Chapter - I

INTRODUCTION
Introduction

Traditionally, risk management has been synonymous with annual budgeting for insurance premiums, and hedging. This has been especially true in Indian environment, and the corporate risk manager has the sole responsibility of negotiating insurance contracts. In a recent international research programme, most respondents, while offering commendable definitions of risk management, had little to say, by way of explanations, as to how in practice they would operationalise their grand risk management ambitions. Whatever an individual’s attitude to words risk may be, if he/she is to maximize his/her welfare, the first step must be to identify and evaluate the risks to which he/she is, or may become, exposed.

Risk management, as a set of techniques for surviving loss, comes in more or less five forms. First, we can restrict our decisions to those over whose outcomes we have some control, thereby managing the probability of loss. Second, we can diversify in order to reduce the consequences of loss. Third, we can insure as a collective method of diversification. Four, we can change our minds and evade a commitment before all is lost. The only other method available to us is to refuse to play when the risk are unacceptable.

In his monumental work, Against the Gods: The Remarkable Story of Risk, a powerful indicator of fundamental changes affecting societies around the world, Petrel. Bernstein observes that development and progress of society at large implies accepting the risk and uncertainties of life as a fundamental fact, or point of reference. He remarks how “until now, civilizations have avoided or dismissed risk and uncertainty, initially with the
help of the gods, then with the help of deterministic science". What is more, he visualizes that "in the future, a better, more civilized world might arise, capable of better confronting, and subsequently better managing, the challenges and changes resulting from risk management".

Accordingly, risk managers, economists, as well as individuals have responded to these challenges and changes in formulating their programmes for dealing with current risk, and for handling future events under changing conditions. Consequently, risk management is broader today in its treatment of risk, control. What is more, it approaches the problem of risk, not from the standpoint of the insurance industry, but from that of the organization or individual exposed to risk. It is also increasingly being recognized that risk management is far more than the management of insurance programmes. New ideas are being brought to bear on problems, and new theories are being developed. This leads us to the chief concern of the present chapter.

**Significance of the Study**

Agriculture remains the dominant sector in a large number of developing economies. It accounts for a major share of the gross national product and is still the primary source of employment. Moreover, agricultural products are often an important export item. Products are often an important export item. Productivity gains in agriculture are necessary for self-sustaining economic development in most developing countries.

Despite the importance of agriculture in the developing countries, the various initiatives taken for its development have often failed to deliver full
benefits. Low levels of income, low capital-labor ratios, and the general precariousness of agricultural production still characterize this sector in many countries. There is often a dichotomy between the urban and rural sectors of the economy, not only in terms of technology but, more importantly, in terms of access to services, for example, transportation, medical and educational facilities, and credit and insurance.

Agriculture has always been a risky business. Unlike the industrial sector, it is subject to the vagaries of the weather. The variations in productivity induced by nature cannot be fully accommodated by farmers. It is true that since time immemorial farmers have devised measures to limit these risks: crop rotation and diversification, inter-cropping, use of low yield but hardy varieties, tillage systems, share tenancy, contractual interlinking, development of non-farm sources of income such as handicrafts and handlooms, socio-cultural strategies which distribute risks within the Extended family, and informal financial arrangements.

However, while these measures continue to be helpful, the problem of residual risks remains. The farmers are in addition subject to the common risk of a catastrophe and the aggregate group risk has still to be confronted. This co-variability of risks reduces the efficacy of traditional measures. The modern insurance sector can play a major role here, and considerably strengthen the security of farmers.

Credit in rural areas is in many countries still provided by money-lenders and traders, often at usurious interest rates. Such sources are hardly
suitable for financing agricultural development. There is thus a clear need to expand the availability of credit at reasonable rates. "Credit and capital remain scarce in many countries and supporting rural credit systems to the extent required may be difficult. Agricultural insurance can play a distinct role in securing credit."

It would make the farmer a better credit risk, and would alleviate some of the problems concerning the collateral which the farmer would have to offer. If the crop fails, the bank would receive a payment from the insurance company. Insurance, in fact, is common when mortgages or loans for capital goods are made to individuals and corporate bodies and the practice could be extended to the agricultural sector as well.

The farmer would thus have better access to credit. In many countries the Stare provides aid or relief to the agricultural sector in the event of a natural catastrophe as a matter of public policy.

