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Working Paper

INDUSTRIAL SICKNESS IN INDIA :

MAGNITUDE AND IDENTIFICATION CRITERIA

By

Bakul H. Dholakia

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1. Introduction

In recent years industrial sickness has emerged as a serious problem affecting the process of industrial development in Indian economy. By the end of 1986, the number of sick units in the portfolio of scheduled commercial banks stood at 1.48 lakhs involving an outstanding bank credit of Rs.4874 crores (Ministry of Finance, 1988). Sporadic closures of business units and corporate failures resulting in bankruptcies have been a normal feature in the market economies all over the world. Thus, for instance, in UK more than 10,000 industrial units are estimated to fail every year with nearly 20% of the firms listed on the stock exchanges turning sick each year (Slatter, 1984). Similarly, available empirical evidence shows that the number of corporate failures resulting in bankruptcies has been increasing in many countries. Thus, during the period 1972 to 1983, the number of bankruptcies per annum has increased from around 10,000 to more than 25,000 in the U.S., from less than 7,000 to around 20,000 in Japan,

from around 4,000 to more than 10,000 in West Germany and from 3,000 to more than 12,000 in the U.K. (Kharbanda & Stallworthy, 1985). Incidence of bankruptcies in the U.S. economy is currently running at around 100 per day and the rate seems to be increasing with the passage of time.

1 [Growing competition and changing international economic environment often lead to high incidence of corporate failures in developed market economies]. At the same time, developed economies also have the ability to absorb the economic distur- bances brought about by the closure of industrial units. How- ever, in developing economies like India, the socio-economic consequences of corporate failures and closure of industrial units are often difficult to absorb. As a result, [the Govern- ment would find it extremely difficult to reconcile with the phenomenon of business failures and accept closures of industrial units as a normal phenomenon associated with the process of industrial development and diversification. It is not surpris- ing, therefore, that there has been a growing concern for a careful handling of the problem of industrial sickness in Indian economy and that the government is keen on making every possible attempt to review the sick units and control the growth of industrial sickness in the economy.

3 [The pre-requisite for effectively dealing with the problem of industrial sickness is a comprehensive assessment of the actual

magnitude of industrial sickness and an analysis of the main factors responsible for making industrial units sick. Both the cure as well as prevention of industrial sickness would critically depend on our ability to identify sickness as early as possible and analyse its causes. The remedial action to deal with the problem of industrial sickness would involve (a) rehabilitation of the sick units to restore their financial viability; and (b) prediction of the possibility of the existing industrial units turning sick in future and prevention of such sickness. It is obvious that faulty or delayed identification of industrial sickness would considerably reduce the ultimate effectiveness of the remedial action in either of these directions. It is in this context that the existing system for identifying and rehabilitating sick units needs careful scrutiny.

An attempt has been made in this paper to examine the criteria used by official agencies to identify industrial sickness and highlight the limitations of such definitions. The main purpose of this paper is to raise some issues regarding the identification of industrial sickness in the context of the nature of remedial action that needs to be taken to deal with this problem. The paper is divided into five sections. Following the introductory first section, a broad perspective on the magnitude and growth of industrial sickness in Indian economy is provided in the next section. The third section discusses

the prevailing definitions of industrial sickness and examines the main issues involved in the identification of sick units. The fourth section discusses briefly the issues relating to financial viability of sick units. The fifth and final section summarises the conclusion emerging from the discussion presented in earlier sections.

2. Magnitude Of Industrial Sickness

The incidence of industrial sickness in Indian economy has been increasing at a significant rate in recent years. The number of large sick units having outstanding bank credit of Rs.1 crore or more increased from 241 in 1976 to 714 in 1986, while the number of sick units in the small scale sector increased sharply from around 8 thousand to 1.46 lakhs during the same period. The level of outstanding bank credit to sick industrial units increased from less than 700 crores in 1976 to 4874 crores in 1986, indicating a seven-fold increase during the 10 year period. The steady growth in the incidence of industrial sickness during the 80's is clearly brought out by the figure given in Table 1.

