Chapter 1

Introduction
Human beings need goods, services and abode for their survival, and exchange system ensures the transfer of these goods and services among the people. Since pure barter system (as an exchange system) involved difficulties, mankind innovated money for smooth functioning of the exchange system. It is one of the major innovations of mankind.¹

In the present exchange system, money can buy any good or service put for sale. It can be used for either constructive or destructive purposes. However, human beings’ efforts are generally directed for their own welfare. Every nation endeavors to tame, and use the strength and utility of money for the betterment of its people in general. There is a need for building institutional framework that shall use and direct money power by devising, executing, directing monetary policy as well as monetary measures to uplift the general welfare of the people.

After the innovation of money and replacement of barter system by money, many changes, refinements and expansion have taken place in the economic arena in different countries of the world. These changes have brought about increasing complexities in the management of the economy, including monetary sector, which provided newer events and newer experiences. Scholars and academicians were inspired and encouraged to continually develop and refine economic theory, including the monetary theory, to capture new events and experiences after witnessing gradual changes in the economic activities.

A primitive economy produced whatever it needed, and fulfillment of personal economic needs did not require much economic interaction between households. However, a modern economy is interwoven with each economic unit having a set of diverse needs, and there is enormous amount of economic interaction to satisfy these diverse needs. Efficient functioning of modern economy is largely dependent on intermediaries who facilitate this economic interaction: matching the needs of one economic unit with another economic unit. One such vital intermediary is the financial institution.

The role of financial institutions in the macroeconomic performance assumes much importance. Schumpeter² opined that an efficient financial system supports and assists an economy to grow, as competent banks serve as catalyst for technological innovation by

¹ Crowther, G., 1940, The Outline of Money, Thomas Nelsons and Sons, London, p. 4
financing entrepreneurs who are likely to succeed in implementing innovative production processes and products. There is a growing amount of empirical evidences that validate strong linkage between the financial sector and economic growth. In fact, the level of financial depth does help to predict economic growth. At the same time, development of financial intermediaries positively influences the economic growth.

Financial institutions facilitate intermediation in the financial sector. Financial intermediation is a process of acquiring surplus funds from economic units – business firms, government agencies, and individuals – for the purpose of making available such funds to other economic units. They assist in transfer of savers’ fund to borrowers and provide savers with compensation (in form of interest income and dividends) for the use of their funds. In this manner, they act as buffer between savers and borrowers. They operate within a financial system to bring savers and borrowers together for mutual benefit. The financial intermediaries include commercial banks, finance companies, insurance companies, etc.

Financial intermediaries provide three key financial services: risk reduction, liquidity, and reduction in information and search cost.

Risk here implies uncertainty in returns. Since most people are attuned to risk aversion, they seek safe returns on their assets or savings. At the same time, people also wish to borrow from sources that charge a reasonable and predictable cost of borrowing. The financial institutions are in position to offer reasonable cost of borrowing as they collect savings from many sources, which gives them economies of scale. Thus, they provide ways to reduce risks faced by both the savers and borrowers.

Secondly, the financial institutions provide service of liquidity, which is a measure of how easily and quickly an asset can be converted into cash. They facilitate people to convert their savings into liquid assets such as deposits, stocks and bonds. This feature assists in conducting economic transaction with ease and convenience.

Thirdly, it becomes extremely difficult for an individual saver to locate a prospective borrower who would be willing to borrow the amount and compensate

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adequately. The task will be expensive, time-consuming and tedious. Likewise, a borrower has to undertake the same level of difficulty to locate a saver who would be willing to provide him with requisite amount of funds at a fair price. The information and search costs will be high for individual saver and borrower making transaction cost exorbitant. Because of the existence of financial institutions, the individual saver or borrower do not have to incur information and search costs that help in reducing transaction cost. The fund allocation becomes speedy and efficient as the search time is significantly reduced.

In most of the economies of the world, among all the financial intermediaries, commercial banks and finance companies assume greater importance as they are the largest of all financial intermediaries and they lend to all sectors of the economy. In addition, for efficient and effective implementation of monetary policy decisions, they are important as they fall under the purview of monetary authority unlike other financial intermediaries such as insurance companies. Thus, the monetary authority can directly influence the activities of commercial banks and finance companies. With their pervasiveness in the economic affairs of the country, they serve as a conduit of policy decisions of the monetary authority.

1.1 Review of Literature regarding Nepal

G.N. Sharma\textsuperscript{6} wrote a book, *Monetary Structure of the Nepalese Economy*, in 1987. He used data up to 1982. The objectives of his study were: (a) to study the historical nature of monetary control techniques used in Nepal; (b) to examine the money supply; (c) to estimate relationships of money with other economic variables such as GDP, etc; (d) to examine the efficiency of domestic control measures in the face of the openness of the Nepalese economy; and (e) to derive monetary policy prescriptions for the future. His study pointed out that the supply-side effect on the domestic prices from abroad was stronger than the internal source of inflation; the demand for money was a stable function of certain variables; and regulation of cash with commercial banks was an appropriate instrument for controlling money supply. However, he did not run any statistical tool to determine the money and income relation.