In some countries this is done on an adhoc basis while in others there are formal arrangements and even legislation for this purpose. Agricultural insurance is a more efficient instrument and an institutionalized mechanism for dealing with the problem. It helps to streamline the relief efforts and reduces the direct and indirect costs on the national economy: some funds would be available for the purpose; the payments could be earmarked for replacing affected assets; and a portion of the cost would have been paid by the farmer as premium.
Furthermore, the insurance infrastructure provides a mechanism for a more accurate measurement of losses and disbursement of compensation.

The benefits of enhanced financial and economic stability in the rural sector cannot be over-emphasized. Insurance can help agriculture to develop through institutionalized channels and can assist in speeding up the commercialization of the rural economy.

The scope of insurance in the development of the rural sector can be more comprehensive. Wherever investments are made and considerable investments are being made into agriculture in developing countries there is a role for insurance. For example, extensive scientific research has been carried out to improve the quality of seeds, and cultivation of hybrid varieties has been taken up on organized basis as a part of efforts to increase crop yield. Insurance for seed crops can be considered. Another interesting cover negotiable in the international markets relates to risks deriving from the professional liability of seed merchants and seed growers, including financial loss arising from restricted growth or crop failure caused by the seed growers and seed merchant’s errors and omissions. Insurance has been devised in India for reimbursing the cost of bore wells in villages if the operation is unsuccessful.

**Insurance environment**

The growth of the insurance industry in developing countries, although varied, has been appreciable. However, this growth has been largely confined
to meeting the requirements of the domestic industrial and organized trade and commercial sectors.

There are understandable reasons why the operations of insurance companies in developing countries are concentrated in urban areas. In many instances, the insurance markets are in what may be described as their infancy, and have yet to fully acquire expertise and consolidate. Furthermore, trade practices are better developed in urban areas. It is also a fact that the industrial sector is relatively easier to service a petrochemical plant would have similar features anywhere.

Much more needs to be done by insurance companies even in the urban areas in improving services and this keeps them preoccupied. But the potential for growth of insurance business in the urban sector is linked to the overall growth of the economy and the level of development of the country.

In some developing countries, particularly on the African continent, the share of the modern sector in the economy is stagnant or even declining. There is, however, considerable potential for the expansion of business in the rural sector. On the one hand, this is due to the low level of insurance services existing in that sector, and, on the other, to the substantial growth potential of the agricultural sector, consequently, the rural sector offers new opportunities for the growth of the insurance industry.

There is a special synergy between the banking and insurance sectors, the two interact and cooperate in urban areas in respect of trade and
commerce. In rural areas, the banks have a much better interface with the people as they are perceived as benefactors. Agreements may be negotiated with banks, particularly agricultural development banks, for protection through insurance of assets created by credit. This, in fact, has been done in many developing countries. Often the banks will agree to take care of some administrative work as well. Insurance provides security to the lending institution, and this should be reflected in either a lower interest rate or some corresponding concession in the terms of the credit. For a variety of reasons, insurance is far from universal for all agricultural activities, and is being sought by lenders, or provided by borrowers, in selected cases only. Fairness requires that credit backed by insurance should be treated differently from credit with no backing.

Farming business involves numerous risk—natural, social and human. The major risks confronting farmers are: market risk, such as fluctuation in the prices of outputs and inputs, and interest rates, which are affected by unpredictable changes in markets and government polices; resource risk, such as uncertain supplies of labour, credit and irrigation water, or uncertain about the timeliness of supply of seeds and fertilisers; production risks, which cover a whole gamut of pest, disease and weather related risks; health risks, asset risks and other risks. Crop insurance, exists in many countries as an institutional response to nature induced risk. Uncertainty of crop yield is one of the basic risks that every farmer has to face. Individual farmer due to insufficient means and resources is seldom able to face risks, especially when it may result in disastrous losses.
More than 100 years, a few countries in Europe, the US and Canada had introduced hail insurance, an example of protection against specific risk. In the early 20th century private companies in the US introduced crop insurance covering multiple risks. Crop insurance in the public sector is a phenomenon of the 1930s. Japan and the US were the pioneers in this area. Developing countries in Asia, Africa and Latin America were the late starters in this field.

Policy objectives of a country determine the goals, guidelines and general parameters of crop insurance, while the operational or technical considerations determine the scheme's general working principles and practices. At the policy level government support and interventions for risk mitigation in agricultural production are justified on the grounds of broader national and social objectives, since crop insurance benefits not only the insured, but also the community at large. However, crop insurance is not like any other business venture. It hardly earns profit for its investors and seldom pays for itself through the contributions that the insured make in the form of premiums. In the developing countries like ours crop insurance is a tripartite operation, i.e., a co-operative endeavor among the farmers, government and the credit institutions. Ideally it should be a risk-sharing arrangement among the participants.

