

**CREDIT PLANNING AND WORKING CAPITAL
FINANCE FOR LARGE PUBLIC LIMITED
COMPANIES IN INDIA**

**A THESIS
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IN ECONOMICS**

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CERTIFICATE

CERTIFIED that the work incorporated in thesis,
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my supervision. Such material as has been obtained from
other sources has been duly acknowledged in the thesis.

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CHAPTER I

INTRODUCTION

In an economy like ours where 'economic growth with social justice' has been the desired objective of National Economic Plans, credit planning as a part of financial resources planning assumes importance. Though the importance of deployment of bank credit among various sectors in conformity with Plan priorities was recognised even at the time of the initiation of the First Five Year Plan and has been emphasized in the subsequent plans, the concept of credit planning has gained much currency in the late 1960s, i.e. after the social control and nationalisation of commercial banks in 1969.

This chapter is divided into two sections. Section I deals with the following issues. Firstly, it tries to trace out the importance that is being accorded to credit planning in India by the authorities, viz., the Reserve Bank of India (RBI) and the Planning Commission. Secondly, an attempt is made to bring out the distinctions between (i) organised and unorganised sectors of financial system, (ii) short-term and long-term credit, and (iii) monetary planning and credit planning. Thirdly, a brief discussion regarding the inadequacy of quantitative and selective credit controls in aligning bank credit with Plan priorities is presented. Lastly, a comparison between 'indicative' or 'French-Style' planning and credit planning is also

presented. Section II deals with (a) the objectives of the study, (b) data base and methodology, and (c) plan of the study.

Section I

The First Five Year Plan indicated that, "Central banking in a planned economy can hardly be confined to the regulation of the overall supply of credit or to a somewhat negative regulation of the flow of bank credit. It would have to take on a direct and active role, firstly, in creating or helping to create the machinery needed for financing developmental activities all over the country and, secondly, in ensuring that the finance available flows in the directions intended. ... The banking system ... will thus have to be fitted increasingly into the scheme of development visualised for the economy as a whole, for, it is only thus that the process of mobilising savings and of utilising them to the best advantage becomes socially purposive."¹

Similar statements are found in the subsequent Five Year Plan Documents highlighting the importance of deployment of credit in relation to Plan objectives.² The importance of

¹ Government of India, Planning Commission, The First Five Year Plan, Vol. I, Chapter II, pp. 16-17.

² See (a) Government of India, Planning Commission, Draft Second Five Year Plan, Part I, p. 19.

(b) Government of India, Planning Commission, Fourth Five Year Plan, A Draft Outline, p. 20.

(c) Government of India, Planning Commission, Draft Five Year Plan, p. 3 and p. 16.

aligning bank credit with the Plan priorities has thus been recognised from the beginning of the First Five Year Plan.

The Reserve Bank of India (RBI) had also taken into account the importance of deployment of bank credit in line with the Plan priorities which may be substantiated by the following statements made by the RBI and its officials:

"The movements in the broad distribution of bank credit seems to accord with the requirements of the Second Five Year Plan with its emphasis on rapid industrialisation."¹

"In an economy whose credit needs are growing and where investment is being undertaken within the confines of an over-all plan, it is clearly important that the regulation of credit expansion should be linked both dimensionally and directionally, to the overall requirements of the Plan."²

"There has been emphasis on Credit Planning for some-time - i.e., on allocation of credit as well as on the total quantum of expansion that be safely permitted. The Planning Commission has also rightly been emphasizing that the annual budgetary plans should be dovetailed with credit plans of financial institutions."³

It, therefore, becomes clear that both the Planning

1 Reserve Bank of India, RBI Bulletin, October 1957, p.984.

2 V.G. Pendharkar and M. Narasimham, "Recent Evolution of Monetary Policy in India," RBI Bulletin, April, 1966, p. 360.

3 I.G. Patel, "Some Thoughts on Monetary and Credit Policy", Address to the 71st Annual General Meeting of the Indian Merchants' Chamber, Bombay, RBI Bulletin, February 1979, p. 96.

Commission and the RBI¹ have taken note of the importance of quantum of credit and its deployment in various sectors to fulfil plan targets pertaining to investment and output. However, before discussing the raison d'être of credit planning and issues like the need for an integration of credit plan with National Plan, in what follows an analysis of the concept of credit used for the definition of credit planning in our study is presented. This is being done while presenting the distinction between organised and unorganised financial institutions on the one hand and the distinction between long-term and short-term credit on the other hand, from the viewpoint of monetary and credit policies.

Organised and Unorganised Sectors of Financial System

Broadly, the Indian financial system may be divided into organised and unorganised sectors. Organised sector of the financial system comprises commercial banks, cooperative banks, development banks (IDBI, IFC, SFCs, NABARD), Life and

1 See for similar opinions: (a) H.V.R. Iengar, "Current Problems of Credit and Fiscal Policy," statement at the Joint Informal Discussion, 12th Annual Meeting of IMF and IBRD, Washington D.C., RBI Bulletin, November 1957, p. 1093.

(b) RBI Bulletin, February 1966, p. 124.

(c) P.C. Bhattacharya, "Monetary Policy and Economic Development", Lecture delivered at Indian Merchants' Chamber (B.F.Madan Memorial Lecture), RBI Bulletin, February 1966, p.132.

(d) L.K. Jha, "Some Thoughts on the Role of the Banking System in Our Economy", speech delivered at the Fourteenth Anniversary of Bombay Bankers, RBI Bulletin, September 1967, p.1203.

(e) C. Rangarajan, "Process of Policy Formation in Central Banks", Keynote Address at the 14th SEANZA Central Banking Course, Singapore, RBI Bulletin, August 1982, p. 525.

General Insurance Corporations, Unit Trust of India, etc. The unorganised sector includes Nidhis, Chit Funds, Moneylenders. By and large the operations of the unorganised sector are outside the realm of direct control of the Reserve Bank, while the organised segment of the financial system is amenable to such control.

Further, within the organised sector a broad distinction can be made between banking institutions and non-bank financial intermediaries. The former group comprises besides RBI, commercial banks and cooperative banks while the latter group includes development banks, Unit Trust of India, Life and General Insurance Corporations, etc. Both these categories are financial intermediaries mobilising savings of surplus economic units and financing expenditures of deficit spenders. However, there is an important difference as regards the impact of their operations on the financial system. For, in the process of intermediation the former group of institutions not only activate the existing stock of money but also create credit which is treated as a part of money supply. On the other hand, the operations of non-bank financial intermediaries result in only an increase in the velocity of circulation of the existing stock of money.

Short-term vs Long-term Credit

Another important aspect of the problem is the distinction between short-term and long-term credit. The word credit, in its broader sense, is generally understood to cover both short-term and long-term credit. However, most of the commercial

bank credit is mainly short-term in nature whereas credit by development banks and a substantial part of cooperative bank credit is long-term credit. This is so because firstly commercial banks traditionally preferred to finance self-liquidating trade bills or real bills and working capital requirements of industry and trade, both of which are for short time periods.

However it may be noted that, though commercial bank credit is treated as short-term credit, a large part of it ceases, in effect, to be short-term credit because of rolling over of credit. In other words, banks grant fresh credit to their clients and debit these amounts towards payment of outstanding credit in their accounts.

Secondly, the very nature of functioning of commercial banks, i.e. acceptance of deposits of various maturities ranging from current account deposits to fixed deposits perforce make short-term loans to occupy an important place in their asset portfolio. Another point that deserves to be mentioned here is that development banks have been started specifically to finance the long-term credit needs of industry and agriculture. An integrated credit plan or credit plan in a broader sense should aim at alignment of credit flows from both commercial banks and development banks, into various sectors and regions with output and investment targets of the National Plan. In other words, an integrated credit plan has to take into account both short-term and long-term credit. However the scope of the present study being limited to an examination of

the relationship between credit planning and working capital finances of industry, we use a rather narrower concept of credit covering only commercial bank credit.

Monetary Planning vs Credit Planning

Another aspect that needs clarification in this context is the distinction between monetary planning and credit planning. The chief distinction is that whereas in the former case, "... the problem is only its (money) total stock and changes in it." In the latter, "... the problem is not merely one of its (bank credit's) total and changes in it, but also of its allocation - sectoral, inter-industry, inter-party, regional - cost and other terms and conditions, duration, renewal of various sources, etc."¹ In other words, the essential difference between monetary planning and credit planning lies not only in their target variables, i.e., money and bank credit respectively, but equally or more so on the emphasis laid on the distributional aspects in the latter. Monetary planning pays little attention and plays no role in matters like correction of regional and sectoral imbalances in the process of development. On the other hand credit planning takes into account these problems apart from the total quantum of bank credit. Thus, in a planned economy where not only the aggregate rate of growth but also the development of different regions and sectors is equally vital, credit planning becomes crucially important.

¹ S.B. Gupta. Monetary Planning for India. Oxford University Press, Delhi, 1979, p. 1.

Credit Controls, Bank Credit Deployment
and Credit Planning

We may now turn our attention to the distinction between credit planning and credit control measures and try to explain the inadequacy of credit controls, per se, in aligning bank credit with the plan priorities. Firstly, it is to be noted that credit planning takes into consideration both promotional and restrictive aspects of policy while credit control measures, both quantitative or general and qualitative or selective, deal with either the dimensional or directional aspect of the policy depending upon the choice of instrument. Secondly, credit controls are, by and large, regarded as reacting or having to react to current economic situation by changes in availability and/or cost of credit. On the other hand, credit planning takes into consideration quantum of credit and its allocation and its cost as well as the necessary structural changes in the banking system that have to be effected in order to align bank credit deployment with the plan targets of output.

In the light of the above discussion on credit planning and credit control measures, we shall briefly analyse various credit control measures. Credit controls may be broadly classified into (a) quantitative, and (b) selective credit policy measures. Quantitative credit control measures include bank rate or discount rate, open market operations and variable reserve ratio. These are called quantitative credit controls since they affect the overall levels of availability of credit or cost of credit in general. The impact of these measures does not discriminate between various sectors of the economy.

It may be noticed that, "the immediate objective of the general control is to regulate the total supply of money and credit; it is not to determine the allocation of total supply of credit among the various types of borrowers or among its various possible uses, although some allocative effects may occur as an unintended by-product."¹ Thus, quantitative credit controls, depending upon the choice of instrument or a combination of instruments, influence either the overall availability of credit or cost of credit or both. However, the final effects need not necessarily be in correspondence with the Plan priorities regarding output targets of different sectors. For instance, when the cost of credit rises, all borrowers are likely to be affected unless there is a stipulation to shield specific sectors from the impact of a rise in interest rates. Likewise, whenever there is a curtailment in the availability of bank credit in the face of a sustained demand for credit, it will be likely that all sectors of the economy will be affected. However, it may be pointed out that individual banks may shield certain sectors from the impact of these measures. Even in this case, the actions of individual banks will be on their own initiative and, therefore, need not necessarily conform to the plan priorities. In other words, quantitative credit control measures aiming at the regulation of total supply or cost of credit may tend not to pay attention to the

¹ L.V. Chandler and S.M. Goldfeld. The Economics of Money and Banking, 7th Ed., Harper and Row, New York, 1977, p. 221.

purpose of borrowing or the standing of borrowers in the overall scheme of developmental priorities, or, the aspect of distribution of bank credit among sectors/units in accordance with the plan priorities is ignored.

On the other hand, selective credit controls operate specifically in relation to certain sectors and do not have all-embracing effects. The main purpose of selective credit controls is to regulate the flow and/or cost of credit for selected sectors or purposes. "They" as Patel puts it, "are intended to encourage or discourage specific types of investment and expenditure by influencing the lending policy of banks and similar credit institutions."¹ The instruments used under selective credit controls are (a) minimum margin requirements, (b) ceiling on amounts of advance for specified purposes, (c) differential rates of interest charged on different types of advances, and (d) moral suasion. These measures are intended to affect the availability and/or cost of credit to certain specified purposes. Selective credit controls, thus, have a limited role to play in the sense that they try to regulate the flow of bank credit into certain sectors or specific purposes, as a sub-set of monetary and credit policies followed by central banks. However, selective credit controls are more effective and may be used to influence aggregate economic activity if, as argued by Patel, "... fluctuations in effective

¹ I.G. Patel, "Selective Credit Controls in Underdeveloped Economies," IMF Staff Papers, Vol. IV, 1954-55, p. 73.

demand are concentrated in certain sensitive areas, and if these areas are particularly susceptible to changes in credit conditions, a decisive influence on aggregate demand may be exercised by controlling credit conditions in a few strategic fields only."¹

The importance of selective credit controls assume much significance for controlling inflationary or expected inflationary tendencies arising from certain sectors, primarily due to speculative inventory holdings.

In this context it is essential to note that in India selective credit controls have often been used in a restrictive way, i.e. curtailing the supply of bank credit for specified purposes. Very little has been done to use selective credit controls to align credit deployment with the Plan priorities, except Differential Rate of Interest (DRI) Scheme and Priority sector lendings. Under priority sector lendings and DRI Scheme, targets are fixed in terms of certain percentage of total bank credit that should flow to these classes of borrowers. But credit given under DRI and priority sector lendings forms only a part of total bank credit, thus leaving a substantial portion of total bank credit, the allocation of which is left to the individual banks. In Indian plans, only broad indications regarding investment over plan period by the private sector are given; no details as regards the sources and amounts of funds that could be obtained by the industry are available.

1 Ibid., p. 84.

This makes, deployment of bank credit consistent with the plan priorities, a difficult task for banking system by merely relying on credit controls.

In this context, it may be noted that though quantitative credit controls are concerned primarily with regulation of total amount of credit, with some modifications, they may be also used to influence the directional aspect of bank credit. Johnson argues that, "The central bank preferential rates in rediscounting paper originating in the sectors ^{are} earmarked 'high priority' in order to provide an added incentive for the commercial banks to increase lending to these favoured activities or at least to reduce the private cost of funds to the favoured activities. Or the Central bank may engage in discretionary alterations of the list of eligible types of paper in order to take account of alterations in the intensity with which it wants to push credit into different areas from time to time."¹ He also favours imposing differential reserve requirements in relation to the composition of different types of loans of the bank asset portfolios and states that "Banks whose portfolios conform to the requirements of certain prescribed percentages of loans to the 'high-priority' areas are allowed to maintain lower cash or liquidity ratios than the normal ratio."² Similar opinion has been expressed by J. Marquez

1 O.E.G. Johnson, "Credit Controls as Instruments of Development Policy in the Light of Economic Theory," Journal of Money, Credit and Banking, Vol. 6, 1974, pp. 86-87.

2 Ibid., p. 87.

while arguing in favour of differential reserve requirements linked with the composition of banks' asset portfolios.¹

However, the effectiveness of the use of differential discount rate mechanism to direct the flow of bank credit into preferred sectors or activities depends to a large extent on the development of the bill market and the significance of bill-finance as an instrument of private finance. As the bill market in India is not so developed, the efforts of the Reserve Bank seeking to direct increased amounts of bank credit into sectors viz., agriculture, small scale industry, etc., which incidentally happen to be the sectors where bill financing is less common, may not be successful by a policy of differential discount rates. On the other hand, prima facie, differential reserve requirements seem to be relatively more useful in this context.

However, it needs to be recognised that use of the above-mentioned two techniques to guide the flow of bank credit into preferred sectors or uses may dilute the power of central bank in controlling the total quantum of bank credit. For, in the case of differential discount rates, the banks may first lend to those borrowers coming under the eligibility list, rediscount with the Central bank and thus be able to lend to the non-priority sectors or borrowers almost on the same scale as they would have done in the absence of their first round of

¹ J. Marquez, "Financial Intermediaries and Economic Development," in H.S. Ellis (ed.). Economic Development for Latin America. Macmillan, London, 1963, p. 184.

operations, i.e., lending to the priority sector borrowers. In effect the total credit given by banks will be at a higher level than it otherwise would have been. Likewise, under differential reserve requirements total advances by banks will be at a higher level, since the total reserves available for the banking system will be at a higher level with differential reserve requirements. The point that is sought to be highlighted is that the use of differential discount rates and differential reserve requirements may succeed in inducting a larger flow of bank credit to the priority areas, but as explained above lead to a larger aggregate supply of bank credit.

Both quantitative and selective credit controls, per se, therefore, have certain limitations in achieving a credit distribution in accordance with the plan priorities. It is in this context credit planning aimed at bank credit deployment consistent with the overall Plan priorities becomes important.

Indicative or French-Style Planning

Before presenting the relationship between overall planning and credit planning, a brief discussion on 'indicative planning' or 'French-style' planning is in order since in discussions on credit planning in India it is usual to refer to French planning.¹

The first stage in the French planning system is choosing

¹ (a) M. Narasimham, "Case for More Active Credit Planning", Economic and Political Weekly, February 1967, pp. 303-308.

(b) P.C. Bhattacharya, op.cit., p. 132.

the main 'options' on which the plan should be based. This involves an elaboration of preliminary sketches of the process of economic development upto the terminal year of the plan. These growth sketches and variants of them are used as the basis for investigating alternative hypotheses for the overall growth rate to make clear the possible options of the plan as regards aggregate investments associated with different overall growth rates. Then, this 'Report on the options of the plan' prepared by the Commissariat is placed for approval of the government, then to be passed on to the 'Economic and Social Council' for its opinion and finally to be voted by Parliament to become a law.

Then, the second stage begins when various commissions, viz., Vertical and horizontal commissions, work out the plan within the framework of directives given by the government. The vertical commissions work out sectoral investments and output and also give estimates of the resources and requirements of the economy in a detailed way, i.e., branch-wise. Further, along with investment estimates, financial estimates are given indicating, inter alia, the extent of finance expected from the banking system and other financial institutions. In other words, branch-wise estimates regarding production, sales, fixed capital investment, etc., both in terms of physical and financial units as well as sources of funds for finance are prepared by the vertical commissions. During the process of preparation of detailed branch forecasts, discussions and exchange of information takes place among the vertical

commissions and between vertical and horizontal commissions. One of the important tasks performed by horizontal commissions dealing with general aspects of the economy is that of synthesizing financial estimates of vertical commissions to achieve an overall financial balance. Moreover, these detailed final branch-level forecasts done by these commissions are used for cross-checking the validity of original hypotheses regarding the option of aggregate rate of growth.¹ Thus, credit plan is built into the overall plan.

However, it is important to note that the Credit Plan in French-Style Planning is indicative in nature, i.e. devoid of any mandatory intervention by the authorities. Neither the Central Bank of Finance nor the Government attempts to influence the lending policies of the banks. This is despite the fact that in France the Government directly controls a large part of the banking sector and can thereby influence the allocation of credit in conformity with plan priorities.² Credit plan, thus, only serves as an indication to both private investors and banks regarding sources of funds, and credit demands respectively. And it is argued that the absence or

1 (a) Saul Estrin and Peter Holmes. French Planning in Theory and Practice. George Allen & Unwin, London, 1983, Chap.4.

(b) C.P. Kindleberger, "French Planning," in M.F. Millikan (ed.). National Economic Planning. NBER, Columbia University Press, New York, 1967, p. 283.

(c) Vera Lutz. French Planning. American Enterprise Institute for Public Policy Research, Washington, D.C., 1965, pp. 15-20.

2 Pierre Bauchet. Economic Planning: The French Experience. Heinemann, London, 1964, pp. 104-107.

lack of direct controls over banks' lending operations by the authorities has led to non-fulfilment of plan targets. Therefore, suggestions have been made to enhance the control over banks by the authorities so that banks are made to follow the priorities indicated in the plan in deploying credit to various sectors or branches. To sum up, the essence of French-style or indicative planning, as M. Massb states, is that, "The Theory holds that the 'logical element' which resides in proven internal consistency of the plan makes it seem reasonable to economic operators to conform to the plan's forecasts and that this element gives the plan a 'power of persuasion' which causes it to be implemented or realised and makes it 'a plan in the real sense of the term', even if it has little, if any, instrumentation from outside."¹ In other words, the internal consistency between the estimates of various sectors with respect to output and input on the one hand, and balance between financial requirements and sources of funds on the other hand achieved in the Plan documents, makes the plan successful by inducing all the economic units to conform to the plan forecasts. The intervention by the authorities, therefore, will be very little and hence French Planning is known as indicative planning.

After this brief survey of some of the important issues related to credit planning, now we shall present in the next section the objectives of the study, sources of data, methodology and plan of the study.

¹ Vera Lutz. Central Planning for the Market Economy. Longmans, Green and Co. Ltd., London, 1969, p. 59.

Section II

a) Objectives of the Study

The study attempts to explore the relationship between credit planning and working capital finances for the large and medium public limited companies in India. The following aspects are examined in the study:

- i) the impact of credit planning on reducing rural-urban, regional and sectoral imbalances in regard to the availability of banking facilities and bank credit deployment;
- ii) demand for bank credit by industry, i.e., large and medium public limited companies;
- iii) the extent of excess bank borrowings by industry and the scope for reduction of the over-dependence of industry on commercial bank credit by following the recommendations of the Tandon Committee and the Chore Committee.

b) Data Base and Methodology of the Study

All the data that we have used in the study are collected from published sources, except the data for 100 companies which is obtained from the RBI, Bombay. RBI Studies on Company Finances, RBI Bulletins, Reports on Currency and Finance and Basic Statistical Returns - Banking Statistics are the major sources of information used in Chapters II, III, IV and V of the study. Data on net domestic product and value added by manufacturing sector (industry-wise) used in Chapter II, are collected from National Accounts Statistics published

by the Central Statistical Organisation. The company level data obtained from the RBI is used for the analysis in Chapter VI.

The technique of single equation multiple regression is used in Chapter III. The excess bank borrowings are computed at industry level in Chapter V and at company level in Chapter VI by following the inventory and receivables norms and lending Methods I and II suggested by the Tandon Committee.

c) Plan of the Study

The plan of the study is as follows:

The study is divided into seven chapters. The introductory chapter is followed by a chapter in which the concept of credit planning, its formulation and objectives are discussed. The theoretical issues concerning different approaches, viz., RBI's approach and money multiplier approach to money supply determination are presented in this chapter. The evolution of credit planning in India and its evaluation — in terms of broad objectives like bank branch expansion, sector-wise, state-wise, industry-wise deployment of bank credit and priority sector lendings — are also included here.

Chapter III deals with the demand for bank credit by industry. The demand functions for bank credit are estimated by using linear regression methods. An attempt is made to explain the demand for bank credit using output, inventory, trade credit, rate of interest, rate of inflation and lagged bank credit as explanatory variables. Different combinations of these explanatory variables are tried out in the regression models.

In Chapter IV is presented an analysis of bank credit requirements of industry by following the 'Working Capital' approach. The relationship between bank credit requirements and current asset holdings is discussed with the help of the 'operating cycle' hypothesis. Further, in relation to the discussion on current asset holdings, a theoretical backdrop regarding inventory behaviour of industry is also presented. Finally, the pattern of working capital of large and medium public limited companies for the period 1965-66 to 1980-81, following the working capital gap approach is analysed. However, it is to be noticed that in Chapters II and III the empirical analyses are done at the aggregate industry level. To sum up, in this chapter an attempt is made to bring out the need for and importance of norms with respect to inventory and receivables which, in turn, will serve as a basis for judging bank credit requirements of industry, vis-a-vis other sources of funds.

Chapter V presents a critical evaluation of the Tandon Committee recommendations regarding inventory and receivables norms and Methods of lending. Excess bank borrowings of eight selected Indian industries are computed within the framework of the Tandon Committee suggestions for the period 1970-71 to 1980-81. Excess bank borrowings are computed according to lending Methods I and II. And also, an attempt is made to find out which component or components of inventory are in excess of required levels as per the Tandon Committee's norms. Further, we have also examined the issue of bringing all industries

under lending Method II as suggested by the Chore Committee. A detailed analysis regarding the implications to banking system of a switch-over to lending Method II is presented. Besides, an attempt is made to explain excess bank borrowings arrived at within the Tandon Committee's framework, in terms of (a) excess current asset holdings, (b) inadequacy of long-term funds to finance fixed assets, and (c) inadequacy of long-term funds to finance a part of current assets.

In Chapter VI an attempt is made to examine the excess bank borrowings at the firm level. This analysis reveals that the behaviour of different corporate units within the same industry is different with respect to inventory holdings, borrowings from various sources, etc. The analysis at the firm level throws some additional light on the soundness or appropriateness of inventory and receivables norms and methods of lending suggested by the Tandon Committee. Further, this chapter examines the relationships between size of companies and excess bank borrowings and rate of growth of companies and excess bank borrowings.

The last chapter presents, in brief, the conclusions drawn from the empirical analyses carried out in the earlier chapters.

CHAPTER II

CREDIT PLANNING IN INDIA

This chapter deals with (a) objectives of credit planning, (b) formulation of credit plan, and (c) an analysis of the achievements of credit planning in India in terms of its objectives. The chapter is divided into four sections and Section I contains the objectives of credit planning and a brief summary of some of the research reports and observations of Study Groups with respect to deployment of commercial bank credit in India. Section II discusses formulation of a credit plan. The emphasis here is on:

- a) the relationship between credit planning and national plan, and
- b) the relationship between credit planning and money supply.

Again, the two related issues, as regards (b) discussed are:

- i) how the desired rate of growth of money supply is determined, and
- ii) the approaches to achieve the desired level of money supply.

An evaluation of the objectives of credit planning in India is presented in Section III. An attempt is also made here to examine, with the help of available data, the progress that has been made during 1969-84 towards achieving these

objectives. A brief summary and conclusions are outlined in Section IV.

Section I

Credit planning in India may be said to have begun in the year 1969. Introduction of 'Social Control' over commercial banks and the setting up of National Credit Council have marked a beginning in viewing bank credit as a scarce resource, and since then some attempts were made to distribute bank credit according to certain priorities. Further, various studies also highlighted that the deployment of bank credit was industry biased at the sectoral level; within the industrial sector big borrowers accounted for a larger share of outstanding bank credit.¹ The Reserve Bank of India (RBI) states that, "there have been complaints that the bulk of bank advances tend to be directed to the large- and medium-scale industries and big and established business houses, while priority sectors such as agriculture, small-scale industries and exports have not been receiving their due share".² It was also pointed out that the outstanding bank credit to industry had grown at a faster rate than the increase in its output or inventories.³ This implies

1 (a) For example, see, L.C. Gupta, "A New Era in Banking: Background and Significance," in L.C. Gupta (ed.), Banking and Working Capital Finance, Macmillan, Delhi, 1978, p. 13; (b) D.J. Kanvinde, "Towards Effective Credit Planning in Banks," in L.C. Gupta (ed.), op.cit., p. 166.

2 Reserve Bank of India, RBI Bulletin, May 1968, p. 642.

3 National Credit Council, Report of the Study Group on the Extent to Which Credit Needs of Industry and Trade Are Likely to Be Inflated and How Such Trends Could Be Checked Bombay, 1968; (b) S.L. Shetty, "Deployment of Bank Credit," in L.C. Gupta (ed.), op.cit., pp. 156-157.

that the industrial sector due to either inefficient management and/or for speculative inventory holding has obtained bank credit in excess of its production requirements. The consequences of both are undesirable since the former leads to inefficient use of resources and the latter creates inflationary pressures in the economy.

All these, together with the emphasis given to priority sector lending and government's increased resort to bank borrowings, necessitated a fresh look at the distribution of commercial bank credit. Nationalisation of 14 major commercial banks in early 1969 was the culmination of this process bringing a substantial segment of the banking system under direct public ownership and control. Now we shall present the objectives of credit planning.

Objectives of Credit Planning

It is generally assumed that the objective of credit planning is to ensure that the available bank credit is allocated among different sectors/units according to certain national priorities. Since, the term national priorities can be interpreted in many ways, the objectives of credit planning, according to national priorities, may be listed as follows:

- a) aiming at the allocation of credit among different sectors so as to ensure the fulfilment of the plan targets regarding output of different sectors,
- b) allocation of credit to reduce urban-rural, as well as inter-regional disparities, and

c) ensuring credit for priority sectors.¹

It is primarily the responsibility of the central bank to ensure that banks deploy their funds in such a way that the above objectives will be achieved. The RBI has been making systematic efforts since the introduction of 'social control' to provide a framework for deployment of bank credit to meet the production requirements in line with Plan priorities.

The National Credit Council (NCC) was set up to assess the demand for credit of different sectors and to ensure adequate flow of credit to the neglected sectors and the weaker sections of the society. One of the Study Groups² set up by the NCC has recommended the adoption of an area approach by commercial banks to improve banking facilities in the unbanked and underbanked centres and achieve balanced regional development. The 'lead bank scheme' was introduced accordingly in December 1969, under which specific districts were allotted to individual banks which are required to act as consortium leaders to develop banking facilities with special emphasis on rural and semi-urban areas. The lead banks were expected to (i) locate growth centres for opening branches, (ii) identify credit gaps, (iii) formulate suitable schemes for development, taking into account the availability of resources, and (iv) prepare district credit plans to meet credit requirements in

¹ See, C. Rangarajan, "Some Issues in Linking Credit Planning with National Planning," in S.L. Shetty (ed.), Framework for a National Credit Plan, NIBM, Bombay, 1978, p.23.

² National Credit Council, Organizational Framework for the Implementation of Social Objectives, Bombay, 1969.

collaboration with other financial institutions in the area. The main thrust of the 'area approach' and 'lead bank scheme' is twofold. Firstly, to provide bank credit to economically viable projects or schemes, thus, stimulating development at the local level. Secondly, these schemes reflect the financial counter-part of the planning at micro-level, viz., block level planning.

Further, and more importantly, the RBI has been trying to regulate commercial bank credit to industrial sector, so that credit requirements of the other sectors may also be met by the banks. The acceptance of the Tandon Committee recommendations with respect to inventory and receivables norms and bank finance to industry, is in consonance with the objective of credit deployment on the basis of production at industry level.

In the following section, the formulation of credit plan is presented.

Section II

Formulation of Credit Plan

Credit planning aims at an optimal¹ utilisation of bank credit and such a plan is prepared by the central bank, i.e., Reserve Bank of India (RBI) in the Indian context. To begin with, credit planning starts with the question of what should

¹ Here 'optimal' refers to a pattern of sectoral distribution of bank credit consistent with total bank credit which is desirable from the point of view of monetary authority to achieve a production-oriented deployment of bank credit.

be the total bank credit that will be consistent with the Plan objectives?

On the premise that credit should be made available for only productive purposes, total credit must be in accordance with the expected levels of output in the Plan projections. The level of real output primarily being dependent on the availability of real resources, the implicit constraint on total credit is the availability of physical resources. Since bank credit provides access to real resources, to achieve the targeted rate of growth as well as the desired composition of output, credit planning must aim at a pattern of credit deployment that would help to achieve Plan objectives. The problem of determining total bank credit, thus, has to be seen in relation with the targeted output as envisaged in the 'National Plan'.

Once the total available bank credit is determined, then the problem that needs attention is the appropriate deployment of credit among sectors/units. The total credit has to be apportioned between different sectors or regions in such a way as to help them to achieve the Plan targets of output, reducing the regional or sectoral imbalances in credit facilities.

The problem is one of assessing and meeting the genuine credit requirements based on production plans. This would require appropriate projections regarding output, investment activity, behaviour of the price level and other related variables. To have an idea of demand for credit by the private sector, the RBI holds discussions with the users of credit such as business and commercial organisations, associations of

different industries, chambers of commerce, etc. In the assessment of demand for bank credit, it is assumed that the provision of bank credit is for meeting the working capital requirements based on production plans. In this sense a production elasticity of credit or credit coefficient of production could be estimated for each sector by working out the relationship between production and bank credit. Therefore, at individual bank level, which is ultimately responsible for mobilising deposits and deploying credit, credit budget or micro credit plan is prepared. A proper coordination and perfect understanding between Reserve Bank which draws up the macro credit plan, and commercial banks, implementing agencies, is necessary. At the bank's level there should be greater efforts to formulate credit plans at the micro level, in the context of overall shortages of lendable resources, and in the light of directions and guidelines given by the monetary authority on broad sectoral deployment of credit.¹

However, it is rather difficult to determine bank credit requirements directly in relation to output. This is because, output is a function of, say, stock of capital, technology, etc., apart from availability of finance to meet working capital requirements. And one can visualise situations, other things remaining the same, with varying demands for bank credit, say, of an industry for the same level of output, like:

¹ K.S. Krishna Swamy and A. Raman, "Recent Credit Trends and Evolution of Monetary Policy," RBI Bulletin, December 1973.

- a) expected sales higher than actual sales, resulting in an increased demand for bank credit,
- b) easy availability of trade credit, reducing the demand for bank credit, and
- c) changes in other sources of funds, influencing the demand for bank credit.

Hence, the relationship between output and bank credit at firm/industry level gets obfuscated by the influence of other factors in operation and hence less reliable, for arriving at the total credit needs, by aggregation.

Credit Planning and Money Supply

The relationship between credit planning and money supply is a direct one and depends upon the expected rate of increase in output, as envisaged in the National Plan. The anticipated rate of growth of output in the Plan becomes a given datum for the formulation of credit plan.

As pointed out earlier, because of the difficulties involved in translating production targets into credit requirements, it is useful, in the first instance, to arrive at a desired rate of expansion in money supply consistent with National Plan's output targets. Formulation of the monetary budget and determining the increase in money supply, is therefore, the starting point of credit planning. In a monetary budget, the rate of increase in money stock is worked out on the basis of the postulated rate of increase in output as given in the National Plan as well as some broad assumption regarding the expected change in price level. Even under the assumption of a stable price level, the rate of growth in money supply may

exceed the rate of increase in real income because of two factors. Firstly, monetization of the economy and secondly the rise in incomes may tend to increase the cash balance requirements of the community.

Raman states that, "Given the postulated rate of growth in real national income, the rate of monetary expansion will have to be somewhat higher than that of real income, in view of increased monetization of the economy and the fact that with the increase in incomes, the community's cash balance requirements go up."¹ Many writers have expressed similar opinion regarding the determination of the desired rate of monetary expansion.²

In a complex real world situation, however, fluctuations in price level at different rates in different periods are often observed than constant or stable price level. Hence, in the determination of the rate of growth of money supply in the monetary budget the monetary authority has to take into account the expected rate of change of price level.

The preceding analysis, rests on the assumption that the monetary authority can control the nominal money stock. In

1 A. Raman, "Credit Planning and Formulation of Credit Policy," in S.L.N. Simha and A. Raman (ed.), Credit Planning and Policy, Vora and Co., Bombay, 1974, p. 11.

2 See, (i) Nalini K. Ambegaonkar, "The Existing System of Credit Planning in India: Its Scope, Content and Limitations," in S.L. Shetty (ed.), op.cit., p. 31.

(ii) A. Vasudevan, "An Approach to Money Supply Expansion in India," in S.L. Shetty (ed.), op.cit., p. 37.

other words, money supply is a policy controlled variable and the monetary authority is capable of varying the supply of money at whatever rate it chooses it to be. The distinction between nominal money stock and real money balances is important since in received theory it is an agreed proposition that what the monetary authorities can control is nominal money stock and not the real money balances. The latter is thought to be determined by the asset preferences of the public.¹ The public as ultimate owners of wealth decides what proportion of income it should hold in the form of money, given its nominal income, price level and rate of interest. Since, in equilibrium, demand for money is equal to the supply of money, it follows that it is the public that, by their asset preferences, bring changes in price level as well as rates of return on various financial assets, ^{ing} determines the real money balances. Thus, what emerges from the above discussion is that the rate of growth in real income and the magnitude of the income elasticity of demand for money are crucial in determining the rate of increase in money supply.

Prior to the discussion on the income elasticity of demand for money and the empirical evidence presented to substantiate the importance of it in determining the money supply from the demand side, it is essential to note that there is some difference in the demand functions for money between house-

¹ David Meiselman, The Role of Money in National Economic Activity in Controlling Monetary Aggregates, Proceedings of the Monetary Conference, June 1969, The FRB Boston, September 1969, p. 16.

holds and business firms. Though the form of the function is essentially the same, the variables that enter as arguments of the function differ.¹ However, as our main concern being the aggregate demand function for money of the economy, the empirical estimates of the income elasticity of demand for money are from studies dealing with the aggregate demand for money functions cutting across various sectors of the economy.

The demand for money may also be influenced by rates of return on non-monetary financial assets proxied by an interest rate explaining the substitution between money and financial assets, and the expected rate of change in the price level capturing the substitution effect between money and physical goods. However, the empirical studies on demand for money for developing countries have highlighted that variables other than real income determining the demand for real money balances are not very important.² It is also contended that the substitutability between money and physical goods was more evident than the substitutability between money and other financial assets. This reflects the public's preference to invest in physical goods as a hedge against inflation and also the absence of a well-developed financial market. Therefore, in demand for money functions, the expected rate of inflation used as a

1 For a detailed discussion see Milton Friedman, "The Quantity Theory of Money: A Restatement," in M. Friedman (ed.), Studies in the Quantity Theory of Money, Chicago University Press, Chicago, 1956.

2 J.D. Adekunle, "The Demand for Money : Evidence from Developed and Less Developed Countries." IMF Staff Papers.

proxy for the return on physical goods was significant rather than the rate of interest, a return on financial assets. Adekunle observes, "... on a priori grounds one would expect that the influence of the substitution effects emanating from the financial assets would be less important in less developed countries than in developed economic environments ... the role of the expected rate of change in prices would be expected to be important in the money demand relationship in less developed countries."¹

As regards wealth effect operating via individual's decisions with respect to consumption, savings and investment, there are broadly two views, viz., (a) neo-Keynesian and (b) monetarist.² The discrepancy between actual and desired cash balances may arise because of a change in the general price level. The portfolio approach of demand for money treats money as one of the several assets — financial and physical — in which the individuals as ultimate wealth owners want to hold their wealth given the budget constraint, i.e., wealth or income.

1 Ibid., p. 224.

2 See, (a) Warren L. Smith, "A Neo-Keynesian View of Monetary Policy," in Controlling Monetary Aggregates, Federal Reserve Bank of Boston, Boston, 1969.

(b) Yung Chul Park, "Some Current Issues on the Transmission of Monetary Policy," IMF Staff Papers, Vol.19, No.1, 1972.

(c) G.E. Makinen, Money, The Price Level and Interest Rates: An Introduction to Monetary Theory, Prentice-Hall of India Pvt. Ltd., New Delhi, 1978.

(d) David Fand, "Some Issues in Monetary Economics," Review - Federal Reserve Bank of St. Louis, January 1970.

The neo-Keynesians hold the view that monetary policy, i.e. changes in the stock of money, as such does not produce any direct wealth effect. For, in their view, an increase in money supply, say, through open market purchases of government securities will only lead to a change in the composition of wealth but there will be no change in the community's total wealth. This is so because in the neo-Keynesian framework bonds are treated as part of community's wealth. Hence, open market operations result in a mere swap between money and bonds. However, open market operations do produce a wealth effect in their framework, via, a change in the interest rate. The open market purchases lead to a decline in rate of interest and, therefore, the capitalized value of expected income stream from bonds and equities will rise. This leads to an increase in the consumption by individuals who feel wealthier because of the wealth effect induced by a decline in the rate of interest. This increase in consumption, induced by the wealth effect, leads to an increase in the cash balance requirements of the community. In other words, wealth effect results in an increase in the demand for money.

On the other hand, monetarists do not consider government bonds as a part of net wealth of the community. They argue that tax payers have to take into account the future tax liability to meet the interest and redemption payments, of bonds. Hence, bonds are not a part of private net wealth. Therefore, in the monetarist view, changes in money supply by open market operations do produce a direct wealth effect, since

money which is treated as a part of net wealth of the community is substituted for bonds that are not a part of net wealth of the community. An expansionary monetary policy, therefore, leads directly to an increase in the net wealth of the community. Hence, within the monetarist framework of analysis, individuals in an attempt to equilibrate actual and desired cash balances spend on both financial and physical assets including consumer durables, when their actual cash balances are in excess of desired cash balances. The direct wealth effect induced by a change in money supply, in the monetarist analysis, leads to an increase in the consumption expenditures and thus results in the increased demand for money. However, in many empirical studies on the estimation of demand function for money, the results of which are briefly presented below, income is used as a proxy for wealth.

Several studies show that the income elasticity of demand for money in India is unity or not far different from it. Trivedi using permanent income and expected rate of inflation as arguments in the estimation of demand for real money balances (1951-52 to 1974-75) reports that the income elasticity of demand for money is 0.989.¹ A study by Sampath and Hussain shows that the income elasticity of demand for real balances is 0.90 with only income as the explanatory variable and an income elasticity of 1.1 with income, short term interest rate

¹ M.S. Trivedi, "Inflationary Expectations and Demand for Money in India (1951-1975)," The Indian Economic Journal, Vol.28, No.1, July-September 1980, p. 68.

and price level as arguments in the function.¹ Another study by Thomas Paul using permanent income as the scale variable finds that the income elasticity is equal to unity.² Gupta also reports that the income elasticity of demand for real money balances is unity or not different from it, i.e., 1.019.³ The explanation that follows, from the above evidence, is that the income elasticity being unity, ceteris paribus, a one per cent change in real income leads to a one per cent change in the demand for real balances.

To sum up, in the determination of demand for real money balances, income elasticity is the crucial variable. Since, in equilibrium, demand for money is equal to the supply of money and on the assumption that income elasticity is not different from unity, rate of increase in money supply should be the same as the expected rate of increase in output. When the factor of monetisation is taken into account, the rate of growth in money may be higher than the expected growth rate in output. Hence, three factors, viz. the rate of growth in output, the magnitude of the income elasticity and the degree of monetisation are important in determining the rate of expansion in money supply.

1 R.K. Sampath and Z. Hussain, "Demand for Money in India," The Indian Economic Journal, Vol.29, No.1, July-September 1981, p. 21.

2 M. Thomas Paul, "The Demand for Money and the Variability of the Rate of Inflation (India) - 1951-52 to 1977-78," The Indian Economic Journal, Vol.29, No.1, July-September 1981, p.72.

3 S.B. Gupta, Monetary Planning for India, Oxford University Press, Delhi, 1979, p. 28.

Till now the discussion is centred around the question of determining the rate of growth in money supply. Now, we shall try to explain, assuming that the monetary authorities can control the nominal money stock, how the desired level and rate of growth in money stock as determined in the monetary budget are brought about. For this purpose, we present a brief account of two approaches, viz. (a) money multiplier theory and (b) RBI analysis of money supply.

a) Money Multiplier Theory of Money Supply

The money multiplier theory of money supply determination in its simplest version states that money supply is a multiple of the reserve money or high-powered money. Reserve money is defined as currency with the public, bank reserves (cash on hand with banks, bankers' deposits with RBI) and other deposits with RBI. This is known as high powered or reserve money since it is the actual base on which the credit creating capacity of the banking system rests. Though at any time only bank reserves serve as the base for credit creation and changes in money supply, currency with the public and other deposits of RBI are also treated as reserve money since they have the potential of being converted into reserves, without any policy intervention.

High powered money is, thus defined as:

$$H = C + R + OD$$

- H - High powered or Reserve money
- C - Currency with the public
- R - Bank reserves
- OD - Other deposits with RBI.

The money multiplier theory of money supply determination postulates that money supply is equal to the value of multiplier (m) times the stock of high powered money, where m is treated as functionally dependent on the behaviour of public's demand for currency and bank's demand for reserves. That is,

$$M = m(\quad).H$$

The empty parenthesis after m denotes the behavioural nature of m , the determinants of which are asset ratios: c , b , t , r , and l .

Where c - the currency ratio C/DD
 t - the time deposit ratio t/DD
 b - the ratio of other deposits OD/DD
 r - the reserves ratio R/L
 l - the total liabilities ratio L/DD .

The ratios c , t , b , and r are the demand functions with respect to the asset by either the public or the banks and l is a supply function of total liabilities of banks. The crucial determinants of m among the five ratios are c and t representing public's preference for currency and time deposits and r reflecting the banks' demand for reserves. The other two ratios, b and l , are thought to exert negligible influence on ' m ' since other deposits of RBI is a negligible proportion of money stock and more importantly the holders of these deposits are not amenable to behavioural analysis; while l has remained highly stable.¹ Even the ratios c , t and r considered to be important

1 Ibid., p. 205.

in influencing the value of m are in turn functionally dependent on variables like rate of interest, spread of banking facilities, etc. The main import of the argument is that because of the functional relationships involved in the determination of m , changes in which are sufficiently slow, it is fairly reasonable to assume it to be a highly stable and predictable parameter. This implies that the monetary authority may treat the value of m as exogenously given and exercise its control over the level and rate of change in money supply through variations in reserve money.¹

The analysis of money supply determination within the framework of money multiplier theory is based on (a) distinction between nominal and real magnitudes and, theoretically, it is the nominal stock of money which the central bank controls whereas the stock of real money balances is determined by the public and (b) the assumption that it is the high powered money which is amenable to control rather than stock of money by the monetary authorities. Therefore, given the value of multiplier, the desired level of money supply could be achieved through variations in the stock of reserve money.

b) RBI's Analysis of Money Supply

The RBI's analysis of money supply presented as "Sources of Change in Money Supply" is based on balance sheet identity and not on any theory of money supply. The fundamental reason for adopting a framework derived from accounting identity is

1 Ibid., pp. 65-94.

that, "... such a presentation is designed to trace the origin of money supply variations to specific sectors, which draw upon credit from the banking system."¹ It also states that, "The determination of money supply is the result of a complex process of interaction between monetary and real sectors. Therefore, any meaningful theory of the money supply determination has to cut across the monetary sector and include variables also from the real sector."² Thus, the RBI's 'Analytical Frame'³ for explaining the sources of money supply variations reflecting the interactions between monetary and real sectors, presents the distribution of credit of banking system in terms of broad sectors. This, in turn, is based on the accounting identity that the total net credit of the banking system is equivalent to the monetary liabilities of the banking system or money supply.

By definition, in balance sheet analysis, total liabilities are identically equal to total assets. In the consolidated balance sheet of the banking system total liabilities may be divided into (a) monetary liabilities, and (b) non-monetary liabilities. Likewise, total assets may be divided into (a)

1 Report of the Second Working Group, Money Supply in India: Concepts, Compilation and Analysis, Reserve Bank of India, Bombay, 1977, p. 16.

2 Ibid., p. 16.

3 a) RBI, 1961a. "Analysis of Money Supply in India—I," RBI Bulletin, July, pp. 1045-1067.

b) RBI, 1961b. "Analysis of Money Supply in India—II," RBI Bulletin, August, pp. 1214-1219.

financial assets, and (b) non-financial assets. Therefore, by balance sheet identity this may be shown as:

$$\text{Monetary liabilities (ML) + Non-monetary liabilities (MML) = Financial Assets (FA) + Non-financial assets (NFA)}$$

By defining

$$\text{Net non-monetary liabilities (NNML) = Non-monetary liabilities - Non-financial assets.}$$

The above identity may be written as:

$$\text{ML} = \text{FA} - \text{NNML} \quad \dots (1)$$

Definitionally, money supply (M) consisting of currency with the public, demand deposits of the banks and other deposits of the RBI, may be shown as :

$$\text{M} = \text{ML} + \text{GC} \quad \dots (2)$$

This is because demand deposits of the banks, other deposits of the RBI and a major portion of the currency with the public are the monetary liabilities of the banking system, while the remaining part of currency with the public is government currency. Using (1) in (2) we have :

$$\text{M} = \text{FA} - \text{NNML} + \text{GC} \quad \dots (3)$$

Now, the financial assets of the banking sector and changes in it are determined by the transactions of the banking sector with the rest of the economy. For this purpose, the rest of the economy has been divided into three broad sectors, viz. (1) government sector, (2) commercial sector, and (3) foreign sector. The level and changes in the financial assets of the banking sector will be reflected, on the liabilities side of the consolidated balance sheet of the banking sector,

as credit and changes in credit to the three above-mentioned sectors. That is:

$$FA = NBCGS + BCCS + NFA \quad \dots (4)$$

where NBCGS = Net bank credit to government sector

BCCS = Bank credit to commercial sector

NFA = Net foreign exchange assets.

Using (4) in (3) we get:

$$M = NBCGS + BCCS + NFA + GC - NNML \quad \dots (5)$$

Thus, the RBI's analysis of 'Sources of Change of Money Stock' aims at explaining the level and changes in money supply in terms of credit at broad sectoral levels.¹ Further, when one considers the R.H.S. of (4) it becomes clear that only one of the three components (BCCS), i.e. banking sector's credit to the commercial sector is amenable to control by the monetary authority. This is because the variations in the other two components, viz. NBCG and NFA are more or less outside the purview of control of the monetary authority. NBCGS as stated by Raman, "... is determined by the Government's budgetary policies, including the size of the budgetary deficit as decided upon the Government".²

The influence of the foreign sector on money supply, i.e., the interactions between banking and foreign sectors, is reflected in the net change in the foreign exchange assets of

1 For a detailed explanation of the sub-components of the three sectors, refer to, 'Sources of Changes of Money Stock (M₁)', R.B.I., Report of the Second Working Group, op.cit., pp. 30-33.

2 A. Raman, op.cit., p. 11.

the banking sector. Mujumdar argues that, "... the accrual of foreign exchange assets is a sort of an 'autonomous' factor so far as the central bank is concerned and hence money supply expansion which is directly attributable to this factor becomes a 'given' in the monetary budget".¹

Thus, the RBI's 'analytical frame' as presented in the identity (5) not only traces the sources of change in money supply but also helps the monetary authority to take a decision on the permissible level of bank credit to the commercial sector, given the NBCGS and NFA. Hence, the approach, it is argued, is useful for purposes of credit planning. The Working Group states that, "... it facilitates credit planning and forecasting, based on the disaggregation of total domestic credit into major user sectors, consistent with macro level projections of the appropriate rate and quantum of increases in money supply".² The Working Group, justifying the approach to money supply changes, argues, "Therefore, we have to devise a format of presentation of factors influencing money supply based on the major sectors of credit-use so that the same format could facilitate credit planning and credit projections consistent with the appropriate rate of expansion in "money supply," independently determined say on the basis of output increases,

¹ N.A. Mujumdar, "Interpreting Monetary Data for Policy Formulation: Some Exploratory Notes," in S. L. Shetty (ed.), op.cit., p. 61.

² Report of the Second Working Group, R.B.I., op.cit., p. 16.

its sectoral composition, the expected rate of inflation and the past increases in money supply."¹

Without going into the details of the controversy regarding the question of unqualified superiority of one approach or the other which is beyond the scope of the present study, we would only try to make clear one aspect of it in relation to credit planning. The RBI's 'analytical frame' to quote the Working Group, "... is no doubt an accounting framework. It is certainly not claimed that this frame is based on any theory, conventional or otherwise, of money supply determination".² Despite this weakness the RBI's approach, as it is claimed, facilitates credit planning, in being useful to determine the desired level of credit to the commercial sector that is consistent with a desired rate of growth in money supply, based on output growth, given the NBCGS and NFA.

The preceding discussion, thus, lays emphasis mainly on: (a) the relationship between money supply and output, and (b) the relationship between bank credit and money supply. While discussing the alternative approaches to the money supply determination, it is noted that the RBI's analysis of money supply determination helps credit planning, for it enables decomposition of sources of change in money supply by sectors of origin. Further, it facilitates arriving at a broad sector-wise distribution of bank credit consistent with the desired

1 Ibid., p. 7.

2 Ibid., p. 16.

levels of total credit and money supply. The practical utility of the RBI's approach to money supply determination thus lies in the fact that it takes into account the sectoral credit deployment and consequently helps to achieve the output targets of the National Plan.

Moreover, considering the present banking system in India which is subject to statutory reserve requirements and also taking into account the close relation between bank deposits and credit, and bank deposits and money supply broadly defined, one can say that there is a very close association between bank credit and money supply. The banks have a substantial volume of assets in the form of approved securities, the liquidation of which enables them to expand loans without increasing the money supply. However, banks are constrained from doing so because of the statutory reserve requirements under which the banks are required to hold a certain proportion of their deposit liabilities in the form of approved securities and balances with the RBI. The linkage between bank credit to private sector and output is, therefore, likely to be closer than it would be if bank credit were to vary independently of money supply. The essence of the argument is that since variations in bank credit are very closely associated with variations in money supply, regulation of money supply has similar impact on output as regulation of bank credit. Consequently, in a planned economy, where not only the aggregate rate of growth but rates of growth of different sectors/regions are also equally important, an approach to money supply determination which at the

same time allows for the determination of distribution of bank credit at sectoral level becomes important.

