CHAPTER – 6

CONCLUSIONS AND GENERAL REMARKS
CHAPTER – 6

CONCLUSIONS AND GENERAL REMARKS

No economy or business house can sustain on its own wealth. It needs the strong roots of the investor’s wealth. But the investors can’t sleep peacefully after having invested in the economy. An investor has to continuously monitor the various internal and external factors affecting the stock markets. Though the presence of a regulating body such as the SEBI and RBI, assures the investor’s faith to some extent, yet it is for the investors to keep a constant vigil.

India, being an emerging economy, is being affected by a number of domestic and international pressures and conditions. Any change in the international market, results into a magnified effect on the Sensex. It leads to greater profits in the favorable conditions and to unprecedented losses in the critical circumstances. The past data reflects the same. The Indian investor, while investing his hard earned money, always needs to keep this factor in his mind.

The investors should have a track not only on the performance of the business houses, but also on the other political and economical parameters such as the GDP growth rate, inflation rate, government policies, crude oil prices, global indices and so on. The investors are often guided by the experts, but when the Sensex declines, they end up in trouble. Some of the well-educated investors, who are well-versed with the fundamentals of the stock exchange, are somehow able to reduce their losses, but the poor investors, who go by the trend of the market, find him in no man’s land.
So, it can be said that, apart from the direct and indirect factors that affect the stock exchange, it is the investor’s luck, which also plays a complimentary role in his investment spree. It’s truly said, “Expect realistic returns, this is not a casino. Be greedy, but be long term greedy. Despite all-round pessimism, never forget the opportunity in equities”

Intelligent investors have somehow managed to invest their amount and possibly increase their wealth. Uncertainty about a situation can often indicate risk, which is the possibility of loss, damage, or any other undesirable event. Most people desire low risk, which would translate to a high probability of success, profit, or some form of gain.

Actually this thesis targeted small investors to hold their amount in long-term period and hence we give a mathematical model to analyze the situation of investment and the model give the optimum return on investment with less risk.

1. From the past record, whenever political uncertainty exits, then the sensex index is coming down and some time coming down to the worst. This period is suitable for investment.

2. If the foreign investors selling their shares largely, then the sensex index is drastically reduced, then this is also one of the best times to enter the market.

Basically, the share market index suffers due to the above reasons.
The following are some of the reasons / policies / incidents which will motivate the foreign investors to get back their investments:

- Government policies and the involvement of Communist Parties in the government (The role of Communist parties in India is more, especially in the present Congress Government)
- Increase in oil and fuel prices
- Increase of other commodities and the increase of the GDP rate
- Political instability.

Since the literature survey reveals that the non-traditional techniques are used in an alternate way of evaluating the future prediction of the share market (this topic is related to our work) and no one in the world can quantify the amounts related to the investment. In this research, we concentrate on the following aspects and our findings are up to the expectations of the study.

1. If the small investors want to invest their amount in limited scripts out of available 11 types of sub-indexes in BSE Indian Share Market, chapter -5 gives the solution for that. In this chapter, two genetic algorithms are used to get the optimum return on investment, to invest their amounts invariably in all types of shares.
i). the first genetic algorithm is used to rearrange (order) the type of shares, so that the share sub-indexes are arranged according to their return on investment, taking risk as one of the main factor. The list will give the order of preference of investors to invest their amount in one or few sub-indexes.

ii). the second genetic algorithm is used to obtain the level of investment, namely, high, medium and low, invariably in all available sub-indexes. This is one of the most significant advantages of this thesis. We actually quantify the level of investment in each sub-index, and in turn one can get the maximum return on investment. The level of investment is not suited, if the investors want to invest their amount in one or two scripts. Totally it requires to complete two genetic algorithms is 6 hours 23 minutes. The system configuration is Pentium IV with 256 RAM.

2. In chapter -2, we have designed a mathematical model to demonstrate and rank the various factors involved and affecting the Indian share market index BSE.

- Initially to describe the factors / situations related to affect the share market index either directly or indirectly and evaluate their fuzziness with the help of fuzzy membership function.
• Using Fuzzy Weighted Similar Choice Method to rank the various factors influenced which cause decline of the share market index considerably.

• These factors are directly or indirectly influenced to decline share market index.

• The investors to make use of any of the opportunities to enter the share market invest (the rank already specified) and leave the share market investment. To make use of the ascending order to enter into the share market and the descending order is used to come out of the share market. For example, in case of the Government policies and any instability, the share market index gets reduced vastly and that is also a suitable time for entering into the market. Similarly, if the FIIs investment is high then the index value gets raised. And this period is better for leaving the market.

This is the significance of this chapter and this will give the guideline to the fresh investors to enter into the market. The concept of Fuzziness is used as a tool in this chapter.
3. Chapter -2 gives the guidelines for the investors that what will be the best time for the investors to enter or leave the share market. Chapter -3 onwards, we have suggested the policy of investment procedure that the investors to invest their amount in a share market. In the same way as adopted in chapter -2, we rank the sub-indexes according to the return on the investment. After that the Artificial Neural Network is used to design a policy in which the investors invest their amount in all shares invariably and this tool is used to determine the correlation coefficient (of the return on investment) between the actual and the estimated (proposed) one. The correlation coefficient between these two is 0.997, which is of course the best. Chapter-3 is fully dedicated to test whether our proposed policy of investing share market and its return on investment tally with the actual return on investment or not and of course it fully satisfies and its correlation coefficient is 0.997. Again, in the same chapter we also evaluated the number of iterations required to obtain the proposed return on investment, which will be helpful in setting ANFIS iteration and it will be discussed in chapter-4.

4. Chapter 4 is an extension of Chapter 3. In this chapter we have designed the level of investment, namely low, medium and high, as linguistic variables through Fuzzy Inference System (FIS). The FIS rule may further be classified into more than three linguistic variables, like low medium, high medium etc., then the cost of computation will be very high. These values are further trained through Artificial Fuzzy Inference System
(ANFIS) and these values are used in chapter-5. In a similar manner, the risk value is also evaluated and this will also be utilized in chapter -5. In the same chapter, we have further evaluated the return on investment, if any one wants to invest his amount in the largest six valuable sub-indexes. We have restricted to six sub-indexes because, if we include all the sub-indexes, the computational time will be very large and even it will be more than 24 hours. That is why, we further improve this methodology. We have introduced genetic algorithm concepts and it is discussed in point number-1. In this case, we will give the provision/scope for the investors to select limited scripts or invariably invest in all the scripts. Hence, the optimum sequence and the optimum distribution of amount is given by 10(H) 8(M) 7(H) 1(H) 11(H) 9(M) 5(M) 4(M) 2(L) 6(L) 3(L) and the maximum return on investment is Rs.17,258/-. This is the amount we will get after one year if the invested amount is Rs.12,000/-. 
Tools Used:

1. Matlab 7.0
2. Microsoft Excel.
4. Source Code developed for Eigen Values and Eigen Vectors (Chapter-2).
5. Matlab source code developed for ANFIS and FIS (Chapter 3 and 4).