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Bank Credit As An Input Of Production And The State Of MSME Finance In India: Role Of Scheduled Commercial Banks And SIDBI Through The Prism Of Granger Causality

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Abstract: ***World over SMEs are playing a major role in the sphere of socio-economic enhancement of lives of millions. In India, the Micro, Small & Medium Enterprises (MSMEs) contribute 8 per cent to the country's GDP, 45 per cent to the manufactured output and 40 per cent to the country's exports. They provide employment to 101 million people through 45 million enterprises. As an employment generator, MSMEs are the second largest employment opportunity provider only behind the agriculture sector. The MSMEs also act as a catalyst for social change by helping reduce the income inequality among various social classes as also between regions. Within MSMEs, the performance of the MSME manufacturing sector has been particularly worth considering. The role of credit as an important input of production is well accepted in the academia and thoroughly accepted for all spectrums of economic activities. Bank credit being the most important source of credit to the MSMEs in India, through this paper we will figure out the sufficiency of flow of bank credit to the MSME manufacturing units in India. This paper will also dwell upon the contribution of all India institutions like Small Industries Development Bank of India (SIDBI) and the Credit Guarantee Trust for Micro & Small Enterprises (CGTMSE) towards ease of credit flows to the MSMEs in India.***

Keywords: MSMEs, Manufacturing, Granger Causality Test, SIDBI, CGTMSE.

JEL classification: C01, E01, E24

I. INTRODUCTION

The MSMEs play a very pivotal role in the economic structure of an economy. In India, the MSMEs contribute around 8 per cent to national GDP, 45 per cent to total manufacturing value addition in the country and accounts for close to 40 per cent of total exports earnings. Moreover, the MSMEs are often used as a medium to create employment opportunities leading to reduction in unemployment and poverty, to abridge inequality, to foster regional development and to industrialise the rural areas. The MSME Development Act, 2006 defines the MSMEs in two broad categorisation; Manufacturing and Services depending on where the principal investment lays i.e. plan & machinery in case of a manufacturing undertaking and equipment for rendering services in case of a services oriented unit. The current study will deal solely with the issues concerning the manufacturing enterprises. Moreover, the character of the current study is spread on two broad areas i.e. sufficiency of credit flows to the MSME Manufacturing sector and the sufficiency of support provided by Small Industries Development Bank of India (SIDBI) and Credit Guarantee Trust for Micro, Small Enterprises (CGTMSE) to the concerned sector. We will discuss these one after another.

II. CAPITAL AS AN INPUT

For each and every sector of production capital is a critical input. The MSMEs also require capital to fund their

day to day activities and also for business expansion. There are two broad sources of capital namely equity capital and debt capital. For an unlisted MSME, equity capital comprises of the promoters' own funds and profits earned, if any. A listed MSME, however, has the advantage of sourcing equity capital from the stock market through listing of shares. The sources of debt capital for both the listed and unlisted MSMEs include borrowings from banks, NBFCs, MFIs, relatives, etc. Adequate availability of funds facilitates healthy growth of MSMEs while paucity of funds at times leads to sickness of the MSME units. In India, traditionally, people depended upon informal sources of capital like loan from money lenders, relatives, etc. to fund their businesses. However, with the gradual liberalisation of the financial market in the country, the entrepreneurial class now prefer formal sources of finance like bank finance, finance from NBFCs, MFIs, etc. In the Indian context, bank finance is the predominant form of finance accounting for more than seventy per cent of total credits in the country. Thus, in the current paper, we will analyse whether the available bank finance to the MSME Manufacturing sector in the country is sufficient or not.

III. LITERATURE REVIEW

Chaudhary, Samta and Ahalawat, Shweta (2014) in their research article titled 'Credit flow to SMEs in India: A Study conducted at Bank of Baroda' has ascertained that there is no such problem in providing credit to certain industries like transformer & stamping and lamination. Further, they opine that adoption of rating of SMEs as a tool to gauge their financial stand would further help the banks in extending credit facilities to SMEs.

Ackah, John and Vuvor Sylvester (2011) in their study titled 'The Challenges faced by Small & Medium Enterprises (SMEs) in obtaining credit in Ghana' have ascertained that in Ghana there are banks and NBFCs which are willing to lend to the SMEs provided they meet certain conditions. However, often it is found that the SMEs in Ghana are not able to meet such conditions.

Yadav, Dr. Ram Jass () in his report titled 'Issues in SME Financing' submitted to Indian Institute of Banking and Finance has observed that lengthy and complex paper & processing system of loan appraisal in banks is observed as an impediment for flow of bank credit to SMEs. He also observed that ineptitude of bank officials and lack of knowledge of schemes like Credit Guarantee Trust for Micro and Small Enterprises (CGTMSE) is the primary reason behind failure of such a policy.

Beck, Thorsten and Cull, Robert (2014) in their working paper titled 'Small and Medium Sized Enterprise Finance in Africa' have concluded that enterprises in the regions of sub-Saharan Africa are less likely to have an enterprise loan than any other developing regions in the world.

Piabuo, Serge Mandiefe, Baye, Francis Menjo and Tieguhong, Juliuschupezi (2015) in their research paper titled 'Effects of credit constraints on the productivity of small and medium sized enterprises in Cameroon' have observed that interest rates, size of enterprise, size of loan, size of collateral, maturity of loans, and legal status of enterprises are major sources of credit constraints faced by SMEs in Cameroon.

Padilla-Perez, Ramon and Ontanon, Rodrigo Fenton (2013) in their study titled 'Commercial Bank Financing for Micro Enterprises and SMEs in Mexico' observed that the greatest barriers to increasing the credit supply are lack of information, creditor protection failures, informality, and the changes and disruptions that commercial banking has experienced over the past three decades.

We observe that the available literature does not speak of much about the relationship between MSME output and credit flow to the MSME sector in the country. Neither there are sufficient studies which assess the sufficiency of credit flow to the MSME Sector. In this backdrop the current study will be an innovative attempt.

IV. RELATIONSHIP BETWEEN MSME MANUFACTURING OUTPUT AND CREDIT TO THE MSME MANUFACTURING SECTOR

Before we analyse whether the flow of funds to the MSME sector have been substantial or not, we need to analyse the relationship between credit outstanding to the MSME sector and the MSME output. The data on credit outstanding to the MSME sector has been sourced from the Reserve Bank of India (RBI). For this we have analysed the time series data available for MSME output (Q) and credit outstanding to the MSME sector (Mc) for the period from 1973-74 to 2012-13. Since we are dealing with time series data, we check for the stationarity property of the variables as they would produce more reliable results for us.

A. TEST OF STATIONARITY OF MSME MANUFACTURING OUTPUT (Q) AND CREDIT OUTSTANDING TO THE MSME MANUFACTURING SECTOR (MC)

Since the variables under consideration in case of our above model are time series variables, we need to ascertain whether the variables 'Q' and 'Mc' are stationary or not. It is pertinent to mention here that the time series variables need to be stationary for us to draw any meaningful conclusion. For ascertaining stationarity of the variables, we would be deploying the following tests to find out whether the variables in question have unit roots or not:

- ✓ Augmented-Dickey Fuller Unit Root Test;
- ✓ Philips – Perron Unit Root test;
- ✓ KPSS Unit Root test.

As no single test is sufficient in itself, we would be using all the three tests above to ascertain the stationarity of a variable based on a majority outcome i.e. the results coming out of any two tests would be considered as the finding. The summary output of all the three test statistics are further summarised in the Table 1.

Unit Root Test	Null Hypothesis	Status at 1 per cent level of significance	Status at 5 per cent level of significance
ADF	The variable has a unit root: **non-stationary**	Accepted	Accepted

Unit Root Test	Null Hypothesis	Status at 1 per cent level of significance	Status at 5 per cent level of significance
PP	The variable has a unit root: **non-stationary**	Accepted	Accepted
KPSS	The variable does not have a unit root: **Stationary**	Accepted	Accepted
Majority		**Non Stationary**	**Non Stationary**

Table 1: Summary Of The Unit Root Tests

The decision rule is that the variable (ln Mc) is non-stationary at both 1 per cent and 5 per cent level of significance.

