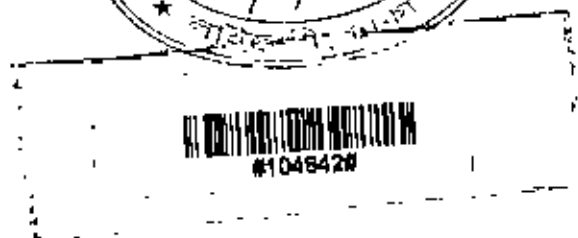
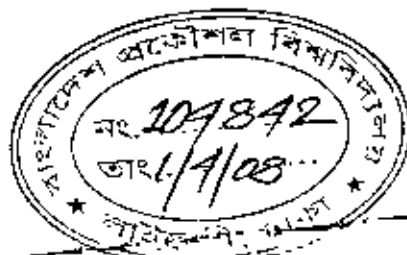


# **ECONOMIC ANALYSIS OF POULTRY INDUSTRY: A CASE STUDY**

**By**

**MD. ANOWARUL AZIM KHAN**

A thesis submitted in partial fulfillment of the requirements for the degree of Master  
of Advanced Engineering Management



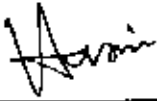
**DEPARTMENT OF INDUSTRIAL & PRODUCTION ENGINEERING  
BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY**

**March, 2008**

## CERTIFICATE OF APPROVAL

The thesis titled "ECONOMIC ANALYSIS OF POULTRY INDUSTRY: A CASE STUDY" submitted by MD. ANOWARUL AZIM KHAN Roll No. 100508136(P) session: October, 2005 has been accepted as satisfactory in partial fulfillment of the requirement for the Degree of Master of Advanced Engineering Management on March 15, 2008

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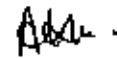
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Md. Anowarul Azim Khan

## ACKNOWLEDGEMENT

The author expresses his immense gratitude and indebtedness to his Supervisor **Dr. M. Ahsan Akhtar Hasin**, Professor & Head, Department of Industrial and Production Engineering, Bangladesh University of Engineering And Technology (BUET) for his constant guidance, supervision, valuable suggestions and kindest support throughout the preparation of this thesis work.

The author owes his heartfelt gratefulness to **Dr. Nafis Ahmad**, Assistant Professor, Department of Industrial and Production Engineering, Bangladesh University of Engineering And Technology (BUET) for his all out cooperation to complete the project work successfully.

The author would like to his profound thanks and gratitude to **Mr. Md. Zafar Ullah**, Senior Assistant Chief, Planning Commission, GOB, for his effective criticism and constructive suggestions.

Last but not least the author would like to express a very special thanks to his fellow colleagues in various financial institutions and other concern associations for providing different data and information related to this project



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Md. Anowarul Azim Khan

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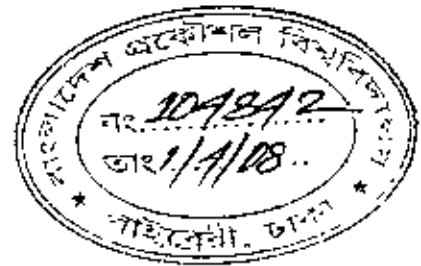
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# CHAPTER 1

## INTRODUCTION



### 1.1 INTRODUCTION

Agriculture still dominates the Bangladesh economy. Eighty percent of the 140.0 million inhabitants of Bangladesh depend on agriculture. The area of this country is 1,47,570 sq. km. As developing country poverty, unemployment and malnutrition are the major problems of Bangladesh. Forty four percent of this country's population live below the absolute poverty line and the number of landless poor people has been increasing by 3.7 percent per annum (BBS,2004). According to the government estimation, the total number of educated but unemployed people in the country is about 2.2 million. So the importance of agriculture in Bangladesh can never be overemphasized.

Poultry is one of the most important sub-sectors of agriculture in Bangladesh. The rural people have been keeping indigenous chicken for centuries under semi-natural conditions mainly for their domestic consumption with very little commercial motives. At present, a large number of poultry farms have been established on commercial basis in and around the cities and towns and are operating under intensive management.

### 1.2 BACKGROUND OF THE STUDY

#### 1.2.1 Contribution of Poultry as a Food

The foods of animal origins are richer than the foods of plant origin. Food of animal origins provides higher proteins, vitamins and minerals than that of food of plant origin. Meat is the most important food of animal origin. It includes beef, goat meat, poultry meat, etc. Among these poultry meat is the most desirable source of animal protein and highly accepted by most of the people of Bangladesh. Poultry meat can efficiently and rapidly fill in the shortage of body requirement. The context of different nutrients in chicken meat and other animals is presented in the table 1.1[4]



**Table 1.1 Nutrient contents of chicken meat and other animal (per 100 gm.)**

Nutrients	Chicken meat	Beef	Egg	Milk
Water (gm)	73.30	66.60	74.60	87.70
Food energy (K.cal.)	117.00	197.00	158.00	64.00
Protein (gm)	23.40	20.20	12.10	3.30
Ash (gm)	1.00	0.90	11.90	0.70
Fat (gm)	1.90	12.30	11.90	3.60
Saturated fatty acid (gm)	-	4.70	3.30	2.05
Unsaturated fatty acid (gm)	-	5.75	6.63	1.25
Cholesterol (mg)	60.00	70.00	550.00	11.00

Chicken meat contains large amount of high quality and easily digestible vitamins and minerals. Vitamins and mineral content of chicken meat and other products are shown in table 1.2[4]

**Table 1.2: Vitamin and mineral content of chicken meat and other products ( per 100 gm. Of edible portion)**

Nutrients	Chicken meat	Beef good grade	Egg	Milk
Calcium (mg)	11.00	10.00	54.00	118.00
Phosphorus (mg)	265.00	152.00	205.00	93.00
Iron (mg)	1.03	2.50	2.30	Traces
Sodium (mg)	64.00	63.00	122.00	50.00
Potassium (mg)	41.00	333.00	129.00	144.00
Magnesium (mg)	19.00	18.00	11.00	13.00
Vitamin-A (IU)	60.00	60.00	118.00	140.00
Thiamin (mg)	0.04	0.07	0.11	0.03
Riboflavin (mg)	0.10	0.15	0.31	0.17
Niacin (mg)	11.60	4.00	0.31	0.10
Vitamin-C (mg)	-	-	-	1.00

**Table 1.3: Comparative food value of broiler and other poultry species meat**

Poultry species	Energy (K. cal)	Protein (mg)	Fat (mg)	Mineral (mg)	Riboflavin (micro gm)	Niacin (mg)	Moisture (%)
Chicken (Broiler)	151	23.3	7.2	3.9	160	10.2	65.9
Chicken (Layer)	104	20.2	0.5	3.8	90	10.5	65.4
Duck	326	16.0	28.6	4.1	240	5.6	64.0
Quail	168	25.0	6.8	4.7	-	-	-
Pigeon chicks	279	18.6	22.1	3.8	240	5.6	-
Turkey	268	20.1	20.2	3.9	140	8.0	-

### 1.2.2 History of Broiler Birds in Bangladesh

History of broiler enterprise in Bangladesh is very recent. Commercial broiler chicks were not available in Bangladesh a few decades ago. In 1935 improved variety birds (White leghorn) were first imported in India from foreign countries. Raising of improved s the poultry production started in government poultry farm. Later, people became interested in raising the chickens in their own houses after knowing about their better production capacity. In 1947, six poultry farms were first established in different places in Bangladesh for supplying eggs and chicks to the villagers. During the period, several small poultry farms were also established under village aid programmes for rural poultry development. In 1962/63, the Directorate of Livestock Services also started about 91 small poultry units in 91 upazilas with the objectives of supplying improved birds to the villagers. In 1964, a commercial poultry farm named eggs and Hens Ltd., was established at Gazipur near Dhaka city by late Mr. Ekramul Hossain, which was recognized as a mother commercial poultry farm in private poultry sector. After the liberation of Bangladesh, BIMAN Bangladesh Airlines, started a commercial poultry farm in the name of Biman Poultry Complex Ltd. at Savar, very close to Dhaka city. Its aim was mainly to furnish for flight catering needs of the Biman Bangladesh Airlines, but it also fulfilled the demand for eggs and day-old-chicks of private poultry farms to some extent. It reared 'Starbo' parent stock of Shaver Poultry Breeding Company of Canada. It is still in poultry business. During late 1980, the Department of Livestock Services (DLS), Bangladesh imported "Arbon Acres" broiler parent stocks to increase meat production through popularizing commercial poultry in the country. DLS took programme of

distributing day-old chicks of commercial strains to farmers through its various regional and central poultry farms. Since then, commercial poultry started to gain popularity and during the 1990s the poultry production started taking the shape of an industry with the establishment of a large number of small and large broiler and layer hatcheries.

### 1.2.3 Commercial Poultry Production in Bangladesh

A picture of expansion which happened in the poultry sector is shown in Table 1.4. At present a total of 0.15 million commercial farms have been established throughout the country. About 6 million people are engaged directly and indirectly in poultry industry. About 3500 million of eggs, 250 million of broiler day-old chicks, 25 million of layer day-old chicks and more than 200 million tones of poultry feed are being produced per year in the country (Rahman 2004). A number of mills have started producing poultry feed by this time and more entrepreneurs are coming forward to establish feed mill and poultry processing plants. [4]

**Table 1.4: Commercial poultry production in Bangladesh**

Year	Broiler hybrid				Layer hybrid			
	No. of hatchery/ breed farm	No of parent stock (000)	Day-old chick production (million)	Broiler production (tons)	No of hatchery/ breeding farm	No of parent stock	Day-old chick production (million)	Egg production (million)
1984-85	2	5	0.6	7.75	2	2	0.16	88
1991-92	6	30	3.54	4540	8	22.5	2.03	620
1993-94	11	65	7.75	9920	16	65.5	5.9	1510
1994-95	25	155	18.75	24370	20	80	7.8	1860
1996-97	36	285	32.5	72150	24	90	8.1	2553
1998-99	45	425	61.8	82900	28	115	10.3	2915
1999-00	50	750	104	140450	30	145	11.8	3250
2000-01	56	1050	126	170325	35	220	19.8	3430
2001-02	70	2500	305	712000	50	380	29.6	5330

At present poultry farming is a recognized profession in Bangladesh. Total number of poultry farms in the country has been increasing remarkably over the years. The year-wise establishment of the poultry farms in private sector in Bangladesh is given in Table 1.5 [5]

**Table 1.5: Year-wise Establishment of Poultry Farms in Private Sector**

(Number)

Type	1979-1980	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002
Chicken farms	787	40133	47638	53644	60670	67186	73540	80018	1061134
Duck farms	2002	16434	21225	21646	30760	35527	40921	45062	60401

With the expansion of commercial poultry farming throughout the country, the demand for poultry inputs like day-old chicks, feed, medicine, etc. are increasing day by day. To meet the demand for these inputs, entrepreneurs from private sector are coming forward to establish hatchery, feed mill and pharmaceutical company for poultry. At present there are 123 hatcheries in the country (Rahman 2004). Aflab Bahumukhi Farm Ltd, Paragon Poultry Ltd., Biman Poultry Complex, Quazi Farm Ltd., etc. are the examples of large scale commercial poultry hatchery farms in Bangladesh but the set back is that their production system totally depends on import of parent stock from abroad demanding foreign exchange having high opportunity cost. Now in the country there are about 10 international poultry breeding farms which supplies day-old chicks, either from imported parent stocks or from imported hatching eggs (Latif 1999)

A number of 30 mills have started producing poultry feed by this time (Rahman 2004). Among them Aflab Feed Ltd., Fresh Feed Ltd., Paragon Feed Ltd., Padma Feed Ltd., Prime Feed Ltd. are some examples of large scale commercial poultry feed producing mills in the country.

#### **1.2.4 Projected Parent Stock and Commercial Chicks Production**

The broiler market is increasing day-by-day. So the requirement and thus the production of broiler will increase in future. As a result a great number of broiler farms, hatcheries, feed mills, pharmaceutical companies, etc. need to be established which means more investment, more employment and more income generation in the economy. With the rapid rise in population, urbanization and changing habits demand for poultry products has been increasing in Bangladesh. [5]

**Table 1.6: Projected Parent stock and commercial chicks production**

(million)

Particulars	Projected Year			
	2004	2006	2008	2010
Broiler parent stock	19.62	24.17	29.77	36.68
Layer parent stock	5.65	6.97	9.60	10.60
Commercial broiler	2800.00	3450.00	4256.00	5244.00
Commercial layer	500.00	616.00	760.00	950.00

### 1.2.5 Justification of the Study

Bangladesh is a densely populated country. Malnutrition and hunger are serious problems in this country. Fifty percent of the newborn are low birth weight and more than 90 percent of the children (aged <5 years) suffer from mild to severe forms of malnutrition. Egg, meat and milk, the three important protein foods originate from the poultry and livestock sector. On an average every person should consume at least 100 eggs, 43.5 kg. Of meat and 90 liter of milk per annum to prevent malnutrition. Therefore, it is essentially needed to increase the production of poultry and livestock products.

Broiler farming has a great potential for providing additional income to male and female of rural and urban areas through creation of employment opportunities. Broiler, however, has a shorter life cycle and its production requires less capital compared to other meat-producing animals. Since the majority of the people irrespective of caste or religion prefer chicken, its demand is very high. As a result, the price of those products has gone up. Having received the signal of higher price and demand in home market, recently a tendency to establish small-scale commercial farm is observed among some people both in rural and urban areas. Poultry is no more a backyard farming now. It is shaping up as an industry. So an efficient production system is required for supporting commercial broiler farming in the country.

It is difficult to set up commercial dairy, sheep and goat farm for want of capital, inadequate lands for producing fodder, technological problems and so on. Raising of poultry can solve these problems to a significant extent. The relative merit of poultry raising are noted below:

- i) People are accustomed to raise a small number of poultry in their houses.

- ii) Poultry rising is one of the best ways for earning within the shortest possible time.
- iii) Unemployed young men, women and widows can look after poultry very easily.
- iv) Poultry farming can be started with small capital.
- v) Poultry can be adaptable very easily in all climatic conditions. Hence, high yielding variety of chicken for eggs and broiler can be imported from foreign countries.
- vi) Small area of land is required for raising chicken. Hence it would be one of the profitable businesses as for small farmers and landless laborers.
- vii) All by products such as bone meal, wheat and rice bran can be efficiently be used by raising poultry.

Poultry is a part of subsistence agriculture farming system in Bangladesh and broilers is an important component of commercial poultry farming system and plays a significant role in rural economy. Broiler enterprise creates various job opportunities for unemployed people through the establishment of hatchery, feed industry, equipment manufacturing and marketing of poultry birds. With this backdrop, the present study is an attempt to find out the existing picture of broiler production in Bangladesh. With this point of view – the economic study will focus on the analysis of the practicability of a proposed Broiler poultry Farm that will meet different options and choices of the consumers. This research will focus on justifying the soundness of the investment by means of a critical and systematic of different elements of a project. This study aims to address two types of studies in broader sense, i.e. ( i ) Commercial feasibility and ( ii ) Socio economic feasibility .

While studying the commercial feasibility of the project profitability element will be taken into consideration from the individuals as well as lenders point of view whereas in case of economic feasibility the same is viewed from the society ‘s angle as a whole .Commercial feasibility study again comprises of five different aspect namely: technical, marketing, financial, managerial and organizational [4, 5]

### **1.3 OBJECTIVE**

The proposed project will aim at the following objectives:

- (a) Analyze the market condition and assess the market demand and prospect of the proposed project.
- (b) Assess the socio – economic and environmental implication of the project.
- (c) Assess the financial and technical viability of the project.

### **1.4 METHODOLOGY**

The followings step- by – step methodology has been applied to the research project.

- (a) Market study will be carried out mainly on the data / information collected through field visits, market survey and discussions with businessmen related to this discipline.
- (b) Financial and economic analysis will be done based on real obtained from engineering economic methods.
- (c) The environmental assessment will be done in consultation with the Department of Environment and pollution Control with respect to Environmental policy 1992 and EIA rule
- (d) Technical assessment will be done based on the consideration of engineering design of the project, infrastructure, facility, production process etc.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 MAJOR ASPECTS OF ECONOMIC STUDY

Projects go through a number of phases. Managing its progress can ensure it all runs smoothly.

A typical project starts with someone having an idea, which then gains acceptance from a wider group: probably informally through discussion with colleagues and then through a more formal process involving senior management, the management committee or board. This work has to be planned and managed, problems dealt with, until the project concludes, hopefully successfully, and is wound up.

Formal methods of project management offer a framework to manage this process, providing a series of elements – templates and procedures – to manage the project through its life cycle. The key elements consist of:

- Defining the project accurately, systematically clarifying objectives
- Dividing the project up into manageable tasks and stages
- Controlling the project through its stages using the project definition as a baseline
- Highlighting risks and developing specific procedures to deal with them
- Providing mechanisms to deal with quality issues
- Clarifying roles to provide the basis for effective teamwork

The purpose of a economic study is to determine if a business opportunity is possible, practical, and viable.

When faced with a business opportunity, many optimistic persons tend to focus on its positive aspects. A feasibility study enables them to take a realistic look at both the positive and negative aspects of the opportunity.