It is evident from the information given in Table 1 that not only the number of sick units in the large scale sector has increased rapidly during the period 1980-86, but the average amount of outstanding bank credit to large units has also increased from Rs.324 lakhs per unit in 1980 to Rs.460 lakhs per

unit in 1986. It is, however, interesting to observe that, while the number of sick units in the small scale sector has increased at an alarming rate of 36% per annum during the period 1980-86, the average outstanding bank credit to these units has actually decreased from the level of P.132 thousand per unit in 1980 to 90 thousand per unit in 1986. However, because of the explosive growth in the number of sick units in the small scale sector, the total amount of bank credit tied up in sick small scale units has increased at the phenomenal rate of 27.4% per annum during this period. Moreover, as a result of significantly rapid growth of sickness among the small units, the proportion of total bank credit to sick units tied up in SSI units has increased from less than 17% in 1980 to around 27% in 1986. However, despite the acceleration in the incidence of sickness among small industrial units, a high proportion of bank credit is still tied up in large units, which continue to account for more than two-thirds of the total bank credit tied up in sick industrial units.

The incidence of industrial sickness in India has been widespread, covering different industries as well as different regions. Information on the industry-wise incidence of industrial sickness is provided in Table 2. Information on the incidence of industrial sickness in different states is given in Table 3.

It is evident from Table 2 that two industries, viz.,
engineering and textiles, account for more than half of the
outstanding bank credit tied up in large sick units. Moreover,
the proportion of bank credit advanced to the sick units in
these two industries has increased from 53% in 1980 to 58.9%
in 1986. As against this, there has been a significant de-
cline in the proportion of bank credit advanced to sick units
in the chemicals industry, from 11.9% in 1980 to 4.3% in 1986.
It is interesting to compare the increase in outstanding bank
credit advanced to large sick units with the corresponding
increase in the aggregate bank credit advanced to large and
medium industrial units taken as a whole. During the period
1980-86, the bank credit to large and medium industries increased
from 8238 crores to 19,170 crores, while during this period
the bank credit to sick units increased from 1233 crores to
3239 crores. Thus, bank credit to large sick industrial units
as a proportion of total bank credit to large and medium
industry increased from 15% in 1980 to 17% in 1986.

If we examine the trends in the ratio of bank credit to
large sick units in a given industry to total bank credit advan-
ced to all industrial units in that industry, we find that the
relative incidence of sickness is increasing at an alarming rate
in some industries while it is steadily decreasing in others.
Thus, for instance, this ratio increased sharply in the case of
textiles industry from 34.5% in 1980 to 51.6% in 1986, while

it declined sharply in the case of chemicals industry from
11.6% in 1980 to 4.4% in 1986. In the case of engineering
industry, the proportion of bank credit to sick units increased
from 10.3% to 11.7% during this period. In the case of all
other industries taken together, this proportion increased
marginally from 7.6% in 1980 to 8% in 1986. Thus, in terms
of the proportion of bank credit tied up in sick units in
individual industries, the major problem exists in the textile
industry, and to some extent in engineering industry, while all
other industries have less than 10% and in several cases less
than 5% of their total bank credit tied up in large sick units.
Available empirical evidence, therefore, indicates that the
relative magnitude of industrial sickness cannot be considered
to be high in most industries, and it appears to be more of an
industry-specific problem than a general problem as such, espe-
cially in the case of large industrial units. The case of cotton
textile industry is a clear example of the sickness being an
industry-wide phenomenon. A recent RBI study (1987) indicates
that the cotton textile industry has been in a poor state of
health for several years particularly since 1970. In 1986, out
of 720 mills in the private sector, 72 mills remained closed on
account of sickness and a large majority of the mills in the
public sector are making huge losses. Moreover, in the coope-
rative sector also there are more loss-making mills than profit-
making mills.