Crop insurance is an instrument for maintaining stability in farm income, which in turn can promote superior technology, encourage investment, and increase credit flow in the agriculture sector. The basic consideration behind crop insurance is that the loss incurred by a few, in a
given area, is shared by many in the same area. Also, losses incurred in bad years are compensated from resources accumulated in good years.

Importance of risk mitigation cannot be overstated as for as Indian farmers are concerned. In India agriculture has been and continues to be the main source of livelihood for millions of households. They meet food and nutrition requirements of the people. Major industries are dependent on agriculture, not only for raw material but also as market for their products. Large majority of agricultural producers are small farmers. Per capita holding is hardly 0.18 hectare; per worker value added is around 400 US$ (in 1995 prices). There are only 20 million farmers who produce a marketable surplus. An estimated distress sale of 18 million tones of food grains is reported by small and marginal farmers. Most farmers in India produce for household food security. Large part of Indian agriculture is rain fed agriculture. Thus, agriculture is heavily dependent on weather, and uncertainty of weather cycle makes agriculture a risky venture.

For a section of farmers, minimum support prices for certain crops provide measure of income stability. In the recent times forward trading is also used to insure producers from market risk. However, for coping with the natural risks crop insurance is the only mechanism available. It is an instrument that protects agriculturists against uncertainties of crop production that are beyond their control. As a financial mechanism it helps in minimising the impact of uncertainty entailed in crop production. A large number of uncertainties that have impact on crop yields are factored into crop insurance. As crop production in India is affected by vagaries of nature and huge
damages occur due to droughts, floods, cyclones, hail storms, attacks of pest and diseases, crop insurance can play a vital role in sustaining farmers’ economy.

Objectives

1. To study the role of agri-insurance in economic development.
2. To assess the various aspects of risk management in agriculture.
3. To analyse growth and development of agricultural insurance in India.
4. To analyse the growth and fluctuations in agricultural insurance in Anantapur District.
5. To compare the growth and fluctuations in agricultural insurance in the three divisions of Anantapur district.

Methodology

The study basically depends on secondary sources of data to examine the objectives mention in the study. Also, the study draw inferences based up on the information available in different sources, like books records, files, magazines research journals news papers websites etc.

To make the study more simple scientific and precise simple statistics like standard deviation, co-efficient of variation, linear growth rates, simple averages and percentage were used basically to measure the instability in agricultural insurance in Anantapur District.
To determine the growth rates in various aspects of crop insurance scheme in the study, it is proposed to estimate the linear regression model of the form

\[ Y = A + BX \]

Where

- \( Y \) = Number of farmers covered/Area/Sum insured/
  Premium/Claims/Loss ratio/Claim ratio.
- \( t = \) time in years.
- \( A, B \) are the constants to be determined.
- \( L.G.R = \) Linear growth rate.

The percentage of linear growth rate is

\[ L.G.R. = \frac{\hat{B}}{y} \times 100 \]

\( \hat{B} \) is tested by t-test statistic

\[ t = \frac{\hat{B}}{SE(\hat{B})} \]

\[ SE(\hat{B}) = \sqrt{\frac{\sum (Y - \hat{Y})^2}{N}} \]

The instability in crop insurance is estimated by the coefficient of variation

\[ CV = \frac{\sigma}{y} \times 100 \]

The more value of the coefficient of variation is the more instability.

The simple linear regression equation was estimated by adopting the ordinary least squares method (OLS method).
Limitations of the study

The results obtained through analytical process of the data in the case study may be or may not be a reflection of inferences at macro level. However a comprehensive study is required in view of complexity existing, in diversified geographical divisions at regional and national level.

Organisation of the study

This study has been presented in seven chapters. The first chapter begins with the significance of agricultural insurance. In this chapter the scope of the study methodology adapted, objectives, and brief review of earlier studies are covered.

Second chapter presents a brief picture of agricultural insurance and economic development. Third chapter deals with risk management and agricultural insurance in India. The fourth chapter explains various dimensions of agricultural insurance in India.

Fifth chapter tries to cover the profile of the Anantapur district. Sixth chapter explain growth and fluctuations in agricultural insurance in three divisions of Anantapur district. The seventh chapter ends with conclusions and suggestions in the study.
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