B. STATIONARITY CHECK OF FIRST DIFFERENCE OF THE VARIABLE LNMC I.E. D (LN MC); WHERE 'MC' DENOTES CREDIT TO THE MSME MANUFACTURING SECTOR

The summary output of all the three test statistics is further summarised in the Table 2:

Unit Root Test	Null Hypothesis	Status at 1 per cent level of significance	Status at 5 per cent level of significance
ADF	The variable has a unit root: **non-stationary**	Rejected	Rejected
PP	The variable has a unit root: **non-stationary**	Rejected	Rejected
KPSS	The variable does not have a unit root: **Stationary**	Accepted	Accepted
Majority		**Stationary**	**Stationary**

Table 2: Summary Of The Unit Root Tests Of 'D(Ln Mc)'

The conclusion is that the first difference of the variable credit outstanding to the MSME Manufacturing sector (ln Mc) i.e. D (ln Mc) is stationary at 1 per cent as well as 5 per cent level of significance.

C. STATIONARITY CHECK OF VARIABLE 'LNQ'; (Q = MSME MANUFACTURING OUTPUT)

The summary output of all the three test statistics is further summarised in the Table 3:

Unit Root Test	Null Hypothesis	Status at 1 per cent level of significance	Status at 5 per cent level of significance
ADF	The variable has a unit root: **non-stationary**	Accepted	Accepted
PP	The variable has a unit root: **non-stationary**	Accepted	Accepted
KPSS	The variable does not have a unit root: **Stationary**	Accepted	Rejected
Majority		**Non-stationary**	**Non- Stationary**

Table 3: Summary Of The Unit Root Tests Of 'Q'

The decision rule is that the variable 'ln Q' is non-stationary both at 1 per cent and 5 per cent level of significance. Since the variable is non-stationary, we need to convert it into a stationary variable by way of first differencing and check whether the variable is first difference stationary or not. For this purpose we would be employing the same three unit root tests.

D. STATIONARITY CHECK OF FIRST DIFFERENCE OF THE VARIABLE 'LN Q' I.E. 'D(LN Q)'; WHERE 'Q' DENOTES MSME OUTPUT

The summary output of all the three test statistics is further summarised in the Table 4:

Unit Root Test	Null Hypothesis	Status at 1 per cent level of significance	Status at 5 per cent level of significance
ADF	The variable has a unit root: **non-stationary**	Rejected	Rejected
PP	The variable has a unit root: **non-stationary**	Rejected	Rejected
KPSS	The variable does not have a unit root: **Stationary**	Accepted	Accepted
Majority		**Stationary**	**Stationary**

Table 4: Summary Of The Unit Root Tests Of 'Q'

The conclusion is that the first difference of the variable 'lnQ' i.e. 'D(lnQ)' is stationary at 1 per cent as well as 5 per cent level of significance. Therefore, we ascertained that both the variables i.e. 'lnMc' and 'ln Q'are first difference stationary i.e. they are *I*(1).

Let us now first verify whether there involves any causal relationship between the two variables 'Q' and 'Mc'. This we can find out by putting into use the Granger Causality Test.

E. GRANGER CAUSALITY TEST FOR CAUSAL RELATIONSHIP BETWEEN 'Q' AND 'MC'

Under this, we would be testing the following hypothesis. We have observed that the variables under consideration i.e. 'ln Mc' and 'ln Q' are first difference stationary. Therefore, we will be using the first difference values of the variables for our granger causality analysis. Since Granger causality investigates about pairwise causation, we will have two null as well as alternative hypotheses.

NULL HYPOTHESIS: Credit outstanding to the MSME sector does not cause MSME output and / or MSME output does not cause credit outstanding to the MSME sector.

ALTERNATIVE HYPOTHESIS: Credit outstanding to the MSME sector Granger cause MSME output and / or MSME output Granger cause credit outstanding to the MSME sector.

Pairwise Granger Causality Tests
Date: 05/07/17 Time: 11:21
Sample: 1 40
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
D(Q) does not Granger Cause D(MC)	38	95.5989	2.E-11
D(MC) does not Granger Cause D(Q)		0.81087	0.3740

Table 5: Summary Output Of Granger Causality Test Between 'Q' And 'Mc'

From the summary output presented in Table 5, we observe that the 'p' value or the probability value of the null hypothesis, credit outstanding to the MSME sector does not cause credit outstanding to the MSME sector, is more than 37 per cent implying that we cannot reject the null hypothesis. On the other hand the null hypothesis, MSME output does not granger cause credit outstanding to the MSME sector, has a probability value equal to zero implying that we can reject the null hypothesis and accept the alternative hypothesis that

MSME output does granger cause credit outstanding to the MSME sector.

From the above two deliberations, we may conclude that the causality in our analysis runs from MSME output to credit outstanding to the MSME sector i.e. in the words of Granger, MSME output Granger cause credit outstanding to the MSME sector. This implies that growth in MSME output has resulted into their further expansion leading to increased demand for credit and resultant growth of credit to the MSME sector.

V. QUALITATIVE ANALYSIS OF ADEQUACY OF FLOW OF CREDIT TO MSME SECTOR

As per the existing literature, capital is one of important inputs of production and one of the chief sources of capital is credit. In India, Bank finance constitutes more than eighty per cent of total finance available from all sources combined. For an economy as a whole whether the available credit opportunity is sufficient or not is gauged by credit penetration in the economy. In simple terms, economists often consider credit – GDP ratio to ascertain the level of reach of the formal financial channels in the economy. Credit to GDP ratio of some of the major countries and major geographies in the world is given in the Table 6:

Country Name	1961	1971	1981	1991	2001	2011	2015
Australia	17.7	23.7	28.0	60.2	88.6	122.9	137.7
Brazil	19.3	37.3	43.8	45.2	29.0	58.1	67.9
Canada	18.4	35.8	83.5	92.0	173.2	NA	NA
Switzerland	96.9	NA	100.1	147.8	140.6	160.7	174.1
China	NA	NA	56.4	88.8	110.6	124.1	155.3
Germany	NA	61.4	75.8	87.4	112.0	84.6	78.1
France	21.8	34.8	71.1	92.6	76.7	96.8	95.7
United Kingdom	17.7	20.8	30.9	102.3	128.7	174.9	134.5
Hong Kong SAR, China	NA	NA	NA	137.3	149.0	202.3	207.6
Indonesia	NA	NA	10.7	47.2	20.3	30.1	39.1
India	8.4	12.3	20.9	23.4	28.1	51.3	52.7
Japan	56.9	121.9	132.1	192.5	189.5	180.2	194.3
Mexico	22.3	34.1	19.6	20.9	13.4	25.7	32.7
Russian Federation	NA	NA	NA	NA	16.8	42.0	56.4
United States	75.1	90.9	89.1	118.9	170.2	177.9	190.4

Source: World Bank; Domestic credit to private sector (% of GDP)

Table 6: Major Country Wise Credit – Gdp Ratio

From the information presented in Table 6 above, we observe that credit-GDP ratio is very high for the developed countries like Australia (137.7%), France (95.7%), Japan (194.3%), and United States (190.4%). For developing countries on the other hand the Credit-GDP ratio is gradually increasing: Brazil (67.9%), India (52.7%), Mexico (32.7%), and Russian Federation (56.4%).