Feasibility study is done before starting a new business. The process of defining a new business is critical. A feasibility study is an important tool for making the right decisions.



A wrong decision at this point often leads to business failure. Only 50% of startups are still in business after 18 months, and only 20% are in business after 5 years.

Also feasibility studies can be done before acquiring an existing business and before expanding an existing business. Knowing how to conduct a feasibility study will help many owners make critical quick decisions to select the right opportunities.

Major Aspects to be looked in to while appraising or studying economy of an investment project are outlined below:

#### **A. Marketing**

The marketing or demand analysis should begin by assessing whether the output of the project is to be based to meet local demand or to be sold internationally. For most product sold in the international market there is a vast amount of information available on market trends, new technology, and the approximate cost position of potential competitors. The key question to ask is : What are the advantage and disadvantages which the proposed facility will have relative to other competitors, both domestically and internationally who will be active in this same market ? For some products ( e.g., relatively homogeneous ones sold in organized competitive markets), research on costs relative to those of producers may suffice; for others, research on likely price trends may be needed in addition; and yet for others, research into the likely demand for the output of the specific project under study may also be indicated.

For the market analysis of a product which is to be sold in the domestic market, it will be more important to begin primary research at the feasibility stage of the project appraisal. The potential customers for the product will often have to be surveyed before an accurate picture of the potential market for a product can be determined. If the product is to be sold in a competitive environment, then the appraisal should be made to speculate how the competitors in the market are likely to react. This information can be obtained by reviewing the previous activity in this market and by assessing the strengths the weakness of the competitors.

In the case of public monopolies, such as public utilities, government policies themselves may be an important variable in determining the demand for the output. Extension of

electricity to the rural areas and the development of industrial complexes will have an important bearing on the future demand for the output. The growth in the demand for the output of a public utility can often be forecast quite accurately by studying the relationship over time of demand with respect to variables such as disposable income, industrial output, household formation and relative prices. The study of growth in demand experienced by utilities in other countries with similar circumstances can often provide a good indication of what can be expected in the future.

The output of this analysis, if it is to be a commercial project, should be a set of forecasts of the following variables for the duration of the project [1]:

- (2) Quantities of expected sales and prices for goods to be sold in competition with traded goods from other countries, regardless of whether such sales are made to domestic or foreign customers.
- (3) Quantities of expected sales and prices for goods to be sold domestically and not in competition with internationally traded goods.
- (4) Sales taxes and export taxes that are expected to be paid by the consumers of the traded goods.
- (5) Sales taxes to be paid on goods not traded internationally.
- (6) Subsidies to be received on the basis of production, or sales, exports, etc.
- (7) Government regulations (such as price ceiling, floors, or quotas) affecting the sales or price of the output.
- (8) Product trends in terms of technological developments and the expected product cycle.
- (9) All trade restrictions that are not caused by government regulation must be identified and their impact quantified.

## **B. Technical or Engineering Analysis**

In this analysis, secondary research can be used very effectively. Engineering firms and technical experts in a field usually have considerable experience on other projects that have used either identical technology or similar technologies. Often there are a number of



consulting firms or government agencies that have technical expertise in a specific area. The most important rule to follow when using outside expertise in assisting with feasibility studies, is that the consulting group being employed to provide this information must be informed that it will not be considered for the design or management of the facility in the design and implementation phase. It is critical to avoid placing the consultants used in the appraisal of a project in a position where they have a conflict of interest. Consultant should be hired at the appraisal stage to provide truthful information based on their past experience. The authorities also may wish to indicate to them that if their estimates for the current project prove to be accurate then they will receive favorable attention when the contracts are being let on future design activities of other projects. The consultants used to assist in the preparation of the appraisal should also be retained to check and approve the design and cost estimates developed by the group, which has been given the task of preparing the final detailed plans.

If the procedure is not followed, then there will likely be a conscious effort on the part of the engineering or technical consultants to underestimate costs so that the project will get approved in principle and thus give them an opportunity to obtain the more profitable task of preparing the detailed design of the project. Of course, the worst possible approach is to ask for free advice at the appraisal stage on the basis that the outside experts will be given a chance to do further work for hire if the project is attractive. It is a sad commentary on the performance of many governments in this area to note that these last two procedures are the ones most often followed.

The output from the technical analysis of a feasibility study should obtain the following information [1]:

- (1) The quantities of inputs by type, which will be required for the construction of the project.
- (2) The prices of these inputs and their problem sources of supply.
- (3) Labor requirements by skill and by time of construction for the building of the project.
- (4) The physical input requirements for the operation of the project by year and by volume of sales.

- (5) The likely sources of supply for those inputs and the price assumptions used to estimate future costs of operation.
- (6) Information on the technological life of the project.
- (7) The labor requirements by skill for the operation of the project.
- (8) The nature of the outputs of the project, which have an impact on the environment surrounding the facility and a quantitative assessment of these impacts

### **C. Manpower and Administrative Support Module:**

Project appraisal to be effective must not confine itself to examining the financial and economic costs and benefits under the assumption that the project can be built on delivered operationally and on time. This assumes a degree of administrative support for implementation of projects that in many countries does not exist. Many projects have failed because they were undertaken without the administrative expertise available to deliver the project as specified. The prospect that future financial and economic benefits will materialize is only as good as is the administrative capability of the agency in charge to put the project in place.

This module must reconcile the technical and administrative requirements of the project with the supply constraints on manpower available to this project. If they cannot be reconciled, then the project should not be undertaken. A careful study of the labor markets should be made in order to ensure that the estimates of wage rates to be paid are accurate and that the planned source of manpower is reasonable in the light of labor market conditions.

In general, manpower requirements should be broken down by occupational and skill categories, and these needs should be evaluated in terms of the possible success from which they might be met. Where both needs are foreseen, this information should be passed to the technical module so that possible revisions of the timing of the project can be considered.

#### **D. Financial/ Budget Module:**

The Financial/ budget module provides the first integration of the financial and technical variables that have been estimated by the previous modules. A cash flow profile of the project will be constructed which will identify all the receipts and expenditures that are expected to occur during the lifetime of a project. Even in the feasibility stage, an attempt should be made to provide a description of the financial flows of the project that identifies the key variables to be used as input data in the economic and social appraisal.

Because of the need for estimates of particular variables (e.g. foreign exchange requirements) for the purpose of making economic and social project appraisals, the level of financial detail required is considerably greater than that which is usually found in the financial appraisal of a private sector project. The financial module should answer a series of basic questions concerning the financial prospects and viability of the project. Four of the most important of these questions are outlined below [1]:

- (1) What relative degrees of certainty do we place on each of the revenue and cost items in the financial analysis? What factors are expected to affect these variables directly and in what way?
- (2) What sources of financing will be used to cover the cost of the project? Does this financing have special features, such as subsidized interest rates, grants, foreign equity or loans ( tied or general)?
- (3) What is the minimum net cash flow required by these investments to be able to continue operations without unplanned requests being made to the government treasury for supplementary financing?
- (4) Does the project have a large enough net cash flow or financial rate of return for it to be financially viable? If not, what sources of additional funds are available and can be committed to assist the project if it is economically and socially justified?

If any one of these questions points to future difficulties, then adjustments should be made in either the design or financing of the project to avoid failure.

### **E. Economic Module:**

The objective of the economic appraisal is to examine the project from the entire economy's point of view to determine whether or not its implementation will improve the economic welfare of the country.

In a very real sense, an economic appraisal is of exactly the same nature as a financial analysis, except in the case of an economic appraisal, the benefits and costs are measured from the point of view of the whole country while a financial analysis measures only the benefits and costs relevant to the investors or owners of the project. Instead of relying solely on accounting techniques to measure expenditures and costs as in the case of a financial appraisal, the economic evaluation requires the use of economic techniques of measurement to supplement the accounting framework. To extend the financial appraisal into an economic appraisal, we need to obtain answers to a series of questions that are a continuation of those already outlined above. The questions covering the economic appraisal of expenditure can be set out as follows [1]:

- (1) What are the magnitudes of the differences between the financial and economic values of those variables, which are affected by government regulation and control or are subject to taxes, tariffs and subsidies?
- (2) What are the magnitudes of the differences between the financial and economic values of those variables, which are affected by other imperfections in the factor and product market (e.g. labor unions restrictive trade practices)?
- (3) What relative degree of certainty do we place on each of the above measures of the economic externals as compared to the estimates of financial expenditures and revenues?
- (4) When evaluated at a discount rate that reflects the relevant cost of capital from the standpoint of the economy as a whole, does this project produce a positive net present value?

(5) In order for the appraisal to indicate that the project is economically viable, what proportion of the more uncertain economic adjustments must be included?

Before the adjustments outlined in questions (1) and (2) can be measured with a satisfactory degree of accuracy, the basic principles of economic evaluation must be clearly understood by the analysts. However it must also be pointed out that all these adjustments are made to the basic financial data of the project and thus it should always be relatively easy to check the various steps in the methodology, which transform the financial data into an economic appraisal.

Before we can know whether a project is likely to improve the economic well-being of a country, we must know the opportunity cost of the resources it uses. If a project does not have an economic return equal to the opportunity cost of government funds, it does not automatically imply that the project should not be undertaken. The project may also lead to net social benefits which can be quantified (but not necessarily measured in monetary terms) and which may be viewed by the decision makers as being worth the sacrifice of economic output that the project entails. For example, the project might distribute income to a group of people whom the government is very anxious to help relative to others in the country. It is here that an important factor must be noted. A project may distributed income to a desired group at the same time it may increase the incomes of those that are not favored. Therefore, both of these outcomes must be noted for the decision makers to determine the overall attractiveness of the project.

#### **(F) Social Appraisal:**

The social appraisal is concerned with the identification and wherever possible, the quantification of the extra-economic impacts of the project. These include the impact of this project on the well-being of particular groups in society since seldom does a project benefit everyone in a country proportionally. Political factors should be identified as well as longer run impacts of the project on the community, which are not reflected by changes in income. While this aspect of the appraisal may be less precise than the financial or economic analysis of a project, to be meaningful the social evaluation will generally be tied to the same factors that make up the financial and economic appraisal.

For example a project cannot be expected to assist consumers in an area unless it increases the supply of a good or service at a price not greater than its previous price.

An illustrative set of questions to be asked by the analyst when undertaking a social appraisal of a project is as follows [1]:

- (1) What social objective of the government could this project potentially assist in attaining?
- (2) Who are the beneficiaries of this project and who is expected to bear the costs?
- (3) In what ways do those who benefit from the project receive those benefits and how do those who bear the costs pay?
- (4) What other political or social impacts is this project expected to generate? How?
- (5) By what alternative ways (and at what costs) could the government obtain social results similar to those expected from this project (or program)?
- (6) What are the net economic costs of undertaking these alternative projects or programs?

In evaluating the social impact of a project, there are two important principles that should be remembered. First, the reasoning should be clear as to how this project is going to produce the social impacts attributed to it. Secondly, as the government is usually undertaking many projects and programs to reach its social objectives, we must compare the cost effectiveness of this project with at least a bench mark of the costs which are incurred by the other policy instruments available. Only if this project is as cost effective as other projects and programs in achieving the social objectives should an additional benefit be attributed to it.

The set of questions, which have been outlined for a financial –economic –social appraisal of a project, makes it clear that it is our aim to categorize costs and benefits from the point of view of society as a whole. However, in doing so, we recognize that (a) some costs and benefits will be financial and directly generated within the project; (b) some will be financial to the project, (c) Others will be measurable and valued at an imputed price, and (d) still others will be identifiable but measured and/or valued with some degree of uncertainty. The variety of types of costs and benefits should be borne in mind in interpreting the results of a social project appraisal. In particular, we



should not be misled by the apparent simplicity of the net economic or social present values expressed as real numbers.

The function of the feasibility stage of an appraisal is to improve the accuracy of the measures of key variables if the project indicates it has the potential for success. In order to improve the accuracy, more primary research will have to be undertaken and perhaps a second opinion sought on other variables.

## 2.2 RATIO ANALYSIS

Appropriate information and interpretation of the information should be the prior requirements of investing a firm. Analysis of financial statement is one of the useful tools for this purpose. Financial ratios are like the financial temperatures of a business entity. Ratios are among the best – known and most widely used tools of financial analysis. Ratio analysis expresses the relationship among selected items of financial statement data. These data may appear on the same statement or they may appear on different statements. Its objective is to assess the firms' performance.

### Definition of Ratios

Financial ratio analysis is a fascinating topic to study because it can teach us so much about accounts and businesses. When we use ratio analysis we can work out how profitable a business is, we can tell if it has enough money to pay its bills and we can even tell whether its shareholders should be happy!

Ratio analysis can also help us to check whether a business is doing better this year than it was last year; and it can tell us if our business is doing better or worse than other businesses doing and selling the same things.

In addition to ratio analysis being part of an accounting and business studies syllabus, it is a very useful thing to know anyway!

The overall layout of this section is as follows: We will begin by asking the question, what do we want ratio analysis to tell us? Then, what will we try to do with it? This is the

most important question, funnily enough! The answer to that question then means we need to make a list of all of the ratios we might use: we will list them and give the formula for each of them.

Once we have discovered all of the ratios that we can use we need to know how to use them, who might use them and what for and how will it help them to answer the question we asked at the beginning?

At this stage we will have an overall picture of what ratio analysis is, who uses it and the ratios they need to be able to use it. All that's left to do then is to use the ratios; and we will do that step-by-step, one by one.

By the end of this section we will have used every ratio several times and we will be experts at using and understanding what they tell us.

### **Liquidity Ratios**

A class of financial metrics that is used to determine a company's ability to pay off its short-term debts obligations. Generally, the higher the value of the ratio, the larger the margin of safety that the company possesses to cover short-term debts.

Common liquidity ratios include the current ratio, the quick ratio and the operating cash flow ratio. Different analysts consider different assets to be relevant in calculating liquidity. Some analysts will calculate only the sum of cash and equivalents divided by current liabilities because they feel that they are the most liquid assets, and would be the most likely to be used to cover short-term debts in an emergency.

### **Current ratio**

An indication of a company's ability to meet short-term debt obligations; the higher the ratio, the more liquid the company is. Current ratio is equal to current assets divided by current liabilities. If the current assets of a company are more than twice the current liabilities, then that company is generally considered to have good short-term financial strength. If current liabilities exceed current assets, then the company may have problems meeting its short-term obligations.

For example, if XYZ Company's total current assets are \$10,000,000, and its total current liabilities are \$8,000,000, then its current ratio would be \$10,000,000 divided by \$8,000,000, which is equal to 1.25. XYZ Company would be in relatively good short-term financial standing.

### **Quick ratio**

An indicator of a company's short-term liquidity. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. The higher the quick ratio, the better the position of the company.

The quick ratio is calculated as:

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Investments}}{\text{Total Liabilities}}$$

Also known as the "acid-test ratio" or the "quick assets ratio".

The quick ratio is more conservative than the current ratio, a more well-known liquidity measure, because it excludes inventory from current assets. Inventory is excluded because some companies have difficulty turning their inventory into cash. In the event that short-term obligations need to be paid off immediately, there are situations in which the current ratio would overestimate a company's short-term financial strength.

### **Working Capital Turnover**

A measurement comparing the depletion of working capital to the generation of sales over a given period. This provides some useful information as to how effectively a company is using its working capital to generate sales.

$$\text{Working Capital Turnover} = \frac{\text{Sales}}{\text{Working Capital}}$$

A company uses working capital (current assets - current liabilities) to fund operations and purchase inventory. These operations and inventory are then converted into sales revenue for the company. The working capital turnover ratio is used to analyze the relationship between the money used to fund operations and the sales generated from these operations. In a general sense, the higher the working capital turnover, the

better because it means that the company is generating a lot of sales compared to the money it uses to fund the sales

For example, if a company has current assets of \$10 million and current liabilities of \$9 million, its working capital is \$1 million. When compared to sales of \$15 million, the working capital turnover ratio for the period is 15 (\$15M/\$1M). When used in fundamental analysis, this ratio can be compared to that of similar companies or to the company's own historical working capital turnovers.

### **Activity Ratios**

Accounting ratios that measure a firm's ability to convert different accounts within their balance sheets into cash or sales.

Companies will typically try to turn their production into cash or sales as fast as possible because this will generally lead to higher revenues.

Such ratios are frequently used when performing fundamental analysis on different companies. The asset turnover ratio and inventory turnover ratio are good examples of activity ratios.

### **Inventory turnover (in days)**

A ratio showing how many times a company's inventory is sold and replaced over a period.

Generally calculated as

$$= \frac{\text{Sales}}{\text{Inventory}}$$

However, it may also be calculated as:

$$= \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

Although the first calculation is more frequently used, COGS (cost of goods sold) may be substituted because sales are recorded at market value, while inventories are usually recorded at cost. Also, average inventory may be used instead of the ending inventory level to minimize seasonal factors.

This ratio should be compared against industry averages. A low turnover implies poor sales and, therefore, excess inventory. A high ratio implies either strong sales or ineffective buying.

High inventory levels are unhealthy because they represent an investment with a rate of return of zero. It also opens the company up to trouble should prices begin to fall

#### **Account receivables (turn over in days)**

Money owed by customers (individuals or corporations) to another entity in exchange for goods or services that have been delivered or used, but not yet paid for. Receivables usually come in the form of operating lines of credit and are usually due within a relatively short time period, ranging from a few days to a year.

