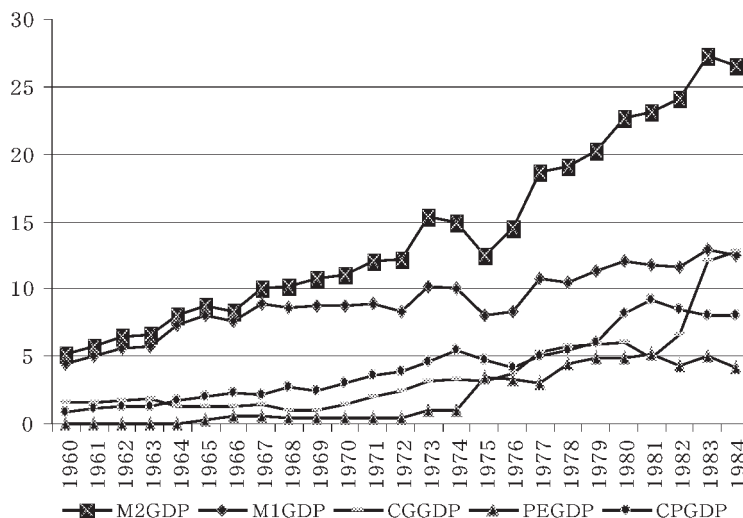
### *2.2.2 Performance of Financial Intermediaries during the Controlled and Regulatory Phase*

Financial system during the controlled and regulatory phase suffered from several weaknesses that restricted the system from appropriate development, and made it failure in the policy implementation. The monetary and credit indicators grew at a very low and slow rates until 1972. Within this situation several fluctuations appeared in the system. There was a slight drop in money supply indicators in 1966 and large drop in 1977. The economy experienced slow growth due to high risks and uncertainty originated from structural and institutional sources and experienced a high utilization of bank resources in credit market (Sharma, 1987).

In most of the years of controlled period, the central bank took hands off approach for controlling the system in terms of loan rates that had to be charged commercial banks by themselves because the central bank was willing to work as development authority as well as to assist in developing the financial system. The central bank regulated the system through some other monetary tools rather than interest rates control. However, banking sector sluggish performance trends and financial sector development indicates a low impact of financial intermediaries in the development process. Policy implementations in financial sectors had reflected to develop the indicators of the system.

Monetization activities took place faster than the other intermediary activities in the system. However, financial intermediation had at very lower and slower rates. There is direct impact of policy in the intermediary indicators. Those indicators are represented by credit to private

Figure 1: Monetary and Credit Indicators during Controlled and Regulatory Period



Note: M2GDP=Broad money (% of GDP), M1GDP=money supply (% of GDP), CGGDP=claims on government sector (% of GDP), PEGDP=claims on public enterprises (% of GDP), CPGDP=claims on private sector (% of GDP).

Source: Nepal Rastra Bank, (2009), Quarterly Economic Bulletin.

sectors, credit to government enterprises and credit to government, and represent the actual financial intermediation of the system. In this time, public enterprises were the main institutions to produce public goods and services. And, banks were providing loans mainly to those enterprises. Figure 1 shows high decline of credit of these enterprises after 1980. Credit to the private sector also declined from 1974 to 1976 and then slightly increased until 1981. But this ratio again started to decline from this year and continued declining. All monetary and credit indicators except claims on government were in decreasing trends after 1980s.

NRB tried to develop the financial sector controlling by interest rates in the early 1970s. To expand commercial bank credit the central bank offered quota of refinancing for each bank but this was underutilized by banks and NRB stopped thereafter (Aghevli, *et al.*, 1979). Similarly, during the mid 1960s, the central bank aimed at achieving banking density one in per 30 thousand citizens by 1977, but it was impossible to achieve until up to early of 1980s.

The foreign trade sector had continuously been suffered from negative trends from 1975 that resulted in the BOP problem. Similarly, a widening resource gap after 1975 increased dependency on foreign aid for financing and pressured the government to follow reform policies on monetary sector (Sharma, 1987). Therefore, failures of monetary policies, a dismal situation, falling trends in credit supply, fluctuating and slow development in monetary indicators pushed Nepal to follow reform policies in the financial sector during mid of 1980s.

### 2.3 *Modern Liberalized Phase (1984 onwards)*

Nepal has gradually experienced a series of economic reform measures since the mid 1980s. This has resulted in the widening and the deepening of the financial system both in terms of the volume and the nature of financial business (Poudyal, 2005). Policies were introduced to replace large government participation with the private sector investment during the period after 1984. In addition, this decade keeps importance for financial development because the government implemented several policies to ease private sector participation in the economy. Some of these policies are explained in the next section.

#### 2.3.1 *Policy Implementations for Financial Liberalization*

As mentioned in the previous section, financial sector in Nepal needed to increase its activities for economic growth and development during the 1980s. The existing situation prevailed in a highly controlled financial system through some direct policy measures by the central bank with the suggestion of government resisted private sector to take part in development activities. Opening up the financial sector to private sector and decontrolling of the system seemed essential.

The central bank took steps to deregulate constraints of the banking system first. In the first step, the monetary authority allowed private sector participation in the financial system by removing the entry barriers for banks. As a result, at the beginning of liberalization a joint venture bank; Nabil Bank was established in 1984. This joint venture bank was very important to modernize banking services through technology transfers and to introduce managerial skills (Pant, 2009). Before the initiation of liberalization, the government owned two commercial banks and two development banks were operating in the market. With the objective of promoting healthy competition among banks, the Commercial Bank Act 1974 was amended in 1984 and entry barriers of private sector investment in the commercial banking industry were removed. Among the objectives of removing entry barriers, one objective was to attract private joint venture banks with foreign collaboration with the hope of bringing more foreign capital and technical know-how to introduce, modern banking skills to the domestic banks, and, widen and deepen the national financial structure (Acharya, *et al.*, 1998).