The book of Y.R. Khatiwada⁷, *Some Aspects of Monetary Policy in Nepal*, was published in 1990 and used data up to 1994 for the study. The study dealt with the analysis of the role of changes in the quantity of money in economic activity, prices, and balance of payments in Nepal. The study endeavored to investigate whether the monetary factors were major destabilizing factors and whether appropriate monetary actions were sufficient to ensure stability in the economy or not. The findings are that: (a) changes in the money supply were stable function of the changes in the disposable high-powered money, so that the monetary policy can attain desired changes in money stock by means of high-powered money management; (b) the statistically significant association between changes in the stock of money and money income indicated that money stock could be adopted as a potent tool of economic stabilization; (c) growth of money stock affected more on the nominal income growth than the growth of government expenditure; (d) the growth of money stock did not exert one to one positive effect on price; (e) the causality between money and price was unidirectional from money to prices, and no feedback from price to money; (f) the long-run analysis of money-price relationship exhibited stronger effect of money on prices; (g) the imported inflation was mainly transmitted to the Consumer Price Index (CPI) by cost-push factor; (h) the exchange rate adjustment should be viewed as a tool of price stabilization rather than a tool of balance of payments adjustment; (i) the exchange rate was not found to exert significant impact on balance of payments and the domestic credit to have significant effect on it; and (j) the impact of money on the balance of payments was much stronger than on prices.

Yadav Sharma Gaudel⁸ in his book, *Monetary System of Nepal*, used the data up to 1994 for the purpose of statistical analysis. It dealt with supply of and demand for money, and provided description about financial institutions, financial markets and exchange rate system in Nepal. The monetary balance sheet was used to determine the money supply. The study was silent about high-powered money, velocity of money, and money multiplier, and it said nothing regarding the stability of variables of demand functions for money in Nepal. According to this study, income elasticity of demand for money was positive and significantly less than unity in all log-linear models suggesting that money is not a luxury asset in Nepal. McKinnon’s hypothesis performed significantly better than other conventional semi log-linear model in explaining the demand function of money.

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Mr. Vijaya Raj Sharma’s article, ‘Inflation in Nepal’ (*The Economic Journal of Nepal*, Vol. 15, No. 4, Issue 60, Oct-Dec 1992) considered the causative factors of both internal and external origins, and estimated their relationship with inflation in Nepal. He used regression equation taking data from 1960 to 1990. His findings are that the prices in Nepal are affected by money supply, income and world prices. Money supply is the prominent cause of inflation and the effect of Indian prices on inflation could not be rejected.

Mr. Tirtha Kumar Shrestha in his article, ‘A Note on Inflationary Condition in Nepal’ (*The Economic Journal of Nepal*, Vol. 23, No. 1, Issue 89, Jan-March 2000) discussed the causes of price rise in Nepal from 1970 to 1990. According to his findings, the structural factors, such as shortfall in commodity producing sectors, increasing import prices, and rising government deficits were the causes of inflation in Nepal, and he recommended the government policy to increase production in both the agricultural and industrial sectors.

Mr. Yogendra Timilsina authored an article ‘Capital Market Development and Stock Price Behavior in Nepal’ (*Economic Review*, No. 13, April 2001). He has attempted to find the fair market prices of equity, and tested whether the behavior of equity prices remained stable. He used stock market indicators of mid-July of every year from 1986 to 2000. Coefficients of correlation between the earning per share (EPS) and corresponding market price on one hand, and dividend per share (DPS) and corresponding market price on the other were computed to know whether EPS or DPS had a higher degree of relationship with the market. The finding was that the market price of share depended on EPS as well as DPS, but DPS was more price-sensitive and it had direct and immediate response in the market.

Prof. Parasar Koirala and Prof. Puskar Bajracharya jointly authored an article ‘Nepalese Capital Market: Issues and Challenges’ (*Economic Review*, No. 16, April 2004). They assert that despite apprehensions of many, the secondary market, in the initial years, proved to be successful with both the entrepreneurs and investors showing earned acceptance and participation in the process. However, the market faced downward swings after 2000/01 because of unscrupulous management as well as prevailing unfavorable political-economic situation in the country. Serious problems existed in respect of

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transparency, corporate governance and disclosure. The Board seemed to have got converted into a superfluous body, which merely tried to fulfill formalities rather than seriously attending to corporate governance. The small shareholders suffered much on account of such poor situation. The authors suggested that initiatives need to be taken to protect investors, improve corporate governance and make the corporate bodies operate in a conducive and transparent manner to make the stock exchange a vehicle of growth.