On a public company's balance sheet, accounts receivable is often recorded as an asset because this represents a legal obligation for the customer to remit cash for its short-term debts

If a company has receivables, this means it has made a sale but has yet to collect the money from the purchaser. Most companies operate by allowing some portion of their sales to be on credit. These type of sales are usually made to frequent or special customers who are invoiced periodically, and allows them to avoid the hassle of physically making payments as each transaction occurs. In other words, this is when a customer gives a company an IOU for goods or services already received or rendered.

Accounts receivable are not limited to businesses - individuals have them as well. People get receivables from their employers in the form of a monthly or bi-weekly paycheck. They are legally owed this money for services (work) already provided.

When a company owes debts to its suppliers or other parties, these are known as accounts payable.

#### Account payable turnover (in days)

As for short-term liquidity measure used to quantify the rate at which a company pays off its suppliers. Accounts payable turnover ratio is calculated by taking the total purchases made in suppliers and dividing it by the average accounts payable amount during the same period.

$$\text{Accounts Payable Turnover} = \frac{\text{Total Supplier Purchases}}{\text{Average Accounts Payable}}$$

The measure shows investors how many times per period the company pays its average payable amount. For example, if the company makes \$100 million in purchases from suppliers in a year and at any given point holds an average accounts payable of \$20 million, the accounts payable turnover ratio for the period is 5 (\$100 million/\$20 million). If the turnover ratio is falling from one period to another, this is a sign that the company is taking longer to pay off its suppliers than it was before. The opposite is true when the turnover ratio is increasing, which means that the company is paying off suppliers at a faster rate.

#### Total asset turn over ratio

The amount of sales generated for every dollar's worth of assets. It is calculated by dividing sales in dollars by assets in dollars.

Formula:

$$\text{Asset Turnover} = \frac{\text{Revenue}}{\text{Assets}}$$

Asset turnover measures a firm's efficiency at using its assets in generating sales or revenue - the higher the number the better. It also indicates pricing strategy: companies with low profit margins tend to have high asset turnover, while those with high profit margins have low asset turnover.

## **Leverage Ratios**

1. Any ratio used to calculate the financial leverage of a company to get an idea of the company's methods of financing or to measure its ability to meet financial obligations. There are several different ratios, but the main factors looked at include debt, equity, assets and interest expenses.
2. A ratio used to measure a company's mix of operating costs, giving an idea of how changes in output will affect operating income. Fixed and variable costs are the two types of operating costs; depending on the company and the industry, the mix will differ.
3. The most well known financial leverage ratio is the debt-to-equity ratio. For example, if a company has \$10M in debt and \$20M in equity, it has a debt-to-equity ratio of 0.5 (\$10M/\$20M).
4. Companies with high fixed costs, after reaching the breakeven point, see a greater increase in operating revenue when output is increased compared to companies with high variable costs. The reason for this is that the costs have already been incurred, so every sale after the breakeven transfers to the operating income. On the other hand, a high variable cost company sees little increase in operating income with additional output, because costs continue to be imputed into the outputs. The degree of operating leverage is the ratio used to calculate this mix and its effects on operating income.

## **Debt Equity Ratio**

A measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

$$= \frac{\text{Total Liabilities}}{\text{Shareholders Equity}}$$

Note: Sometimes only interest-bearing, long-term debt is used instead of total liabilities in the calculation.

A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense.

If a lot of debt is used to finance increased operations (high debt to equity), the company could potentially generate more earnings than it would have without this outside financing. If this were to increase earnings by a greater amount than the debt cost (interest), then the shareholders benefit as more earnings are being spread among the same amount of shareholders. However, the cost of this debt financing may outweigh the return that the company generates on the debt through investment and business activities and become too much for the company to handle. This can lead to bankruptcy, which would leave shareholders with nothing.

The debt/equity ratio also depends on the industry in which the company operates. For example, capital-intensive industries such as auto manufacturing tend to have a debt/equity ratio above 2, while personal computer companies have a debt/equity of under 0.5.

$$\text{Debt to Total Asset Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

Indicates what proportion of the company's assets are being financed through debt.

Things to remember

- This ratio is very similar to the debt-equity ratio.
- A ratio under 1 means a majority of assets are financed through equity, above 1 means they are financed more by debt. Furthermore you can interpret a high ratio as a "highly debt leveraged firm".

### **Coverage Ratios**

A type of accounting ratio that helps measure a company's ability to meet its obligations satisfactorily.



A coverage ratio encompasses many different types of financial ratios. Typically, these kinds of ratios involve a comparison of assets and liabilities. The better the assets "cover" the liabilities, the better off the company is.

### **Interest Coverage Ratio**

A ratio used to determine how easily a company can pay interest on outstanding debt. The ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) of one period by the company's interest expenses of the same period:

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Expense}}$$

The lower the ratio, the more the company is burdened by debt expense. When a company's interest coverage ratio is 1.5 or lower, its ability to meet interest expenses may be questionable. An interest coverage ratio below 1 indicates the company is not generating sufficient revenues to satisfy interest expenses.

### **Debt-Service Coverage Ratio (DSCR)**

In corporate finance, it is the amount of cash flow available to meet annual interest and principal payments on debt, including sinking fund payments.

In government finance, it is the amount of export earnings needed to meet annual interest and principal payments on a country's external debts.

In personal finance, it is a ratio used by bank loan officers in determining income property loans. This ratio should ideally be over 1. That would mean the property is generating enough income to pay its debt obligations.

In general, it is calculated by:

$$= \frac{\text{Net Operating Income}}{\text{Total Debt Service}}$$

A DSCR of less than 1 would mean a negative cash flow. A DSCR of less than 1, say .95, would mean that there is only enough net operating income to cover 95% of annual debt payments. For example, in the context of personal finance, this would mean that the borrower would have to delve into his or her personal funds every month to keep the project afloat. Generally, lenders frown on a negative cash flow, but some allow it if the borrower has strong outside income.

### **Profitability Ratios**

A class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period is indicative that the company is doing well.

Some examples of profitability ratios are profit margin, return on assets and return on equity. It is important to note that a little bit of background knowledge is necessary in order to make relevant comparisons when analyzing these ratios.

For instances, some industries experience seasonality in their operations. The retail industry, for example, typically experiences higher revenues and earnings for the Christmas season. Therefore, it would not be too useful to compare a retailer's 4th quarter profit margin with its 1st quarter profit margin. On the other hand, comparing a retailer's 4th quarter profit margin with the profit margin from the same period a year before would be far more informative.

### **Gross Profit Margin**

A financial metric used to assess a firm's financial health by revealing the proportion of money left over from revenues after accounting for the cost of goods sold. Gross profit margin serves as the source for paying additional expenses and future savings. Also known as "gross margin".

Calculated as.

$$\text{Gross Profit Margin} = \frac{\text{Revenue} - \text{COGS}}{\text{Revenue}}$$

Where:

COGS = Cost of Goods Sold

For example, suppose that ABC Corp. earned \$20 million in revenue from producing widgets and incurred \$10 million in COGS-related expense. ABC's gross profit margin would be 50%. This means that for every dollar that ABC earns on widgets, it really has only \$0.50 at the end of the day.

This metric can be used to compare a company with its competitors. More efficient companies will usually see higher profit margins.

### **Operating Profit Margin**

Operating profit for a certain period divided by revenues for that period. Operating profit margin indicates how effective a company is at controlling the costs and expenses associated with their normal business operations.

### **Net Profit Margin**

Net profit divided by net revenues, often expressed as a percentage. This number is an indication of how effective a company is at cost control. The higher the net profit margin is, the more effective the company is at converting revenue into actual profit. The net profit margin is a good way of comparing companies in the same industry, since such companies are generally subject to similar business conditions. However, the net profit margins are also a good way to compare companies in different industries in order to gauge which industries are relatively more profitable. also called net margin.

### **Return On Assets (ROA)**

An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

$$= \frac{\text{Net Income}}{\text{Total Assets}}$$

Note: Some investors add interest expense back into net income when performing this calculation because they'd like to use operating returns before cost of borrowing.

ROA tells you what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or the ROA of a similar company.

The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment. For example, if one company has a net income of \$1 million and total assets of \$5 million, its ROA is 20%; however, if another company earns the same amount but has total assets of \$10 million, it has an ROA of 10%. Based on this example, the first company is better at converting its investment into profit. When you really think about it, management's most important job is to make wise choices in allocating its resources. Anybody can make a profit by throwing a ton of money at a problem, but very few managers excel at making large profits with little investment.

### **Return On Equity (ROE)**

A measure of a corporation's profitability that reveals how much profit a company generates with the money shareholders have invested.

Calculated as:

$$= \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

Also known as "return on net worth (RONW)".

The ROE is useful for comparing the profitability of a company to that of other firms in the same industry.

There are several variations on the formula that investors may use:

1. Investors wishing to see the return on common equity may modify the formula above by subtracting preferred dividends from net income and subtracting preferred equity from shareholders' equity, giving the following: return on common equity (ROCE) =  $\frac{\text{net income} - \text{preferred dividends}}{\text{common equity}}$ .
2. Return on equity may also be calculated by dividing net income by *average* shareholders' equity. Average shareholders' equity is calculated by adding the shareholders' equity at the beginning of a period to the shareholders' equity at period's end and dividing the result by two.
3. Investors may also calculate the change in ROE for a period by first using the shareholders' equity figure from the beginning of a period as a denominator to determine the beginning ROE. Then, the end-of-period shareholders' equity can be used as the denominator to determine the ending ROE. Calculating both beginning and ending ROEs allows an investor to determine the change in profitability over the period.

### **Market Value Measures**

1. The current quoted price at which investors buy or sell a share of common stock or a bond at a given time. Also known as "market price".
2. The market capitalization plus the market value of debt. Sometimes referred to as "total market value".
3. In the context of securities, market value is often different from book value because the market takes into account future growth potential. Most investors who use fundamental analysis to pick stocks look at a company's market value and then determine whether or not the market value is adequate or if it's undervalued in comparison to its book value, net assets or some other measure.

### **Earnings Per Share (EPS)**

The portion of a company's profit allocated to each outstanding share of common stock. EPS serves as an indicator of a company's profitability.

Calculated as:

$$= \frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

In the EPS calculation, it is more accurate to use a weighted-average number of shares outstanding over the reporting term, because the number of shares outstanding can change over time. However, data sources sometimes simplify the calculation by using the number of shares outstanding at the end of the period.

Diluted EPS expands on the basic EPS by including the shares of convertibles or warrants outstanding in the outstanding shares number.

An earnings per share is generally considered to be the single most important variable in determining a share's price. It is also a major component of the price-to-earnings valuation ratio.

For example, assume that a company has a net income of \$25 million. If the company paid out \$1 million in preferred dividends and had 10 million shares for one half of the year and 15 million shares for the other half, the EPS would be \$1.92 (24/12.5). First, the \$1 million is deducted from the net income to get \$24 million. Then a weighted average is taken to find the number of shares outstanding ( $0.5 \times 10M + 0.5 \times 15M = 12.5M$ ).

An important aspect of EPS that's often ignored is the capital that is required to generate the earnings (net income) in the calculation. Two companies could generate the same EPS number, but one could do so with less equity (investment) - that company would be more efficient at using its capital to generate income and, all other things being equal, would be a "better" company. Investors also need to be aware of earnings manipulation that will affect the quality of the earnings number. It is important not to rely on any one financial measure, but to use it in conjunction with statement analysis and other measures.

### **Price-Earnings Ratio (P/E Ratio)**

A valuation ratio of a company's current share price compared to its per-share earnings.

Calculated as:

$$= \frac{\text{Market value per Share}}{\text{Earnings per Share (EPS)}}$$

For example, if a company is currently trading at \$43 a share and earnings over the last 12 months were \$1.95 per share, the P/E ratio for the stock would be 22.05 (\$43/\$1.95).

EPS is usually from the last four quarters (trailing P/E), but sometimes it can be taken from the estimates of earnings expected in the next four quarters (projected or forward P/E). A third variation uses the sum of the last two actual quarters and the estimates of the next two quarters.

Also sometimes known as "price multiple" or "earnings multiple".

In general, a high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. However, the P/E ratio doesn't tell us the whole story by itself. It's usually more useful to compare the P/E ratios of one company to other companies in the same industry, to the market in general or against the company's own historical P/E. It would not be useful for investors using the P/E ratio as a basis for their investment to compare the P/E of a technology company (high P/E) to a utility company (low P/E) as each industry has much different growth prospects.

The P/E is sometimes referred to as the "multiple", because it shows how much investors are willing to pay per dollar of earnings. If a company were currently trading at a multiple (P/E) of 20, the interpretation is that an investor is willing to pay \$20 for \$1 of current earnings.

It is important that investors note an important problem that arises with the P/E measure, and to avoid basing a decision on this measure alone. The denominator (earnings) is based on an accounting measure of earnings that is susceptible to forms of manipulation, making the quality of the P/E only as good as the quality of the underlying earnings number.

## 2.3 DEFINITIONS

**Pay Back Period:** The length of time required to recover the cost of an investment.

Calculated as.

$$= \frac{\text{Cost of Project}}{\text{Annual Cash Inflows}}$$

All other things being equal, the better investment is the one with the shorter payback period.

For example, if a project cost \$100,000 and was expected to return \$20,000 annually, the payback period would be \$100,000 / \$20,000, or five years.

There are two main problems with the payback period method:

- 1) It ignores any benefits that occur after the payback period and, therefore, does not measure profitability.
- 2) It ignores the time value of money.

Because of these reasons, other methods of capital budgeting like net present value, internal rate of return or discounted cash flow are generally preferred

**Net Present Value (NPV):** The difference between the present value of cash inflows and the present value of cash outflows. NPV is used in capital budgeting to analyze the profitability of an investment or project.

NPV analysis is sensitive to the reliability of future cash inflows that an investment or project will yield.

Formula:

$$NPV = \sum_{t=1}^T \frac{C_t}{(1+r)^t} - C_0$$

NPV compares the value of a dollar today to the value of that same dollar in the future, taking inflation and returns into account. If the NPV of a prospective project is positive, it should be accepted. However, if NPV is negative, the project should probably be rejected because cash flows will also be negative.

For example, if a retail clothing business wants to purchase an existing store, it would



first estimate the future cash flows that store would generate, and then discount those cash flows into one lump-sum present value amount, say \$565,000. If the owner of the store was willing to sell his business for less than \$565,000, the purchasing company would likely accept the offer as it presents a positive NPV investment. Conversely, if the owner would not sell for less than \$565,000, the purchaser would not buy the store, as the investment would present a negative NPV at that time and would, therefore, reduce the overall value of the clothing company.

**GDP:** The monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

$$GDP=C+G+I+NX$$

where:

"C" is equal to all private consumption, or consumer spending, in a nation's economy

"G" is the sum of government spending

"I" is the sum of all the country's businesses spending on capital

"NX" is the nation's total net exports, calculated as total exports minus total imports. (NX = Exports - Imports)

GDP is commonly used as an indicator of the economic health of a country, as well as to gauge a country's standard of living. Critics of using GDP as an economic measure say the statistic does not take into account the underground economy - transactions that, for whatever reason, are not reported to the government. Others say that GDP is not intended to gauge material well-being, but serves as a measure of a nation's productivity, which is unrelated.

**GNP:** An economic statistic that includes GDP, plus any income earned by residents from overseas investments, minus income earned within the domestic economy by overseas residents.

GNP is a measure of a country's economic performance, or what its citizens produced (i.e. goods and services) and whether they produced these items within its borders

**IRR:** The discount rate often used in capital budgeting that makes the net present value of all cash flows from a particular project equal to zero. Generally speaking, the higher a project's internal rate of return, the more desirable it is to undertake the project. As such, IRR can be used to rank several prospective projects a firm is considering. Assuming all other factors are equal among the various projects, the project with the highest IRR would probably be considered the best and undertaken first.

IRR is sometimes referred to as "economic rate of return (ERR)".

You can think of IRR as the rate of growth a project is expected to generate. While the actual rate of return that a given project ends up generating will often differ from its estimated IRR rate, a project with a substantially higher IRR value than other available options would still provide a much better chance of strong growth.

IRRs can also be compared against prevailing rates of return in the securities market. If a firm can't find any projects with IRRs greater than the returns that can be generated in the financial markets, it may simply choose to invest its retained earnings into the market.

## **CHAPTER 3**

### **COMPANY PROFILE**

### **PRODUCT & CAPACITY**

#### **3.1 VISION – MISSION - OBJECTIVES**

As agriculture –based industry, poultry sector has been considered as one of the thrust sectors receiving special attention. The relevant objectives and policy strategies of the Industrial Policy are:

- To meet the growing demands of the local market.
- To encourage expansion of production for local raw materials based industries.
- To provide special revenue assistance to the thrust sector industries.
- To extend financial assistance to this sector, if needed.