Information on state-wise distribution of large sick
units given in Table 3 indicates that there is a significant
regional concentration of industrial sickness. West Bengal
and Maharashtra are the two states that account for nearly
half of the total bank credit tied up large sick units. Their
combined share in total bank credit to sick units has increased
from 46.5% in June 1981 to 50.5% in June 1986. Moreover, the
proportion of total bank credit to sick units in a given state
has increased in the case of Gujarat from 7.6% in 1981 to 10.3%
in 1986, while this proportion has declined sharply in the case
of Tamil Nadu from 12.9% to 6.3% during the same period. Thus,
the problem of industrial sickness is getting aggravated in
states like Gujarat and Maharashtra, while it is getting signi-
ficantly reduced in states like Tamil Nadu and Karnataka. Thus,
the preliminary analysis of the available information on the
spread of industrial sickness clearly shows that if more detailed
information on industry-wise and region-wise distribution of
sick units and their characteristics is available, it would
provide valuable perspective on the problem of industrial sick-
ness and would also help in a proper diagnosis of this problem.

It is important to note that the above analysis of relative
magnitude of industrial sickness in India is based on the official
statistics relating to the identified sick units. It is, how-
ever, possible to argue that the criteria adopted by the official
agencies to identify sick units in different industries may not
properly estimate the actual incidence of industrial sickness

in the country. It is necessary, therefore, to examine the definitions of sick units adopted by the official agencies to identify and measure the magnitude of industrial sickness.

3. Criteria For Identification Of Sick Units

The official yardstick adopted for identifying industrial sickness is based on the cash loss criterion. In fact, the criterion of cash loss represents the common element underlying various definitions of industrial sickness given by different agencies. Among the alternative definitions of industrial sickness, the ones given by the Reserve Bank of India, the term lending institutions and the legal definition adopted in the **Sick** Industrial Companies (Special Provisions) Act, 1985, deserve special mention.

Currently, the identification of sick industrial units is made by the Reserve Bank of India on the basis of a mix of criteria including continued cash losses, imbalances in the financial structure and deterioration in the liquidity position. Thus, as per the definition of RBI, "a unit may be considered sick, if it has incurred cash losses for one year and, in the judgement of the Bank, it is likely to continue to incur cash losses for the current year as well as the following year and the unit has an **imbalance** in its financial structure such as current ratio of less than 1:1 and worsening debt equity ratio." (RBI, 1978). The definition of sick units adopted by the term lending institutions is based on the criteria of continuous

cash losses, defaults in debt servicing requirements and irregularities in meeting statutory and other liabilities. Thus, an industrial unit is classified as sick by term lending institutions after taking into account the following symptoms : (a) Continuous defaults in meeting four consecutive half yearly instalments of interest or principal in respect of the institutional loans; (b) Continuous cash losses for a period of 2 years or continued erosion in the networth by 50% or more; and (c) Mounting arrears on account of statutory or other liabilities for a period of one or two years (Bidani & Mitra, 1983). As against this, the most stringent definition of industrial sickness is the one given under the Sick Industrial Companies (Special Provisions) Act, 1985, which is based on the criteria of continuous cash losses and complete erosion of the equity bases of the unit. Thus, according to the legal definition, a sick industrial company has been defined as "An Industrial Company (being a company registered for not less than 7 years), which has at the end of any financial year accumulated losses equal to or exceeding its entire net worth and has also suffered cash losses in such financial year and the financial year immediately preceding such financial year" (Government of India, 1985).

It is evident from the above definitions that the phenomenon of industrial sickness is essentially viewed in terms of extreme deterioration in the health of industrial unit judged primarily from the financial angle. Moreover, the criteria underlying these

definitions focus on the symptoms of sickness which cannot be
regarded as sufficiently advanced signals of the ultimate
consequence of extreme sickness, viz., closure of the unit.
Thus, for instance, the wiping out of the entire net worth
of a unit accompanied by at least 2 consecutive years of cash
loss clearly signals extreme form of sickness which would in
fact take the enterprise on the verge of closure. Similarly,
severe cash losses with persistent defaults in institutional
debt servicing also indicates fairly advanced stage of sickness
on the part of the industrial unit, though this stage would
certainly precede the stage of complete erosion of the net worth
of the unit. Such yardsticks adopted for identifying sickness
have the undesirable effect of delaying the identification of
sick units by at least a couple of years or more. In fact,
it is quite likely that the process of sickness may have set
in much earlier in the case of most of the units which may be
identified as sick units according to the above yardstick only
during the current period.