The sectoral allocation has to be within the framework of certain broad objectives of the National Plan and ensure that the expansion of credit is non-inflationary. If credit planning is to succeed as an instrument of credit allocation in line with the overall economic policy, the necessary conditions are: (a) full awareness of, and commitment to, the national priorities, (b) allocation of resources according to the scheme of national priorities, and (c) a realistic estimation of the credit needs of borrower.¹ Credit planning, thus, aims at (a) channelling credit to various sectors according to accepted priorities and (b) restraining the overall size of credit expansion. . In the following section, an attempt is made to examine the extent to which the objectives of credit planning have been achieved during the period 1969-1984.

Section III

In this section, we shall try to assess the impact of credit planning in helping to achieve the Plan priorities on the basis of objective criteria like (1) branch expansion, (2) sectoral deployment of credit and (3) advances to the priority sectors.

1) Branch Expansion Scheme

The main emphasis of branch expansion scheme has been

1 D.J. Kanvinde, op.cit., p. 168.

twofold. First, strengthening the bank branch network, particularly, in the rural areas. It was thought that this will augment the deposits of banking system by promoting the habit of banking in these areas and provide incentives to save. Second, a well planned branch expansion policy can be used to reduce the regional imbalances. The two issues, viz. reduction of (a) rural-urban and (b) regional imbalances are among the objectives of credit planning.

A) Branch Expansion: Rural-Urban Disparities

A vigorous rural branch expansion has been a part of the banking policy, after nationalisation of banks in 1969 and since then there has been a significant increase in number of rural bank offices.

Details pertaining to bank offices in India for the years 1969 and 1984 are given in Table 2.1.

From the data furnished in Table 2.1 it is seen that during the last fifteen years, rapid progress has been made by the commercial banks in the spread of branch network. In June 1969, there were 8,262 offices in the country and by the end of June 1984, the number increased to 45,332. There was not only a tremendous increase, i.e. an annual average geometric rate of growth of 12 per cent, but there was also a change in the structure of bank offices. In the year 1969, bank offices in rural areas constituted about 22 per cent of total offices, whereas in 1984 this has gone up to nearly 56 per cent. The emphasis given to branch expansion in rural areas can be observed by the fact that out of 37,070 new branches opened

Table 2.1 : Distribution of Commercial Bank Offices According to Population Groups

	June 1969	June 1984	Offices opened after June 1969
Rural	1,833 (22.2)	25,372 (56.0)	23,539 (63.5)
Semi-urban	3,342 (40.4)	9,262 (20.4)	5,920 (16.0)
Urban	1,584 (19.2)	5,769 (12.7)	4,185 (11.3)
Metropolitan	1,503 (18.2)	4,929 (10.9)	3,426 (9.2)
Total	8,262	45,332	37,070

Notes : 1) Rural centres: Places with population upto 10,000.
Semi-urban centres: Places with population over 10,000 and upto 1,00,000. Urban centres: Places with population over 1,00,000 and upto 10,00,000.
Metropolitan centres: Places with population over 10,00,000.

2) Figures in parentheses are percentages to the total.

Sources: RBI, (i) Basic Statistical Returns.

(ii) Report on Currency and Finance.

during this period (1969-84), 23,539 i.e. about 63 per cent were in the rural areas. Rural and semi-urban areas together accounted for about 80 per cent of the new branches opened during the above-mentioned period.

Another aspect of the effect of rapid branch expansion in the rural areas is the improvement in banking habits, which is reflected in the banking business in India, as shown in Table 2.2.

Table 2.2 : Population Group-wise Distribution of Deposits and Credit of Scheduled Commercial Banks

(Rupees in crores)

	As on the last Friday of June				Credit/Deposit Ratio	
	1969		1983		1969 (5)	1983 (6)
	Deposit (1)	Credit (2)	Deposit (3)	Credit (4)		
Rural	145 (3.1)	54 (1.5)	7,657 (14.1)	4,588 (12.4)	37.2	59.9
Semi-urban	1,024 (22.0)	407 (11.3)	12,892 (23.7)	6,546 (17.7)	39.7	50.8
Urban	1,209 (25.9)	722 (20.0)	13,503 (24.8)	8,226 (22.2)	59.7	60.9
Metropolitan	2,287 (49.0)	2,486 (67.2)	20,352 (37.4)	17,689 (47.7)	106.0	86.9
Total	4,665	3,609	54,404	37,049	77.4	68.0

Note: Figures in parentheses are percentages to the total.

Source: RBI, (a) Report on Currency and Finance, 1973-74, p.113.

(b) Basic Statistical Returns, June 1981, p. 2.

There was a significant increase in the deposits as well as credit of commercial banks during the period under study. Deposits increased from Rs.4,665 crores in 1969 to Rs. 54,404 crores in 1983, i.e., an annual average geometric rate of increase of more than 19 per cent; for the same period the outstanding credit registered an annual average rate of growth of 18 per cent.

Regarding the structural changes in the distribution of deposits and credit, it may be seen from Table 2.2 that in the

year 1969 the share of rural deposits was only 3 per cent of total deposits which had gone up to 14 per cent by 1983. There was a corresponding decline in the share of metropolitan areas, while the other two groups more or less maintained their shares. This has to be seen in relation with the structural change in the banking system, after 1969. Rural branches accounted for 63 per cent of the offices opened after 1969, while the share of metropolitan branches was only about 9 per cent. Though deposits per office of the metropolitan areas were approximately nine times higher than that of rural office, the significant increase in the offices in rural areas resulted in the change of the percentage of share of deposits in favour of the rural branches. On the other hand, the distribution of credit of scheduled commercial banks presents a slightly different picture in the sense that the share of metropolitan branches has declined from about 67 per cent in 1969 to nearly 48 per cent in 1983, while the share of each of the other three groups has increased. The same explanation which has been advanced in the case of deposits, i.e. the structural change with respect to the distribution of offices in favour of rural and semi-urban areas led to an improvement in the share of these groups with respect to bank credit, holds good here.

Another notable feature of Table 2.2 is the change in the credit-deposit ratio. Credit-deposit ratio for a region or state represents what proportion of deposits mobilised is disbursed as credit in that region or state. The overall credit-deposit ratio, according to the data presented in Table 2.2,

has declined to 68 per cent in 1983 from 77.4 per cent in 1969. Again, going back to the analysis by population groups, credit-deposit ratio for three groups, viz., rural, semi-urban and urban, had gone up between the years 1969-83, at different rates ranging from 2 per cent to 20 per cent, while there was a decline in the case of metropolitan group from 106 per cent in 1969 to nearly 87 per cent in 1983.

Though the data show that the relative importance of different groups had undergone a change during the period of analysis, one has to exercise caution in interpreting credit-deposit ratios. Here, we have taken credit according to the office of sanction. But it is possible that credit sanctioned in a metropolitan branch is utilised in rural or urban area and/or vice-versa. Therefore, the approach which uses the data of credit according to utilisation will be more meaningful. This is so because basically what is important is in which region or area credit is utilised, to what use is it being put and which section of the population has got it. Since the data is not available according to utilisation by population groups, we have used the data according to the office of sanction.

From the above analysis, two important observations emerge. Firstly, there was a shift in favour of the rural and semi-urban groups so far as the credit-deposit ratios are concerned. In other words, despite the aggregate credit-deposit ratio was relatively low in 1983, there was a significant improvement in the credit-deposit ratios of the rural

and semi-urban groups between the years 1969 and 1983. Secondly, the available data clearly show that banking facilities in the rural areas, proxied by the number of offices opened after 1969, have improved significantly.

B) Regional Imbalances

Apart from the disparities in banking facilities and credit deployment by population groups, another facet of the problem is inter-state disparities.

Historically, certain states where industrial activity was concentrated, like Maharashtra, West Bengal and Tamil Nadu, for instance, have become the centres for banking operations. Commercial banks, which were in the private sector before nationalisation, were satisfied as long as they could find customers with adequate security, irrespective of their position in the priority scale, the place of their operation, etc. Though, it is difficult to establish a cause and effect relationship between industrial concentration and banking operations in a particular region, in the sense which of the two is the cause, it may, however, be stated that they exert a reinforcing impact upon each other. Thus, the greater the industrial development in a particular region the larger the banking business and so long as finance is a constraint on economic activity, availability of credit may stimulate industrial expansion and hence the concentration of banking in particular regions. Therefore, a structural change in the banking system for correcting the extant regional imbalances with respect to credit distribution and banking facilities was

felt necessary, in line with the objective of 'balanced regional development'.

Now, we shall try to examine as to what extent the objective of correcting regional imbalances in terms of credit distribution and banking facilities has been achieved. First, the issue of banking facilities provided by number of offices, in various states will be examined for the period 1969-84 and then the problem of distribution of credit will be attempted.

We have already seen that the post-1969 period has witnessed a rapid bank branch expansion at an annual average compound rate of growth of 12 per cent. The increase in number of branches reflects the emphasis of the policy on providing banking facilities. But what we are interested in is to examine the extent to which this has helped in reducing the differences as regarding banking facilities among various states. For this, we present in Table 2.3, information on state-wise distribution of population per office for the years 1969 and 1984.

From Table 2.3, it may be observed that in the year 1969, there were some states with population per office almost eight times (Manipur) and five times (Tripura) higher than the all-India average population per office. Even if these are taken as extreme cases, still there were a few states with population per office around 2,00,000 i.e. more than three times the all-India average of 64,000. There were 14 states with population per office higher than the all-India average in 1969. In the year 1984, the overall population per office had come down to

Table 2.3 : State-wise Distribution of Population Per Bank Office (As on 30th June)

State	(in 000)	
	1969	1984
1. Andhra Pradesh	74	15
2. Assam	192	28
3. Bihar	200	22
4. Gujarat	34	12
5. Haryana	56	13
6. Himachal Pradesh	80	9
7. Jammu and Kashmir	124	9
8. Karnataka	37	11
9. Kerala	34	10
10. Madhya Pradesh	116	16
11. Maharashtra	43	14
12. Manipur	510	28
13. Meghalaya	137	14
14. Nagaland	250	14
15. Orissa	211	18
16. Punjab	38	9
17. Rajasthan	68	16
18. Tamil Nadu	37	13
19. Tripura	300	23
20. Uttar Pradesh	114	19
21. West Bengal	79	20
All India Average	64	15

Source: RBI. Report on Currency and Finance, 1975-76, pp.14-15; 1983-84, p. 174.

15,000. It is important to notice that in the year 1969, the differences among various states were very wide-ranging, from 5 lakhs per office (Manipur) to 34,999 per office (Gujarat and Kerala); whereas in 1984 the range within which various states have fallen has been compressed between 28,000 (Manipur and Assam) and 9,000 (Punjab, Jammu and Kashmir and Himachal Pradesh). To put it in another way, the inter-state differences in banking facilities were narrowed down to a considerable extent during the period 1969-84. This can be seen from Table 2.4, in which scores¹ are assigned to States.

On the basis of Table 2.4, some observations may be made regarding the relative positions of various States for the two reference years in terms of their scores. First, let us analyse the states with population per office less than All-India Average (AIA) which is designated as Group A. It is seen

1 The scores are assigned in the following way:

The national average is taken as the centre and the deviations from it are grouped into different ranges based on the magnitude of deviations. Then the States falling within a specific range are assigned the 'score' with the appropriate sign. Symbolically, it can be shown as:

$$x_i = \bar{X} \pm \alpha a$$

$$\frac{x_i - \bar{X}}{a} = \pm \alpha.$$

x_i = population per office of the i^{th} State
 \bar{X} = National average
 a = a constant % of \bar{X} .

Therefore, α represents the range within which the ' i 'th State falls and the score assigned to it. In the computations of scores of states according to population per bank office ' a ' is taken as 25% of \bar{X} . All the States with the rank 1, are therefore States with population per bank office within the range of $(\bar{X}+25\%\bar{X})$ and similarly States with a rank 2 are those falling in between the ranges $(\bar{X}+25\%\bar{X})$ and $(\bar{X}+50\%\bar{X})$.

Table 2.4 : Scores of States According to Population Per Office for the Years 1969 and 1984

State	1969	1984
1. Andhra Pradesh	+ 1	+ 1
2. Assam	+ 8	+ 4
3. Bihar	+ 9	+ 2
4. Gujarat	- 2	- 1
5. Haryana	- 1	- 1
6. Himachal Pradesh	+ 1	- 2
7. Jammu and Kashmir	+ 4	- 2
8. Karnataka	- 2	- 2
9. Kerala	- 2	- 2
10. Madhya Pradesh	+ 4	+ 1
11. Maharashtra	- 2	- 1
12. Manipur	+27	+ 4
13. Meghalaya	+ 5	- 1
14. Nagaland	+12	- 1
15. Orissa	+10	+ 1
16. Punjab	- 2	- 2
17. Rajasthan	+ 1	+ 1
18. Tamil Nadu	- 2	- 1
19. Tripura	+15	+ 3
20. Uttar Pradesh	+ 4	+ 2
21. West Bengal	+ 1	+ 2

that there were 7 States with population per office less than the All-India Average (AIA) in the year 1969, out of which 4 States, viz. Haryana, Punjab, Karnataka, and Kerala, maintained their scores in the year 1984. The other three States in this group, i.e., States with population per office less than AIA, viz. Maharashtra, Gujarat and Tamil Nadu, moved nearer the AIA in the year 1984. As far as the second group (Group B), i.e. States with population per office more than AIA, is concerned there were four types of movements:

- a) States moving towards the AIA, as is indicated by the change in their scores, but still in the same group: There were 7 such States, as can be seen in the Table.
- b) States which were in Group B in 1969 and in Group A in 1984 (for example, Jammu and Kashmir, Meghalaya and Nagaland). In the case of these States there was clear evidence of movement towards AIA.
- c) States moving farther away from the AIA, i.e., West Bengal and Himachal Pradesh showed this type of movement; and
- d) States maintaining the scores within the same group, like Andhra Pradesh and Rajasthan.

Hence, by looking at these different types of behaviour within the Group B, it may be stated that there was, on the whole, a definite movement nearer to the AIA in a large number of States. By combining these two observations, i.e., States within Group A have either moved towards the AIA or maintained their earlier position and most of the States within Group B

moved nearer the AIA, one may state that the inter-state disparities in banking facilities were on the decline.

Another way of looking at the problem of changes in the availability of banking facilities, among different States, proxied by population per bank office, is to examine the dispersion of the distribution patterns for the two years, i.e., 1969 and 1984, in relation with their respective means.¹ For this, we have chosen standard deviation as the measure of dispersion. In the following table are presented means (\bar{X}), standard deviations (σ) and coefficient of variation (V) for the years 1969 and 1984.

	1969	1984
\bar{X}	64.0	15.0
σ	132.0	5.7
V	206.6	38.0

From the Table, it is clear that the absolute as well as relative dispersion indicated by σ and V respectively, are quite low for the year 1984 compared to those in 1969. This coupled with a low \bar{X} for the year 1984 (15.0) denoting

¹ It has to be mentioned, however, that the analysis relies upon the argument that branch expansion aims at creating infrastructural facilities making available banking facilities to increased numbers with more geographical coverage, etc. But the reduction in the number of population served per bank office per se should not be treated as desirable for any length of time, because, in the ultimate analysis, at least at the aggregate level, the costs have to be balanced with the returns.

that the number of persons covered by a single bank office is much lower in comparison with the figure for 1969, leads to the conclusion that during the period 1969-1984 not only has the coverage improved but also the increased branch expansion resulted in reducing the inter-state disparities as regards banking facilities proxied by number of persons per bank office. It is to be noticed that the coefficient of variation is quite low for the 1984 series, confirming that the variation in 1984 is less than the variation in 1969.

Yet, another measure used to study the problem of inequality is the 'Lorenz Curve' analysis. Lorenz Curve is widely used to represent and analyse the size distributions of income and wealth. The curve portrays a relationship between the cumulative proportion of income units and the cumulative proportions of income received when the units are arranged in ascending or descending order of their income.

In our analysis 'Lorenz Curve' as shown in Figure 2.1, presents the distribution of banking facilities among different States, i.e., the percentage share of banking facilities associated with a certain percentage share of number of units (States), in years 1969 and 1984. If the distribution is perfect, i.e., a certain percentage of units associated with exactly the same percentage of banking facilities, then the Lorenz Curve will be a straight line and merge with the 'Line of Equality' or 'egalitarian line'. If the distribution is not perfect the Lorenz Curve will lie nearer or farther depending upon the inequality in the distribution. The curvature also depends upon the degree of inequality in the distribution.

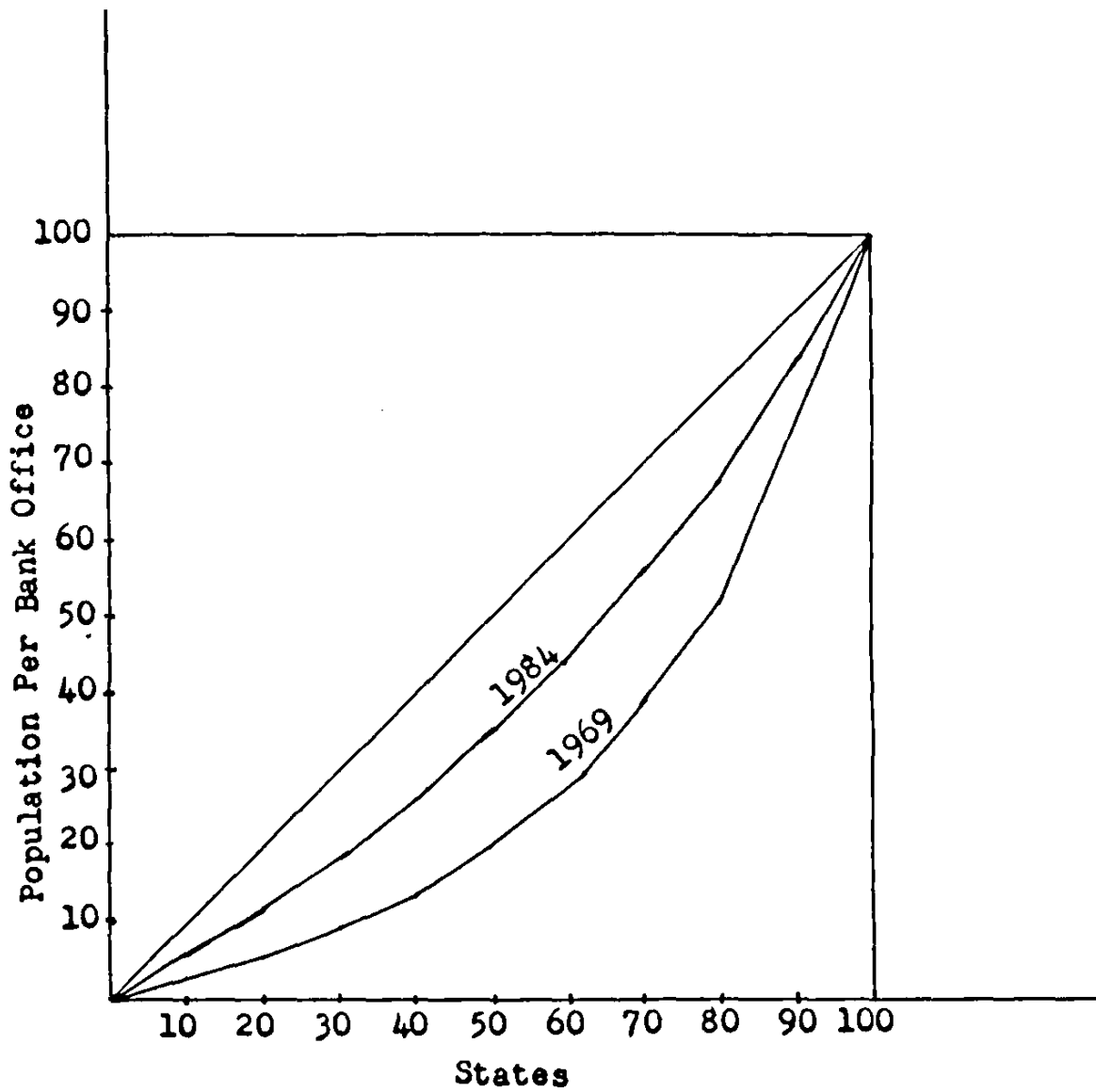


Figure 2.1 : Lorenz Curves of the Distribution of Population Per Bank Office in 1969 and 1984

From the Figure, it may be seen that the Lorenz Curve for the year 1984 was nearer to the line of equality than the one for the year 1969. Thus, it is very clear that during the period 1969-84, the inequality in the distribution of banking facilities among States has declined.

Next, coming to the problem of deployment of credit among various States, we have used credit-deposit ratio as an indicator. The credit-deposit ratio of a particular State indicates the proportion of deposits mobilised in the State that has been sanctioned as credit in the State concerned. This, however, should not be used for the purpose of examining the issue of siphoning-off resources from one State to another, because of the limitations of the nature of data which have been mentioned earlier.

Tables 2.5 and 2.6 present the credit-deposit ratios of various States and their scores respectively for the years 1969 and 1983. It may be observed from the data furnished in the Tables, that there was a marginal change in the number of States below the all-India average; i.e., there were altogether 14 States in this group in 1969 and 11 for 1983. But as regards the range within which different States fell in the two reference years, there has been a marked change. In the year 1969 States below the all-India average varied within the range of +9 to -10, whereas for the year 1983 the corresponding range was compressed to +5 to -5. Thus, between the period 1969-1983, the range within which various States fell according to their scores in both the groups — credit-deposit ratio higher

Table 2.5 : Credit-Deposit Ratios : State-wise

State	1969	1983
1. Andhra Pradesh	94.2	70.8
2. Assam	42.4	45.6
3. Bihar	27.2	44.5
4. Gujarat	50.6	53.7
5. Haryana	47.2	70.4
6. Himachal Pradesh	22.3	44.2
7. Jammu and Kashmir	9.2	47.1
8. Karnataka	72.7	81.5
9. Kerala	68.8	66.9
10. Madhya Pradesh	55.8	60.7
11. Maharashtra	92.1	89.9
12. Nagaland	8.1	36.6
13. Orissa	49.5	85.0
14. Punjab	33.2	41.4
15. Rajasthan	49.8	71.3
16. Tamil Nadu	133.5	95.5
17. Tripura	5.9	74.1
18. Uttar Pradesh	44.5	48.2
19. West Bengal	100.6	57.8
All India	72.2	68.1

Sources : RBI, various issues of:

(a) Basic Statistical Returns.

(b) Report on Currency and Finance.

Table 2.6 : Scores of States According to Credit-Deposit Ratio

State	1969	1983
1. Andhra Pradesh	+ 4	+ 1
2. Assam	- 5	- 4
3. Bihar	- 7	- 4
4. Gujarat	- 3	- 3
5. Haryana	- 4	+ 1
6. Himachal Pradesh	- 7	- 4
7. Jammu and Kashmir	- 9	- 4
8. Karnataka	+ 1	+ 2
9. Kerala	- 1	- 1
10. Madhya Pradesh	- 3	- 2
11. Maharashtra	+ 3	+ 4
12. Nagaland	- 9	- 5
13. Orissa	- 4	+ 3
14. Punjab	- 6	- 4
15. Rajasthan	- 4	+ 1
16. Tamil Nadu	+ 9	+ 5
17. Tripura	-10	+ 1
18. Uttar Pradesh	- 4	- 3
19. West Bengal	+ 4	- 2

Note: For computing the scores 'a' is taken as 10% of \bar{X} .

and lower than the national average — had declined.

We may now examine the relative position of the individual States based on their scores along with the sign, which will depict whether a particular State's position has improved or otherwise, between the years 1969 and 1983.

First, we deal with the States with credit-deposit ratios below the all-India average (scores with negative sign), which we call as Group A. In the year 1969, in Group A there were 14 States. Out of these 14 States, in the year 1983, 8 States appeared with the same sign, but with a clear movement towards the all-India average credit-deposit ratio; whereas 4 States had a change in the sign of their scores, i.e., there was a shift from Group A to Group B. But even here, all these 4 States showed a movement towards the average credit-deposit ratio. In the case of the remaining two States, viz. Kerala and Gujarat, there was no change, i.e., they maintained their scores. To sum up, in Group A, out of 14 States, 12 moved nearer to, and 2 maintained their earlier position, judged by their scores in the two reference years.

Next coming to the States with credit-deposit ratios higher than the all-India average, which we designate as Group B, it may be observed that there were 5 such States. From this group three States, viz. Andhra Pradesh, Tamil Nadu and West Bengal, showed a movement towards all-India average whereas other two States (Karnataka and Maharashtra) moved farther from all-India average.

Thus, between the two years 1969 and 1983 there were

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Thus, between the two years 1969 and 1983 there were

only two States drifting farther from, while 15 States moved closer to, the all-India average credit-deposit ratio.

An analysis of dispersion of the series for the years 1969 and 1983 leads to the same conclusion that during the period 1969-83 disparities among States with respect to credit-deposit ratio¹ were on the decline. This may be seen from the following Table.

	1969	1983
\bar{X}	72.2	68.1
σ	38.3	18.2
V	53.1	26.7

From the Table it may be observed that in the year 1983 the variation in the series was somewhat lower in comparison to that of 1969, judged from standard deviation (σ) as well as coefficient of variation (V).

The same, i.e., the decline in the inequality among different States with respect to credit-deposit ratio, may be seen from Figure 2.2. From the Diagram depicting Lorenz Curves for the years 1969 and 1983, it may be seen that the curve for the year 1983 lies nearer to the line of equality.

1 A higher or lower credit-deposit ratio, per se, may not reveal anything apart from the amount of credit supported by one unit of deposits. An increase in the credit-deposit ratio, however, means that a larger incremental credit for a unit increase in deposits. From the viewpoint of reducing the imbalances among States, the development of incremental credit may be helpful to achieve the objective.

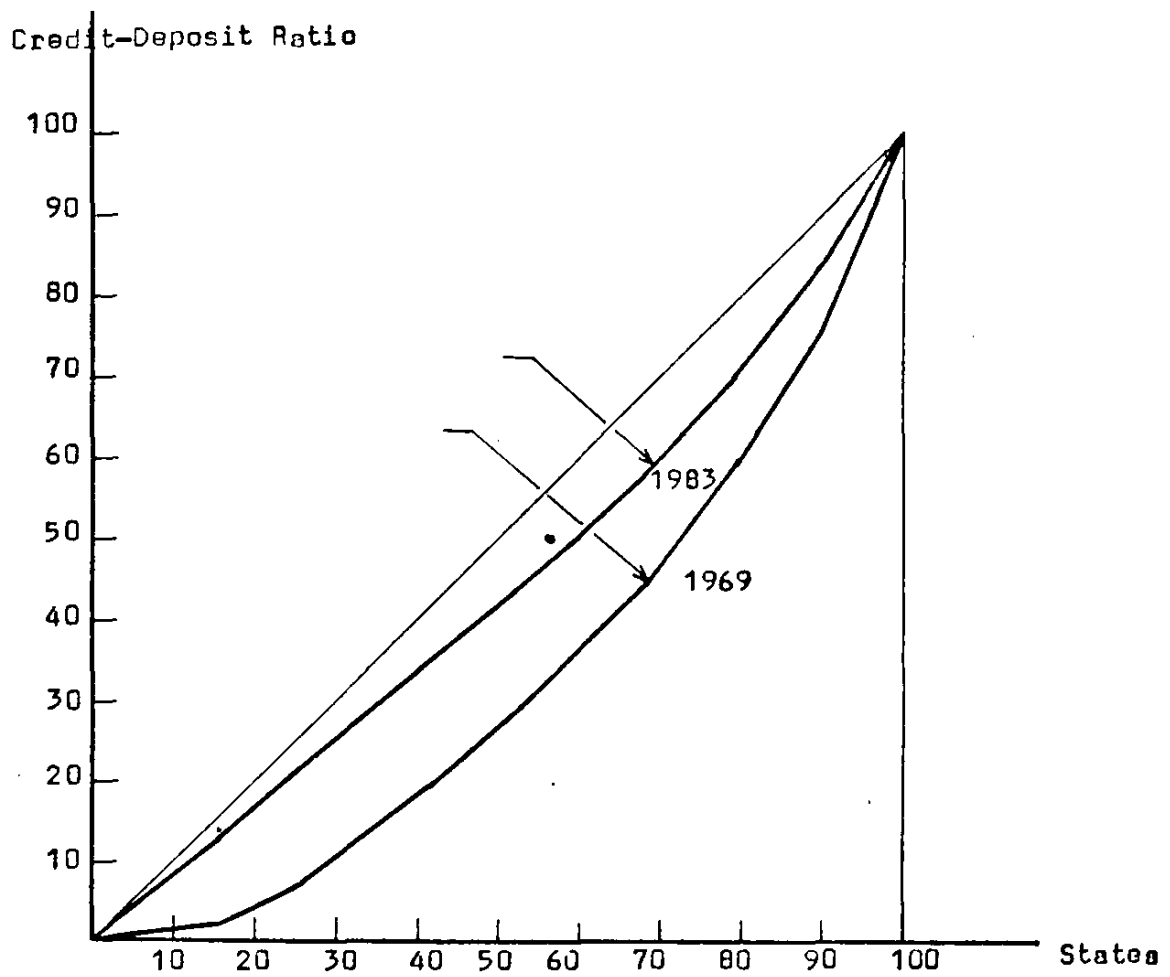


Figure: 2.2

Lorenz Curves of the Distribution of Credit-Deposit Ratios for the years 1969 and 1983.

Another interesting feature is that the change in the distribution pattern between 1969 and 1983 is more pronounced so far as the bottom five States are concerned. In other words, the bottom five States forming roughly 26 per cent of total number of States accounted for 7 per cent and 18 per cent share in terms of credit-deposit ratio in 1969 and 1983 respectively.

It may, therefore, be concluded that the regional imbalances, i.e., the disparities among States as regards availability of banking facilities were on the decline during the period 1969-83, as is observed in terms of population per bank office and credit-deposit ratios of different States.

2. Sectoral Deployment of Bank Credit

As mentioned earlier, allocation of bank credit among different sectors according to national priorities is one of the principal objectives of credit planning. The importance of the issue of sectoral allocation of credit becomes clear when one looks at the basic forces that have led to several developments in the banking system like social control, nationalisation, etc. These changes were effected to bring about certain structural changes in the deployment of commercial bank credit. This was so because commercial banks being the main source of short-term finance were expected to help achieve the Plan objectives by reorienting their credit policies.

Now, we shall try to analyse the deployment of scheduled commercial bank credit at two levels:

1. At the aggregate sectoral level, i.e. by broad sectors like industry, agriculture, trade, services and personal loans, and
2. at industry-group level within the industry sector.

We do not propose at this stage to attempt a micro-level study dealing with the norms for inventory and receivables to determine the requirements of bank credit. This requires an approach that takes into account total assets as well as liabilities of the unit concerned to arrive at the requirements of bank credit. Here, we present the sector-wise deployment of bank credit against their output. Though there may be no direct relationship between bank credit and output, since the data is not available on inventories and trade credit at the sectoral level which leaves no option but to use the data on output to study the deployment of bank credit in various sectors. Table 2.7 presents the sector-wise distribution of bank credit and output.

From Table 2.7 it may be seen that there was a marked shift in the pattern of credit deployment by banks. According to the data, there was a decline in the proportion of outstanding credit to industry¹ which stood at 66 per cent in 1969, came down to 49 per cent in 1981. Within the industry, the

¹ Here, industry refers to the 'Group II, Industry', according to the classification of 'Basic Statistical Returns'. An adjustment is made regarding the output figures taken from C.S.O. National Accounts Statistics, by adding Mining and Quarrying to the secondary sector, to make the two sets of figures comparable. See, Appendix for the adjustments that have been made.

Table 2.7 : Distribution of Commercial Bank Credit and Net Domestic Product by Industry of Origin

(In per cent)

	1969	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
<u>Bank Credit</u>											
I. Agriculture and Allied Activities	5.5	6.8	9.0	8.9	10.7	10.4	10.4	12.3	13.2	14.8	16.7
II. Industry	65.9	54.1	57.2	59.1	62.5	54.6	52.5	47.7	46.8	48.0	49.1
Manufacturing	62.6	51.2	53.7	55.5	55.2	47.9	45.4	45.4	44.8	46.0	47.1
III. Trade	-	17.4	18.6	17.4	16.6	26.7	28.4	26.3	25.4	22.2	17.9
IV. Others	28.6	21.7	15.0	14.5	10.1	8.3	8.6	13.7	14.6	15.0	16.3
<u>Net Domestic Product</u>											
I. Agriculture and Allied Activities	49.7	47.8	51.5	47.3	43.4	41.7	42.3	39.6	37.3	38.6	36.2
II. Industry	20.8	21.0	19.4	21.0	22.2	23.4	23.2	25.2	25.3	24.3	24.5
Manufacturing	13.5	13.9	13.4	15.0	15.0	15.5	15.2	16.8	17.3	16.7	16.1
III Trade	-	10.7	10.6	12.2	13.2	12.8	13.0	13.2	14.3	15.2	16.8
IV. Others	29.4	20.4	18.4	19.4	21.1	22.0	21.4	22.0	23.1	22.0	22.5

Note: For the year 1969 bank credit to the Trade Sector is not separately available, but included in 'others'. We have, therefore, clubbed the output of Trading Sector with the output of 'others' for the year 1969.

Sources: Various issues of:

- a) C.S.O., National Accounts Statistics.
- b) R.B.I., Banking Statistics, Basic Statistical Returns.
- c) R.B.I., Supplement to RBI Bulletin, April 1973.
- d) R.B.I., Reports on Currency and Finance.

share of manufacturing sector declined to 47 per cent in 1981 from 63 per cent in 1969 of total bank credit. On the other hand, during the same period, the share of agriculture in total credit increased from 5.5 per cent to 16.7 per cent. Thus, it could be said as a preliminary observation that there has been a change in the lending pattern of commercial banks. An important point which needs to be mentioned is that the share of agriculture in total outstanding bank credit has increased while its share in total output represented by Net Domestic Product (NDP) has declined over the same period, from 49.7 per cent in 1969 to 36.2 per cent in 1981. On the other hand, industry's share in total credit has declined, while its share in output has increased from 20.8 per cent to 24.5 per cent for the same period. But it may be pointed out that the share of industry in total bank credit (49 per cent) was still disproportionately higher than its share in output (24.5 per cent), in 1981. And this is particularly clear in the case of manufacturing sector which accounted for 47 per cent of total bank credit and only 16 per cent of output in the year 1981. This contrast is better brought out by a comparison of the share of agriculture in total bank credit (16.7 per cent) and its share in output (36.2 per cent) in the same year.

Though the data show that the share of industry in total bank credit has declined, the question still remains whether or not industry had 'excess' bank credit. This is not clear from the analysis we have made so far, because it is in highly aggregative terms. The inter-sectoral comparison of

commercial bank credit or total institutional credit with their share in output may not be very meaningful, since the nature of operations and the type of finance that these sectors require are very different. Hence, it will be useful to analyse the deployment of bank credit within the industry-sector. Even within industry, the analysis for the period 1973-1981 is restricted to the manufacturing sector which accounted for about 96 per cent of outstanding bank credit, and for more than 65 per cent of output of the industry in 1981.

Table 2.8 presents the percentage shares of 11 industry groups of the manufacturing sector, in bank credit and value added (proxy for output). Some adjustments regarding regrouping were made with respect to industry groups 6, 7, 8 and 9 for purposes of comparison between the BSR data on credit and data on output taken from National Accounts Statistics (see Appendix).

From Table 2.8 it is seen that there did not exist a unique relation between bank credit and value added for all the 11 industry groups, over the years. Some industries like engineering and basic metals and minerals had a relatively greater share in bank credit than their contribution to output throughout the period. And some other industries, viz. (a) beverages and tobacco, (b) paper and paper products, (c) leather products, (d) rubber, plastic, petroleum and coal products, (e) vehicles, vehicle parts and transport equipment, and (f) wood and wood products, etc., did show a different trend, i.e., their share in output was higher than their share

Table 2.8 : Industry-wise Distribution of Commercial Bank Credit and Output

	(in per cent)																	
	1973		1974		1975		1976		1977		1978		1979		1980		1981	
	BC	VA	BC	VA	BC	VA	BC	VA	BC	VA	BC	VA	BC	VA	BC	VA	BC	VA
1. Food Products	10.5	8.7	9.1	8.4	9.6	8.8	8.7	8.6	9.5	9.8	11.4	7.4	11.4	7.2	9.4	9.3	9.2	8.6
2. Beverages and Tobacco	2.3	3.1	2.3	3.1	2.2	3.7	1.8	4.3	2.2	3.5	2.0	4.0	1.8	3.2	1.9	3.4	1.5	3.1
3. Textiles	22.3	25.3	22.1	22.9	19.8	19.9	20.5	19.1	21.5	20.4	21.1	21.8	19.9	23.2	18.3	21.3	18.3	18.3
4. Paper, Paper Products and Printing	3.4	3.8	3.1	4.3	3.1	4.0	3.3	3.7	3.2	3.5	3.3	3.6	3.5	3.9	3.7	4.2	3.8	4.0
5. Leather and Leather Products	1.8	2.1	1.4	1.8	1.3	1.8	1.5	2.0	1.5	1.8	1.6	1.8	1.9	2.1	1.8	2.1	1.6	1.7
6. Rubber, Plastic, Petroleum and Coal Products	3.1	3.6	4.1	4.5	3.9	4.8	3.8	5.4	4.0	5.6	4.1	5.8	4.2	6.0	5.7	5.8	9.2	10.8
7. Chemicals and Chemical Products	8.5	9.2	9.1	9.8	9.6	9.6	10.9	9.5	10.6	9.7	11.2	10.6	11.3	9.9	12.4	10.6	12.1	9.6
8. Basic Metals and Metal Products	12.1	10.8	11.6	11.4	13.1	11.9	13.1	11.7	12.6	10.6	12.2	11.2	11.8	11.1	12.3	10.1	11.9	11.2
9. Engineering	18.5	11.1	19.5	10.8	20.3	11.6	22.1	11.7	19.4	11.3	20.5	11.1	21.5	11.2	21.5	11.5	19.8	11.4
10. Vehicles, Vehicle Parts and Transport Equipment	4.6	5.6	4.8	5.2	5.3	5.3	4.9	5.5	4.6	5.0	5.1	5.3	5.3	5.6	5.4	5.8	4.4	6.1
11. Wood and Wood Products, Mineral Products and other Manufacturing Industries	12.7	16.7	12.9	17.4	11.8	18.5	9.3	18.4	10.8	18.7	7.2	17.4	7.4	16.6	7.7	16.0	8.3	15.2

BC = Outstanding Bank Credit.

VA = Value Added.

Sources: Various issues of: a) RBI, Banking Statistics, Basic Statistical Returns.b) C.S.O., National Accounts Statistics.

of bank credit for all the five years. However, in the case of three industry groups, viz. (a) food products, (b) textiles, and (c) chemical and chemical products, the evidence was mixed. Another important point to be noted is that even the industries with similar trends differ with regard to the dimensions of differences of their shares in bank credit and output which may be seen, for example, with respect to industry groups 8 and 9 in the Table. Hence, the evidence available at this stage is not adequate either to support or not to support the hypothesis that bank credit has been deployed in relation to the output, among different manufacturing industries.

This is because commercial bank credit to industry is supposed to finance the working capital requirements. The working capital needs of different industries will be different depending upon the nature of their operations, scale of output, trading practices, and the manufacturing process. Therefore, working capital and changes in it become important for an analysis of bank credit. This problem needs a thorough enquiry of sources of funds and the various uses to which they are utilised in order to determine the adequacy of bank credit for a particular industry or firm. The main import of the argument is that optimal utilisation of bank credit demands a better utilisation of working capital. Therefore, the volume of working capital and factors which influence it become crucial. However, this involves questions such as the optimal levels of various components of current assets and method of financing them, i.e., what proportion of the working

capital requirements may be met by banks. In other words, the extent to which the draft on the banking system by the industry can be minimised? These issues will be taken up in Chapters V and VI.

3. Advances to the Priority Sectors

After the foregoing examination of the sectoral distribution of bank credit, we may now turn our attention to an analysis of the deployment of credit to priority sectors. One of the objectives of credit planning, as observed earlier, is provision of credit for certain sectors classified as 'priority sectors'. Priority sectors have been defined to include (a) agriculture, (b) small scale industry, (c) road and water transport operators, (d) retail trade and business, (e) professional and self-employment, (f) education, and (g) setting up of industrial estates. It is important to note that there is no single criterion adopted in defining the priority sectors. Rather, it may be viewed as an operational counterpart in financial terms, of the government's socio-economic objectives. The deployment of credit under the priority sector scheme, thus seems to have been devised to provide credit in adequate amounts at lower rates of interest to the above-mentioned sectors. The essence of the idea may be better understood, when seen in relation with the lending practices of the commercial banks, especially prior to nationalisation. However, the then lending practices of private commercial banks have to be explained in terms of achieving their primary goal, i.e., maximisation of profits, like any other private business firm.

From the bankers' point of view dealing with a single large account rather than a number of small accounts is preferable because it involves lower costs of administration. And from the safety angle also industrial sector satisfies the requirements of banks regarding security. As mentioned earlier, some of the large private industrial houses had substantial control over commercial banks which resulted in a nexus between commercial banks and the industry, and this was the main reason for the imposition of social control over banks. The RBI following the guidelines of the government, therefore, devised the scheme of priority sector lending to provide adequate credit facilities to these hitherto neglected sectors. The RBI also set a target for the banks that one-third of total bank credit should be given to the priority sectors by March 1979 and this has been recently raised to 40 per cent to be reached by March 1985. Table 2.9 presents the share of the priority sectors in scheduled commercial bank credit, from the year 1969 to 1984.

From the data furnished in Table 2.9 it is seen that there was a significant increase in the share of priority sectors in the scheduled commercial bank credit. It increased from 14 per cent in 1969 to 37 per cent by 1984. Though the share of priority sector advances in 1979 (30.9 per cent) was below the targeted one-third of total advances by the end of March 1979, it is a clear testimony of change in policy, and involvement of the banking system in the development of these sectors.

Table 2.9 : Scheduled Commercial Banks' Advances to Priority Sectors

Year	Amount	(Rs. in crores)
		Per cent of total bank credit
End of June 1969	504	14.0
1970	838	19.9
1971	1015	21.3
1972	1149	21.0
1973	1478	23.0
1974	1901	24.2
1975	2242	25.0
1976	2815	24.5
1977	3488	25.8
1978	4491	28.6
1979	5906	30.9
1980	7278	33.0
1981	9110	34.3
1982	10683	35.9
End of March 1983	12322	35.7
1984*	14384	36.7

Note : *Provisional.

Source: RBI, Reports on Currency and Finance.

Now, let us analyse the relative positions of agriculture and small scale industry (SSI) within the priority sectors. These two accounted for 90 per cent of total priority sector advances of banks till 1975, which decreased to around 80 per cent in 1984.

Commercial bank lending to agriculture has become increasingly important and accounted for about 15 per cent of

total bank credit in 1984. The RBI issued guidelines to the banks in December 1970, for financing of agriculture emphasising that, "the main objective of commercial bank lending to agriculture is ^{to} assist cultivators to move to a higher technological plane of activity".¹ Banks have been striving to increasingly involve themselves in the development of this sector, by providing adequate credit facilities. For this purpose they have adopted several schemes like (a) area-approach, i.e. selecting groups of villages in different areas and meeting the credit needs of the farmers, (b) the scheme of financing Primary Agricultural Credit Societies which in turn cater to the needs of farmers, and (c) financing through Farmers' Service Societies which provide to the members credit as well as certain services like supply of inputs and marketing of the produce, etc. These efforts, supplemented by the branch expansion drive with special emphasis on rural and semi-urban areas, have increased the share of agriculture in total priority sector advances from 37 per cent in 1969 to 43 per cent in 1984.

Regarding the SSI, until 1975, it accounted for more than 50 per cent of the total priority sector advances. From 1975 onwards there was a gradual decline in its share and accounted for approximately 37 per cent of the priority sector advances in 1984. But this has to be interpreted cautiously. It is not as though that SSI is becoming less important within

1 RBI, Report on Currency and Finance, 1970-71, p. 128.

the priority sector group, but the other groups within the priority sector could not make use of the banking facilities prior to bank nationalisation of 1969, due to various reasons, like the problem of accessibility, lack of information, and security, etc. Hence, the SSI accounted for a major share within the priority sector advances till the year 1975. The post-nationalisation period witnessed an increase in the share of agriculture and particularly the share of 'other' priority sectors which increased from 6 per cent in 1969 to 20 per cent in 1984 of total priority sector advances.

The evidence, thus, showed that the share of priority sector advances in total scheduled commercial bank credit, and the share of agriculture and 'other' priority sectors within the priority sector advances has increased substantially between the years 1969 and 1984. But still much has to be done on this front for which the banking system may have to face operational problems involved in providing credit to a large number of small borrowers.

The operational problems arise because of the associated higher costs in servicing a larger number of small accounts. According to government policy, credit to priority sectors in the year 1981-82 was to be provided at a concessional rate of interest with a ceiling of 13.5 per cent, depending upon the purpose and the type of beneficiary as against a maximum interest rate of 19.5 per cent for non-priority sectors. Hence, there may be no incentive for the banks to lend to the priority sectors particularly in situations where there is sufficient

Table 2.10 : Scheduled Commercial Banks' Advances to Agriculture and Small Scale Industry

Year	Agriculture		S.S.I.	
	Amount	Per cent of total priority sector advances	Amount	Per cent of total priority sector advances
1969	188 (5.5)	37.3	286 (8.4)	56.7
1972	440 (6.8)	38.1	598 (11.3)	52.0
1973	572 (9.0)	38.7	759 (12.0)	51.3
1974	709 (8.9)	37.3	1005 (12.6)	52.9
1975	969 (10.7)	43.2	1118 (12.4)	49.9
1976	1214 (10.4)	43.1	1251 (10.7)	44.4
1977	1399 (10.4)	40.1	1462 (10.9)	41.9
1978	1961 (12.3)	43.7	1848 (11.6)	41.1
1979	2521 (13.2)	42.7	2277 (11.9)	38.5
1980	3097 (14.8)	42.6	2793 (11.9)	38.4
1981	3901 (14.9)	42.8	3420 (12.9)	37.5
1982	4588 (15.4)	42.9	3921 (13.2)	36.7
1983	5275 (15.3)	42.8	4486 (13.2)	36.4
1984	6133 (15.2)	42.6	5412 (13.4)	36.5

Note : Figures in parentheses are percentages to total bank credit.

Source: RBI, Reports on Currency and Finance.

demand for credit from large borrowers. But the argument of profitability by the banks has to be balanced with the social objectives. Increased lending to priority sectors in line with the government policy, will have a bearing on the profitability of banks. That is, to fulfil social objectives banks are faced with a combination of (a) increasing the efficiency of operations thereby reducing costs to compensate, at least partly, the decline in profitability due to increased priority sector lending, and (b) charging higher rates of interest for the non-priority sector advances to make good, even partially, the decline in profitability of banks, i.e., cross subsidisation.

To sum up, there was a substantial increase in priority sector advances by commercial banks during the period 1969-84. Agriculture and small-scale industry were the two major constituents of the priority sector, accounting for 80 per cent of the total priority sector advances in 1984. The share of these two in 1969 was 94 per cent and, therefore, during the period 1969-84 there was a decline in the share of agriculture and small-scale industry put together in the total advances of banks to the priority sector. However, it may be noticed that the share of small-scale industry has declined from approximately 57 per cent in 1969 to 37 per cent in 1984, whereas the share of agriculture has increased from about 37 per cent to 43 per cent for the respective years.

Section IV

In this chapter, the formulation of credit planning is

presented bringing into focus the theoretical under-pinnings in determining the desired level of bank credit in relation to the Plan targets of output. The desired level of bank credit is determined via the relationships between (a) output and money supply and (b) money supply and bank credit to the commercial sector. In the light of the importance that is being accorded to bank credit to the commercial sector, especially from the policy point of view, it is noted that the RBI's approach to money supply determination may be useful for purposes of credit planning. For, the RBI's analysis of 'Sources of Change of Money Stock' traces the sources of change in money supply to sectors of origin and also helps the monetary authority to take a decision on the permissible level of bank credit to the commercial sector. It is of crucial importance since the other sources of changes in money supply viz., bank credit to the government sector and changes in foreign exchange assets are not amenable to the RBI's control.

In this chapter the objectives of credit planning in India and analyses of impact of credit planning in terms of (a) rural-urban and state-wise disparities as to the availability of banking facilities, (b) sectoral distribution of credit and (c) priority sector advances are also presented.

Three indicators are used in our analyses, to study the imbalances between rural-urban areas as to the availability of banking facilities. These indicators are: (a) the percentage share of rural offices in total bank offices, (b) the percentage share of deposits and credit of rural offices in total deposits

and credit, and (c) credit-deposit ratios of different areas by population groups. It is observed that all these three indicators showed a trend which is in favour of rural areas. In other words, we found that the rural-urban disparities in terms of availability of banking facilities have declined. Similarly, our exercises regarding inter-State imbalances in terms of population per bank office and credit-deposit ratios of different States revealed that there has been a declining trend in the inequalities of availability of banking facilities among States.

As regards sectoral deployment of bank credit it is observed that the share of industry has declined substantially, i.e., from 66 per cent in 1969 to 49 per cent in 1981, while the share of agriculture had gone up from 5.5 per cent in 1969 to 17 per cent in 1981. However, agriculture which contributed 36 per cent of national income accounted for only 17 per cent of bank credit, while manufacturing industry with only 16 per cent of national income accounted for 47 per cent of total bank credit in 1981. There is still, therefore, some scope for further improvement to correct the imbalances of availability of bank credit at the sectoral level. The industry level analysis did not show any clear-cut trend as to the relation between output and bank credit among different types of industries.

Lastly, the evidence shows that the percentage share of priority sectors in total bank credit has been increasing

and was around 37 per cent in 1984. Furthermore, there appears to be a good chance of achieving the target of 40 per cent of total bank credit to the priority sectors by March 1985.

To conclude, it may be stated that the success of credit planning in India is satisfactory in terms of the objectives listed and analysed in the preceding sections.

Appendix II.1 : Adjustments Made for Ensuring Comparability of
Data of National Accounts Statistics and
Basic Statistical Returns

For the purpose of comparison between the data published in National Accounts Statistics and Basic Statistical Returns, the following adjustments, by regrouping some of the industries, wherever necessary, are done.

Basic Statistical
Returns

National Accounts Statistics

I. Mining and Quarrying	I. The figure for crude petroleum and natural gas has been deducted from Mining and Quarrying.
II. a) Rubber and Rubber Products	II. a) Rubber, plastic, petroleum and coal products.
b) Plastic and Plastic Products	b) Crude petroleum and natural gas.
c) Basic Minerals	
III. Basic Metals and Metal Products	III. a) Basic metals and alloys industries
	b) Metal products and parts except machinery and transport equipments.
IV. Engineering	IV. a) Machinery, machine tools and parts except electrical machinery
	b) Electrical machinery, apparatus, and appliances.
V. a) Cement, Cement Products	V. a) Wood and wood products, furniture and fixtures.
b) All other industries not classified elsewhere	b) Non-metallic mineral products.
	c) Miscellaneous manufacturing industries.

CHAPTER III

DEMAND FOR BANK CREDIT BY LARGE CORPORATE SECTOR

Introduction

In Chapter II, the relationship between commercial bank credit and output has been analysed. However, the analysis made therein is at a fairly aggregative level, i.e., sectoral level like agriculture, industry and so on. The coverage is broad, even with regard to the analysis of sub-groups within the industrial sector, since registered and unregistered manufacturing units are incorporated. It has also been seen that, among factors influencing money supply, it is bank credit to the commercial sector that is amenable to the policy control of the monetary authority. Furthermore, from the viewpoint of credit planning, as it has been defined in Chapter I, commercial bank credit to the commercial sector is very important. However, as the scope of the present study is restricted to the explanation of the relationship between credit planning and the finances of the large and medium public limited companies, in what follows an attempt is made to explain the determinants of outstanding bank credit to this group of companies.