In this connection, the proposed project of “Poultry Industry” is an appropriate and timely concerned approach because of its connection to the agro-based industry. The immediate objective of this project is to produce meat and market them all over the country. As a consequence, it will have multifaceted beneficiary from rural poor to upper income group in the cities. The project will have direct impact on the followings:

- Job creation for skilled and semi-skilled people;
- Contribution to GDP;
- Employment creation for rural men and women;
- Efficient use of poultry meat;
- Consumers health in general;

The project is proposed to establish with the following objectives, Mission and Vision:

- Vision:** To improve health condition of the people with special attention to child.
- Mission:** To produce poultry meat & to distribute all over the country.
- Objectives:** To provide poultry meat to a wide range of people at a reasonable and affordable price.

Sub-objective of the project are as follows:

- Stimulate poultry meat and utilize women manpower of the country more fruitfully.

### 3.2 COMPANY PROFILE

1. **Name of the Project** : **M/S. XYZ POULTRY FARM.**
2. **Location of the Project** : a. Area : 25.01 acres  
b. Location : Jhikorgacha, Jessore.  
c. Encumbrance : The project land is free from any kind of encumbrance.
3. **Legal Status** : Private Limited Company
4. **Capital Status** : Authorized Capital :  
Paid-up Capital :
5. **Name of the Sector** : Agro based
6. **Type of the Project** : Broiler Farm
7. **Source of Raw Material** : Local
8. **Production Capacity** : At 100% capacity utilization, the project is expected to produce annually the items below:

Sl.	Item of Products	Quantity
i)	Broiler	1,800 MT
ii)	Liter	Tk. 50,000/-

9. **Cost of the Project** :

Sl	Particulars	Incurred		To be incurred		Total
		L.C	F.C	L.C	F.C	
1	Fixed Cost	4888	-	52511	16800	74199
2.	Initial W/C	-	-	8075	-	8075
3.	IDCP	-	-	2221	-	2221
	Total	4888	-	62807	16800	84495

**10. Means of Finance**

Sl	Item	Cost Incurred		Cost To be incurred		Total
		Equity	Bank	L C	F.C	
01	Term Loan	-	-	32560	16800	49360
02.	IDCP	-	-	1465	756	2221
03.	Equity	4888	-	28026	-	32914
	Total	4888	-	62051	17556	84495

**Debt-Equity ratio** : 60:40 (Including IDCP).

**11. Financial Performance**

(Tk in '000')

Sl. No	Particulars	Yr-1	Yr-2	Yr-3	Yr-4
01.	Sales Revenue	90000	90000	90000	90000
02	Gross Profit	15929	15327	14715	14094
03	Operating Profit	12130	11351	10560	9757
04	Net Profit after Return on Investment	4630	4828	5010	5189

**Ratios (%):**

Sl. No	Particulars	Yr-1	Yr-2	Yr-3	Yr-4
01.	Gross Profit to Sales	18	17	16	16
02.	Operating Profit to Sales	13	13	12	11
03.	Net Profit to Sales	5	5	5	6
04.	Debt Service Coverage Ratio	0.92	0.93	0.94	0.95

**12. Market aspect**

The proposed project M/S.XYZ POULTRY FARM is an innovative addition to the agricultural production in Bangladesh. The main products of the project poultry meet will be sold in greater Jessore district.

- 13. Socio-Economic Aspects** : The project after implementation will create new job opportunity for 6 persons of different categories and will contribute to TK. 195 lakh per year to GDP. The macro-economic effect will change the socio-economic condition of the directors, the employees and the country as a whole.
- 14. Break-Even Point** 53% of the assumed capacity.
- 15. Conclusion** : The proposed Project is Technically Feasible, Commercially viable and financially rewarding. So the project may be established under Bank finance.

## CHAPTER 4

### ORGANIZATION AND MANAGEMENT ASPECT

#### 4.1 LEGAL STATUS OF THE ORGANIZATION

The proposed project is a private limited company registered with the Registrar of Joint Stock Companies (RJSC) on November 01, 2005. The title of the project is “M/S. XYZ POULTRY FARM”

#### 4.2 CORPORATE STRUCTURE

The corporate structure of the organization is as follows:

Sl.	Name of the Sponsor and Permanent Address	Present Address	Number Shares	Position in Business
1	Mr. ABC S/O EFG 4, Civilian R/A, Jessore Cant, Jessore	Akiz Chamber, 73, Dilkusha C/A, Dhaka	6,00,000	Managing Director
2	Ms. HIJ W/O ABC 4, Civilian R/A, Jessore Cant, Jessore	Akiz Chamber, 73, Dilkusha C/A, Dhaka	4,00,000	Director
<b>Total Share</b>			<b>10,00,000</b>	

#### 4.3 PROFILE OF THE DIRECTORS

**Mr. ABC** (64) is a tremendously successful business personality, is the Managing Director of the Company and a very well known figure in the country's business arena. At the beginning of his career, he served a few multinational companies for acquiring knowledge and experiences to fulfill his vision to be an industrialist. Mr. ABC achieved

significant success in the related industry and trade and also earned wide reputation in the business community. He has also overseas business and visits frequently developed and developing countries. Mr. ABC's involvement in different businesses is as follows:

Sl.	Name and address of business	Position
1.	ABC Paper mills Ltd 73, Dilkusha C/A, Dhaka	Director
2.	Navaron Printing and Packages Ltd. 73, Dilkusha C/A, Dhaka	Director
3.	Nebula Ink Ltd. 73, Dilkusha C/A, Dhaka	Director
4.	Spandan Color Lab Ltd.(16 unit) 73, Dilkusha C/A, Dhaka	Managing Director
5.	ABC Biri Factory Ltd. (2 unit) 73, Dilkusha C/A, Dhaka	Director
6.	ABC Gas Station Ltd. (3 Petrol pump) Chachra, Jessore	Director
7.	ABC Toiletries Ltd. Chachra, Jessore	Director
8.	ABC Feed Mills Ltd. Chachra, Jessore	Director

**Ms. HJJ.** (56) is a director of the company. She is a graduate. In addition to the directorship of the proposed company she has also directorship of other companies as mentioned above. She has visited several countries of the world for business purpose. She is a dedicated social worker and is associated with few socio-cultural organizations. By



engaging herself into business activities, she acquired considerable business management capability, which will certainly be of good use to run the business affairs of the proposed company.

#### **4.4 MANAGEMENT**

The overall management of the company will be vested in the Board of Directors. The Managing Director will be responsible to the Board of Directors for overall operation of the project and will be assisted by different managerial and technical personnel.

##### **Technical Expert**

Mr. KLM, Consultant, of the company is an M.Sc in Poultry Science Department from USA and a Veterinary Doctor. He is a renowned person in the field of Poultry Project installation in Bangladesh. He has more than 20 years of experience in poultry related projects.

#### **4.5 CONCLUSION**

The management team has the entrepreneurial spirit with adequate education and experience to set up a poultry industry as proposed one.

## CHAPTER 5

### TECHNICAL ASPECTS

#### 5.1 PROJECT PURPOSE AND DESIGN

The proposal envisages for establishment of Broiler Poultry Farm in the name and style of M/S. XYZ POULTRY FARM at Jhikorgacha, Jessore at Mouza No. 34, Jhikorgacha, 37, Kritipur, 53, Sreerampur, 35, Sagorpur. It is intended to produce meat by rearing broiler chicks. The sponsors have planning for exporting meat after while. The project has been designed based on both importable and locally available machinery as well as importable and locally available raw materials. The fixed cost of the project has been estimated at Tk. 741.99 lacs excluding IDCP of Tk. 22.21 lacs under net working capital Tk. 80.75 lacs. Detailed of which is given in the Annexure -I. The project will be consisted of 1,50,000 no of Broiler Poultry bird.

#### 5.2 PRODUCT MIX AND PRODUCTION CAPACITY

At 100% capacity utilization band on 365 days in a year, the annual capacity of the project has been assumed as follows.

Sl. No	Product Name	Yearly Production
i)	Broiler: 30,000X40	12,00,000 pcs X 1.5 = 1800 MT

#### 5.3 LAND AND LOCATION

The project site is located at Mouza- Jhikorgacha, Kritipur, Sagorpur under Jhikorgacha Up-zilla, Dist- Jessore measuring an area of 12.96 acres. The site is about 8 km away from Jessore town and the site is flood area. Some of the land is to be developed with cutted earth up to 2'-6" height. The value of land has been assessed at Tk. 38.88 lacs as per LF-5 assessed by BKB jhikorghacha branch and development cost becomes Tk. 29.64 lacs as assumed by BKB, Jhikorgacha branch. Schedule of land is enclosed herewith.

## **5.4 BUILDING AND OTHER CIVIL CONSTRUCTION WORKS**

The main construction buildings are environmental control shed, Nursing house, Semi pucca godown, Office, Generator house, Guard room, Staff quarter, STW, Overhead water tank, Electrification, Surface drain, Internal road, Barbed wire fencing, Main gate etc. The specification & design of different sheds are given on the drawing sheets. The estimated cost becomes 408.22 lacs and details of estimation are given in Annexure-II. The estimate for construction works has been prepared on the basis of PWD's rate of schedule and drawings design of the building submitted by the sponsors.

## **5.5 CAPITAL AND LOCAL MACHINERY & EQUIPMENT**

### **A. Importable Machinery**

The project has been designed on the basis of both importable and locally available machinery. The capital machinery, which will be imported from abroad- European country. Environmental shed equipments are Air Master Fan (1.5HP), Air intake curtain with accessories, Pad cooling system, Ventilation control system, Alarm system etc. Details of list of capital machinery are given in Annexure- III. List of capital machinery and price have been prepared on the basis of quotation submitted and accepted by the company. The cost of imported machinery is Tk. 160.00 lacs.

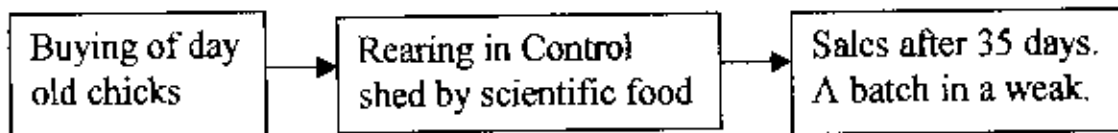
### **B. Local Machinery**

The project has been designed on the basis of local machinery namely (a) Clearing & washing machinery (b) 200KVA diesel generator with auto system (c) HT panel, LT panel, Charges over switch (d) Submersible pump for water supply (e) Grass cutter etc. As per quotation collected the cost of local machinery becomes Tk. 26.55 lacs. Details of list of Local machinery are given in Annexure- IV. The price of local machinery has been quoted on the basis of lowest quotation submitted and accepted by the company.

## 5.6 TECHNOLOGY AND PROCESS

The technology involved in broiler bird rearing is very simple and well known in the country. Adequate local and foreign expertise are available in the country for installation of machinery and operational activities

A. Simple flow chart is shown below:



## 5.7 REQUIREMENTS OF RAW MATERIALS

As 100% capacity utilization based on 365 working days in a year, annual requirement of raw materials are given below

Sl	Item	Quantity
01.	Day Old Chicks (12,00,000+5%)	12,60,000 nos.
02.	Broiler feed (1200000x2.25)/1000	2700 MT
03.	Medicine	Cost @ Tk. 5/- per bird.

## 5.8 TECHNICAL AND ADMINISTRATIVE PERSONNEL

(A) Technical staff

Sl	Category	No. of Post
01.	Veterinary Doctor	1
02.	Production Manager	1
03.	Supervisor	3
04.	Skilled labor	50
05.	Unskilled labor	50
06.	Cleaner	3
07.	Store Keeper	1
08.	Peon	2
	Total	111

(B) Administrative staff

Sl	Category	No. of Post
01.	General Manager	1
02.	Manager (Admin)	1
03.	Purchase Officer	1
04.	Commercial Officer	1
05.	Computer Operator	1
06.	Driver	3
07.	Security Officer	1
08.	Security Guard	6
09.	Peon/ Messenger	1
	Total	16
	Grand Total (A+B)	127

## 5.9 UTILITIES

(a) Water:

Required quantity of water will be supplied by installing submersible pump & water pipe line, the cost of which is in the civil requirement cost.

(b) Power.

Connected Load : 200 KW  
Connection : 150 KW  
Source : REB

(d) Oil, Fuel, Lubricant:

- (i) Diesel : 100x360 = 36,000 liter.  
(ii) Lubricant, Greeze etc. L.S

## 5.10 OFFICE FURNITURE AND EQUIPMENT

Office furniture and equipment such as Almirah, Chair, Table, Ceiling Fan, and Computer etc. considered and a sum of Tk. 2.00 lacs has been considered for this purpose.

### **5.11 STORE & SPARES**

The cost of annual requirement of stores and spares for the machinery and equipments as 0.5%, 1%, 1.5% & 2% of its cost for the 1st, 2nd, 3rd, 4th year of operation respectively.

### **5.12 REPAIR AND MAINTENANCE**

The cost of annual repair and maintenance cost for the machinery and equipment's has been estimated at 0.5%, 1%, 1.5%, 2% of its costs for the 1st, 2nd, 3rd and 4th year of operation.

### **5.13 TRANSPORTATION**

The proposed project is communicated by pucca road & suitable for all type of transport for carrying of raw materials and finished products. Two Trucks has been considered for project for this Tk. 30 lacs has been considered.

### **5.14 REMARKS**

On consideration of above facts & figure, the project is seemed to be technically feasible.

## CHAPTER – 6

### MARKET POTENTIALITY

#### 6.1 INTRODUCTION

" Health is Wealth" a universal proverb is well known to almost every conscious people of the world but it is a bare fact that this popular proverb has become an imaginary dream to the common people of Bangladesh due to acute shortage of portentous staple food.

Protein is one of the main ingredients of food items which is very much necessary for building up as well as up keeping of good health and which is mainly available in fish, meat, egg and milk. The reason for existing acute protein deficiency in Bangladesh is mainly due to insufficient supply of food items like meat, fish and eggs as well low purchasing capacity of the consumers in comparison to the market price. According to the experts of the institute of food science & Nutrition, University of Dhaka, per capita protein requirement per day should be 65 gms and at least one third i.e. about 22 grams of the total requirements should come from animal sources usually in the form of meat, milk, eggs and fish. As per report of FAO UNDP Mission and Govt. of Bangladesh, 1977 average per capita availability of animal protein had been 6.1 grams of which only 3 grams were from animal source, of these 3 grams 1.5 grams come from meat, 1.4 grams from milk and 0.1 grams eggs. This alarmingly level of protein consumption is due to insufficient supply and low per capita income.

Livestock sector is highly viable sector for generation of employment and income for the landless, unemployed youths and destitute women. Little attention was given to livestock sub-sector until the recent past. In spite of that about 50,000 private poultry farms have been set up in the country in the private sector.

## 6.2 DEMAND-SUPPLY ANALYSIS

The project is envisaged mainly to improve meat which is good source of protein. This is consumed by house-hold level both in rural and urban areas. Besides, the demand of the products also come from Hotels, Hospitals, Hostels, Cantonments, Students halls etc. But like many other products market in Bangladesh, the market of poultry meat is not organized and as such proper estimation of demand cannot be possible in straight way rather the apparent consumption and increasing demand of meat in different research reports and publications have been taken as the basis.

On the basis of the information provided by Institute of Nutrition Research, Dhaka University that a person should take at least 0.03 lbs of meat in a day. The demand & supply of meat from 2004-2005 to 2009-10 has been estimated in following Tables [4]:

**Table 6.1: Projected Requirement of Meat in Bangladesh from 2004-2005 to 2009-2010**

(fig. in million)

Year	Estimated population	Requirement of meat KG
2003-2004	139.78	694.26
2004-2005	142.23	706.43
2005-2006	144.72	718.80
2006-2007	147.25	731.36
2007-2008	149.83	744.18
2008-2009	152.45	757.06
2009-2010	155.12	770.32

- Considering one person should take 0.03 lbs of meat daily.
- Annual growth rate 1.75%



**Table 6.2: Projected Supply of Meat in Bangladesh from 2004-2005 to 2009-2010**

(fig. in million)

Year	Estimated supply of meat KG
2003-2004	143.52
2004-2005	145.06
2005-2006	146.61
2006-2007	148.17
2007-2008	149.76
2008-2009	150.77
2009-2010	152.38

c) Considering 1.07% average rate of increase of production per annum.

The production of meat increased by an annual compound growth rate of 3.2 percent. There are ample potentials of increasing production of meat in the country. The main problems of this sector are inadequate supply of vaccine, medicine feed, health care facilities, quality feed, parent stock, credit facilities and other inputs.[4]

**Table 6.3: Estimated Demand- Supply Gap of Meat in Bangladesh**

(fig. in million)

Year	Requirement of meat KG	Estimated supply of meat KG	Gap
2003-2004	694.26	143.52	552.74
2004-2005	706.43	145.06	561.37
2005-2006	718.80	146.61	572.19
2006-2007	731.36	148.17	583.19
2007-2008	744.18	149.76	594.42
2008-2009	757.06	150.77	606.29
2009-2010	770.32	152.38	617.94

1. Demand for Meat has been estimated for daily requirement of Meat 108 Grams for up keeping the sound health.

2. Supply production of the products during the year 2003-2004 are actual and following the year on the basis estimated projection during the fifth year-planned period.
3. Fifth five-year plan 1997-2002 (source of data)

From the above table it is clear that there is huge demand for meat in the country. To meet the above demand production of the same are required to be increased immediately.