In 1985, the Finance Companies Act was enacted in order to allow finance companies to work in the financial system. This was done with the objective of serving small borrowers and meeting the demand for consumer credit. Through the 1992 amendment of this Finance Companies Act, many financial companies were established rapidly.

Similarly, unstable fuelling of inflation due to adoption of expansionary monetary and fiscal policies, BOP imbalances on current account and trade imbalances led Nepal to adopt a stabilization program in 1985 that was followed by the Structural Adjustment Program (SAP) in 1987 (Osmani and Bajracharya, 2008). SAP emphasized on the role of market activities in the



financial system. One action of it was to introduce regular auction of treasury bills. The purpose of initiating treasury bills was not only to attract commercial banks to invest in bills but also was to bring flexibility in interest rates structures. Likewise, under SAP in 1988, a study called Commercial Problems Analysis and Strategy Study (CBPASS) was held to improve the financial conditions and organizational structure of two state owned commercial banks, NBL and RBB with the guidance of IMF. SAP helped to improve the activities of market forces. Therefore, Nepal entered to Enhanced Structural Program (ESAP) in 1992 (Pant, 2009).

In the changing financial environment, the central bank realized the need to increase the role of development banks. With this in mind, Agriculture Development Bank was allowed to carry out commercial bank activities since 1984 (Khatiwada, 1994). It has played active role in mobilizing urban resource to lend in the undeveloped agricultural sector.

The liberal system mainly emphasized on the mobilization of savings for investment. One of the actions relating to it is the establishment of Citizen Investment Trust (1991). This is working to mobilize the contractual savings. Similarly, the existence of non-monetization and lack of credit availability in the rural sectors were the problems noticed by the central bank and government at that time. This enabled to introduce the concept of Gramin Bikas Bank which was becoming popular to mobilize credit to the rural area. Therefore, Regional Rural Development Banks started to establish from 1993 to enhance accessibility of formal credit to rural people. These banks are working under Development Bank Act of 1996.

The central bank removed the provision of SLR in 1997 that commercial banks until that time had to maintain at certain percentage of assets in the form of government securities and cash reserve ratio. It was rendering the lending capacity of commercial banks.

The NRB Act 2002 made NRB more independent to execute its policy to ensure efficiency and healthy financial system through its prudential regulatory and supervisory mechanism. The central bank with the concerns of government was imposing priority sector lending for commercial banks. This provision was phased out from 2007.

### 3 . Structure of the Financial System

Nepalese financial system is comprised of three major components called money market, capital market and others (such as Employment Provident Fund, Postal Savings Banks and Citizen Investment Trust). Among these, the money market is a major part of the system. And the financial system mainly is bank based rather than market based. The capital market is limited to mainly urban areas and larger cities. Its development took off only after the 1990s. The momentum of liberalization policies mainly after 1990 has broadened and deepened the financial system. However, capital market activities are very limited such as treasury bills as

short term capital market and corporate equities, debenture and government bonds as long term securities. On the other hand, money market has longer history of development than the capital market. Several kinds of financial intermediaries are working in the money market under central banking system are shown as in figure 2.

Liberalization opened the opportunities to launch various new institutions such as finance companies, micro-credit development banks, cooperatives and NGOs in money market. These institutions are also contributing to develop capital market by listing in the securities market. And, these institutions spread in the market in very short periods. There are a number of reasons for their rapid increment in the market. First, they can be established with a very low amount of money in comparison to banks. Secondly, they are capable of capturing small savings from the rural sectors and mobilize it to the local level. Similarly, they reached to those sectors where the accessibility of banking sector is not yet possible. People who have small amount of savings and who need small credit for their economic activities can easily access these kinds of non-bank financial intermediaries. Therefore, the sector which is most inaccessible to the banking system is served by these institutions.

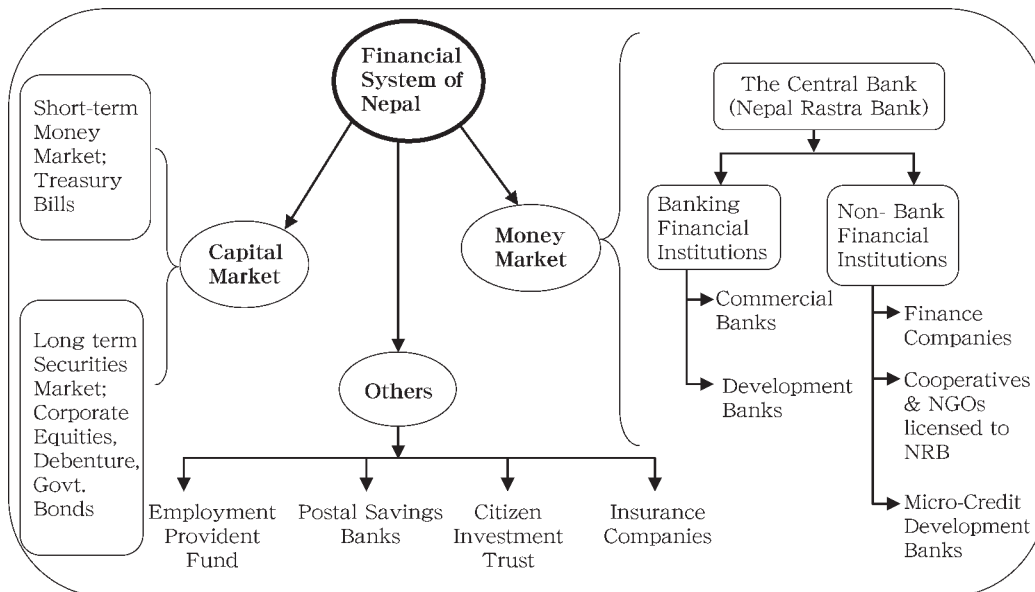
Abolition of entry barriers in 1984, enactment of Development Bank Act of 1996, enactment of Finance Company Act of 1992, Insurance Act of 1992 have given more emphasis to developing the financial system more broadly and deeply. As of NRB (2009), there are 26 commercial banks (A class financial institutions), 63 development banks (B class financial institutions), 77 finance companies (C class financial institutions), 15 micro-credit development banks (D class financial institutions), 16 cooperatives, 45 NGOs and 25 insurance companies are operating in the market.<sup>1)</sup> When Development Bank Act (1996) enacted, large numbers of development banks came in the market to enhance the important sectors of the economy such as agriculture, industry and others. Prior to this act there were only two government owned development banks, namely Agriculture Development Bank and Nepal Industrial Development Corporation.