Country Name	1961	1971	1981	1991	2001	2011	2015
Euro area	23.3	50.9	65.8	76.9	87.4	101.7	90.8
European Union	23.1	45.4	58.4	78.2	92.9	111.1	98.4
Latin America & Caribbean	19.3	27.3	33.8	31.3	23.7	43.8	55.2
Least developed countries: UN classification	NA	NA	12.7	11.8	13.7	20.9	26.3
Low income	NA	8.5	13.7	13.0	13.1	15.8	19.6
Lower middle income	9.5	14.0	19.4	25.4	28.2	40.1	45.5
Low & middle income	NA	24.6	32.1	40.9	49.4	72.2	100.8
Middle East & North Africa	14.0	17.7	22.8	29.5	41.0	45.3	55.9
Middle income	NA	25.1	32.5	41.7	50.0	72.8	101.7
Middle East & North Africa (excl. high income)	14.1	18.6	30.5	31.0	36.1	40.1	35.0
North America	71.3	86.6	88.6	116.4	170.4	177.9	190.4
OECD members	55.7	71.5	78.5	110.4	138.6	141.9	147.1
East Asia & Pacific(IDA &IBRD countries)	NA	NA	41.7	74.9	97.3	112.0	142.7
Europe & Central Asia (IDA & IBRD countries)	12.7	16.5	16.6	NA	17.8	46.0	57.6
Latin America & the Caribbean (IDA & IBRD countries)	19.3	27.3	33.8	31.2	23.5	43.7	55.2
Middle East & North Africa (IDA & IBRD countries)	14.1	18.6	30.5	31.0	36.4	40.3	35.3
South Asia (IDA & IBRD)	8.6	13.6	19.7	22.1	27.1	46.6	47.3
Sub-Saharan Africa (IDA & IBRD countries)	NA	34.2	33.4	NA	59.3	50.7	NA
Upper middle income	NA	NA	38.5	48.3	56.8	81.7	117.1
World	51.2	65.8	70.0	102.1	124.2	118.1	131.5

Source: World Bank; Domestic credit to private sector (% of GDP)

Table 7: Credit – Gdp Ratio Of Major World Territories

From Table 7, we have information on region wise credit-GDP ratio over different time periods. Credit-GDP ratio in the European Union improved from 23.1 per cent in 1961 to 98.4 per cent in 2015. In south Asia, the credit-GDP ratio improved from 8.6 per cent in 1961 to 47.3 per cent in 2015. For the OECD member countries, Credit-GDP ratio improved from 55.7 per cent in 1961 to 147.1 per cent in 2015.

Empirically, it has been ascertained that a strong positive correlation exist between the openness of an economy and financial deepening measured in terms of credit to GDP ratio and the causality runs from financial development to economic growth(Guglielmo, Christophe, Robert, Anamaria; German Institute for Economic Research, Berlin, October 2009). However, there are also studies which point out that the periods of excessive credit growth is succeeded by extreme financial sector instability and rising defaults (Robert, Kieran and Rebecca, European Central Bank, April 2013).

Total Bank credit to GDP ratio in India vis-à-vis the ratio of bank credit to the MSME sector to MSME output for the period 1973-74 to 2011-12 provide a good insight into the nature of credit flows to the MSME sector. The relevant data is given in the table below:

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Year	Total Bank credit (Rs. Billion)	YoY Growth in Bank credit (%)	MSME Bank Credit (Rs. Billion)	YoY Growth in Bank credit to MSMEs (%)
2012-13	52605	14.1	4091	13.2
2011-12	46119	17.0	3614	10.6
2010-11	39421	21.5	3267	-3.6
2009-10	32448	16.9	3390	16.4
2008-09	27755	17.5	2912	19.6
2007-08	23619	22.3	2435	91.2
2006-07	19312	28.1	1273	25.7
2005-06	15071	37.0	1013	21.3
2004-05	11004	30.9	835	17.3
2003-04	8408	15.3	712	10.0
2002-03	7292	23.7	647	-3.6
2001-02	5897	15.3	671	11.6
2000-01	5114	17.3	601	5.4
1999-2K	4360	18.2	570	10.4
1998-99	3688	13.8	517	12.9
1997-98	3241	16.4	458	19.8
1996-97	2784	9.6	382	11.5
1995-96	2540	20.1	342	17.4
1994-95	2116	28.7	292	21.7
1993-94	1644	8.2	240	14.3
1992-93	1520	21.0	210	10.8
1991-92	1256	8.0	189	5.6
1990-91	1163	14.6	179	12.3
1989-90	1015	19.8	160	9.1
1988-89	847	20.1	146	12.9
1987-88	705	11.4	130	21.7
1986-87	633	12.9	107	16.8
1985-86	561	14.5	91	16.6
1984-85	490	18.5	78	19.8
1983-84	413	16.3	65	21.3
1982-83	355	19.6	54	20.7
1981-82	297	17.0	45	12.9
1980-81	254	17.8	40	46.7
1979-80	215	17.8	27	20.7
1978-79	183	22.4	22	31.0
1977-78	149	13.4	17	21.5
1976-77	132	21.1	14	21.7
1975-76	109	24.1	12	10.9
1974-75	88	18.4	10	15.0
1973-74	74	-----	9	

Source: Statistical tables related to banks in India, RBI.

Table 8: Total Bank Credit Vis-À-Vis Total Msme Bank Credit

From the Table 8, it is observed that while total bank credit in the economy increased from Rs. 74 billion in FY 1973-74 to Rs. 52,605 billion in FY 2012-13, recording a compound annual growth rate of 18.3 per cent, total bank credit to the MSME Manufacturing sector increased from Rs. 9 billion in FY 1973-74 to Rs. 4091 billion in FY 2012-13 recording a CAGR of 17.0 per cent. The CAGR of credit flow to the MSME sector is found to be lower than the CAGR of total credit flow in the country.

Statistical parameters	Bank credit	YoY growth in Bank credit (%)	MSME Credit	YoY growth in Bank credit to MSMEs (%)
Mean	8,122	18.5	747	17.7
Median	1,582	17.8	225	16.4
Standard Deviation	13559	5.9	1139	14.8
Coefficient of variation	1.7	0.3	1.5	0.8
CAGR	18.3	-----	17.0	------

Source: Self calculations

Table 9: Statistical Properties Of Credit Flows

From Table 9, we observe that the coefficient of variation of MSME credit at 1.5 is lower than the coefficient of variation for the total bank credit in the country at 1.7. This signifies that credit flows to the MSME sector has been more stable than other sectors of the economy. However, we also observe that the coefficient of variation of YoY growth in MSME credit from the banking sector at 0.8 is much higher than the coefficient of variation of YoY growth in total bank credit in the country at 0.3. The higher coefficient of variation in case ofYoY growth of MSME credit indicates that the growth of MSME credit has been more volatile and unstable in nature compared to theYoY growth of general credit flow in the country.

A. MSME CREDIT – MSME OUTPUT RATIO

Credit to GDP ratio in an economy can also be construed as a measure of the degree of development of the financial sector in that country. The more developed the financial sector of an economy more the ease at which credit flows to different sectors of that economy. From the information provided in the Table 10, it is observed that bank credit to GDP ratio for the Indian economy has improved, at a gradual pace, from around 10.8 per cent in FY 1973-74 to around 51.2 per cent in FY 2011-12.