The chapter is divided into five sections. First section presents a brief analysis of the importance of two variables viz. output and inventory in explaining bank credit. In Section II are presented the sources of data and the variables used in

the analysis. The method of estimation and the specification of the equations are presented in Section III. The empirical results are presented and analysed in Section IV. A summary of the findings is given in Section V.

Section I

In this section, analyses of the relationships between (a) output and bank credit and (b) inventory and bank credit are presented.

Output and Bank Credit

The RBI's credit policy, which is characterised as 'controlled expansion', puts emphasis on meeting credit requirements in relation to output growth in the economy. In other words, though the policy aims at restraint on credit expansion to check inflationary pressures, the endeavour is to meet the genuine credit requirements for increase in output. That is, providing adequate bank credit to a sector/industry based on their production plans in the light of the priorities laid down in the National Plan. The assumption that there exists a determinate and stable relationship between credit requirements and production forms the basis and this relationship is termed as 'production elasticity of credit' or 'credit coefficient of production' which would measure the credit requirements of a sector/industry in relation to production.¹ The concept of production elasticity of credit assumes that for

¹ M. Narasimham, "Credit Planning: Its Rationale and Content," Prajnan, January-March 1972, p. 78.

every manufacturing activity there is a minimum credit need and that every increase in production is expected to lead to a corresponding increase in the need for credit. Further, credit creation in the economy cannot be out of tune with the trends in production for maintaining a stable price level. Shetty argues that, "Even on a priori considerations, and as a first approximation, it could be hypothesised that credit for any sector or industry over a period (not necessarily in the short run) has to have some relationship with its performance in real terms particularly of output."¹ The theoretical basis of a relationship between bank credit and output is that bank credit is one constituent of short term sources of funds and finances a part of the working capital of an industrial unit.

Inventory and Bank Credit

The determination of bank credit requirements by postulating a relation between inventory and bank credit also seems to be satisfactory. This is based on the argument that decisions of a firm regarding output are dependent on various factors operating simultaneously, like expectations regarding demand, market share, availability of raw materials, apart from availability of bank credit as such. Besides, knowing that bank credit is to finance short term requirements or current assets, it is reasonable to assume that bank credit is used mainly to finance inventory holdings which are a major item of

¹ S.L. Shetty, "Deployment of Credit: An Assessment of Structural Changes," in L.C. Gupta (ed.), Banking and Working Capital Finance, Macmillan, Delhi, 1978, p.142.

current assets. In this connection, it may be added that changes in the availability as well as cost of bank credit will have its impact, first, on inventory rather than on output. This is because in the short run, presumably, the costs of adjusting output will be higher than the costs of inventory adjustments.

However, three situations may be visualised in which inventory holdings ceteris paribus may be different for the same level of output and hence requirements of bank credit may be different for the same level of output. They are as follows:

- i) When realised sales and expected sales are equal the increase in finished goods inventory will be zero;
- ii) When expected sales are higher than actual sales the change in finished goods inventory will be positive;
and
- iii) When actual sales exceed expected sales the inventory of finished goods will decline.

Similarly, in a situation where both output and sales increase, other things remaining the same, one of the following three situations may be observed.

(1) Output and sales change by the same amount. In this case, the increase in inventory is mainly due to higher levels of raw material requirements to sustain higher levels of output. Since we have assumed that the increase in output and sales are equal, the increase in finished goods inventory will be insignificant. Work-in-progress inventory remains

unchanged, ceteris paribus, for any level of output in the short run given the scale of output.

(2) The increase in output is higher than the increase in sales. In this situation, both raw materials and finished goods inventory will increase. Raw materials inventory will rise for the same reason as given in (1). Finished goods inventory will be high because the absolute increase in the volume of output is higher than that of sales. This is because of the discrepancy between expected and realised sales. In other words, the level of output will be decided on the basis of expected sales, and if at the end of the period actual sales are less than sales expected at the beginning of the period, there will be an increase in finished goods inventory.

(3) The increase in output is less than that in sales. In this case, since current sales are higher than current output, inventory of finished goods will decline. In other words, realised sales are higher than expected sales and hence there is a decline in finished goods inventory. Inventory of raw materials with production process unchanged, however, will increase because of higher levels of output. The aggregate level of inventory, therefore, will depend on the balancing of these two components of inventory, moving in opposite directions.

In the following sections the main focus will be on two issues, viz. (1) analysis of the major factors in explaining outstanding levels of bank credit to industry, and (2)

examining whether it is output or inventory that is significantly related to bank credit. For this, we make use of regression analysis. The sources of data and variables used are presented in the next section.

Section II

Sources of Data

In the analysis carried out here, industry refers to large and medium public limited companies as presented in the RBI's Company Finance Studies. Thus, the balance sheets and income and expenditure statements of this group of companies form the basic source of data. The period covered is from 1965-66 to 1980-81.¹ However, certain problems arise in the use of these data because their coverage is not uniform. That is, data are not available throughout the period for the same number of companies. The coverage of the sample is changed on a quinquennial basis. The number of companies covered in the present analysis are 1501, 1650 and 1720 respectively for three periods, i.e. 1965-66 to 1969-70, 1970-71 to 1975-76 and 1976-77 to 1980-81. Even within a period, though the coverage (i.e., the total number of companies covered) is kept constant, the sample number of companies for

1 a) RBI, Financial Statistics of Joint Stock Companies in India 1960-61 to 1970-71. RBI, Bombay, August 1975.

b) RBI, Financial Statistics of Joint Stock Companies in India 1970-71 to 1974-75. RBI, Bombay, 1977.

c) RBI, "Finances of Large and Medium Public Limited Companies," RBI Bulletins, (i) September 1977, (ii) May 1980, (iii) November 1981, (iv) July 1983.

different industry groups is not the same for all the years, during the period 1976-77 to 1980-81. Besides, the same companies might not have appeared in the samples throughout the period. However, this may not create a serious problem since we have used the same set of data for all the variables (except rate of interest and inflation) like bank credit, output, inventory and trade credit.

Variables Used

Q = Value of output

M = Value of inventory

N = Net Trade Credit (sundry creditors - sundry debtors)

I = Rate of Interest or Loan Rate

I_d = Rate of Interest on Debentures

R = (I - I_d)

P^* = Rate of Inflation : $P^* = \frac{P_t - P_{t-1}}{P_{t-1}}$

R^* = Real Rate of Interest (I - P^*)

P_e^* = Expected Rate of Inflation

P = Wholesale Price Index

BC = Outstanding Bank Credit

BC_{t-1} = Outstanding Bank Credit in period 't-1'.

All variables with a bar, denote real magnitudes, i.e., nominal values deflated by wholesale price index.

Section III

Single equation regression models are used to explain the demand for bank credit by industry. Output is used as the major explanatory variable in some of the equations, along

with rate of interest, net trade credit and rate of inflation. In some equations, inventory is used as an explanatory variable in place of output. We have also tried to examine the hypothesis of partial adjustment, i.e., BC is used as an explanatory variable with one year time-lag.

Model

The demand for bank credit by industry is hypothesised to depend upon the level of output/inventory, rate of interest, availability of trade credit, and rate of inflation. The higher the level of output/inventory, ceteris paribus, the higher will be the demand for bank credit. A higher level of output/inventory requires larger amounts of funds to meet the working capital requirements and hence higher will be the demand for bank credit. On the other hand, the higher the rate of interest, representing cost of bank borrowings, the lower will be the demand for bank credit. However, the impact of rate of interest on demand for bank credit, in final analysis, has to be seen from the viewpoint of minimisation of total costs. This will bring into picture some other offsetting factors like ordering costs, discounts associated with bulk purchases and so on. We shall not be dealing with this aspect as the relevant data are not available. On theoretical grounds, rate of inflation is to have a positive relationship with demand for bank credit as, at high rates of inflation, a larger volume of funds will be required to finance the same level of operations or for holding the same quantum of inventory. The variable, net trade credit, if positive denotes that industry

is a net borrower of funds from other sectors or industries and is assumed to be inversely related with the dependent variable. On the other hand, if industry is a net credit giver to others, the coefficient of net trade credit variable is expected to appear with a positive sign.

It is postulated that bank credit is linearly related to output/inventory and other explanatory variables. The simplest version of the regression model used is as given below:

$$BC_t = a + bQ_t \quad \dots (I)$$

where BC = outstanding bank credit

Q = value of output

b = credit coefficient of production.

Subsequently other variables, viz. rate of interest, rate of inflation, net trade credit have been introduced sequentially and also different combinations of these variables are experimented with.

Similar equations, using inventory as the main explanatory variable, are also estimated. The basic equation with inventory as explanatory variable is

$$BC_t = a + bM_t \quad \dots (II)$$

On the other hand, the third equation assumes partial adjustment of demand for bank credit to its desired level within each time period, i.e., one year. The specifications in equations I and II suggest that demand for bank credit is instantaneously adjusted with respect to output and inventory. A partial adjustment model, however, implies that the actual

level of bank credit corresponding to any set of the values of explanatory variables adjusts in each period by a fraction of the discrepancy between the desired and past levels of bank credit. That is,

$$BC_t - BC_{t-1} = \lambda (BC_t^d - BC_{t-1}) \quad \dots (1)$$

where BC_t^d = Desired level of bank credit.

However, the desired level of bank credit, as is true of the actual level of bank credit, is assumed to be a function of output/inventory. Therefore,

$$BC_t^d = a + bQ_t$$

or

$$BC_t^d = a + bM_t \quad \dots (2)$$

In relation (1), λ is the speed of adjustment parameter with values lying between 0 and 1, i.e., $0 < \lambda < 1$.

Substituting (1) and (2) in equation II, we get :

$$BC_t = a\lambda + b\lambda M_t + (1 - \lambda) BC_{t-1} \quad \dots (III)$$

If λ takes the value unity, it implies complete adjustment within one year and equation III is identical with equation II. The lower the value of λ the slower is the adjustment process.

We have also used, in some of the equations, different cost variables, like debenture rate of interest (I_d) reflecting the cost of alternative source of funds, real rate of interest (R^*), i.e., nominal rate of interest adjusted for the rate of inflation, and the difference between loan rate and debenture rate of interest (R). Likewise, in some of the equations (eq. 43-56) expected rate of inflation (P_e^*) is used. We have

also tried with the price level (WPI) variable instead of rate of inflation (eq. 83-126). The model is estimated with both nominal and real variables.

Section IV

The equations are estimated by the method of ordinary least squares (OLS). The regression estimates in both nominal and real terms are presented in Appendix III.1 for the three equations using output, inventory, lagged dependent variable along with other explanatory variables. However, here, we present two selected equations. The equations presented below are selected by a combination of criteria, i.e., appropriateness of the signs of coefficients, coefficient of multiple determination adjusted for degree of freedom (\bar{R}^2), 't' values of the 'b' coefficients and DurbinWatson Statistic(D.W.).

$$\text{Eq.No. 15) } BC_t = -88.67 + 0.69 M_t - 1.22 N_t$$

$$(0.82) \quad (11.66)** \quad (3.40)**$$

$$R^2 = 0.986$$

$$D.W. = 1.068^@$$

$$\text{Eq.No. 36) } BC_t = 320.47 + 0.15 Q_t - 0.54 N_t$$

$$(5.39) \quad (13.98)** \quad (2.24)*$$

$$R^2 = 0.991$$

$$D.W. = 1.625^*$$

Figures in parentheses are 't' values.

** - Significant at 1 per cent level.

* - significant at 5 per cent level.

@ - D.W. Statistic in the inconclusive range at 5 per cent level of significance.

In equation 15 inventory (M) and net trade credit (N) and in equation 36, output (Q) and (N) are used as explanatory variables. In both equations outstanding level of bank credit is expressed as a linear function of inventory/output and net trade credit. The total explanatory power of the two equations is very high, i.e., 99 per cent. In other words, these two variables between them i.e., inventory and net trade credit or output and net trade credit, explain 99 per cent of the variation in bank credit. The coefficients of all the variables in both the equations are statistically significant. There is no auto-correlation, judged by the D.W. statistic at 5 per cent level of significance, in equation 36. However, in equation 15, the value of D.W. lies in the inconclusive range at 5 per cent level of significance. Therefore, positive first order auto-correlation among residuals cannot be ruled out. And this is further confirmed from equation 99, in which the D.W. statistic is 0.636 indicating the presence of auto-correlation.

Moreover, equation 65, where both output and inventory are used as explanatory variables, suggests that output is significantly related to bank credit. In fact, the sign of inventory coefficient suggests an inverse relation between inventory and bank credit. The reason seems to be the problem of multi-collinearity as there is almost perfect positive correlation between output and inventory. The value of correlation coefficient between output and inventory is 0.995. And also to be seen in this connection is equation 66 where

inventory is regressed on output. The fit is highly satisfactory by the usual criteria and explains 96 per cent of variation in inventory.

In other words, though output or inventory appear to be logical candidates to the explanation of demand for bank credit, equations 65 and 66 make it clear that it is output which is crucial in the determination of both inventory and bank credit. As inventory is highly correlated with output, the former when used as an independent variable may probably be capturing the effect of output.

On statistical grounds, therefore, the equations using output as an explanatory variable performed better than those with inventory as an explanatory variable. The set of equations in both nominal and real terms with output as one of the explanatory variables on the whole gave better fit. It may, therefore, be stated that demand for bank credit by industry is significantly related to output and net trade credit. Almost similar results are obtained when demand function for bank credit is estimated in real terms (eq. 68).

From the regression results reported in Appendix III.1 it is seen that in most of the equations, rate of inflation variable (P^*) appears with a positive sign contrary to the a priori reasoning. Moreover, many of the equations satisfy other statistical criteria like absence of autocorrelation, high R^2 s and the coefficient of P^* in most of the equations is statistically significant. In other words, a large number of equations where rate of inflation is used as explanatory

variable satisfies the normal statistical criteria, except the sign, and fits are good. The regression results are almost similar, so far as the sign of the coefficient of rate of inflation is concerned, in nominal and real variables as well as when expected rate of inflation (P_e^*) or wholesale price index (WPI) is used as explanatory variable.

Therefore, an explanation of the negative sign of coefficient of P^* is in order, since a priori reasoning postulates a positive relationship between rate of inflation and demand for bank credit. It is based on the assumption that bank credit is for meeting working capital requirements of which inventory holding is a major item. Therefore, to hold the same units of inventory when price level is rising, the industry's bank credit requirement will be higher. Moreover, the argument crucially depends on the assumption that all prices, i.e., input and output prices of industry rise simultaneously and instantaneously. If this were to be true the coefficient of P^* should appear with a positive sign.

Since, the coefficient of rate of inflation consistently appeared with a negative sign in most of the equations and also statistically significant, the assumption that input and output prices rise instantaneously resulting in a positive relationship between bank credit and output/inventory seems doubtful. Input prices include price of raw materials and price of labour (wage rates). A more plausible assumption, however, seems to be that different prices adjust with different speed, i.e., some prices adjust faster than other prices. As regards our

sample, viz., industry, there is no empirical evidence to contend which price, i.e., input or output price, rises first. Moreover, in general, it is difficult to disentangle a change in the price level and to state confidently as to which of the two prices, i.e., input or output prices, is leading or lagging. But the negative sign of the coefficient of P^* indicates that output price leads and input prices lag, resulting in an increase in additional generation of funds in the short run for a given level of output and hence a decrease in the bank credit requirements.

However, the assumption that all input prices lag behind output prices seems to be a very strong one. Nonetheless, the coefficient of rate of inflation appearing with a negative sign is possible even with a weaker assumption of allowing instantaneous adjustment of material input prices and of lagging wage rates. And this is not an unreasonable assumption if one takes into account factors like:

- a) the sample used for the analysis being big companies, there might be certain oligopolistic characteristics allowing for control over their prices,
- b) the nature of wage contracts, typically extending over a period of, say, 3 or 5 years, and
- c) the labour market conditions where, relatively, the supply is higher making the bargaining power of labour somewhat weak.

Under these conditions, it may not be unreasonable to postulate a time lag in the adjustment of wage rates. Acceptance

of this assumption results in an inverse relationship between rate of inflation and demand for bank credit. This is illustrated with an example.

Let us suppose that in time period 't', with zero rate of inflation the industry's output is 'X' units. To produce X units of output, let us also suppose that the input requirements are 'a' units of labour and 'b' units of material inputs. Further, allowing for a certain rate of return, the relationship between the value of inputs (a and b) and output (X) may be shown as

$$\lambda_1 X_t > \lambda_2 (a + b)_t \quad \dots (1)$$

where λ_1 and λ_2 denote the price per unit of output and material inputs & labour respectively. Consider that in period t+1 the output of industry remains unchanged. Now, superimposing the assumption that wages lag behind output and material input prices and also assuming that the rate of increase in these prices is equal to rate of inflation (π) in period t+1, inequality 1 may be written as:

$$(\pi\lambda_1 + \lambda_1) X_{t+1} > [\lambda_2^a + (\pi\lambda_2 + \lambda_2)b]_{t+1} \quad \dots (2)$$

It should be noticed that in inequalities(1) and(2), a and b are of the same magnitude, because of the assumption that output in t+1 remains unchanged at the same level as in period t. Inequalities(1) and(2) state that the revenue obtained from X units of output is larger by a certain amount than the expenditure incurred on inputs a and b. However, with the assumption of lagged wages while other prices adjust to the rate of inflation, it may be seen that

$$\begin{aligned}
 (\pi\lambda_1 + \lambda_1) x_{t+1} - [\lambda_2^a + (\pi\lambda_2 + \lambda_2)^b]_{t+1} \\
 > \lambda_1 x_t - \lambda_2(a+b)_t \quad \dots (3)
 \end{aligned}$$

Thus, it is to be seen that with the assumption of wages adjusting with a time lag, ceteris paribus, inflation results in generating a larger volume of sales revenue for any given level of output. And the larger the availability of internal sources of funds the lower will be the demand for bank credit.¹ Therefore, the net effect of a rising price level on demand for bank credit will be negative.

The negative sign of the coefficient of rate of inflation may also be justified from the viewpoint of credit policy of the RBI. The main stance of the RBI's credit policy is 'controlled expansion', i.e., allowing a rate of expansion in bank credit within certain limits so as to ensure price stability while simultaneously meeting all the genuine credit requirements to fulfil production targets. Naturally, following this policy of controlled expansion in periods of rising prices results in a restriction on the availability of bank credit. Moreover, the structural changes that have taken place in the banking system after bank nationalisation of 1969, resulted in an increasingly larger proportion of bank credit being made available to the priority sectors which, in turn, led to a decline in the share of industry in total bank credit.

¹ See, T.R. Venkatachalam and Y.S.R. Sharma, "An Econometric Analysis of Financial Behaviour of the Private Corporate Sector in India," Reserve Bank Staff Occasional Papers, Vol.3, No.2, December 1978, p. 78.

As regards the variable of cost of credit, from the results reported in Appendix III.1, it may be seen that the rate of interest (I) variable in most of the equations appears with a sign contrary to expectations. Moreover, in none of the equations, except in equations 94, 95 and 96, the coefficients are statistically significant. It may also be seen that even these three equations, either contain P^* as an argument of the function or has the problem of autocorrelation and, therefore, are not satisfactory.

Further, from the reported regression results in Appendix, it may be noticed that equations using other variables reflecting the cost of credit, viz., debenture rate of interest (I_d) representing the cost of credit from an alternative source, the difference between I and I_d (R) and real rate of interest (R^*) also did not perform well. In almost all the equations in which these variables are used they appear with wrong sign. It may be also noticed that inclusion of I sequentially, in different combinations of output/inventory and other explanatory variables, the standard errors of coefficients of output/inventory have increased, without any improvement in the overall statistical fit. Thus, the cost of credit variable do not show any systematic influence on the dependent variable BC .

However, the above results do not exclude the possibility that the rate of interest affects the demand for bank credit. For, it is essential to take into account the expectations regarding future profits also to have an idea about

borrowers' response to changes in the rate of interest with respect to their demand for bank credit. Suppose that the central bank raises the rates of interest in a boom period when expectations about future profits are high (and decrease it when expected future profits are low). Then, even, an increase in the rate of interest may, ceteris paribus, tend to decrease the demand for bank credit and vice-versa, it may not be reflected in the regression results similar to that of those reported in the Appendix III.1. For, the expectations about future profits may tend to compensate or even overcompensate, the impact of a rise in the rate of interest on the demand for bank credit. Furthermore, the rate of interest used in our study being an administered rate, with marginal variation may not correspond to the rate of interest determined by the market forces of demand and supply a meaningful measure of the cost of bank borrowings. And this may result in interest rate variable in the demand function for bank credit to be not significant or even appearing with a perverse sign.¹

1 See, (a) Gunnar Eliasson, The Credit Market, Investment Planning and Monetary Policy - An Econometric Study of Manufacturing Industries, Almquist & Wiksell, Stockholm, pp. 103-104.

(b) Michael C. Lovell, "Determinants of Inventory Investment," in Models of Income Determination, Studies in Income and Wealth, NBER, Princeton University Press, 1964, pp. 213-214.

(c) C. P. Khetan, R. R. Waghmare and J. C. Handa, The Monetary Structure of the Indian Economy, Macmillan, 1976, pp. 59-60.

(d) Reserve Bank of India, "The Incidence of Effect of Rates of Interest on Bank Credit," RBI Bulletin, February 1976, p. 136.

Lastly, the use of lagged dependent variable BC_{t-1} as a regressor is based on the assumption of a partial adjustment hypothesis. However, it may be noticed that there is a general worsening of the overall statistical fit when BC_{t-1} is used as an additional explanatory variable. The output/inventory and net trade credit variables, significant without BC_{t-1} , lost statistical significance in many of the equations when BC_{t-1} is added. It is also to be noted that since we have used lagged dependent variable as a regressor, the Durbin-Watson statistic may not be useful in testing for autocorrelation.¹ Further, since there are only 16 observations, the Durbin h statistic suggested for testing autocorrelation in such models, may not be helpful.² This is because the Durbin h statistic can be used only for large samples. Since equations not using BC_{t-1} give better fits than with BC_{t-1} we are inclined to reject the hypothesis of partial adjustment in the present case.

Section V

Conclusions

The broad conclusions emerging from the preceding regression analysis are as follows.

(1) Output and inventory are linearly related to and are of special importance in the explanation of outstanding levels of commercial bank credit for large and medium public

¹ J. Johnston, Econometric Methods, McGraw-Hill Inc., Tokyo, 1972, p. 252.

² Ibid., p. 313.

limited companies.

(2) As regards the question of choosing between output and inventory, it seems that output variable scores on statistical grounds as explained in the previous section. However, we still think that in the determination of bank credit at firm/industry-group level, inventory may be an important variable since the inventory/output ratios of different industries may be different due to the nature of product, technology, trade practices, etc. This may result in varied demands for bank credit for the same levels of output in different industries. Further work is to be done at a disaggregated level, i.e., industry groups/firms, to examine this point.

(3) The output elasticity of demand for bank credit is 0.92. That is a one per cent change in the level of output, other things remaining same, will be accompanied by 0.92 per cent change in demand for bank credit, in the same direction.

(4) Trade credit variable is significantly, inversely, related to demand for bank credit by industry. It is in line with a priori reasoning, since, for a given level of output, larger availability of trade credit, i.e., credit obtained by industry exceeding credit given by industry, may reduce the demand for bank credit by industry. This is so, because, a part of the working capital requirements are met by others (creditors) when industry is a net borrower in the form of trade credit.

(5) The rate of inflation is inversely related to bank credit. Though it is at variance with the expected relation, from the point of view credit policy of the RBI it is in conformity with the policy objective of restricting the supply of

bank credit in periods of inflation and also from the angle of desired structural changes in the deployment of bank credit. Further, as explained in the previous section, the additional generation of internal funds may act as a depressing factor on the demand for bank credit in periods of inflation.

(6) The interest rate variable turning out to be insignificant implies that it is rather availability of funds for firms that may be more important than the cost of credit, which needs to be examined. This is not surprising considering the fact that interest payments as a percentage of total expenditure, according to the data available from the studies on company finances of the RBI, are around 3 per cent. Besides, cost of funds from alternative sources may, perhaps, have an influence on demand for bank credit, rather than its own cost. This, of course, needs further empirical exploration.¹ However, it may be stated that the higher the cost of alternative sources of funds like public deposits,² in relation to cost of bank credit, ceteris paribus, the higher will be the demand for bank credit.

1 See, (a) T.R. Venkatachalam and Y.S.R. Sharma, op.cit., p. 78.

(b) C.P. Khetan, R.R. Waghmare and J.C. Handa, op.cit., p. 78.

2 We could not use interest rate on public deposits, the closer short-term alternative source of funds for industry, due to non-availability of data for the entire period.

Appendix III.I : Regression Equations of Demand for Bank Credit by Industry

Equation Number	Intercept	Regression Coefficients and 't' values of											R ²	D.W.
		Q	M	N	I	I _d	R (I-I _d)	P*	P _g *	R* (I-P*)	P	BC _{t-1}		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	229.07 (3.18)	-	0.49 (24.19)**	-	-	-	-	-	-	-	-	-	0.975	0.744
2	122.02 (0.77)	-	0.43 (5.77)**	-	27.00 (0.76)	-	-	-	-	-	-	-	0.974	0.750
3	331.47 (2.89)	-	0.52 (9.78)**	-	-10.08 (0.41)	-	-	-12.20 (4.28)**	-	-	-	-	0.989	1.922*
4	-99.26 (0.70)	-	0.68 (6.90)**	-1.21 (3.12)**	3.50 (0.12)	-	-	-	-	-	-	-	0.985	0.692
5	194.53 (1.15)	-	0.60 (6.73)**	-0.48 (1.10)	-10.88 (0.44)	-	-	-9.38 (2.45)*	-	-	-	-	0.989	1.58@
6	287.36 (3.58)	-	0.44 (12.09)**	-	-	-	55.00 (1.45)	-	-	-	-	-	0.977	0.78
7	304.77 (5.54)	-	0.48 (17.76)**	-	-	-	17.42 (0.63)	-11.19 (3.97)**	-	-	-	-	0.989	1.69@
8	-29.51 (0.24)	-	0.65 (8.86)**	-1.12 (3.07)**	-	-	32.67 (1.07)	-	-	-	-	-	0.986	0.813
9	166.10 (1.21)	-	0.56 (7.52)**	-0.48 (1.10)	-	17.46 (0.64)	-	-8.36 (2.20)*	-	-	-	-	0.989	1.423@
10	463.82 (1.55)	-	0.49 (5.80)**	-	51.83 (1.32)	-87.63 (1.32)	-	-	-	-	-	-	0.976	0.846
11	587.61 (3.06)	-	0.56 (10.06)**	-	10.54 (0.40)	-67.74 (1.61)	-	-11.73 (4.35)**	-	-	-	-	0.990	1.938*
12	450.61 (2.08)	-	0.64 (7.46)**	-0.51 (1.26)	10.31 (0.40)	-69.76 (1.70)	-	-8.73 (2.46)*	-	-	-	-	0.991	1.682@
13	219.63 (0.93)	-	0.73 (7.53)**	-1.18 (3.26)**	26.82 (0.89)	-80.52 (1.63)	-	-	-	-	-	-	0.986	0.974@
14	289.42 (6.00)	-	0.50 (37.65)**	-	-	-	-	-11.80 (4.57)**	-	-	-	-	0.990	1.829*
15	-88.67 (0.82)	-	0.69 (11.16)**	-1.22 (3.40)**	-	-	-	-	-	-	-	-	0.986	1.068@

(continued)

Appendix III.I : (continued)

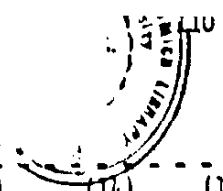
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
16	150.82 (1.14)	-	0.58 (8.34)**	-0.48 (1.12)	-	-	-	-8.97 (2.50)*	-	-	-	-	0.990	1.51@
17	91.45 (1.96)	-	0.17 (3.12)**	-	-	-	-	-	-	-	-	0.70 (5.72)**	0.992	1.446
18	8.18 (0.093)	-	0.13 (2.02)*	-	21.35 (1.11)	-	-	-	-	-	-	0.69 (5.70)**	0.992	1.655
19	112.11 (0.90)	-	0.24 (2.14)*	-	9.53 (0.44)	-	-	-4.36 (1.17)	-	-	-	0.52 (2.67)*	0.993	1.804
20	135.95 (0.93)	-	0.18 (0.93)	0.16 (0.35)	11.84 (0.51)	-	-	-4.51 (1.15)	-	-	-	0.57 (2.25)*	0.992	1.898
21	21.13 (0.19)	-	0.10 (0.51)	0.10 (0.22)	23.08 (1.07)	-	-	-	-	-	-	0.73 (3.41)**	0.992	1.706
22	419.54 (9.31)	0.12 (34.99)**	-	-	-	-	-	-	-	-	-	-	0.988	1.145@
23	359.85 (2.84)	0.12 (8.97)**	-	-	12.43 (0.51)	-	-	-	-	-	-	-	0.987	1.105@
24	446.03 (4.22)	0.12 (11.55)**	-	-	3.25 (0.16)	-	-	-6.63 (2.88)**	-	-	-	-	0.992	1.895*
25	266.89 (2.23)	0.14 (8.96)**	-	-0.53 (2.16)*	11.28 (0.52)	-	-	-	-	-	-	-	0.990	1.586@
26	415.07 (2.83)	0.13 (7.62)**	-	-0.11 (0.32)	4.21 (0.20)	-	-	-5.76 (1.58)	-	-	-	-	0.991	1.880@
27	448.46 (9.44)	0.12 (17.81)**	-	-	-	-	39.25 (1.47)	-	-	-	-	-	0.989	0.888
28	475.35 (11.79)	0.12 (21.41)**	-	-	-	-	23.33 (1.03)	-6.08 (2.69)**	-	-	-	-	0.992	1.539@
29	352.40 (5.64)	0.14 (11.48)**	-	-0.49 (2.09)*	-	-	32.11 (1.34)	-	-	-	-	-	0.991	1.362@
30	445.46 (5.08)	0.13 (8.82)**	-	-0.13 (0.38)	-	-	24.07 (1.02)	-5.07 (1.45)	-	-	-	-	0.992	1.541@

(continued)

Appendix III.I : (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
31	650.46 (3.12)	0.13 (9.35)**	-	-	36.03 (1.34)	-72.93 (1.69)	-	-	-	-	-	-	0.989	0.817
32	643.97 (3.76)	0.13 (11.59)**	-	-	21.07 (0.92)	-52.01 (1.43)	-	-5.91 (2.61)*	-	-	-	-	0.992	1.359@
33	617.58 (3.00)	0.13 (8.00)**	-	-0.09 (0.26)	21.66 (0.90)	-51.51 (1.36)	-	-5.23 (1.48)	-	-	-	-	0.992	1.37@
34	508.96 (2.52)	0.15 (9.45)**	-	-0.46 (1.92)*	30.10 (1.23)	-57.70 (1.45)	-	-	-	-	-	-	0.991	1.27@
35	462.01 (12.07)	0.13 (44.03)**	-	-	-	-	-	-6.69 (3.06)**	-	-	-	-	0.992	1.924*
36	320.47 (5.39)	0.15 (13.98)**	-	-0.54 (2.24)*	-	-	-	-	-	-	-	-	0.991	1.625*
37	438.19 (5.00)	0.13 (9.46)**	-	-0.10 (0.30)	-	-	-	-5.91 (1.78)*	-	-	-	-	0.992	1.917*
38	225.46 (3.04)	0.06 (3.09)**	-	-	-	-	-	-	-	-	-	0.53 (2.99)**	0.992	1.695
39	109.00 (0.87)	0.05 (2.02)*	-	-	21.84 (1.14)	-	-	-	-	-	-	0.56 (3.17)**	0.992	1.807
40	232.96 (1.23)	0.07 (1.95)*	-	-	14.44 (0.68)	-	-	-3.06 (0.88)	-	-	-	0.37 (1.34)	0.992	1.936
41	225.93 (1.16)	0.05 (0.77)	-	0.27 (0.61)	16.38 (0.75)	-	-	-3.79 (1.01)	-	-	-	0.51 (1.40)	0.992	1.981
42	91.31 (0.64)	0.03 (0.54)	-	0.13 (0.31)	23.64 (1.14)	-	-	-	-	-	-	0.65 (1.91)*	0.992	1.804
43	297.06 (3.29)	-	0.42** (10.55)**	-	34.89 (1.82)*	-	-	-	-29.63 (5.76)**	-	-	-	0.993	1.684@
44	219.70 (1.65)	-	0.49** (5.53)**	-0.30 (0.80)	28.06 (1.33)	-	-	-	-25.77 (3.63)**	-	-	-	0.992	1.603@
45	442.31 (7.37)	-	0.48* (19.91)*	-	-	-	20.72 (0.84)	-	-27.48 (4.65)**	-	-	-	0.991	1.383@

(continued)



Appendix III.I : (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
46	275.59 (2.00)	-	0.55 ^e (8.68) ^{**}	-0.47 (1.33)	-	-	18.53 (0.77)	-	-21.67 (3.01) ^{**}	-	-	-	0.991	1.388@
47	430.64 (7.47)	-	0.49 (41.21) ^{**}	-	-	-	-	-	-28.96 (5.19) ^{**}	-	-	-	0.991	1.091@
48	258.61 (1.93)	-	0.57 (9.84) ^{**}	-0.49 (1.41)	-	-	-	-	-22.75 (3.28) ^{**}	-	-	-	0.992	1.102@
49	157.52 (1.42)	-	0.27 (2.92) ^{**}	-	28.32 (1.60)	-	-	-	-16.37 (1.93)*	-	-	0.37 (1.87)*	0.994	1.711
50	171.81 (1.34)	-	0.23 (1.24)	0.11 (0.26)	30.21 (1.52)	-	-	-	-16.40 (1.85)*	-	-	0.41 (1.59)	0.993	1.746
51	405.76 (4.28)	0.11 (10.89) ^{**}	-	-	30.18 (1.60)	-	-	-	-17.65 (3.42) ^{**}	-	-	-	0.993	1.266@
52	403.50 (3.29)	0.11 (5.53) ^{**}	-	-0.01 (0.03)	29.96 (1.43)	-	-	-	-17.46 (2.15)*	-	-	-	0.992	1.274@
53	544.06 (10.26)	0.12 (21.69) ^{**}	-	-	-	-	26.93 (1.20)	-	-14.09 (2.67)*	-	-	-	0.992	1.071@
54	493.09 (4.38)	0.13 (8.88) ^{**}	-	-0.16 (0.52)	-	-	26.99 (1.16)	-	-11.29 (1.47)	-	-	-	0.992	1.211@
55	533.87 (10.03)	0.13 (43.57) ^{**}	-	-	-	-	-	-	-15.39 (2.93) ^{**}	-	-	-	0.992	1.119@
56	483.51 (4.24)	0.13 (9.72) ^{**}	-	-0.16 (0.50)	-	-	-	-	-12.63 (1.64)	-	-	-	0.992	1.283@
57	440.42 (13.70)	0.12 (45.78) ^{**}	-	-	-	-	-	-	-	7.56 (3.91) ^{**}	-	-	0.994	1.650*
58	432.46 (6.62)	0.12 (9.70) ^{**}	-	-0.04 (0.14)	-	-	-	-	-	7.29 (2.62)*	-	-	0.993	1.668@
59	360.26 (3.79)	0.08 (1.64)	-	0.21 (0.58)	-	-	-	-	-	6.29 (2.14)*	-	0.32 (1.04)	0.993	1.874
60	362.60 (3.93)	0.10 (4.00) ^{**}	-	-	-	-	-	-	-	5.82 (2.12)*	-	0.20 (0.90)	0.994	1.850

(continued)

Appendix III.I : (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
61	261.11 (5.89)	-	0.47 (36.78)**	-	-	-	-	-	-	11.61 (4.98)**	-	-	0.991	1.684*
62	133.28 (1.17)	-	0.55 (0.06)**	-0.46 (1.21)	-	-	-	-	-	9.26 (2.95)**	-	-	0.991	1.500@
63	181.80 (1.85)	-	0.24 (1.70)	0.12 (0.30)	-	-	-	-	-	6.29 (2.16)*	-	0.49 (2.43)	0.994	1.900
64	156.87 (3.12)	-	0.27 (4.13)**	-	-	-	-	-	-	6.08 (2.23)*	-	0.45 (2.92)**	0.994	1.843
65	476.18 (0.95)	0.13 (3.32)**	-0.06 (0.46)	-	-	-	-	-	-	-	-	-	0.982	1.038@
66	404.47 (3.08)	0.26 (20.11)**	-	-	-	-	-	-	-	-	-	-	0.957	1.08
67	331.61 (2.11)	-	0.61 (3.83)**	-	-	-	-	-	-	-	-3.35 (0.74)	-	0.974	0.709
68	223.82 (1.33)	-	0.62 (4.10)**	-	58.18 (1.43)	-	-	-	-	-	-7.37 (1.42)	-	0.976	0.855
69	-30.22 (0.18)	-	0.75 (5.65)**	-1.10 (2.66)*	20.75 (0.58)	-	-	-	-	-	-3.59 (0.80)	-	0.984	0.797@
70	416.35 (2.62)	-	0.58 (3.85)**	-	-	-	58.93 (1.54)	-	-	-	-4.08 (0.94)	-	0.977	0.861@
71	371.36 (1.11)	-	0.59 (3.48)**	-	61.04 (1.44)	-46.25 (0.52)	-	-	-	-	-4.93 (0.69)	-	0.974	0.860@
72	244.60 (0.95)	-	0.70 (5.22)**	-1.23 (3.00)**	22.19 (0.64)	-96.05 (1.36)	-	-	-	-	1.90 (0.32)	-	0.985	0.994@
73	-19.28 (0.12)	-	0.76 (5.87)**	-1.19 (3.23)**	-	-	-	-	-	-	-2.05 (0.59)	-	0.985	0.681
74	65.10 (0.37)	-	0.73 (5.62)**	-1.08 (2.87)**	-	-	36.03 (1.15)	-	-	-	-2.62 (0.75)	-	0.985	0.910@
75	63.48 (0.50)	-	0.16 (0.75)	0.14 (0.29)	33.92 (1.27)	-	-	-	-	-	-2.36 (0.71)	0.71 (3.23)**	0.991	1.692

(continued)

Appendix III.I : (continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
76	75.30 (0.58)	-	0.20 (0.95)	-0.08 (0.17)	-	-	-	-	-	-	0.02 (0.01)	0.67 (2.99)**	0.991	1.420
77	44.33 (0.43)	-	0.20 (1.71)	-	31.14 (1.31)	-	-	-	-	-	-2.25 (0.72)	0.66 (5.06)**	0.992	1.633
78	523.90 (4.42)	0.15 (6.76)**	-	-	-	-	-	-	-	-	-2.31 (0.95)	-	0.988	1.100@
79	441.77 (3.35)	0.14 (6.89)**	-	-	36.49 (1.30)	-	-	-	-	-	-4.37 (1.53)	-	0.988	1.020@
80	309.81 (1.97)	0.15 (7.27)**	-	-0.45 (1.42)	19.78 (0.67)	-	-	-	-	-	-1.51 (0.44)	-	0.989	1.487@
81	570.57 (4.92)	0.14 (6.75)**	-	-	-	-	42.13 (1.59)	-	-	-	-2.66 (1.15)	-	0.989	0.837
82	389.15 (2.48)	0.14 (7.32)**	-	-0.45 (1.61)	-	-	33.33 (1.31)	-	-	-	-0.64 (0.26)	-	0.990	1.321@
83	602.05 (2.60)	0.14 (6.21)**	-	-	40.74 (1.41)	-50.57 (0.85)	-	-	-	-	-2.17 (0.56)	-	0.988	0.817@
84	537.33 (2.55)	0.14 (6.90)**	-	-0.61 (1.92)*	21.12 (0.76)	-86.62 (1.53)	-	-	-	-	3.28 (0.73)	-	0.990	1.464@
85	322.28 (2.11)	0.15 (7.51)**	-	-0.53 (1.88)*	-	-	-	-	-	-	-0.03 (0.01)	-	0.990	1.623@
86	146.64 (0.90)	0.06 (1.57)	-	-	26.99 (1.13)	-	-	-	-	-	-1.06 (0.39)	0.52 (2.47)*	0.992	1.782
87	136.56 (0.80)	0.04 (0.60)	-	0.22 (0.49)	32.89 (1.19)	-	-	-	-	-	-1.63 (0.53)	0.66 (1.87)*	0.991	1.778
88	184.30 (1.10)	0.06 (0.93)	-	-0.02 (0.04)	-	-	-	-	-	-	0.69 (0.28)	0.55 (1.58)	0.991	1.741

(continued)

Appendix III.I : (continued)

Equation Number	Intercept	Q	M	N	I	I _d	R (I-I _d)	P*	P	R* (I-P*)	\overline{BC}_{t-1}	R ²	D.W.
89	7.92 (6.41)	0.06 (3.82)**	-	-	-	-	-	-	-	-	-	0.475	0.835
90	4.95 (4.67)	0.13 (7.00)**	-	-1.01 (4.39)**	-	-	-	-	-	-	-	0.772	1.483@
91	8.86 (8.15)	0.05 (3.31)**	-	-	-	-	-	-	-	0.07 (2.67)**	-	0.635	0.880
92	5.76 (4.22)	0.11 (4.60)**	-	-0.85 (0.94)	-	-	-	-	-	0.02 (2.94)**	-	0.771	1.429@
93	8.66 (9.31)	0.06 (5.15)**	-	-	-	-	-	-0.08 (3.60)**	-	-	-	0.717	1.704*
94	7.31 (8.86)	0.12 (6.03)**	-	-	-0.03 (3.58)**	-	-	-0.06 (3.21)**	-	-	-	0.835	1.822*
95	6.34 (5.89)	0.14 (5.23)**	-	-	-0.36 (3.22)**	-	-	-	-	-	-	0.686	1.134@
96	6.79 (5.29)	0.12 (5.63)**	-	-0.21 (0.53)	-0.23 (1.94)*	-	-	-0.06 (2.03)*	-	-	-	0.825	1.750@
97	4.99 (4.78)	0.14 (6.44)**	-	-0.77 (2.55)*	-0.15 (1.18)	-	-	-	-	-	-	0.779	1.456@
98	5.36 (2.72)	-	0.33 (3.69)**	-	-	-	-	-	-	-	-	0.457	0.750
99	0.13 (0.68)	-	0.63 (6.06)**	-0.94 (3.71)**	-	-	-	-	-	-	-	0.716	0.636
100	6.55 (4.25)	-	0.27 (3.83)**	-	-	-	-	-	-	0.07 (3.33)**	-	0.684	0.901
101	2.35 (1.24)	-	0.51 (5.11)**	-0.69 (2.92)**	-	-	-	-	-	0.05 (2.55)*	-	0.801	1.145@
102	5.76 (4.44)	-	0.34 (5.88)**	-	-	-	-	-0.08 (4.40)**	-	-	-	0.765	1.247@
103	4.30 (2.95)	-	0.47 (5.23)**	-	-0.13 (1.76)	-	-	-0.08 (4.47)**	-	-	-	0.798	1.492@
104	3.44 (1.51)	-	0.49 (3.53)**	-	-0.17 (1.52)	-	-	-	-	-	-	0.503	0.653

(continued)

Appendix III.I : (continued)

Equation Number	Intercept	\bar{Q}	\bar{M}	\bar{N}	I	I_d	R ($I-I_d$)	P^*	P	R^* ($I-P^*$)	BC_{t-1}	R^2	D.W.
105	2.99 (1.44)	-	0.51 (5.04)**	-0.39 (0.88)	-0.04 (0.37)	-	-	-0.06 (2.44)*	-	-	-	0.794	1.283@
106	0.09 (0.05)	-	0.66 (5.35)**	-1.16 (3.20)**	-0.10 (0.84)	-	-	-	-	-	-	0.709	0.804
107	1.91 (0.81)	-	0.58 (4.10)**	-	-	-	-	-	-0.01 (2.16)*	-	-	0.569	0.583
108	1.16 (0.46)	-	0.59 (4.15)**	-	0.27 (0.96)	-	-	-	-0.03 (1.71)	-	-	0.567	0.643
109	0.17 (0.08)	-	0.59 (4.90)**	-1.21 (2.33)*	0.07 (0.29)	-	-	-	0.003 (0.14)	-	-	0.684	0.817@
110	2.39 (0.99)	-	0.58 (4.12)**	-	-	-	0.28 (1.05)	-	-0.02 (2.31)*	-	-	0.572	0.703
111	2.16 (0.59)	-	0.58 (3.90)**	-	0.28 (0.97)	-0.23 (0.39)	-	-	-0.02 (0.88)	-	-	0.534	0.694
112	3.05 (1.07)	-	0.57 (4.87)**	-1.48 (2.81)**	0.08 (0.34)	-0.71 (1.46)	-	-	0.03 (1.16)	-	-	0.713	1.233@
113	0.31 (0.15)	-	0.59 (5.09)**	-1.26 (2.68)**	-	-	-	-	0.01 (0.80)	-	-	0.708	0.810
114	0.74 (0.35)	-	0.59 (5.05)**	-1.20 (2.51)*	-	-	0.20 (0.91)	-	0.002 (0.21)	-	-	0.703	0.910@
115	0.01 (0.01)	-	0.53 (2.39)*	-1.06 (1.52)	0.15 (0.43)	-	-	-	-0.003 (0.11)	-	0.11 (0.35)	0.656	0.902
116	0.31 (0.15)	-	0.58 (3.09)**	-1.24 (2.30)*	-	-	-	-	0.01 (0.74)	-	0.03 (0.10)	0.681	0.823
117	0.10 (0.04)	-	0.35 (1.77)	-	0.45 (1.57)	-	-	-	-0.04 (2.15)*	-	0.43 (1.58)	0.615	1.095
118	4.91 (4.86)	0.16 (6.96)**	-	-	-	-	-	-	-0.03 (4.70)**	-	-	0.791	1.024@
119	4.75 (4.30)	0.16 (6.69)**	-	-	0.08 (0.43)	-	-	-	-0.03 (2.51)*	-	-	0.777	1.003@
120	4.66 (4.21)	0.15 (6.23)**	-	-0.46 (1.02)	0.01 (0.07)	-	-	-	-0.02 (0.95)	-	-	0.777	1.225@

(continued)

Appendix III.I : (continued)

Equation Number	Intercept	\bar{Q}	\bar{M}	\bar{N}	\bar{I}	\bar{I}_d	\bar{R} ($\bar{I} - \bar{I}_d$)	P^*	P	R^* ($I - P^*$)	BC_{t-1}	R^2	D.W.
121	5.16 (4.55)	0.16 (6.63)**	-	-	-	-	0.11 (0.55)	-	-0.03 (4.17)**	-	-	0.779	0.988@
122	4.89 (4.22)	0.15 (6.20)**	-	-0.45 (1.06)	-	-	0.08 (0.44)	-	-0.02 (1.58)	-	-	0.781	1.186@
123	5.36 (2.60)	0.16 (6.31)**	-	-	0.10 (0.46)	-0.15 (0.36)	-	-	-0.03 (1.44)	-	-	0.759	0.989@
124	6.18 (2.93)	0.15 (5.69)**	-	-0.63 (1.27)	0.02 (0.09)	0.38 (0.85)	-	-	-0.001 (0.07)	-	-	0.772	1.328@
125	4.68 (4.60)	0.15 (6.50)**	-	-0.47 (1.15)	-	-	-	-	-0.02 (1.58)	-	-	0.796	1.235@
126	3.89 (2.10)	0.14 (3.47)**	-	-	0.17 (0.67)	-	-	-	-0.03 (2.50)*	-	-	0.764	1.109@
127	4.27 (2.21)	0.14 (3.50)**	-	-0.41 (0.82)	0.06 (0.21)	-	-	-	-0.02 (0.93)	-	-	0.757	1.248@
128	4.52 (3.16)	0.15 (4.29)**	-	-0.46 (1.08)	-	-	-	-	-0.02 (1.46)	-	-	0.778	1.258@

Note : ** Significant at 1 per cent level. * Significant at 5 per cent level. @ D.W. statistic in the inconclusive range at 5 per cent level of significance.

List of Variables Used:

\bar{Q} = Value of output

\bar{M} = Value of inventory

\bar{N} = Net trade credit
(Sundry Creditors - Sundry debtors)

\bar{I} = Rate of interest or loan rate

\bar{I}_d = Rate of interest on debentures

\bar{R} = ($\bar{I} - \bar{I}_d$)

P^* = Rate of inflation; $P^* = \frac{P_t - P_{t-1}}{P_{t-1}}$

R^* = Real rate of interest ($I - P^*$)

P_e^* = Expected rate of inflation

P = Wholesale price index

BC = Outstanding bank credit

BC_{t-1} = Outstanding bank credit in period t-1.

All variables with a bar denote real magnitudes i.e., nominal values deflated by wholesale price index.

CHAPTER IV

WORKING CAPITAL ANALYSIS

Introduction

In Chapters II and III the relationship between output and bank credit has been analysed. In Chapter III an analysis of demand for bank credit is presented using single equation regression models. It is found that output is an important variable in the explanation of outstanding bank credit. The estimated production elasticity of bank credit is approximately 0.92. The production elasticity of bank credit approach to the determination of the requirements of bank credit, relies heavily on the assumption that every increase in output necessitates a certain increase in demand for bank credit. But this approach to the determination of bank credit does not distinguish between bank credit being used for long-term investment and for financing working capital requirements. The distinction, however, is crucial particularly in the Indian context because of two reasons. Firstly, industry in India relies heavily on bank credit as a source of short-term finance; secondly and more importantly from the viewpoint of credit planning, as discussed in Chapter II, bank credit to the commercial sector becomes an important variable not only because of the objective of price stability but also because of the objective of deployment of bank credit among various sectors in line with national plan priorities.

Bank credit to industry is mainly to finance working capital requirements. An approach to the determination of bank credit making a distinction between working capital requirements and other investment requirements is, therefore, essential. The distinction between working capital and other investment requirements also brings into focus the correspondence of different sources of funds, used to finance working capital and fixed capital, apart from bank credit, viz. other short-term borrowings, long-term borrowings and owned funds.

The present chapter is divided into four sections. Section I deals with the definition of working capital. In Section II, the analyses of working capital and the structure of current assets and current liabilities are presented. In Section III, the pattern of working capital, using the working capital gap approach, is presented. Conclusions are presented in Section IV.

Section I

Definition of Working Capital

Broadly, there are two views regarding the definition of working capital. The term working capital is used both as a 'gross' and a 'net' concept. Net working capital refers to the difference between current assets and current liabilities. Gross working capital represents the total amount of funds used for current operating purposes, i.e., total current assets. The choice between the two concepts depends upon the purpose in view. For example, if the objective is to judge the current

financial soundness or the short term liquidity of a concern, the net concept is more meaningful; however, if the purpose is to assess how efficiently the current assets are being used, it is the gross working capital that ought to be used. According to Dockeray and Husband, "Management prefers gross working capital or total current assets concept. ... it takes into consideration all the current resources of the enterprise from whatever source derived and their application to the current and future activities of the enterprise."¹ From the lender's point of view, however, the concept of net working capital is more relevant since he is more interested in the liquidity position of the enterprise that will ensure the timely repayments and minimize the risk of default.

It is appropriate to bring out the distinction between current and non-current assets/liabilities, since working capital has been defined either as net current assets, or as total current assets. Assets and liabilities are classified into current and non-current items depending upon their maturity. Current assets are those which are convertible or tend to be converted into cash within a short period of time, normally one year. Likewise, current liabilities are obligations which fall due for payment within a year. It is, thus, obvious from lenders' point of view that current assets, besides providing an adequate cover to meet the current

¹ J.C. Dockeray and W.H. Husband. Modern Corporation Finance. Richard D. Irwin, Inc., Homewood, Illinois, 1966, p. 536.

obligations as they mature, should also have the quality of liquidity. This implies that there should be a continuous and uninterrupted transformation of current assets into cash involving a circular flow from cash to inventories to receivables and back into cash. Any interruption of this cycle results in the disruption of normal production and sales. Current assets would thus comprise, apart from cash itself, investment in marketable securities, accounts receivables and inventory. Similarly, current liabilities are those obligations maturing within a year and thus constitute all short-term borrowings, current provisions, and accounts payable and other short-term debtor balances.