Besides, the capital market and money market, Employment Provident Fund (EPF), Postal Savings Banks, Citizen Investment Trust and Insurance Companies are working as a separate form of financial intermediaries. Employment Provident Fund provides funds to officials working in government sector, teachers, law enforcement, army, and employees of public enterprises and private companies which negotiate EPF to provide provident funds. Postal Savings Banks collect savings from people and provides loans to the public and to post office employees. Its target is to motivate lower income people for savings. Due to increasing trend of non-bank financial intermediaries, activities of postal saving banks have declined. The citizen Investment Trust was also established in 1991, and currently is working as a financial intermediary. It

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1) Central bank regulates and supervises the bank and non-bank financial institutions providing them license in categories A, B, C and D.

Figure 2: Structure of the Financial System of Nepal



collects private and corporate savings and mobilizes loans.

#### 4 . Financial Sector Performance

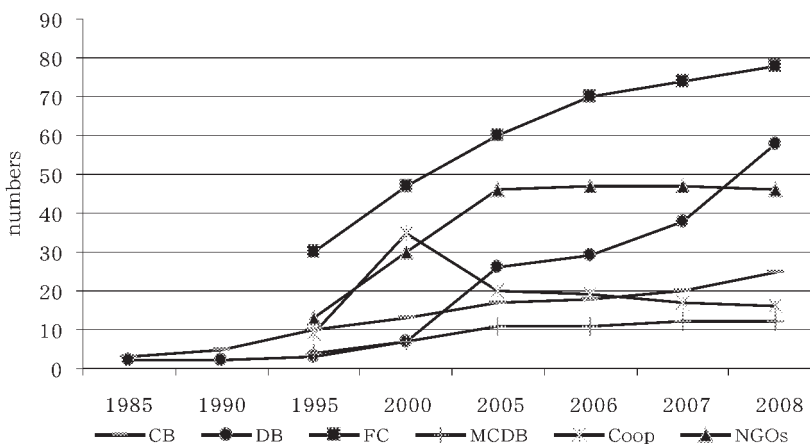
##### 4.1 Institutional Development of Bank and non-Bank Financial System

Before the early of 1980s, the Nepalese financial system was a totally state owned system. Under this system, there were two commercial banks, two development banks, some insurance companies, Employees Provident Fund, Postal Savings Banks, and Security Exchange Centre.

Therefore, institutional development of banks and the non-bank private financial sector was totally absent. Then from the mid of 1980s, the central bank and the government initiated several policies to generate cordial environment for the entry of financial intermediaries from the private sector. As a result of liberal policy implementations, the financial system from 1990s has witnessed a dramatic growth of financial institutions. In the open environment and initiation of partial democratic system created an environment of introducing new institutions such as finance companies, cooperatives, and NGOs.

The central bank had a policy of expanding bank branches during the controlled system period. However, target of expansion could not meet due to controlled system and presence of only limited state owned banks. In the beginning year of financial liberalization, there were 357 commercial bank branches in the country. That number has peaked to 481 in 1999. Due to some reasons such as domestic political instability and conflicts, banks could not work efficiently and

Figure 3: Development of Bank and non-Bank Financial Intermediaries

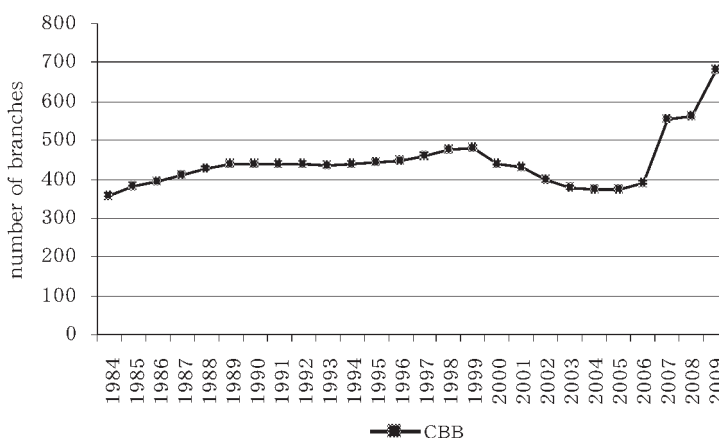


Note: CB=commercial banks, DB=development banks, FC=Financial Companies, MCDB=Micro-credit Development Banks, Coop=Cooperatives, NGOs=Non-governmental Organizations.