Year	Bank credit to GDP* Ratio (%)	MSME credit to MSME output* ratio (%)	Credit Gap (%)
2011-12	51.2	19.7	31.5
2010-11	50.6	19.0	31.7
2009-10	50.1	20.9	29.2
2008-09	49.3	19.1	30.2
2007-08	47.4	17.0	30.4
2006-07	45.0	9.4	35.5
2005-06	40.8	20.3	20.5
2004-05	33.9	19.4	14.5
2003-04	29.6	19.5	10.1
2002-03	28.8	20.6	8.2
2001-02	25.0	23.8	1.3
2000-01	23.5	23.0	0.5
1999-2K	21.5	24.4	-2.9
1998-99	20.5	24.6	-4.1
1997-98	20.6	24.4	-3.8
1996-97	19.6	22.8	-3.1
1995-96	20.7	23.2	-2.5
1994-95	20.2	23.9	-3.7
1993-94	18.4	24.3	-5.8
1992-93	19.6	24.8	-5.2
1991-92	18.6	23.5	-4.9
1990-91	19.8	22.8	-2.9
1989-90	20.2	12.1	8.1
1988-89	19.4	13.8	5.6
1987-88	19.2	14.9	4.3
1986-87	19.5	14.7	4.8
1985-86	19.4	14.9	4.5
1984-85	19.1	15.5	3.6
1983-84	18.0	15.7	2.3
1982-83	18.0	15.4	2.7
1981-82	16.9	13.7	3.2
1980-81	17.0	14.1	2.9
1979-80	17.1	12.5	4.7
1978-79	15.9	14.1	1.8
1977-78	14.1	11.9	2.2
1976-77	14.1	11.3	2.8
1975-76	12.5	10.5	2.1
1974-75	10.8	11.3	-0.5
1973-74	10.8	12.6	-1.7

*Source: Statistical Tables related to Banks in India, Reserve Bank of India; Data Tables, erstwhile Planning Commission of India. *output at current prices.*

Table 10: Credit To Gdp Ratio

If we consider the similar counterpart for the MSME sector, we observe that the ratio of MSME credit to MSME output in the Indian context has improved from around 12.6 per cent in FY 1973-74 to around 19.7 per cent in FY 2011-12. In order to put across an effective comparison between the credit – GDP ratio for the Indian economy and the ratio of

MSME credit to MSME output in the Indian economy, we have calculated a measure called as 'credit gap' which is the difference between the two (credit-GDP ratio of the Indian economy 'minus' ratio of MSME credit to MSME output).We observe that MSME credit to output ratio was higher than the overall credit-GDP ratio in the initial periods of comparison. Gradually, the later overtook the former with in between periods witnessing opposite observations as well. Particularly, during the 1990s, MSME credit to MSME output ratio was higher than the overall credit-GDP ratio. Further, until 1989-90 we observe a wide credit gap between the total credit to GDP ratio of the economy and the ratio of MSME credit to MSME output and thereafter the situation get revered in 1990-91 and continue upto 2000-01. Since 2001-02, the credit gap has increased again i.e. the total credit to GDP ratio in the economy has outpaced the ratio of MSME credit to MSME output in the economy.

B. SHARE OF MSME CREDIT IN TOTAL CREDIT

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Non-food Credit (Rs. bn.)	22048	26018	30396	36674	42897	48696	55296	60030	65469
Agriculture & Allied Activities	2753	3387	4157	4806	5466	5899	6660	7659	8829
Industry (Micro & Small, Medium and Large)	8583	10544	13115	16046	19373	22302	25165	26576	27307
Micro & Small	1327	1690	2064	2102	2367	2843	3482	3800	3715
Medium	1108	1222	1326	1165	1248	1247	1241	1245	1148
Large	6148	7632	9724	12779	15759	18211	20442	21531	22444
Services	5493	6463	7268	8942	10230	11519	13375	14131	15411
Ratio to Non-food credit (%)									
Agriculture & Allied Activities	12.5	13.0	13.7	13.1	12.7	12.1	12.0	12.8	13.5
Industry (Micro & Small, Medium and Large)	38.9	40.5	43.1	43.8	45.2	45.8	45.5	44.3	41.7
Micro & Small	6.0	6.5	6.8	5.7	5.5	5.8	6.3	6.3	5.7
Medium	5.0	4.7	4.4	3.2	2.9	2.6	2.2	2.1	1.8
Large	27.9	29.3	32.0	34.8	36.7	37.4	37.0	35.9	34.3
Services	24.9	24.8	23.9	24.4	23.8	23.7	24.2	23.5	23.5
Priority Sector (Rs. bn.)	**7481**	**9325**	**10922**	**12624**	**14210**	**15398**	**18297**	**20103**	**22259**
Micro & Small Enterprises	2521	3092	3735	4428	4986	5623	7078	8003	8476
Manufacturing	1327	1690	2064	2102	2367	2843	3482	3800	3715
Services	1194	1402	1671	2326	2620	2779	3596	4203	4761
Ratio to priority sector (%)									
Micro & Small Enterprises	33.7	33.2	34.2	35.1	35.1	36.5	38.7	39.8	38.1
Manufacturing	17.7	18.1	18.9	16.7	16.7	18.5	19.0	18.9	16.7
Services	16.0	15.0	15.3	18.4	18.4	18.1	19.7	20.9	21.4
Ratio to Non-food credit (%)									
Total priority sector	33.9	35.8	35.9	34.4	33.1	31.6	33.1	33.5	34.0
Micro & Small Enterprises	11.4	11.9	12.3	12.1	11.6	11.5	12.8	13.3	12.9
Manufacturing	6.0	6.5	6.8	5.7	5.5	5.8	6.3	6.3	5.7
Services	5.4	5.4	5.5	6.3	6.1	5.7	6.5	7.0	7.3

Source: Reserve Bank of India and Self calculations.

Table 11: Sectoral Deployment Of Credit

From the information presented in the Table 11, we observe that the share of MSME manufacturing in total non-food credit of the banking industry has come down from around 11 per cent in FY 2007-08 to around 7 per cent in FY 2015-16. Within the MSME manufacturing, while the share of micro and small enterprises has remained stagnant around 6 per cent, the share of medium enterprises has come down from around 5 per cent in FY 2007-08 to around 2 per cent in FY 2015-16. A notable increase in the share of credit large industries is observed which increased from around 28 per cent in FY 2007-08 to around 34 per cent in FY 2015-16.It is very important to observe here that the share of MSME (Manufacturing) credit in total non-food credit has come down during the time period under consideration despite of the fact that the share of credit to the industrial sector in total non-food credit has increased from around 39 per cent in FY 2007-08 to around 42 per cent in FY 2015-16.

VI. ROLE OF SPECIALIZED INSTITUTIONS LIKE SIDBI & CGTMSE IN PROVIDING ADEQUATE SUPPORT FOR THE HEALTHY GROWTH OF MSME SECTOR

As we have already stated, capital is an important input of production. No industrial concern can take off without monetary support. This need for finance can be classified into following types:

- ✓ Long and medium term finance
- ✓ Short term or working capital requirements / finance
- ✓ Risk Capital
- ✓ Seed Capital/Marginal Money
- ✓ Bridge loans

Financial assistance in India for MSME units is available from a variety of institutions. The important ones are:

- ✓ Commercial/Regional Rural/Co-operative Banks.
- ✓ SIDBI: Small Industries Development Bank of India (refinance and direct lending);
- ✓ SFCs/SIDCs: State Financial Corporations (e.g. Delhi Financial Corporation)/State Industrial Development Corporations.

Long and medium term loans are provided by SFCs, SIDBI and SIDCs. Banks also finance term loans. This type of financing is needed to fund purchase of land, construction of factory building/shed and for purchase of machinery and equipment. The short-term loans are required for working capital requirements, which fund the purchase of raw materials and consumables, payment of wages and other immediate manufacturing and administrative expenses. Such loans are generally available from commercial banks. The commercial banks also sanction composite loan comprising of working capital and term loan up to a loan limit of Rs.1 crore.

A. SOURCES OF LONG AND MEDIUM TERM FINANCE

Long term and medium term finance requirement of MSMEs are meant for capital expenditures such as purchase of land, machinery, technological equipment etc. Various sources of long and medium term finance are:

- ✓ Reinvestment of profits;
- ✓ Loans from commercial banks and financial institutions;
- ✓ Public deposits;
- ✓ Risk capital;

- ✓ Issue of shares;
- ✓ Issue of debentures.