### 6.3 SECTORL OVERVIEW

#### Projection of Livestock Products for Fifth Plan:

The production of milk, meat and eggs are show a significant increase during the Fifth Plan period, Details may be seen in following table [4]:

**Table 6.4: Projection of Livestock Products for fifth five year Plan**

Products	Unit	1996/97 (Benchmark)		1997/2002 (Projection)				
		Projection	Achievement	1997/98	1998/99	1999/00	2000/01	2000/02
Milk	mt	1 600	1,510	1680	1764	1850	1942	2058
Meat	mt	600	575	630	662	702	744	788
Egg	M. No	3,005	2815	3260	3550	3890	4281	4730

#### Financial Outlay During Fifth Plan

In order to implement the livestock development programers during the fifth five plan, an estimated amount of tk. 5435.60 million was spend in the public sector Year wise break up is given in following Table[4].

Public sector financial outlay for livestock development during fifth plan (at 1996/97 prices)

(In Million Taka)

Year	Financial Outlay
1996/97	690.00
1997/98	1000.00
1998/99	1000.00
1999/2000	1012.00
2000/2001	1164.00
2001/2002	1259.60
Total (1997-2002)	5435.60

In addition to the public sector development outlay of TK 5435.60 million an amount TK.20646.40 million was invested for the development of livestock by the private entrepreneurs. With increasing supports from the government, private individuals, groups and companies a coming up in a big way in different fields of livestock development. By and large the main fields will be the establishment of poultry duck hatchery, poultry duck farms dairy farms, goat farms and feed mill fodder cultivation, beef fattening farms etc.

#### **6.4 OBJECTIVES, STRATEGIC & MAJOR PROGRAMS TAKEN BY THE GOVT. IN THE PLANNING DOCUMENTS (5th five year plan).**

##### **6.4.1. Objectives:**

- a. Increase people's participation through development of entrepreneur groups and create new employment opportunities for small farmers, landless laborers and women and other target groups in livestock development;
- b. Generate income and alleviate poverty of the rural poor through livestock development;
- c. Increase the supply of milk, meat, birds, eggs hides and skins, etc. through improvement in breed, feed and disease control of animals and birds;
- d. Undertake adaptive research on breeding, feeding, disease control for cattle, Begat, goat and sheep and poultry bird by BLRI and to transfer appropriate technologies to the users;

- e. Improve the quality of draft power of both cattle and buffaloes through genetic improvement, better veterinary services, adequate feed supply and improved management;
- f. Increase foreign exchange earnings through the export of quality hides and skin, and to reduce dependence on import of powder milk;
- g. Involve the private sector local government bodies and NGO'S in livestock industry for credit distribution, production of cattle and poultry feed, milk processing, input supply and marketing and to improve distribution network for these products in collaboration with Department of livestock and livestock Research Institute;
- h. Privatise input supply and to provide fiscal support, if needed for sustainable development of the sub-sector.

#### 6.4.2 Strategies:

In order to achieve the above objectives of the fifth Plan, the following strategies will be adopted:

- a. Improvement of the quality of animals and birds through genetic upgrading, preservation of native breeds and selection of exotic breed;
- b. Wider provision for treatment of infectious diseases and zoonotic infections and large-scale production of vaccine at home;
- c. Increasing fodder supply through intensive use of available land;
- d. Improvement of livestock management through manpower training and skill development;
- e. Improvement of the quality of draft animals and expansion of single animal plugging system;
- f. Emphasizing development of dairy cattle and encouraging establishment of mini dairy farms through support services;

- g. Encouraging goat and sheep production through supply of inputs;
- h. Giving special emphasis on poultry for increased supply of meat and eggs
- i. Giving credit for livestock and poultry farming on reasonable terms in the private sector.
- j. Improvement of marketing facilities for realization of competitive prices by the farmers;
- k. Discouraging import of powder milk and other livestock products:
- l. Strengthening of the organizational and institutional framework of the Bangladesh Livestock Research Institute for undertaking research on livestock production and expanding the data base on socio-economic aspects of livestock development,
- m. Training of the target groups like the landless, destitute women, unemployed youth and poor farmers in livestock management, inputs production, product processing and marketing for poverty alleviation and income generation.
- n. Pricing of vaccines for cost recovery and commercialization of veterinary vaccine production laboratory under the Department of Livestock Services.

#### 6.4.3 Major Programmes

**Feed and fodder development:** Feed mill will be established in the private sector at important places of the country. The government will provide support services in kith form of credit ethnologies. Fodder production will be encouraged through crop diversification, inter-cropping and plautation of fodder trees with timber trees.

**Animal health and disease control:** The programme consists of diagnosis, prevention and treatment, vaccine and medicine production and distribution. Qualitative and quantitative improvement will be made in disease control. Facilities will be expanded and number of veterinary surgeons will be increased by 350 during the plan period. About 10 000 youths will trained as veterinary health workers

**Animal breeding and breeder multiplication:** Programmers will be directed towards multiplication of breeding of cattle, buffalo, goat sheep, fowl and duck.

Increase in milk, meat and egg production will be achieved mainly through quality improvement of local cattle by cross-breeding with deep frozen semen through artificial insemination and improvement poultry through introduction of high breed commercial birds for eggs and meat production. The poultry population is expected to increase significantly during the plan period.

**Extension training and education:** In order to increase livestock productivity, improved production technologies will be spread all over the country. Training of farmers, farm owners and NGOs for all dints of related activities of this sector will be given of related activities of this of this sector will be given through extension services and formal and informal education. Number of veterinary college and veterinary training institutes will be in reused from 2 and 3 to 6 and 21 respectively which will be located in 6 divisions and 21 former larger district.

**Input production:** Input production like production of vaccine, semen, day old chick, ducking and eggs through different projects included in the plan will increase significantly Vaccine productionn will increase form 350 million doses in 1996-97 to 400 million doses in

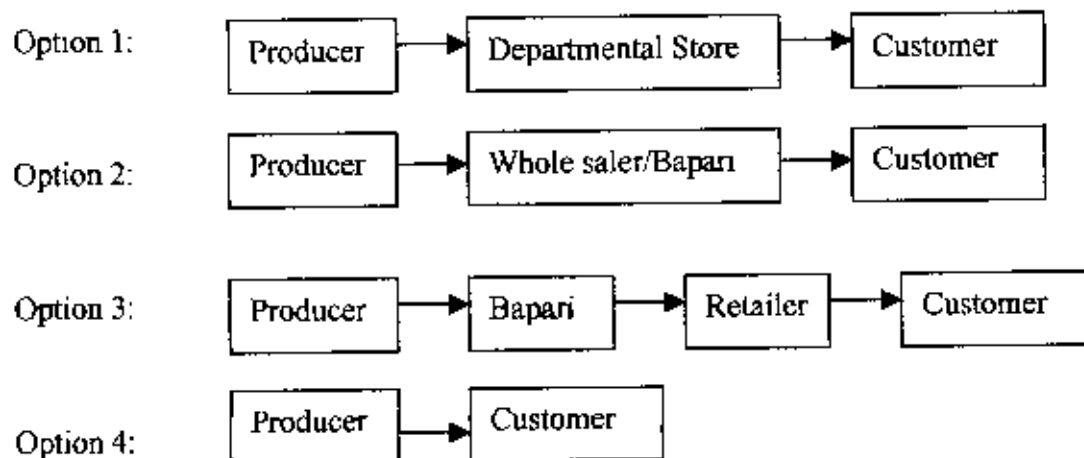
2001/2002, semen production from 1.8 million doses to 4.5 million doses, day old chick production from 4 million to 6 million, ducking production from 0.5million to 1.0 million and egg production from 2,815 million during the plan period. Limited input production still in the public sector will be gradually transferred to the private sector. Meanwhile, existing input supply programmes in the public sector will be run on full-cost recover basis.

**Employment creation and poverty alleviation:** Programmes undertaken during the fifth plan create positive impact on sell and wage employment in livestock farming, chick and goat rearing fee selling and other income generation activities under different package programmes of the Department Livestock. Credit programmes of various NGOs are supporting women involvement in livestock production around homesteads using surplus labour and agricultural by-products. The government encourages these programmes. The total number of man days involved in the livestock development activities is likely to increase form 12.50 million in 1996/97 to 16.00 million in 200/2002. The beneficiaries like poultry walkers will increase form 22,600 to 45,000, chick rearers from 8,000 to 12,000 key rearers form 5,00,000 to

14,00,000 feed sellers form 1,000 to 3,000 egg collectors from 2,600 to 6.50 and mini hatcheries from 200 to 1,000.

## 6.5 CHANNEL OF DISTRIBUTION

For enhancing quick and prompt distribution to the consumers the project will follow the following distribution channel.



The project can follow any one option. But they should be capable enough to purchase bulk quantity (the quantity that is cost-effective in terms of its transportation cost) and meet the daily target. The transportation cost up to distribution will be borne by the company.

### Display Outlets

The products can be displayed in departmental stores, supermarkets and shopping malls after processing.

## 6.6 LOCATIONAL ADVANTAGE

The project is located in Jhikorgacha upazilla of Jessore district which has communication linkage with all district town surrounding Jessore. All products will be marketed to Jessore, Khulna, Kushtia, Bagerhat, Satkhira etc.

## 6.7 CONCLUSION

Considering the overall demand and supply analysis the proposed project will directly increase the supply of meat, which are the consumable nutrition items necessary for building up a keeping of good health. The project will go a long way in solving the nutrition problem which exists in the country in acute form with the establishment of this project the supply position of meat will improve in different market indirectly which would have a favorable impact on the prices of meat.



## CHAPTER 7

### FINANCIAL ASPECTS

#### 7.1 COST OF THE PROJECT

The total cost of the project has been- estimated at Tk. 844.95 lakh including interest during construction of Tk. 22.21 lakh. The capital structure is given in Annexure-III. Total debt and equity: 60: 40 (on fixed cost excluding IDCP).

The detailed estimates of working capital requirement have been shown at Annexure-VII and Annexure-VIII

#### 7.2 FINANCIAL EVALUATION

(a) Cost of Production and Profitability:

A statement showing forecast of earning which enter all includes cost of production. The main assumptions underlying the earning forecast are as under:

- (i) The project will run 365 days a year.
- (ii) The cost of raw materials as well as sales will be the same throughout the projected years on the assumptions that price increase in raw materials will be off set by the proportionate price increase in sales.
- (iii) There will be 5% increase in salaries & wages and a bonus equal to 2 (two) month basic will be given each year.
- (iv) Depreciation has been charged @ 10% on Machinery, @ 5% on building and 20% on furniture and fixture & pre-operation expenses on straight-line method.
- (v) The project will enjoy tax holiday for Nine (9) years for which the project will have to buy govt. bond to be eligible for tax holiday.

Based on the above assumptions the estimated profitability of the project will be as following:

(I) Financial Performance

Annexure-IX. The detailed sales estimates and cost of goods sold have been shown at Annexure-X and XI respectively. Whereas the detailed general, administrative & selling expenses, earning forecast have been shown at Annexure-XII and IX respectively.

II) Debt-Service Coverage

The project will enjoy tax holiday for a period of 5 years. As a tax holiday unit, the project will have the following debt service coverage: (Detail in Annexure-XVI)

	Year-1	Year-2	Year-3	Year-4
Debt-service coverage Ratio (times)	0.92	0.93	0.94	0.95

III) Cash Flow Statement

The Cash flow statement, which is presented in Ann. XV shown that the project will have comfortable each surplus at the year enable the project to repay its debt obligation in time

### 7.3 BREAK-EVEN ANALYSIS

The break-even analysis of the project is shown in annexure-XIV. The project is expected to break even at 53% assumed capacity utilization with a sales value of Tk. 483 lacs.

### 7.4 INTERNAL RATE OF RETURN (IRR)

The project promises a financial rate of return is 5% detail calculations shown in Annexure-XVI.

## CHAPTER 8

### SOCIO – ECONOMIC ASPECTS

The socio-economic implications of the proposed project are immense for a least developed country like Bangladesh. A few major impacts are detailed below:

#### 8.1 EMPLOYMENT GENERATION

Direct employment generation 105 persons. Most of employees will be skilled and unskilled labor. From this point of view the project will help to improve distribution of income. Besides additional employment opportunities will be created for production supply and distribution of raw materials and products.

#### 8.2 SOCIAL BENEFITS

The net incremental benefit will accumulate through the growth of local supply chain and the growth of business transactions with the project in the center.

##### (a) Forward linkage

Development of such agro-based on industrial basis will help the entrepreneurs to invest money for poultry farm and these new avenues for investment will create more employment opportunity.

##### (b) Backward Linkage

This type of project will help to establish poultry feed industry as well as industry for manufacturing of such machinery.

#### 8.3 CONTRIBUTION TO GDP

The project will contribute an amount of Tk.195.21 lacs to the gross domestic products of the country, which is shown in Annexure-XVIII

##### Assumptions:

- (a) Fixed cost of the project Tk. 53.63 lac excluding IDCP & Initial Working Capital
- (b) Project will enjoy 7 years tax holiday.
- (c) Economic life of the project to be 10 years without any major replacement.

## CHAPTER 9

### ENVIRONMENTAL ASPECTS

#### 9.1 BACKGROUND

Now-a-days protection of environment (both natural and human environment) is one of the burning issues. In respond to growing environmental awareness in Bangladesh over the last few years, the concerned authorities have now begun to consider the need for sound management approaches for the protection of the environment without jeopardizing the badly needed industrial and economic progress. Emphasis has, therefore, been placed on good planning and management systems that are essential in addition to appropriate technical solution.

Bangladesh is one of the highest population densities in the world. This puts tremendous pressure on its limited resources management program, which can only be effective if they are environmentally sound. Natural and man made environment hazards coupled with limited resources make it imperative to incorporate the environmental dimension in the delicately balanced ecosystem that exists in Bangladesh.

Since the process of development in Bangladesh is still in its initial stage, it is advantageous to incorporate the environmental dimension in the development program. For instance, the incorporation of EIA as part of overall planning process would help avoid some of the adverse effects of development experienced by industrialized nations.

#### 9.2 INTRODUCTION

The United Nations Environment program (1978) EIA has a method "to identify, predict and to describe in appropriate terms the pros and cons (penalties and benefits) of proposed development. To be useful, the assessment needs to be communicated in terms understandable by the community and decision-makers and the pros and cons should be identified on the basis of criteria relevant to the countries affected"

The purpose of the environmental assessment can therefore be defined as to serve as a management tool not only to assess impacts but also to improve the quality of decision. Although XYZ POULTRY FARM LIMITED is an environment friendly project; it is

necessary to be conducted by EIA to assess the impacts on surrounding natural and man-made environment.

### **9.3 LEGAL FRAMEWORK**

There is a legal requirement for the completion of environmental assessments for a variety of different types of projects that are considered as having the potential for causing the significant environmental effects. The Environment Conservation Act 1995 and Environment Conservation Rules (ECR) 1997 constitute the legal basis for undertaking EIA for any development industries or development projects

### **9.4 SCREENING OF PROPOSED PROJECT**

As XYZ POULTRY FARM LIMITED is an agro based project, it is friendly to the environment. As per ECR 1997, a normative screening procedure is to be followed according to which industries and projects have been divided into four categories: Green, Orange A, Orange B and Red. This screening is based on several important criteria such as type of project, its size, location and pollution potential. According to the ECR 1997, this project is of Orange B category. So the full scale of EIA is not necessary for determining the environmental assessment of the project. Besides, the proposed location is an agricultural land at a remote area of Jessore.

### **9.5 EIA PROCEDURES**

A baseline study is one of the most important parts of EIA. This term refers to the collection of background information on the environmental and socio-economic setting for a proposed development project, and it is normally one of the first activities undertaken in an EIA. A study team surveyed the project area and collected the necessary information of the proposed project. The social survey reveals that if the project is implemented, it will bring an economic contribution to the society.

### **9.6 EVALUATION OF THE IMPACTS**

**Short-term Impact:** From the checklist it has been seen that most of the short-term impacts are minor category. When the construction and installation activities are completed, the impacts would be overcome.

**Long term impacts:** The proposed project is one kind of agricultural project. So the project will not bring any severe harm to the adjacent agricultural land. Most of the long term impacts are positive. If the project is implemented, it will accelerate the ultimate development of the country bringing contribution to GDP and creating employment opportunities. Although some long-term impacts are adverse to the natural environment, most of them have either minor impacts or might be treated.

### **9.7 PROPOSED MEASURES FOR ADDRESSING THE ENVIRONMENTAL ISSUES**

The following measures should be undertaken to mitigate the adverse impacts on the surrounding environment:

10-13-12  
**Structural measures:**

- (a) There should be adequate treatment facilities to mitigate the impacts of solid and liquid waste.
- (b) There should have adequate safety provision both for the health of labor and protection from fire hazard.

**Non-Structural measures:**

- (a) There should have an effective Environmental Management Plan for each of the selected protection and enhancement measure.
- (b) There should have an implementation schedule indicating the timing of work plan as to when the protection measures are to be installed and/or be operational.

## CHAPTER 10

### LENDING RISK ANALYSIS

#### 10.1 INTRODUCTION

Lending Risk Analysis (LRA) involves in assessing the likelihood of non-repayment of loans (mainly lending risk) from the borrowers as per loan agreement by analyzing some sort of risks associated with the borrower's business and security.