Source: Nepal Rastra Bank, (2009), Quarterly Economic Bulletin.

some branches closed down prior to 2006. After 2006, a peace process started reopening closed branches and opening new branches has started as well.

Figure 4: Development of Commercial Bank Branches



Note: CBB=Commercial Banks Branches

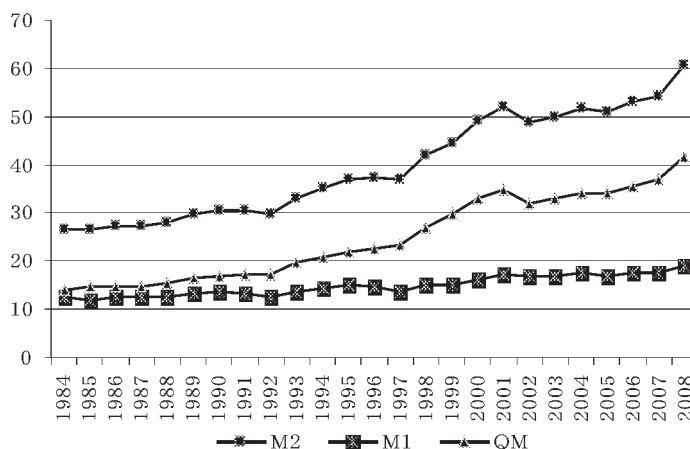
Source: Nepal Rastra Bank, (2009), Quarterly Economic Bulletin.

### 4.2 Monetary Expansion

The trends in monetary indicators, relative to GDP are shown in figure 5. The figure shows the rapid development of monetary sector during the liberalized period. One of the indicators M1/GDP, mainly reflects the absorption of barter economy. Another important indicator is broad money (M2) relative to GDP; it represents the monetization of subsistence economy in Nepal. Generally, the government has been following an expansionary fiscal policy during the last two decades. Under such a framework, the government ran with the deficit budget and it has been financing through itself expansionary means.

The ratio of broad money (M2) not only represents the transaction activities but also is a kind of speculative form of money. These speculative activities can increase monetization as well as development of actual financial intermediation. Therefore, it is better to separate this indicator into currency in circulation (M1) and time and savings deposits (M2) to show the actual intermediation. This resulted variable is sensitive to interest rates and is called quasi-money. The increase in quasi money may be due to the abolition of interest rates control. Quasi money has expanded sharply, comparative to the narrow money (M1) after 1990s. It was the period of democratically elected government and it implemented the second phase of liberalization. It can also be noted that M1 also has expanded rapidly after the second phase of liberalization.

Figure 5: Money Supply Situation



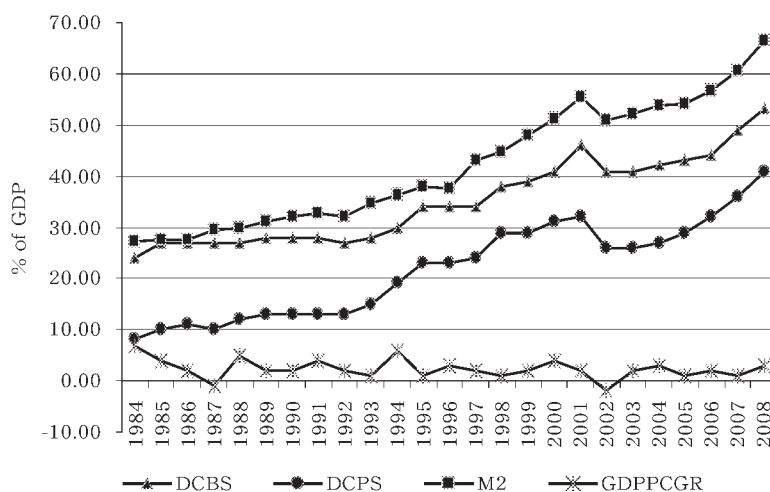
Note: M2=broad money (% of GDP), M1=money supply (% of GDP), QM=quasi-money (% of GDP).  
 Source: Nepal Rastra Bank, (2009), Quarterly Economic Bulletin.

### 4.3 Financial Intermediaries and Economic Growth

The financial intermediaries consist of measures of size of banking sectors and their activities (Beck, *et al.*, 2000). Such kinds of financial activity structure can foster financial development.

The emerging literature on size of banking sector and economic growth have suggested that the measure of size of banking sector has significantly correlated with economic growth of any developing economy, developed or even to economies in transitions. Here we attempt to depict the measure of size of financial intermediaries, liquidity of the money markets and economic growth in the post liberalization period. These indicators measure their size relative to the economy, i.e., as percentage of GDP.

Figure 6: Financial Intermediation and Economic Growth



Note: DCBS=Domestic credit provided by banking sector (% of GDP), DCPS=Domestic credit to private sector (% of GDP), M2=Money Supply (% of GDP), GDPPCGR=GDP per capita growth.

Source: World Development Indicators, Online database.