The one year criterion used for separating assets and liabilities as current and non-current is based on practical convenience and convention. There is, however, another approach to determine the currentness of assets and liabilities, viz., the operating cycle criterion advocated by the American Institute of Certified Public Accountants (AICPA). The AICPA proposed a departure from any narrow definition of strict one year interpretation for separating current assets/liabilities as follows:

"For accounting purposes the term current assets is used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business. The term current liabilities is used principally to designate obligations whose liquidation is reasonably

expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities."¹

The concept of operating cycle, thus, becomes crucial in determining current assets and current liabilities. An operating cycle is defined as, "the average time intervening between the production process and the final cash realisation."²

The length of the operating cycle of any unit involved in production is the time taken from the acquisition of raw materials to the realisation of cash from sales. Thus, the operating cycle consists generally of four phases in the following sequence: (a) the acquisition of raw materials and other resources, (b) the production process, (c) storage of final goods, i.e., the time taken for marketing of goods, and (d) realisation of cash from goods sold. The finances required to complete an operating cycle, i.e., the amount of funds required to maintain a certain level of inventory and receivables in relation to output/sales, is considered to be the working capital requirement of the enterprise.

Park and Gladson argued that the AICPA concept of operating cycle is in several respects a forward step towards realism than the conventional one-year accounting period concept.

¹ S.A. Murali Prasad, "Evaluating Working Capital Requirements," in S.L.N. Simha and A. Raman (ed.). Credit Planning and Policy, Vora and Co., Bombay, 1974, p. 82.

² C. Park and J.W. Gladson. Working Capital. Macmillan, New York, 1963, p. 12.

According to them, it will provide, "a specific time period basis (a) for tracing the flow of strategic working capital in a business, and (b) for measuring the fund of working capital which the management may commit to the productive activities of the business."¹ One major point in favour of the operating cycle concept is that it facilitates the estimation of working capital requirements of the unit concerned in a more scientific way taking into account the nature of the industry or unit, technological factors as well as trading conventions. It thus helps in the better management of current assets and hence management of working capital.² In the following sections an attempt is made to present the trends and pattern of working capital with respect to the medium and large public limited companies, which will be referred to as the RBI's sample companies, hereafterwards, for the period 1965-66 to 1980-81.

For this purpose, we make use of the data on Company Finance Studies published by the Reserve Bank of India.³ The absolute figures may not be comparable since the coverage of the sample is different for the three periods. The number of companies included in the sample are 1501, 1650 and 1720 for periods 1965-66 to 1969-70, 1970-71 to 1975-76 and 1976-77 to 1980-81, respectively. However, the rates of growth and ratios

1 Ibid., p. 3.

2 See S.K. Chakraborty, "Operating Cycle and Working Capital Management," Economic and Political Weekly, August 25, 1973, pp. M69-M76.

3 See for further details, footnote , p. , Chapter III.

of different variables may not be subject to this limitation in revealing the broad trend over the period of time. First, we shall present the analyses regarding the volume or quantum of working capital and structure of working capital. Secondly, the composition of current liabilities and changes in it over the period of analysis are presented.

Section II

Volume of Working Capital

The importance of the magnitude of working capital may be understood from two aspects. Firstly, the rate of growth of an economy is a function of capital accumulation. Inventories (a major component of working capital), and changes in it, form a part of total capital formation. Secondly, the optimal utilisation of fixed assets is related to the optimal utilisation of working capital.¹ Working capital and utilisation of working capital, therefore, have a bearing on the pace of economic development.

The analysis of the magnitude of working capital is carried out, under both approaches, viz., gross and net approaches. It may be seen from the basic data presented in the Appendix IV.1, that there was a continuous increase in the level of working capital throughout the period of analysis. The annual rates of growth in gross working capital are presented in Col.1 of Table 4.1.

¹ See: S. Chakravorthy, "Working Capital Management and Economic Growth," in L.C. Gupta (ed.), op.cit., p. 25.

Table 4.1 : Trends in Gross Working Capital (GWC)

Year	Annual Rate of Growth (Per cent) (1)	GWC as per cent total Assets (2)	GWC as per cent Output (3)
1965-66		54.9	56.7
1966-67	12.4	54.5	57.2
1967-68	8.1	54.8	57.7
1968-69	7.5	55.5	57.3
1969-70	9.7	56.9	56.4
1970-71	16.6	57.0	56.2
1971-72	10.6	58.6	55.6
1972-73	5.7	58.4	54.0
1973-74	15.7	60.3	56.2
1974-75	22.8	62.4	53.5
1975-76	8.1	62.0	53.1
1976-77	3.5	61.3	50.4
1977-78	8.1	61.0	49.6
1978-79	12.1	61.7	49.4
1979-80	14.8	62.8	49.9
1980-81	15.6	62.5	49.0

As seen from the Table the rates of growth varied very widely ranging from 3.5 in 1976-77 to 22.8 in 1974-75. The variations in the annual rates of increase in working capital may have to be explained in terms of variations in its components and factors influencing the changes in these components. This will be done later while presenting the structure of working capital.

In Table 4.1, columns 2 and 3 present working capital as a percentage of total assets and of output, respectively.

It is noticed that working capital as percentage of total assets ranged from 54.5 in 1966-67 to 62.8 in 1979-80. Another feature of this ratio is that there was a gradual increase in it over the period of analysis. This gives an idea of the importance of managing working capital as a part of total operations of industry since current assets or gross working capital accounted for more than 60 per cent of total assets or total capital employed from the year 1973-74 onwards.

The increase in working capital as per cent of total capital employed may be interpreted as due to either efficient utilisation of fixed capital or an increase in current assets at a rate higher than in other assets. The increase in current assets at a higher rate was again due either to accumulation of inventory or to an increase in credit sales since these two accounted for more than 90 per cent of current assets of the sample companies analysed. This will be examined later while discussing the structure of working capital.

The other ratio, viz., the ratio of working capital to output, denotes the efficiency of utilisation of working capital. In other words, this ratio presents the amount of working capital per unit of output. It may be observed from Table 4.1 that there was a decline in the ratio over the period under study. The minimisation of ratio of working capital to output implies a better utilisation of current assets. Thus the two ratios, viz., working capital to total assets and working capital to output, viewed together leads to the conclusion that the overall importance and efficiency of working

capital increased during the period 1965-66 to 1980-81.

Now, we shall present the analysis of magnitude of working capital in terms of net working capital approach. From the data presented in Appendix, it may be observed that net working capital increased from Rs. 441 crores in 1965-66 to Rs.2181 crores in 1980-81. However, the annual rates of growth in net working capital presented in column 1 of Table 4.2 showed a very wide variation over the years.

Table 4.2 : Trends in Net Working Capital (NWC)

Year	Annual Rates of Growth (Per cent) (1)	NWC as per cent of Total Long-term Funds (2)
1965-66		18.5
1966-67	Negli.	16.6
1967-68	"	15.8
1968-69	13.6	17.0
1969-70	16.2	18.6
1970-71	27.1	22.6
1971-72	15.7	24.6
1972-73	12.2	25.5
1973-74	13.6	26.7
1974-75	16.5	27.4
1975-76	Neg.	24.5
1976-77	Negli.	23.5
1977-78	1.5	22.1
1978-79	7.7	21.9
1979-80	21.9	23.8
1980-81	15.3	23.4

Note : Neg. = Negative.

Negli. = Negligible.

The annual rates of growth were negligible for some of the years and even negative in the year 1975-76 while the highest rate of growth of 27 per cent was registered in the year 1970-71. Since net working capital has been defined as current assets minus current liabilities, the variation in the rates of growth of net working capital is dependent on the levels of and relative rates of growth in current assets and current liabilities. Thus, the factors that influence the magnitude of net working capital reflect the effect of not only the internal policy decisions of a firm like inventory management, trade credit practices, investment and cash management but also exogenous influences like the availability and cost of credit from various sources. However, it has to be noted that, to a certain extent, inventory and trade credit are also subject to external influences and there was no clear-cut trend in the annual rates of growth of net working capital.

Another ratio presented in column 2 of Table 4.2 is the ratio of net working capital to total long-term funds. This ratio indicates the contribution of shareholders funds and long-term borrowings towards financing current assets. For, net working capital being the excess of current assets over current liabilities, by balance sheet identity, it must have been financed by shareholders' funds and long-term borrowings. There was an increase in this ratio till 1974-75 and thereafter it registered a decline. It may, therefore, be stated that after 1974-75 the contribution of long-term funds towards financing current assets declined.

Structure of Working Capital

Now, we may turn to analysing the structure of working capital. Current assets comprise (a) inventory, (b) loans and advances and other debtor balances, (c) quoted investments, (d) advance tax payments, and (e) cash and bank balances. The composition of these items in current assets or gross working capital is presented in Table 4.3.

Table 4.3 : Structure of Gross Working Capital

Year	(In percentages)		
	Inventories (1)	Receivables (2)	Others (3)
1965-66	58.2	31.7	10.1
1966-67	58.1	32.6	9.3
1967-68	59.0	32.6	8.4
1968-69	56.2	34.7	9.1
1969-70	55.2	35.1	9.7
1970-71	55.8	34.9	9.3
1971-72	57.1	34.2	8.7
1972-73	57.1	34.1	8.8
1973-74	56.9	33.1	10.0
1974-75	60.0	31.9	8.2
1975-76	57.5	34.0	8.5
1976-77	54.3	37.0	8.7
1977-78	53.4	37.4	9.2
1978-79	54.9	36.5	8.6
1979-80	56.3	36.1	7.6
1980-81	56.9	37.0	6.1

It is noticed that inventory was the most important item of gross working capital, which accounted for more than

55 per cent of current assets, followed by loans, advances and other debtor balances or receivables. These two items together constituted more than 90 per cent of current assets in all the years, i.e., from 1965-66 to 1980-81. The other three components, viz., (1) quoted investments, (2) advance tax payments, and (3) cash and bank balances formed less than 10 per cent of current assets and are presented in the Table 4.3 as 'others'.

A cursory glance at Table 4.3 reveals that inventory as a proportion of current assets declined after 1975-76. The decline in inventory as a proportion of gross working capital indicates that due to constraints on bank lending, inventory's share in current assets declined. While increase in the receivables seen along with a declining trend in the ratio of sundry debtors to sundry creditors (see Table 4.5) points to the fact that in periods of constraints on the availability of bank credit, reliance on trade credit will be higher. This point will be discussed in detail in the next section.

It is, thus, seen that inventory and receivables constituted more than 90 per cent, of current assets and deserve further analysis. The analysis regarding inventory is presented first.

Inventory comprises raw materials, work-in-progress, stocks and stores, and finished goods and hence depends both on level of production and sales. Raw materials and stores and spares are related to output whereas finished goods inventory is dependent on sales as well. For any firm as an

on-going concern there is always a certain minimum level of inventory to be carried, determined by technological and business conditions. Firms may also hold some inventory over and above this minimum level as a margin of safety. This is because forecasting always involves some element of uncertainty and hence to minimise loss due to the deviation or variance between expected and realised sales, firms are justified to hold inventories to cover this, over and above the minimum requirements. Another argument is that firms, with a view to make speculative profits, hold inventory in excess of what is regarded as safety level. In what follows we shall try to present the factors influencing inventory holdings.

Firms hold inventory for various reasons ranging from maintaining a smooth flow of output to making speculative profits. However, the following may be mentioned as the main motives for inventory holding:

- a) production motive,
- b) buffer stock motive, and
- c) speculative motive.

The rationale behind the three motives is discussed below.

Production Motive: The production motive for inventory holding may be explained as the desire by a firm to maintain a certain level of inventory which will enable it to attain a certain level of output without any interruption. Inventory based on production motive consists of raw materials and stores and work-in-progress. Given the technology, changes in production levels lead to changes in raw materials inventory. Work-

in-progress is related to the scale of production which is assumed to remain unchanged in the short run. The required level of inventories as determined under this motive will be, therefore, just enough to carry out the production activity of the firm. However, it has to be noted that this is based on certain assumptions like, absence of (a) lead time, i.e., time gap between placing an order and delivery of the items, and (b) supply constraints, i.e., non-availability of raw materials throughout the year in the market. The implications of these two assumptions will be discussed under buffer stock motive.

Buffer Stock Motive: This takes into account the levels and changes of inventory (over and above the minimum requirements as stipulated under the production motive) that are due to the presence of lead time, supply constraints as well as deviations of actual sales from expected sales. Inventory under this motive constitutes not only raw materials, stores and work-in-progress but also finished goods. It is not unreasonable to assume that manufacturers in the presence of variable lead time and supply constraints actually hold a level of inventory higher than what is determined by production motive alone.

The reasons for buffer stock holding may be explained in terms of an attempt to avoid undesirable consequences of a failure to satisfy customers' demand due to unanticipated spurt in sales as well as unexpected stoppages in production resulting in stock-outs and loss of potential sales and profits.

It, therefore, becomes economical to hold inventory in excess of the level that is determined by the actual production requirements.

Thus, inventory in finished goods is mainly for two reasons. Firstly, it will help to dampen the effect of loss of sales due to sudden or unanticipated reduction or complete stoppage of production. Firms consider it important because failure to satisfy customers' demand in the short run may have implications for their share of market and profits in the long run. Secondly, the buffer stock inventory in finished goods acts as a shock absorber in the event of actual sales exceeding expected sales, for the buffer stock of finished goods makes it possible for the firm not to lose customers to its competitors.¹

Speculative Motive: The preceding discussion on decision-making in regard to inventory holding has not taken into account the impact of anticipated price changes on the level of inventory holdings. In a real world situation, however, other things remaining the same, it is plausible that manufacturers make attempts to adjust their inventory holdings so as to take advantage of price changes in the light of expectations regarding the behaviour of prices. The speculative motive results in a higher level of inventory because of:

¹ Gary Fromm, "Inventories, Business Cycles and Economic Stabilization," in Joint Economic Committee of the U.S. Congress, 1962, Inventory Fluctuations and Economic Stabilization, Part IV, Washington, D.C., 1962, p. 39.

- a) accumulation of raw materials and stores, in anticipation of higher prices, in quantities larger than what normally they would have held. Because of this, raw materials and stores will be at higher levels than the level dictated by the buffer stock motive alone;
- b) accumulation of finished goods inventory, expecting an increase in their prices results in higher levels of inventory than would be the case in the absence of price expectations.

However, as far as raw material inventory is concerned this need not necessarily be to make speculative gains since it may also be surmised that firms try to build up raw material inventory with a view to reduce the future cost of production.¹ On the other hand, an increase in the finished goods inventory with anticipated price increase may be said to be a purely speculative phenomenon.²

Till now, the focus of discussion has been on the three basic motives for inventory holdings and changes therein. The main difficulty, however, lies in separating out the three motives and deciding what proportion of total inventory is to be ascribed to each of the motives. Another question of crucial

1 (a) Franco Modigliani, "Business Reasons for Holding Inventories and Their Macro Economic Implications," Problems of Capital Formation, Studies in Income and Wealth, Vol. 19, NBER, 1957, p. 502.

(b) Abramovitz Moses. Inventories and Business Cycles With Special Reference to Manufacturers Inventories. NBER, 1950, p. 315.

2 Abramovitz Moses, op.cit., p. 124.

importance in this regard is whether firms in reality behave in such a manner as if they were trying to hold inventories in three separate compartments as determined by the three motives. It may not be so, because it is reasonable to assume that, in reality, firms view inventory as a single item the holding of which is associated with certain costs like interest, storage, spoilage, etc. Therefore, what one can safely assert in this regard is that firms, as a part of cost minimisation effort, try to hold a level of inventory which may be termed as desired or optimum level of inventory that will equate at the margin the benefits with costs of inventory holdings.¹

However, we have to identify the factors that influence a firm's decision in determining the optimal or equilibrium level of inventories. It may be said that firms will hold, if the inventory holding is cost-free, a level of inventory dictated by the three basic motives. In other words, at zero costs, ceteris paribus, manufacturers prefer to hold a level of inventory determined according to the above three motives. The inventory holdings, however, involve costs because they tie up money whether borrowed or own which, in turn, is associated with interest cost or opportunity cost. Besides, there are certain other costs like ordering costs, transport,

1 (a) Franco Modigliani, op.cit., pp. 500-501.

(b) See also, Mack Ruth, "Characteristics of Inventory Investment: The Aggregate and Its Parts," Problems of Capital Formation, Studies in Income and Wealth, Vol. 19, NBER, 1957, pp. 471-487.

storage and obsolescence and spoilage costs. Some of these costs are directly and some are inversely related to the level of inventory.

For example, if a firm's estimated consumption requirements of raw materials is 'X' units per period, the concerned firm may either buy all the 'X' units at one time or procure in different quantities at different times, spread over a period, depending upon its actual need. In the former case, ordering and transport costs will be minimum and also the firm may realise discounts associated with bulk purchases, whereas storage, spoilage and interest costs will be high; and vice-versa in the latter case. The balancing of these forces pulling in opposite directions, therefore, results in an optimum or equilibrium level of inventory for a particular level of output.

In Table 4.4 inventory ratios viz., inventory to output and short-term bank borrowings to inventory for the period 1965-66 to 1980-81 are presented. Here, however, we are not presenting the analysis of inventory holdings in a framework which will reveal whether the extant levels of inventory holdings in relation to output are optimal or not. This problem will be discussed in the next chapter while presenting the analysis of bank borrowings within the framework of the Tandon Committee recommendations regarding norms for inventory and receivables. The analysis here, therefore, is restricted to the examination of trends in inventory movements in relation to output and bank credit.

Table 4.4 : Inventory Ratios

	(In Percentage)	
	I/O	STBB/I
1965-66	33.1	58.0
1966-67	33.2	60.8
1967-68	34.1	63.1
1968-69	32.2	64.9
1969-70	31.1	64.2
1970-71	31.3	57.4
1971-72	31.7	53.8
1972-73	30.8	49.0
1973-74	32.0	47.1
1974-75	31.9	45.5
1975-76	30.6	49.5
1976-77	27.4	52.4
1977-78	26.5	52.8
1978-79	27.1	51.1
1979-80	28.1	46.8
1980-81	27.2	43.9

Note: I/O = Inventory-Output Ratio.

STBB/I = Short-term Bank Borrowings-Inventory Ratio.

From the Table it may be observed that inventory-output ratio was higher than 30 per cent till the year 1975-76 after which declined and was around 27 per cent thereafter. As inventory-output ratio indicates inventory held per unit of output, a declining inventory-output ratio, ceteris paribus, implies a higher turnover of inventory. In other words, a declining inventory-output ratio reflects an improvement in the utilisation of inventory and hence a better inventory

management. The observed decline in inventory-output ratio especially from the year 1976-77 onwards, when seen in the light of declining ratio of bank credit to inventory for the same period, indicates that the implementation of the Tandon Committee norms by banks was, by and large, effective in reducing the RBI's sample companies' inventory holdings.

The other ratio that is presented in Table 4.4 is the ratio of short-term bank borrowings (STBB) to inventory. This ratio gives the amount of short-term bank credit per unit of inventory. The higher the ratio the higher the proportion of inventory financed by bank credit and vice-versa. However, there is no hard-and-fast rule of what should be the ideal ratio. This is because, inventory holdings is a function of many factors like various associated costs and benefits as mentioned earlier, and also the availability of funds from different sources, including credit from banks. On the other hand, the supply of bank credit depends upon a different set of factors, like objective of price stability acting as a constraint on total supply of bank credit and the pattern of credit deployment among sectors as envisaged by the RBI. The behaviour of the ratio of bank credit to inventory, therefore, provides information regarding the importance of bank credit with respect to inventory holdings.

It may be observed from Table 4.4 that the ratio of STBB to inventory varied between 58 per cent and 65 per cent till the year 1970-71 and declined thereafter and was generally at a lower level in comparison with the earlier period, i.e.,

1965-66 to 1970-71. It may be noted further that the decline in STBB-inventory ratio after 1971-72 was more due to a relatively lower rate of increase in bank funds than in inventory. This may be inferred from the ratio of inventory to current assets. The ratio of inventory to current assets was more stable over the period of analysis than the ratio of STBB to inventory. These two ratios seen together suggest that there was a marginal decline in inventory as a proportion of current assets and the amount of bank credit used for financing a unit of inventory declined. Therefore, as a preliminary observation it may be stated that the changes in credit policy, particularly after 1970, aimed at a credit deployment favouring the priority sector, had an impact in reducing the share of bank credit available to the RBI's sample companies which was partly due to the decline in the inventory holdings of industry and partly due to the decline in bank credit to finance a unit of inventory.

Now, let us turn our attention to the other major component of current assets, viz., receivables. From Table 4.3 it may be observed that in the first three years, i.e., from 1965-66 to 1967-68, the ratio of receivables to current assets was less than 33 per cent. From 1968-69 to 1975-76 there was a marginal increase in the ratio of receivables to current assets and stabilised around 34 per cent. Thereafter, it had gone up and was around 37 per cent for the rest of the period under analysis. The movement in the ratio, therefore, indicates that over the period of analysis the importance of

receivables as a component of current assets had slightly gone up.

The major component of receivables is sundry debtors which arise out of credit sales. The various factors affecting credit sales and hence sundry debtors may be broadly grouped into (a) exogenous and (b) endogenous factors. Exogenous factors are largely beyond the control of a firm and hence are taken as given to a firm which accordingly adjusts its operations regarding sales on credit. These are general business conditions, money and credit market conditions and the prevailing trade practices. Endogenous factors are those in the purview and control of the firm and include variables such as the size of cash discounts, credit terms, selection of customers and collection policies.

There is, however, one significant distinction between investment in inventory and financing of receivables. While in both cases the optimal level will be determined by costs and benefits at the margin, receivables can theoretically be reduced to zero as there is no minimum level as such in case of receivables that have to be maintained.

The ratio of sundry debtors to sundry creditors indicates whether a firm is a net borrower or lender in its dealings with other firms. If the ratio is greater than 1 it may then be inferred that a firm is a net lender, i.e., the amount of credit extended in the form of credit sales is larger than what it obtained in the form of credit on its purchases.

In Table 4.5 the trend in sundry debtors is presented.

Table 4.5 : Trends in Sundry Debtors

	(In Percentages)			
	SD/REC	SD/SC	SD/CA	SD/Sales
1965-66	65.0	92.9	20.6	12.0
1966-67	62.6	88.4	20.4	11.9
1967-68	65.3	89.7	21.3	12.4
1968-69	67.4	95.9	23.4	13.5
1969-70	66.9	94.0	23.5	13.4
1970-71	67.3	94.8	23.5	13.5
1971-72	67.5	93.4	23.1	13.1
1972-73	66.0	86.7	22.5	12.1
1973-74	62.5	79.5	20.7	11.9
1974-75	63.6	72.5	20.3	11.3
1975-76	66.2	79.4	22.5	12.1
1976-77	67.0	86.9	24.8	12.5
1977-78	67.1	83.8	25.1	12.5
1978-79	66.0	77.6	24.1	12.1
1979-80	65.1	76.6	23.5	11.9
1980-81	66.2	76.2	24.5	12.2

Note: SD/REC = Ratio of Sundry Debtors to Receivables.

SD/SC = Ratio of Sundry Debtors to Sundry Creditors.

SD/CA = Ratio of Sundry Debtors to Current Assets.

From Table 4.5 it is observed that sundry debtors was the major component of receivables and on an average accounted for 65 per cent and 25 per cent of receivables and sales respectively during the period 1965-66 to 1980-81. In all the sixteen years the ratio of sundry debtors to sundry creditors was less than 1. However, till the year 1971-72 for the RBI's sample companies the ratio of sundry debtors to sundry creditors

was nearer to 1, i.e., above 90 per cent and thereafter was at a relatively low level - on an average around 80 per cent. The ratio of sundry debtors to sales, reflecting sales on credit, was almost stable around 12 per cent during the period of analysis. The stability in the ratio of sundry debtors to sales along with the observed decline in the ratio of sundry debtors to sundry creditors from 1972-73 onwards indicate that the RBI's sample companies reliance on trade credit increased. It is, therefore, clear that there was a net flow of credit to the RBI's sample companies in all the sixteen years from other public limited companies, government companies, private limited companies, small-scale industry, etc.

So far the focus of the discussion was on the importance of inventory and receivables, the two major components of current assets which, in turn, are one of the determinants of working capital according to the net working capital approach. Let us now turn our attention to the other determinant of net working capital, viz., current liabilities.

Current liabilities comprise short-term borrowings, current provisions, and trade dues and other current liabilities or accounts payable. Short-term borrowings are borrowings from banks (exclusive of the portion treated as debt) and other short-term borrowings. Accounts payables represents what a firm owes to others in the form of creditors for purchases, liabilities to subsidiaries, unpaid interest on loans, unclaimed dividends, deposits from customers and agents, etc. The relevant data regarding short-term borrowings and accounts

payable are furnished in Table 4.6. It may be noticed that short-term borrowings and accounts payable together accounted for about 90 per cent of current liabilities. Of the two, accounts payable formed around 50 per cent of current liabilities. As in the case of accounts receivable, the optimum level of accounts payable depends on the associated costs and benefits. The costs are cash discounts forgone and indirect effects on the management of inventory while benefits include interest costs saved if the firm has to pay for its purchases through borrowings. The analysis regarding increase in net trade credit during periods of credit scarcity is presented earlier while discussing the importance of sundry debtors. Now we turn to short-term borrowings (STB).

The relevant data are presented in Table 4.6 from which it may be seen that STB as percentage of current liabilities declined more or less continuously from 1967-68 onwards. The decline in the ratio suggests relatively higher rates of increase of other components of current liabilities. Accounts payable and current provisions are the two other components of current liabilities. The share of current provisions remained the same, i.e., around 9 per cent of current liabilities, almost throughout the period. Therefore, it was the increased share of accounts payable, as seen from Table 4.6, that has resulted in a lower ratio of STB to current liabilities. The decline in STB to current liabilities ratio has also to be accounted for by the movements in STBB or in other short-term borrowings (OSTB) or in both. For this purpose, the ratios of

Table 4.6 : Structure of Current Liabilities

	(In Per cent)				
	STB (1)	Accounts payable (2)	Provi- sions (3)	STBB (4)	STBB/STB (5)
1965-66	49.2	38.8	12.0	39.0	79.3
1966-67	50.7	38.5	10.8	40.2	79.3
1967-68	52.4	38.6	9.0	41.9	80.2
1968-69	51.8	39.7	8.4	41.2	79.5
1969-70	51.1	41.1	7.9	40.6	79.5
1970-71	48.3	43.5	8.2	41.1	85.0
1971-72	46.6	44.5	8.9	39.8	85.0
1972-73	43.5	47.5	9.0	37.0	85.0
1973-74	40.7	50.2	9.1	35.3	86.7
1974-75	39.6	51.6	8.8	35.0	88.8
1975-76	39.5	50.6	9.9	35.6	90.1
1976-77	39.4	50.4	10.2	35.2	89.3
1977-78	38.3	52.1	9.6	34.4	89.8
1978-79	37.6	53.4	9.0	34.0	90.4
1979-80	35.9	54.9	9.2	32.3	90.0
1980-81	33.5	57.8	8.7	29.8	88.9

Note: a) Columns 1, 2, 3 and 4 are expressed as percentage of total current liabilities.

- b) STB = Short-term Borrowings
 STBB = Short-term Bank Borrowings
 CL = Current Liabilities

STBB to current liabilities and STBB to STB will be useful and are presented in columns 4 and 5 of Table 4.6. Though there was a general decline in the ratio of STBB to current liabilities, it is noticed that the decline in STB to current liabilities ratio was more due to the decline in OSTB. The

increase in the ratio of STBB to STB also points to the fact that the importance of OSTB as a component of STB declined over the period of analysis.

From the above analysis of current liabilities, the following points are to be highlighted:

- a) Current liabilities as a percentage of total liabilities over the period of analysis, has increased;
- b) STB and accounts payable accounted for more than 90 per cent of current liabilities during the years 1965-66 to 1980-81;
- c) STB as percentage of current liabilities declined; and
- d) Accounts payable as a percentage of current liabilities increased.

Further, it may be observed that:

1) Though current liabilities as a percentage of total liabilities or total capital employed increased, there was no significant change in the liquidity position of the sample companies as judged by the current ratio (ratio of current assets to current liabilities). This is because current assets have also increased during the same period. Therefore, current assets as well as current liabilities as proportion of total capital employed had gone up. Thus, the structure of finances of the RBI's sample companies in terms of long-term and short-term sources had undergone a change in favour of short-term sources. Some of the reasons for this development are presented in the next section while discussing the pattern of working capital.

2) The importance of accounts payable as a component of current liabilities had gone up while the share of STB declined. And this increase in accounts payable viewed along with the decline in the ratio of sundry debtors to sundry creditors makes it clear that reliance on trade credit increased and the sample companies were net borrowers of funds in the form of trade credit. This observation coupled with the structural changes sought to be brought about by the RBI, i.e., change in deployment of commercial bank credit in favour of priority sectors, supports the view that large firms try to compensate, at least partly, the shortfall in bank credit by resorting to enhanced trade credit. In other words, trade credit seems to be a substitute for bank borrowings.

In this section some of the issues regarding the volume, structure, and movements of current assets and current liabilities over a period of time (1965-66 to 1980-81) and the determinants of working capital are discussed. In the following section the pattern of working capital according to Working Capital Gap approach is presented.

Section III

Pattern of Working Capital

Working Capital Gap (WCG) is defined as current assets minus current liabilities other than STBB. Thus WCG is identical with Net Working Capital (NWC) adjusted for STBB since NWC is equivalent to current assets less current liabilities. That is

$$\text{NWC} - \text{STBB} = \text{WCG}.$$

The NWC approach gives the quantum of current assets that are being financed by owned funds and long-term borrowings. In other words, NWC is that part of current assets financed by sources other than current liabilities. Thus, strictly speaking, in NWC approach shareholders funds and long-term borrowings appear as residual sources meeting the gap between current assets and current liabilities. In other words, it implies that if a firm is able to borrow as much as it would like to from banks and other short-term sources the contribution from equity and long-term borrowings towards financing current assets could be kept at a minimum level. And perhaps this type of behaviour by industry may be quite plausible because of the following reasons:

1) Enhancing the equity base would imply diluting the control of existing shareholders.¹

2) From the point of view of borrowers, borrowings in general are a preferred source of finance over equity since (a) borrowings do not dilute control unlike new issue of shares and (b) the servicing of borrowings, i.e., interest costs are deductible for tax purposes, thus reducing the post-tax costs of borrowings.

3) Moreover, long-term borrowings from financial institutions with a convertibility clause make the borrowers reluctant to raise funds from this source² than it would have been

1 D.C. Rao, "The Structure of Corporate Finance and Some Related Policy Issues," Reserve Bank of India Occasional Papers, Vol. 1, No. 2, December 1980, p. 127.

2 Ibid., p. 133.

otherwise. Long-term borrowings from public in the form of debentures is on a limited scale during the reference period because of the lower rates of return on them in comparison with alternative investments from the point of view of investing public. Another form of borrowings, i.e., public deposits, are costlier than borrowings from banks. Rao states that, "For the less well established companies, the effective cost of raising deposits (inclusive of interest, advertisement and brokerage) may turn out to be more than the cost of bank borrowing, which may account for the fact that deposits are not more widely solicited."¹

For, the reasons stated above, industry would be reluctant to increase the share of owned funds and term borrowings towards financing current assets and rather would prefer bank finance. However, with the reordering of priorities, especially after the nationalisation of banks, an increasingly large proportion of bank resources are sought to be deployed to meet the requirements of priority sectors. And this has made it necessary to reduce the dependence of industry on banks.

The WCG approach to the analysis of working capital and to the determination of bank credit reveals the extent of bank finance towards meeting the shortfall in other short-term sources for financing current assets. Thus, the WCG approach, will be helpful in assessing and planning the bank credit requirements of a firm.

1 Ibid., p. 143.

Table 4.7 : Pattern of Working Capital

	(Rs. in crores)				
	CA	OCL	WCG	STBB	WCG as per cent of CA
	(1)	(2)	(3)	(4)	(5)
1965-66	2371	1178	1193	752	50.3
1966-67	2664	1327	1337	893	50.2
1967-68	2881	1414	1467	1021	50.9
1968-69	3096	1521	1575	1068	50.9
1969-70	3396	1668	1728	1140	50.9
1970-71	3961	1822	2139	1269	53.9
1971-72	4382	2030	2352	1344	53.7
1972-73	4632	2207	2425	1295	52.3
1973-74	5361	2613	2748	1438	51.3
1974-75	6586	3308	3278	1783	49.8
1975-76	7117	3670	3447	2030	48.4
1976-77	7366	3846	3520	2093	47.8
1977-78	7960	4276	3684	2244	46.3
1978-79	8927	4870	4057	2505	45.4
1979-80	10250	5658	4592	2700	44.8
1980-81	11852	6786	5066	2885	42.7

Note : CA = Current Assets
OCL = Other Current Liabilities
WCG = Working Capital Gap
STBB = Short-term Bank Borrowings.

The relevant data with respect to current assets, current liabilities other than STBB, WCG are presented in Table 4.7. It is noticed that there was a continuous increase, in absolute terms, in WCG throughout the period, i.e., from 1965-66 to 1980-81. However, WCG as a percentage of total current assets represents the gap between investment in current

assets and the availability of short-term funds through sources other than bank borrowings. In other words, this ratio indicates the excess of long-term funds plus short-term bank borrowings as percentage of current assets. It is noticed that till 1969-70 WCG as a percentage of current assets was around 50 per cent and in the year 1970-71 it had gone up to 54 per cent and thereafter started to decline. The change in the structure of short-term sources of funds broadly reveals that the importance of accounts payable increased while that of STBB declined during the years 1965-66 to 1980-81.

Theoretically, the emphasis of WCG approach is on the identification of the magnitude of shortfall in short-term sources of funds other than bank credit in relation to current assets and then deciding what proportion of it is to be financed by bank borrowings. It, therefore, takes into account, though implicitly, aspects like the capital structure of a firm. This is so, because determination of bank credit as a certain proportion of WCG also means that a certain proportion of WCG should come in the form of owned funds and term borrowing towards financing current assets. This has relevance in the context of reducing the dependence of industrial sector on banking system for credit.

The determination of bank credit based on WCG also involves certain issues, from the angle of credit planning. One of the objectives of credit planning is deployment of bank credit linked with production or output targets. From this point of view, inventory holdings and receivables, forming the

bulk of current assets which in turn, one of the determinants of WCG, and hence bank credit have to be in relation to output targets. In this context, a need arises to work with certain norms of inventory and receivables related to output.

Therefore, from credit planning point of view, WCG approach to the determination of bank credit seeks to establish a relation between bank credit and output, inter alia, with the imposition of norms on inventory and receivables. The norms for inventory and receivables and the appropriate level of bank borrowings related to WCG are presented in the next chapter with respect to eight Indian industries. In the next section conclusions that emerged from the analyses are presented.

Section IV

Conclusions

The analyses presented in the preceding sections with respect to volume, structure and pattern of working capital reveal the following:

i) Gross working capital, i.e., total current assets, on an average, accounted for 60 per cent of total assets or total capital employed. Moreover, the proportion of current assets in total assets had been increasing over time and, therefore, the volume or quantum of working capital had been increasing.

ii) As regards the structure of working capital it may be noted that inventories and receivables constituted more than

90 per cent of current assets. Inventories alone accounted for more than 55 per cent of current assets. However, the available evidence shows that, on the whole, the importance of receivables had gone up while there was a marginal decline in the share of inventories and other current assets in total current assets, during the period of analysis.

iii) The increase in the ratio of current assets to total assets was mainly due to a large increase in receivables, a component of current assets. In fact, after 1975-76 the ratio of inventories to current assets had declined. The former observation, i.e., an increase in receivables ratio, seen together with the ratio of sundry debtors to sundry creditors which was less than 1 throughout the period and more importantly a further decline in it after 1971 indicates that the reliance on trade credit of the RBI's sample companies increased.

iv) There is evidence to show that the importance and efficiency of working capital increased during the period of analysis. An increase in current assets-total assets ratio indicates the increase in the importance of working capital as a proportion of total capital employed. The observed decline in the ratio of current assets to output suggests that the amount of working capital used per unit of output declined.

v) The observed decline in the two ratios, viz., inventory to output and short-term bank borrowings to inventory indicates that for the RBI's sample companies (a) inventories in relation to output, particularly after 1975-76, declined and (b) the amount of bank credit available to finance a unit of

inventory declined. These are in line with the objective of credit policy, i.e., reducing the dependence of industrial sector on bank finance.

vi) The analysis regarding the changes in the structure of finances in terms of long-term and short-term sources revealed that there was a change in favour of short-term sources. In other words, current assets as well as current liabilities as proportion of total capital employed had gone up during the period 1965-66 to 1980-81 with respect to the RBI's sample companies.

Appendix IV.1 : Data on Some Selected Variables of Medium and Large Public Limited Companies for the Period 1965-66 to 1980-81

	(Rs. in crores)															
	1965- 66	1966- 67	1967- 68	1968- 69	1969- 70	1970- 71	1971- 72	1972- 73	1973- 74	1974- 75	1975- 76	1976- 77	1977- 78	1978- 79	1979- 80	1980- 81
1. Output	4179	4657	4990	5403	6020	7054	7875	8581	9546	12303	13413	14607	16058	18079	20534	24174
2. Inventory	1381	1549	1700	1740	1875	2211	2500	2644	3051	3922	4099	3996	4249	4901	5768	6749
3. Current Assets	2371	2664	2881	3096	3396	3961	4382	4632	5361	6586	7117	7366	7960	8927	10250	11852
4. Current Liabilities	1930	2220	2435	2589	2807	3091	3375	3502	4077	5090	5700	5938	6520	7375	8358	9671
5. Short-term Bank Borrowings	752	893	1021	1068	1139	1269	1344	1295	1437	1783	2030	2093	2243	2505	2700	2885
6. Other Short-term Borrowings	198	234	255	273	295	224	229	228	220	231	224	246	251	268	298	352
7. Sundry Debtors	488	544	613	724	797	932	1012	1044	1109	1339	1598	1827	1995	2151	2411	2900
8. Sundry Creditors	525	615	683	755	848	983	1084	1177	1395	1847	2012	2103	2380	2773	3147	3805
9. Accounts Receivable	752	868	940	1076	1194	1381	1497	1579	1773	2101	2422	2725	2976	3257	3695	4386
10. Accounts Payable	749	860	941	1027	1155	1344	1503	1665	2048	2625	2883	2996	3398	3940	4590	5589
11. Net Working Capital	441	444	446	507	589	870	1007	1130	1284	1496	1417	1428	1440	1552	1892	2181
12. Total Assets/Liabilities	4319	4891	5258	5577	5970	6942	7476	7927	8890	10550	11479	12008	13044	14460	16309	18970
13. Sales	4081	4565	4931	5353	5970	6910	7749	8598	9356	11833	11371	14581	15949	17782	20268	23736

Sources : Reserve Bank of India, (a) Financial Statistics of Joint Stock Companies in India, 1960-61 to 1970-71, Bombay, August 1975.

(b) Financial Statistics of Joint Stock Companies in India, 1970-71 to 1974-75, Bombay, 1977.

(c) Various issues of RBI Bulletin.

CHAPTER V

INVENTORY NORMS, METHODS OF LENDING AND EXCESS BANK BORROWINGS OF INDUSTRY

Introduction

The two important questions which have to be answered in the context of commercial bank lending to the industrial sector are (1) what constitutes the working capital requirements of an industry, and (2) what portion of the working capital requirements of industry may be met by bank borrowings? Associated with the former question is whether appropriate norms can be evolved for build-up of current assets to bring down excessive dependence of companies on bank finance. In the previous chapter an attempt is made to examine the issue of working capital, i.e., what are the components of working capital and what are the determinants of, or factors influencing the components of, working capital. It is seen there that the two components determining the magnitude of working capital (net) are current assets and current liabilities. And, among the various items comprising these two, some were identified as the main components, variations in which are the major factors determining the level and changes in working capital requirements. They are inventory, borrowings and net trade credit. But the question that still remains unanswered is whether a firm that holds a level of current assets, especially inventories, in excess of its production requirements should

be allowed to obtain credit from banks.

The chapter is divided into six sections. In Section I a brief background of the situation that led to the constitution of the Tandon Committee, its terms of reference, and the Committee's recommendations regarding inventory norms and methods of lending are presented. It also contains data sources and the methodology followed in our analysis. Section II deals with the trend and magnitudes of excess bank borrowings by industry computed for the period 1971-72 to 1980-81 within the framework of the Tandon Committee recommendations. In Section III analyses regarding the factors or determinants of excess bank borrowings viz. inventory norms, other current liabilities and methods of lending are presented. Section IV discusses the end use of excess bank borrowings, i.e., whether the excess bank borrowings were used for holding excess current assets or to finance fixed assets. Section V examines the scope for reducing excess bank borrowings of industry and the implications of this reduction on industry as well as banking system. Major conclusions emerging from our analyses are presented in Section VI.

Section I

A. Background to the Constitution of the Study Group

Under the security-based lending system, when banks used to grant credit facilities against the security of assets, the higher the level of inventory holdings, the higher the entitlement of a firm to obtain credit from a bank. According to a

report by the National Credit Council, also known as the Dehejia Committee's Report, this reportedly led to excessive inventory build-up by large firms.¹ Except for reasons like poor management, excessive inventory is largely held as an insurance against failure of supplies or for reaping speculative profits.

Apart from the undesirable consequences of the security-oriented lending system, - like inequitable distribution of credit among different sectors and geographical areas, credit being available only to the established and big borrowers leading to concentration of economic power - the emergence of public sector and the priority sector as major claimants to bank credit necessitated a fresh look at the distribution of bank credit. Further, the lendable resources of the banks to the corporate sector as a proportion of total bank credit declined, partly due to the increased share of the priority sectors in total bank credit, and partly due to the increase in statutory reserve requirements. These developments made it necessary for the banking system to ensure that industrial credit is production-oriented and the funds are used for the purpose for which they are lent.

On the basis of the Dehejia Committee's finding that the credit utilisation by industry rose steeply while production

¹ National Credit Council, Report of the Study Group on the Extent to Which Credit Needs of Industry and Trade Are Likely To Be Inflated and How Such Trends Could Be Checked, Bombay, 1969.

remained stagnant, the RBI imposed credit restraints in the year 1973¹ which had the effect of increasing the cost and/or reducing the availability of bank credit. It was further noticed that as at the end of June 1974, credit limits sanctioned by the banking system aggregated Rs.12,880 crores while total deposits of the banking system amounted to Rs.10,706 crores.² This type of situation could have resulted in undesired developments, if the borrowers had fully used their facilities. It was against this background that the 'Study Group to Frame Guidelines for the Follow-up of Bank Credit', popularly known as the Tandon Committee, was constituted by the RBI in 1974. In the text, hereafterwards, the words Tandon Committee, Committee, Group, Study Group are interchangeably used.

1 a) The Net Liquidity Ratio (NLR) was raised three times during the year on March 20, June 29 and November 16 from 36 to 37 per cent, 37 to 39 per cent and 39 to 40 per cent respectively.

b) The Cash Reserve Ratio (CRR) was raised from 3 per cent to 8 per cent in three phases during the year, i.e., on May 31 from 3 to 5 per cent, on September 8 from 5 to 7 per cent and on September 22 from 7 to 8 per cent.

c) Effective from May 31, 1973, Bank Rate was raised from 6 to 7 per cent.

d) The Minimum Lending Rate (MLR) on bank advances was raised twice during the year: First, the MLR was raised from 9 to 10 per cent on June 1 and further to 11 per cent on December 1.

e) Most of the refinance facilities at or below the Bank Rate were withdrawn in July 1973.

f) For the first time, a quantitative credit ceiling was imposed on commercial banks' non-food credit.

2 Reserve Bank of India, Report of the Study Group to Frame Guidelines for Follow-up of Bank Credit, Bombay, 1975, p. 12.

B. Terms of Reference of the Tandon Committee

The terms of reference of the Committee were:

- "(i) to suggest guidelines for commercial banks to follow-up and supervise credit from the point of view of ensuring proper end use of funds and keeping a watch on the safety of the advances and to suggest the type of operational data and other information that may be obtained by banks periodically from such borrowers and by the Reserve Bank of India from the lending banks,
- (ii) to make recommendations for obtaining periodical forecasts from borrowers of (a) business/production plans, and (b) credit needs,
- (iii) to make suggestions for prescribing inventory norms for different industries both in the private and public sectors and indicate the criteria for deviating from these norms,
- (iv) to suggest criteria regarding satisfactory capital structure and sound financial basis in relation to borrowings,
- (v) to make recommendations regarding the sources for financing the minimum working capital requirements,
- (vi) to make recommendations as to whether the existing pattern of financing working capital requirements by cash credit/overdraft system, etc., requires to be modified, if so, to suggest suitable modifications, and
- (vii) to make recommendations on any other related matter as the Group may consider germane to the subject of enquiry or any other allied matter which may be specifically referred to it by the Reserve Bank of India." 1/

From the terms of reference the Group identified the following tasks:

- "(a) what constitutes the working capital requirements of industry which banks should finance and what is the end use of credit?

1 Ibid., pp. 4-5.

- (b) how is the quantum of bank advances to be determined?
- (c) can norms be evolved for build-up of current assets and for debt equity ratio to ensure minimal dependence on bank finance?
- (d) can the current manner and style of lending be improved?
- (e) can an adequate planning, assessment and information system be evolved, to ensure a disciplined flow of credit to meet genuine production needs and its proper supervision?" 1/

As we are interested in examining two questions, viz., norms for current assets and for the scale of financing by commercial banks within the framework of the Group's recommendations, we shall present here a critical assessment of the Committee's recommendations on these two issues.

C. Recommended Norms and Methods of Lending

In its Interim Report, the Group has suggested norms for inventory and receivables for ten major industries. They are presented in Appendix V.1. The principal objective was, "to introduce a discipline and improvement in the maintenance of reasonable inventory and receivables levels consistent with encouragement of production ...".² The RBI accepted the norms and gave directions to all scheduled commercial banks to implement the norms, on an experimental basis, and to furnish it with a feedback of the experience. Later, the Committee extended the norms, covering 15 major industries, and certain

1 Ibid., p. 8.

2 Ibid., p. 18.

norms, suggested in the Interim Report, were revised in the light of information received from the banks. The suggested norms for 15 industries are presented in Appendix V.2.

First, let us examine the norms for current assets. Inventory and receivables constitute a major part of current assets. Inventory comprises (i) stock of raw materials (including consumable stores), (ii) work-in-progress or stock-in-process, (iii) finished goods. Norms were suggested separately for all these components viz. raw materials, finished goods, and stock-in-process and receivables. Variability or flexibility of norms within the total sanctioned limit, i.e., of permitting holding of higher level of finished goods because of lower levels of raw materials or receivables, etc., is not allowed as that would defeat the very purpose of fixing norms.

The Group proceeded from two basic premises. (i) "If bank credit is to be viewed as a tool of resource allocation in the economy, one cannot get away from the need to define norms for reasonable levels of inventories (including safety stock) and receivables in each industry."¹ (ii) "The main function of a banker as a lender is to supplement the borrower's resources to carry an acceptable level of current assets. The implications are two-fold; one, the level of current assets must be reasonable and based on norms; two, a part of the fund requirements for carrying current assets must be found from long-term funds comprising owned funds and term borrowings

1 Ibid., p. 17.

including other non-current liabilities."¹

a) Coverage of Norms

Norms are applicable to all industrial borrowers (of the 15 major industries) from the banking system with aggregate limits for working capital finance exceeding Rs. 10 lakhs. The Group suggested that the norms to be made applicable to other borrowers, i.e., borrowers with aggregate limits of less than Rs. 10 lakhs progressively as early as possible. The Group made it clear that banks should keep in view the purpose and spirit behind the norms while granting credit to the other borrowers, i.e., borrowers of industries other than the 15 industries. Norms should be uniformly applied by all banks to industries both in the private sector and in the public sector.

b) Deviations from Norms

The norms suggested by the Committee may be changed for the entire industry and not for an individual borrower. The norms can be changed by the Committee of Directions of the Reserve Bank of India, on the basis of the recommendations made either by the banks or by the industry's representative.

Deviations from norms are permitted for a short period, in the following six cases:

- (i) bunched receipt of raw materials including imports,
- (ii) power-cuts, strikes and other unavoidable interruptions in the process of production,

1 Ibid., p. 17.

- (iii) transport delays and bottlenecks,
- (iv) accumulation of finished goods due to non-availability of shipping space for exports or other disruptions in sales but not under circumstances where a sale stimulation is needed through reduction in prices,
- (v) build-up of stocks of finished goods such as machinery due to failure to take delivery, on the part of purchasers for whom these were specifically manufactured, and
- (vi) need to cover full or substantial requirement of raw materials for specific export contract of short duration.

The Group states that "the deviations should be for known specific circumstances and situations (which should be recorded) and allowed for agreed periods which should be relatively short."¹ The above-permitted deviations are only for temporary periods and not on a roll-over basis. The unit should carry the normal levels of current assets when conditions revert to normal.

The rationale for suggesting norms for individual components of current assets is the recognition that an industrial unit's excess holding of inventories and receivables, i.e., more than its production requirements, should not be financed by bank credit. Consequently, with the suggested methods of bank lending along with inventory and receivables norms, the quantum of bank credit be limited to financing a part of working capital, thus reducing the dependence of industry on commercial banks.

1 Ibid., p. 25.

As credit planning has to be dovetailed with production planning, the banks should finance only current assets of a firm that are necessary to carry out its operations. In other words, bank credit should be strictly available for financing working capital requirements based upon the output. A need arises, therefore, to know the level of current assets that are essential to support a particular level of output of a firm - termed as 'reasonable' level of current assets by the Group. Hence the Group, with a view to link credit with production requirements, suggested norms for inventory and receivables at the industry level to be followed by commercial banks as an operational framework. The norms suggested take into account:

- "(a) the company finance studies made by the Reserve Bank,
- (b) process period in the different industries,
- (c) discussions with experts in the industries concerned,
- (d) general discussions with the industry interests,
- (e) need for ensuring smooth production, depending upon the availability of the materials, seasonality, etc., and
- (f) reactions and feedback on the Interim Report." 1/

The Group has clearly stated that, except in cases of permitted deviations from norms, the borrowers are not expected to hold current assets in excess of the reasonable

1 Ibid., p. 19.

levels as per the norms and that the norm is not an entitlement to hold current assets upto this level. In other words, if a unit has managed in the past with less current assets than what is considered reasonable level of current assets as per norms, the unit should continue to do so.

D. Sources of Data and Methodology

Within the light of the norms suggested by the Group, now let us analyse the situation at the industry level with respect to bank credit and see if there were any excess borrowings.

For this purpose we make use of the data published by the Reserve Bank. The period of analysis is from 1970-71 to 1980-81.¹ The number of companies included in each industry sample varies over the period. And it is also not feasible to know from the company finance studies whether or not the same companies, appear in different samples. The analysis is carried out on the assumption that the sample is representative of the industry. While year-to-year comparisons may not be valid because the number of companies included in the sample at each industry level was different, from 1975-76 onwards, some broad trends in the data may be noted.

For the purpose of determining whether there were any excess bank borrowings by industry, we first calculate the

1 a) Reserve Bank of India, Financial Statistics of Joint Stock Companies in India, RBI, Bombay, 1975.

b) Reserve Bank of India, RBI Bulletin, September 1977; May 1980; November 1981; July 1983.

reasonable level of current assets (RCA) and then excess bank credit is worked out by making use of the lending norms. For computing RCA, the norms suggested by the Group with respect to (a) raw materials and stores, (b) work-in-progress, (c) finished goods, and (d) receivables, are utilised. The level of raw materials and stores is expressed as so many months consumption of raw materials and stores. Work-in-progress is expressed as so many months cost of production; finished goods are expressed as so many months cost of sales while receivables are expressed as so many months of sales. The implicit assumption underlying the norms is that a unit in any particular industry is a representative of that industry and thus it should be able to carry out its operations by holding a level of current assets that are worked out for the industry by taking into account various factors mentioned earlier. As has been already observed that for purposes of calculation of reasonable level of inventory and receivables, norms or the actual holdings whichever is lower should be used. To this, then, is to be added other current assets, viz., loans and advances, quoted investments, advance tax payments and cash and bank balances to arrive at the RCA.