Let us now discuss these sources of long term and medium term finance one after another.

a. REINVESTMENT OF PROFITS

Profitable companies do not generally distribute the whole amount of profits as dividend but, transfer certain proportion to reserves. This may be regarded as reinvestment of profits or ploughing back of profits. As these retained profits actually belong to the shareholders of the company, these are treated as a part of ownership capital. Retention of profits is a sort of self-financing of business. The reserves built up over the years by ploughing back of profits may be utilised by the company for the following purposes:

- ✓ Expansion of the undertaking
- ✓ Replacement of obsolete assets and modernisation
- ✓ Meeting permanent or special working capital requirement
- ✓ Redemption of old debts
- ✓ The benefits of this source of finance to the MSME concern are:
- ✓ It reduces the dependence on external sources of finance
- ✓ It increases the credit worthiness of the company
- ✓ It enables the company to withstand difficult situations
- ✓ It enables the company to adopt a stable dividend policy
- ✓ It increases the debt raising capacity of the company

b. LOANS FROM COMMERCIAL BANKS / FINANCIAL INSTITUTIONS

Medium and long term loans required for setting up projects can be obtained from banks and \or financial institutions for all viable projects. Similarly, funds required for modernisation and renovation schemes can be borrowed from them. Such loans are generally secured by mortgage of the Company's properties, pledge of shares, personal guarantees etc.

c. PUBLIC DEPOSITS

Companies often raise funds by inviting their shareholders, employees and the general public to deposit their savings with the company. The Companies Act permits such deposits to be received for a period up to 3 years at a time. Public deposits can be raised by companies to meet their medium-term as well as short-term financial needs. The increasing popularity of public deposits is due to:

- ✓ The rate of interest the companies have to pay on them is attractive.
- ✓ These are easier methods of mobilising funds than banks, especially during periods of credit squeeze
- ✓ They are unsecured

c. RISK CAPITAL

Risk capital denotes the provision of capital where the provider reduces the risk burden of the entrepreneur, and in turn bears some part of the overall risk involved in a productive activity. As per a definition widely used in India – The term 'risk capital' includes equity as well as mezzanine/ quasi equity financial products that have features of both debt and equity. Risk Capital is an important instrument for not only start-ups and innovative / fast growing companies but is also critical to those companies looking at growth. Risk capital substitutes promoter's contribution, thereby reducing the capital to be brought by the entrepreneurs. Under such cases, Risk capital is one of the most viable options for raising capital for MSMEs. Some of the major risk capital options available for MSMEs include Venture Capital, Angel Investment and Public Listing.

d. ISSUE OF SHARES

It is the most important method. The liability of shareholders is limited to the face value of shares, and they are also easily transferable. A private company cannot invite the general public to subscribe for its share capital and its shares are also not freely transferable. But for public limited companies there are no such restrictions. There are two types of shares:

- ✓ Equity shares: the rate of dividend on these shares depends on the profits available and the discretion of directors. Hence, there is no fixed burden on the company. Each share carries one vote.
- ✓ Preference shares: dividend is payable on these shares at a fixed rate and is payable only if there are profits. Hence, there is no compulsory burden on the company's finances. Such shares do not give voting rights.

e. ISSUE OF DEBENTURES

Companies generally have powers to borrow and raise loans by issuing debentures. The rate of interest payable on debentures is fixed at the time of issue and the debentures have a charge on the property or assets of the company, which provide the necessary security. The company is liable to pay interest even if there are no profits. Debentures are mostly issued to finance the long-term requirements of business and do not carry any voting rights.

B. SOURCES OF SHORT TERM FINANCE

Short term finance are required by the MSMEs to carry out their ay to day activities like purchase of raw materials, payment of wages to labours, purchase of spare parts for running the machineries etc. Various sources of short term finance are:

- ✓ Trade Credit;
- ✓ Factoring;
- ✓ Discounting bills of exchange;
- ✓ Bank overdraft and cash credit;
- ✓ Financing and in financing by SIDBI.

Let us now discuss these sources one after another.

a. TRADE CREDIT

Companies buy raw materials, components, stores and spare parts on credit from different suppliers. Generally

suppliers grant credit for a period of 3 to 6 months, and thus provide short-term finance to the company. Availability of this type of finance is connected with the volume of business. When the production and sale of goods increase, there is automatic increase in the volume of purchases, and more of trade credit is available.

b. FACTORING

The amounts due to a company from customers, on account of credit sale generally remain outstanding during the period of credit allowed i.e. till the dues are collected from the debtors. The book debts may be assigned to a bank and cash realised in advance from the bank. Thus, the responsibility of collecting the debtors' balance is taken over by the bank on payment of specified charges by the company. Book debts may be assigned by the seller to a FACTOR, who who will provide about 80 - 85 % or more of the value of the book debt, as advance to the seller. The FACTOR will also undertake the task of collecting the amount representing the debt (credit sales) from the debtors. Factoring is an important avenue of raising short funds against the receivables for the MSME units. The charges payable to the FACTOR is treated as cost of raising the funds.

c. DISCOUNTING BILLS OF EXCHANGE

This method is widely used by companies for raising short-term finance. When the goods are sold on credit, bills of exchange are generally drawn for acceptance by the buyers of goods. Instead of holding the bills till the date of maturity, companies can discount them with commercial banks on payment of a charge known as bank discount. The rate of discount to be charged by banks is prescribed by the Reserve Bank of India from time to time. The amount of discount is deducted from the value of bills at the time of discounting. The cost of raising finance by this method is the discount charged by the bank.

c. NTREES

*Trade Receivables Engine for E-discounting***:** SIDBI and NSE have joined hands to set up an electronic platform for e-discounting of accounts receivable of suppliers, particularly MSMEs. The platform called, NTREES, replaces the paper-based physical mechanism with e-trading which will make discounting of bills transactions cost-effective, expeditious, and more transparent. The initiative is designed to address the liquidity issues of the suppliers, particularly MSMEs in an effective and efficient manner and in the bargain make it a self-sustaining platform. One of the main challenges facing the MSMEs today is meeting capital requirements at reasonable costs. NTREES is a unique and exciting platform to address these challenges for MSMEs.

d. BANK OVERDRAFT AND CASH CREDIT

It is a common method adopted by companies for meeting short-term financial requirements. Cash credit refers to an arrangement whereby the commercial bank allows money to be drawn as advances from time to time within a specified limit. This facility is granted against the security of goods in stock, or promissory notes bearing a second signature, or other marketable instruments like Government bonds. Overdraft is a temporary arrangement with the bank which permits the company to overdraw from its current deposit account with the bank up to a certain limit. The overdraft facility is also granted against securities. The rate of interest charged on cash credit and overdraft is relatively much higher than the rate of interest on bank deposits.

e. SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA: FINANCING AND REFINANCING OF MSMES

Small Industries Development Bank of India (SIDBI), set up on April 2, 1990 under an Act of Indian Parliament, acts as the Principal Financial Institution for the Promotion, Financing and Development of the Micro, Small and Medium Enterprise (MSME) sector and for Co-ordination of the functions of the institutions engaged in similar activities. The objective of SIDBI is to emerge as a single window for meeting the financial and developmental needs of the MSME sector to make it strong, vibrant and globally competitive. The business domain of SIDBI consists of Micro, Small and Medium Enterprises (MSMEs), which contribute significantly to the national economy in terms of production, employment and exports. MSME sector is an important pillar of Indian economy as it contributes greatly to the growth of Indian economy with a vast network of around 4.6 crore units, creating employment of about 11 crore, manufacturing more than 6,000 products, contributing about 45% to manufacturing output and about 40% of exports in terms of value, about 37% of GDP, directly and indirectly.

The business strategy of SIDBI is to address the financial and non-financial gaps in MSME eco-system. Financial support to MSMEs is provided by way of (a) Indirect refinance to banks / Financial Institutions for onward lending to MSMEs and (b) direct finance in the niche areas like risk capital/equity, sustainable finance, receivable financing, service sector financing, etc. As on March 31, 2015, SIDBI has made cumulative disbursements of over Rs. 3.90 lakh crore benefitting about 346 lakh persons. By this way, SIDBI would be complementing and supplementing efforts of banks/ FIs in meeting diverse credit needs of MSMEs.