Timely action to help sick units requires early identifi-
cation of sickness; and for this purpose it is necessary to
identify other symptoms which could signal the setting in of
the process of sickness in its early stages. In the case of
large units whose shares are quoted in the stock exchanges, a
clear signal of the sickness of the enterprise comes at a much
earlier stage when the dividends are skipped and its impact is
reflected in terms of a sharp decline in the share price. It

is interesting to observe that the shareholders and the stock
market in general have their own yardsticks to evaluate the
extent of sickness of an enterprise, even when the enterprise
is reported to be incurring cash losses. Thus, all those
companies who skip dividend in any given year do not necessarily
suffer from the same adverse reaction in terms of their share
price movement on the stock exchange. In some cases, the share
price nosedives and goes significantly below par soon after the
company skips dividend, even for the first time. As against this,
it is not uncommon to come across several cases where despite the
dividend being skipped the shares continue to be quoted above
par on the stock exchange. However, it would be wrong to
conclude on the basis of such observations that skipping of
dividends by an enterprise does not signal sickness and that
such symptoms are not relevant for identifying sickness. In fact
this symptom, which essentially follows the erosion of profita-
bility of the enterprise, can be viewed along with other identi-
fiable symptoms pertaining to the enterprise to judge whether it
indicates a setting in of the process of sickness or it represents
a mere transitory phenomenon in the nature of a temporary down-
fall in the financial performance of the enterprise.

It is possible to argue that in practice, sick and non-sick
enterprise do not always constitute clearly defined categories
with a distinct dividing line mainly because an enterprise does
not fall sick overnight and, in most cases, it takes several

years of decline before the clearly visible symptoms of sickness emerge (Gupta & Sekhar, 1988). This, however, does not mean that one should wait for massive losses to be incurred by the unit before identifying it as a sick unit and, therefore, initiating whatever action may be necessary. In fact, the excessive and continuous cash loss criterion adopted by the official yardsticks for defining sickness actually results in delaying corrective action in most cases by several years and in the process many units almost reach the point of no return. In this context, it is necessary to make an attempt to evaluate what may be called the normal profitability of an average unit in a given industry. A sub-normal profit indicating a significant departure from the normal profitability should also be regarded as a matter of concern from the viewpoint of assessing whether the process of sickness is likely to set in or has already set in, though it is not visible in terms of acute problems faced by the unit.

Another related and equally important criterion to judge the health of an industrial unit is its relative performance vis-a-vis other firms in the industry. The main reason why the firm's relative position in the industry should be considered as an important criterion in the context of industrial sickness is that business fluctuations and changes in economic environment do not affect the profitability of different firms in the same manner. While a pronounced downswing in business conditions or a significant recession in a given industry would bring about a general decline in the average profitability of that industry,

it is most likely that some units in the industry would be
affected far more seriously than others. The competitive
advantage gained by some firms in the industry through well-
formulated competitive strategy and basic managerial strengths
could effectively protect such firms during the periods of
business downtown and also in situation where the industry is
approaching its maturity stage or even long term declining
period (Porter, 1980). Moreover, it is generally observed
that during the period of sharp upswing in business conditions
marked by rapid growth of industry sales, almost all firms in
industry, including the existing and established firms as well
as the new firms entering the industry, earn fairly high
profits. In this process, even marginal or inefficient firms
with relatively high cost of production also make profits.
However, their relative profitability is likely to be significantly
lower in relation to the average profitability of some of the
well established and successful firms in the industry. When the
boom is over and the industry growth slackens significantly,
such marginal or relatively inefficient firms are among the
first ones to show sharp decline in the profitability, with the
extent of decline in their profitability far exceeding the
extent of general decline in average profitability experienced
by the industry as a whole. Eventually, such firms are likely
to turn into sick units with persistent cash losses and erosion
of their net worth.