From this RCA, current liabilities, other than bank borrowings, are deducted to arrive at working capital gap (WCG). Current liabilities that are taken into account for this purpose are: (a) current provisions, (b) other borrowings (exclusive of the portion included under debt), and (c) trade dues and other current liabilities.

After working out the working capital gap, the first and second Methods of lending suggested by the Group are used to compute the permissible levels of bank finance (PBF). The Group has suggested three alternatives for working out the PBF. They were:

- "(i) Bank can work out the working capital gap, i.e., total current assets less current liabilities other than bank borrowings and finance a maximum of 75 per cent of the gap; the balance to come out of long-term funds, i.e., owned funds and term borrowings.
- (ii) Borrower to provide for a minimum of 25 per cent of total current assets out of long-term funds, i.e., owned funds plus term borrowings. A certain level of credit for purchases and other current liabilities will be available and the bank will provide the balance. Total current liabilities inclusive of bank borrowings will not exceed 75 per cent of current assets.
- (iii) Same as (ii) above, but excluding core current assets from total current assets on the theory that core current assets should be financed out of long-term funds, i.e., owned funds plus term borrowings."¹

These three lending methods were suggested by the Group to reduce the dependence of industry on the banking system. Under lending Method I, 75 per cent of the WCG alone will be

¹ Reserve Bank of India, Report of the Study Group to Frame Guidelines for the Follow-up of Bank Credit, op.cit., p. 27.

financed by banks; under lending Method II 75 per cent of the current assets will be financed by bank credit and other current liabilities; under the Method II, the core current assets (the technological minimum) will not be financed by banks at all, and of the remaining, 75 per cent will be financed by bank credit and other current liabilities. The core current assets will have to be financed by owned funds and term borrowings. The concept of core current assets is borrowed from the Dehejia Committee's concept of 'hard core', and the Group has entrusted the task of working out the core current assets for different industries to the Indian Banks' Association.

The Group has expressed that, though lending Method III is the ideal one which will greatly reduce the dependence of industry on banks, it would be better, from the point of view of allowing time for the units to adjust their capital structure, to start with the lending Method I and gradually reach lending Method III.

The industry-wise analysis is done for 10 years using the data on company finance studies of the RBI for the period 1970-71 to 1980-81¹ for the following eight industries.(1) Jute

¹ The following abbreviated notations are used hereafter, unless otherwise specified, to denote different industries:

- 1) Jute textiles - Jute
- 2) Transport Equipment - Tran.Equip.
- 3) Rubber and rubber products - Rubber
- 4) Edible, vegetable and hydrogenated oils - EVH
- 5) Cotton textiles - Cotton
- 6) Medicines and pharmaceutical preparations - MPH
- 7) Basic industrial chemicals - BIC.

textiles, (2) Transport equipment, (3) Cement, (4) Rubber and rubber products, (5) Edible, vegetable and hydrogenated oils, (6) Cotton textiles, (7) Medicines and pharmaceuticals, and (8) Basic industrial chemicals. The proforma given below is used for the computations.

FORM 1

- 1 Annual consumption of raw materials and stores and spares
- 2 Annual cost of production
- 3 Annual cost of sales
- 4 Annual sales
- 5 a) Raw materials (including stores and other items used in the process of manufacture)
- b) Stock-in-process or Work-in-progress
- c) Finished goods
- d) Receivables
- e) Sundry loans and advances
- f) Investments (Quoted)
- g) Cash and bank balances
- Sum of (a) to (g): Reasonable level of current assets (RCA)
- 6 Current liabilities other than bank borrowings
- 7 Working capital gap (WCG) (5-6)
- 8 Permissible levels of bank finance (PBF)
 - I Method
 - II Method
- 9 Actual bank borrowings (ABB)
- 10 Excess bank borrowings (EBB) (9 - 8)
 - I Method (9 - 8.I)
 - II Method (9 - 8.II)

The annual cost of production and cost of sales are calculated as shown below.

FORM 2

- 1 Raw materials, components, etc., consumed
- 2 Stores and spares consumed
- 3 Power and fuel
- 4 Salaries, wages and bonus
- 5 Provident fund
- 6 Employees' welfare expenses
- 7 Managerial remuneration
- 8 Repairs to machinery
- 9 Repairs to buildings
- 10 Other expenses
- 11 Depreciation provision
- 12 Other provisions
- Sub-Total (1 to 12)
- 13 Add:
Opening Stock-in-process
Sub-Total
- 14 Deduct:
Closing stock-in-process
- 15 Sub-Total (Annual Cost of Production)
- 16 Add:
Opening stock of finished goods
Sub-Total
- 17 Deduct:
Closing stock of finished goods
- 18 Sub-Total (Annual Cost of Sales)

The reasonable level of current assets is calculated as shown below.

FORM 3

1.

- a) Raw materials and stores¹
- b) Stock-in-process²
- c) Finished goods³
- d) Receivables⁴
- e) Other current assets

Total: Reasonable level of current assets

¹Raw materials and stores are equal to so many months of annual consumption, according to the suggested norm or the actual holdings, whichever is lower.

²Stock-in-process is equal to so many months of cost of production as per the norm or the actual figure, whichever is lower.

³Finished goods is equal to so many months cost of sales as per norm or the actual holdings, whichever is lower.

⁴Receivables is equal to so many months of sales as per norm or the actual outstandings, whichever is lower.

The computation of excess bank borrowings is done in the following way.

FORM 4

1. Reasonable level of current assets
2. Current liabilities other than bank borrowings (OCL)
3. Working capital gap (1 - 2)
4. Permissible level of bank finance (PBF)
 - I Method : 75 per cent of WCG
 - II Method : RCA
Deduct 25% of RCA
 - Sub-Total
 - Less: OCL
 - Sub-Total PBF. II Method
5. Actual bank borrowings
6. Excess bank borrowings
 - I Method : Actual bank borrowings
Deduct PBF (Method I)
Sub-Total EBB (Method I)
 - II Method : Actual bank borrowings
Deduct PBF (Method II)
Sub-Total EBB (Method II)

Section IIA. Trend in Excess Bank Borrowings (EBB)

In Table 5.1 the data pertaining to ABB, PBF and EBB are presented with respect to the afore-mentioned eight industries for the period 1971-72 to 1980-81. The computations of PBF and EBB are presented in the Tables given in Appendix V.5. The following observations may be made on the basis of data presented in Table 5.1.

1. Three industries, viz., Jute textiles, Transport equipment, and Cement had EBB under both lending methods throughout the period.
2. According to lending Method I, apart from the three industries in (1),
 - (a) Rubber and rubber products industry had EBB, except for two years i.e. 1972-73 and 1973-74; Edible, vegetable and hydrogenated oils had excess bank borrowings in all the years except for the years 1979-80 and 1980-81,
 - (b) Cotton textiles which started with an EBB of 2.4 per cent, exhibited absence of EBB for the next four years; but again there were EBB for the subsequent three years and for the last two years there were no EBB.
 - (c) There were no EBB throughout the period with respect to (i) Medicines and pharmaceutical preparations and (ii) Basic industrial chemicals.
3. According to lending Method II, apart from the three industries in (1):

Table 5.1 : Industry-wise Excess Bank Borrowings

(Rs. in lakhs)

Year	ABB	PBF		EBB		EBB as % ABB	
		I	II	I	II	I	II
<u>EVH</u>							
1971-72	966	528	245	438	721	45.3	77.7
1972-73	951	613	286	338	665	35.5	69.9
1973-74	1004	818	477	186	527	18.5	52.3
1974-75	1257	952	577	305	680	24.3	54.1
1975-76	892	611	244	281	648	31.5	72.6
1976-77	883	606	236	277	647	31.4	73.3
1977-78	943	726	220	217	723	23.0	76.7
1978-79	950	496	Neg.	454	950	47.8	100.0
1979-80	918	1121	559	-	359	-	39.1
1980-81	880	1248	610	-	270	-	30.7
<u>MPH</u>							
1971-72	2541	3945	2643	-	-	-	-
1972-73	2902	4405	2991	-	-	-	-
1973-74	3096	4917	3340	-	-	-	-
1974-75	3689	6022	4127	-	-	-	-
1975-76	3814	7411	5382	-	-	-	-
1976-77	4030	5904	3738	-	292	-	7.2
1977-78	4277	6148	3748	-	529	-	12.4
1978-79	4518	7778	5146	-	-	-	-
1979-80	5614	8663	5427	-	187	-	3.3
1980-81	7212	10654	7140	-	72	-	1.0

(continued)

Table 5.1 : (continued)

Year	ABB	PBF		EBB		EBB as % ABB	
		I	II	I	II	I	II
<u>COT.TEX.</u>							
1971-72	22846	22306	16576	540	6270	2.4	27.4
1972-73	21842	23887	18138	-	3704	-	17.0
1973-74	22671	26204	19346	-	3325	-	14.7
1974-75	26780	33772	25279	-	1501	-	5.6
1975-76	30879	34266	24917	-	5962	-	19.3
1976-77	34998	30724	20207	4274	14791	12.2	42.3
1977-78	39612	33052	20840	6560	18772	16.6	47.4
1978-79	45516	42323	28329	3193	17187	7.0	38.0
1979-80	42898	43949	29114	-	13784	-	32.0
1980-81	47881	49390	31518	-	16263	-	34.0
<u>BIC</u>							
1971-72	6825	6844	3294	-	3531	-	51.7
1972-73	5917	7897	3865	-	2052	-	34.7
1973-74	6768	9095	4854	-	1914	-	28.3
1974-75	8068	12808	7226	-	842	-	10.4
1975-76	9987	18376	11626	-	-	-	-
1976-77	11763	24034	16083	-	-	-	-
1977-78	12507	24119	15711	-	-	-	-
1978-79	13385	25349	15214	-	-	-	-
1979-80	15527	26864	15589	-	-	-	-
1980-81	20833	31498	19359	-	1474	-	7.1

(continued)

Table 5.1 : (continued)

Year	ABB	PBF		EBB		EBB as % ABB	
		I	II	I	II	I	II
<u>JUTE</u>							
1971-72	5688	4283	2850	1405	2838	24.7	49.9
1972-73	5682	4559	3064	1123	2618	19.8	46.1
1973-74	7373	3066	1006	4307	6367	58.4	86.4
1974-75	7509	2974	628	4535	6881	60.4	91.6
1975-76	6696	3316	915	3380	5781	50.5	86.3
1976-77	5913	3049	846	2864	5067	48.4	85.7
1977-78	6739	2780	213	3959	6526	58.7	96.8
1978-79	7777	1109	-	6668	7777	85.4	100.0
1979-80	6780	2396	-	4384	6780	64.7	100.0
1980-81	7190	3556	474	3634	6716	50.5	93.4
<u>CEMENT</u>							
1971-72	2491	232	-	2259	2491	90.7	100.0
1972-73	2423	71	-	2352	2352	97.1	100.0
1973-74	2916	-	-	2916	2916	100.0	100.0
1974-75	2577	-	-	2577	2577	100.0	100.0
1975-76	2797	-	-	2797	2797	100.0	100.0
1976-77	4315	-	-	4315	4315	100.0	100.0
1977-78	2319	-	-	2319	2319	100.0	100.0
1978-79	2032	-	-	2032	2032	100.0	100.0
1979-80	2818	-	-	2818	2818	100.0	100.0
1980-81	4404	-	-	4404	4404	100.0	100.0

(continued)

Table 5.1 : (continued)

Year	ABB	PBF		EBB		EBB as % ABB	
		I	II	I	II	I	II
<u>TRAN. EQUIP.</u>							
1971-72	8610	5954	3029	2656	5581	30.8	64.8
1972-73	7546	5481	2288	2065	5258	27.4	69.7
1973-74	9377	6376	2600	2985	6777	31.8	72.2
1974-75	14385	7897	2908	6488	11479	45.1	79.8
1975-76	14377	8440	2878	5937	11499	41.3	80.0
1976-77	16777	11660	6135	5117	10642	30.5	63.4
1977-78	16956	12381	6651	4575	10305	27.0	60.8
1978-79	16713	12341	4776	4372	11937	26.2	96.7
1979-80	25192	14066	4720	11126	20472	44.2	81.3
1980-81	18697	11102	-	7597	18697	40.6	100.0
<u>RUBBER</u>							
1971-72	2341	1930	916	411	1425	17.6	60.9
1972-73	1697	2028	946	-	751	-	44.3
1973-74	1128	2038	752	-	376	-	33.3
1974-75	3436	2814	1161	622	2275	18.1	66.2
1975-76	4312	2878	924	1434	3388	33.3	78.6
1976-77	6528	1852	-	4676	6528	71.6	100.0
1977-78	6860	2805	570	4055	6290	59.1	91.7
1978-79	6185	3554	914	2631	5271	42.5	85.2
1979-80	5914	3301	-	2613	5914	44.2	100.0
1980-81	6211	3073	-	3138	6211	50.5	100.0

Note : 'Neg.' = Negligible.

' - ' = Nil.

- (a) There were excess bank borrowings throughout the period in regard to (i) Rubber and rubber products, (ii) Edible, vegetable and hydrogenated oils and (iii) Cotton textiles.
- (b) There were EBB in the first four years with respect to Basic industrial chemicals.
- (c) There were no EBB in the first five years with respect to Medicines and pharmaceutical products.

It may be also observed that in regard to no industry was there a clear-cut tendency in the movement of the EBB as percentage of ABB under both the Methods of lending.

B. Magnitudes of EBB

As regards the magnitudes of EBB, Cement industry displayed peculiar characteristics, i.e., negative working capital¹ throughout the period as per lending Method II, and negative working capital in all the years, except 1971-72 and 1972-73 as per lending Method I. Even in the two years, i.e., 1971-72 and 1972-73 the excess borrowings were of the order of 91 per cent and 97 per cent of ABB respectively. Medicines and pharmaceutical preparations industry showed quite different

¹ Negative working capital refers to a situation where current liabilities other than STBB are in excess of RCA. Under the suggested methods of lending by the Committee, a firm in order to avail bank credit should have a positive working capital gap. Negative working capital, therefore, implies that the short term resources, other than bank borrowings, are more than RCA and hence the entire bank credit is to be treated as EBB. The implication is that to pay off short-term bank borrowings, a firm has to either rundown its excess current asset holdings, if there are any, or raise funds through term borrowing and equity capital.

behaviour to that of Cement industry in the sense that there were no EBB throughout the period as per Method I and there were EBB only in four years ranging between 1.0 per cent and 12.4 per cent as per Method II. In case of the other six industries EBB, as per Method I, were at a higher level with respect to Jute textiles and Rubber and rubber products, i.e., exceeding 50 per cent of ABB in some years, while EBB were at a lower level, i.e., less than 50 per cent of ABB for Transport equipment, EVH oils and Cotton textiles. There were no excess borrowings by Basic industrial chemicals. As per lending Method II, four industries, viz., Jute textiles, Transport equipment, Rubber and rubber products and EVH oils, had EBB at a higher level i.e., between 50 and 100 per cent of ABB, whereas in the case of two industries, Cotton textiles and Basic industrial chemicals, the EBB were comparatively at lower levels, less than 50 per cent of ABB.

In this connection two points have to be kept in mind.

1. From the point of view of placing an industry under Method I or Method II of lending, the above analysis is useful, since it broadly gives an idea regarding the extent of EBB. The Tandon Committee opined that 75 per cent of WCG as the maximum limit on bank borrowings under the 1st Method is liberal, but viewed it as a beginning, "particularly to facilitate financial structuring of new companies, setting up projects in backward areas and also for flexibility in re-structuring of existing companies with a weak financial base."¹

1 Ibid., p. 30.

However, "... the aim should be to move forward and borrowers who already fall in the third or second category should not increase their dependence on bank borrowings and revert to the second or first category respectively."¹

From Table 5.1 it may be seen that four industries, viz., Cotton textiles, EVH oils, Medicines pharmaceuticals, and Basic industrial chemicals may be brought under lending Method II. This is based on the fact that there were no EBB in the most recent years i.e., 1979-80 and 1980-81 under Method I and EBB were negligible in case of Medicines and pharmaceuticals, Basic industrial chemicals and less than 40 per cent of ABB with respect to EVH oils and Cotton textiles as per Method II. And even it may be thought that Medicines and pharmaceuticals and Basic industrial chemicals may be brought under Method III since EBB were negligible as per Method II. The results show that Jute textiles, Transport equipment and Rubber and rubber products industries are to be kept under Method I for some more time, since they have,

- a) substantial EBB, more than 40 per cent of ABB, under Method I; and
- b) under Method II EBB were very high, i.e., upto 100 per cent in the case of Jute textiles and more than 60 per cent for Rubber and rubber products, for the years 1979-80 and 1980-81.

1 Ibid., p. 30.

In the case of Cement industry, it seems, the suggested norms are grossly inadequate in relation to the actual current assets holdings of the industry.

The observations are subject to two limitations:

- i) acceptance of the norms suggested by the Committee,
- ii) the computations are based on the combined balance sheet and income, expenditure and appropriation data at the industry level. This may result in underestimation, i.e., EBB at the industry level computed on the basis of combined balance sheets are likely to be lower than the EBB computed at the firm level and aggregated for the same number of companies (see Appendix V.6).

Moreover, the above interpretation is carried on the basis of EBB as percentage of ABB. This should not be taken to mean that an industry with high percentage should be paid more attention than an industry with a low percentage figure. From the banks' point of view, what is more important is the amount of funds that is being locked up with the industries for financing assets other than RCA. This is because a substantial amount of funds could be released by bringing down, even marginally, the share of EBB in ABB than by a substantial pruning of the EBB. For example, in the year 1978-79, the EBB as per Method I for Cotton textiles and EVH oils were 7 per cent and 47.8 per cent respectively. Even a one percentage decline in EBB of Cotton textiles would release an amount of the order of Rs.460 crores which is higher than the total

outstanding EBB of the EVH oils industry. The point that is sought to be emphasised here is that from the point of view the credit planning and policy, the quantum of bank credit expected to be released by adherence to the norms in industries with large borrowings should also be given due importance along with attempts to bring all industries in conformity with norms.

Section III

The problem of variation in excess borrowings has to be explained in terms of analysis of factors responsible for EBB. Given the level of ABB, it is PBF that determines the EBB, since $EBB = ABB - PBF$. On the other hand, PBF is dependent on two variables viz., (a) WCG and (b) the methods of lending. WCG is again based on the norms for inventories and receivables and the level of OCL. Thus, the three important factors that influence PBF are, therefore, (i) the norms for inventories and receivables, (ii) the level of OCL, and (iii) the methods of lending.

A) Norms

The suggested norms for inventory and receivables based on several factors, as mentioned earlier, are supposed to ensure that a unit will hold a level of current assets (RCA) that will meet the production requirements. The basic objective is to discourage firms to hold excess inventories over and above their production requirements. The Group, while suggesting norms for various industries, has taken into

consideration the process period in different industries, availability of raw materials for ensuring smooth production, seasonality, technology, practices of trade credit, industry-wise and region-wise variations, etc. The suggested norms are for a maximum level of inventory and receivables on a disaggregated level, i.e., separate norms for each of the components. These norms for raw materials and stores, work-in-progress, finished goods and receivables resemble the four phases of the operating cycle. They are: (1) acquisition of raw materials and other components, (2) production process, (3) the marketing of goods, and (4) the recovery or collection of the funds committed to the process of production. The length of operating cycle is thus the time required to convert cash-into-goods and goods-into-cash. The finance required for completing an operating cycle, therefore, is the basic working capital requirement of a firm. The firm is thus required to hold a certain level of inventory in the form of raw material, work-in-progress, finished goods and receivables to carry out smoothly its production plans because of the presence of the time-lags involved at various stages of manufacturing process. But the two approaches mentioned, viz., Tandon Committee norms and the operating cycle approach to working capital requirements, try to spell out the maximum levels of inventory and receivables that a firm might hold to fulfil their production targets. The norms, according to both the approaches, determine the working capital requirements necessary to attain production targets and are therefore considered desirable. In a later

section, we present the suggested norms of Tandon Committee for inventory (component-wise) and receivables juxtaposing the norms according to the operating cycle approach. This we believe would throw some light on the validity of the suggested norms for different industries.

B) Other Current Liabilities (OCL)

The components of OCL that are taken into account by the Tandon Committee are: (a) current provisions, (b) other short-term borrowings, and (c) trade dues and other current liabilities. OCL assumes importance in the analysis of bank credit within the Group's framework, since WCG is defined as RCA minus OCL. Once the WCG is arrived at, the PBF are calculated by applying the Group's suggested methods of lending.

Thus, indirectly, what determines the PBF apart from the norms for inventory holdings and receivables and the methods of lending, is the level of OCL. In other words, for a given level of RCA, the higher the level of OCL the lower will be the WCG and hence the lower will be PBF. In passing, we may state that the incentive to raise resources from short-term sources other than banks, gets blunted, since the shortfall as reflected in the WCG will be met by bank credit as per the Group's recommendations. In fact, there may not be any efforts by a firm to attract short-term funds because of (a) the interest rate differential, and (b) costs of obtaining loans from banks (transaction costs) are less compared with other sources. Thus, the recommended approach aimed at reducing the dependency of industry on banks may in fact induce a complacency

on the part of borrowers in regard to tapping other short-term sources. This is because the PBF, in the framework of the Committee, has been treated as a residual instead of a determining factor which will be helpful to plan the credit deployment by banks, as well as to induce the borrowers to actively explore other sources of finance.

We think that from the point of view of credit planning, the Tandon Committee approach is not very much helpful, in the sense that it does not give an idea of the demand for bank credit, by a firm independent of OCL. Therefore, firms' demand for bank credit, though based on production targets and inventory requirements, is again dependent on the availability of other short-term funds. This creates problems, since the level of OCL is dependent on factors like public's willingness to invest in or lend to the corporate sector companies' efforts, trade credit practices, etc. From the banks' point of view, it becomes rather difficult to assess the demand for credit by firms unless the level of OCL is known. This will have further implications for matching supply of and demand for bank credit. Further, firms may not make the required efforts to tap other short-term sources for two reasons. Firstly, there is no direct penalty for not mobilising OCL, since the Committee visualises that a certain portion of the gap reflecting the shortfall in OCL in relation to RCA will be met by bank credit. Secondly, the willingness of firms to substitute OCL for bank credit is dependent on the ease with which funds can be obtained from these sources as also cost considerations.

It is, however, to be noted that a part of WCG has to be met by a firm's own resources plus term borrowings. For a firm, therefore, the trade off is between raising OCL which will minimise the WCG thus reducing its contribution by way of long-term funds towards current assets and keeping OCL at a minimum level so that the PBF for a given level of RCA will be higher with a higher matching contribution by way of long-term funds. In other words, the effective trade off is among other short-term borrowings and bank credit and long-term sources of funds, because for a given level of RCA the higher the level of OCL the lower will be the PBF and matching contribution towards RCA and vice versa. This also implies that with a better capacity to raise long-term funds a firm can afford to keep the OCL at a lower level. Since, for given level of RCA, the lower the level of OCL the larger will be the WCG and therefore the higher will be the unit's capacity to borrow from banks.

As regards access to capital market, the prevailing notion is that big and well established firms have an edge over new companies in gaining the confidence of the investing public.¹ The big and well-established companies, therefore, have an advantageous position vis-a-vis new and weaker companies

1 (a) M.Y. Khan, New Issue Market and Finance for Industry in India. Allied, New Delhi, 1978, p. 17.

(b) D.C. Rao, "The Structure of Corporate Finance and Some Related Policy Issues," Reserve Bank Staff Occasional Papers, Vol. 1, No. 2, December 1980, p. 125.

in availing bank credit facilities because of the difference regarding the accessibility to the capital market.

One of the basic objectives of credit planning is to meet the demand for bank credit based on production requirements. The framework suggested by Tandon Committee also accepts this point of view stating that, "The rationale of norms and the need to link credit with production requirements is to us thus fairly clear; and we envisage that eventually the entire system of credit planning will be dovetailed with production planning...".¹

However, production decisions are directly related with certain components of current assets, viz., raw materials, work-in-progress and stocks of finished goods. The other current assets taken into account for the purpose of computing RCA are receivables, quoted investments, advance tax payments and cash and bank balances. These components of current assets do not have any direct bearing on production decisions. Likewise, OCL which are deducted from RCA to arrive at WCG and PBF, also do not have any direct relation with the production process.

C) Methods of Lending

The third factor, which influences PBF and therefore EBB, in the Committee's framework, is the Methods of lending. Two of the three methods of lending, i.e., Methods I and II,

¹ Reserve Bank of India, Report of the Study Group to Frame Guidelines for Follow-up of Bank Credit, op.cit., p. 30.

suggested by the Committee were accepted by the RBI. Both the methods visualise meeting a certain portion of WCG according to Method I or a part of RCA according to Method II from long-term funds, i.e., net worth and long-term borrowings. For availing of any credit from the banks, therefore, each borrower must have a positive WCG as per Method I, and positive WCG (with adjusted RCA) as per Method II. That is, a part of current assets must be financed by the borrower from long-term funds. The objective of the methods of lending is to ensure a reasonable relationship between current assets and current liabilities, and each successive method is intended to increase the producer's contribution towards financing current assets. The Committee, thus, expects a secular reduction in industry's dependence on bank finance following the implementation of norms for inventory and receivables, and the methods of lending.

In a later section we examine the trend in excess bank borrowings with respect to eight industries to assess whether all of them should be put under Method II, as was suggested by the 'Chore Committee'.¹

Now we shall present the analysis with respect to fluctuations in EBB. Fluctuations in EBB, as argued earlier, are mainly because of three factors, viz., (i) norms for inventories and receivables, (ii) level of OCL and (iii) Methods of lending. So, an attempt is made here to analyse

¹ Reserve Bank of India, Report of the Working Group to Review the System of Cash Credit, RBI, Bombay, 1979.

EBB and fluctuations in it in relation to these three factors, during the period 1971-72 to 1980-81 for eight industries.

Fluctuations in EBB

(1) Norms for Inventories and Receivables

The methodology followed here is a comparison between the norms suggested by Tandon Committee for different industries regarding inventory and receivables with the actual holdings of inventories and receivables. This will reveal two things.

- (a) Which component or components of inventory and receivables is mainly contributing to EBB.
- (b) The closeness or otherwise of suggested norms with the prevailing practice in the industry regarding inventory holdings and trade credit.

Table 5.2 presents receivables and component-wise holdings of inventory expressed as number of days, for eight industries during the period 1971-72 to 1980-81. The computations are done in the following ways.

(a) Raw materials:

$$\frac{\text{Stock of raw materials + Stores and spares}}{\text{Annual consumption of raw materials, stores and spares}} \times 365 = \text{No. of days}$$

(b) W.I.P.:

$$\frac{\text{Stock of WIP}}{\text{Annual cost of production}} \times 365 = \text{No. of days}$$

(c) Finished Goods:

$$\frac{\text{Stock of finished goods}}{\text{Annual cost of sales}} \times 365 = \text{No. of days}$$

Table 5.2 : Component-wise Inventory Holdings of Industry

(Number of Days)

	1971- 72	1972- 73	1973- 74	1974- 75	1975- 75	1976- 77	1977- 78	1978- 79	1979- 80	1980- 81	1.A	1.B	1.C	1.D
<u>EVI</u>														
RM	30	34	29	30	23	27	23	23	21	24	30	26	29	24
WIP	4	6	5	5	5	5	5	6	6	5	-	5	5	5
FG	22	17	20	22	20	23	22	24	18	21	{ 22	21	20	22
Rec	10	10	11	9	10	11	8	15	9	8		10	10	10
<u>Cot. Tex.</u>														
RM	76	98	113	82	65	59	57	69	77	73	67	77	87	67
WIP	23	21	25	28	30	31	31	28	27	27	22	27	25	29
FG	44	35	35	37	36	31	30	27	25	25	{ 67	32	37	28
Rec	39	33	31	33	32	31	33	31	33	35		33	34	33
<u>MPH</u>														
RM	112	122	114	114	91	85	94	90	97	94	82	101	110	92
WIP	18	20	20	21	21	21	22	21	20	21	15	21	20	21
FG	49	45	41	45	45	43	38	39	44	48	60	44	45	42
Rec	50	48	50	44	40	46	45	42	42	40	37	45	46	45
<u>BIC</u>														
RM	160	161	156	137	114	87	103	99	119	108	82	124	146	103
WIP	11	11	12	16	17	13	14	14	14	14	8	14	13	14
FG	47	35	37	44	39	33	32	30	29	31	30	36	40	31
Rec	56	52	42	41	47	53	56	57	51	58	52	51	48	55
<u>JUTE</u>														
RM	98	86	128	128	89	89	90	87	101	98	75	99	106	93
WIP	9	9	10	9	9	10	10	11	9	8	8	9	9	10
FG	40	35	45	49	40	38	38	54	48	41	37	43	42	44
Rec	26	23	29	28	27	24	28	29	29	25	45	27	27	27
<u>TR. EQ.</u>														
RM	162	166	164	152	130	126	129	127	144	121	67	142	155	129
WIP	23	22	23	31	30	26	27	26	30	27	22	26	26	27
FG	23	26	28	30	29	23	22	16	17	16	{ 75	23	27	19
Rec.	48	39	38	42	44	52	49	43	47	43		44	42	47
<u>CEMENT</u>														
RM	261	268	231	278	219	170	156	171	196	193	45	214	251	178
WIP	19	19	21	18	14	11	9	11	13	13	15	15	18	11
FG	12	12	12	10	12	11	8	11	11	9	{ 30	11	12	10
Rec	48	44	45	39	33	34	31	33	29	29		36	42	31
<u>RUBBER</u>														
RM	99	106	102	101	66	65	62	64	78	65	60	81	95	67
WIP	10	10	10	12	11	10	9	10	9	9	7	10	11	9
FG	26	22	22	28	46	47	37	29	26	27	{ 52	31	29	33
Rec	51	35	29	40	50	72	69	66	60	68		54	41	67

Note : RM = Raw materials, stores and spares.
WIP = Work-in-progress.
FG = Finished goods.
Rec = Receivables.

(d) Receivables:

$$\frac{\text{Sundry Debtors}}{\text{Sales}} \times 365 = \text{No. of days.}$$

In Table 5.2, Cols. 1-A, 1-B, 1-C, 1-D represent respectively the norms suggested by the Tandon Committee, the average level of actual holding over the period, the average level of actual holding over the first five years, i.e., from 1971-72 to 1975-76 and the average level of actual holdings for the latter period (1976-77 to 1980-81). The rest of the columns are figures for the respective years for different industries, for inventory and receivables. The division of the total period into two sub-periods is done mainly because it was in the year 1975 that the Tandon Committee submitted the Report to RBI and, therefore, it would perhaps be more meaningful to observe the trends in inventory and receivables prior to and after the implementation of the norms separately and compare with the suggested norms.

Firstly, a comparison of the suggested norms (1-A) with the average actual holdings (1-B) reveals that, except in the case of EVH, in all other industries the average actual raw material holdings were higher than the suggested norm. Another important factor is that except EVH and Cotton textile industries, in the other six industries for all the ten years the actual holdings of raw materials were higher than the norm suggested for the respective industry. The norms for work-in-progress were also lower than the average actual holdings, except in case of Cement industry. The actual holdings were

higher than the norm suggested in all the years with respect to three industries, viz. (i) MPH (ii) BIC and (iii) Rubber and rubber products.

The Committee has suggested clubbed norms for finished goods and receivables for certain industries, like Cotton textiles, EVH, Transport equipment, Cement, Rubber and rubber products, etc. In other words, the combined level of finished goods and/or receivables expressed as so many months' cost of sales and/or sales respectively was given as the norm. Out of the five industries mentioned above, for two industries, viz. Cotton textiles and Transport equipment, the norm was higher than the average actual holdings of finished goods and receivables. On the other hand, the average actual holdings exceeded the suggested clubbed norms for the three other industries. Except for one year, i.e., 1973-74, in the case of Rubber industry and for all the ten years in the case of EVH and Cement industries, actual holdings were higher than the suggested norms. Next coming to the three other industries covered in the present study, viz., MPH, BIC and Jute textiles industry, for which separate norms for finished goods and receivables were suggested by the Committee, the finished goods norm was higher for MPH while for the other two industries the average actual holdings were higher than the norms. It is also observed that in case of MPH the actual holdings were less than the suggested norm for all the years. Regarding receivables it may be observed that the norm conformed to the average actual holdings. On the other hand, in Jute textiles

the average actual holdings as well as actual holdings for all the years were less than the suggested norm.

Till now we have examined the relation between suggested norms (1-A) and average actual holding of different components of inventories and receivables for the period 1971-72 to 1980-81 across the industries. Now we shall examine the relation between the average actual holdings of the two sub-periods as shown in Cols. 1-C and 1-D with that of the suggested norms. This, we hope, may throw some light on the broad trends in actual holdings which will roughly indicate the effectiveness or impact of the norms on the inventory holdings of these industries.

From Table 5.2 it may be seen that in all the industries the average actual holdings of raw materials declined in sub-period I (Col. 1-C). But as regards the other components, the evidence is mixed, i.e., unlike in the case of raw materials showing a decline in all the industries from sub-period I to sub-period II, there was no clear-cut trend in the behaviour of work-in-progress and finished goods inventories.

To sum up, two broad conclusions emerge from the analysis.

1. Since there were differences in the suggested norms and actual holdings, in some cases very substantial, there is a need for the revision of the norms.
2. As regards the impact of the norms on the actual holdings is concerned, there is clear-cut evidence that raw material holdings declined, which means that the norms did have an influence on the behaviour of industry.

Table 5.2 read along with the EBB does not give any clear-cut relationship between actual holdings of inventory and receivables and EBB. It supports our contention that the decisive factors in determining the EBB within the Committee's framework are OCL and the methods of lending. For example, though there was no substantial difference in the actual holdings of EVH industry in different years in the second sub-period, the fluctuations in EBB were quite significant. However, here, we do not propose to go into the proximate reasons of EBB, viz. excess current asset holdings and/or deficit of long term sources, since this will be analysed while discussing the issue of end-use of bank borrowings. Now the analysis regarding the effect of OCL on EBB is presented.

Other Current Liabilities

Within the framework of the Committee's approach, OCL is the second factor determining the WCG, and hence PBF and EBB. As explained above, in the Committee's framework PBF are obtained as a residual that will make planning by banks, with respect to deployment of credit, a difficult task. Since a unit's PBF is dependent on WCG and WCG, in its turn, is related to the difference between RCA and OCL, PBF for different units within the same industry, with uniform norms for inventory and receivables, will be different depending upon the magnitudes of RCA and WCG. Further, one can visualise situations where for borrowers with same levels of output, sales, and RCA, the PBF may be different because of different levels of OCL. In other words, assuming equal accessibility to bank borrowings

and other short-term sources, the borrowers are free to choose between short-term bank borrowing and other short-term borrowings. This may be illustrated with the help of a hypothetical example.

Consider an industry comprising 4 firms with the following data:

$$RCA = X = 100$$

$$OCL = M = 40, 50, 60, 70$$

$$WCG = (X - M)$$

$$PBF \text{ I} = (X - M)0.75$$

$$PBF \text{ II} = (0.75X - M)$$

<u>Firm</u>	<u>RCA</u>	<u>OCL</u>	<u>WCG</u>	<u>PBF I</u>	<u>PBF II</u>
1)	100	70	30	22.5 (7.5)	5 (25)
2)	100	60	40	30 (10)	15 (25)
3)	100	50	50	37.5 (12.5)	25 (25)
4)	100	40	60	45 (15)	35 (25)

Figures in parentheses represent the required contribution from long-term funds.

From the above illustration it is clear, that companies within the same industry, with the same level of current assets will be treated differently as regards the amount of credit they can obtain from banks because of varying levels of OCL. Thus, in the Committee's framework, the level of OCL becomes a crucial factor in determining the PBF. But OCL being dependent on a host of factors like the unit's willingness to borrow, the relative cost of funds, the availability

of funds, etc., and also because of the residual approach adopted by the Committee in determining PBF, the borrowers may be able to influence the PBF by changes in OCL.

It is seen from the illustration that under lending Method I, a decline in OCL by one unit results in an increase of PBF by 0.75 units, with an increase in the matching contribution from long term funds by 0.25 units. In other words if the unit has the capacity to raise funds from long-term sources or convert some of the short-term borrowings into long-term, the unit's capacity to borrow (PBF) will be higher. In addition, because of (a) residual approach to determination of PBF and (b) the relative costs of funds, there may be no compulsion on the units to raise maximum possible resources outside the banking system, as long as they can bring in the required long-term funds. And this is more true, under lending Method II since the long-term funds to be brought in are related to only RCA. In other words, under Method II a unit decline in OCL, for a given RCA, results in an increase of PBF by one unit.

Thus, it is not quite clear from the Committee's approach as regards the feasibility of reducing the dependence of industry on banking system. This is so because the industry may attempt a reduction in the OCL along with an increase in the long-term funds, which will enhance the PBF, under lending Method I; while under lending Method II a rupee decline in OCL will enhance the PBF by one rupee. Thus, this brings into forefront much wider issues like (a) the financial structure

of industry which again is intricately related to rates of interest, savers preference, etc., and (b) the implications with respect to the banking system.

Another aspect that deserves attention in this regard is the approach to the determination of PBF. The framework suggested by the Committee determines PBF in the following way:

$$RCA - OCL = WCG = PBF + LT.$$

In other words, a part of the working capital gap will be met by long-term funds (25 per cent of WCG under lending Method I, 25 per cent of RCA under Method II) and the remaining is treated as maximum permissible level of bank finance. The drawbacks or weaknesses of this approach have been discussed above.

If bank credit has to be treated as a tool of resource allocation and the relative dependence of industry on banking system is to be progressively reduced, then permissible level of bank finance has to be first determined. In other words, PBF has to be an active variable, i.e., influencing the magnitudes of other sources of funds rather than being determined as a residual factor as in the Committee's framework.

Methods of Lending

The methods of lending suggested by the Committee is another factor influencing the PBF. The basic rationale of these methods is to supplement borrowers' resources to maintain a reasonable level of current assets to carry out production plans. In other words, a part of the working

capital gap will be met by bank borrowings and the remaining portion of WCG has to be met by long-term funds. The contribution of long-term funds to finance current assets will be higher under successive methods of lending.

Here, we are concerned with only examining the issue whether it is feasible to bring all the industries under lending Method II, as suggested by the Chore Committee Report. The Chore Committee recommended a switch-over to the lending Method II suggested by the Tandon Committee according to which the borrowers' contribution from owned funds and long-term sources to meet the working capital requirements should at least be 25 per cent of the total current assets. The empirical results presented in Table 5.1 reveal that there exists a substantial difference between different industries as regards their EBB under lending Methods I and II.

For this purpose, the eight industries are divided into two groups, i.e. industries (I) without EBB and (II) with EBB under lending Method I. Group I comprises industries (1) MPH, (2) BIC, (3) Cotton textiles and (4) EVH. Group II includes (1) Jute textiles, (2) Cement, (3) Rubber and rubber products, and (4) Transport equipment. In the second group, the EBB under lending Method II were very high, particularly in the later period, to the extent of 100 per cent of actual bank borrowings. In the case of Cement industry, the EBB under both the methods of lending, except for two years under Method I, were to the extent of 100 per cent. The EBB under Method I were also quite high in all these industries. Therefore,

prima facie, it appears that placing all industries under lending Method II may not be feasible, considering the large amounts of EBB. However, the issue of the implementation of lending Method II, has to be examined in relation to the current state of the capital market, which is presented in Section V. In the next section analysis regarding the end-use of bank credit is presented.

Section IV

End-Use of Bank Credit

It was the general contention that the security-oriented approach to lending has resulted in over-financing of industry in relation to production and inventory requirements. The National Credit Council's Study Group appointed in 1968 to review the commercial bank lending pointed out that:

- (a) there has been a general increase in bank credit to industry in relation to production and inventory, and
- (b) in some cases, there was a diversion of funds in acquiring long term assets or fixed capital assets.

The Dehejia Committee argued that there was a disproportionate growth of inventory and diversion of bank credit to financing assets that are not intended to be acquired by short term bank credit. But the Dehejia Committee did not suggest any quantitative norms to bring down the inventory levels of industry. Later, it was the Tandon Committee which argued that the demand for bank credit be reduced partly by curtailing the inventory levels and partly by increasing the contribution

of industry by way of long term funds towards financing current assets. The Tandon Committee felt that the norms and methods of lending not only bring down the demand for bank credit, but also ensure the end-use of bank credit for production purposes.

The end-use of bank credit is said to be proper only when (a) it has not been used for acquiring assets other than current assets, (b) it has not been used for holding current assets in excess of those justified by production requirements. Both the aspects of end-use of bank credit are desired from the viewpoint of better utilisation of bank credit avoiding excess inventory accumulation and diversion to fixed assets financing, thus making the bank finance increasingly available to priority sector borrowers.

The two issues, i.e. excess current asset holdings, and the use of bank credit for acquiring assets other than current assets are examined with respect to eight industries for the period 1971-72 to 1980-81. For this purpose, we have juxtaposed the actual holdings of current assets and the RCA to work out excess current assets. Then, the excess current assets series is compared with EBB series.

Our analysis of end-use of bank credit is aimed at examining the following main points:

- (a) whether bank credit has been used for productive purposes only;
- (b) whether there are EBB; if yes, whether EBB has been used (i) to hold excess current assets and/or (ii) to finance fixed assets.

The first issue of follow up of bank credit, viz. whether

bank credit is used for production purpose only is analysed with reference to EBB. This is so because PBF and EBB are computed with reference to RCA, which, in turn, are based on production requirements. Therefore, absence of EBB, measured by Tandon Committee norms, means that bank credit is used for production purposes only, while the presence of EBB indicates the use of bank credit for (i) and/or (ii) of (b) mentioned above.

However, it has to be remembered that for EBB computations within the framework of the Tandon Committee, it is assumed that under Method I 25 per cent of WCG and under Method II 25 per cent of RCA has to be met by owned funds and long term borrowings. Therefore, to examine the issue of end-use of bank credit, EBB may have to be decomposed into three parts, viz.:

1. Due to the deficiency in long term funds to meet the stipulations of the Committee's recommendations.
2. Excess current asset holdings.
3. If EBB exceed the sum total of 1+2, then it is a clear indication of diversion of funds to finance long term assets, which is also reflected in a shortfall in long term funds towards financing fixed assets.

In Tables 5.3 and 5.4 industry-wise EBB and the decomposition of EBB in terms of uses for which they have been put, for the period 1971-72 to 1980-81 are presented. The computations of EBB in Table 5.3 are done through 'Balance Sheet approach' and is presented below. The balance sheet approach

**Table 5.3 : Decomposition of EBB into Various Components
(Industry-wise)**

	(Rs. in lakhs)						
	LTF	LTA	ELT (1-2)	25% of WCG	ECA	EBB	
						I	II
<u>EVH</u>							
1971-72	1261	1067	194	176	457	439	726
1972-73	1380	1053	327	204	458	335	661
1973-74	1651	1075	576	273	490	187	528
1974-75	1912	1289	623	317	612	306	680
1975-76	1875	1412	463	204	541	282	649
1976-77	1766	1096	670	202	744	276	647
1977-78	2024	1248	776	242	751	217	723
1978-79	1797	1066	731	165	1020	454	950
1979-80	2809	1636	1173	374	595	-	358
1980-81	3598	2087	1511	312	727	-	270
<u>JUTE</u>							
1971-72	6794	5412	1382	1428	1360	1406	2839
1972-73	6867	5813	1054	1520	658	1124	2619
1973-74	6327	6152	175	1022	3460	4307	6367
1974-75	7435	6991	444	992	3987	4535	6881
1975-76	6093	6504	-411	1105	1864	3380	5781
1976-77	4392	6018	-1626	1016	222	2864	5068
1977-78	3457	6259	-2802	926	231	3959	6526
1978-79	2511	6323	-3812	370	2486	6668	7777
1979-80	5210	5974	-764	799	2821	4384	6780
1980-81	6868	7390	-522	1185	1930	3635	6717

(continued)

Table 5.3 : (continued)

	LTF	LTA	ELT (1-2)	25% of WCG	ECA	EBB	
						I	II
<u>TRAN. EQUIP.</u>							
1971-72	23713	16717	6956	1985	7625	2654	5579
1972-73	24922	17015	7907	1827	8146	2066	5259
1973-74	26627	18011	8616	2125	9471	2985	6776
1974-75	28451	20152	8299	2632	12154	6487	11477
1975-76	29907	23116	6791	2813	9916	5938	11500
1976-77	33501	25729	7772	3886	9003	5117	10642
1977-78	36158	26693	9465	4127	9913	4575	10305
1978-79	41409	29312	12097	4114	12355	4372	11937
1979-80	47307	33693	13614	4689	20050	11125	20472
1980-81	56014	42399	13615	3701	17511	7597	18697
<u>CEMENT</u>							
1971-72	17035	13499	3536	77	5719	2260	2491
1972-73	16901	13302	3599	23	5929	2353	2353
1973-74	16287	13036	3251	-	6238	2916	2916
1974-75	16403	13411	2992	-	7857	2577	2577
1975-76	16491	13705	2786	-	6758	2797	2797
1976-77	16957	15431	1526	-	6951	4315	4315
1977-78	17644	15833	1811	-	6650	2319	2319
1978-79	18870	16126	2744	-	6499	2032	2032
1979-80	19483	17944	1539	-	7273	2818	2818
1980-81	22996	21929	1067	-	8682	4404	4404

(continued)

Table 51 : (continued)

	LTF	LTA	ELT (1-2)	25% of WCG	ECA	EBB	
						I	II
<u>COT.TEX</u>							
1971-72	45881	33323	12558	7435	5665	542	6272
1972-73	51754	35339	16415	7962	6407	-	3704
1973-74	61367	37948	23419	8735	11148	-	3322
1974-75	68263	43252	25011	11257	6758	-	1500
1975-76	66098	47458	18640	11422	3831	-	5962
1976-77	59231	46802	12429	10241	6461	4273	14790
1977-78	61655	49271	12384	11017	7926	6559	18772
1978-79	72829	58053	14776	14108	3861	3193	17187
1979-80	89369	66808	22561	14650	6859	-	13783
1980-81	106783	82682	24101	16463	6026	-	16261
<u>BIC</u>							
1971-72	48601	39737	8864	2281	6565	-	3531
1972-73	51776	41419	10357	2632	5743	-	2051
1973-74	54529	42684	11845	3031	6488	-	1916
1974-75	61558	42492	19066	4269	10058	-	843
1975-76	66675	43242	23433	6125	8919	-	-
1976-77	83180	54927	28253	8011	7970	-	-
1977-78	89090	59086	30004	8040	10352	-	-
1978-79	92178	64093	28085	8450	7669	-	-
1979-80	103528	71646	31882	8955	11591	-	-
1980-81	120774	85759	35015	10499	13852	-	1475

(continued)

Table 5.3 : (continued)

	LTF	LTA	ELT (1-2)	25% of WCG	ECA	EBB	
						I	II
<u>MPH</u>							
1971-72	10340	5866	4474	1315	1755	-	-
1972-73	11398	6175	5223	1468	2251	-	-
1973-74	12620	6727	5893	1639	2432	-	-
1974-75	14038	7178	6860	2007	2519	-	-
1975-76	14772	7474	7298	2470	1230	-	-
1976-77	13308	7111	6197	1969	2355	-	292
1977-78	14372	7429	6943	2049	3022	-	529
1978-79	16424	8849	7575	2593	1722	-	-
1979-80	18683	10290	8393	2888	2458	-	188
1980-81	21423	12202	9221	3551	2228	-	72
<u>RUBBER</u>							
1971-72	8228	5480	2748	643	2515	410	1424
1972-73	8612	5675	2937	676	1930	-	751
1973-74	8961	5732	3229	679	1638	-	375
1974-75	10381	6297	4084	938	3769	623	2276
1975-76	10795	6601	4194	959	4669	1434	3388
1976-77	11603	8566	3037	617	7096	4676	6528
1977-78	11652	8503	3149	935	6268	4054	6289
1978-79	12507	8637	3870	1185	5316	2631	5271
1979-80	13562	9003	4559	1100	6071	2612	5914
1980-81	14907	9810	5097	1024	7212	3139	6216

Note : LTF = Long Term Funds.
LTA = Long Term (Fixed) Assets.
ELT = Excess Long Term Funds.
ECA = Excess Current Assets.
WCG = Working Capital Gap.
EBB = Excess Bank Borrowings.

Table 5.4 : Excess Bank Borrowings, Excess Current Assets and Deficit in Long-Term Funds (Industry-wise)

(Rs. in lakhs)						
	EBB I	ECA	DCWC	EBB II	ECA	DCWC
<u>EVH</u>						
1971-72	439	439	-	726	457	269
1972-73	335	335	-	661	458	203
1973-74	187	187	-	528	490	38
1974-75	306	306	-	680	612	68
1975-76	282	282	-	649	541	108
1976-77	276	276	-	647	647	-
1977-78	217	217	-	723	723	-
1978-79	454	454	-	950	950	-
1979-80	-	-	-	358	358	-
1980-81	-	-	-	270	270	-
<u>JUTE</u>						
1971-72	1406	1360	46	2839	1360	1479
1972-73	1124	658	466	2619	658	1961
1973-74	4307	3460	847	6367	3460	2907
1974-75	4535	3987	548	6881	3987	2894
1975-76	3380	1864	1165 (411)	5781	1864	3506 (411)
1976-77	2864	222	1016 (1626)	5068	222	3220 (1626)
1977-78	3959	231	926 (2802)	6526	231	3493 (2802)
1978-79	6668	2486	370 (3812)	7777	2486	1479 (3812)
1979-80	4384	2821	799 (764)	6780	2821	3195 (764)
1980-81	3635	1930	1183 (522)	6717	1930	4265 (522)

(continued)

Table 5.4 : (continued)

	EBB I	ECA	DCWC	EBB II	ECA	DCWC
<u>TR. EQUIP.</u>						
1971-72	2654	2654	-	5579	5579	-
1972-73	2066	2066	-	5259	5259	-
1973-74	2985	2985	-	6776	6776	-
1974-75	6487	6487	-	11477	11477	-
1975-76	5938	5938	-	11500	9916	1584
1976-77	5117	5117	-	10642	9003	1639
1977-78	4575	4575	-	10305	9913	392
1978-79	4372	4372	-	11937	11937	-
1979-80	11125	11125	-	20437	20050	422
1980-81	7597	7597	-	18697	17511	1186
<u>CEMENT</u>						
1971-72	2260	2260	-	2491	2491	-
1972-73	2353	2353	-	2433	2433	-
1973-74	2916	2916	-	2916	2916	-
1974-75	2577	2577	-	2577	2577	-
1975-76	2797	2797	-	2797	2797	-
1976-77	4315	4315	-	4315	4315	-
1977-78	2319	2319	-	2319	2319	-
1978-79	2032	2032	-	2032	2032	-
1979-80	2818	2818	-	2818	2818	-
1980-81	4404	4404	-	4404	4404	-

(continued)

Table 5.4 : (continued)

 EBB I ECA DCWC EBB II ECA DCWC

COT. TEX.

1971-72	542	542	-	6272	5665	607
1972-73	-	-	-	3704	3704	-
1973-74	-	-	-	3322	3322	-
1974-75	-	-	-	1500	1500	-
1975-76	-	-	-	5962	3831	2131
1976-77	4273	4273	-	14790	6461	8329
1977-78	6559	6559	-	18772	7926	10846
1978-79	3193	3193	-	17187	3861	13326
1979-80	-	-	-	13783	6859	6924
1980-81	-	-	-	16261	6026	10235

BIC

1971-72	-	-	-	3531	3531	-
1972-73	-	-	-	2051	2051	-
1973-74	-	-	-	1916	1916	-
1974-75	-	-	-	843	843	-
1975-76	-	-	-	-	-	-
1976-77	-	-	-	-	-	-
1977-78	-	-	-	-	-	-
1978-79	-	-	-	-	-	-
1979-80	-	-	-	-	-	-
1980-81	-	-	-	1475	1475	-

 (continued)

Table 5.4 : (continued)

	EBB I	ECA	DCWC	EBB II	ECA	DCWC
<u>MPH</u>						
1971-72	-	-	-	-	-	-
1972-73	-	-	-	-	-	-
1973-74	-	-	-	-	-	-
1974-75	-	-	-	-	-	-
1975-76	-	-	-	-	-	-
1976-77	-	-	-	292	292	-
1977-78	-	-	-	529	529	-
1978-79	-	-	-	-	-	-
1979-80	-	-	-	188	188	-
1980-81	-	-	-	72	72	-
<u>RUBBER</u>						
1971-72	410	410	-	1424	1424	-
1972-73	-	-	-	751	751	-
1973-74	-	-	-	375	375	-
1974-75	623	623	-	2276	2276	-
1975-76	1434	1434	-	3388	3388	-
1976-77	4676	4676	-	6528	6528	-
1977-78	4054	4054	-	6289	6289	21
1978-79	2631	2631	-	5271	5271	-
1979-80	2612	2612	-	5914	5914	-
1980-81	3139	3139	-	6211	6211	-

Note: ECA = Excess Current Assets.