In order to promote and develop the MSME sector, SIDBI adopts a 'Credit+' approach, under which, besides credit, SIDBI supports enterprise development, skill upgradation, marketing support, cluster development, technology modernisation, etc., in the MSME sector through its promotional and developmental support to MSMEs.

Direct And Indirect Credit To Msmes

The Small Industries Development Bank of India (SIDBI) extends two kinds of credit facilities namely Direct and Indirect. Direct Credit facility from SIDBI comprises of Term loan, Risk capital, sustainable finance, MSME receivable finance, etc. On the other hand indirect credit from SIDBI comprises of refinance facility, lending to micro finance

institutions, NBFCs, and other eligible entities for on-lending to MSMEs. Comparable data for direct and indirect credit by SIDBI is available from FY 2006-07 onwards as presented hereunder.

Financial Year	Direct credit (Rs. Crore)	Indirect credit (Rs. Crore)	Total Credit (Rs. Core)
2006-07	5007	5218	10225
2007-08	5907	9180	15087
2008-09	6811	21478	28289
2009-10	9160	22758	31918
2010-11	10869	35184	46054
2011-12	11316	42469	53785
2012-13	12265	43794	56059
2013-14	12013	49258	61271
2014-15	11588	43755	55343
2015-16	11397	54235	65632

Source: Annual Reports of SIDBI for different years.

Table 12: Composition Of Credit From Sidbi

From Table 12, we observe that while total credit assistance from SIDBI has increased at a CAGR of 22.9 per cent during the period under consideration, direct credit has increased at a CAGR of 9.6 per cent and indirect credit has increased at a CAGR of 29.7 per cent. We also observe that direct credit from SIDBI has experienced a fall during the last two financial years. In case of indirect credit, while it experienced a fall in FY 2014-15, it bounced back in FY 2015-16. The major component of indirect credit is refinance facility provided by SIDBI which is also one of the most important objective with which SIDBI was established. On the other hand the direct credit support from SIDBI has its origin recently which also explains the voluminous nature of indirect credit compared to direct credit.

Financial Year	Share of direct credit in total credit (%)	Share of indirect credit in total credit (%)
2006-07	49.0	51.0
2007-08	39.2	60.8
2008-09	24.1	75.9
2009-10	28.7	71.3
2010-11	23.6	76.4
2011-12	21.0	79.0
2012-13	21.9	78.1
2013-14	19.6	80.4
2014-15	20.9	79.1
2015-16	17.4	82.6

Source: Annual Reports of SIDBI for different years.

Table 13: Change In Composition Of Credit From Sidbi

What we also observe is a gradual change in the composition of credit support from SIDBI. We observe that the share of direct credit in total credit from SIDBI has decreased from 49 per cent in FY 2006-07 to 17.4 per cent at the end of FY 2015-16. On the other hand, the share of indirect credit in total credit support from SIDBI has increased from 51 per cent at the end of FY 2006-07 to 82.6 per cent at the end of FY 2015-16.

As we have mentioned above, SIDBI gives both direct credit and indirect credit to the MSME sector. While the major part of direct credit is loans and advances to the industrial concern, major part of indirect credit is the loans given to Scheduled Commercial Banks (SCBs), State Co-operative Banks (SCoBs) and other financial institutions for on-lending to the MSME sector. We here below give a comparative picture of the available information available from FY 1996-97 to FY 2014-15.

Financial year ended March 31	Loans/Advances to SCBs, SCoBs and other financial institutions (Rs. Billion)	Loans/Advances to Industrial concerns (Rs. Billion)	Total Loans and Advances (Rs. Billion)	Share of loans to SCBs/SCoBs/Fis in total Loans and advances from SIDBI	Share of loans to industrial concerns in total loans from SIDBI
1997	79	10	89	89.2	10.8
1998	86	11	97	88.8	11.2
1999	102	10	112	90.9	9.1
2000	113	11	124	90.9	9.1
2001	110	13	123	89.5	10.5
2002	103	12	115	89.9	10.1
2003	110	9	119	92.4	7.6
2004	79	12	91	87.1	12.9
2005	84	17	101	83.3	16.7
2006	102	29	131	77.9	22.1
2007	110	41	151	72.8	27.2
2008	140	51	191	73.4	26.6
2009	243	56	299	81.2	18.8
2010	289	68	357	80.8	19.2
2011	352	82	434	81.1	18.9
2012	425	87	512	83.0	17.0
2013	438	80	518	84.5	15.5
2014	463	91	554	83.5	16.5
2015	438	95	533	82.2	17.8

Source: Handbook of statistics on Indian Economy, Reserve Bank of India.

Table 14: Loans And Advances By Sidbi

As given in Table 14, we observe that loans to industrial concerns from SIDBI has increased from Rs. 10 billion at the end of FY 1996-97 to Rs. 95 billion in FY 2014-15, recording a CAGR of 13.6 per cent. On the other hand loans and advances to SCBs, SCoBs, and other financial institutions from SIDBI has gone up from Rs. 79 billion at the end of FY 1996-97 to Rs. 438 billion at the end of FY 2014-15, recording a CAGR of 9.9 per cent. It is observed that the share of loans to SCBs, SCoBs, other financial institutions in total loans and advances from SIDBI has decreased from 89.2 per cent at the end of FY 1996-97 to 82.2 per cent at the end of FY 2014-15. On the other hand the share of loans to industrial concerns in total loans and advances from SIDBI has increased from 10.8 per cent at the end of FY 1996-97 to 17.8 per cent at the end of FY 2014-15.

The SIDBI loans to SCBs, SCoBs and other financial institutions are used by the later to reinforce their lending capacity to the MSME sector. The primary lending institutions namely the SCBs, SCoBs and other lending institutions lend to the MSME sector as per their business plans. Against these they avail loans from SIDBI which are also called refinance facility in the banking parlance. So prima facie, the loans by

SCBs, SCoBs and other financial institutions come first and then refinance from SIDBI i.e. loans to MSMEs by SCBs, SCoBs and other financial institutions is the cause and refinance from SIDBI in the form of loans are the effect.

VII. RELATIONSHIP BETWEEN CREDIT FLOW TO THE MSMES AND SIDBI REFINANCE FACILITIES FOR THE FINANCIAL INSTITUTIONS

Let us now ascertain whether there exist any causal relationship between the two variables i.e. Credit outstanding to the MSME sector (Manufacturing) and SIDBI loans to SCBs, SCoBs & other lending institutions for the purpose of on-lending to the MSMEs. We would be employing the Pairwise Granger Causality test for this purpose. The following hypothesis would be tested.

NULL HYPOTHESIS: The variables credit outstanding to the Micro, Small and Medium (Manufacturing) Enterprises (MSME) sector does not granger cause the SIDBI loans to SCBs, SCoBs and other lending institutions and SIDBI loans to SCBs, SCoBs and other lending institutions does not granger cause credit to the MSME (Manufacturing) sector.

ALTERNATIVE HYPOTHESIS: The variables credit outstanding to the Micro, Small and Medium (Manufacturing) Enterprises (MSMEs) sector granger cause the SIDBI loans to SCBs, SCoBs and other lending institutions and SIDBI loans to SCBs, SCoBs and other lending institutions granger cause credit outstanding to the Micro, Small and Medium (Manufacturing) Enterprises (MSMEs) sector.

Pairwise Granger Causality Tests
Date: 11/23/16 Time: 07:19
Sample: 1 20
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LSCB does not Granger Cause CREDIT	17	0.30798	0.7406
CREDIT does not Granger Cause LSCB		11.5354	0.0016

Table 15: Summary Output Of Pairwise Granger Causality Between Credit To The Mse Sector And Sidbi Loans To The Scbs, Scobs And Other Lending Institutions

From the results given in the Table 15, we observe that the null hypothesis of SIDBI loans to SCBs, SCoBs and other lending institutions does not granger cause credit to the MSME (Manufacturing) sector has a 'p' value of 74 per cent. It implies that we cannot reject the null hypothesis.