Recent studies investigating the typical path to the present cash loss situation of several sick companies have shown that the cash loss was not a sudden occurence and it actually represented only a continuation and aggravation of a trend already in evidence for two or three years before the commencement of the cash loss period in most cases (Gupta, 1983). The typical path of sickness, as represented by the annual average profitability index for the sample companies examined in the study, indicated that in the early stages (i.e. upto 6 years preceding the cash loss period), the profitability index showed a marginal decline, followed by sustained decline during the period of 3 years preceding the cash loss period and then it showed continuous and significant cash loss during the subsequent period. This empirical finding, if verified and validated through larger samples spread over different industries, would be of great signi-ficance for developing a forewarning system which could aim at catching the earliest available signals to identify the tendency towards industrial sickness in the concerned individual cases. This would facilitate the task of undertaking necessary preventive action well in time to make it most effective. It is interesting to observe in this context that, enough empirical evidence is now available in terms of research findings in the area of prediction of corporate sickness in Indian economy (Yadav, 1986; Vinod Kumar, 1987; Srivastava & Yadav, 1986;

and Kaveri, 1980). This clearly suggests that formulation
of empirically validated predictive models to monitor corporate
sickness is a feasible and fruitful exercise that can be under-
taken on a regular basis to identify potential cases of sickness
and monitor their progress and performance more closely in
order to effectively prevent setting in of sickness in future.
However, it is obvious that such a system can only be based on
a much broader perspective with regard to the problem of con-
trolling of industrial sickness.

Concept of "Weak" Units

Recently the Reserve Bank of India has advised the banks
to make a distinction between sick industrial units and "weak"
industrial units mainly with a view to facilitating the detec-
tion of sickness at the incipient stage. According to the
RBI guidelines, an industrial unit will be termed as "weak",
if at the end of any accounting year it has (a) accumulated
losses equal to or exceeding 50% of its peak net worth in the
immediately preceding five accounting years; (b) a current
ratio of less than 1:1; and (c) suffered a cash loss in the
immediately preceding accounting year (RBI, 1987). It is
interesting to note that this distinction between sick units
and weak units does not apply to SSI units in respect of which
a separate distinction is suggested under the guidelines issued
by the Reserve Bank. Accordingly, SSI unit should be considered

sick if it has (a) incurred cash loss in the previous accounting year and is likely to continue to incur cash loss in the current accounting year and has an erosion of 50% or more of its net worth; and/or (b) continuously defaulted in meeting four consecutive quarterly instalments of interest or two half yearly instalments of principal on term loans and there are persistent irregularities in the operation of its credit limits with the bank (RBI, 1987). Thus, the classification of industrial units into the categories of sick units and weak units is relevant only in the case of large and medium units.

The concept of weak units has been evolved in response to the need to initiate remedial measures much before the net worth of the unit is fully eroded. While identifying weak units and initiating necessary remedial measures in respect of such units at the stage of 50% erosion of their net worth is a step in the right direction, it is difficult to believe that this step by itself would pave the way for detection of sickness at the incipient stage. In this context it is useful to distinguish between newly established units and ongoing units which were established long ago. In the case of newly established units with an operating period of about five years, 50% erosion of net worth with an inadequate current ratio would indicate that the unit essentially failed to take off as a successful business unit and perhaps it is sick from the stage of inception itself. This could happen if the initial exercise of project identification, formulation and appraisal was not

properly carried out. As against this, a well established
business unit with a long operating period is likely to have
accumulated high amount of reserves and surplus and a fairly
sound equity base. When such a unit starts incurring losses,
it would normally take more than a couple of years to accumulate
losses of an order which would wipe out more than half of the
net worth of the unit. In fact, the more successful the unit
was in the past, the higher would be its net worth and hence,
the longer it would take to reach the level of 50% erosion of
net worth through accumulated current losses. In any case,
it is likely that the losses incurred by such a unit in the
initial stages of its down turn would be moderate and such
losses would grow with the passage of time if the enterprise
continues to be sick. Thus, by the time such a unit reaches
the level of 50% erosion of its net worth, the process of sick-
ness may have already reached fairly advanced stage.