#### 10.2 TYPE OF RISK

LRA gives focus mainly two types of risk viz Business risk and Security risk. Business risk, the prime component of lending risk, can be viewed from two angles viz. Industry risk and Company risk.

Industry risk covers two types of risks viz. Supplies risk and Sales risk.

##### 1. Supplies Risk

The risk of failure to repay the loans due to disruption of supply of inputs is called supplies risk. The assessment of supplies risk mainly involves analyzing the price, quantity and quality of inputs. Determine likelihood and nature of any future changes of price, quantity and quality of inputs due to changes in Government regulations, policy, etc. which may affect the supplies adversely.

##### 2. Sales Risk

The risk of failure due to disruption to sales is called sales risk. Sales may be disrupted by changes to market size, increase in competition, loses a single large customer, etc.

Again Company risk also covers two types of risk viz. Company position risk and Management risk

## **1. Company Position Risk**

Actually, Company position risk is the outcomes of two types of external conditions – (a) expected external conditions which is measured by the performance risk and (b) unexpected external conditions which is measured by the resilience risk.

### **(a) Performance Risk**

Assessment of performance risk involves validating the company's performance expectations because performance assumptions may be incorrect or analysis may be faulty or non-existent. Four areas need to be assessed here by using form (page 6-7). These are

- Analyze recent performance history
- Analyze competitive position
- Assess company's strategy
- Analyze cash flow forecast

#### Example of strength

- Good reputation in the market
- Low price but high durable and better quality of products
- Low cost of production due to effectively use of labor and materials as a result the mark-up is high
- Sales is not highly concentrated to a single customer or group of customers.
- Better technology
- Efficient marketing & distribution channels and promotional activities
- Experience production, marketing and financial manager
- Computerized quality control system
- Own transport facilities and power supply system in case of emergency



- ❑ Diversified production line
- ❑ Composite production plant
- ❑ Good site of the plant which is well connected by roads, railway, etc. and availability of utilities
- ❑ Participating management and low turnover rate of skilled manpower

**(b) Resilience Risk**

The resilience of a company depends on its leverage, its liquidity and the strength of its connection .

- ❑ First analyze the financial measures of leverage
- ❑ Second assess how readily the shareholders will provide additional support if necessary and evaluate the company's resilience to bankruptcy.
- ❑ Third assess variability of costs and overall resilience to illiquidity
- ❑ Finally assess resilience to adverse political changes

**2. Management Risk**

Management risk is the outcome of two types of human qualities of management viz. (a) Incompetent of management which is measured by Management competence risk; and (b) Lack of integrity of management which is measured by Management integrity risk.

**(a) Management Competence Risk**

The competence of management depends on its

- ❑ Owners/ board member's abilities and experience in management of key areas of the company say finance, operation, administration, etc.
- ❑ Level of teamwork i.e. all managers work well together, important decisions are taken by through analysis, clear responsibility, etc.

**(b) Management Integrity Risk**

Management integrity is the combination of

- ✦ Honesty i.e. management does not mislead the information, disclose all relevant data etc. To ensure these review credit files, interview management, interview individuals familiar with management perform site visits and look for signs of audit problems.
- ✦ Dependability i.e. company meets the commitments & contractual obligations, keep in touch with the bank, avoids security double pledge, etc. To ensure these review intra-group accounts and look for the characteristics of managers that may cause problems in recovering the loans.

**Security Risk**

Security risk is the risk that the realized value of the security does not cover the loan exposure ( i.e principal + interest) which is created by sanctioning a loan facility. There are two main aspects of security risk.

**(a) Security Control Risk**

It is the risk that the bank fails to realize the security due to lack of bank's control over the security executed transferred by the borrowers. The risk of failing to control the security depends on the difficulty with which the bank can both obtain a favorable judgment and take possession. To avoid difficulties verify documentation, assess customer's lobbying power with the legal authorities and conduct site visit to verify security existence

**(b) Security Cover Risk**

Security cover risk is the risk that the realized value of the security is less than the exposure. It depends on speed of realization and liquidation value.



### 10.3 LRA FORM FAMILIARIZATION

There are 11 forms under LRA Manual which contain 16 pages.

#### A. Reporting part/non analytical part

Form 1 (Page 1) : Cover page. It deals with (a) information concerning the customer, (b) information concerning the risk analysis, and (c) information concerning the approval process.

Form 2 (Page 2) : Summary of various risks score and risk matrix for reporting ultimate risk level.

Form 11 (Page 16) : Data collection checklist.

#### B. Analytical/ Working part

Form 3 (Page 3) : Supplies risk analysis.

Form 4 (Page 4-5) : Sales risk analysis

Form 5 (Page 6-7) : Performance risk analysis

Form 6 (Page 8-9) : Resilience risk analysis

Form 7 (Page 10-11) : Management competence (ability & teamwork) risk analysis.

Form 8 (Page 12) : Management integrity risk analysis.

Form 9 (Page 13) : Security control risk analysis

Form 10 (Page 14-15) : Security cover risk analysis



## CHAPTER 11

### CONCLUSION

#### 11.1 CONCLUSION

**Project:** The project is completely agro- based. It is a growing industry in the country. New projects with innovative idea will come to this sub-sector and its market eventually will expand throughout the country. Poultry meat will always be in demand as long as people keep on consuming the products like those of the proposed project. It will also be a source of export earnings.

**Management Capability:** Management may be considered the strongest determinant in efficient and effective implementation of the project. With a technically competent Managing Director on the fore the project bears a greater chance of success. Other Directors also have a clear understanding of the market and also have good academic background and knowledge in this sector. This will give leverage to the project.

**Marketing Prospect:** A large demand- supply gap exists in the market. With only a few players on the supply side and a huge demand, the project can enter the market with minimum effort. The growing population and changing food habit will certainly push the expanding market forward. With low involvement in promotion and personal selling expenditure, the profitability curve will rise substantially if distribution cost and raw material costs can be managed properly.

**Technical Feasibility:** There are quite a few big companies in the industry using the same technology and there will be no dearth of expertise to operate the plant efficiently.

**Financial Sustainability:** The financial ratios obtained from calculations are within acceptable ranges. With a ready market, the cash flow seems to be on the positive side. Breakeven analysis is reasonable. A satisfactory earnings forecast reinforces the notion that the project will be viable.

**Socio Economic Impact:** The project is expected to make quite a significant socio-economic impact in and around the project area. Though it will be located in the

industrial belt, the area concerned is still to be exploited fully. It will have other indirect socio- economic benefit due to forward and backward linkages with the related sectors.

However the project will face the following constraints:

- a) Lack of an appropriate Poultry policy to address product standardization, taxation, infrastructure development, price, import rationalization and product safety measures.
- b) Absence of the Poultry Development Board in Bangladesh and lack of autonomy in functioning.
- c) Shortage of quality Poultry feed at a reasonable price.
- d) Lack of support from the government, national and international donor agencies to undertake a massive poultry development.
- e) Absence of adequate training facilities and support to adopt new technologies.

## **11.2 RECOMMENDATION**

- a) In our country the marketing of poultry sector still remains unattended. Attention should be made through organized form like some advanced countries e.g. France, Italy, USA etc. The institutional marketing channels both in demand and supply side may be developed through direct initiation of the government. In this case livestock department can take appropriate measures to make up the smooth functioning of marketing system.
- b) Demand and supply analysis is very difficult job due to unavailability of reliable data. The primary and secondary sources of such data are not sound much. Therefore a data bank may be developed including all sectors of agro based industries so that the researchers can easily get the required data for any research or study purpose.

- c) Poultry is very sensitive sector and highly contaminated by different diseases like bird flu and other contagious diseases. So bio security should be strictly maintained.
- d) Bangladesh is almost flood affected zone during the rainy season. The environment friendly technology may be developed like Philippine, Thailand and other Asian countries assuming the natural hazards and thus poultry sectors may be kept under the umbrella of protection.
- e) The socio economic effect of poultry industry is so high in one side this sector provides employment opportunity and generating income and on the other hand the deficiency of protein for the nation can be minimized through expanding the sub sector. In the case study the economic and financial performance indicators are not up to the mark. Different type of ratio and other indicator shows that the particular case has not been handled and operated smoothly due to in efficiency of inagement, continuous rising in operational costs like food cost, medicine and natural hazards the sector suffers a lot. Subsidy system and other protective measures by the government shall be under taken.
- f) In short poultry is the essential item in the food industry to cover up the deficiency of the protein for the nation. The study paper is not conclusive but it has some essential indication as a guide line for future researching.

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## APPENDIX

Annexure -I	: List of imported machinery
Annexure -II	: List of local machinery
Annexure -III	: Total Cost of the Project
Annexure -IV	: Details of civil Construction
Annexure -V	: Land Development
Annexure -VI	: List of Furniture-Fixture and Office Equipments
Annexure -VII	: Initial Working Capital
Annexure -VIII	: Assessment of working capital
Annexure -IX	: Forecast of Earning
Annexure -X	: Sales estimate
Annexure -XI	: Cost of goods sold
Annexure -XII	: General, administrative and selling expenses
Annexure -XIII	: Estimates of Financial Expenses
Annexure -XIV	: Break-even analysis
Annexure -XV	: Cash Flow Statement
Annexure -XVI	: Financial Rate of Return
Annexure -XVII	: Debt-Service Coverage Ratio
Annexure -XVIII	: Contribution to GDP
Annexure -XIX	: Lending risk analysis
Annexure -XX	: Implementation chart
Annexure -XXI	: Lay out Plan



# **ANNEXURES**

**LIST OF IMPORTABLE MACHINERY**

(Tk. In '000')

Sl. No.	Items	Quantity	Rate/Unit	Amount (Tk.)
01.	1. Close House Equipments- a) Air Master Fan (1.5HP) =10 Nos. b) Air Intake Curtain with Accessories = 230 Meter. c) Pad Cooling System (15 cm thick) =02 set d) Ventilation Control System:- Temperature Control, Humidity control, Water supply control, Feed supply control etc. e) Alarm system f) Silo	08 set.	20,00,000	1,60,000.00
	Total	-	-	1,60,000 00

**LIST OF LOCAL MACHINERY**

(Tk In '000')

Sl. No	Items	Quantity	Rate/Unit	Amount (Tk.)
01.	Cleaning & Washing Machinery (High Procure Jet Pump)	5 sets.	80,000/-	4,00,000
02.	200 KVA Diesel Generator Auto Starting System	1 sets.	16,25,000/-	16,25,000
03.	Submersible Pump for water lifting from source	1 sets.	1,00,000/-	1,00,000
04.	Other Motors, Construction, use curing, water letting, and supply etc.	5 nos.	6,000/-	6,000
05.	Grass cutter, Straw cutter, Spray M/c.	6 sets.	-	2,00,000
06.	Welding machine (04 nos.), Concrete mixture machine (1) Vibrator, Earth compactor, Road cutter(1) and angle etc.	9 sets.	-	3,00,000
03.	HT Panel, LT Panel, Charges, Over Switch etc.	6 sets.	-	2,00,000
	Total	-	-	26,55,000

**TOTAL COST OF THE PROJECT**

(Tk. in. '000')

Sl	Descriptions	Cost Incurred (L/C)	Cost to be Incurred			Grand Total
			L/C	F/C	Total	
1.	Project Land 1296 decimal	3888	-	-	-	3888
2.	Land Development	-	2964	-	2964	2964
3.	Building construction and other civil works (Annexure-III)	-	40822	-	40822	40822
4.	Imported Machinery	-		16000	16000	16000
5.	Duty, Tax, Insurance etc. 7.5%	-	1200		1200	1200
6.	Local Machinery & Equipment (Annex-V)	-	2225	-	2225	2225
7.	Internal Freight for machinery and equipments	-	100	-	100	100
8.	Erection & Installation		500		500	500
9.	Vehicle/Transport (Annex-VII)	-	3000	-	3000	3000
10.	Office furniture-fixture (Annex-VIII)	-	200	-	200	200
11.	Security Deposit	-	500	-	500	500
12.	Pre-operating Expenses	500	500	-	500	1000
13.	Contingencies	500	500	-	500	1000
14.	Price Inflation on F.C. 5%	-	-	800	800	800
	Total fixed cost	4888	52511	-	16800	74199
15.	Initial working capital	-	8075	-	8075	8075
	Total Cost of the Project	4888	60586	16800	3544	82274

Bank Loan 60%	:	49360
Owners Equity 40%	:	32914
Total	:	82274

**DETAILS OF CIVIL CONSTRUCTION**

(Tk. in '000')

Sl.	Name of items with specification	Quantity	Rate/ sft	Amount
1.	8 nos. 400'X40' semi pucca environmental control shed to be constructed with RCC column. Tie beam, Pucca floor, CI sheet, roofing, fixing and all other finishing works etc. completed.	128000 sft	250/	32000000
2.	100'X50' semi pucca godwon cum store	5000 sft	350/	17500000
3.	a. Hospital House: 50'X18' = 900 sft b. Staff House: 45'X18' = 3510 sft Decorated: 29'X20' = 580 sft	2830 sft	350/	13405000
4.	Office: 40'x36' =1440 sft Generator Room:30'X20' =600 sft Guard Room: 12'X10' =120 sft	2160 sft	350/	756000
5.	STW with submersible Pump, Motor with Pipe lines works to shed to shed	L.S	-	1000000
6.	Overhead Water Tank	L.S	-	500000
7.	Surface drainage works	L.S	-	500000
8.	Internal Road Works 1300x15 = 19,500 sft	19,500 sft	50/-	9,75,000
9.	Barbed Wire Fencing.	L.S	-	10,00,000
10.	Electrification Works	L.S	-	10,00,000
	Total	-	-	4,08,21,500

**LAND DEVELOPMENT**

(Tk. in 000)

<b>Sl.</b>	<b>Description</b>	<b>Total Amount</b>
01.	Area to be developed with cutting earth 3'-5" ht. from ground level, on average: Volume of work: $1296 \times 435.6 \times 3'-5" = 19,75,882$ cft	29,63,822

**LIST OF FURNITURE-FIXTURE AND OFFICE EQUIPMENTS**

(Tk. in '000')

Sl.	Items/Descriptions	Quantity	Rate	Amount
1.	Foamed Chair (Revolving)	3	7,000/-	21
2.	Foamed Chair (Standard)	3	6000/-	18
3.	Guest Chair (Standard)	10	1000/-	10
4.	Secretariat Tables	3	10000/-	30
5.	Half Secretariat Tables	2	10000/-	20
6.	Steel Almirah	3	10000/-	30
7.	Steel File Cabinet	3	4,000/-	12
8.	Ceiling Fans	5	2000/-	10
9.	Computer	1	39000	39
10.	Others office Furniture & equipments	L.S	L.S	10
Total				200

**LIST OF VEHICLES:**

Two no. of Trucks

: 3000000.00

**INITIAL WORKING CAPITAL**

Sl.	Item	Quantity	Unit Price	Total Amount
01.	Day old chick @ 30,000 nos./batch weekly, Total 5 batch (30,000X5)=1,50,000	1,50,000 pcs	16/-	24,00,000
02.	Feed cost @ 2.25 kg/bird. Total feed= 1,50,000X2.25	3,37,500 kg.	14/-	47,25,000
03.	Medicine Cost @ 5/- per Bird	-	-	7,50,000
04.	Wages & Salary, Electricity Bill & Other Expenses	L.S.	-	2,00,000
	Total	-	-	80,75,000



**ASSESSMENT OF WORKING CAPITAL**

(Tk. In '000')

Sl.	Particulars	Tied up Period	Yr-1	Yr-2	Yr-3	Yr-4
A.	Current Assets					
	(1) Feed/Raw Materials cost for broiler unit	180 days	19973	19973	19973	19973
	(2) Finished goods stock	3 days	740	740	740	740
	(3) Receivables	10 days	2466	2466	2466	2466
	(4) Store & spares	90 days	26	52	78	105
	(5) Other expenses	30 days	837	892	948	1006
	Total	-	24042	24123	24205	24290
B.	Current Liabilities					
	(6) Bank borrowing (70%)	-	16829	16886	16943	17003
	(7) Margin (30%)	-	7213	7237	7263	7287

**FORECAST OF EARNING**

(Tk In '000')

Sl	Particular	Yr-1	Yr-2	Yr-3	Yr-4
01.	Sales Revenue	90000	90000	90000	90000
02.	Cost of Goods Sold	74071	74673	75285	75906
03.	Gross Profit	15929	15327	14715	14096
04.	Admin. & Selling Expenses	3799	3976	4155	4337
05.	Operating Profit	12130	11351	10560	9757
06.	Financial Expenses	5513	4630	3746	2863
07.	Net Profit before Tax	6617	6721	6814	6894
08.	Income Tax	Tax Holiday			
09.	Investment (30%)	1985	2016	2044	2068
10.	Net profit after Investment	4630	4705	4770	4826
11.	Return on Investment (6%)	-	119	240	363
12.	Net profit after Return on Investment	4630	4828	5010	5189
13.	Retained Earnings	4630	4828	5010	5189

## Ratios (%)

Sl.	Particular	Yr-1	Yr-2	Yr-3	Yr-4
01.	Gross Profit to Sales	18	17	16	16
02.	Operating Profit to Sales	13	13	12	11
03.	Net Profit to Sales	5	5	5	6
04.	Debt Service Coverage Ratio	0.92	0.93	0.94	0.95