EBB = Excess Bank Borrowings.

DCWC = Deficit in Long-Term Funds to Finance Working Capital.

'-' = Nil.

facilitates decomposition of EBB into (a) excess current assets (ECA), (b) deficiency of long term funds towards the contribution of working capital (DCWC), and (c) diversion to fixed assets (DFA). But here, two of the items, viz. WCG and RCA, are obtained from the computations done within the Tandon Committee's framework. The end-results, i.e., EBB, are identical in both the approaches, because of the accounting identity, as shown below.

A) Lending Method I:

Tandon Committee Approach:

$$\begin{aligned} \text{EBB} &= \text{ABB} - \text{PBF} \\ &= \text{ABB} - 0.75 \text{ WCG} \end{aligned} \quad \dots(\text{I})$$

Balance Sheet Approach:

$$\text{EBB} = 0.25 \text{ WCG} + \text{ECA} - \text{ELT} \quad \dots (\text{II})$$

$$\text{where ECA} = \text{ACA} - \text{RCA}$$

$$\text{ELT} = \text{LTF} - \text{LTA}$$

ECA = Excess Current Assets

ACA = Actual Current Assets

RCA = Reasonable Current Assets

ELT = Excess Long Term Funds

LTF = Total Long Term Funds

LTA = Total Long Term Assets.

The logic of the Balance Sheet Approach is explained below:

By Balance Sheet identity:

$$\text{Total Liabilities} = \text{Total Assets}$$

This can be broadly divided into:

$$\text{LTF} + \text{CL} = \text{LTA} + \text{CA} \quad \dots (1)$$

$$\text{LTF} - \text{LTA} = \text{CA} - \text{CL} \quad \dots (2)$$

Further, current assets and current liabilities may be divided, following the Tandon Committee approach, into:

$$CA = RCA + ECA \quad \dots (3)$$

$$CL = OCL + BB \quad \dots (4)$$

Making use of (3) and (4) and substituting in (2), we arrive at

$$LTF - LTA = (RCA + ECA) - (OCL + BB) \quad \dots (5)$$

Bank borrowing can further be split into (a) PBF and (b) EBB. Therefore,

$$ELT = RCA + ECA - OCL - (PBF + EBB) \quad \dots (6)$$

Regarding the terms, we get:

$$EBB = (RCA - OCL) + ECA - ELT - PBF \quad \dots (7)$$

In the Tandon Committee approach:

$$RCA - OCL = WCG$$

$$\text{Therefore, } EBB = 0.25 WCG + ECA - ELT \quad \dots (8)$$

Now, the equivalence of the two approaches is shown:

From equations (I) and (II), it may be written:

$$ABB - 0.75 WCG = 0.25 WCG + ECA - ELT \quad \dots (III)$$

$$ABB = WCG + ECA - ELT \quad \dots (IV)$$

Now by deducting (II) from (IV), we get:

$$ABB - EBB = 0.75 WCG,$$

which, by rearranging, can be written as:

$$EBB = ABB - 0.75 WCG$$

Or

$$EBB = ABB - PBF$$

This is nothing but the approach followed by Tandon Committee to compute EBB. Likewise, the equivalence of EBB of Tandon

Committee Approach and of Balance Sheet Approach¹ is shown below, for lending Method II.

B) Lending Method II:

Tandon Committee Approach:

$$\begin{aligned} \text{EBB} &= \text{ABB} - \text{PBF} \\ &= \text{ABB} - [(0.75 \text{ RCA} - \text{OCL})] \quad \dots \text{ (I)} \end{aligned}$$

Balance Sheet Approach:

$$\text{EBB} = 0.25 \text{ RCA} + \text{ECA} - \text{ELT} \quad \dots \text{ (II)}$$

Therefore,

$$\text{ABB} - [(0.75 \text{ RCA} - \text{OCL})] = 0.25 \text{ RCA} + \text{ECA} - \text{ELT} \quad \dots \text{ (III)}$$

$$\text{ABB} = \text{RCA} + \text{OCL} + \text{ECA} - \text{ELT} \quad \dots \text{ (IV)}$$

The Balance Sheet Approach, though gives the same end-results with respect to EBB as Tandon Committee Approach, is useful from the point of view of analysis of end-use of bank credit, since it is possible to decompose EBB into its components like (a) ECA, (b) deficit in LTF towards financing CA as suggested by the Committee as shown in Table 5.4, and (c) diversion to fixed assets, as reflected under ELT (Col. 3 of Table 5.3).

¹ Starting with the identity 7 in Method I, identity (II) is arrived at as follows:

$$\begin{aligned} \text{EBB} &= (\text{RCA} - \text{OCL}) + \text{ECC} - \text{ELT} - \text{PBF} \\ &= [(\text{RCA} - (\text{OCL} + \text{PBF}))] + \text{ECC} - \text{ELT} \end{aligned}$$

The term in square brackets is equivalent to 0.25 RCA in Tandon Committee's second method of lending. Therefore,

$$\text{EBB} = 0.25 \text{ RCA} + \text{ECC} - \text{ELT}.$$

With the help of Tables 5.3 and 5.4 we shall present the extant situation in industry as regards the two objectives of financial follow up cited above, viz.

- (a) whether bank credit was used for production purposes;
- (b) if there were excess bank borrowings, for what purposes have they been utilised.

It is to be mentioned that within the framework of Tandon Committee's suggestions, bank borrowings are deemed to have been utilised for production purposes, so long as there are no EBB. It does not, however, mean that the concerned industry is not holding excess current assets than warranted by production requirements. That is, absence of EBB coupled with presence of ECA indicates that the industry's long term funds are adequate to finance ECA and is line with the Committee's suggested contribution of long term funds towards financing a part of RCA. Whether in such cases it is not feasible and desirable to reduce bank credit (though there were no EBB according to the Committee's framework) to bring down the level of current assets is a moot point, which has to take into consideration the discrepancy between the suggested norms for inventory and receivables, and the actual holdings of these current assets by industry. This issue has been discussed earlier, and here, we confine ourselves to examining whether or not bank credit has been used for only production purposes.

From Table 5.3 it may be seen that according to Method I three industries, viz. (i) BIC, (ii) MPH and (iii) Cotton

textiles (except in three years) had no EBB. All other industries had EBB. Judged by the criterion stated above, only the three industries with no EBB used bank credit for production purposes only, while in other industries at least a part of bank credit was utilised for purposes other than production. On the other hand, according to Method II of lending, it is to be noticed that all industries had EBB. Even industries like MPH and BIC, with no EBB throughout the period under Method I, had EBB in some years. It may be noticed, however, in case of BIC from 1975-76 to 1979-80 there were no EBB, and in MPH there were no EBB till 1975-76; in the other years EBB in both these industries were less than 10 per cent of ABB. Therefore, it may be stated that on the whole only MPH and BIC utilised bank credit for production purposes alone.

Now we shall present the analysis regarding EBB and division thereof into different components like (1) excess current assets, (2) inadequacy of long term funds to meet the Committee's suggestions with respect to financing a part of current assets, and (3) diversion of bank credit to finance fixed and other long term assets. Here, the methodology followed is shown below:

$$\text{EBB} = \text{ECA} + \text{DCWC} + \text{DFOA}$$

where, DCWC = Deficiency of LTF towards the contribution of working capital

DFOA = Diversion to fixed and other assets.

From the above identity relation, total EBB are allocated among the three components. It is assumed that EBB are because

of (a) ECA, (b) DCWC and (c) DFOA, in a sequential order. In other words, ECA has a first claim followed by DCWC and DFOA in allocation of EBB and if, in a particular year, for an industry $EBB < ECA$ for that year entire EBB is assumed to be because of the holding of ECA. On the other hand, if $EBB > ECA$, the excess of EBB over and above ECA, in the first instance is allocated to DCWC; any EBB, is then thought of due to DFOA. However, it has to be noted that DFOA can be directly obtained from Col.3 of Table 5.3 representing excess of long term funds (ELT). Only when ELT appears with a negative sign, is there a clear case of diversion of bank credit to acquire fixed and other long term assets.

From Table 5.4 it may be seen that, under lending Method I, there were no EBB due to DCWC except in the case of Jute textiles. For industries with EBB, except Jute textiles, it is observed that EBB were due to ECA only. That is, within the suggested framework of the Committee, EBB were used for holding current assets over and above RCA. Thus, in all these industries excess long term funds were adequate to meet the suggested contribution towards financing a part of WCG, and also a part of ECA. As regards Jute textiles, the whole of ECA were met by EBB throughout the period. In addition, a part of contribution towards financing WCG was met by EBB till 1974-75, while from 1975-76 onwards not only the entire amount of WCG, but also the deficit in long term funds was met by EBB, i.e. $EBB > ECA + DCWC$. This may be seen from Table 5.3 also where ELT for the Jute textiles appears with a negative sign

from 1975-76. As far as diversion of bank credit to finance fixed assets is concerned, there is evidence only in the case of Jute textiles from 1975-76 onwards and no evidence for other industries.

Next coming to the lending Method II, it is to be seen that BIC and MPH have EBB in some years, and rest of the industries had EBB in all the years. Four industries, viz., Cement, BIC, MPH and Rubber and rubber products, held only ECA with EBB. Industries like EVH, Transport equipment, and Cotton textiles showed a mixed type of behaviour, i.e., in some of the years EBB were used for only holdings of ECA and in some other years, a part of RCA was also met by EBB. However, it has to be noticed that in EVH, till 1975-76, EBB were used not only to cover ECA but also a part of RCA, while in the latter period the ELT were adequate not only to meet the required contribution towards RCA but also a part of ECA. On the other hand, there was an exact opposite trend in the case of the Transport equipment and Cotton textiles industries. In other words, in these two industries the whole of EBB were due to ECA till the year 1975-76 while in the latter years EBB were mainly due to ECA, though a part of EBB were because of DCWC, i.e. during the period 1977-78 to 1980-81, the long term funds were not adequate to meet the matching contribution as per the lending Method II. In the case of Jute textiles, not only the whole of ECA but also a part of the RCA till 1974-75 was met by EBB. From 1975-76 the total of the RCA requirement and DFOA was met by bank borrowings.

From the above analysis, therefore, it is clear that in all the eight industries ECA was the main reason for EBB. And in only one industry, viz., Jute textiles, out of eight industries analysed diversion of bank credit to finance fixed assets is found to be present. Therefore, there is every reason to believe that proper inventory management has a vital role to play in reducing the dependence of industry on the banking system thus releasing funds to be deployed elsewhere for purposes of production. In the following section the analysis regarding the implications of eliminating the EBB for the industry as well as banking system is presented.

Section V

Scope for Reducing EBB and the Implications of it for the Industry and the Banking System

In an earlier section, we have seen that there is no adequate evidence to support the Chore Committee's recommendation that all industries/units with borrowing limits more than Rs. 10 lakhs should be brought under second method of lending. There are some industries like Cement, Jute and Rubber and rubber products which had very high EBB even under Method I. Therefore, bringing these industries, ceteris paribus, under lending Method II would only make matters difficult, i.e., the resources to be brought in the form of long term funds to comply with the lending Method II would be enormous and hence deserves further consideration.

The total amount of EBB for all the eight industries covered in this study for the year 1980-81 were Rs.541 crores.

This constitutes 48 per cent of total actual bank borrowings of the eight industries in that year. As per the Chore Committee recommendation, to follow the lending Method II of the Tandon Committee, these industries have to either rundown their holdings of inventory which are excess according to the Tandon Committee framework or to bring funds in the form of equity and term borrowings. The excess bank borrowings due to excess current asset holdings are presented in Table 5.3 and will be discussed later. So far as raising funds from the capital market is concerned, the sources are (a) share capital or equity capital, (b) borrowings from the public (debentures and company deposits). The capacity of industry to raise funds from these sources to the extent that would enable it to meet the requirements as per lending Method II, appears to be rather a difficult task.

This is because the total capital raised by all non-government companies (public and private limited companies) though increasing continuously, was about Rs. 450 crores only in the year 1982. On the other hand, the total capital raised by non-government public limited companies during the year 1981-82 was Rs.170 crores only. Therefore, it would certainly have been a very difficult task for the eight industries analysed in the present study to raise capital to the extent of Rs. 541 crores in order to comply with the lending Method II. However, to make a final conclusion, regarding this aspect, an analysis of the current state of the capital market is necessary which is presented later.

However, it is essential to point out here that EBB may also be due to the holdings of excess current assets arrived at by the application of inventory and receivables norms suggested by the Tandon Committee. The excess current asset holdings in the year 1980-81 for all the eight industries taken together amounted to Rs. 582 crores (see Table 5.3) which was, in fact, more than EBB in that year as well as in the preceding years, i.e., excess current asset holdings were higher than EBB. It seems, therefore, that strict compliance with inventory and receivables norms would have resulted in drawing down of inventory and receivables levels, reduced the EBB and thus would have released funds to be deployed elsewhere.

Of the two ways to eliminate EBB and reduce the dependence of industry on bank credit, viz., (a) running down of excess current asset holdings, and (b) raising long term sources, we shall deal with the latter first. However, it should be emphasised that both the aspects are equally important, since:

- a) accumulation of inventories in excess of production requirements results in inefficient use of resources, and
- b) to the extent bank funds are locked up in some sectors/units credit facilities will be denied to some other sectors/units where funds can be utilised for production purposes.

We have already seen that the magnitude of EBB, with respect to the eight industries covered, according to Method II were very high and it would be a difficult task for the

industry to bring in long-term resources to comply with the norms.

The study by D.C. Rao also reveals that "the experience however, has been disappointing and the amount of equity raised from the public by non-financial companies each year has remained small. The equity market has become increasingly reliant on support from public financial institutions."¹ The study also brings out the fact that the public response to debentures was generally very poor in the earlier years. It is stated that, "the main cause of the low public demand for debentures is the low rate of return. The ceiling on debenture interest rate is, at least in recent years too low in relation to other rates of return available to investors."² And loans from the term-lending institutions are not generally available for companies seeking to shift the maturity pattern of working capital finance.

However, recently many measures are taken by the government to develop an active capital market. These measures range from relaxation in debt-equity norms enabling companies to raise more capital from the public to allowing the companies to pay higher rates of dividend on preference shares and higher rates of interest on debentures and company deposits. These measures are taken to enable the Indian corporate sector to raise additional funds in the form of debentures and to

1 D.C. Rao, op.cit., p. 154.

2 Ibid., p. 138.

make the investments in the corporate securities attractive from the viewpoint of public.

The debt-equity ratio for issuing debentures was doubled from 1:1 to 2:1 in October 1980, thus widening the scope for companies to raise funds through debenture issues. Companies were also given the option to offer an incentive of a premium upto 5 per cent of the face value on non-convertible debentures at the time of redemption.

Rates of return on different forms of corporate investments along with the rate of return on fixed bank deposits are presented in Table 5.5.

Fixed deposit rate represents the return that could be obtained by investing public as an alternative to the risk-adjusted return on corporate securities. The dividend yield on ordinary shares, as shown in the Table, on an average, was about 6 per cent which is lower than the yield on bank deposits. However, the total yield on ordinary shares arrived at by taking into account the element of capital gain/loss gives a different picture, i.e. the total yield on shares in most of the years during 1970 to 1982 was higher than that of bank deposit rate. The differential between the two rates was quite high in the years 1978-79 (30 per cent) and 1981-82 (14 per cent). It is to be noticed that the capital gain/loss was highly variable from year to year. The difference between fixed deposit rate and total yield on ordinary shares was not much during the period 1970-71 to 1977-78 but thereafter the total yield on ordinary shares rose quite steeply while bank

Table 5.5 : Rates of Return on Corporate Securities and Bank Deposits

(Per cent per annum)

Year	1 5 year Fixed deposit	2 Average gross yield on Ordinary shares	3 Capital gain/ loss*	4 (2+3) Total yield	5 Deben- tures	Prefer- ence shares	Company Deposits (5 years)
1970-71	7.25	5.50	5.00	10.50	8.00	9.50	
1975-76	10.00	5.41	-13.51	-8.10	10.50 ^a	11.00	9.00-16.00
1977-78	9.00	6.52	3.41	9.93	10.50	11.00	12.00-16.00
1978-79	9.00	5.66	34.00	39.66	10.50 ^b	11.00	12.00-16.00 ^e
1979-80	10.00	5.83	10.00	15.83	10.50	11.00	11.50-16.00
1980-81	10.00	5.88	12.20	18.08	13.50 ^c	11.00	15.00-16.00
1981-82	11.00	5.51	20.10	25.61	13.50 15.00 ^d	13.50	15.00-16.00

Notes:

* Rate of change in average annual index of security prices. This represents the capital gain/loss that could be realised by the average shareholder in the year.

- a - Effective from September 12, 1974 and for a term exceeding 7 years; for a term less than 7 years the rate was 10 per cent.
- b - Interest on rights debentures issued by public limited companies to augment their long term working capital resources was fixed at a rate of 10.5 per cent upto 7 years maturity and 11 per cent on the maturity from 8 to 12 years.
- c - The ceiling on interest rate on public issue of debentures was raised from 11 per cent to 12 per cent from October 1980 and further to 13.5 per cent from March 1981.
- d - While the existing ceiling on interest rate of 13.5 per cent was maintained for issue of convertible debentures, the ceiling rate was raised to 15 per cent on non-convertible debentures from March 1981.
- e - The acceptance of deposits for periods more than 3 years has been prohibited with effect from April 1978, but companies are permitted to retain such deposits accepted prior to April 1978 till maturity.

Source : RBI, various issues of Reports on Currency and Finance.

deposit rate remained stable thus resulting in a wide margin between the two rates of return.

The difference between yields on preference shares and bank deposit was not much and variations in the differential over the period were also within a narrow range, i.e. between 1 per cent and 2.5 per cent. However, the difference between these two was largest (2.5 per cent) in the year 1981-82, when the ceiling on dividend rates on preference shares was raised to 13.5 per cent.

On the other hand, differential between debenture rate and fixed deposit rate increased from 1980-81 onwards; prior to 1980-81, the difference between these two rates of return was not large (the maximum being 1.5 per cent in the years 1977-78 and 1978-79).

Regarding the 5 year company deposits, though the ceiling rate was kept unchanged at 16 per cent, the minimum rate was raised from 11.5 per cent in 1979-80 to 15 per cent in 1980-81. Thus, the difference between ceiling and minimum rates on company deposits narrowed down to the extent of 1 per cent; the difference between fixed deposit rate and rate of interest on company deposits widened from the year 1980-81.

All these measures taken by the government to make investments in corporate securities attractive to the investing public appear to have achieved the purpose to some extent as reflected in the larger amounts that were being raised by the corporate sector and in the improvement in the number of over-subscribed issues since 1979. In Table 5.6 data regarding

the amounts offered to and subscribed by the public during 1971 and 1982 are presented.

Table 5.6 : Public Response to Capital Issues *

(Rs. crores)			
Year ended March 31	(1) Offered to Public	(2) Subscribed by Public	(3) Col. 2 as per cent of Col. 1
1971	33.30	19.15	57.51
1976	56.39	28.56	50.65
1979	46.50	34.77	74.77
1980	48.36	39.89	82.48
1981	74.10	65.59	88.51
1982	301.98	260.93	86.41

Note: * Capital issues for which data on public response was available.

Source: RBI, various issues of RBI Bulletin.

From the above Table it is seen that the public response to the capital issues of the corporate sector as measured by the ratio of the amount subscribed by the public to the amount offered (subscription rate) has increased since 1979, and from 1980 onwards, the subscription rate was, on an average, around 85 per cent. Another notable feature is that the amounts offered as well as subscribed in the year 1982 increased four times to those of the year 1981. Thus there was a sudden spurt in the supply of and demand for corporate securities.

Besides the relaxation in debt-equity norm, higher rates of interest on various corporate securities and tax

concessions, the government also adopted the buy-back arrangement to encourage issues of non-convertible debentures. Under this scheme the companies can buy back non-convertible debentures at par from any holder whose holding does not exceed Rs. 40,000 and who had held them for a period of at least one year and the companies can in turn place these debentures with the public financial institutions. All these measures have resulted in an improvement in the capital market as judged by the public response and the amounts raised through capital issues by corporate sector.

It may, therefore, be said that the capital market is not so sluggish as it was a few years ago and now there is ample scope for the companies to obtain funds from the public. In the light of the above analysis, i.e. (a) the policy measures taken by the government to develop an active capital market and (b) excess holdings of current assets by industry, it seems possible for corporate units to reduce the EBB partly by liquidating the excess current assets and partly by raising additional funds from the market. Therefore, the Chore Committee's suggestion that all industries with borrowings Rs. 10 lakhs and above should be brought under Method II of lending, though at a first glance seems a difficult task because of the large magnitudes of EBB involved as shown in Table 5.3, an in-depth analysis of the state of capital market and a rather strict compliance with inventory norms of the Tandon Committee reveals that it may not be so.

Another aspect that needs to be highlighted in this

is the suggestion made by the Chore Committee that the extant EBB should be segregated and treated as a working capital term loan repayable in instalments over a period of time. The Committee also recommended a higher rate of interest, i.e. 2 per cent per annum higher than the rate charged on the cash credit to induce the borrowers to repay the instalments promptly. In effect, this amounts to conversion of that portion of outstanding bank borrowings which are treated as excess within the Tandon Committee's framework into a long term loan with a fixed repayment schedule. This will enable banks to plan their deployment of credit more effectively. Further, increasingly larger amounts of funds will be at the disposal of banks, since every year a portion of bank credit hitherto locked up with the industry will be released due to periodical repayments.

However, this requires that the borrowers have to either increase their retained profits, i.e. ploughing back of profits or to raise funds from sources other than banks, to ensure the regular repayment of working capital term loan. As retained profits are the excess of net profits over dividend payments, retained profits mainly depend on net profits, assuming that the company has to pay a certain rate of dividend. Net profits, in turn, depend upon total profits adjusted for interest and tax payments. A higher level of total profits, ceteris paribus, requires efficient utilisation of assets of which current assets are an important component. Therefore efficient management of inventory, the

principal component of current assets (i.e. holding an optimum level of inventory in relation to production requirements), becomes crucial in maximising profits and increasing the volume of retained profits. Thus, in the context of our analysis, holdings of excess current assets should be brought down as a part of cost minimisation to increase total profits.

Till now the discussion has been focussed on the implications for industries of the implementation of the Tandon Committee recommendations especially with regard to lending Method II. However, equally important in this respect is its effect on the banking system (commercial banks) since bringing all the industries under lending Method II involves diverting a substantial part of industry's funds requirements from the banking system to the market. This we shall present with reference to the three alternatives to reduce the EBB of the industry. They are:

- (A) Liquidation of the excess current asset holdings,
- (B) Raising long term resources from the market, and
- (C) Conversion of EBB into a working capital term loan.

Of the above, the first two are open for the industry, of course, with certain restrictions on raising funds from the public and the third one is suggested by the Chore Committee.

A) Liquidation of excess current assets:

The excess current asset holdings are, as shown earlier,

computed by following the inventory and receivables norms as suggested by the Tandon Committee. It was also seen that EBB were in some of the industries wholly and in some other industries partly due to holdings of excess current assets. There was, thus, ample scope for a reduction of EBB of industry by liquidating excess current asset holdings.

B) Raising Funds from the Public:

This source of funds includes capital raised through issuing shares, debentures and acceptance of company deposits. We have outlined earlier several measures that are taken by the Government to develop an active capital market to enable the companies to raise additional funds from the market. However, the crucial question in the context of making the industry borrow from the capital market is whether the funds that are going to be tapped by the corporate sector will come from:

- (a) additional savings of the community, or
- (b) from those savers who are outside the ambit of financial system, or
- (c) a switchover of the public from bank deposits into corporate securities or deposits.

It is rather difficult to make any statement without empirical evidence whether the relatively higher rates of return on corporate securities will result in an improvement in the overall savings-income ratio. Besides, the proportion of savings in financial assets for a given level of income also depends on the rate of inflation and level of economic

development. The ratio of savings in financial assets is generally related positively to the level of economic development and inversely to the rate of inflation. Further, in an economy like India where agricultural sector's contribution to national income is quite high, it is doubtful whether an improvement in the rates of return on corporate securities will lead to a significant change in saving-income ratio.

The second aspect of raising long term funds from the market is that of inducing those surplus units whose savings are held in the form of physical assets or hoardings of cash, to invest in corporate securities. In other words, by providing an incentive in the form of higher rates of return on corporate securities a part of savings of the community hitherto held in the form of non-financial assets may be transferred to the corporate sector. However, in the Indian context this also seems doubtful since a major segment of this class of savers are from the rural sector where the general awareness regarding alternative investment opportunities is very poor with limited information available.

The third and rather more important effect of the corporate sector's raising funds from the market on the banking system is a simple transfer of funds from banks to the corporate sector. Assuming that the relative rate of return on corporate securities is higher than that on bank deposits, other things remaining the same, it is logical to expect a flow of funds from the banking system to the industry. However, this may not lead to a decline in the deposits of

the banking system since,

- i) part of the funds will flow into the banking system through repayments of the outstanding credit by industry, and
- ii) a large portion of the additional funds raised by industry from market will be held in the form of bank deposits, i.e. increase in the cash holdings of industry due to additional long term borrowings may be very insignificant. Therefore, in effect, the impact of a transfer of the above type on the operations of the banking system might be minimal.

To sum up, if the industry's attempts to raise long term resources results in either (a) or (b) as mentioned above, the deposits of the banking system will, in fact, be augmented. It has to be, however, remembered that this is based on the assumption that the additional resources mobilised by the industry will flow into the banking system either as industry's deposits or repayments of bank credit by industry. Whereas in the case of a simple switchover from bank deposits into investments in corporate securities by the public, the effect on banking system if at all is marginal. It is to be pointed out that though the effect on banking system's operations of a switch-over from bank deposits into industrial securities by the public is negligible,¹ it may

¹ This is so because the leakage or cash drain from the banking system as a whole will be negligible when savers switch-over from bank deposits to corporate securities.

most likely result in dilution of control of the Monetary Authority over industry. In other words to the extent industry's dependence on the banking system gets reduced, the overall effect of the credit control measures of the Monetary Authority in influencing the behaviour of industry tends to be weak. However, as the industry becomes increasingly reliant on capital market for funds the administrative controls in the form of regulations as framed under the Companies Act, MRTP Act, The Capital Issues Control Act and FERA will become more pervasive and effective. Whether this development, i.e. enhancement of administrative control at the cost of financial control, is desirable or not is a difficult question to answer and beyond the scope of the present study.

C) Conversion of EBB into a Working Capital Term Loan:

This measure, in effect, has implications similar to that in (B), when industry resorts to borrowings from the market to repay the instalments of working capital term loan. However, over a period of time the conversion of EBB into working capital term loan facilitates a redeployment of bank resources, since the industry's dependence on banking system will be reduced. In other words, increasingly larger amounts of bank funds will be made available to sectors other than industry.

Another aspect of the problem of industry's increasing reliance on capital market is that whether it is desirable or not since theoretically financial intermediation facilitates

flow of funds from surplus spenders (savers) to deficit spenders (investors) in large amounts. There is a vast amount of literature on issues like the effects of financial intermediation on economic development, how financial intermediation results in improving the ratio of savings to income in financial assets by supplying different types of financial instruments to suit the requirements of different types of savers and the factors which enable financial intermediaries to supply larger amounts of funds to investors at relatively low rates of interest than the rate at which investors had to borrow directly from the savers.¹ It is the last aspect, i.e. financial intermediation resulting in low cost of funds to the ultimate investors that deserves more attention in the context of increasing reliance of industry for funds on the market. In other words, by making industry more reliant on direct borrowings from the ultimate savers the beneficial effects of financial intermediation are denied to both investors and savers.

The preceding analyses present the trend and magnitudes of EBB of the selected eight industries, determinants of EBB, end-use of EBB and the implications of eliminating EBB for the industry as well as banking system. In the next

1 See (a) James Tobin and William Brainard, "Financial Intermediaries and the Effectiveness of Monetary Control," in Donald D. Hester and James Tobin (ed.). Financial Markets and Economic Activity. John Wiley and Sons Inc., New York, 1967, pp. 57-58.

(b) Basil J. Moore. An Introduction to the Theory of Finance. Amerind Publishing Co., New Delhi, 1971, pp.98-III.

section, we shall now present the major conclusions drawn from the above analyses.

Section VI

Conclusions

In this chapter a critical review of the Tandon Committee recommendations in regard to norms for current asset holdings and the Methods of lending is presented. By following these norms EBB are worked out for eight industries for a period of ten years, i.e. from 1971-72 to 1980-81. The EBB according to Methods I and II are broadly as follows.

Method I

- a) Jute Textiles, Cement and Transport equipment industries had EBB in all the years.
- b) Rubber and rubber products and EVH industries except for two years (i.e. 1972-73 and 1973-74 in the case of the former and 1979-80 and 1980-81 for the latter) had EBB for the rest of the period.
- c) As regards Cotton textiles industry, there is no discernible trend in EBB — low level of EBB followed by absence of EBB for four years, then again there were EBB for three years again to be followed by absence of EBB in the last two years.
- d) In the case of two industries, viz., MPH and BIC there were no EBB throughout the period.

Method II

- a) Except MPH and BIC all the other six industries had EBB in all the years.

- b) There were no EBB in the case of MPH till the year 1975-76 while BIC had EBB till the year 1974-75.

In the light of the views expressed by the Tandon Committee in regard to placing the industries under the suggested alternative methods of lending, it has been observed on the basis of computed EBB, that it is possible to bring only four out of eight industries viz., Cotton textiles, EVH, MPH and BIC, under lending Method II. It has also been noticed that, in the case of Cement industry, there was a wide gap between the suggested norms and actual holdings of current assets in all the years indicating the need for a further examination of the norms.

The main reasons for the EBB by industry are analysed in terms of (a) norms for current assets, (b) OCL, and (c) Methods of lending. In this context an attempt is made to compare the Tandon Committee norms for receivables and component-wise inventory holdings with the actual holdings expressed as so many number of days arrived at by using the operating cycle approach. This has revealed that in all the ten years actual holdings of raw materials were higher than those suggested by the Tandon Committee for all industries, except EVH and Cotton textiles. Even in the case of Cotton textiles industry the average level of actual holdings of raw materials over the ten years was higher than the Tandon Committee norm. Thus, out of eight, seven industries' actual average holdings of raw materials were higher than the

suggested norm by the Tandon Committee. However, the period-wise analysis shows that in the second sub-period, i.e., from 1976-77 to 1980-81 the average actual holdings of raw materials declined in comparison with that of the first sub-period i.e. from 1971-72 to 1975-76, indicating the impact of the implementation of the Tandon Committee norms on the behaviour of industry.

So far as work-in-progress is concerned, except in the case of two industries viz., Jute textiles and Cement where the norm by the Tandon Committee and the average actual holdings were the same, in the other six industries the number of days of actual average holdings were higher than those of the Tandon Committee norms.

The evidence in regard to finished goods and receivables is inconclusive, i.e. the suggested norms are higher in some industries while the average actual holdings were higher in some other industries. Further, even with reference to a particular industry there was no clear trend, since, the actual holdings were higher than the suggested norms in some years and vice-versa in some other years.

Next, while discussing the importance of OCL the implications of it in relation to the magnitudes of EBB are presented. The emphasis here is that in the Committee's framework since bank borrowings are implicitly treated as a residual, the industry has the option to manipulate its current asset holdings and OCL in such a way that it will

obtain maximum level of bank credit. This is more so considering the low cost of bank funds. It was also seen that due to the residual approach followed by the Committee to determine bank credit, there is no compulsion for the industry to tap funds from alternative sources.

As regards the suggested methods of lending, two issues are discussed. They are (a) the effect on the magnitudes of EBB by following Methods I and II, and (b) the desirability as well as the consequences of bringing all the industries under second Method of lending as proposed by the Chore Committee. In relation to the second issue, it was observed that at a first glance it appears to be a very difficult task to bring all the industries under lending Method II because of the large amounts of EBB involved. However, a detailed analysis of the state of capital market coupled with the ECA indicates that with some efforts by the Government to stabilise and to further promote capital market and sincere efforts by industry to liquidate ECA, the objective of reducing EBB and thus making industry less reliant on bank funds could be realised.

An attempt has also been made to decompose the EBB as arrived at within the framework of Tandon Committee recommendations into (a) ECA, (b) DCWC, and (c) DFOA. It is found that ECA was the main reason for EBB. This confirms the Dehejia Committee's finding that industry's borrowings had grown at higher rates in relation to growth in output. On

the other hand, the Dehejia Committee's observation that bank borrowings being used for financing fixed assets is not found to be present, except in the case of Jute textiles, for the period 1970-71 to 1980-81 with respect to our sample industries.

However, a more important aspect is the effect on financial institutions in general and commercial banks in particular of the implementation of the lending Method II. Since this involves raising large amounts of funds directly from the public by industry, to that extent it may lead to a decline in the level of financial intermediation. Therefore, as pointed out earlier, it may result in a diminution of the benefits because of a reduction in the role of financial intermediaries.

SUGGESTED INVENTORY NORMS

	Raw materials (1)	Finished goods (2)	Receivables and inland bill discounts (exclusive of foreign bill discounts) (3)
1. Cotton textiles	1.1/2 (Bombay & Ahmedabad areas)	/ <u>2</u> /	
	2.1/2 (Eastern areas - Bihar, Orissa, West Bengal and Assam)		
	2 (Other than the above)		
2. Synthetic textiles	1 - 1.1/2	1/2 to 1	1/4
3. Jute textiles	2 - 2.1/2	1 (for domestic sale) 1.1/2 (for export)	1
4. Pharmaceuticals	2 - 2.1/2	2	1
5. Rubber products	2	1/2	1/2
6. <u>Fertilisers</u> :			
(i) for nitrogenous plants	1/2 - 3/4 (near the refinery) 1 - 1.1/2 (for inland units)	3/4 - 1 (where stocks are in plant site) 1.1/2 (where stocks are also in upcountry centres)	1/2 - 1
(ii) for phosphatic plants	2 - (for units in port areas) 3 - (for inland units)	- do -	- do -
7. Vanaspati	1	/ <u>1/2</u> /	

Appendix V.1 : Suggested Inventory Norms

	(1)	(2)	(3)
8. Paper :			
(i) Bamboo and wood	4 - 8 (to be built up in stages from November to May and thereafter to be brought down)	(i) Controlled sales 3/4 (ii) Free sales 1/4	1/2 -do-
(ii) Chemicals	2.1/2		
9. Light engineering	3	/ 2 /	
10. Medium engineering	3	- do -	

Note : 1. Raw materials are expressed as so many months' consumption.

2. Finished goods and receivables are expressed as so many months' sales. These figures represent only the average levels. Individual items of finished goods and receivables could be for different periods which could exceed the indicated norms so long as the overall average level of finished goods and receivables does not exceed the amounts as determined in terms of the norm.

Appendix V.2

SUGGESTED NORMS FOR INVENTORY AND RECEIVABLES

Industry	Raw materials (including stores and other items used in the process of manufacture)	Stocks- in- process	Finished goods	Receivables* and bills purchased and discounted
(1)	(2)	(3)	(4)	(5)
i) Cotton and Synthetic Textiles	Cotton 2 (Bombay and Ahmedabad areas)	3/4 (Com- posite textile mills)	/ 2.1/4 /	
	3 (Eastern areas - Bihar, Orissa, West Bengal and Assam)	1/2 (Other mills)		
	2.1/2 (Other than the above areas)			
	2 Other raw materials			
ii) Man-made Fibre	1.1/2	1/2	/ 1.3/4 /	

(1)	(2)	(3)	(4)	(5)
ii) Jute Textiles	2.1/2	1/4	1 (For Domestic sales) and 1.1/2 (For exports)	1.1/2
iv) Rubber Products	2	1/4	1.3/4	
v) Fertilisers -				
a) For nitrogenous plants	3/4 (Units near refinery)	Negligible	1 (Where stocks are in plant site)	1.1/4
	1.1/2 (Units away from refinery)		1.1/2 (Where stocks are in upcountry centres)	
b) For phosphatic plants	2 (Units in port areas)	Negligible	1 (Where stocks are in plant site)	1.1/4
	3 (Units away from port areas)		1.1/2 (Where stocks are also in upcountry centres)	
vi) Pharmaceuticals	2.3/4	1/2	2	1.1/4
vii) Dyes and Dyestuffs	2.1/4	1	3/4	2.1/4
viii) Basic Industrial Chemicals	2.3/4	1/4	1	1.3/4

<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>(5)</u>
ix) Vegetable and Hydrogenated Oils	1	Negligible	<u>1</u> <u>3/4</u> <u>1</u>	
x) Paper	2-6 Bamboo and Wood (To be built up in stages from November to May and thereafter to be brought down)	"	1 (For controlled sales) and 1/4 (For free sales)	3/4
	2.1/4 Chemicals			
xi) Cement	2.1/4 Gypsum	1/2	<u>1</u> <u>1</u> <u>1</u>	
	1.1/4 Limestone			
	3/4 Coal			
	1.1/2 Packing materials			
xii) Engineering -				
Automobiles and ancillaries	2.1/4	3/4	<u>1</u> <u>2.1/2</u> <u>1</u>	
xiii) Engineering -				
Consumer Durables	2	3/4	<u>1</u> <u>2.1/2</u> <u>1</u>	
xiv) Engineering -				
Ancillaries (other than Automobile Ancillaries) and Component Suppliers	2	3/4	<u>1</u> <u>2.1/2</u> <u>1</u>	

<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>(5)</u>
Engineering -				
Machinery Manufacturers and other Capital Equip- ment Suppliers (other than Heavy Engineering)**	2. 3/4	1. 1/4	/ 3. 1/2 /	

- Notes :
- i) Raw materials are expressed as so many months' consumption. They include stores and other items used in the process of manufacture.
 - ii)
 - a) Stocks-in-process are expressed as so many months' cost of production.
 - b) In individual cases, the bank may deviate from the norm for stocks-in-process if it is satisfied that the actual process time involved in any particular unit, say, in view of the nature of production, past experience and technology employed, is more than the norm suggested.
 - iii)
 - a) Finished goods and receivables are expressed as so many months' cost of sales and sales respectively. These figures represent only the average levels. Individual items of finished goods and receivables could be for different periods which could exceed the indicated norms so long as the overall average level of finished goods and receivables does not exceed the amounts as determined in terms of the norm.
 - * b) The norm prescribed for receivables relates only to inland sales on short term basis (i. e. excluding receivables arising out of deferred payment sales and exports).
 - iv) Stocks of spares are not included for norms, since in financial terms they are not significant in many industries. Banks will ascertain requirements of spares for individual units. They should, however, keep a watchful eye if spares exceed 5% of total inventories.
 - **v) Heavy Engineering will include supply of whole or substantial plants involving long manufacturing period, i. e. sugar, cement, steel and textile plants.

Appendix V.3 : The Scheme of the Computations of Excess Bank Borrowings

- 1) Annual consumption of raw materials and stores & spares
- 2) Annual cost of production
- 3) Annual cost of sales
- 4) Annual sales
- 5)
 - a) Raw materials and stores & spares
 - b) Work-in-progress
 - c) Finished goods
 - d) Receivables
 - e) Sundry loans and advances
 - f) Investments (Quoted)
 - g) Cash and bank balances

Sum of (a) to (g): Reasonable level of
current assets (RCA)
- 6) Current liabilities other than bank borrowings
- 7) Working capital gap (WCG): (RCA - 6)
- 8) Permissible levels of bank finance (PBF)
 - I Method
 - II Method
- 9) Actual bank borrowings (ABB)
- 10) Excess bank borrowings (EBB)
 - I Method
 - II Method

Appendix V.4 : Adjustments Made as Regards Inventory Norms

Some adjustments wherever necessary, as shown below, were made regarding the inventory norms of some of the industries due to lack of availability of data as required by the suggested norms corresponding to different components of raw materials or places where the firms are located, etc.

Industry	Suggested Norm	Norm Used (Number of Months)
1) Jute textiles	Finished goods: 1 (Domestic Sales) $1\frac{1}{2}$ (For exports)	$1\frac{1}{4}$
2) Cement	Raw materials and Stores & spares: $2\frac{1}{4}$ Gypsum $1\frac{1}{4}$ Limestone $\frac{3}{4}$ Coal $1\frac{1}{2}$ Packing materials	$1\frac{1}{2}$
3) Cotton textiles	1) Raw materials & stores & spares: a) Cotton: 2 (Bombay and Ahmedabad 3 (Eastern areas - Bihar, Orissa, West Bengal and Assam) 2 (Other than the above areas) b) 2 (Other raw materials) 2) Work-in-progress: $\frac{3}{4}$ (Composite mills) $\frac{1}{2}$ (Other mills)	$2\frac{1}{4}$

Appendix V.5 : Excess Bank Borrowings : Industry-wise

	(Rupees in lakhs)									
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
1. MEDICINE AND PHARMACEUTICAL PREPARATIONS										
1) Annual consumption of raw materials and stores & spares	10669	11938	13613	17626	20329	19840	21487	25127	29298	33836
2) Annual cost of production	19399	21788	24339	29859	33545	33812	36548	42048	48448	55702
3) Annual cost of sales	19124	21698	24273	29024	33747	33477	36664	41473	47210	54287
4) Annual sales	23028	26037	28879	33917	38950	39007	42729	48425	54601	60651
5) a) Raw materials and stores & spares	2445	2736	3120	4039	4659	4259	4924	5769	6714	7754
b) Work-in-progress	808	908	1014	1244	1398	1409	1523	1752	2018	2321
c) Finished goods	2567	2657	2723	3588	4133	3938	3822	4392	5682	7097
d) Receivables	2399	2712	3008	3533	4057	4063	4451	5044	5688	6318
e) Sundry loans and advances	1114	1216	1473	1916	1922	1416	1468	2640	2903	3184
f) Investments (Quoted)	24	28	15	15	16	42	153	69	63	80
g) Cash and bank balances	1110	1272	1512	1307	1813	1410	1458	1235	1427	1505
RCA : Sum of (a) to (g)	10467	11529	12865	15612	17998	16537	17799	20901	24495	28259
6) Current liabilities other than bank borrowings	5207	5656	6309	7582	8117	8665	9601	10530	12944	14054
7) Working capital gap (WCG) : (RCA - 6)	5260	5873	6556	8030	9881	7872	8198	10371	11551	14205
8) Permissible levels of bank finance (PBF):										
a) Method I	3945	4405	4917	6022	7411	5904	6148	7778	8663	10654
b) Method II	2643	2991	3340	4127	5382	3738	3748	5146	5427	7140
9) Actual bank borrowings (ABB)	2541	2902	3096	3689	3814	4030	4277	4518	5614	7212
10) Excess bank borrowings (EBB):										
a) Method I	-	-	-	-	-	-	-	-	-	-
b) Method II	-	-	-	-	-	292	529	-	187	72

Note: '-' = Nil.

(continued)

Norms: a) Raw materials and stores : $2\frac{3}{4}$ c) Finished goods : 2
 b) Work-in-progress : $\frac{1}{2}$ d) Receivables : $1\frac{1}{4}$

Appendix V.5 : (continued)

(Rupees in lakhs)

	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
2. JUTE TEXTILES										
1) Annual consumption of raw materials and stores & spares	18299	20214	18917	19064	22764	21820	23087	21819	22629	25106
2) Annual cost of production	29717	33691	32290	35833	39344	36308	38573	36286	40630	46555
3) Annual cost of sales	29320	33639	31670	34978	39445	36249	38403	34972	39775	46642
4) Annual sales	31244	34500	31800	37386	40240	35376	37310	35057	44350	49421
5) a) Raw materials and stores & spares	3812	4211	3941	3972	4742	4350	4652	4546	4714	5230
b) Work-in-progress	619	702	673	746	820	756	803	756	846	970
c) Finished goods	3054	3260	3299	3643	4109	3882	3992	3643	4143	4859
d) Receivables	2270	2215	2604	2954	2515	2335	2854	2762	3508	3350
e) Sundry loans and advances	1215	1207	1393	1544	1403	1160	1208	1313	1619	1901
f) Investments (Quoted)	247	252	233	242	234	239	219	189	163	181
g) Cash and Bank balances	228	211	181	251	204	219	245	400	450	577
RCA : Sum of (a) to (g)	11445	12058	12327	13352	14027	12881	13973	13609	15503	17008
6) Current liabilities other than bank borrowings	5734	5979	8239	9386	9605	8815	10267	12130	12308	12327
7) Working capital gap (WCG) : (RCA - 6)	5711	6079	4088	3966	4422	4006	3706	1479	3195	4741
8) Permissible levels of bank finance (PBF):										
a) Method I	4283	4559	3006	2974	3316	3049	2780	1109	2396	3556
b) Method II	2850	3064	1006	628	915	846	213	-	-	474
9) Actual bank borrowings (ABB)	5688	5682	7373	7509	6696	5913	6739	7777	6780	7190
10) Excess bank borrowings (EBB):										
a) Method I	1405	1123	4307	4535	3380	2864	3959	6668	4384	3634
b) Method II	2838	2618	6367	6881	5781	5067	6526	7777	6780	6716

Note : '-' = Nil.

(continued)

Norms : a) Raw materials and stores	: $2\frac{1}{2}$	c) Finished goods	: $1\frac{1}{4}$
b) Work-in-progress	: $\frac{1}{4}$	d) Receivables	: $1\frac{1}{2}$

Appendix V.5 : (continued)

(Rupees in lakhs)

	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
3. BASIC INDUSTRIAL CHEMICALS										
1) Annual consumption of raw materials and stores & spares	20012	22641	25846	42112	52124	67473	71456	76739	88466	106428
2) Annual cost of production	36996	41989	46776	68741	84524	108870	115162	125445	144134	168845
3) Annual cost of sales	36519	42613	46140	65548	85493	108742	114537	125122	143093	166243
4) Annual sales	45665	52704	56869	82135	101446	125896	133095	144563	163341	184513
5) a) Raw materials and stores & spares	4516	5189	5923	9651	11945	15462	16375	17580	20273	24390
b) Work-in-progress	771	875	975	1432	1761	2208	2399	2613	3003	3518
c) Finished goods	3043	3551	3845	5462	7124	9062	9545	10396	11537	13853
d) Receivables	6659	7549	6568	9212	13142	18360	19410	21082	23203	26908
e) Sundry loans and advances	3831	4275	5339	5941	7194	6866	7914	11280	14047	14497
f) Investments (Quoted)	676	774	974	1073	1231	1318	1481	1651	1652	1751
g) Cash and bank balances	3761	4446	5470	6634	9102	10516	8606	9725	7205	5635
RCA : Sum of (a) to (g)	23327	26659	29094	39405	51499	63852	65790	74339	80920	90552
6) Current liabilities other than bank borrowings	14201	16129	16968	22328	26998	31806	33631	40540	45101	48555
7) Working capital gap (WCG) ; (RCA - 6)	9126	10530	12126	17077	24501	32046	32159	33799	35819	41997
8) Permissible levels of bank finance (PBF):										
a) Method I	6844	7897	9095	12808	18736	24034	24119	25349	26864	31498
b) Method II	3294	3865	4854	7226	11626	16083	15711	15214	15589	19359
9) Actual bank borrowings (ABB)	6825	5917	6768	8068	9987	11763	12507	13385	15527	20833
10) Excess bank borrowings (EBB):										
a) Method I	-	-	-	-	-	-	-	-	-	-
b) Method II	3531	2052	1914	842	-	-	-	-	-	1474

Note : '-' = Nil.

(continued)

Norms: a) Raw materials and stores : $2\frac{3}{4}$

c) Finished goods : 1

b) Work-in-progress : $\frac{1}{4}$ d) Receivables : $1\frac{3}{4}$

Appendix V.5 : (continued)

	(Rupees in lakhs)									
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
4. CEMENT										
1) Annual consumption of raw materials and stores & spares	6671	7192	8917	8438	11450	13903	15251	14762	15187	19129
2) Annual cost of production	17022	18144	18917	21429	27296	33202	35671	35838	37027	41420
3) Annual cost of sales	16916	18119	18894	21454	27268	33170	35869	35489	36935	41441
4) Annual sales	19106	19482	19403	22094	29492	34625	38084	37897	39451	41930
5) a) Raw materials and stores & spares	834	899	1146	1055	1431	1738	1906	1845	1898	2391
b) Work-in-progress	709	756	788	893	1040	963	923	1037	1332	1505
c) Finished goods	1501	1567	1596	1814	2365	2825	3081	3058	3183	3474
d) Receivables										
e) Sundry loans and advances	1720	1706	1921	2092	2912	2724	2710	4313	4764	5933
f) Investments (Quoted)	260	287	270	271	199	340	335	338	346	261
g) Cash and bank balances	382	345	708	592	824	905	1732	1710	1023	1446
RCA : Sum of (a) to (g)	5406	5560	6524	6717	8771	9495	10687	12301	12546	15010
6) Current liabilities other than bank borrowings	5097	5466	6592	8064	9945	10605	13207	14024	15462	18221
7) Working capital gap (WCG): (RCA - 6)	309	94	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg
8) Permissible levels of bank finance (PBF):										
a) Method I	232	71	-	-	-	-	-	-	-	-
b) Method II	-	-	-	-	-	-	-	-	-	-
9) Actual bank borrowings (ABB)	2491	2423	2916	2571	2797	4315	2319	2032	2818	4404
10) Excess bank borrowings (EBB):										
a) Method I	2259	2352	2916	2571	2797	4315	2319	2032	2818	4404
b) Method II	2491	2423	2916	2571	2797	4315	2319	2032	2818	4404

Note : '-' = Nil. Neg = Negative.

(continued)

Norms: a) Raw materials and stores : $1\frac{1}{2}$ c) Finished goods }
 b) Work-in-progress : $\frac{1}{2}$ d) Receivables } 1

Appendix V.5 : (continued)

	(Rupees in lakhs)									
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
5. RUBBER AND RUBBER PRODUCTS										
1) Annual consumption of raw materials and stores & spares	11863	12972	13076	20149	24358	22872	24763	28604	32649	41573
2) Annual cost of production	16986	18816	19222	27572	31145	32218	35186	39125	44399	55498
3) Annual cost of sales	16588	18865	19155	26673	31235	32151	35227	39353	44426	54655
4) Annual sales	18293	20424	20588	29181	33801	33875	36322	41731	48733	58460
5) a) Raw materials and stores & spares	1977	2162	2179	3358	4059	3812	4127	4767	5441	6929
b) Work-in-progress	354	392	400	574	649	671	733	815	925	1156
c) Finished goods	2543	2865	2906	4072	4742	4814	5217	5912	6792	8248
d) Receivables										
e) Sundry loans and advances	685	817	837	1241	1230	1067	1285	1798	2138	3040
f) Investments (Quoted)	61	64	68	78	80	50	49	47	46	47
g) Cash and bank balances	1008	731	1563	1040	894	859	1268	1962	2873	2961
RCA : Sum of (a) to (g)	6628	7031	7865	10363	11654	11273	12679	15301	18216	22381
6) Current liabilities other than bank borrowings	4055	4327	5147	6611	7816	8803	8939	10562	13814	18284
7) Working capital gap (WCG) : (RCA - 6)	2573	2704	2718	3752	3838	2470	3740	4739	4402	4097
8) Permissible levels of bank finance (PBF):										
a) Method I	1930	2028	2038	2814	2878	1852	2805	3554	3301	3073
b) Method II	916	946	752	1161	924	-	570	914	-	-
9) Actual bank borrowings (ABB)	2341	1697	1128	3436	4312	6528	6860	6185	5914	6211
10) Excess bank borrowings (EBB):										
a) Method I	411	-	-	620	1434	4676	4055	2631	2613	3138
b) Method II	1425	751	376	2225	3388	6528	6290	5271	5914	6211

Note : '-' = Nil.