The detection of sickness at the incipient stage involves
continuous monitoring of the performance of the enterprise and
defining the range within which fluctuations in its performance
could be regarded as a normal phenomenon. Any deterioration
in the performance of the unit which goes beyond the normal
range of business fluctuations should be subjected to a careful
scrutiny to determine whether it indicates the earliest stage
of sickness or not. Continuous monitoring of the performance
of business units in this manner is likely to be a strenuous,
time consuming and costly affair. However, the short cuts to

this method of early detection of industrial sickness, which
are being currently employed through the definitions of sick
or weak units, are unlikely to achieve the purpose of detecting
the sickness at the incipient stage for reasons already discussed
above. Hence, the difficulties that arise in dealing with cases
of prolonged sickness are likely to continue even after adopting
the new definition of weak units, though perhaps to a somewhat
lesser extent.

4. Assessment of Potential Viability

As per the RBI guidelines, the commercial banks are required
to undertake detailed viability studies in respect of the identi-
fied sick industrial units and come to a conclusion with regard to
their future viability. The task of assessing potential viability
of the sick units is guided mainly by the principle that "the
rehabilitation of sick units has to be very selective and syste-
matic", and "there is no point in throwing away further resources
in support of the units which are irretrievably sick" (Ministry
of Finance, 1986). Thus, only such units which are found to be
potentially viable are recommended to be taken up for the formulation
of rehabilitation packages to restore them to their normal level
of health. The package that is jointly designed for rehabilita-
ting sick units consists of various concessions from commercial
banks, financial institutions, Central Government, State Govern-
ment, other government agencies and suppliers of goods and services
or other creditors, as may be necessary.

A sick industrial unit is regarded as potentially viable,
if in the opinion of the banks assessing its viability, "it
would be in a position, after implementing a package of con-
cessions **spread** over a period not exceeding seven years from
the commencement of the package, to continue to service its
repayment obligations as agreed upon, including those formula-
ting part of the package, without the help of any further
concessions after the aforesaid period". (Ministry of Finance,
1986). It is also stipulated that the repayment period for
restructured debts should not exceed 10 years from the date of
implementation of the package. It is evident that a detailed
viability study has to be conducted in each case to determine
whether or not the unit is potentially viable. By now, the
banks have completed viability studies in respect of more than
90% of the large units which were identified as sick industrial
units. Information on the viability status of large units
relating to the period 1980-86 is provided in Table 4.

It can be seen from Table 4 that the proportion of large
sick units which can be considered potentially viable has steadily
decreased during the period 1980-86. Out of 328 sick units for
which viability studies were completed by the Banks in 1980, as
many as 275 units (84%) were found to be viable. As against this,
in 1986 viability studies were completed for 653 units, out of
which 383 units (59%) were found to be potentially viable. The

corresponding rise in the proportion of non-viable units has been from 16.2% in 1980 to 41.3% in 1986, indicating relatively much faster growth in the number of non-viable units as compared to the growth in the number of viable units. Thus, during the period 1980-86, the average growth rate of potentially viable units has turned out to be 5.7% per annum as against the growth rate of non-viable units which is as high as 31.2% per annum.

The obvious implication of this finding is that the rapid growth of industrial sickness among large units is also accompanied by a more rapid growth in the incidence of the extreme form of sickness that tends to make the units totally non-viable and makes them unfit for even being considered for a rehabilitation programme. This aspect of industrial sickness deserves most urgent attention. It represents a sorry state of affairs that the problem of industrial sickness has reached the level where nearly half of the identified large sick units can no longer be considered to be viable and, in the absence of any rehabilitation package, they are likely to be on the verge of bankruptcy. The average amount of banks credit that is tied up in non-viable units has also increased from Rs.240 crores per sick unit in 1980 to Rs.444 crores per unit in 1986. While the information on the exact employment potential such non-viable large sick units is not readily available, it can be safely assumed that the average number of persons employed per unit in such cases would also be fairly large. Thus, the eventual bankruptcy and closure of large sick units, which are found to be non-viable, would pose serious

problems both in terms of financial resources locked up in these units as well as the loss of employment potential.