S. R. Poudyal authored an article ‘Money Supply and Imports in Nepal’ published in *Savings and Investment* (Vol. XV, No. 3, 1991). His finding is that the effect of an increase in money supply of Re. 1 increased imports by 43 to 48 paisa.

### 1.2 Research Gap

Monetary authorities of every country, including that of Nepal, derive their authority and power from their statutes and they have to confine their activities within the limit prescribed by the law. The Nepal Rastra Bank Act, 1955, under which the Nepal Rastra Bank was established, did not have specific objectives mentioned in the Act. Generally, objectives should be unequivocally stated and prioritized in the law as it helps to monitor the performance of the central bank. The Nepal Rastra Bank Act, 1955 was replaced by a new Act, the Nepal Rastra Bank Act, 2002, which became effective from January 30, 2002. Section 4 of this Act states the objectives of the Central Bank.

No in-depth research in the field of monetary policy has been made after the period of 1990. In fact, liberalization of the financial sector has gained momentum and speeded up after 1990. Moreover, substantial changes have taken place in the monetary policy and financial sector in the post-1990 period. At the same time, the new Act empowered the Nepal Rastra Bank adequately and made it autonomous *de jure*. It is important to know what happened in the economy and whether the central bank really has become potent in respect of monetary policy and its formulation and implementation to fulfill the objectives assigned to it under the Act. This study intends to fill-in this research gap.

### 1.3 Objectives of the Study

The main objectives of the study are:

- To review the monetary theories and policies in general;
To briefly highlight the socio-economic and political aspects of the Nepalese economy (since political aspects have a great bearing on the socio-economic profile of a country, which in turn affect the monetary stability of Nepal);

To trace the evolution, growth, and performance of banks and financial institutions in Nepal; and

To critically examine the effectiveness of monetary policy in Nepal with regard to:
- Achieving price stability in Nepal;
- Maintaining exchange rate stability and stability in balance of payments; and
- Promoting and developing banking and financial system in Nepal;

1.4 Hypotheses

The study is based on the following hypotheses:

- Monetary policy measures can be potent instrument to maintain the price stability and balance of payments stability as well as develop banking and financial system in Nepal.
- Deepening and integrating of financial system leads to better economic growth.
- Monetary policy to be effective requires independent monetary authority.

1.5 Methodology

Statistical tools and techniques are used to test empirical results in the study. Multiple-regression in the form of Ordinary Least Square (OLS) is applied. The regressions are conducted in log-linear form to find relative changes (than absolute change) of independent variable, which is important to interpret and analyze the empirical results. Moreover, the coefficients also provide elasticity. Annual change (Δ) is generally used for the regression equation, which will enable to remove multicollinearity and heteroscedasticity from the data and increase the predictive capacity of the empirical result.

Time series data are used for the regression analysis. The data of the following variables are taken into account: Narrow money supply (\(M1\)), Broad money supply (\(M2\)), Time Deposits (\(TD\)), National Urban Consumer Price Index (\(CPI\)), Balance of Payments (\(BOP\)), Imports (\(IMP\)), Exports (\(EXP\)) and Gross Domestic Product (\(GDP\) or
Data are fabricated in the form of one-year lag \((t-1)\), two-year lags \((t-2)\) as well as in the form of annual change, an example of which is \(\Delta EXP_t = EXP_t - EXP_{t-1}\).

The data of \(CPI\) and \(GDP\) are based on annual collection of data using random sampling methods and the periodic surveys conducted by the Nepal Rastra Bank and the Central Bureau of Statistics. Those time series data, which are based on sampling method, may be non-stationary having no predictive capacity. Thus, the Dicky-Fuller (\(DF\)) and the Augmented Dicky-Fuller (\(ADF\)) tests are conducted to determine the unit-root, and whether the regression is spurious or whether it is only co-integrated. If the regression is only a co-integrated, and if that is established by Co-integrating Regression Durbin-Watson (\(CRDW\)) test, it does not become spurious regression. Co-integration and Error Correction Mechanism (\(ECM\)) will be used, if necessary, to correct the data.

The Granger test will be conducted to determine the direction of the effect between nominal income growth and money supply, and also between money supply movement and price movement. The monetary data, government expenditure figures, trade statistics and \(BOP\) statistics at current prices are converted into real term by dividing them by \(GDP\) Deflator Index. The partial adjustment model is used to derive speed of adjustment of effect of money supply changes on the movement of nominal income. The adaptive expectation model is used to estimate the expectation of people of price rise in the coming year and future. Though both models look similar, they are conceptually very different. The former is based on existence of technical and institutional rigidities, inertia, cost of change, etc; the latter is based on uncertainty about the future course of prices, interest rates, etc.