On the other hand, the null hypothesis of credit outstanding to the MSME sector does not granger cause SIDBI loans to SCBs, SCoBs and other lending institutions has a probability (p) value of 0.16 per cent, implying that we can reject the null hypothesis. Accordingly, we accept the alternative hypothesis that credit outstanding to the MSME sector granger causes SIDBI loans to SCBs, SCoBs and other lending institutions. This implies that the causality runs from credit outstanding to the MSME (Manufacturing) sector towards the SIDBI loans to SCBs, SCoBs and other lending institutions. This is also as per the practical convention of working between SIDBI and various credit institutions working in the country wherein the lending institutions first lend to the MSMEs and then move to SIDBI on the basis of the asset created for obtaining refinance facility. The refinance facility obtained by the lending institutions help them free up their money locked up in a particular sector which in this case is the MSMEs. After establishing a relationship between the credit to the MSMEs and SIDBI loans to SCBs, SCoBs and other financial institutions for on-lending to MSMEs, let us now see, how both have moved over a period of time.

Financial year ended March 31	SIDBI loans to SCBs, SCoBs and other financial institutions for on-lending to MSEs (Rs. Billion)	Credit to the MSE sector (Rs. Billion)	Ratio of SIDBI credit to SCBs, SCoBs and other financial institutions to total credit to the MSME sector
1997	79	382	20.8
1998	86	458	18.8
1999	102	517	19.7
2000	113	570	19.7
2001	110	601	18.3
2002	103	671	15.3
2003	110	647	17.1
2004	79	712	11.2
2005	84	835	10.1
2006	102	1013	10.0
2007	110	1273	8.7
2008	140	3243	4.3
2009	243	3783	6.4
2010	289	4949	5.8
2011	352	5950	5.9
2012	425	6525	6.5
2013	438	8119	5.4
2014	463	9752	4.7
2015	438	10857	4.0

Source: SIDBI & RBI.

Table 16: Ratio Of Sidbi Credit To Scbs, Scobs, Other Financial Institutions To Credit Outstanding To The Mse Sector

From Table 16, we observe that the ratio of SIDBI loans to SCBs, SCoBs and other lending institutions to credit outstanding to the MSME sector has gone down progressively from 20.8 per cent at the end of FY 1996-97 to 4.0 per cent at the end of FY 2014-15.

VIII. ROLE OF CREDIT GUARANTEE TRUST FOR MICRO AND SMALL ENTERPRISES (CGTMSE) IN THE GROWTH OF MSES

Of all the problems faced by the MSEs, non-availability of timely and adequate credit at reasonable interest rate is one of the most important. One of the major causes for low availability of bank finance to this sector is the high risk perception of the banks in lending to MSMEs and consequent insistence on collaterals which are not easily available with these enterprises. The problem is more serious for micro enterprises requiring small loans and the first generation entrepreneurs.

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The Credit Guarantee Fund Scheme for Micro and Small Enterprises (CGS) was launched by the Government of India (GoI) to make available collateral-free credit to the micro and small enterprise (MSE) sector. Both the existing and the new enterprises are eligible to be covered under the scheme. The Ministry of Micro, Small and Medium Enterprises, GoI and Small Industries Development Bank of India (SIDBI), established a Trust named Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) to implement the Credit Guarantee Fund Scheme for Micro and Small Enterprises. The scheme was formally launched on August 30, 2000. The corpus of CGTMSE is being contributed by the GoI and SIDBI in the ratio of 4:1 respectively.

A. ELIGIBLE LENDING INSTITUTIONS

The Banks / Financial Institutions, which are eligible under the scheme, are scheduled commercial banks (Public Sector Banks/Private Sector Banks/Foreign Banks) and select Regional Rural Banks (which have been classified under 'Sustainable Viable' category by NABARD). As on May 31, 2016, there were 133 eligible Lending Institutions registered as MLIs of the Trust, comprising of 26 Public Sector Banks, 21 Private Sector Banks, 73 Regional Rural Banks (RRBs), 4 Foreign Banks and 9 other institutions i.e. Delhi Financial Corporation, Kerala Financial Corporation, Jammu & Kashmir Development Finance Corporation Ltd, Andhra Pradesh State Financial Corporation, Export Import Bank of India, The Tamil Nadu Industrial Investment Corporation Ltd., National Small Industries Corporation (NSIC), North Eastern Development Finance Corporation (NEDFI) and Small Industries Development Bank of India (SIDBI).

B. ELIGIBLE CREDIT FACILITY

The credit facilities which are eligible to be covered under the scheme are both term loans and/or working capital facility up to Rs.100 lakh per borrowing unit, extended without any collateral security and / or third party guarantee, to a new or existing micro and small enterprise. For those units covered under the guarantee scheme, which may become sick owing to factors beyond the control of management, rehabilitation assistance extended by the lender could also be covered under the guarantee scheme. Any credit facility in respect of which risks are additionally covered under a scheme, operated by Government or other agencies, will not be eligible for coverage under the scheme.

C. GUARANTEE COVER

The guarantee cover available under the scheme is to the extent of maximum 85% of the sanctioned amount of the credit facility. The guarantee cover provided is up to 75% of the credit facility up to Rs.50 lakh (85% for loans up to Rs. 5 lakh provided to micro enterprises, 80% for MSEs owned/ operated by women and all loans to NER including Sikkim) with a uniform guarantee at 50% for the entire amount if the credit exposure is above Rs.50 lakh and up to Rs.100 lakh. In case of default, Trust settles the claim up to 75% (or 85% / 80% / 50% wherever applicable) of the amount in default of the credit facility extended by the lending institution. For this purpose the amount in default is reckoned as the principal amount outstanding in the account of the borrower, in respect of term loan, and amount of outstanding working capital facilities, including interest, as on the date of the account turning Non-Performing Asset (NPA). The Guarantee cover under the scheme is for the agreed tenure of the term loan/composite credit. In case of working capital, the guarantee cover is of 5 years or block of 5 years. A year-wise guarantee approved growth position is indicated in the table below:

Period	No. of Active MLIs	No. of Credit Facilities Approved	Amount of Guarantees Approved (Rs. Crore)	Cumulative Guarantees Approved (Rs. Crore)
FY 2000-01	9	951	6.06	6.06
FY 2001-02	16	2296	29.52	35.58
FY 2002-03	22	4955	58.67	94.25
FY 2003-04	29	6603	117.60	211.85
FY 2004-05	32	8451	267.46	538.62
FY 2005-06	36	16284	461.91	1000.53
FY 2006-07	40	27457	704.53	1705.06
FY 2007-08	47	30285	1055.84	2701.59
FY 2008-09	57	53708	2199.40	4824.34
FY 2009-10	85	151387	6875.11	11559.61
FY 2010-11	106	254000	12589.22	23846.01
FY 2011-12	109	243981	13783.98	37139.31
FY 2012-13	117	288537	16062.48	52600.07
FY 2013-14	117	348475	18188.12	70026.28
FY 2014-15	119	403422	21274.82	90445.90
FY 2015-16	119	513978	19949.38	108990.85

Source: Development Commissioner – MSME

Table 17: Guarantee Cover Provided By Cgtmse

As per the information given in the Table 17, cumulative guarantees provided by the CGTMSE increased from Rs. 0.06 billion at the end of FY 2000-01 to Rs. 1089.9 billion at the end of FY 2015-16. Similarly, number of lending institutions that have approached CGTMSE for guarantee cover has increased from 9 in FY 2000-01 to 119 in FY 2015-16. Total number of credit facilities approved for guarantee by the CGTMSE increased from 951 in FY 2000-01 to 5,13,978 in FY 2015-16.