The situation with regard to the viability of small units, which are identified as sick, is even **worse**. In 1986, out of the total number of sick SSI units (1.46 lakhs), only 16.9 thousand units (11.6%) with outstanding credit of Rs.303 crores (23.2%) were considered by the banks as potentially viable (Ministry of Finance, 1988). Thus, almost 9 out of every 10 sick SSI units are found to be non-viable. That such a high proportion of sick SSI units has to be regarded as "irretrievably sick" and on the brink of closure only indicates the gross inadequacy of the entire process of identifying sick units in the category of SSI units financed by the banks.

5. Conclusion

The alarming proportion of non-viable units in the category of identified sick industrial units raises the issue discussed earlier regarding the identification of industrial sickness at the incipient stage. It is possible to argue that delayed identification of sickness could have been mainly responsible for such high proportion of non-viable units among the identified sick units, especially in the category of large industrial units. The need for having early warning system that predicts industrial sickness assumes special significance especially in the light of this recent experience. As already indicated earlier, it is possible to design an empirically workable system in which prediction of significant deterioration in the performance of an industrial unit leading to

sickness can be made on the basis of past and current financial data relating to individual units and information on the relative performance of the unit vis-a-vis other units in the industry and the industry average.

A more comprehensive model that incorporates non-financial data can also be formulated but such models would be more complex to handle especially in terms of the data requirements and analysis Moreover, the banks and the financial institutions would already have systems for collecting and processing financial data and with some modifications and improvements in the system of data collection and processing, it may be possible to develop a system to predict industrial sickness among the large industrial units financed by the banks in a manner that would minimise the incremental cost of generating such predictions.

In the light of growing incidence of industrial sickness and also the increasing proportion of non-viable units among the identified sick units, it is obvious that the financial institutions will have to play a major role in detecting and preventing sickness at the earliest possible stage. It is interesting to note in this context that a recent study by Khandwalla (1988) has identified financial institutions' own procedures and practices as an important cause of industrial sickness along with inappropriate management of the enterprise which has already been identified as the major cause of sickness by several earlier studies. Restructuring the procedures adopted by the financial

institutions for identifying and monitoring industrial sickness and introducing appropriate systems for early detection and prevention of sickness appear to be the major long term sustainable measure for controlling the menace of industrial sickness during the years to come.

TABLE 1

GROWTH OF INDUSTRIAL SICKNESS, 1980-86

Year	Large Units	Medium Units	Small Units	Total Sick Units
(1)	(2)	(3)	(4)	(5)
No. of Sick Units as at the end of -				
December 1980	409	992	23,149	24,550
December 1981	422	994	25,342	26,758
December 1982	444	1,178	58,551	60,173
December 1983	491	1,256	78,363	80,110
December 1984	545	1,287	91,450	93,282
December 1985	637	1,186	1,17,783	1,19,606
December 1986	714	1,250	1,45,776	1,47,740
Outstanding Bank Credit (Rs. crores) as at the end of				
December 1980	1324.47	178.42	305.77	1808.66
December 1981	1478.47	187.63	359.07	2025.54
December 1982	1790.60	225.76	568.97	2585.33
December 1983	2014.33	357.97	728.99	3101.29
December 1984	2330.12	428.58	879.69	3638.39
December 1985	2980.24	220.02	1070.67	4270.93
December 1986	3287.02	281.37	1306.10	4874.49

Note : Large Units are those availing bank credit limit of Rs.1 crore and above. Medium units are those non-SSI units which have bank credit limit of less than Rs.1 crore. Data relating to small units (SSI Units) from 1982 onwards are not comparable with the corresponding data for the earlier period.