**SALES ESTIMATES**

(Tk. in '000')

Sl	Particular	Yr-1	Yr-2	Yr-3	Yr-4
01	Broiler	90000	90000	90000	90000

**Assumptions**

(Tk. in '000')

Sl	Particular	Quantity	Unit Price	Total Volume
01.	Broiler	1800 MT	50,000/-	90000

**COST OF GOODS SOLD**

(Tk. in '000')

Sl	Particular	Yr-1	Yr-2	Yr-3	Yr-4
01.	Feed/Raw Materials Cost	63180	63180	63180	63180
02.	Wages & Salary	3237	3398	3569	3749
03.	Water, Power & Fuel	2083	2083	2083	2083
04.	Rent, Tax, Insurance etc.	742	742	742	742
05.	Stores & Spares	106	212	318	424
06.	Repair & Maintenance	310	620	930	1240
07.	Depreciation	4163	4163	4163	4163
08.	Other Expenscs	250	275	300	325
	Total	74071	74673	75285	75906

**Assumptions****01. Feed/ Raw Materials Cost:**

Sl	Item	Quantity	Unit Price	Total Value
(a)	Day old Broiler Chicks	12,60,000 Nos	16/-	20160
(b)	Feed cost for Broiler	2700 MT	15/-	40500
(c)	Medicine cost @ Tk. 5/- /Bird	-	-	2520
	Total			63180

02. Factory & Wages Salary:

(Tk. In '000')

Sl.	Designation	No	Monthly Salary	Annual Salary
01.	Veterinary Doctor	1 No	10,000	120
02.	Production Manager	1 No	10,000	120
03.	Supervisor	2 No	8,000	192
04.	Skilled Labor	40 No	3,000	1440
05.	Unskilled Labor	40 No	2,000	960
06.	Cleaner	2 No	2,000	48
07.	Store Keeper	1 No	3,000	36
08.	Peon	2 No	3,000	72
	Total	-	-	2988

(Tk.in '000')

Sl.	Particulars	Yr-1	Yr-2	Yr-3	Yr-4
01.	Salary & Wages	2988	2988	3137	3294
02.	Increment (@ 5%)	-	149	157	165
03.	Bonus (One Month's Pay)	249	261	275	290
	Total	3237	3398	3569	3749

03. Water, Power & Fuel:

01.	Sources of Water	Shallow Tube Well
02.	Sources of Power	REB
03.	Connected Load	100 KW
04.	Maximum Demand	20 KW.
05.	Operation Hour	12
06.	Cost per KW	4.80
07.	Vat	15%
08.	Requirement of Power (20X12X365X4.80)	4,20,480.00
09.	Vat (15%)	63,072.00
	<b>Total</b>	<b>Tk. 4,83,552.00</b>

Fuel Lubricants:

(Tk in '000')

Sl.	Item	Unit	Quantity	Unit Rate	Total
01.	Diesel	Liter	30000	50	1500
02.	Lubricant	(L.S)	-	-	100
	<b>Total</b>	-	-	-	<b>1600</b>

Total Cost: 20, 83,552.00

04 Stores & Spares:

Particulars	Yr-1	Yr-2	Yr-3	Yr-4
0.5%, 1%, 1.5%, & 2% on Machinery Cost (21225)	106	212	318	424

05. Repair & Maintenance

<b>Particulars</b>	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
0.5%, 1%, 1.5%, & 2% on Machinery Cost (21225)	106	212	318	424
0.5%, 1%, 1.5%, & 2% on Building Cost (40822)	204	408	612	816
<b>Total</b>	<b>310</b>	<b>620</b>	<b>930</b>	<b>1240</b>

06. Rent, Tax, Insurance

<b>Particulars</b>	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
1%, of Fixed Cost of Project (74199)	742	742	742	742

Depreciation

<b>Items</b>	<b>Amount</b>	<b>Rate</b>	<b>Depreciation Amount</b>
Building Cost	40822	5%	2041
Machinery Cost	21225	10%	2122
<b>Total</b>	-	-	<b>4163</b>

**GENERAL, ADMINISTRATIVE & SELLING EXPENSES**

(Tk. in '000')

Sl.	Particulars	Yr-1	Yr-2	Yr-3	Yr-4
01.	Admin Salary	1034	1086	1140	1197
02.	Postage & Telephone, Fax & E-mail	150	200	250	300
03.	Printing & Stationary	100	110	120	130
04.	Traveling & Conveyance	150	160	170	180
05.	Depreciation & Write off	240	240	240	240
06.	Sales Commission	1800	1800	1800	1800
07.	Audit Fee	25	25	25	25
08.	Advertisement	50	55	60	65
09.	Misc. Expenses	250	300	350	400
	<b>Total Cost</b>	<b>3799</b>	<b>3976</b>	<b>4155</b>	<b>4337</b>

**Assumptions:**

Sl.	Category	No. of Post	Monthly Salary	Yearly Salary
01.	General Manager	1	15,000/-	180
02.	Manager (Admin.)	1	10,000/-	120
03.	Purchase Officer	1	8,000/-	96
04.	Commercial Officer	1	8,000/-	96
05.	Computer Operator	1	4,000/-	48
06.	Driver	3	4000/-	144
07.	Security Officer	1	5,000/-	60
08.	Security Guard	6	2,500/-	180
09.	Peon/ Messenger	1	2,500/-	30
	<b>Total</b>	<b>16</b>	<b>-</b>	<b>954</b>



(Tk. in '000')

Sl.	Particulars	Yr-1	Yr-2	Yr-3	Yr-4
01.	Salaries	954	954	1002	1052
02.	Increment @ 5%	-	48	50	53
	Total	954	1002	1052	1105
03.	Bonus (One month's pay)	80	84	88	92
	Total Salary	1034	1086	1140	1197

02. Depreciation & Write off:

Sl.	Items	Amount	Rate	Depreciated Amount
01.	Furniture & Fixture	200	20%	40
02.	Pre-Operating expenses	1000	20%	200
	Total	-	-	240

03. Sales Commission @ 2%

**ESTIMATES OF FINANCIAL EXPENSES**

(Tk. in '000')

Sl.	Item	Yr-1	Yr-2	Yr-3	Yr-4
01.	Interest on Term Loan	3998	3110	2221	1333
02.	Intt. on W/C	1515	1520	1525	1530
	<b>Total</b>	<b>5513</b>	<b>4630</b>	<b>3746</b>	<b>2863</b>
03.	Term Loan				
04.	Principal	49360	39488	29616	19744
05.	Installment	9872	9872	9872	9872
06.	Balance	39488	29616	19744	9872
07.	Interest @ 9% per annum on average balance	3998	3110	2221	1333
08.	Working Capital Loan	16829	16886	16943	17003
09.	Intt. On W/C Loan @ 9%	1515	1520	1525	1530

**BREAK-EVEN ANALYSIS**

(Tk. in '000')

1. Sales Revenue (4 th year) : 90000  
 2. Total Cost Operation, Admin & Financial : 81241

<b>Analysis of Total Cost</b>	<b>Total Cost</b>	<b>Fixed Cost</b>	<b>Variable Cost</b>
Raw materials	63180	-	63180
Wages & Salaries	3749	750	2999
Stores & Spares	424	85	339
Repair & maintenance	1240	248	992
Depreciation and Write off	4403	4403	-
Water, Power & Fuel	2083	417	1666
Rent, Tax & Insurance	742	742	-
Other Expenses	325	160	165
Salaries Admin.	1197	1197	-
Postage, Telephone & Telegram	300	150	150
Printing & Stationary	130	65	65
Traveling & Conveyance	180	90	90
Audit Fee	25	10	15
Misc. Overhead	400	250	150
Financial Exp.	2863	1573	1290
<b>Total</b>	<b>81241</b>	<b>10140</b>	<b>71101</b>

- i. P/V Ratio = 0.21  
 ii. SEP (Sales) = 483 lac. i.e 53% of capacity utilization.

**CASH FLOW STATEMENT**

(Tk. in '000')

**A. Source of Fund:**

Sl.	Description	Cost Year	Yr-1	Yr-2	Yr-3	Yr-4
01.	Paid up Capital	32914	-	-	-	-
02.	Operating Profit	-	12130	11351	10560	9757
03.	Depreciation & Write off	-	4403	4403	4403	4403
04.	Bank's Term Loan	49360	-	-	-	-
05.	Interest During Construction Period	2221	-	-	-	-
06.	Return on Investment	-	-	119	240	363
	<b>Total</b>	<b>84495</b>	<b>16533</b>	<b>15873</b>	<b>15203</b>	<b>14523</b>

**B. Utilization of Fund:**

Sl.	Description	Cost Year	Yr-1	Yr-2	Yr-3	Yr-4
01.	Capital Expenditure	82274	-	-	-	-
02.	Repayment of Term Loan	-	9872	9872	9872	9872
03.	Repayment of IDCP	-	444	444	444	444
04.	Payment of Intt.	-	5513	4630	3746	2863
05.	Investment of Bond	-	1985	2016	2044	2068
	<b>Total</b>	<b>82274</b>	<b>17814</b>	<b>16962</b>	<b>16106</b>	<b>15243</b>
06.	Cash surplus/deficit	2221	1281	1089	903	720
07.	Opening cash balance	-	2221	3502	4591	5494
08.	Closing cash balance	2221	3502	4591	5494	6214

**FINANCIAL RATE OF RETURN**

(Tk. in '000')

Year	Cost	Benefit	Net Benefit	NPV discounted at (25%)	NPV discounted at (30%)
0	82274	-	(82274)	(82274)	(82274)
1	7213	16533	9320	7456	7167
2	24	15754	15730	10067	9312
3	26	14963	14937	8588	6796
4-10	24	14160	14136	22844	18023
11 Salvage Value	-	7287	7287	627	408
				(32692)	(40568)

$$\begin{aligned} \text{Financial Rate of Return} &= 25 - 5 \times (32692 / 7876) \\ &= 5\% \text{ (approximately)} \end{aligned}$$

**Assumptions:**

1. The economic life of the project has been estimated to be 10 years within any major replacement
2. Benefit of the project has been estimated as a appended :

Operating Year	Operating Profit	Depreciation & write off	Total
1	12130	4403	16533
2	11351	4403	15754
3	10560	4403	14963
4	9757	4403	14160

3. Recovery of capital i.e salvage value of the project at the 11th year

Items	Value	Rate	Considerable Value
(i) Land	3888	100%	3888
(ii) Building	40822	10%	4082
(iii) Machinery	22575	5%	1129
(iv) Inventory	7287	100%	7287

4. Inventories

Year	Amount
0	0
1	7213
2	24
3	26
4	24
	7287

**DEBT-SERVICE COVERAGE RATIO**

(Tk. in '000')

Income	Yr-1	Yr-2	Yr-3	Yr-4
Net Profit after return on Investment	4613	4828	5010	5189
Depreciation and Write off	4403	4403	4403	4403
Financial Expenses	5513	4630	3746	2863
Total	14529	13861	13159	12455
Debt Obligation:				
Financial Expenses	5513	4630	3746	2863
Installment of term loan	9872	9872	9872	9872
Installment of IDCP	444	444	444	444
Total	15829	14946	14062	13179
Debt-Service Coverage Ratio (Times)	0.92	0.93	0.94	0.95

**CONTRIBUTION TO GDP**

(Tk. in '000')

A.	Net sales (4th Year)	90000
B.	<u>Inter-farm Transaction:</u>	
	Raw Materials	63180
	Repair & Maintenance	1240
	Rent, Tax & Insurance	742
	Water, Power & fuel	2083
	Stores & Spares	424
	Postage, Telephone & Telegram	300
	Printing & Stationary	130
	Traveling & Conveyance	180
	Selling Expenses	1800
	Misc. Expenses (Administrative)	400
		<hr/>
		70479
C.	Contribution to GDP (A-B)	<hr/>
		19521



**LENDING RISK ANALYSIS**

## Lending Risk Analysis

Company name: XYZ POULTRY FARM		Industry Name.	
Address : Jhikorgacha, Jessore		Code :	
Group name(if company is part of group)		Originating office/branch BKB, LPO, Dhaka	
Current exposure to this customer		Current exposure to group ..	
Why was this analysis conducted?	Application for New facility <input checked="" type="checkbox"/>	Increase to existing facility <input type="checkbox"/>	Renewal of existing facility <input type="checkbox"/>
			Delinquent customer <input type="checkbox"/>
Risk category	Good <input type="checkbox"/> <input checked="" type="checkbox"/>	Acceptable <input type="checkbox"/>	Marginable <input type="checkbox"/>
Business	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>	Poor <input type="checkbox"/>
Security	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type of facility sought		Project Loan	
Purpose		Amount sought 559.00 lacs	
Loan category		Level of approval required	
Voluntarily given By bank	<input type="checkbox"/>		Board of Directors
Part of government Scheme	<input type="checkbox"/> ..... (name of scheme)		Date customer made request 10/11/2007
Directed by ..... Individual	<input type="checkbox"/> ... Mr. ABC (name of person directing this loan)		
Originating officer Manager BKB LPO, Dhaka	Recommendation Accept Decline <input checked="" type="checkbox"/> <input type="checkbox"/>	Date analysis 5/12/2007	
Recommending officer(s)	<input type="checkbox"/> <input checked="" type="checkbox"/>	Date recommendation made	
(1) 5(five) Members' Committee	<input type="checkbox"/> <input type="checkbox"/>		
(2) Concerned Branch & R. M. office	<input type="checkbox"/> <input type="checkbox"/>		
(3) Project Evaluation Committee (PEC)	<input type="checkbox"/> <input type="checkbox"/>		
Approving Officer (Board of Directors)	Decision Accept Decline <input type="checkbox"/> <input type="checkbox"/>	Date decision Made	
Officer authorizing disbursement	Date disbursement Authorized	Date loan Disbursed	

## Lending Risk

When you have completed Pages 3 to 15 of loan analysis from, copy your answers to the questions into the grid below. Then write the score corresponding to each answer in the rightmost column, and total all the scores.

### Lending Risk

Business

**Supplies risk**  
What is the risk of failure due to disruption in the supply of inputs?

Industry risk

**Sales risk**  
What is the risk of failure due to disruption to sales?

Company

**Performance risk**  
What is the risk that the Company's position is so weak that scarce it cannot perform well enough to repay the loan, given expected external conditions?

Company Position risk

**Resilience risk**  
What is the risk of failure due to lack of resilience to unexpected external condition?

Management risk

**Management competence risk**  
What is the risk of failure due to lack of management integrity

**Management Integrity risk**  
What is the risk of failure due to lack of Management integrity

Security

**Security control risk**  
What is the risk that the bank fails to realize the security?

**Security cover risk**  
What is the risk that the realize security value is less that the exposure?

Risk Level	Score
Low Average High Expensive	
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score 1.5 3 4.5 12	1.5
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score 1.5 3 4.5 12	1.5
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score 2 4 6 16	4.0
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score 2 4 6 16	2.0
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score 3 6 9 24	3.0
<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score 3 6 9 24	3.0
<b>Total Business risk Score</b>	<b>15.0</b>
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score -10 -5 +5 +10	-5
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Score -10 -5 +5 +10	-5
<b>Total Security risk score</b>	<b>-10</b>

	Good Risk	Acceptable Risk	Marginal Risk	Poor Risk
Business Risk	13 - 19	20 - 26	27 - 34	over 34
	<input type="checkbox"/> 1 <input checked="" type="checkbox"/>	<input type="checkbox"/> 2 <input type="checkbox"/>	<input type="checkbox"/> 3 <input type="checkbox"/>	<input type="checkbox"/> 4 <input type="checkbox"/>
Security Risk	(-20)-(-15)	(-10)-0	0 - 10	over 10
	<input type="checkbox"/> A <input type="checkbox"/>	<input type="checkbox"/> B <input type="checkbox"/>	<input checked="" type="checkbox"/> C <input type="checkbox"/>	<input type="checkbox"/> D <input type="checkbox"/>

### Select Overall Risk from Matrix

	1	2	3	4
A		VA	A	
B		B	B	
C		C		
D		D		

## Supplies risk

Cost item	% of total costs	What is the risk of disruption?			Comments
		Better than average	Average	Worse than average	
Labour Tk. 32.37 lacs	4.37%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wages of staff & Officers
Raw materials: Tk 631.80 lacs	85.30%	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Raw material cost
Equipment : 21.89 lacs Power	2.95%	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Stores and spares, Water, power & fuel etc.
Premises : 52.15 lacs	7.04%	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	Depreciation, Rent, Tax, Insurance, Repair and maintenance
Other	0.34%	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

Number of days productions lost in past 12 month due to strikes?

NA

Independent power supply

Dependent on public utilities

Power supply



Explain any significant risks of disruption to production.

NA

What is the risk of failure due to disruption the Supply of inputs

Low

✓

Average

High

Excessive

(Tick one box)

## Sales risk

### Industry growth

Give industry size figures for the latest 3 years that are available

Year			
Estimated total industry turnover	NA		

Strong Growth     Weak growth     No change     Small decline     Large decline

Over the next few years, what is the most likely trend in industry turnover

Support your answer. The sales position remains unchanged.