(continued)

Norms : a) Raw materials and stores : 2
 b) Work-in-progress : $\frac{1}{4}$

c) Finished goods }
 d) Receivables } $\frac{1}{4}$

Appendix V.5 : (continued)

(Rupees in lakhs)

	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
6. EDIBLE, VEGETABLE AND HYDROGENATED OILS										
1) Annual consumption of raw materials and stores & spares	10392	11676	12661	15283	13803	12397	17126	14004	19241	21544
2) Annual cost of production	11477	12817	14043	16872	15481	14061	19005	15725	21735	24384
3) Annual cost of sales	11468	12912	13886	16627	15450	13975	18849	15627	21885	24097
4) Annual sales	11578	13202	14507	17234	15883	14333	19348	15963	22554	25018
5) a) Raw materials and stores & spares	852	973	998	1242	851	899	1061	884	1116	1431
b) Work-in-progress	-	-	-	-	-	-	-	-	-	-
c) Finished goods	720	816	887	1058	979	885	1194	987	1388	1535
d) Receivables										
e) Sundry loans and advances	211	267	426	308	265	325	529	585	900	978
f) Investments (Quoted)	2	3	11	11	11	1	2	3	3	3
g) Cash and bank balances	68	64	135	148	177	182	205	193	1388	1535
RCA : Sum of (a) to (g)	1853	2123	2457	2767	2283	2292	2991	2652	3764	4216
6) Current liabilities other than bank borrowings	1149	1306	1366	1498	1468	1483	2023	1991	2249	2552
7) Working capital gap (WCG): (RCA - 6)	704	817	1091	1269	815	809	968	661	1495	1664
8) Permissible levels of bank finance (PBF):										
a) Method I	528	613	818	952	611	606	726	496	1121	1248
b) Method II	245	286	477	577	244	236	220	-	559	610
9) Actual bank borrowings (ABB)	966	951	1004	1257	892	883	943	950	918	880
10) Excess bank borrowings (EBB):										
a) Method I	438	338	186	328	281	277	217	454	-	-
b) Method II	725	665	527	680	648	647	723	950	359	270

Note : '-' = Nil. Neg. = Negative

(continued)

Norms: a) Raw materials and stores : 1
b) Finished goods } : $\frac{3}{4}$
c) Receivables }

Appendix V.5 : (continued)

	(Rupees in lakhs)									
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
7. COTTON TEXTILES										
1) Annual consumption of raw materials and stores & spares	75957	77012	83689	111533	117782	135206	157047	171737	175698	201531
2) Annual cost of production	113458	123988	137124	176080	191962	210646	238586	268036	280385	325054
3) Annual cost of sales	111725	125261	136111	171563	193911	210618	237163	267750	279960	322517
4) Annual sales	116865	133346	151382	183989	195387	214058	247058	288741	306001	347102
5) a) Raw materials and stores & spares	14242	14440	15691	20912	21098	21911	24024	32201	32943	37787
b) Work-in-progress	7091	7322	8570	11005	11998	13165	14912	16752	17524	20316
c) Finished goods	21912	24317	25805	34489	36697	36257	41306	44763	47245	55478
d) Receivables										
e) Sundry loans and advances	5556	5308	7404	8274	8567	7411	7643	12383	13865	16794
f) Investments (Quoted)	1748	1692	1826	1364	2095	1718	1855	1975	1957	1859
g) Cash and bank balances	2118	1723	3076	2958	2628	2570	3121	4335	4407	5109
RCA: Sum of (a) to (g)	52662	54849	62372	79002	83083	83032	92921	112409	117941	137343
6) Current liabilities other than bank borrowings	22920	22999	27433	33972	37395	42067	48851	55978	59342	71489
7) Working capital gap (WCG): (RCA - 6)	29742	31850	34939	45030	45088	40965	44070	56431	58599	65854
8) Permissible levels of bank finance (PBF):										
a) Method I	22306	23887	26204	33772	34266	30724	33052	42323	43949	49390
b) Method II	16576	18138	19346	25279	24917	20207	20840	28329	29114	31518
9) Actual bank borrowings (ABB)	22846	21842	22671	26780	30879	34998	39612	45516	42898	47781
10) Excess bank borrowings (EBB):										
a) Method I	540	-	-	-	-	4274	6560	3193	-	-
b) Method II	6270	3704	3325	1501	5962	14791	18772	17187	13784	16263

Note : '-' = Nil.

(continued)

Norms: a) Raw materials and stores : $2\frac{1}{4}$ c) Finished goods }
 b) Work-in-progress : $\frac{3}{4}$ d) Receivables } : $2\frac{1}{4}$

Appendix V.6 : Excess Bank Borrowings and the Problems of Aggregation

As mentioned in footnote on p. 169 for the purpose of calculation of RCA inventories and receivables are taken according to the suggested norm or the actual holdings whichever is low. For the same number of companies RCA at the aggregate industry level using combined balance sheet data is likely to be higher than the RCA computed at the firm level and added together to arrive at the industry's RCA. This can be shown as below.

Suppose there are 'n' firms in the industry, with actual holdings of CA of each A_i and norm for each firm as m_i . Let us also suppose that RCA_1 and RCA_2 denotes, reasonable level of current assets for industry, computed at the firm level and added together and RCA worked out with combined data for the same number of firms.

Following the procedure suggested by the Committee,

$$RCA_1 = \sum \text{Min} (A_i, m_i)$$

$$RCA_2 = \text{Min} (\sum A_i, \sum m_i)$$

To prove that $RCA_2 \geq RCA_1$, split n into three sets such that:

$$S_1 : A_i > m_i = n_1$$

$$S_2 : A_i = m_i = n_2$$

$$S_3 : A_i < m_i = n_3$$

$$\frac{n_1 + n_2 + n_3 = n}{}$$

$$RCA_1 = \sum_{n_1} m_i + \sum_{n_2} m_i + \sum_{n_3} A_i$$

$$RCA_2 \text{ is either } \sum_n A_i \text{ or } \sum_n m_i$$

a) If $RCA_2 = \sum_n A_i$

Then $RCA_2 > RCA_1$

if $\sum_{n_1} A_i + \sum_{n_2} A_i + \sum_{n_3} A_i > \sum_{n_1} m_i + \sum_{n_2} m_i + \sum_{n_3} A_i$

But $\sum_{n_1} A_i > \sum_{n_1} m_i$ provided that there is at least

one firm for which $A_i > m_i$.

b) If $RCA_2 = \sum_n m_i$

Then $RCA_2 > RCA_1$

if $\sum_{n_1} m_i + \sum_{n_2} m_i + \sum_{n_3} m_i > \sum_{n_1} m_i + \sum_{n_2} m_i + \sum_{n_3} A_i$

But $\sum_{n_3} m_i > \sum_{n_3} A_i$ provided that there is at least

one firm for which $A_i < m_i$.

∴ Unless for all firms $A_i = m_i$, $RCA_2 > RCA_1$.

If for all firms $A_i = m_i$, then $RCA_2 = RCA_1$. In any case it cannot happen that $RCA_2 < RCA_1$.

The same can be illustrated with the help of a numerical example

	A_i	m_i	$\text{Min}(A_i, m_i)$
Firm 1	50	30	30
2	40	40	40
3	25	30	25
Σ	115	100	95

$$RCA_1 = \sum \text{Min}(A_i, m_i) = 95$$

$$RCA = \text{Min}(\sum A_i, \sum m_i) = 100.$$

We also know that (a) the higher the RCA, ceteris paribus, the higher will be PBF (b) Given ABB, the higher the PBF, the lower will be EBB.

CHAPTER VI

ANALYSIS OF EXCESS BANK BORROWINGS: COMPANY LEVEL

In this chapter an analysis of the excess bank borrowings (EBB) using the Tandon Committee norms at the firm or company level is presented, while the analysis at the industry-level for eight industries in the previous chapter has been outlined. Though the Tandon Committee suggested norms for inventory and receivables at the industry level, in practice, banks have to take decisions at the firm level, while lending. Besides, an analysis at the company level will be useful for examining the relationships between (a) size and excess bank borrowings and (b) rate of growth and excess bank borrowings of companies.

In Section I details pertaining to the selected sample companies used in the analysis are presented. Section II deals with EBB of these companies computed within the framework of the Tandon Committee's recommendations. Section III is concerned with an analysis of the relationships between (a) size and EBB and (b) rate of growth and EBB of companies. In Section IV summary and conclusions are presented.

Section I

The sample selected for analysis consists of a total of 100 companies drawn from five different industries. The

basic sources of data are published balance sheets and income, expenditure and appropriation accounts submitted by these companies to the RBI. All these companies from which our sample is drawn belong to the 'Medium and Large Public Limited Companies'.

These 100 companies are chosen from a universe of 308 companies belonging to five industries, viz., (1) Cotton textiles (composite mills), (2) Cotton textiles (spinning),¹ (3) Basic industrial chemicals, (4) Medicine and pharmaceutical preparations and (5) Edible, vegetable and hydrogenated oils.²

Since we are interested in examining (a) EBB at firm level, and (b) relationship between EBB and size of the firm, we decided to have a continuous series, i.e. a series with same companies recurring for a period of time. A sample with same companies spread over a period of time will be devoid of the influence of new companies as well as of companies dropping out of a sample for reasons like mergers, liquidation, etc.

1 In 'Financial Statistics of Joint Stock Companies' published by the RBI, data for composite mills and spinning mills are separately available. The two are combined and published under cotton textiles.

2 Hereonwards, unless specified otherwise, the following abbreviated notations are used to denote companies within a specific industry:

Cotton textiles (composite mills)	: COT.COM.
Cotton textiles (spinning)	: COT.SP.
Basic industrial chemicals	: BIC
Medicine and pharmaceutical preparations	: MPH
Edible, vegetable and hydrogenated oils	: EVH

On the other hand, in a sample where the endeavour is to keep the number of companies in the sample constant over a period of time, as for example, in the case of the RBI samples in their "Studies on Company Finances", it is likely that some companies are substituted because of delays in returns from companies, apart from reasons cited above. The financial behaviour of an industry, represented by an aggregation of companies with respect to a sample containing same companies, will be more meaningful than a sample of same number of but different companies, spread over a period of time. This is particularly more so when the objective is to study the behaviour of industry to changes in exogenous factors, say, a change in credit policy. We have, therefore, selected our 100 companies from a universe of 308 companies recurring for the period 1970-71 to 1978-79.

One of the main reasons for choosing the above-mentioned five industries, is of computational convenience, the other being adequate coverage in terms of number of companies and paid-up capital. For, the inventory norms suggested by the Tandon Committee with respect to these industries are relatively simple i.e. directly applicable, whereas in the case of many other industries like Fertilizers, Paper and paper products, etc., the application of norms need further disaggregation of raw materials into various components (see Appendix V.2).

In addition, the coverage was satisfactory in terms of number of companies as well as paid-up capital. For the year

1978-79 these five industries accounted for nearly 23 per cent of total number of companies covered in the RBI's sample. In terms of paid-up capital these five industries accounted for roughly 26 per cent of paid-up capital of the RBI's sample. On the other hand, the 308 companies of the 'common series'¹ accounted for about 78 per cent of number of companies and 89 per cent of paid-up capital of the RBI's sample companies with respect to the above-mentioned five industries.

Our selected 100 companies formed 25 per cent and 32 per cent of the RBI's sample and common series companies respectively of the five industries. In terms of paid-up capital, our selected sample of companies accounted for 34 per cent and 38 per cent respectively of the RBI's sample and common series companies of the five industries.

For the selection of these 100 companies we followed stratified random sampling method. First, all these companies belonging to these five industries appearing continuously in the RBI's sample have been arranged industry-wise, from 1970-71 to 1978-79.

Second, the sample companies from each industry were then selected on a random basis i.e., every fourth company in the case of Cotton textiles, both composite as well as

¹ Common series refers to the total number of companies appearing in the RBI's sample continuously during the period under study, i.e. from 1970-71 to 1978-79. The common series is a sub-set of RBI's sample companies and data for the RBI's sample are published at industry-level and for the total sample number of companies.

spinning, every third company in the case of MPH and so on. The total number of companies, thus chosen from five industries came to 100.

The industry-wise distribution of common series companies and selected sample is as follows:

Table 6.1 : Industry-wise Distribution of Sample Companies

	Number of common series companies (1)	Number of sample companies (2)	2 as % 1 (3)
1. COT.COM.	114	29	25
2. COT.SP.	91	23	25
3. BIC	50	25	50
4. MPH	45	15	33
5. EVH	8	8	100
Total	308	100	32.5

The selected sample, thus, formed approximately 32 per cent of the common series companies. The industry-wise coverage ranges between 25 per cent and 100 per cent of common series companies among the five different industries.

Section II

In this section, an analysis of EBB of the 100 companies is presented. The procedure followed to compute EBB is the same as outlined in Chapter V.

EBB of the sample companies, computed within the framework of the Tandon Committee recommendations, are presented

in Appendix VI.1. To make the analysis manageable, we have chosen three years to examine the trend in EBB. The three years are 1970-71, 1975-76 and 1978-79. The reason for choosing these years is that 1970-71 and 1978-79 being opening and closing years for which data are collected; 1975-76 being the year from which the banks have been asked by the RBI to implement the Tandon Committee recommendations. However, the emphasis of the analysis is placed on two years, i.e. 1975-76 and 1978-79, since the financial behaviour of companies from 1975-76 onwards is expected to reflect the impact of the implementation of the Tandon Committee recommendations.

Firstly, we shall present analysis regarding the number of companies with EBB. Here, a note of caution is necessary. The EBB are computed for the year 1970-71 as per the Tandon Committee's framework though the Committee's recommendations were implemented from 1975-76 onwards. We have done so mainly to examine the behaviour of firms with respect to bank borrowings; in other words, to see whether there was any perceptible change in the behaviour of firms with respect to bank borrowings, prior to and after the implementation of norms. In effect, therefore, the year 1975-76 is treated as a point of departure and the behaviour of firms with respect to bank borrowings in years 1970-71 and 1978-79 is compared with that of 1975-76.

In Table 6.2, the number of companies (industry-wise) with EBB, according to Methods I and II of lending suggested by the Tandon Committee, are presented.

Table 6.2 : Number of Companies with EBB (Industry-wise)

Industry	1970-71		1975-76		1978-79	
	I	II	I	II	I	II
1. COT.COM.	22	23	21	26	26	27
2. COT.SP.	18	21	19	20	15	20
3. BIC	13	17	14	17	17	18
4. MPH	9	11	10	12	9	13
5. EVH	5	8	4	7	6	8
Total	67	81	68	82	73	86

From the Table it is seen that the number of companies with EBB increased according to Method I, from 67 in the year 1970-71 to 68 and further to 73 in the years 1975-76 and 1978-79 respectively, whereas, according to lending Method II, there was an increase from 81 to 82 and further to 86 in the year 1978-79. It may be noticed that as per both lending methods the number of companies with EBB in 1978-79 was higher than in 1975-76.

The industry-wise analysis, however, gives a slightly different picture. As per lending Method I, in the case of BIC there was an increase in the number of companies with EBB from 13 to 14 and further to 17 in the years 1975-76 and 1978-79 respectively. In the case of COT.SP. and MPH first there was an increase in the number of EBB companies from 1970-71 to 1975-76 followed by a decline in the year 1978-79, whereas EVH and COT.COM. industries first showed a decline in

the year 1975-76 followed by an increase in the year 1978-79. To sum up, only two industries viz., MPH and COT.SP., showed a decline in the number of companies with EBB from 1975-76 to 1978-79.

As per lending Method II, two industries viz., EVH and COT.SP., showed a decline in the number of companies with EBB between 1970-71 and 1975-76. However, in the year 1978-79 but for COT.SP. industry, there was an increase in the number of companies with EBB in the other four industries. Thus it was only in COT.SP. industry that there was a decline in the number of companies with EBB as per lending Method I, without any simultaneous increase in the number of companies as per lending Method II. In the other two industries, viz., EVH and COT.COM., though there was a decline in the number of EBB companies according to lending Method I, the companies with EBB as per Method II had gone up.

For the purpose of analysing the magnitudes of EBB, industry-wise EBB for the years 1970-71, 1975-76 and 1978-79 according to lending Methods I and II are presented in Table 6.3.

From the Table it is seen that EBB for all the five industries together as per lending Method I in the year 1970-71 stood at Rs. 2106 lakhs. The average annual rates of growth of EBB during the two periods, i.e. from 1970-71 to 1975-76 and from 1975-76 to 1978-79 were 24 per cent and 40 per cent respectively.

Table 6.3 : Industry-wise EBB

Industry	(Rs. in lakhs)					
	1970-71		1975-76		1978-79	
	I	II	I	II	I	II
1. COT.COM.	948	1825	2769	4122	6804	8851
2. COT.SP.	374	508	357	521	464	768
3. BIC	489	732	928	1297	2084	2545
4. MPH	239	439	500	792	591	986
5. EVH	56	129	119	180	326	614
Total	2106	3633	4673	6912	10269	13764

The total EBB as per lending Method II increased, on an average, at rates of 18 per cent and 33.3 per cent per annum during the two periods respectively. This indicates that, in effect, the objective of reducing industry's dependence on bank borrowings by the implementation of the Tandon Committee recommendations does not appear to be successful. It may also be noticed that actual bank borrowings increased at average annual rates of 11.7 per cent and 24.7 per cent respectively during the two periods. Even taking into account the high rate of growth in bank credit during the second period, it still seems that the situation has not changed much after the implementation of the Tandon Committee's recommendations. However, the industry-wise average annual rates of growth in EBB revealed that the average annual rates of growth in period II are higher as per both lending methods, except in the case of MPH industry.

Now, we shall try to explain EBB with the help of excess current asset holdings of these companies. Excess current assets (ECA), as has been defined in Chapter IV are the difference between actual current assets and the current assets as per the norms suggested by the Tandon Committee. ECA of 100 companies are presented component-wise, viz., (a) raw materials and stores, (b) work-in-progress, (c) finished goods and (d) receivables, in Appendix VI.2.

In Table 6.4 ECA at the industry-group level are presented.

Table 6.4 : Number of Companies with ECA (Component-wise)

Industry	1970-71				1975-76				1978-79			
	R	W	F	RE	R	W	F	RE	R	W	F	RE
1. BIC	19	10	16	12	19	14	16	13	17	11	11	13
2. MPH	11	10	3	11	10	10	-	12	9	9	1	13
3. COT.COM.	14	9	21		8	16	20		8	16		26
4. COT.SP.	16	-	4		11	1	5		12	3		2
5. EVH	3	-	6		4	-	7		3	-		7

R = Raw Materials & Stores
F = Finished Goods

W = Work-in-progress
RE = Receivables.

For Cotton textiles and EVH the Tandon Committee suggested clubbed norm for finished goods and receivables (see Chapter V).

From Table 6.4 it may be seen that, though the number of companies with excess raw materials and work-in-progress holdings declined from 1975-76 onwards, still 49 companies had

excess raw material and stores and 39 companies had excess holdings of work-in-progress in the year 1978-79. It is also to be noticed that in all the industries, except COT.SP., the number of companies with excess raw material and stores and work-in-progress was less in the year 1978-79 than in 1975-76.

Though the number of companies with EBB according to both lending methods increased from 1975-76 to 1978-79, the number of companies with excess holdings of raw materials and stores and work-in-progress declined during the same period. As regards finished goods and receivables for the industries with separate norms viz., BIC and MPH, there was a decline in the number of companies with excess holdings of finished goods from 16 in 1975-76 to 11 in 1978-79. The number of companies with excess receivables remained almost unchanged in both these industries. In the case of the other three industries with clubbed or combined norm for finished goods and receivables, there was no change in the number of companies with excess holdings in EVH industry, while there was an increase from 20 in 1975-76 to 26 in 1978-79 in COT.COM. industry. On the other hand, there was a decline i.e. from 5 companies in 1975-76 to 2 companies in 1978-79 with excess holdings in the case of COT.SP. industry.

However, this does not provide any explanation as to why there was an increase (a) in the number of companies with EBB, or, (b) the magnitudes of EBB. This only gives a rough idea as to which component of current assets was held in excess than the suggested norm and the trend therein. It may be

noticed that in BIC and COT.SP. industries relatively more companies had excess raw material holdings, whereas in EVH and COT.COM. industries more companies had excess finished goods and receivables. Thus, the analysis is helpful to bring out the industry-specific behaviour as regards holdings of current assets in the light of the suggested norms and provides useful information for the authorities to see what further changes are to be made to make the norms more realistic.

Now, we shall present an analysis of the magnitude of EBB expressed as a percentage of ABB. In Table 6.5 industry-wise EBB as percentage of ABB of the respective industry are presented for the years 1970-71, 1975-76 and 1978-79. It is seen from the Table that the total EBB of 100 companies as percentage of total ABB, according to both lending methods increased from 1970-71 to 1978-79. In the year 1978-79, EBB as percentage of ABB were 62 per cent and 83 per cent according to lending Methods I and II respectively.

Table 6.5 : Industry-wise EBB as Percentage of ABB

Industry	1970-71		1975-76		1978-79	
	I	II	I	II	I	II
1. COT.COM.	28.3	54.4	52.3	77.9	66.7	86.7
2. COT.SP.	59.3	80.6	47.9	70.0	45.1	74.8
3. BIC	48.6	72.7	49.2	68.7	69.6	84.9
4. MPH	31.3	57.5	43.2	68.4	38.2	63.7
5. EVH	22.5	51.6	26.8	54.6	41.3	77.7
	(35.1)	(60.1)	(49.1)	(72.6)	(62.0)	(83.1)

Note : Figures in parentheses are percentages of total EBB to total ABB.

The industry-wise analysis shows that from 1970-71 to 1975-76, except in the COT.SP. industry, in the other four industries, EBB as percentage of ABB had gone up as per lending Method I. As regards lending Method II, two industries, viz., BIC and COT.SP. showed a decline in 1975-76 while the other three industries had higher EBB in 1975-76.

However, we are more interested as to what happened after 1975-76, since the Tandon Committee recommendations were implemented from then on. It is to be observed that according to lending Method I, only two industries, viz., MPH and COT.SP. showed a decline in 1975-76 while the other three industries exhibited a rising trend. As regards lending Method II, only one industry viz., MPH, showed a decline in the year 1978-79, while the other four industries had relatively higher levels of EBB expressed as a percentage of ABB in the year 1978-79 than in 1975-76.

Thus, only MPH industry showed a decline in the year 1978-79 according to both lending methods, whereas COT.SP. industry had higher EBB in 1978-79 than in 1975-76 as per lending Method II, while EBB according to Method I were low. On the other hand, the other three industries had relatively high levels of EBB in 1978-79 than in 1975-76 according to both methods of lending. It may be observed that EBB of all companies taken together as per both methods of lending were quite high in 1978-79 (see Table 6.5).

Now, in order to examine the relationship between EBB and excess holdings of current assets in detail, we have made

an analysis of the companies with similar behaviour as regards the component-wise holdings of ECA in relation to their EBB. In other words, if companies A and B in an industry have excess holdings of, say, raw materials and finished goods it is reasonable to expect, ceteris paribus, that they show similar behaviour so far as bank borrowings are concerned.

On the other hand, if companies A and B exhibit different types of behaviour with respect to their EBB that indicates the influence of factors other than ECA on their EBB. This point has been discussed in Chapter V while presenting the analysis of the impact of other current liabilities (OCL) and long term funds (LTF) in the determination of EBB. Here a detailed analysis is presented bringing out the importance of OCL and LTF in the determination of EBB. For this, we have chosen the companies within an industry with similar behaviour regarding ECA. For this purpose, we have taken companies from only two industries viz., MPH and COT.SP. The analysis is confined to the year 1978-79. The selected companies are given below.

<u>Industry</u>	<u>Company Code No.</u>	<u>Industry</u>	<u>Company Code No.</u>
MPH	00238	COT.SP.	00477
	00242		00512
	00245		00537
	00953		00563
	00967		01380
	01513		
	01702		
	01772		
	01829		

In MPH industry, the selected companies are grouped into four broad categories on the basis of similarity of behaviour regarding their component-wise excess holdings of inventory and receivables, while showing a dissimilar behaviour regarding EBB. Likewise, the companies from COT.SP. industry fall into two categories. In the Table below are presented category-wise distribution of these companies and their position regarding EBB according to the Methods of lending.

Industry	Company Code No.	Excess Holdings				EBB	
		R	W	F	RE	I	II

MPH

Category A	1	00238	-	E	-	E	-	P
	2	01829	-	E	-	E	P	P
B	1	00242	E	E	-	E	P	P
	2	00245	E	E	-	E	-	-
C	1	00953	-	-	-	E	P	P
	2	01772	-	-	-	E	-	P
	3	01513	-	-	-	E	P	P
D	1	00967	E	-	-	E	P	P
	2	01702	E	-	-	E	-	P

Industry	Company Code No.	Excess Holdings				EBB	
		R	W	F & RE	I	II	

COT.SP.

Category A	1	00477	-	-	-	-	P
	2	00512	-	-	-	P	P
	3	01380	-	-	-	-	P
B	1	00537	E	-	-	P	P
	2	00563	E	-	-	-	P

Note: '-' denotes absence of EBB.
E denotes excess holdings.
P denotes presence of EBB.

As has been mentioned, the analysis is carried out category-wise which may reveal the influence of factors other than ECA on EBB. For this, we have followed the 'balance sheet approach' as explained in Chapter V. The balance sheet identities for lending Methods I and II respectively are shown below:

$$EBB = 0.25 WCG + ECA - ELTF^1$$

$$EBB = 0.25 RCA + ECA - ELTF$$

Thus, it is seen that the required matching contribution by a firm in the form of long-term funds denoted by 0.25 WCG and 0.25 RCA and holdings of ECA are positively associated with EBB, whereas ELTF are inversely related to EBB. On the other hand, OCL is also positively related to EBB, since the higher the level of OCL the lower will be the level of WCG and lower will be the levels of permissible level of bank finance (PBF).

Firstly, the analysis with respect to MPH industry, category-wise, is presented.

Category A

In this category there were two companies and the relevant information is given below.

¹ The abbreviations WCG, ELTF and RCA denote working capital gap, excess long term funds and reasonable level of current assets respectively. For an explanation regarding computations of WCG, ELTF and RCA please refer to Chapter V.

<u>Item</u>	(Rs.lakhs)	
	Company Code No.	
	<u>00242</u>	<u>00245</u>
1. Total CA	526.53	613.57
2. RCA	340.78	462.43
3. ECA (1 - 2)	185.75	151.14
4. LTF	312.53	535.15
5. FA	100.64	235.12
6. ELTF	211.89	300.03
7. OCL	222.85	169.92

Note: FA denotes fixed assets.

EBB, estimated using the above data, according to lending Methods I and II as per balance sheet approach are as follows:

Company 00242:

$$\text{EBB I} = 29.48 + 185.75 - 211.89 = 3.34$$

$$\text{EBB II} = 85.19 + 185.75 - 211.89 = 59.05$$

Company 00245:

$$\text{EBB I} = 73.13 + 151.14 - 300.03 = \text{No EBB}$$

$$\text{EBB II} = 115.61 + 151.14 - 300.03 = \text{No EBB}$$

As shown in the table, companies 00242 and 00245 had excess holdings of raw materials, work-in-progress and receivables. However, company 00242 had EBB according to both the methods of lending while company 00245 had no EBB despite the fact that actual bank borrowings as percentage of total funds was higher in the case of company 00245 (16.8 per cent) than company 00242 (14.6 per cent).

The explanation is that in the case of company 00245 LTF as a proportion of total funds was relatively high and OCL as a proportion of total funds was relatively low. And since LTF are inversely related to EBB, the higher level of LTF partly accounts for the absence of EBB in the case of company 00245. On the other hand, the higher the level of OCL for a given level of RCA, the lower will be WCG and hence a lower PBF. This will result in higher EBB for a given level of ABB. Thus, in the present example, a low level of OCL in the case of company 00245 partly accounted for the absence of EBB.

One important conclusion that emerges from the analysis is that within the framework of the Tandon Committee recommendations, those companies with relatively large proportion of LTF will be eligible for relatively large amounts of bank credit. In other words, if a company is able to reduce its OCL, other things remaining the same, it will be eligible for more bank credit. Thus, the companies with capacity to substitute other short-term borrowings by LTF will be eligible for large amounts of bank credit.

Another aspect, considering the holdings of ECA, is the liquidation of ECA to repay OCL and LT borrowings. Using the proceeds from drawing down ECA to reduce OCL will enhance the borrowing power i.e. PBF will be higher. For a lower level of OCL, given RCA, will result in a higher WCG and hence a larger PBF. On the other hand, repayment of long-term borrowings by liquidating ECA results in status quo so far as

EBB are concerned. This may be seen from the balance sheet identities as presented earlier. Therefore, even on the assumption that the norms suggested by the Tandon Committee regarding inventories and receivables are to be strictly complied with, there is scope for the companies to maintain and even enhance their levels of PBF by liquidating ECA and repaying OCL. The reduction in the levels of ECA as such, therefore, does not lead to reducing the dependence of industry on the banking system.

<u>Item</u>	(Rs. in lakhs)	
	Company Code No.	
	<u>00278</u>	<u>01829</u>
1. Total CA	1315.36	135.03
2. RCA	1172.27	94.72
3. ECA (1 - 2)	143.09	40.31
4. LTF	798.89	12.19
5. FA	482.96	12.73
6. ELTF	315.93	-0.54
7. OCL	605.90	55.21

These two companies had excess holdings of work-in-progress and receivables. But company 00278 did not have EBB as per Method I while company 01829 had EBB as per both the methods of lending as shown below:

Company 00278: (Rs. in lakhs)

$$\text{EBB I} = 141.59 + 143.09 - 319.53 = \text{No EBB}$$

$$\text{EBB II} = 293.07 + 143.09 - 319.53 = 120.23$$

Company 01829:

$$\text{EBB I} = 9.88 + 40.31 + 0.54 = 50.73$$

$$\text{EBB II} = 23.68 + 40.31 + 0.54 = 64.53$$

In this category, both the companies had EBB as per lending Method II. However, as per lending Method I, company 00278 had no EBB because ELTF were adequate to meet the matching contribution and to finance ECA. On the other hand, in the case of company 01829 long term funds were not sufficient even to finance fixed assets. This is a case of clear-cut diversion of bank credit to finance fixed assets. Although both the companies had EBB according to lending Method II, it may be seen that company 00278 had adequate LTF to provide for the required 25 per cent of RCA as per the Tandon Committee's suggestion while company 01829 had a deficit in LTF. The important point to be noticed is that though both the companies had ECA, their liquidation would have been sufficient to clear-off EBB in the case of company 00278, while in the case of company 01829, LTF have to be raised apart from liquidation of ECA. Further, it may be noticed that in the case of company 00278 it was possible to enhance PBF to a level where there would be no EBB even under Method II, by making use of the proceeds out of ECA to repay OCL, whereas in the case of company 01829, there would still be EBB under lending Method II.

Category C

(Rs. in lakhs)

<u>Item</u>	<u>Company Code No.</u>		
	<u>00953</u>	<u>01513</u>	<u>01772</u>
1. Total CA	121.57	307.84	186.37
2. RCA	116.71	206.48	178.95
3. ECA (1 - 2)	4.86	101.36	7.42
4. LTF	-67.09	179.16	179.64
5. FA	39.64	102.97	140.09
6. ELTF (4 - 5)	-106.73	76.19	39.55
7. OCL	131.49	171.63	139.45

The companies in this category had excess holdings of receivables only. But company 00953 and company 01513 had EBB under both methods of lending while company 01772 had EBB under only lending Method II. The EBB of the three companies are shown below:

Company 00953:

(Rs. in lakhs)

EBB I = Negative WCG = 96.83

EBB II = Negative WCG = 96.83

Company 01513:

EBB I = $8.71 + 101.36 - 76.19 = 33.88$

EBB II = Adjusted RCA < OCL = 60.02

Company 01772:

EBB I = $9.87 + 7.42 - 39.55 = \text{No EBB}$

EBB II = Adjusted RCA < OCL = 7.37

It may be observed that, in the case of company 00953, the WCG was negative i.e. OCL were more than RCA. According to the Tandon Committee's framework, a company should have a positive WCG in order to avail bank credit facilities. The entire amount of bank borrowings were, therefore, to be treated as EBB in this case. It is also to be noticed that there was a diversion of bank credit towards financing fixed assets. On the other hand, in the case of company 01513, the EBB were due to holdings of ECA. LTF were adequate to meet the matching contribution, while in the case of company 01772, LTF were large enough not only to provide for 25 per cent of WCG but also to finance ECA. Hence, there were no EBB under lending Method I. However, under lending Method II, ELTF were

not adequate to meet the matching contribution and hence there were EBB.

Category D

In this category there were two companies, viz. company 00967 and company 01702, with holdings of excess raw materials and receivables. However company 00967 had EBB according to both the methods of lending whereas company 01702 had no EBB under lending Method I. The relevant data for decomposing EBB by 'balance sheet approach' are given below:

(Rs. in lakhs)

<u>Item</u>	<u>Company Code No.</u>	
	<u>00967</u>	<u>01702</u>
1. Total CA	358.42	10.98
2. RCA	187.63	2.65
3. ECA (1 - 2)	170.79	8.33
4. LTF	307.21	9.30
5. FA	235.24	0.68
6. ELTF (4 - 5)	71.97	8.62
7. OCL	181.01	1.62

The EBB of the two companies, according to the two methods of lending, were:

Company 00967:

(Rs. in lakhs)

$$\text{EBB I} = 1.65 + 170.79 - 71.97 = 100.47$$

$$\text{EBB II} = \text{Adjusted RCA} < \text{OCL} = 105.45$$

Company 01702:

$$\text{EBB I} = 0.26 + 8.33 - 8.62 = \text{No EBB}$$

$$\text{EBB II} = 0.66 + 8.33 - 8.62 = 0.37$$

It is to be seen that in the case of company 00967, ELTF was adequate to meet the matching contribution and a part of ECA under both the methods of lending. EBB were, therefore, basically due to holdings of ECA. Similarly, in the case of company 01702 ELTF were enough to provide for matching contribution as well as a substantial part of ECA holdings under lending Method II, whereas under lending Method I ELTF covered both the matching contribution and ECA completely; hence no EBB. However, an important difference between the two companies was that while company 01702 would have enhanced its PBF by liquidating ECA and paying off OCL, in the case of company 00967 this would not be possible since the ABB would be equal to PBF even after the repayment of OCL by liquidating ECA.

We may now turn our attention to the COT.SP. industry. From this industry, the five companies belonging to this industry, which are analysed, fall into two broad categories on the basis of the behaviour with respect to holdings of ECA. Category A comprises 3 companies, viz. (1) 00477, (2) 00512 and (3) 01380. These three companies did not have excess holdings of any component of inventories and receivables. Category B consists of two companies, viz. (1) 00537 and (2) 00563, with holdings of excess raw materials. However, the behaviour of these companies within the same category was not identical with respect to EBB. Another interesting feature of companies in Category A was that all the three have EBB according to Method II of lending and one company (00512) had

EBB even under lending Method I despite the fact that there were no excess holdings of inventories and receivables. Now we shall present the analysis of EBB of these companies according to the 'balance sheet approach'.

The data regarding category A companies are presented below:

<u>Item</u>	(Rs. in lakhs)		
	Company Code No.		
	<u>00477</u>	<u>00512</u>	<u>01380</u>
1. TCA	104.25	181.91	117.33
2. RCA	103.22	181.64	117.33
3. ECA (1 - 2)	1.03	0.27	-
4. LTF	81.50	157.59	107.81
5. FA	69.64	158.46	83.90
6. ELTF	11.86	-0.87	23.91
7. OCL	72.81	149.49	60.90

The EBB of these three companies under both methods of lending, following balance sheet approach are shown below:

Company 00477: (Rs. in lakhs)

$$\text{EBB I} = 7.60 + 1.03 - 11.86 = \text{No EBB}$$

$$\text{EBB II} = 25.80 + 1.03 - 11.86 = 14.97$$

Company 00512:

$$\text{EBB I} = 8.04 + 0.27 + 0.87 = 9.18$$

$$\text{EBB II} = \text{Adjusted RCA} < \text{OCL} = 33.27$$

Company 01380:

$$\text{EBB I} = 14.11 + 0 - 23.91 = \text{No EBB}$$

$$\text{EBB II} = 29.33 + 0 - 23.91 = 5.42$$

It may be seen that company 00512, with relatively less bank borrowings (9.8 per cent of total funds) than the other two companies (11.2 per cent and 16.2 per cent of total funds in the case of companies 00477 and 01380 respectively), had EBB according to both the methods of lending while companies 00477 and 01380 had EBB only according to lending Method II. This was mainly because in the case of company 00512 LTF were not even adequate to finance fixed assets, whereas in the case of the other two companies LTF were not only sufficient to cover fixed assets but also provided matching contribution towards current assets as per the Tandon Committee's recommendations and also ECA. Therefore, there were no EBB according to lending Method I in the case of companies 00477 and 01380. On the other hand, according to Method II of lending it was to be noticed that all the three companies had a deficit in LTF. Another point that needs to be emphasised here is the differential impact of different proportions of LTF and OCL of total funds on EBB.

This may be clearly seen from the fact that under lending Method II companies 00477 and 01380 had 76 per cent and 17 per cent of EBB as a per cent of ABB respectively, though bank borrowings as a proportion of total funds were higher in the case of company 01380. One common feature of all the three companies is that they could have enhanced their PBFs by raising additional LTF to repay OCL. Considering the level of OCL, there was ample scope for the three companies to make this type of substitution which would have improved their

borrowing capacities from the banking system, within the Tandon Committee's framework.

Category B

In this category, there were two companies, viz. company 00537 and company 00563, which had excess raw materials. But company 00537 had EBB according to both the methods of lending while company 00563 had EBB under Method II only. The relevant data and the EBB as per lending Methods I and II are presented below:

Company 00537: (Rs. in lakhs)

$$\text{EBB I} = 7.38 + 10.34 - 4.63 = 13.09$$

$$\text{EBB II} = 15.31 + 10.34 - 4.63 = 21.02$$

Company 00563:

$$\text{EBB I} = 19.18 + 52.44 - 81.26 = \text{No EBB}$$

$$\text{EBB II} = 43.29 + 52.44 - 81.26 = 14.47$$

<u>Item</u>	<u>Company Code No.</u>	
	<u>00537</u>	<u>00563</u>
1. Total C.A.	71.58	225.60
2. RCA	61.24	173.16
3. ECA (1 - 2)	10.34	52.44
4. LTF	69.77	249.53
5. FA	65.14	168.27
6. ELTF	4.63	81.26
7. OCL	31.71	96.42

It may be observed that both these companies had ECA. However, in the case of company 00537 the liquidation of entire ECA to repay OCL, which would have enhanced the PBF,

was not sufficient to offset the EBB under both the methods of lending. Even direct repayment of bank credit out of the proceeds realised from ECA could not have been adequate to completely eliminate EBB. Thus, there was a clear shortfall in the LTF. On the other hand, in the case of company 00563 liquidation of a part of ECA would have been sufficient to either repay EBB or to enhance the PBF via a reduction in OCL. In other words, company 00563 had the option of either repaying the EBB directly or enhancing its PBF by bringing down OCL out of the proceeds of ECA.

The following observations may be made from the above analysis.

(a) In the MPH industry, all the nine companies analysed had excess receivables while none of them had excess holdings of finished goods.

(b) Category A companies of the COT.SP. industry showed that a company may have EBB within the framework of the Tandon Committee even without holdings of excess inventory or receivables. In these companies, EBB were due to either a high level of OCL in relation to RCA which results in a lower WCG and hence a lower PBF or a low level of ELTF, inadequate to cover the matching contribution towards financing a part of RCA.

(c) Almost all the companies in the MPH industry had such high levels of ECA, even higher than EBB, so that they had the option of (i) repaying the EBB by liquidating the ECA or (ii) enhancing their PBF by using the funds obtained by

liquidating ECA to pay off OCL. It is also to be noticed that these companies had high levels of ELTF to finance the increased levels of matching contribution in the event of (ii) mentioned above.

(d) In the case of COT.SP. industry, the ECA holdings of the companies were minimal. In most of the companies the required contribution in the form of LTF was higher than the actual surplus LTF available after providing for fixed assets formation.

(e) Since ECA holdings were not substantial enough in the case of COT.SP. industry the liquidation of which would have reduced EBB, the only possibility of eliminating or reducing EBB was to raise additional LTF. This additional LTF could have been used for financing part of current assets, as suggested by the Tandon Committee, thus making the bank funds hitherto locked up in financing these current assets available for repayment. Or, alternately, the additional LTF used to reduce OCL would have enhanced the WCG and hence PBF. In the case of these companies, therefore, there was a need to raise LTF in order to comply with the Tandon Committee norms.

Section III

In this section, an attempt is made to examine the relation between (a) company size and borrowings, and (b) rate of growth of companies and bank borrowings. We have used paid-

up capital as a measure of size¹ and rate of change in net assets as an indicator of growth. Net assets consist of (a) net fixed assets and (b) current assets.

Fixed assets and sales also have been used in some of the studies as indicators of rate of growth of companies. However, the relation between fixed assets and bank credit requirement is not direct and depends on the assumption that there exists some kind of a proportional relationship between fixed assets and working capital. A direct relation between sales and bank credit, too, may not be very promising, because inventory, a principal component of working capital, depends not only on sales but also on output. Since we are interested in a rather direct relation between rate of growth of companies and bank credit, we used rate of change in net assets as an indicator of growth which reflects the change in fixed assets as well as change in inventories. Moreover, for our sample companies it is found that fixed assets and sales are highly correlated with net assets. The correlation coefficients between (a) fixed assets and net assets and (b) sales and net assets are 0.93 and 0.86 respectively. Therefore, the results would have been more or less similar whichever measure is used

1 As mentioned earlier, our sample companies are drawn from the RBI's sample of Medium and Large Public Limited Companies. The RBI's classification of companies into small, medium and large is based on the size of paid-up capital. We, therefore, have used paid-up capital to represent size of a company. And it also facilitates division of the sample into medium and large companies, consistent with the RBI's classification.

and some of the earlier studies also support this point of view.

Meeks and Whittington state that, "In fact the two measures proved to be highly correlated so that the results are broadly similar whichever measure is used".¹ In another study, it is also found that measures like net assets, sales and fixed assets are very closely correlated for purposes of ranking.²

Since the emphasis of our analysis is on the relationships between (a) size and EBB, and (b) rate of growth and EBB, we have used all the 100 companies of our sample, irrespective of the industry to which they belong.

The size of a company may be expected to have a significant effect on its pattern of financing, since it may be argued that big and well-established companies have greater access to capital market as well as to banking system. In particular, so far as raising resources from the market is concerned it may not be unreasonable to suppose that large and established companies are generally in an advantageous position vis-a-vis small companies. However, large firms may

1 Geoffrey Meeks and Geoffrey Whittington, The Financing of Quoted Companies in the United Kingdom [Background Paper to Report on Royal Commission on the Distribution of Income and Wealth], Her Majesty's Stationery Office, London, 1976, p. 17.

2 See J. Bates, "Alternate Measures of the Size of Firms," in P.E. Hart, Studies in Profit, Business Saving and Investment in the United Kingdom 1920-1962, Vol. 1, George Allen and Unwin Ltd., London, 1965, pp. 133-149.

not have the same edge over small companies as regards bank borrowings in a country like India, where most of the scheduled commercial banks are owned and are under Government's control. Therefore, unlike in the case of market borrowings, where large and established firms are placed in a better position, in the case of bank borrowings the advantage of large and well-established companies over small firms would be mitigated, if not totally eliminated, since banks have to follow Government's broader policy objectives in their credit deployment.

Nonetheless, it may be reasonable to suppose a positive relationship between bank borrowings and size of a company. This^{is}/so, because working capital requirements of a company are positively associated with the size of it. The larger the size of a company, therefore, the larger the working capital requirements, and other things remaining the same, the larger the bank borrowings will be.

Next, coming to the relationship between rate of growth of companies and their borrowings from banks, it is hypothesised that there exists a positive relationship between them. The underlying rationale is that the working capital requirements of fast growing companies will be higher than companies with lower rates of growth. This is because the indicator of growth used in our analysis is rate of change in net assets and net assets include current assets as well. Therefore, a higher rate of growth of current assets means a higher rate of

increase in working capital requirements and hence larger bank borrowings. From this relation, ceteris paribus, it may be surmised that rate of growth of companies to be positively related with EBB.

Firstly, we shall be dealing with the relation between size factor, as represented by paid-up-capital and EBB.¹

Table 6.6 presents distribution of 100 companies according to their paid-up capital.

Table 6.6 : Paid-up Capital-wise Distribution of 100 Companies

Paid-up capital (Lakhs of Rs.)	1970-71	1975-76	1978-79
5.0 - 9.99	3 (1)	3 (2)	1 (-)
10.0 - 24.99	22 (18)	19 (15)	20 (12)
25.0 - 49.99	32 (23)	26 (16)	23 (19)
50.0 - 99.99	19 (11)	24 (18)	25 (22)
100.0 - 199.99	15 (7)	16 (12)	15 (12)
200.0 - 499.99	8 (6)	9 (3)	10 (4)
500.0 and above	1 (1)	3 (2)	6 (4)
Total	100 (67)	100 (68)	100 (73)

Note: Figures in parentheses are number of companies with EBB.

From the Table it is seen that there was a concentration of sample companies as well as companies with EBB within the paid-up capital (PUC) range of Rs.10 lakhs and Rs.99.99 lakhs.

¹ In this section EBB refer to EBB of companies under lending Method II.

However, if a broad division has to be made as (a) large companies and (b) medium companies, it may be observed that the number of companies with EBB expressed as a percentage of total companies with EBB in relation to the number of companies was higher in all the three years in the case of medium companies. This may be seen from the Table 6.7.

However, companies with paid-up capital of Rs. 1 crore and above which have EBB had increased as may be seen from Table 6.7.

Table 6.7 : EBB of Medium and Large Companies

	(Percentages)					
	1970-71		1975-76		1978-79	
	(A)	B	(A)	B	(A)	B
Medium	76	(53) [79]	72	(51) [75]	69	(53) [73]
Large	24	(14) [21]	28	(17) [25]	31	(20) [27]

Note: a) Medium-size companies are companies with paid-up capital ranging from Rs.5 lakhs to Rs.99.99 lakhs.

b) Col. (A) gives number of companies.

c) Figures in parentheses are the number of companies with EBB.

d) Figures in square brackets are the number of companies with EBB as per cent of total companies with EBB.

Now we shall examine the relationship between size and EBB of companies in terms of the magnitudes of EBB. In Table 6.8 EBB of the companies, paid-up capital-wise, are presented.

Table 6.8 : EBB of 100 Companies by the Size of PUC

PUC	(Rs. in lakhs)					
	1970-71		1975-76		1978-79	
5.0 - 9.99	6	(0.3)	27	(0.6)	Nil	
10.0 - 24.99	236	(11.2)	372	(7.9)	612	(6.0)
25.0 - 49.99	531	(25.2)	652	(13.9)	799	(7.8)
50.0 - 99.99	472	(22.4)	1209	(25.9)	2726	(26.5)
100.0 - 199.99	197	(9.4)	1894	(40.5)	3940	(38.4)
200.0 - 499.99	560	(26.7)	124	(2.7)	519	(5.0)
500.0 and above	105	(5.0)	395	(8.4)	1672	(16.3)
Total	2107		4673		10268	

Note: Figures in parentheses are percentage of total EBB.

From the Table it may be seen that the share of large companies in EBB had increased over time from 41 per cent of total EBB of all companies in 1970-71 to 51 per cent in 1975-76 and further to 60 per cent in 1978-79. The number of companies, as well as companies with EBB in this group, had increased. And in the year 1978-79, companies from this group forming approximately 30 per cent of the total companies, accounted for approximately 60 per cent of total EBB. Another point to be mentioned here is that companies within the paid-up capital range of Rs.10.0—99.99 lakhs forming approximately 50 per cent of the sample in the year 1975-76 and 1978-79 accounted for roughly 40 per cent of total EBB. It may, therefore, be said that this group of companies in our sample

account for the bulk of EBB, within the Tandon Committee's framework.

Thus, the influence of size factor on EBB, as revealed in our analysis, indicates that between the years 1975-76 and 1978-79, the number of companies with EBB as well as the amounts of EBB with respect to large companies had gone up. On the other hand, the EBB of the medium-size companies, except within the paid-up capital range of Rs.5.0—9.99 lakhs, had declined from 22 per cent to 14 per cent of total EBB between 1975-76 and 1978-79. On the whole, from the above analysis it may be inferred that the size of company is positively associated with EBB. This is in line with the expected behaviour considering the relatively large working capital requirements of and the consequent bank borrowings by large companies. Moreover, this is not surprising when one takes into account other factors like relatively high cost of funds from alternative sources, tax disadvantages and dilution of control associated with equity funds all of which result in large bank borrowings.

Now we shall turn our attention to an examination of the relationships between (a) rate of growth of companies and bank borrowings, and (b) rate of growth of companies and EBB.

The rates of growth of our sample 100 companies along with the position of EBB, i.e., presence or absence of EBB, for the year 1978-79 are presented in Appendix VI.1. At a first glance, it seems that there was no definite relation between rate of growth of a company and its EBB. This is so

because the companies with EBB had very wide differences in their rates of growth ranging from a significant negative rate of growth (-20.3 per cent) to a growth rate of nearly 65 per cent. Many companies with decline in net assets had EBB, while some of the companies with high rates of growth had no EBB. Thus, there is no discernible relation, as revealed by the available data, between EBB and rates of growth of individual companies. This is not surprising considering the fact that EBB are a function of current assets, OCL and LTF, apart from bank borrowings as such. The rate of growth in net assets conceals the movements in these components. In other words, a certain rate of growth in net assets could be associated with different movements in bank borrowings, OCL and LTF. And we have seen that various combinations of these items will result in the absence or presence of EBB, with different magnitudes, within the framework of the Tandon Committee's recommendations. Therefore, companies with wide ranging differences in their rates of growth may still exhibit similar behaviour as regards EBB.

However, further analysis classifying companies into three groups with respect to their rates of growth revealed that there was a systematic relationship between rate of growth and bank borrowings of the companies. For this purpose, the selected 100 companies are broadly divided into three groups, viz.

- 1) Companies with negative rate of growth.
- 2) Companies with a rate of growth less than

the average rate of growth for the 100 companies which is 13.44 per cent. This group of companies will be called as slow-growth companies.

- 3) Companies with rates of growth higher than the average, labelled as fast-growth companies.

The relevant data are presented in Table 6.9.

Table 6.9 : Size of Bank Borrowings, Changes in Bank Borrowings and Rates of Growth in Bank Borrowings according to Rate of Growth of Companies — 100 Companies (1978-79)

	(in per cent)				
Rate of Growth	(1) No. of companies	(2) Companies with EBB	(3) Δ BB as % Δ NA	(4) BB as % NA	(5) Rate of growth in EBB
Negative	27	19	47.0	19.1	-12.7
Slow-Growth	25	16	17.5	19.7	7.0
Fast-Growth	48	38	24.7	20.6	32.2
Total	100	73	21.2	20.1	14.1

From the Table it may be observed that companies with negative rate of growth were also the companies with negative rate of growth in bank borrowings.

Another point to be emphasised is that the fast-growth companies exhibited a high rate of growth (32 per cent) in bank borrowings while slow-growth companies had a lower rate of growth (7 per cent) in bank borrowings. This supports the contention that the needs of working capital of fast-growth

companies being high, the rate of increase in their bank borrowings are also high. From Cols. 1 and 2 of the Table it may be seen that 79 per cent of the companies in this group, i.e. 38 out of 48 companies, had EBB. This coupled with the evidence shown in Col. 3, representing the percentage share of bank credit in financing net assets formation being relatively higher for this group, leads to the tentative conclusion that bank borrowings were positively associated with the rate of growth of companies. The evidence regarding the other two groups presented in the Table further confirms this pattern of behaviour.