The level of intermediation, institutional development and competition have been speeded up only after establishment of democratically elected government i.e., only after 1991. The slow rates of intermediation from 1989 to 1992 were due to arising political instability starting at the end of 1989 and newly elected government delayed to implement new policies until 1992. Until such time several policy uncertainties affected investment activities. From this time onwards smooth growth in financial intermediation could be seen before 2001. Liberalization policies aimed at minimizing the role of government in economy thereby increasing the role of private sector that has enhanced the financial sectors' activities. Similarly, the enactment of International Financial Centre Act of 1999, enhancement activities on capital market after 1992, enactment of Development Bank Act of 1996 and so forth have promoted the financial intermediary activities.

Similar trends have taken place in the economic growth during this period. Economic growth

sharply increased during 1987 - 1988 and declined from 1989 to 1992. Growth has declined from 1995 due to some other macro economic instability such as a sharp decline in exports towards Europe and America. Again uncertainties due to political changes have appeared in financial markets after 2001 until 2005. Financial intermediary activities sharply increased after 2005 after the peace process took place.

#### 4.4 *Capital Market Development*

The capital market serves to the mobilization of resources for long run and short run investments such as shares of listed companies, commercial papers and treasury bills activities and so forth. Capital market helps investors to obtain their long term funds for investment activities and diversify the risks associated with such investment projects.

Aiming at industrial development, state owned enterprises were started in some manufacturing industries such as jute industry, cement factories and sugar factories during 1960s. As a backward linkage of industrial development, the government followed the policies of developing a better financial system equipped with sound banking and capital market institutions. Similarly, for the first time, the government issued bonds through NRB in 1964 to cover development expenditures.

The formal initiation of capital market went beyond the establishment of Securities Exchange Centre in 1976, under the Industrial Policy Act of 1974, to deal development bonds, national saving bonds and corporate securities. The Security Exchange Act was enacted in 1984 when the government initiated liberalization policies. At the beginning, the Security Exchange Centre played a role as brokers, underwriter, share issuers and government bond sellers. Various types of companies such as companies related to manufacturing, trading, and banking have been listed in the Security Exchange Center.

The amendment of Finance Companies Act (1992) was very important in capital market development process because it opened the door widely to finance companies and enabled them to function through activities such as leasing, housing, finance, real estate leasing agreements. As the Act broadened the functions of finance companies, these companies opened in the market in wider range and they have listed in the security market.

Under the reform policies, Securities Exchange Centre (1976) was converted into Nepal Stock Exchange Ltd (NEPSE) in 1993. It opened its trading from 1994. It facilitates transaction of shares, debentures, government bonds, and mutual funds. Table 1 presents the indicators of capital market in Nepal. Among the indicators, market capitalization as a measure of size of the stock market (Demirguc-Kunt and Levine, 2001) has grown rapidly during the sample period. It represents the liquidity of the capital market.

Stock exchange releases another indicator called paid up value (PUV) of listed shares and it

accounts for the par value. With the increase of listed companies it has also increased. Another important indicator is the total trading turn over (TTO). This represents the value of total transaction of the shares. Indicators grew very slowly during the early 1990s. Several institutional barriers and absence of information about stock market the capital market could not develop appropriately in this period. When institutional barriers went on abolishing, demand for shares have gone increasing.

Under the total value transaction of the capital market instruments, stock exchange constructs NEPSE index based on the general share price. When constraints to establish financial institution from private sector was abolished the liquidity and share prices rose in the secondary markets and implies demand of shares has risen. This index shows the volatility of the security market. During the first five years of its establishment NEPSE was very low and had nearly a constant growth rate because people did not know about its functioning i.e., majority of people were unaware about the security market. This implies stock market transaction was confined to small group of people. From the late 1990s, it started to increase and 2005 onwards it showed

Table 1: Indicators of Capital Market

Year	PUV	MC	TTO	NEPSE Index	No. of listed companies
1988	0.68	1.40	0.00	-	27
1989	0.77	1.70	0.00	-	36
1990	0.76	1.70	0.00	-	41
1991	0.85	2.10	0.00	-	46
1992	0.83	1.40	0.00	-	55
1993	0.84	2.20	0.00	-	62
1994	1.10	6.96	0.22	226.0	66
1995	1.35	5.91	0.48	195.5	79
1996	1.35	4.94	0.08	185.6	89
1997	1.60	4.53	0.15	176.3	95
1998	1.65	4.75	0.07	163.4	101
1999	1.90	6.87	0.02	216.9	107
2000	1.94	11.36	0.07	360.7	110
2001	1.93	11.27	0.03	348.4	115
2002	1.89	7.55	0.02	227.5	96
2003	2.42	7.16	0.01	204.9	108
2004	2.24	7.72	0.05	222.0	114
2005	2.85	10.42	0.03	286.7	125
2006	3.05	14.79	0.05	386.8	134
2007	2.99	25.58	0.20	683.9	135
2008	3.60	44.75	0.32	963.4	142

Note: PUV = Paid up value of listed Shares (% of GDP), MC = Market Capitalization (% of GDP), TTO = Trading Turn Over (% of GDP), NEPSE index = Nepal Stock Exchange Index

Source: Nepal Rastra Bank, (2009), Quarterly Economic Bulletin.



a rapid increase.

These securities market indicators are very much sensitive to political changes. When the conflict came in control in 2006, investors' confidence increased to invest in the markets that resulted to increase the indicators tremendously. There are many reasons that capital market in Nepal is very much volatile. Inflation has increased tremendously after the political change in the 1990s. The investors tried to find investment opportunities in the financial market. Small size of the capital market is also a reason for the high volatility of the securities market. Similarly, there is increasing trends of outflow of young people seeking employment abroad. This is contributing to increase the level of remittances that is motivating to invest in the capital markets.

