



Pre-feasibility Study

PUBLISHING HOUSE

October 2022

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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1. DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice to be obtained by the user. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

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2. EXECUTIVE SUMMARY

Publishing is the process of printing and making information available to the public in different forms, such as books, magazines, newspapers, pamphlets, brochures, letterheads etc. There are generally two types of publishing houses. The first one is where only printing and publishing of the content is done while the copyrights and the responsibilities of marketing and promoting remains with the client. The second type of publishing house is the one where along with publishing and printing, the copyright of the content is also acquired by the publishing house. Hence, in this case, the publishing house is also responsible for marketing and promotion of the published materials. In this prefeasibility study, printing and publishing works without copyrights and marketing is being proposed which is a more common business in Pakistan.

Publishing sector deals with very diverse product line; with text books of schools and colleges, general books, religious books, catalogues, magazines, writing copies, notebooks, writing pads, newspapers, letterheads, etc. being the main product categories. It can be said that the whole education sector of a country is driven by the publishing sector. The sector thus plays a very important role in training and development of human resource of a country.

The proposed publishing house is to be ideally located in big cities of Pakistan such as Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Hyderabad, Gujranwala, Multan, or any other major city. These cities are preferred due to presence of existing printing clusters which ensures easy availability of raw materials and skilled labor.

The proposed unit has a maximum annual capacity of producing 1,359,000 Units which include 288,000 Books-Multi-colored (100 Pages), 252,000 Books-Single colored (100 Pages), 120,000 Notebooks-Multi colored (80 Pages), 315,000 Notebooks-Single colored (80 Pages), 96,000 sets of Pamphlets (sets of 100 Pages), 96,000 Brochures (sets 100 Pages), and 192,000 Letterheads (100 Pages). The sets of 100 pages and 80 pages for all the products will be double sided hence, they'll have 200 and 160 printed sides respectively. This project is assumed to be financed through 100% equity.

The project is assumed to attain 60% capacity utilization in the first year of operations. The production capacity utilization is assumed to increase at a rate of 10% per annum, achieving a maximum capacity utilization of 90% in the 5th year of operations. During the first year of operations, 815,400 sets of different types of products are produced, including 172,800 Books-Multi-colored (100 Pages), 151,200 Books-Single colored (100 Pages), 72,000 Notebooks-Multi colored (80 Pages), 189,000 Notebooks-Single colored (80 Pages), 57,600 sets of Pamphlets (sets of 100 Pages), 57,600 Brochures (sets 100 Pages), and 115,200 Letterheads (sets of 100 Pages).

The proposed project will be set up in a rented building having an area of 3,375 sq. ft. (15 Marla). The proposed project requires a total investment of PKR 82.71 million. This includes capital investment of PKR 76.16 million and working capital of PKR 6.55

million. This project is financed through 100% equity. The Net Present Value (NPV) of project comes out to be PKR 76.51 million with an Internal Rate of Return (IRR) of 43% and a Payback period of 3 years. The project is expected to generate gross annual revenue of PKR 283.66 million during 1st year, Gross Profit (GP) ratio ranging from 14% to 17% and Net Profit (NP) ratio ranging from 3% to 13% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 40% (548,033 units) with breakeven revenue of PKR 190.65 million in a year.

The proposed project may also be established using leveraged financing. At 50% financing, at a cost of KIBOR+3%, the proposed unit provides Net Present Value (NPV) of PKR 92.97 million, Internal Rate of Return (IRR) of 41% and Payback period of 3.12 years. Further, this project is expected to generate Net Profit (NP) ratio ranging from 3% to 13% during the projection period of ten years. The proposed project will achieve its estimated breakeven point at capacity of 42% (574,581 units) with breakeven revenue of PKR 199.89 million.

The proposed project will provide employment opportunities to 57 people. The legal form of this project is proposed as "Partnership Concern" or "Sole Proprietorship".

3. INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectorial research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need-based capacity building programs of different types in addition to business guidance through help desk services.