Now let us examine the relationship between rate of growth and EBB of the companies. The relevant data are presented in Table 6.10.

Table 6.10 : Size of Bank Borrowings, Changes in Bank Borrowings and Rates of Growth in Bank Borrowings according to Rate of Growth of Companies — EBB Companies (1978-79)

Rate of Growth	(1) No. of Companies	(2) Δ BB as % Δ NA	(3) BB as % NA	(4) Rate of Growth of BB	(5) EBB % ABB	(6) EBB as % Total EBB
Negative	19	30	23.1	-7.4	73.7	20.6
Slow-Growth	16	19.7	27.1	5.8	73.7	17.9
Fast-Growth	38	25.6	22.9	30.8	73.9	61.4

From Table 6.10 it is noted that for all the three groups of companies, EBB expressed as per cent of ABB of the group were of the same order, i.e. approximately 74 per cent.

However, EBB expressed as a percentage of total EBB were 61 per cent, 18 and 21 per cent for the fast and slow-growth companies and companies with negative rate of growth respectively. This indicates that, though EBB expressed as a percentage of ABB of the same group was almost same for all the three groups, the share of fast-growth companies in total EBB was very high. This is not surprising, as mentioned earlier, as there exists a positive relation between rate of growth and bank borrowings. In other words, the high growth rate companies were also the companies with high rates of bank borrowings. Further it may be noticed from Col.1 of the Table that 38 companies from this group had EBB accounting for 52 per cent of the total number of EBB companies.

Some of the main conclusions based on the empirical analyses of this and earlier sections of this chapter are presented in the next section.

Section IV

Our data show that the implementation of the Tandon Committee recommendations did not achieve the desired objective of reducing corporate firms' dependence on the banking system. It is noted that there was no decline either in the number of companies with EBB or in the magnitudes of EBB in the year 1978-79 compared with that of 1975-76. In fact, the number of companies with EBB and also EBB as percentage of ABB had gone up in the year 1978-79. However, after 1975-76 the number of companies with excess raw material and work-in-

progress holdings declined which is in conformity with the observation made by the industry level analysis in the previous chapter. Thus, the positive aspect of the implementation of the norms is that it resulted in bringing down components of excess inventory holdings by firms. However, this reduction has not led to a decline in EBB, since EBB, as has been noticed, are a function of OCL and LTF as per the Tandon Committee's suggested methods of lending apart from the level of current assets as such.

It is observed that companies with similar behaviour regarding excess holdings of inventory and receivables showed divergent behaviour as regards EBB. It is also seen that for a given level of current assets, PBF could be different with different levels of OCL. Another interesting feature is that some of the companies, with no excess holdings of inventory and receivables and without diversion of bank credit for financing fixed assets, did have EBB. All these point to the fact that it is not just the level of current asset holdings that is crucial in the determination of EBB of a company; equally important are the levels of OCL in determining the working capital gap and therefore PBF. Therefore, the capacity of a company to keep its OCL at a lower level for a given level of current assets will enhance its borrowing power, i.e. PBF. Hence, the elasticity of substitution between LTF and other short-term sources is of crucial importance in the determination of PBF for a given level of current assets. Further, the analysis reveals that the Tandon Committee's norms for inventory

and receivables and methods of lending as a package has the effect of making companies to raise additional resources from the capital market to meet the required matching contribution towards financing a part of current assets. Our analyses reveal that many medium-size companies had EBB not because of ECA but due to shortage of LTF. Whether this class of companies will be able to raise funds from the capital market, is a problem which needs further empirical work. A related question in this context is the impact of this development on the operations of the banking system which has been discussed in Chapter V.

As regards the second issue, it has been observed that the size and EBB of the companies were positively associated. In other words, large companies with paid-up capital of Rs. 1 crore and more accounted for a high proportion of EBB. Further, the share of these companies in total EBB had gone up between the years 1975-76 and 1978-79.

It is also observed that the rate of growth of companies and bank borrowings were positively associated, i.e., fast-growth companies were the companies with high growth rates in bank borrowings and slow-growth companies had a moderate rate of increase in bank credit while companies with negative rate of growth showed a decline in their bank credit. The evidence (Table 6.9, Cols. 3 and 4) suggests that bank credit is an important source of funds for the companies. It is seen (Table 6.10, Col.6) that fast-growth companies accounted for the bulk of EBB, i.e., slightly less than two-thirds of total EBB.

In the light of the above two findings it seems that more attention needs to be paid to large and fast growing companies by the banking system in order to reduce the dependence of industry on bank credit. This may be achieved by the banking system strictly following the Tandon Committee recommendations. For, the compliance with the Tandon Committee's norms result in either reduction of ECA or compelling the companies with EBB to raise additional funds from the market. And this may release some of the bank funds hitherto locked-in with companies either for holding excess inventories in relation to production requirements or for financing fixed assets. The funds thus released may be deployed elsewhere in the economy and this will help achieve one of the objectives of credit planning viz., provision of bank credit for productive purposes. The Tandon Committee recommendations, therefore, should form an integral part of credit policy.

Moreover, the potential capacity of large companies to obtain resources from capital market being higher than medium and small companies, large companies may not face serious financial problems, unlike the latter group, if the banking system strictly adheres to the Tandon Committee recommendations. Of late, as showed in Chapter V, the response of the public towards investing in the private corporate sector in the form of debentures and company deposits has been quite good. Nonetheless, the Indian capital market needs to be further strengthened so that a part of the working capital requirements of the corporate sector, as envisaged by the Tandon Committee,

may be financed through this source. For developing the capital market, measures like simplifying the procedures, relaxation of debt-equity norms and a realistic interest rate structure may be helpful.

However, to avoid any deleterious effect on the production performance of companies with large EBB, by a one-time and sudden reduction in bank credit, it is perhaps advisable to eliminate EBB over a period of time. It may help if the banking system follows the suggestion made by the Chore Committee with respect to EBB. The Chore Committee, in fact, recommended that EBB may be converted into a long-term loan viz., 'working capital term-loan' (WCTL) to be repayable over a span of time. Moreover, to induce the borrowers to repay WCTL on time the Committee also suggested a penal rate of interest, i.e., 2 per cent more than what is charged on cash credit accounts.

To conclude, it is clear that there is scope for reducing the dependence of companies on bank credit by following the recommendations of the Tandon and Chore Committees along with some measures to develop the capital market.

Appendix VI.1 : Excess Bank Borrowings of Companies

(Rs. in '000)

Name of Industry	Company Code Number	Lending Method I									Lending Method II								
		1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
1) COT.COM.	00032	NE	NE	NE	NE	5669	NE	1856	61	NE	587	1730	960	6474	20340	3324	16976	174	151
	00036	14216	34788	NE	NE	NE	NIL	NIL	668	690	34122	48616	4480	157	16930	NIL	NIL	756	802
	00041	2704	NE	1086	NE	5198	9192	12620	207	87	6987	534	6509	4790	11123	16431	2332	338	213
	00047	4764	21665	12838	27778	36509	85864	151264	1975	2407	13362	31458	21297	33645	43795	95205	151264	1975	2487
	00052	NE	NE	1387	6811	6454	2881	11114	130	81	111	1252	5264	7517	13636	10405	20988	201	209
	00058	NE	902	NE	2464	NE	7347	15667	189	100	226	4157	1596	7736	5820	10595	15657	262	201
	00065	NE	2478	4670	5030	5068	6970	14176	143	219	209	7540	12478	12425	15562	21256	28711	383	404
	00453	NE	NE	1044	4967	6598	8666	612	61	81	NE	3489	5816	10885	14437	16968	18542	170	199
	00464	4522	532	7780	8691	14766	12782	18339	258	231	8130	6935	13207	16861	24748	23236	31015	393	346
	00469	8106	16355	4863	2978	6894	10176	9421	129	93	10891	9050	7652	6451	11620	14206	14666	182	143
	00481	1870	10215	7348	3905	2063	3460	3526	24	38	3690	13363	10000	6883	5177	7046	8404	69	98
	00489	294	2885	1101	NE	3838	477	4843	NE	123	4123	7408	4873	1464	5156	5747	10586	30	170
	00501	7354	12218	7481	5490	5755	6062	12838	247	290	9155	14054	11020	8862	10155	10150	16376	264	333
	00508	NE	1709	NE	NE	NE	NE	175	59	293	1018	4429	NE	3497	NE	3325	5496	146	374
	00525	5837	2067	801	2405	5466	3623	4369	15	34	6991	3273	2059	3684	8097	6284	7147	47	71
	00533	4187	6364	2577	NE	NE	8413	12631	178	97	7603	10238	6714	582	4006	14584	19190	266	210
	00542	1457	4727	5180	2169	4025	9991	13425	143	239	2475	5973	6486	4198	7376	14000	16379	183	239
	00547	8000	10942	8865	4981	6835	7701	572	236	145	9387	10966	11438	8903	13980	14635	11149	319	292
	00553	492	1717	244	NE	NE	NE	1236	37	11	2351	3051	2396	NE	2535	1483	3992	81	50
	00565	1846	21872	8369	21063	17098	38122	32805	2966	455	22557	29073	13429	28805	31504	51109	47590	400	455
	00570	20	3138	5555	9421	3826	NE	1620	51	9	2913	6051	9013	13302	8074	4101	6279	115	103
	00578	NE	NE	NIL	NIL	NIL	NIL	NIL	NIL	99	NE	NE	NIL	NIL	NIL	NIL	NIL	NIL	160
	00587	2987	4557	6104	6374	9872	7731	7944	33	148	4581	7076	10898	9008	15733	14313	15069	126	265
	00607	14498	17487	23626	24035	18422	24626	29487	388	424	14498	17487	24887	27787	25111	26560	29487	388	424
	00618	2322	3493	3157	3283	2456	7345	6676	89	61	3635	4020	4555	4546	4032	7345	8563	99	87
	00631	1028	7142	1005	NE	NE	NE	NE	NE	NE	2955	9133	2869	2780	NE	2008	1515	21	NE
	01369	4130	4452	4971	5700	6573	12233	18077	214	245	5691	5885	6782	7981	9474	14594	20351	241	261
	01393	4101	5224	5617	5245	6855	3252	4145	38	104	4101	5224	5617	7031	7551	3252	4145	64	104
	01798	110	120	NIL	1016	24	NIL	NIL	NIL	NIL	110	120	NIL	2000	1051	NIL	NIL	NIL	NIL

(continued)

Appendix VI.1 : (continued)

		(as. in '000)																	
Name of Industry	Company Code Number	Lending Method I									Lending Method II								
		1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
2) COT.SP.	00040	17248	6439	4078	5056	NIL	NIL	NIL	NIL	NE	23577	12110	4078	18602	NIL	NIL	NIL	NIL	7157
	00477	1850	1757	895	NIL	NE	NIL	NIL	NE	NE	2229	1757	895	NIL	58	NIL	NIL	NE	1498
	00498	NE	4942	4667	6036	5035	6332	11439	7880	5890	988	6164	6803	9425	9273	10589	15127	7880	10557
	00512	3571	3444	2352	2773	3917	4972	3589	1699	916	5152	5146	3462	5203	4618	4972	3589	1699	3327
	00537	280	423	518	18	1324	1129	1514	1301	1311	460	792	990	430	2174	1973	2082	2155	2104
	00563	1785	3042	2158	422	NE	NE	NE	NE	NE	1785	3042	3098	2890	437	NE	NE	NE	1477
	00579	NIL	NIL	NIL	NIL	1184	NE	826	NE	2295	NIL	NIL	NIL	2497	501	2720	2908	7163	
	00590	2594	2901	2073	2854	2567	4103	5024	5149	5355	3026	3083	2546	3245	2799	4389	5024	5389	5533
	00597	NE	NE	NE	916	1187	1742	1399	2109	879	144	579	800	1945	1187	3366	2817	3857	879
	00602	523	918	468	NIL	NE	37	349	2168	633	523	956	981	NIL	354	799	911	3180	1606
	00613	1000	138	537	935	NE	1267	882	882	NE	1349	408	782	1188	63	1920	2015	2015	54
	00619	1315	1785	2419	583	998	2107	1825	509	178	1315	1808	2583	868	1498	2210	2087	509	178
	00623	3012	6239	6772	2549	NE	2008	1836	1274	11442	4312	6239	8447	3778	507	3520	3033	2919	13088
	00628	NE	NE	NE	NE	NE	1589	5109	7339	7902	NE	535	552	723	NE	3467	5109	7339	7902
	01364	55	699	NE	1784	1939	2017	978	NE	NE	800	1880	659	2400	3461	3453	2482	1294	NE
	01376	733	1783	1508	2114	1135	1188	1757	2096	275	733	1783	1508	2493	1723	1188	1757	2096	1385
	01380	NE	1151	1377	1697	1560	2664	2756	2917	NE	209	1249	1818	1729	1560	2664	2756	3563	542
	01397	239	334	784	361	1144	2406	2716	2886	NE	401	654	1216	664	1744	3069	3651	3701	NE
	01403	343	569	17	1186	1740	340	1161	1028	2313	343	569	17	1288	1740	340	1161	1513	2320
	01413	693	916	406	255	494	552	946	794	663	693	916	748	608	852	946	1645	1234	1496
	01660	668	NE	NE	NE	657	675	NE	NE	626	668	NE	NE	NE	657	675	NE	NE	670
	01801	1258	NE	NE	NE	NE	147	NE	NE	NE	1641	NE	NE	NE	NE	688	324	363	NE
	02172	209	NE	NE	NE	1746	414	NE	NE	5691	497	NE	NE	NE	2778	1378	NE	NE	7892

(continued)

Appendix VI.1 : (continued)

		(no. in '000)																	
Name of Industry	Company Code Number	Lending Method I									Lending Method II								
		1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
3) BIC	00207	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
	00212	8843	6123	6876	NE	NE	260	NE	NE	13415	11205	8283	8483	NE	NE	2704	NE	2138	17345
	00214	7538	17690	7696	5397	9486	13091	NE	7990	31571	16206	24508	16879	16045	16421	21936	NE	16910	42933
	00216	NE	1954	6278	2570	911	8571	13579	19399	18289	NE	3092	7652	3257	2825	12143	15496	21152	18289
	00218	NE	NE	NIL	NE	NIL	NIL	NIL	NE	NIL	NE	NE	NIL	NE	NIL	NIL	NIL	NE	NIL
	00220	3111	NE	NE	NE	NE	NE	NE	NE	NE	5847	NE	NE	NE	NE	2965	NE	NE	NE
	00223	6272	6192	5475	3663	1724	2180	1024	3100	8091	6272	6192	5475	3663	3994	3342	2908	3100	8091
	00225	2348	3145	5570	9960	5049	4597	2121	8836	24607	3648	3991	7317	10002	9350	9717	7371	11078	24607
	00228	NIL	968	3000	NIL	NIL	NE	NIL	NE	6857	NIL	968	3000	NIL	NIL	NE	NIL	10449	18244
	00230	NIL	NIL	NIL	NIL	NE	11818	25490	32280	43683	NIL	NIL	NIL	NIL	11726	11818	25490	32280	43683
	00232	143	NE	NE	NE	NE	NE	NE	NE	7039	2613	1426	892	NE	NE	NE	NE	NE	16864
	00235	10473	10716	1768	18300	21620	NE	NE	NE	NE	14184	10716	7613	23722	26788	8318	NE	NE	NE
	00237	1804	11208	11167	1178	25418	26412	50037	45346	22988	2977	11208	11167	1178	25418	26412	50037	45346	22988
	01509	NE	908	1207	NIL	NIL	NE	NIL	NIL	NIL	345	988	1207	NIL	NIL	201	NIL	NIL	NIL
	01767	NIL	NE	NIL	NIL	NIL	10839	6633	2499	9043	NIL	59	NIL	NIL	NIL	11546	6818	2499	9043
	00930	1101	1482	1422	1494	2155	2352	2144	2197	2386	1200	1604	1548	1672	2459	2614	2144	2197	2386
	00932	NIL	NIL	NE	1745	1165	NE	NIL	NIL	NIL	NIL	NIL	1155	3520	1165	NE	NIL	NIL	NIL
	00934	3600	3600	6078	4970	10234	1520	8907	10219	8517	3600	3600	6078	4970	10234	1520	9533	11486	8879
	00937	1483	NE	NIL	1516	4393	NIL	3501	1630	4870	1744	NE	NIL	1772	4840	NIL	4236	2667	6542
	00939	NE	3154	2765	NE	2066	2000	2519	3761	2442	110	3547	3447	NE	2420	2469	2987	3761	3412
	00941	NE	1387	NE	624	2015	5489	1816	1847	1934	143	1813	154	1534	2794	5937	4187	3685	1934
	00943	1966	1556	2753	2977	4428	2080	5854	4810	2132	2403	2648	3178	3756	6137	4479	8595	7483	4915
	00945	270	NE	NE	143	NE	NE	NE	NE	NIL	451	NE	91	245	NE	NE	NE	NE	NIL
	00947	NE	NE	NIL	156	561	1603	443	2521	528	244	66	NIL	514	561	1603	960	2521	1407
	00949	NIL	NE	160	NE	NE	NIL	NE	407	NE	NIL	223	1084	1516	1343	NIL	1175	3015	2927

(continued)

Appendix VI.1 : (continued)

(ns. in '000)

Name of Industry	Company Code Number	Lending Method I									Lending Method II									
		1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	
4) MPH	00238	6356	3181	13629	9665	12418	358	NE	381	NE	14753	12710	27329	20661	25333	10125	10452	15425	12020	
	00242	NE	3584	NE	NE	NE	7234	9234	7167	334	2830	8308	3409	746	2792	9819	14330	13383	5905	
	00245	368	NE	4416	NE	NE	NE	NE	NE	NE	2600	NE	8264	1319	NE	NE	NE	NE	NE	
	00953	1071	2849	3176	3895	6599	7318	7253	9961	9683	1071	4290	4885	5407	8028	8036	7659	11528	9683	
	00956	NE	NE	NE	3399	5820	NE	NE	NE	NE	NE	NE	1500	6305	10130	2535	NE	NE	2824	
	00959	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
	00964	4534	5288	8036	8697	5223	9624	11267	13102	13208	5238	6018	9304	10496	8581	11865	14427	14329	13208	
	00967	2706	3686	5725	7369	7494	6826	6578	5416	10048	5119	4991	7193	7309	7495	7856	7535	7789	10545	
	00971	NE	NIL	NE	1552	676	2676	4457	1383	4173	1400	NIL	123	3685	3151	5778	7380	4465	7871	
	01510	773	983	774	1407	1908	1889	3207	4210	3741	875	1387	1449	1712	1908	2501	4178	4626	4221	
	01513	NE	NE	NE	NE	2173	NE	1861	1857	3388	NE	NE	NE	972	3756	1903	4614	5486	6002	
	01702	555	604	193	87	107	9	NE	NIL	NE	653	604	263	141	123	31	NE	NIL	37	
	01769	2751	3617	8724	10880	10078	10872	5198	5469	9479	4312	5562	10608	11680	14566	15505	10909	12236	19055	
	01772	NE	NE	NE	NE	NE	NE	2422	759	NE	NE	512	NE	NE	NE	NE	2422	2088	737	
	01829	4765	5357	5437	5474	3009	3193	4018	3623	5072	5020	5811	5822	5474	3009	3255	5285	4986	6452	
5) BVH	00392	NE	1402	4699	3592	NE	NE	6948	2123	8607	100	2747	6272	5954	771	1283	9247	7545	11956	
	00393	119	265	8312	2279	16	NE	1780	72	NE	1658	1907	10104	4516	2249	138	4715	3523	1428	
	00394	110	116	483	537	38	652	337	357	625	110	116	483	537	38	652	1054	851	1400	
	00395	3939	3152	5025	1461	3752	6256	9712	3693	4087	3939	3152	5794	4028	5898	6256	10984	8551	5726	
	00397	100	1160	2167	584	2163	1916	3646	6602	12309	2306	3566	4385	3176	5248	4940	8010	12990	18084	
	01322	NE	529	NE	NE	NE	NE	2569	2529	3955	915	3720	2375	156	725	NE	8800	7817	10180	
	01323	1355	2091	2544	5258	4824	3060	2983	1828	NE	2255	2091	2544	6403	5255	3880	4813	3900	837	
	01326	NE	2192	NE	NE	NE	NE	NE	NE	3070	1606	4927	1460	NE	2197	857	1321	5819	11798	

Note : NE = No EBB.

NIL = No bank borrowings.

Appendix VI.2 : Component-wise Excess Current Assets of Companies

Name of Industry and Company Code Number	1970-71						1975-76						1978-79					
	R	W	F	RE	EBB		R	W	F	RE	EBB		R	W	F	RE	EBB	
					I	II					I	II					I	II
1) <u>BIC</u>																		
00207	E	0	0	E	X	X	E	0	0	0	X	X	0	0	0	0	X	X
00212	E	0	E	E	P	P	E	E	E	E	P	P	E	E	0	E	P	P
00214	E	0	E	0	P	P	E	0	0	E	P	P	0	0	E	E	P	P
00216	0	0	E	E	X	X	E	0	E	E	P	P	E	0	0	0	P	P
00218	0	E	0	0	X	X	E	E	0	0	X	X	E	E	0	E	X	X
00220	E	E	E	E	P	P	E	E	E	E	X	P	0	E	E	E	X	X
00223	E	0	0	E	P	P	E	0	0	E	P	P	E	0	0	E	P	P
00225	E	E	0	0	P	P	E	E	0	0	P	P	E	0	E	0	P	P
00228	E	E	E	0	X	X	E	E	E	0	X	X	E	E	E	0	P	P
00230	0	E	0	0	X	X	0	E	E	E	P	P	E	E	E	E	P	P
00232	E	0	E	E	P	P	E	E	E	E	X	X	E	E	0	E	P	P
00235	E	0	E	E	P	P	E	E	E	0	X	P	E	E	0	0	X	X
00237	E	0	0	0	P	P	E	0	E	0	P	P	E	0	0	0	P	P
01509	E	0	0	0	X	P	E	0	0	E	X	P	E	0	0	E	X	X
01767	0	E	E	E	X	X	0	E	E	E	P	P	0	0	E	E	P	P
00930	E	E	E	0	P	P	E	E	E	0	P	P	E	E	0	E	P	P
00932	E	0	E	E	X	X	E	E	E	0	X	X	E	0	E	0	X	X
00934	E	E	E	0	P	P	0	E	0	E	P	P	E	E	E	E	P	P
00937	0	0	E	0	P	P	0	0	0	0	X	X	0	0	E	0	P	P
00939	E	0	E	E	X	P	0	0	E	E	P	P	0	0	E	0	P	P
00941	E	0	0	0	X	P	E	0	E	0	P	P	E	0	0	0	P	P
00943	E	E	E	E	P	P	E	E	E	E	P	P	0	E	0	E	P	P
00945	E	0	E	E	P	P	E	0	E	E	X	X	E	0	E	E	X	X
00947	E	0	0	0	X	P	E	0	0	0	P	P	E	0	0	0	P	P
00949	0	E	E	0	X	X	0	E	E	0	X	X	0	E	0	0	X	P
Total	19	10	16	12	13	17	19	14	16	13	14	17	17	11	11	13	17	18
2) <u>MPH</u>																		
00238	E	0	E	E	P	P	0	E	0	E	P	P	0	E	0	E	X	P
00242	E	E	0	E	X	P	E	E	0	E	P	P	E	E	0	E	P	P
00245	E	E	0	E	P	P	E	E	0	E	X	X	E	E	0	E	X	X
00953	0	0	0	E	P	P	E	0	0	E	P	P	0	0	0	E	P	P
00956	0	E	0	E	X	X	0	E	0	X	X	P	E	E	0	0	X	P
00959	0	E	0	E	X	X	0	E	0	0	X	X	0	0	0	0	X	X
00964	E	E	0	E	P	P	E	E	0	E	P	P	E	E	0	E	P	P
00967	E	E	0	0	P	P	E	0	0	0	P	P	E	0	0	E	P	P
00971	E	E	0	E	X	P	E	E	0	E	P	P	E	E	0	E	P	P
01510	E	E	0	E	P	P	E	E	0	E	P	P	E	E	E	E	P	P
01513	0	0	0	E	X	X	0	0	0	E	X	P	0	0	0	E	P	P
01702	E	0	E	0	P	P	E	0	0	E	P	P	E	0	0	E	X	P
01769	E	E	0	0	P	P	E	E	0	E	P	P	E	E	0	E	P	P
01772	E	E	0	0	X	X	E	0	0	0	X	X	0	0	0	E	X	P
01829	E	0	E	E	P	P	0	E	0	E	P	P	0	E	0	E	P	P
Total	11	10	3	11	9	11	10	10	0	12	10	12	9	9	1	13	9	13

(continued)

Appendix VI.2 : (continued)

Name of Industry and Company Code Number	1970-71					1975-76					1978-79				
	R	F	RE	EBB		R	F	RE	EBB		R	F	RE	EBB	
				I	II				I	II				I	II
3) <u>EVH</u>															
00392	O	O	E	X	P	E	O	E	X	P	E	O	E	P	P
00393	O	O	O	P	P	E	E	E	X	P	E	E	E	X	P
00394	E	O	O	P	P	O	O	O	P	P	O	O	O	P	P
00395	E	O	E	P	P	O	O	E	P	P	O	E	E	P	P
00397	O	O	E	P	P	O	O	E	P	P	O	E	E	P	P
01322	E	E	E	X	P	E	O	E	X	X	E	E	E	P	P
01323	O	O	E	P	P	E	O	E	P	P	O	O	E	X	P
01326	O	O	E	X	P	O	O	E	X	P	O	O	E	P	P
Total	3	1	6	5	8	4	1	7	4	7	3	4	7	6	8

4) <u>COT.COM.</u>	R	W	F	RE	I	II	R	W	F	RE	I	II	R	W	F	RE	I	II
00032	E	E	O	X	P	E	E	O	X	P	O	E	E	X	P			
00036	E	O	E	P	P	O	E	O	X	X	E	E	E	P	P			
00041	E	E	O	P	P	O	E	E	P	P	O	E	E	P	P			
00047	O	E	E	P	P	E	E	O	P	P	O	E	E	P	P			
00052	E	O	O	X	P	E	E	E	P	P	E	E	E	P	P			
00058	O	O	O	X	P	E	O	O	P	P	E	O	E	P	P			
00065	E	O	E	X	P	O	O	E	P	P	O	E	E	P	P			
00453	E	O	E	X	X	E	E	O	P	P	O	E	E	P	P			
00464	O	O	O	P	P	O	O	O	P	P	O	O	E	P	P			
00469	O	O	E	P	P	O	O	E	P	P	O	O	E	P	P			
00481	E	O	E	P	P	O	O	E	P	P	O	O	E	P	P			
00489	O	O	E	P	P	O	E	E	P	P	O	O	E	P	P			
00501	O	O	E	P	P	O	O	E	P	P	E	O	E	P	P			
00508	E	E	E	X	P	O	E	E	X	P	E	E	E	P	P			
00525	E	O	O	P	P	E	O	E	P	P	E	O	E	P	P			
00533	O	O	E	P	P	O	E	E	P	P	O	E	E	P	P			
00542	E	O	E	P	P	E	O	E	P	P	E	O	E	P	P			
00547	O	O	E	P	P	O	O	E	P	P	O	O	E	P	P			
00553	O	O	E	P	P	O	O	E	X	P	O	E	E	P	P			
00565	E	E	E	P	P	O	O	E	P	P	O	O	E	P	P			
00570	O	O	E	P	P	O	E	O	X	P	O	E	O	P	P			
00578	E	E	E	X	X	O	E	O	X	X	O	E	E	P	P			
00587	E	E	E	P	P	O	E	E	P	P	O	E	E	P	P			
00607	O	E	E	P	P	E	E	O	P	P	E	E	E	P	P			
00618	E	O	E	P	P	O	O	E	P	P	O	O	E	P	P			
00631	O	O	E	P	P	O	O	E	X	P	O	O	O	X	X			
01369	O	O	E	P	P	O	E	E	P	P	O	E	E	P	P			
01393	O	E	O	P	P	O	E	E	P	P	O	E	E	P	P			
01798	O	O	O	P	P	O	O	E	X	X	O	O	O	X	X			
Total	14	9	21	22	27	8	16	20	21	26	8	16	26	26	27			

(continued)

Appendix VI.2 : (continued)

Name of Industry and Company Code Number	1970-71					1975-76					1978-79				
	R	W	F.RE	EBB		R	W	F.RE	EBB		R	W	F.RE	EBB	
				I	II				I	II				I	II
5) <u>COT.SP.</u>															
00040	O	O	E	P	P	O	O	O	X	X	E	E	E	X	P
00477	E	O	O	P	P	E	O	O	X	X	O	O	O	X	P
00498	E	O	O	X	P	E	E	O	P	P	E	E	O	P	P
00512	O	O	O	P	P	O	O	O	P	P	O	O	O	P	P
00537	E	O	O	P	P	O	O	O	P	P	E	O	O	P	P
00563	E	O	O	P	P	E	O	O	X	X	E	O	O	X	P
00579	E	O	E	X	X	E	O	O	X	P	E	O	O	P	P
00590	E	O	O	P	P	E	O	E	P	P	E	O	O	P	P
00597	E	O	O	X	P	E	O	E	P	P	E	O	O	P	P
00602	E	O	O	P	P	E	O	O	P	P	O	O	O	P	P
00613	E	O	O	P	P	E	O	O	P	P	E	O	O	X	P
00619	E	O	E	P	P	E	O	O	P	P	O	E	O	P	P
00623	E	O	O	P	P	E	O	O	P	P	E	O	O	P	P
00628	E	O	O	X	X	O	O	E	P	P	E	O	E	P	P
01364	E	O	O	P	P	O	O	E	P	P	O	O	O	X	X
01376	O	O	O	P	P	O	O	E	P	P	O	O	O	P	P
01380	O	O	E	X	P	O	O	O	P	P	O	O	O	X	P
01397	E	O	O	P	P	O	O	O	P	P	O	O	O	X	X
01403	O	O	O	P	P	O	O	O	P	P	E	O	O	P	P
01413	O	O	O	P	P	O	O	O	P	P	O	O	O	P	P
01660	O	O	O	P	P	O	O	O	P	P	O	O	O	P	P
01801	E	O	O	P	P	E	O	O	P	P	O	O	O	X	X
02172	E	O	O	P	P	O	O	O	P	P	E	O	O	P	P
Total	16	0	4	18	21	11	1	5	19	20	12	3	2	15	20

Note : R = Raw materials and stores and spares.
W = Work-in-progress.
F = Finished goods.
RE = Receivables
E = Excess
O = No excess
X = No EBB
P = EBB.

CHAPTER VII

SUMMARY AND CONCLUSIONS

In this study we have examined the importance and relevance of credit planning in India. The raison d'etre of credit planning is that, apart from the determination of total bank credit, it aims at a distribution of bank credit consistent with the targeted output levels of different sectors. The distributional aspects of bank credit, unlike in monetary planning, are, therefore, taken into account in a credit plan. Equally important is the integrated view of a credit plan as it takes into account and combines both promotional and control aspects of credit policy. In other words, formulation of a credit plan involves structural changes that have to be effected in the banking system along with the determination of total quantum of bank credit and its distribution among sectors in line with Plan targets of output. In short, credit planning aims at mobilisation of deposits, channelling of bank credit into regions/sectors according to national priorities and restraining the overall expansion of bank credit to ensure stable price-level.

The formulation of a credit plan starts with the preparation of a monetary budget, in which the desired level of money supply in relation to the postulated rate of growth of output, as given in the national plan, is determined. In this

context, it is noted that the RBI's approach to money supply determination enables the decomposition of the sources of changes in money supply by sectors of origin in terms of banking system's credit to different sectors, viz., net bank credit to government, bank credit to commercial sector and net change in foreign exchange assets. The RBI's approach to money supply determination is, thus, useful in determining the desired level of bank credit to the commercial sector that is consistent with a desired rate of growth in money supply, given the net bank credit to government sector and the net foreign exchange assets. Since the latter two are not under the direct control of the RBI, bank credit to commercial sector becomes important in controlling the total quantum of bank credit. It is, therefore, argued that the RBI's approach to money supply determination facilitates credit planning as it takes into account total quantum of bank credit as well the distribution of it consistent with targeted rates of growth in output.

For the purpose of evaluating the performance of credit planning in helping achievement of national priorities we have studied three aspects, viz., (a) branch expansion, (b) sectoral distribution of bank credit, and (c) advances to the priority sectors. The analysis of branch expansion has thrown considerable light on aspects like inter-state and rural-urban disparities in the availability of banking facilities. The analysis of sectoral deployment has revealed whether or not the distribution of bank credit is related to output.

There is clear and strong evidence to state that there was a marked change in the structure of bank offices in favour of rural areas between 1969 and 1984. The share of rural offices in total commercial bank offices has gone up to 56 per cent in 1984 from 22 per cent in 1969. In the year 1984 rural and semi-urban offices accounted for more than three-fourths of total bank offices. The share of deposits of rural offices, in the total deposits, also increased from a mere 3 per cent in 1969 to 14 per cent in 1983. Likewise, the share of credit by rural bank offices had gone up to 12 per cent in 1983 from 1.5 per cent in 1969. The analysis with respect to credit-deposit ratio also exhibits a similar trend i.e. the credit-deposit ratios of rural and semi-urban areas have improved while there was a decline with respect to metropolitan areas.

The analyses regarding regional, i.e. inter-state, imbalances in banking facilities have been done with respect to (a) population per bank office, and (b) credit-deposit ratios of various states. The results with respect to population per bank office showed that inter-state disparities have been declining. There was a movement of population per bank office of many States nearer to the All-India average, suggesting a decline in the disparities in banking facilities between the years 1969 and 1984. This conclusion received statistical support when an analysis of coefficient of variation is made. The coefficient of variation in 1984 was much lower (38) than

in 1969 (207). The 'Lorenz curves' plotted, using the data on number of bank offices and states for the years 1984 and 1969 corroborated the finding that inequality in the distribution of banking facilities among states has declined, since the Lorenz curve of 1984 lies nearer to the line of equality.

Within the limitations cited in regard to interpretation of credit-deposit ratios, our analyses of credit-deposit ratios of different states, on the same lines as in the case of bank offices, revealed that inter-state disparities in banking facilities proxied by credit-deposit ratios were on the decline. It may, therefore, be concluded that inter-state imbalances as regards availability of banking facilities declined between the years 1969 and 1983.

Next, the issue of deployment of bank credit in relation to output has been examined at two levels, viz., (a) sectoral level and (b) industry level. The analysis at the sectoral level showed that the share of agriculture and allied activities sector in total outstanding bank credit increased from 5.5 per cent in 1969 to approximately 17 per cent in 1981, while that of industry declined from 66 per cent in 1969 to 49 per cent in 1981. This change in the shares of bank credit had taken place while their respective shares of output moved in the opposite directions, i.e., the contribution of agriculture and allied activities declined from 50 per cent in 1969 to 36 per cent in 1981 while industry's share had gone up from 21 per cent in 1969 to 24 per cent in 1981. However,

from these trends, it is rather difficult to make out whether over the years bank credit was deployed in relation to output or not. Nonetheless, the increased share of agricultural sector in total bank credit may be taken as an indicator towards rectifying the imbalances in the deployment of bank credit.

The analysis at the industry level for 11 industries (Manufacturing Group) showed that while there were two industries with higher shares in bank credit than their respective shares of output, there were six industries whose shares of output exceeded their share of bank credit for all the eight years studied, and in the case of other three industries there was no clear-cut trend. This, however, is not surprising because different working capital requirements per unit of output among different industries might result in varying amounts of credit requirements in relation to output.

Another issue we have examined in the context of the impact of credit planning on the achievement of national plan objectives, is advances to priority sectors. It is observed that banks' advances to priority sectors had been increasing and may reach the target of 40 per cent of total bank advances by March 1985. The share of priority sector advances more than doubled between 1969 and 1984 - increasing from 14 per cent to 37 per cent.

On the whole, therefore, there is adequate evidence to conclude that the achievement of credit planning, in

aligning bank credit flows with the national objectives, is satisfactory.

With a view to explore, in detail, the relationship between bank credit to industry and its output, we estimated demand for bank credit by industry (large and medium public limited companies). To estimate demand function for bank credit, we tried different equations using output, inventory, rate of interest (loan rate), debenture rate, real rate of interest, rate of inflation, net trade credit and bank credit with one-year lag as explanatory variables. The regression results, reported in Chapter III, show that output and inventory were the major explanatory variables in the demand functions for bank credit. However, as explained in Chapter III, a further examination (equations 65 and 66) of the results suggests that output is a crucial variable in the determination of both inventory and bank credit. Output elasticity of demand for bank credit was 0.92, i.e., a one per cent change in the level of output, ceteris paribus, will be accompanied by 0.92 per cent change in demand for bank credit. Inventory, it seems, acted as a conduit transmitting the effects of output on demand for bank credit. This is a very significant finding since this supports the view that bank credit to industry should be available for meeting working capital requirements of which inventories are a principal component which should, in turn, have to be based on production levels of industry. Trade credit variable is

statistically significant and, as expected, inversely related to demand for bank credit, supporting the view that for a given level of output/inventory the larger the availability of trade credit the lesser will be the demand for bank credit.

Two other important conclusions that have emerged from the analysis relate to interest rate and inflation variables in the estimation of demand for bank credit. Interest rate variable turning out to be statistically insignificant is not surprising since, (a) it is an administered rate, i.e., not determined by market forces of demand and supply, and (b) interest as a component of total expenditure of industry was rather very small, i.e., around 3 per cent and hence has little influence on the demand for bank credit. The interest insensitivity of demand for bank credit lends support to the view that, ceteris paribus, it is rather availability of bank funds for the companies that may be important and not the cost of bank credit, which needs further examination. Moreover, the interest rate differentials between bank credit and other sources of funds are perhaps more important in the decisions of industry, given the availability, as to how much to borrow from banks.

More interesting, and perhaps controversial, is the finding suggesting an inverse relationship between demand for bank credit and rate of inflation. We tried to explain this rather unexpected relationship between bank credit and inflation, with the help of certain institutional mechanisms that

go into the determination of input and output prices of industry. Moreover, the finding is in line with the RBI's policy of controlled expansion of bank credit. However, we are of the view that without further evidence this may have to be treated as a tentative conclusion. Further empirical work, especially in regard to the postulated institutional mechanisms, i.e. the speeds of adjustment of wages, material input and output prices of industry, is essential in the examination of a relationship between demand for bank credit and rate of inflation.

The analysis regarding working capital, on the basis of the RBI's sample companies during the period 1965-66 to 1980-81, revealed the following.

- a) Gross working capital, i.e. aggregate current assets as a proportion of total assets increased over the period of analysis and accounted for 62 per cent in 1980-81, while current assets-output ratio declined from 57 per cent in 1965-66 to 49 per cent in 1980-81. The importance and efficiency of current assets, thus, increased during the period of analysis.
- b) Inventories and receivables constituted more than 90 per cent of current assets in all the years. However, during the period of analysis, the share of inventories in current assets declined while that of receivables increased and more particularly so after the year 1975-76. This, viewed along with sundry-debtors to sundry-creditors ratio which was

less than 1 throughout the period with an observed decline in it from 1972-73, denotes that the reliance of RBI's sample companies on trade credit has increased. In other words, the RBI's sample companies were net borrowers, especially from 1975-76 onwards, in the form of trade credit from other industries and/or sectors and thus tried to compensate, at least partly, the shortfall in the availability of bank credit with the implementation of the Tandon Committee norms. This supports the finding of our regression analysis, viz., trade credit was a substitute for bank credit. It seems that large firms, in times of credit stringency, try to obtain larger net trade credit.

- c) The observed decline in the ratios of inventory to output and short-term bank borrowings to inventory suggests that there was a decline in (a) inventories held per unit of output and (b) the amount of bank credit available for financing a unit of inventory. Both these developments are in line with the Tandon Committee recommendations for reducing the dependence of industrial sector on commercial banks, via a reduction in inventories as well as financing a part of current assets through long-term sources.

We have seen that, under working capital approach to determination of bank credit requirement, a question arises as to what proportion of total current assets or working capital gap may be met by bank credit? Moreover, and importantly so, prior to deciding the proportion of bank finance, the problem of determining an appropriate level of current assets in

relation to output has to be resolved. In other words, if firms are constrained from holding a desired level of current assets financed by bank credit and if bank credit is available only for financing current assets related to production requirements, then how should the firms decide the appropriate levels of current assets and bank credit? Or is there any scope to impose certain norms on inventory holdings of industry? This is a crucial problem, because, if there are no norms on current asset holdings, a borrower-firm can hold a level of inventory in excess of production requirements financed by bank credit. And this trend is noticed to be present as indicated by the increase in the ratio of current assets to total assets. Therefore, as stated earlier, some sort of norms on inventory holdings in relation to output of industry seems essential to align bank credit with output in order to reduce the dependence of industry on banks and thus make available funds to be deployed in other sectors for production purposes. Moreover, this policy will also discourage speculative inventory build-up by industry. In this context, we have made use of the Tandon Committee norms on inventories, receivables and methods of lending.

For eight industries we computed excess bank borrowings (EBB) using the Tandon Committee's approach. We have also made a comparison of component-wise inventories and receivables arrived at by applying the Tandon Committee norms with their corresponding levels as per the operating cycle approach to

have an idea whether or not there were any wide divergences between them. Then, to study the end-use of bank borrowings, we decomposed EBB into (a) excess current asset (ECA) holdings; (b) deficit in long-term funds (DLTF) to finance the required portion of reasonable level of current assets or working capital gap as suggested by the Tandon Committee; and (c) diversion of bank credit to finance fixed assets (DFA). We have also tried to examine the issue of placing industries under lending Method II as suggested by the Chore Committee and the implications thereof.

The following are the major conclusions that follow from the empirical exercises that have been carried out in the study.

Out of eight industries studied, three industries, viz., Jute textiles, Transport equipment (TR.EQ.) and Cement, had EBB throughout the period, i.e. 1971-72 to 1980-81, according to both the methods of lending. Medicines and pharmaceutical preparations (MPH) and Basic industrial chemicals (BIC) had EBB in none of the years as per lending Method I, but according to lending Method II BIC had EBB in the initial four years while MPH had EBB in the last 5 years. The other three industries, viz. Cotton textiles (Cot.Text.), Rubber and rubber products (Rubber) and Edible vegetable and hydrogenated oils (EVH), had EBB in all the years according to lending Method II, while as per Method I there were EBB in some years. Thus, under lending Method II, six industries had EBB in all

the years while, as per Method I, three industries had EBB in all the years and only two industries had no EBB in any year.

The analysis of EBB as per cent of actual bank borrowings (ABB) revealed that Cement industry had almost 100 per cent EBB in all the years as per both the methods of lending. In other words, entire bank borrowings of this industry had to be treated as excess within the Tandon Committee's approach. As per lending Method I, Jute textiles and Rubber had EBB exceeding 50 per cent of ABB in some years. TR.EQ. and EVH industries had less than 50 per cent while Cot.Text. showed still lower EBB as percentage of ABB. Whereas, according to lending Method II, Jute textiles, TR.EQ., Rubber and EVH had EBB exceeding 50 per cent of ABB, Cot.Text. had less than 50 per cent. MPH had no EBB as per lending Method I and according to lending Method II, EBB as percentage of ABB were insignificant. Thus, as per Method I, three industries had EBB higher than 50 per cent of ABB; three other industries had EBB less than 50 per cent of ABB while the other two industries had no EBB. On the other hand, according to Method II, EBB ranged between 50 per cent and 100 per cent of ABB in five industries, while in the other three industries EBB were less than 50 per cent of ABB. It is, therefore, clear that, within the framework of the Tandon Committee recommendations, a substantial portion of bank credit to industry had to be treated as excess in relation to output requirements, as revealed in our exercises, according to lending Method I and even more so as

per lending Method II. In fact, in some years the entire amount of outstanding bank credit of some industries had been classified as excess under lending Method II.

We have identified three factors viz., (i) ECA, (ii) DLTF and (iii) DFA as the causes for EBB. By following the balance sheet approach, we allocated EBB among the above three factors. In other words, we tried to answer the question that if there were EBB for what purpose they had been used? our observations are given below.

(i) Under lending Method I, except in the case of Jute textiles, in all other industries EBB were due to ECA. EBB in the case of Jute textiles were used to finance not only ECA and DLTF but also fixed assets. Therefore, in Jute textiles industry, there appears to be a diversion of bank credit to finance fixed assets.

(ii) Under lending Method II, Cement, BIC, MPH and Rubber industries utilised EBB for financing ECA only. In industries like Cot.Text., TR.EQ., and EVH, EBB were used for financing ECA in some years while in some other years a portion of matching contribution was also met by EBB. However, in these industries there was no diversion of bank credit towards financing fixed assets. On the whole, therefore, there is no reason to believe that there was a substantial diversion of bank credit to finance fixed assets. On the other hand, there is overwhelming evidence to support the view that industry made use of bank credit to hold ECA.

As regards placing industries under lending Method II, as suggested by the Chore Committee, our study finds enough evidence to support the Committee's view. For, it is found that the extant EBB were principally due to ECA holdings which should be positively discouraged since ECA are due to speculative motive and/or inefficient current assets management. Moreover, it was noted that the state of capital market in India has improved and it should not, therefore, be difficult for industrial sector to obtain long term funds from market for the purpose of meeting the matching contribution required for financing a portion of current assets as suggested by the Tandon Committee.

A related question, with the implementation of the Chore Committee's recommendation of placing industries under lending Method II and converting the EBB into a 'working capital term loan', is its impact on industrial sector and banking system. As regards the impact on industrial sector, it is noted that if a company has to meet its repayments of working capital term-loan, the overall performance of the company has to go up which demands efficient inventory management. As far as the impact on the banking system of the implementation of lending Method II is concerned, it is seen that transfer of funds from the banking system will be, if at all, marginal. In fact, if an industry actively seeks to raise funds from the market, deposits of banking system may even expand provided that (i) industry's efforts lead to

mopping up of savings hitherto lying outside the financial system and (ii) attractive rates of return on corporate investments lead to a higher overall savings-income ratio. Thus, increased reliance of industrial sector on market under lending Method II may have very little effect on banking system as far as its command over resources is concerned. However, whether there will be adequate demand for bank credit from alternative groups of borrowers to fill the gap is a relevant question.

For, to a large extent, demand for bank credit by other groups of companies of the industrial sector as well as medium and large public limited companies without excess bank borrowings and agriculture and other priority sectors depends upon (i) relative cost^{of}/funds from other sources and (ii) their accessibility to bank credit and its availability.

The developments in banking system after bank nationalisation of 1969, viz. rapid expansion of bank branches especially in the rural areas, increase in the share of priority sectors in total bank credit and the increased share of agriculture and other priority sectors within the priority sector advances indicate the potentiality of these borrowers for absorbing bank credit. Lack of accessibility may not come in the way of an increase of this sector's demand for bank credit because of improvements in availability of banking facilities.

It may, therefore, be argued that these other sectors/

borrowers are likely to absorb the funds that will be released from companies with EBB with the implementation of the Tandon Committee and the Chore Committee recommendations.

The analyses done at the company level with respect to a sample of 100 companies for the period 1970-71 to 1978-79 corroborate the findings of the industry level analysis. Specifically, we observed that the number of companies with EBB and also EBB as per cent of ABB of the companies increased during the period 1975-76 to 1978-79. It is also found that EBB were mainly due to ECA holdings. However, as revealed in the industry-level analysis, the results at the company-level also showed that there was a decline in the number of companies with excess raw materials and work-in-progress inventories.

The above findings viewed together suggest that the recommendations of the Tandon Committee might not have been implemented by the commercial banks as a package as was envisaged by the Committee. For, the observed increase in the number of companies with EBB as well as the quantum of EBB from 1975-76 to 1978-79, on the one hand, and the fact that there was a decline in the number of companies with excess raw material and work-in-progress inventories on the other hand leads to the conclusion that commercial banks did not strictly adhere to the Tandon Committee recommendations while lending to the sample companies during the period 1975-76 to 1978-79.

In regard to the relationship between size of companies

and EBB, it is observed that they were positively associated. EBB of large companies increased from 51 per cent of total EBB of all the 100 sample companies in 1975-76 to 61 per cent in 1978-79. It is also found that the rate of growth of companies and the rate of change in their bank borrowings were positively related. In other words, the actual bank borrowings of companies, with negative rates of growth, as a group declined in the year 1978-79; slow-growth companies, viz., companies with a positive rate of growth but less than the average rate of growth of 100 sample companies showed a moderate rate of increase in bank borrowings; while the rate of increase in bank borrowings was quite high in the case of fast-growth companies. In 1978-79, fast-growth companies' bank borrowings increased at 37 per cent and their EBB accounted for 61 per cent of total EBB. In the light of the above evidence, it may be argued that large and fast growing companies deserve special attention, in the context of implementation of the Tandon Committee recommendations, by the commercial banks.

The Tandon Committee's approach to determine the permissible level of bank finance, however, suffers from one major drawback from the viewpoint of credit planning — determination of an appropriate level of bank credit as a residual. It therefore provides, as demonstrated in our study, considerable scope for companies to obtain bank credit by manipulation of other sources of funds. And, as it is known that large and

established firms have an edge over other firms to obtain resources from the market, there is a built-in bias in the Tandon Committee's approach favouring large firms. One way of plugging this loophole is to determine bank credit that will be available to a firm as a certain proportion of its current assets essential to carry out production plans, independently of the availability of funds from other sources. This will enable the banking system in the country to have a clear idea regarding the bank credit requirement of the industrial sector in relation to targeted output and facilitates credit planning.

On the other hand, the permissible level of bank finance to a corporate unit determined by taking into account the availability of funds from other sources makes credit planning a difficult task. For, in this approach, as explained earlier, commercial banks appear to have been assigned a passive role, i.e., as a residual provider of funds.

Moreover, from the industrial sector's point of view, it would be preferable to know in advance the quantum of credit that will be available to a unit from banks strictly in relation to its planned output and current asset requirements to achieve the planned output. This will make it imperative for the firms to search for alternative sources of funds to fulfil their production targets.

Finally, the major findings of the study may be summarized here.

(1) The success of credit planning in India is, by and large, satisfactory so far as its impact on reducing rural-urban and inter-state disparities in the availability of banking facilities and deployment of bank credit is concerned. The structural changes that have taken place in the banking system after the bank nationalisation of 1969 were in consonance with the national priorities.

(2) The empirical findings support the view that output was a crucial variable in the determination of demand for bank credit by industry (the RBI's sample of large and medium public limited companies). It is also found that rate of interest was not systematically related to demand for bank credit, which prima facie lends support to the view that availability of bank funds for the firms rather than the cost of it may be important which needs further examination.

(3) The RBI's sample companies were net users of trade credit implying their increased reliance on trade credit. In other words, there was a net in-flow of resources to these companies, from other companies of the industrial sector and other sectors, in the form of net trade credit.

(4) Excess bank borrowings of industry expressed as percentage of its actual bank borrowings were quite high as per lending Method II; even under Method I excess bank borrowings were substantial.

(5) Excess bank borrowings were a consequence mainly of excess current asset holdings and there was no evidence, except in case of Jute textiles industry of the eight industries studied, of diversion of bank credit for financing fixed assets.

(6) In the light of the evidence of excess current asset holdings coupled with the buoyance of the capital market, it seems that the Chore Committee recommendation of placing industries under lending Method II is justifiable.

(7) Large companies and fast-growth companies accounted for bulk of the excess bank borrowings.

We have identified the following areas where further work is to be done which will be useful for policy purposes.

(1) The relationship between inflation and demand for bank credit by industrial sector has to be further explored. In particular, the leads and lags with respect to input and output prices have to be established to know whether demand for enhanced bank credit during inflationary periods is to be satisfied.

(2) Likewise, estimation of interest cross elasticities may throw light on the preferences of savers with respect to different forms of financial assets and the preferences of borrowers as to various sources of funds.

(3) We are of the view that further work is essential to devise a method for determining the portion of current

assets that may be financed by bank credit without recourse to other current liabilities. In other words, the finance available from banks to an industrial unit should be independently determined by working out the essential current asset requirements in relation to targeted production.

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