As the financial intermediaries were rapidly introduced into financial market, the numbers of companies registered in the securities market also increased rapidly. At the beginning of 1990s, 41 companies were registered in the securities market. During a 10 year period, the number of listed companies reached to 110. After the 2000s some co-operatives could not compete in the market and closed withdrawing from the securities market.

## 5 . Preliminary Empirical Analysis

Financial indicators in Nepal provide a scenario of influential trends in the economy. The pattern of increasing trends of the indicators in pre-liberalization and post liberalization are contributing to a wider and to deeper the financial system. Some important indicators such as credit to private sector by banks, broad money, and quasi-money have continuous increasing trends. Similarly, financial intermediaries and institutional networking of banking system has a longer history than the capital market. In the mid 1980s, the government liberalized the financial system to provide a strong network of financing to the private sector. This also implies that there is a strong link between the economic growth process and financial development in Nepal. Likewise, the growth literature has explained the association between financial development and the economic growth process of developed and developing countries. In this regard, this study intends to empirically estimate the link between economic growth and financial development indicators.

This chapter focuses on the empirical analysis on the basis of time series data. For the time series data, it needs the test of stationarity of the variables in levels and at differenced condition. To test unit root in any time series data, the mostly using method is Augmented Dickey Fuller (ADF) test method. Under the unit root test and the long run Granger causality tests Deb *et al.* (2008) find a strong supply leading causal relationship between financial development variables

and the economic growth for the case of India. Jalil and Ma (2008) explores the long run co-integration relationship between financial development and the economic growth. Some of the cross-country analyses, such as King and Levine (1993), Levine and Zeros (1998) could establish a strong relationship between financial development and economic growth. Fung (2009) finds that low income countries which have relatively well developed financial system are more likely to catch up middle income and high income countries but the poor countries with relatively under developed financial system are less likely to catch up. Most of the cross country analyses which could put a strong hypothesis among the financial development indicators and economic growth relationship, but could not address the problems such as endogeneity and heterogeneity which are essential to explain in the researches. Analyses based on cross-country and panel data could not explain the time dimension in the sample which is useful to explain the evolution of financial development. Recently the trend in the estimation has been diverted to the dynamic panel data methods, a way to control for biased estimation by controlling endogeneity (Baltagi, *et al.*, 2009). In these kinds of estimations, the slope coefficient is assumed identical across the countries taken in the sample, i.e., in case of financial development and economic growth, financial development generates an equivalent level of investment and productivity across the sample countries. However, it is not true. On the other hand, both the cross country estimation and panel data model for a county in macro level analysis cannot be a specific model. As an alternative, time series data analysis can be a useful method that performs stationarity test for series of data to avoid the spurious regression.

### 5.1 Unit Root Test

Stationarity is an essential test for time series data, and a time series data is said to be stationary if it has time invariant mean and variance. This test examines the order of integration of data. If the series is non-stationary it is said to have unit root in its characteristic equation. Therefore it is called a unit root test. Non-stationary time series data can be transformed into stationary by differencing. If a series changes to stationary by first difference, it is said to be integrated of order one, i. e., I(1) process.

In line with the other studies, this study also employs the ADF method to examine the stationarity of the series. The null hypothesis for the test is that the variable in the regression contains a unit root and the alternative hypothesis is the variable is stationary. Table 2 shows the values of ADF test in level and in first difference. Test method for testing unit root in time series data is used three models, i. e., with none, with constant and with constant and trend in level and in differenced data. When real GDP per capita is tested in level with none, constant and constant and trend, none of the t-stat are significant at the conventional level of significance. This indicates that GDP per capita is in I(1) process. Then the unit root test is performed in