National Business Development Program for SMEs (NBDP) is a project of SMEDA, funded through Public Sector Development Program of Government of Pakistan.

The NBDP envisages provision of handholding support / business development services to SMEs to promote business startup, improvement of efficiencies in existing SME value chains to make them globally competitive and provide conducive business environment through evidence-based policy-assistance to the Government of Pakistan. The Project is objectively designed to support SMEDA's capacity of

providing an effective handholding to SMEs. The proposed program is aimed at facilitating around 314,000 SME beneficiaries over a period of five years.

4. PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to provide information to the potential investors about “Publishing House” The document provides a general understanding of the business to facilitate potential investors in crucial and effective investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attain greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business setup and its successful management.

Apart from carefully studying the whole document, one must consider critical aspects provided later on, which form basis of any investment decision.

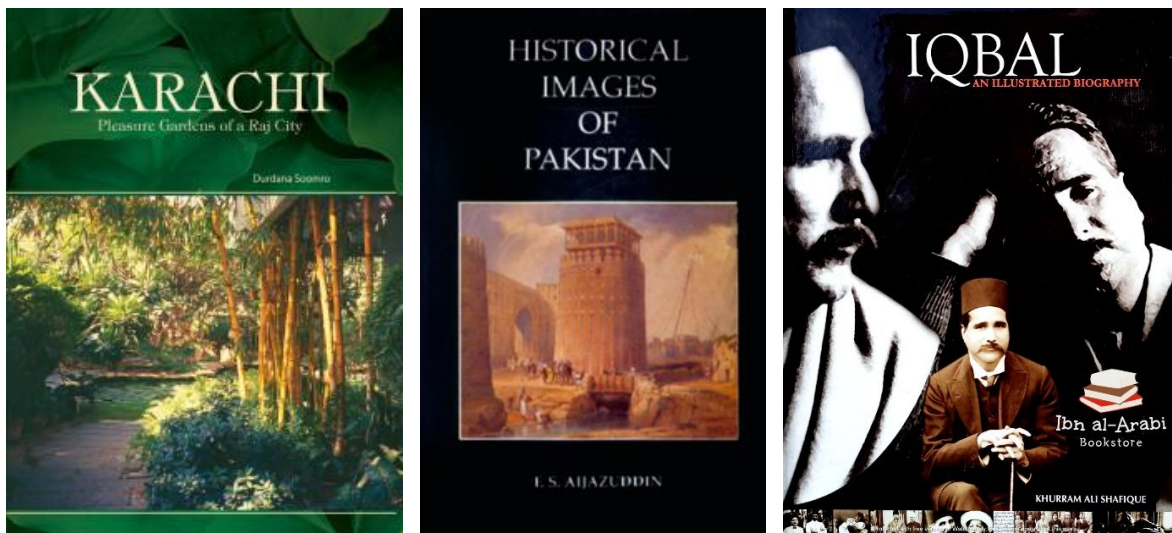
5. BRIEF DESCRIPTION OF PROJECT & PRODUCTS

Printing is the process for mass reproducing text and images using a master form or template. Publishing is the major application of Printing sector, and its importance can never be over emphasized. Publishing sector is the oldest and the most common application of printing where mass production of different types of books, copies and commercial products can be made possible.

Publishing sector entails a wide diversity of products, including the printing of text books of schools and colleges, general books, religious books, magazines, writing copies, newspapers, notebooks, writing pads, letterheads, etc. Figure 1 shows some examples of key categories of published products.

Figure 1: Books, Copies, Newspapers, etc.

In addition to the mainstream segments of publishing products, there are also some niche segments. One such segment is represented by high quality books, commonly known as Coffee Table books. These are usually books of large size including high-resolution pictures and brief text descriptions. These are printed on high quality, expensive papers. Such books are usually published in smaller volumes for a smaller, targeted audience. Such Coffee Table books are developed and published at a premium price. A few high-quality coffee table books are shown in Figure 2.