Period	YoY growth (%) in no. of credit facilities approved	YoY growth (%) in amount of guarantees approved	YoY growth (%) in cumulative guarantees approved
FY 2001-02	141.4	387.1	487.1
FY 2002-03	115.8	98.7	164.9
FY 2003-04	33.3	100.4	124.8
FY 2004-05	28.0	127.4	154.2
FY 2005-06	92.7	72.7	85.8
FY 2006-07	68.6	52.5	70.4
FY 2007-08	10.3	49.9	58.4
FY 2008-09	77.3	108.3	78.6
FY 2009-10	181.9	212.6	139.6
FY 2010-11	67.8	83.1	106.3
FY 2011-12	-3.9	9.5	55.7
FY 2012-13	18.3	16.5	41.6
FY 2013-14	20.8	13.2	33.1
FY 2014-15	15.8	17.0	29.2
FY 2015-16	27.4	-6.2	20.5

Source: Self Calculations

Table 18: Yoy Growth In Guarantee Cover Provided By Cgtmse

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We also observe from the Table 18 that there has been a significant development in terms of guarantee cover provided by CGTMSE to the micro and small enterprises sector. However, the question arises whether the extent of guarantee cover provided by CGTMSE is sufficient or not. It is pertinent to mention here that CGTMSE provides guarantee cover to both term loans and/or working capital facility up to Rs.100 lakh per borrowing unit, extended without any collateral security and / or third party guarantee, to a new or existing micro and small enterprise. Therefore, for a proper comparison we would be considering the credit outstanding only to the micro & small enterprises sector.

Period	Guarantee covered to the MSE sector	Credit to MSEs	Percentage of guarantee cover (%)
2000-01	0.1	601.4	0.01
2001-02	0.4	671.1	0.05
2002-03	0.9	647.1	0.15
2003-04	2.1	712.1	0.30
2004-05	5.4	835.0	0.65
2005-06	10.0	1012.9	0.99
2006-07	17.1	1273.2	1.34
2007-08	27.0	2135.4	1.27
2008-09	48.2	2561.3	1.88
2009-10	115.6	3622.9	3.19
2010-11	238.5	4785.3	4.98
2011-12	371.4	5276.8	7.04
2012-13	526.0	6872.1	7.65
2013-14	700.3	8510.9	8.23
2014-15	904.5	9611.7	9.41
2015-16	1089.9	9957.1	10.95

Source: SIDBI and RBI

Table 19: Percentage Of Guarantee Cover To The Total Credit Outstanding To The Mses

From the information given in the Table 19, we observe that the guarantee cover provided by CGTMSE for the credit outstanding to the MSE sector has increased from 0.01 per cent at the end of FY 2000-01 to 10.95 per cent. It implies that only around 11 per cent of MSE loans are covered with CGTMSE guarantee. The CGTMSE guarantee facilitates easy credit to the MSEs without any collateral and third party guarantee. As we have shown before that credit as an input does affect the MSME output. Taking into account this factor, we conclude that guarantee cover provided by CGTMSE to the MSE sector is grossly inadequate.

Financial institution wise CGTMSE guarantee cover and movement therein: The CGTMSE cover to Micro & Small enterprises (MSE) loans is available to a host of money lending institutions (MLIs) including Banks, Regional Rural Banks (RRBs), State Finance Corporations (SFCs), All India Financial institutions (AFIs) etc.

Number of approvals			Actual			Share in total			Per cent	
Bank / FI Group	2012-13	2013-14	2014-15	2015-16		Bank / FI Group	2012-13	2013-14	2014-15	2015-16
AFIs	254	194	121	99		AFIs	0.1	0.1	0.0	0.0
FB	1192	1280	1688	1580		FB	0.4	0.4	0.4	0.3
PSB	241403	304593	375994	483042		PSB	85.2	88.6	94.0	94.2
Pvt. Bank	10809	19729	20730	13984		Pvt. Bank	3.8	5.7	5.2	2.7
RRB	29530	17823	1386	14214		RRB	10.4	5.2	0.3	2.8
SFI / SFC	25	192	117	18		SFI / SFC	0.0	0.1	0.0	0.0
Grand	**283213**	**343811**	**400036**	**512937**		**Grand**	**100.0**	**100.0**	**100.0**	**100.0**

Number of approvals			Actual			Share in total			Per cent	
Bank / FI Group	2012-13	2013-14	2014-15	2015-16		Bank / FI Group	2012-13	2013-14	2014-15	2015-16
Total						Total				
Amount approved			Rs. Crore			Share in total			Per cent	
Bank / FI Group	2012-13	2013-14	2014-15	2015-16		Bank / FI Group	2012-13	2013-14	2014-15	2015-16
AFIs	91	88	51	48		AFIs	0.6	0.5	0.2	0.2
FB	345	389	518	478		FB	2.3	2.2	2.5	2.4
PSB	13661	15994	19257	18074		PSB	89.2	91.4	92.9	91.3
Pvt. Bank	551	646	863	1062		Pvt. Bank	3.6	3.7	4.2	5.4
RRB	652	371	20	131		RRB	4.3	2.1	0.1	0.7
SFI / SFC	8	18	11	7		SFI / SFC	0.1	0.1	0.1	0.0
Grand Total	**15308**	**17506**	**20720**	**19799**		**Grand Total**	**100.0**	**100.0**	**100.0**	**100.0**

Source: SIDBI. AFIs: All India Financial Institutions, FB: Foreign Banks, PSB: Public Sector Banks, Pvt Banks: Private Banks, RRBs: Regional Rural Banks, SFI / SFC: State Financial Institutions / State Financial Corporations.

Table 20: Mli Wise Number Of Approvals And Amount Approved Under Cgtmse

We observe from Table 20 that both the number of approvals and the approved amount under CGTMSE has increased over the years. While the number of CGTMSE guarantee cover has increased from around 2.83 lakh in FY 2012-13 to around 5.13 lakh in FY 2015-16, amount approved under these have increased from Rs. 15,308 crore in FY 2012-13 to Rs. 19,799 crore in FY 2015-16.

One of the important observations from the above data points is that the Banking sector constitute 97 per cent of the total number of guarantee approvals by CGTMSE, they also account for 99 per cent of the total approved amount. The public sector banks (PSBs) alone account for the bulk of number of guarantee approvals and the amount approved.

IX. CONCLUSION

With regard to flow of credit to the MSME sector, we observed that the credit flow to Micro & Small enterprises engaged in manufacturing activities (MSE Manufacturing) has remained more or less stagnant. Credit flows to medium enterprises, however, have deteriorated both in case of manufacturing units as well as services units. From the above qualitative analysis we may conclude that the flow of bank credit to MSMEs as a whole is far from sufficient.

As far as the performance of SIDBI is concerned, we observe an alarming fact that the SIDBI as a principle refinance institution for the MSMEs have not been able to maintain a healthy growth of loans to SCBs, SCoBs and other lending institutions for on-lending to the MSME sector even when the MSME credit portfolio has increased at a good pace. During the relevant study period, while the credit outstanding to the MSME sector by different lending agencies has increased by a healthy CAGR of 20.4 per cent, refinance facility by SIDBI to the lending agencies have increased by a CAGR of 9.9 per cent only.

With regard to the performance of CGTMSE, we observe that since its inception, CGTMSE as an institutional set up under SIDBI has experienced tremendous growth opportunities and has expanded its reach both in length and breadth. The number of money lending institutions (MLIs) has also increased, increasing the reach of CGTMSE in terms of provision for collateral free loans to micro & small enterprises

up to Rs. 1 crore. However, guarantee cover provided by the CGTMSE to the MSE sector remains far from sufficient. It is evident from the fact that the ratio of guarantee cover provided by CGTMSE to the credit outstanding to the MSE sector has increased from 0.01 per cent at the end of FY 2001-02 to 10.95 per cent at the end of FY 2015-16.

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