Figure 7: Graphical Representation of the Time Series Data

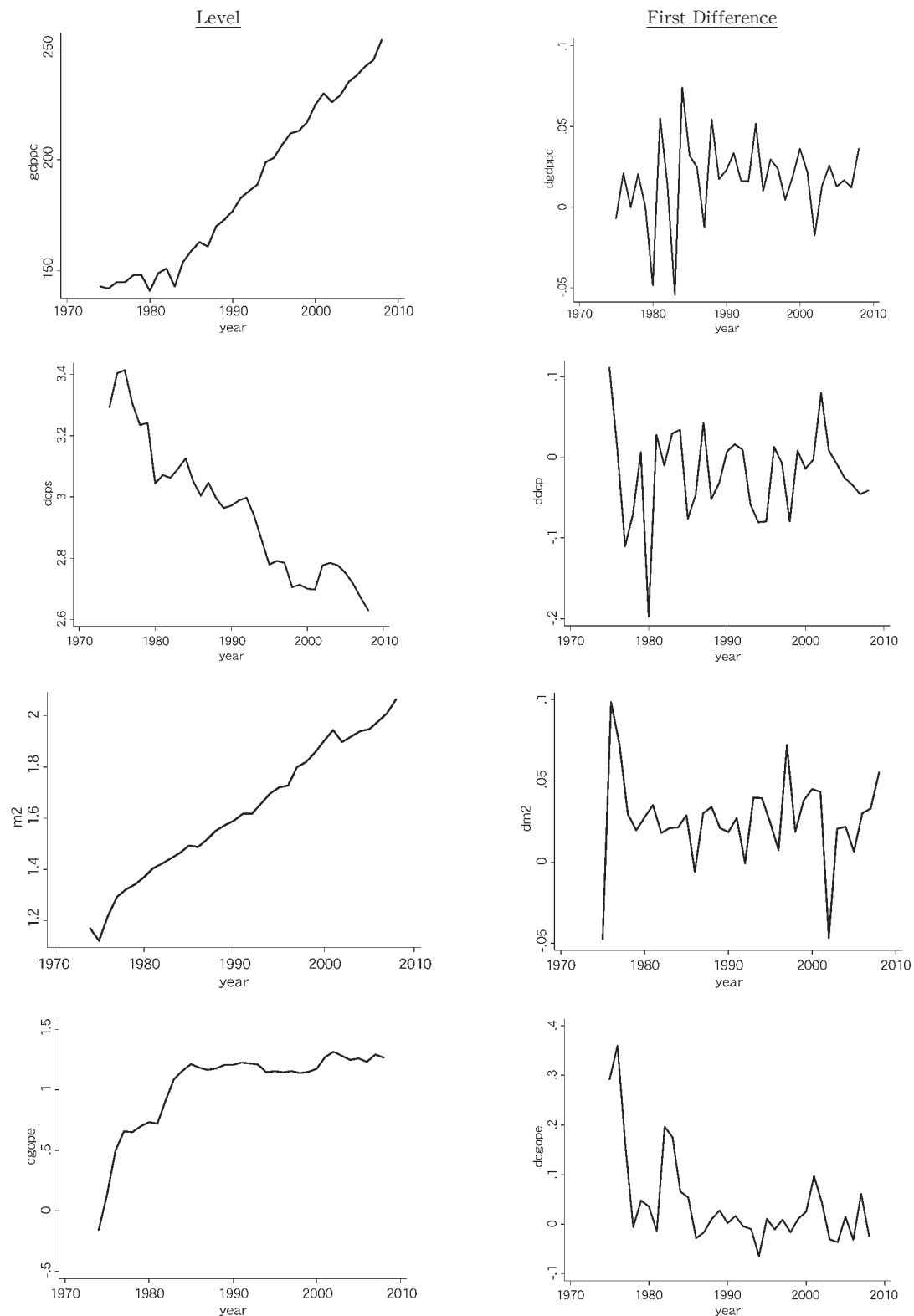


Table 2: ADF Tests for Unit Root

Variables	lag(0)			lag(1)			lag(2)		
	Level								
	None	Constant	Constant & Trend	None	Constant	Constant & Trend	None	Constant	Constant & Trend
GDPPC	4.651213	1.161525	-2.637347	4.651213	1.161525	-2.637347	4.651213	1.161525	-2.637347
	(1.0000)	(0.9972)	(0.2673)	(1.0000)	(0.9972)	(0.2673)	(1.0000)	(0.9972)	(0.2673)
	-2.053908	-0.83184	-2.489953	-2.053908	-0.83184	-2.489953	-2.053908	-0.83184	-2.489953
DCPS	(0.0399)	(0.7971)	(0.3307)	(0.0399)	(0.7971)	(0.3307)	(0.0399)	(0.7971)	(0.3307)
	5.278929	-0.503726	-3.014717	5.278929	-0.503726	-3.014717	5.278929	-0.503726	-3.014717
	(1.0000)	(0.8784)	(0.1431)	(1.0000)	(0.8784)	(0.1431)	(1.0000)	(0.8784)	(0.1431)
CGOPE	0.970155	-7.451618	-5.553403	0.151723	-3.460571	-3.456258	0.151723	-7.451618	-5.553403
	(0.9085)	(0.0000)	(0.0004)	(0.7235)	(0.0157)	(0.0612)	(0.7235)	(0.0000)	(0.0004)
	1st Difference								
GDPPC	-4.987873	-7.581169	-7.611372	-4.98787	-6.04804	-6.23998	-1.25194	-6.04804	-6.23998
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.1890)	(0.0000)	(0.0001)
	-5.290625	-6.134678	-6.133534	-5.29063	-6.13468	-6.13353	-5.29063	-6.13468	-6.13353
DCPS	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0000)	(0.0001)
	-3.457129	-7.183777	-7.330758	-3.45713	-7.18378	-7.33076	-1.59873	-7.18378	-7.33076
	(0.0011)	(0.0000)	(0.0000)	(0.0011)	(0.0000)	(0.0000)	(0.1023)	(0.0000)	(0.0000)
CGOPE	-3.579523	-3.534541	-3.649654	-3.57952	-3.53454	-3.64965	-3.57952	-3.53454	-3.64965
	(0.0008)	(0.0132)	(0.0407)	(0.0008)	(0.0132)	(0.0407)	(0.0008)	(0.0132)	(0.0407)

Note: GDPPC = real per capita GDP, DCPS = domestic credit to the private sector, M2 = broad money, CGOPE = credit to government and other public entities, Values in the parenthesis represent p-value.

Source: World Development Indicators, WDI online.

differenced data. Stationarity test on GDP per capita in first difference at different lags show the increase in the level of significance from level test to differenced condition. There is a smaller t-value of GDP per capita at first difference lag(2) with none. Similarly, financial development variables such as credit to the private sector and liquid liabilities have shown same characteristics in unit root test.

All series in level are non-stationary. When the tests are performed in first difference, all series are integrated at conventional 1 percent level of significance except credit provided by banks to the government and public enterprises. Thus variables are in I (0), when they are differenced.

### 5.2 OLS Estimation

The variables taken in the sample are stationary at first difference level. Therefore, it is better to examine the relationship between financial development and economic growth process in Nepal through OLS estimation.