### Competitive pressure : Obtain performance data for two major competitors

Major competitor 1 ..... Market share..... %  
(name)

Performance

Year			
Turnover	NA		
Profit			

Less Fast     about the same     faster     than our customer

What prevents customers from switching to this competitor?

Major competitor 2

..... "Same as stated above"..... Market share ..... %  
(name)

Performance

Year		NA	
Turnover			
Profit			

Less Fast     about the same     faster     than our customer.

What prevents customers from switching to this competitor?

## Sales risk (continued)

## Barriers to entry

How easy is it for new competitors to enter this industry?

Difficult  
Average  
Easy  

What barriers prevent new competitors from entering this industry?

There is no major barriers to entry considered because of sufficient demand- supply gap exists in the country.

## Regulatory changes

What is the risk that changes in regulations will damage sales?

Low  
Average  
High  

Explain your answer.

This is an agro-based project. This project will be helpful to established new poultry farm for getting available day old chicks as well as help the ultimate users of eggs and meat with regular steady supply. So it is expected that the Govt. will not introduce any regulation which may damage the sales of such projects

## Customer concentration : List 5 largest customers

Customer name	% of total sales
1) Jessore District	60%
2) Khulna District	20%
3) Satkhira District	10%
4) Others area in the country	10%

What is the risk that a single customer representing a significant Proportion of sales, switches to a competitor?

Low  
Average  
High  

Explain your answer.

Question of single customer does not arise.

What is the risk of failure due to disruption to sales

Low  
Average  
High  
Excessive  

(Tick one box)

**Recent performance history**

Yes No The financial spread sheet is

Are financial spreadsheets attached?   not prepared.

Audited Unaided Bank Management other (explain)  
accounts accounts estimates estimates

How did you obtain financial data?     .....

Give most recent 3 years performance data (projected) (Tk. In'000)

Year	Year-1	Year-2	Year-3
Sales			
Capital		NA	
Profits (Net)			

Explain significance of any important trends you notice in the performance data :

**Competitive position**

What is the company's in industry (in terms of turnover) ? Competitive position is not prepared.

Compare figures with other companies in the industry (and/or with industry averages), and explain the significance of any important differences you notice.

**As stated above**

What are the strengths and weaknesses of this company, in comparison to its competitors ?

**Strengths**

**weaknesses**

Financially strong, Strong management capability,  
Strong marketing network.

No

**Performance risk (continued)**

**Strategy**

How does the company differentiate itself from its competitors

Quality		Price			
Better than Competitors	indistinguishable from competitors	worse than competitors	cheaper than competitors	about the same as competitors than	more expensive competitors
√	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What strategy will this company adopt to exploit its strengths and overcome its weaknesses?  
 There is a potato cold storage owner's association. Through negotiation they can avoid the weaknesses as well as strengthen the strength as discussed.

High confidence	average	low confidence
		in strategy
How confident are you that this strategy will work?		
	√	<input type="checkbox"/>
		in strategy

Explain your answer

For the common interest of the owners of all cold storage, they should apply the strategy.

**Cash flow forecasts**

Do the cash flow forecasts indicate that the company will generate sufficient cash to repay its loans ?	significantly more than enough cash	enough cash	not enough cash
	√	<input type="checkbox"/>	<input type="checkbox"/>
How confident are you that the company will perform as forecast in the cash flows?			
	High Confidence	average	low confidence
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Explain your answer.

Difference between the cumulative sources of fund as well as utilization of fund of this project is shown as positive.

What is the risk that the company's position is so weak that it cannot perform well enough to repay the loan, given expected external conditions?	Low	Average	High	Excessive
	√	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			(tick one box)	



## Resilience risk

Leverage Company leverage	Values reported by company Tk.	Bank's Assessment Tk.	Exposure to other banks	
			Bank	Exposure
Assets	659.35 lakh		In the name of the company, no other liabilities have been shown as per CIB report issued in March 2001.	
Liabilities	493.60 lakh			
Equity (=assets-liabilities)	165.75 lakh			
Leverage (=liabilities/equity)	2.98		Total exposure to other banks	Nil

Is the current balance on any account above sanctioned limits?  No  Yes Are any interest or principal payments more than 30 days late?  No  Yes

If you answered yes to either question, give details

Does the credit bureau report indicate any problems?  No  Yes  
If you answered yes to the previous question, explain.

How readily do you expect shareholders to support this company in the future, if the need arises?

very readily  will support reluctantly  may not support further

Explain your answer

Shareholders are financially solvent and they have other concerns

How resilient is the company to bankruptcy?  highly  average  not at all resilient resilient

### Liquidity

**Liquidity (Continued)**

What proportion of costs is fixed?

How easily will this company be able to reduce costs if sales fail?

very easily	average	with difficulty
√ <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Explain your answer. It is expected that the products will be sold and its demand is high

..... How resilient is the company to liquidity (which may cause repayment failure)

Highly Resilient	average	not at all resilient
√ <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Connections**

Do the owners or managers have any connections/affiliations which may benefit or damage the company?

The owners of the company have strong connections with established business community. The owners of the company is the member of Dhaka Chamber of Commerce of which may help to benefit the company. Again the managing Director of the company is also the managing Director of an export oriented project & he is prominent with established business man of the country

How resilient is the company to liquidity (which may cause repayment failure)?

highly resilient	average resilient	not at all
√ <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**RESILIENCE RISK**

Copy your assessments of resilience to bankruptcy, liquidity and the average effects of political changes, from above.

How resilient is the company to bankruptcy?

How resilient is the company to liquidity?

How resilient is the company to the adverse effects of political changes?

Highly resilient (low risk)	average	not at all resilient (High risk)
√ <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Now, use your assessment of resilience to bankruptcy, liquidity and the adverse effects of political changes, to answer the following question:

Low	√ <input type="checkbox"/>	Average	<input type="checkbox"/>	High	<input type="checkbox"/>	Excessive	<input type="checkbox"/>
-----	----------------------------	---------	--------------------------	------	--------------------------	-----------	--------------------------

(tick one box)

What is the risk of failure due to lack of resilience to unexpected external conditions?

**Management ability**

List all owners holding more than 20% of equity name	Shareholding (%)
1) Mr. ABC	60%
2) Mr. HIJ	40%

List board members	
1) Mr. ABC	MD Director
2) Mr. HIJ	

What is your assessment of the ability of these people to ensure that this company succeeds?  
Give reasons for your assessment.

Better than average       average       Worse than average

Who is the primary decision maker on financial issues? Mr. ABC

(name)

is this person's bio-data attached? Yes  No

Better than average       average       Worse than average

What is your assessment of this person's ability to manage the finances of this company?  
Give reasons for your assessment.

Who has primary responsibility for operations issues?

Mr. ABC

(name)

Is this person's bio-data attached? Yes  No

Better than average       average       Worse than average

What is your assessment of this person's ability to manage the finances of this company?  
Give reasons for your assessment.

**comment on strengths and weaknesses of any other key personnel**

Name	Responsibility	Strengths	Weaknesses
		NA	

What is the risk that the business fails due to lack of management ability?

Low Average High Excessive  
                 

(tick one box)

Comment on any deficiencies you observe in the organization chart : Not yet found  
 No deficiency has been observed in the organization chart

Have any key managers/personnel changed in the last 12 months? Yes No  
   
 Why? NA

How well does the management team work with the owner(s)/board? Very well Average Regular conflicts

How thorough does the management team analyses issues before taking important decisions? Very thorough analysis supporting all important decisions average level of analysis Poor analysis. "Seat of the Pants" decision making

Are the management team prepared to take difficult decisions? Take difficult decisions readily take difficult decisions reluctantly avoid or delay difficult decisions  
 (e.g. cost cutting; staff reductions)

What is the risk that the business fails due to lack of managerial teamwork? Low Average High excessive  
    (tick one box)

Management competence risk

Copy your assessments of managerial ability and level of teamwork from above.

What is the risk that the business fails due to lack of management ability?

Low	Average	High	Excessive
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low	Average	High	Excessive
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What is the risk that the business fails due to lack of managerial teamwork?

Now, use your assessment of managerial ability and level of teamwork to answer the following question:

What is the risk that the business fails due to lack of management competence?

Low	Average	High	Excessive
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Tick one box)



**Security Control risk**

Describe the security : Land, Buildings, Machinery and other assets

**Ease of obtaining a favourable judgement**

Security documents last checked by the manager BKB, Lauhajang branch, Munshigonj on 26.08.2001

What is the level of perfection of the security documents ? (date) strong perfection average weak perfection (name)  
 Yes  No

Is the account subject of an inspection exception Yes No

Support your answer : As per PCR an amount of Tk. 840.75 lakh has already been invested for existing project & Tk. 318.50 lakh for BMR project, as per inspection report. The proposed loan will be disbursed subject to inspection.

What is the risk that the bank fails to obtain a favorable judgement? Confident favorable judgement of Some risk of unfavorable judgement Significant risk of unfavorable judgement

Support your answer : As per BKB rules all the documentation is to be done properly. So we are confident of favourable judgement.

**Ease of taking possession of security**

Last site visit made on Yes No By Bank nominated Person (date) Confident of king Some risk of failure to take possession Significant risk of failure to take possession (name)  
  26.08.2001 Possession

Is site visit report attached? Attached

What is the risk that the bank fails to take possession of the security ?

Support your answer : Normally, all the securities remain under the possession of the company. In case of default of loan repayment the possession of the security may be taken by the Bank after completion of legal formalities. It is very difficult to take the possession of inventory.

What is the risk that the bank fails to realise the security? Low (no realisation complications) Average (potential complications) High (realisation complex) Excessive (realisation impaired)

What is the risk that the bank fails to realise the security?

(tick one box)

**Security Cover risk****Speed of liquidation****How long will it take to liquidate the security?**

After filing the case, liquidation of properties like land, building & others will take 3 – 4 years time and in case of inventory it will take normally 1(one) year time.

*(The time(s) given here should be used in calculating security on next page.)*

**What potential problems may delay liquidation?**

1. Legal complication and existing lengthy procedure to realise the security money.

What is the risk that the liquidation process takes longer than the estimate given? Low    Average    High

Liquidation value	security value :	Net value after 5 years
Assessed liquidation value.	Land 38.88 lac	38.88 lac
	Building & others construction 408.22 lac	306.16 lacs
Who assessed the liquidation value?	Branch Manager Machinery 430.47 lac	215.23 lacs
	(name of person) Total 877.57 lac	560.27 lacs
	Bangladesh Krishi Bank.	
	(company)	

**How do you expect this value to change by the time that the security is released?**

The value of land will not change after 5 years, the value of building & other civil works will depreciated @ 5% in each year and the value of machinery will depreciated @ 10% in each year.

**What do you estimate will be the value of the security at liquidation?**

Tk. 560.27 Lakh.

**What costs will the bank have to bear in liquidating this security?**

(e.g. Legal fees, auction commission etc.)	1) Court fee	: 2.50 lakh
	2) Legal fee & others	: 2.50 lakh
( Approximately estimated )	Total	: 5.00 lakh

**How much do you expect the bank to realise from this security?**

(= liquidation value less cost of liquidation)

Tk. 555.27 lakh

*(this number should be used in calculating security cover on the next page.)*

What is the risk that the value actually realised is less than your estimate? Low    Average    High

## Security cover risk (continued)

Expected security cover strength

	Primary Security	Collateral	Other Security	Total
a) Type of security	Land Building & Machinery	-	-	-
b) Expected realizable value at liquidation (MCL value)	Tk.555.27 lakh	-	-	-
c) Expected time taken to liquidate this security (years)	3 years	-	-	-
d) Discount rate % (1 year fixed deposit rate)	6.25%	-	-	-
e) Discount factor % =100 x $\frac{1}{(1+d/100)^c}$				
(Discount factor are listed in a separate table)	83%	-	-	-
f) Present value of security (=b x e/100)	Tk. 460.87 lakh	-	-	Tk. 460.87m lakh
g) current exposure (Principal + interest)	-	-	-	Tk 543.6 lakh
h) Security cover % (= 100 x f/g)	-	-	-	80 %

Note:

How strong is security cover,  
Based on expected speed of liquidation  
And liquidation value?

Strong (above 100%)	Average (in range 75-100%)	Weak (below 75%)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Now copy from the previous page your assessments of the risk that the actual speed of  
Liquidation is longer than expected, and actual liquidation value is lower than expected.

What is the risk that the liquidation  
Process takes longer than the estimate given?

Low	Average	High
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

What is the risk that the value actually  
Realized is less than your estimate?

Low	Average	High
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Use the three assessments above to answer the following question.

What is the risk that the realized security value  
Is less than the exposure?

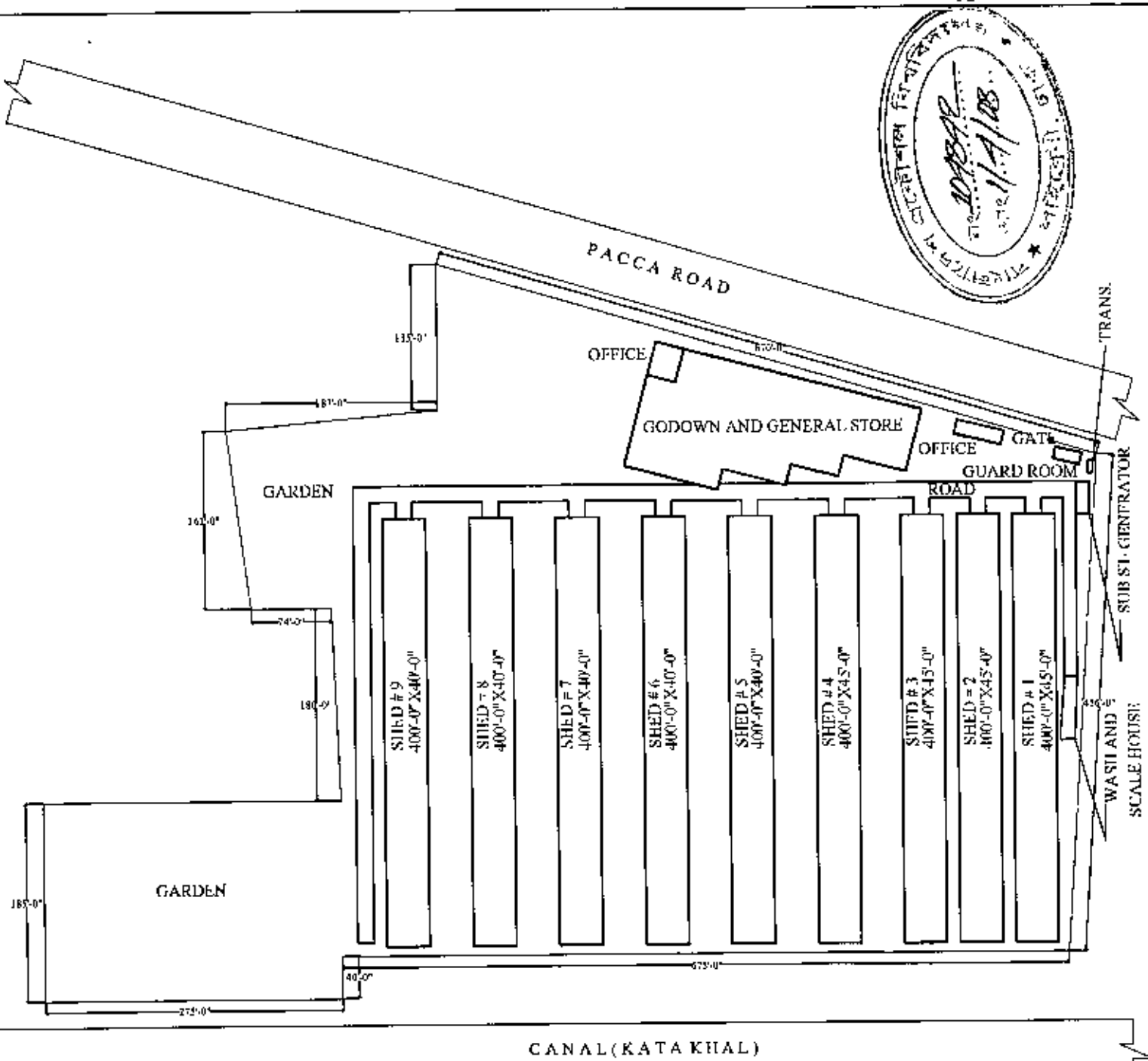
Low	Average	High	Excessive
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(tick one box)



**IMPLEMENTATION CHART**

Sl	Activities	Month						
		1	2	3	4	5	6	7
1	Project approved and goes for implementation	■						
2	Loan sanction and documentation		■					
3	Land preparation and site office		■					
4	L/C opening for imported machinery			■				
5	Ordering for local machinery & Day old chicks			■				
6	Construction work		■					
7	Delivery of imported machinery at site				■			
8	Delivery local machinery & Day old chicks at site				■			
9	Erection and installation						■	
10	Commercial production							■



PROJECT:  
LAYOUT PLAN FOR  
M/S XYZ POULTRY FARM  
MOUZA NO 34.  
AT JHIKORGACHA

LAND AREA : 1296 DCML.

OWNER:  
  
MR. ABC  
AKIZ CHAMBER  
73, DILKUSHA C/A  
DHAKA

ENGINEER.  
  
MR. TTT  
B.S.C. ENGINEER (CIVIL)

SHEET #1

DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_