Source : Economic Survey 1987-88, Ministry of Finance, Government of India.

TABLE 2

INDUSTRY-WISE DISTRIBUTION OF LARGE SICK INDUSTRIAL
UNITS

Industry	June 1980		June 1986	
	No. of Units	Outstanding Bank Credit (Rs. crores)	No. of Units	Outstanding Bank Credit (Rs. crores)
(1)	(2)	(3)	(4)	(5)
Engineering & Electricals	88	304.25 (24.68)	175	788.10 (24.33)
Iron & Steel	42	82.36 (6.68)	38	166.38 (5.14)
Textiles	89	349.56 (28.36)	186	1118.38 (34.53)
Chemicals	22	146.16 (11.86)	39	140.08 (4.32)
Sugar	48	77.97 (6.32)	47	177.02 (5.47)
Jute	35	86.81 (7.04)	43	199.58 (6.16)
Rubber	9	42.50 (3.45)	16	127.17 (3.93)
Cement	3	11.83 (0.96)	5	41.32 (1.28)
Other Industries	53	131.26 (10.65)	140	480.61 (14.84)
Total	389	1232.70 (100.00)	689	3238.64 (100.00)

:   This information relates to large industrial units availing
    bank credit limit of Rs.1 crore and above.

:   Reserve Bank of India : Report on Currency and Finance,
    1981-82 and 1986-87.

TABLE 3

STATE-WISE DISTRIBUTION OF LARGE SICK INDUSTRIAL UNITS

State/ Union Territory	June 1981		June 1986	
	No. of Units	Outstanding Bank Credit (Rs. crores)	No. of Units	Outstanding Bank Credit (Rs. crores)
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	16	39.96 (2.75)	39	114.28 (3.53)
Gujarat	36	110.47 (7.60)	66	332.20 (10.26)
Karnataka	21	102.81 (7.07)	36	183.79 (5.68)
Kerala	13	51.76 (3.56)	18	130.25 (4.02)
Madhya Pradesh	19	37.95 (2.61)	26	96.27 (2.97)
Maharashtra	88	330.59 (22.75)	151	898.54 (27.74)
Tamil Nadu	35	187.02 (12.87)	55	203.69 (6.29)
Uttar Pradesh	50	141.95 (9.77)	72	315.80 (9.75)
West Bengal	107	345.59 (23.78)	150	738.22 (22.79)
Other States & Union Territories	37	105.19 (7.24)	76	225.60 (6.97)
Total	422	1453.29 (100.00)	689	3238.64 (100.00)

Note :   This information relates to large industrial units availing bank credit limit of Rs.1 crore and above.

Source :   Reserve Bank of India : Report on Currency and Finance, 1981-82 and 1986-87.

TABLE 4

VIABILITY STATUS OF LARGE SICK INDUSTRIAL UNITS

		1980	1985	1986
1.	Total No. of Sick Units	389	637	714
2.	No. of Units for which Viability Assessment has been made	328	552	653
3.	No. of Units found Viable	275	350	383
4.	No. of Units found Non-viable	53	202	270
5.	Outstanding Bank Credit for Units found Viable (Rs. crores)	959	1737	1819
6.	Outstanding Bank Credit for Other Sick Units (Rs. crores)	274	1243	1468
7.	Proportion of Sick Units Found Viable (Per cent)	70.7 (83.8)	54.9 (63.4)	53.6 (58.7)
8.	Share of Viable Units in Total Bank Credit Given to Sick Units (Per cent)	77.8	58.3	55.3
9.	Average Amount of Bank Credit for Viable Units (Rs. lakhs/Unit)	348.7	496.3	474.9
10.	Average Amount of Bank Credit for Other Units (Rs. lakhs/Unit)	240.4	433.1	443.5
11.	Average Amount of Bank Credit for Large Sick Units (Rs. lakhs/Unit)	317.0	467.8	460.4

Source : 1. Reserve Bank of India : Report On Currency and Finance, 1980-81.

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