Table 3: OLS Results; Dependent Variable:  $\Delta$ GDPPC

Independent Variables	Coefficient	t-stat	p-value
$\Delta$ DCP	0.168*	2.05	0.05
$\Delta$ M2	0.409**	2.52	0.017
$\Delta$ CGOPE	-0.120**	-2.61	0.014
Constant	0.014**	-2.61	0.017
Prob>F	0.0238	Adj R-squared	0.193
R-squared	0.267	No. of Obs.	34

GDPPC=real per capita GDP, DCPS=domestic credit to the private sector, M2=broad money, CGOPE=credit to government and other public entities. \* and \*\* represents the level of significance at 10 percent and 5 percent respectively.

Data are conventionally in I(0) process. Ordinary least square method is employed to examine the relationship among the variables. The OLS estimation shows log of real per capita GDP is a positive function of financial development variables; credit to private sector and liquid liabilities but negative function of credit supply to government and public enterprises. Large numbers of public enterprises in comparison to private companies still exist in the country and they are born by loss in each year. One of the reasons of non performing loans of banks is due to supplying credits to those sectors. It has resulted negative impact to the economy.

### 5.3 Causality Test

In an econometric model, causality refers to the direction of change in one variable due to change in another variable. Not only one directional causality but also bidirectional relationship

Table 4: Granger Causality Test

Null Hypothesis	Lags	F-Statistics	Prob	Decision
$\Delta$ DCPS does not Granger Cause $\Delta$ GDPPC	1	0.16370	0.6886	accept
	2	0.25005	0.7805	accept
$\Delta$ GDPPC does not Granger Cause $\Delta$ DCPS	1	1.24374	0.2736	accept
	2	0.76654	0.4745	accept
$\Delta$ M2 does not Granger Cause $\Delta$ GDPPC	1	0.16960	0.6834	accept
	2	0.21511	0.8078	accept
$\Delta$ GDPPC does not Granger Cause $\Delta$ M2	1	0.38739	0.5384	accept
	2	1.30388	0.2880	accept
$\Delta$ CGOPE does not Granger Cause $\Delta$ GDPPC	1	1.94968	0.1729	accept
	2	1.57989	0.2245	accept
$\Delta$ GDPPC does not Granger Cause $\Delta$ CGOPE	1	2.91207	0.0983	reject
	2	5.83975	0.0078	reject

between the variables may exist in the system. This means suppose in a regression model, economic growth is explained by financial development variables and if financial development causes growth and growth causes financial development then it can be possible that the coefficient is statistically significant. In such situation, Granger Causality test ascertains the bidirectional causality.

According to Granger (1969), Granger causality test is a method which can be used to investigate whether one time series can forecast another time series. Due to small number of observations and annual data we run ADF unit root test for lag0, lag1 and lag2. In this paper, the objective is to examine whether financial development leads growth or growth leads financial development. The financial development variables are domestic credit to private sector, liquid liabilities (M2) and the credit supplied by banking sector to government and public enterprises. Public enterprises are still exiting as major component of the economy and banking sector is supplying credit to those sectors. These institutions are in loss from long time. The causality test provides the support of economic growth led financial development. This preliminary test indicates more investigations are essential to confirm this result.

## 6 . Conclusions

This paper attempted to provide a general overview of the financial system in Nepal that could explain the policies initiatives and their impact. To that end, policy initiatives in different stages of financial development have been briefly discussed. The financial system of Nepal has passed through three different stages; primitive phase (1937-1956), controlled and regulatory phase (1956-1984) and modern liberalized phase (1984 onwards). The first phase was characterized by single commercial bank that tried to motivate people into the banking system by expanding the

bank based network. This period suffered from instability of exchange rate between Nepal and India because India was the main trading partner for Nepal and there was a free flow of Indian currency. Due to the high volatility of Nepalese currency vis-à-vis Indian currency people had no confidence with domestic currency. The second phase was state owned financial intermediaries majority phase that was controlled by the central bank. However, important steps in policy formulations and establishment of important financial intermediaries such as Agriculture Development Bank, Rastriya Banijya Bank, Employees Provident Fund, and Security Exchange Centre had taken place. Limited number of financial intermediaries, majority of state owned financial institutions and public enterprises, limited expansion of bank branches could not develop the financial sector appropriately in this period. Very slow growth of credit and monetary indicators, losses born by public enterprises, low participation of private sector in the economy forced to consider the policy reforms during the mid of 1980s. Therefore, opening up the entry barriers of banks to private sectors during mid of 1980s was an important step for the Nepalese financial system.

At the beginning of financial liberalization, the central bank and the government intended to attract private sector investment into the economy by intermediating through freely competitive financial system and speed up the economic growth. Policy reformations have taken place in foreign sector, financial sector and public enterprises. As a result of policy reforms, during the last two and half decades dramatic changes have been experienced by the financial system. First, the central bank and the government have initiated various policies to attract private sector investment into the economy and minimize the government's role in the economy. As a result, many public enterprises have gone through privatization. Secondly, new types of financial institutions such as finance companies, cooperatives, microfinance development banks, NGOs have entered in the economy. Thirdly, different types of existing institutions and newly launched institutions expanded rapidly in a very short span of time. Similarly, with the institutional development, monetization of the economy and credit intermediation by financial intermediaries took place in the rapid way. The flow of credit by banks has shifted from government and public enterprises sector to the private sector. Public participation in banking and capital markets has been rising enormously. Preliminary empirical analysis also suggests a long run relationship between financial development and economic growth. Therefore, it can be concluded that the financial system has a key role in the development process of Nepal and its role has been increasing more in a liberalized system. To detect the impact of development of financial system in the economic development of Nepal, further empirical investigations are necessary.

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