1.6 Sources of Data

The sources of data are secondary. Gross Domestic Product (\(GDP\)) data and fiscal data are taken from the Economic Survey reports published by the His Majesty’s Government, Nepal. Both these data are available only on annual basis, and quarterly data is not available. Nepal’s Urban Consumer Price index (\(CPI\)) data are available from 1972/73 only. The statistics of money supply, banking sector, balance of payments, and foreign trade are taken from the Quarterly Economic Bulletin and the Annual Economic Reports published by the Nepal Rastra Bank. It began to collect and publish the balance of payments data from 1974/75 and these figures are not available for the previous years. The
data of wholesale prices in India are taken from the Reserve Bank of India Bulletin. In respect of other data, they are taken from the International Financial Statistics published by the International Monetary Fund (IMF).

1.7 Scope of the Study

The study covers the period from 1974/75 to 2003/04 for quantitative analysis purposes. If major changes take place in the legal structure of the banking and financial sectors, information will be included for the period ending July 2005, but quantitative figures will not be included. The starting period 1974/75 is chosen in the study because of two reasons: (a) the balance of payments statistics are not available prior to this period, and (b) maintaining balance of payments stability is one of the objectives of the study, and without availability of BOP figures belonging to earlier periods before 1974/75, the study cannot become meaningful.

In Nepal, the fiscal year starts from mid-July to mid-July of the next year. The Bikram Sambat calendar is used in Nepal for official purposes and not the Gregorian calendar. In Bikram Sambat, the year tentatively starts in 14th or 15th of April and ends in 13th or 14th of April next year of the Gregorian calendar.

1.8 Limitations of the Study

The study does not cover fiscal measures, international trade policy, public debt measures and banking supervision. The last two areas are in dispute for the reason that whether it is desirable for the monetary authority to shoulder responsibility of these areas or whether those should be given to independent bodies. These questions need a separate in-depth research. Therefore, these areas are not included in the study.

1.9 Chapter Contents

The research work consists of five chapters. First chapter is Introduction wherein role of financial institutions in an economy and their importance are discussed. After reviewing the literature, the research gap has been established. Besides, the chapter also states the objectives of the study, hypotheses, scope, and limitations of the study. It briefly describes the methodology adopted in the study.
The second chapter, *Theoretical Framework, Policy Perspectives, and Empirical Research*, discusses various monetary theories, namely Quantity Theory of Money, Keynesian Theory of Demand for Money, Friedman’s Quantity Theory of Money, etc. It then proceeds to deal with conditionalities for effectiveness of monetary policy: stable demand for money, predictable income velocity, central bank independence, influence of money on economic activity, and financial deepening and integration. It addresses various issues regarding monetary transmission mechanism and monetary instruments. It also deliberates on monetary policy goal wherein policy targets, viz. price stability, monetary-aggregate targeting, exchange rate targeting, and stability in balance of payments are discussed. Lastly, it discusses the theoretical framework of the finance-led economic growth.

The third chapter, *The Economy of Nepal*, intends to present current Nepalese scenario. It describes the geography of Nepal. It also provides an overview of the economic and non-economic factors such as population, employment, national income and income distribution, agriculture, manufacturing and industry sector, international trade, transportation, energy, and social overheads. The chapter discusses formal financial sector of Nepal, which includes the Nepal Rastra Bank (the Central Bank), the commercial banks, and other financial institutions.

The fourth chapter, *Central Bank of Nepal and the Effectiveness of Monetary Policy*, is the core chapter presenting empirical analyses regarding conditionalities of effectiveness of monetary policy. It covers six major areas of concern. First, it discusses the empirical analyses for Nepal concerning money demand and money supply, which includes velocity of money. Next, it examines the role of money in promoting economic activity in Nepal, and then it explores price stability and inflation in the Nepalese context looking at different variables that influence prices in Nepal. Subsequently, it discusses exchange rate stability and the balance of payments adjustment by addressing the issues such as determination of exchange rate in Nepal and operations of foreign exchange market. In addition, it evaluates the application of monetary approach to the balance of payments in the Nepalese context. It also explores the theme of central bank independence detailing the experiences of different countries and the Nepalese experience in this regard. At the end, it delves into financial deepening by studying the role of the Nepal Rastra Bank. Moreover, it highlights financial sector reforms and financial sector performance.
The fifth chapter, *Research Findings and Recommendations*, aims at summarizing the empirical analyses and formulating monetary policy prescription. It briefly presents the findings of the research and provides recommendations to increase the effectiveness of monetary policy in Nepal. This research hence will be useful to policymakers, monetary authorities, academicians and students.