Figure 2: Coffee Table Books

It can be said that the whole education sector of a country is driven by publishing activity. This sector thus plays an important role in training and development of human resource of a country.

Other applications of publishing sector include printing of commercial products like brochures, pamphlets, posters, catalogues, etc. Examples of some commercial published products are shown in Figure 3.

Figure 3: Publishing Commercial Products



The publishing industry thus provides information and communication materials for general public and businesses. It carries a huge importance for any economy and thus can never go down. Publishing offers products/services which are inevitably required by many sectors of the economy.

Another important application of printing is the production of large variety of packaging materials for consumer products.

Printing Technologies

The modern-day printing sector uses different types of printing technologies which have evolved over the last few centuries. Key printing technologies are offset printing, flexographic printing, digital printing and screen printing.

Offset Printing

The most common type of commercial printing technology, used by the publishing sector, is offset printing. It is also known as offset lithography or litho-offset. Offset printing is used to print books, copies, magazines, newspapers, posters, maps, etc. It can be said that offset printing can be used to print any smooth, mass-produced item with print and graphics on it. Books and indeed all types of high-volume text are printed using offset printing.

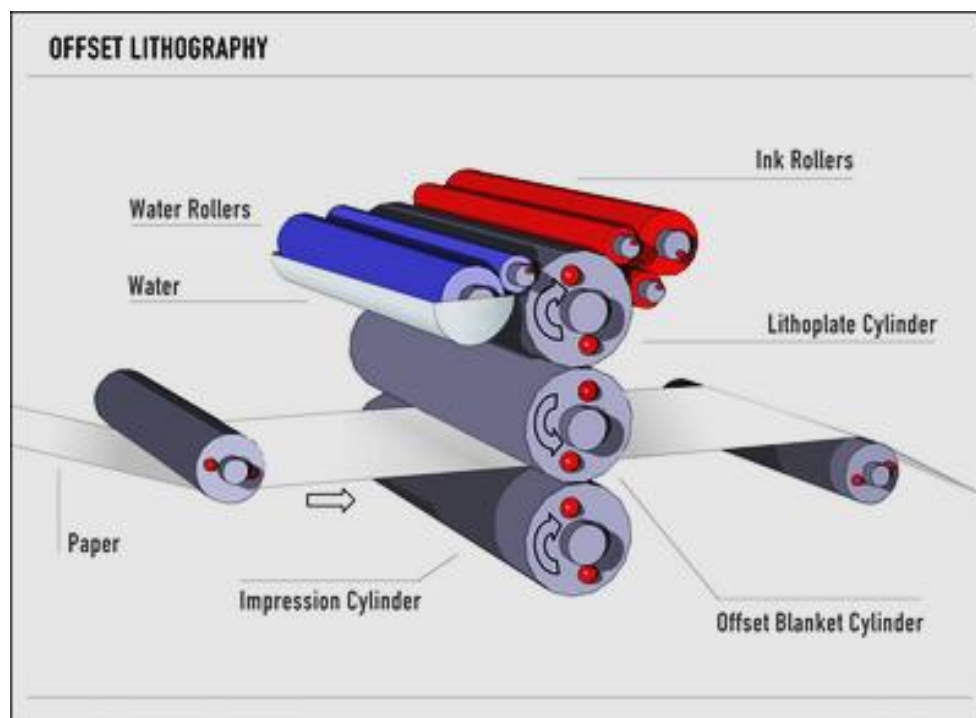
Offset lithography depends on photographic processes and uses aluminum printing plates, covered with a photosensitive emulsion. A photographic negative of the desired image is placed in contact with the emulsion and the plate is exposed to ultraviolet

light. After development, the emulsion shows a reverse of the negative image, which is thus a duplicate of the original (positive) image.

Offset printing involves the transferring of an image from aluminum plate to a rubber blanket before being printed on the receiving medium or substrate (paper is the most common receiving medium). Offset printing is a planographic method of printing; based on immiscibility of oil and water. The positive part of an image is a water-repelling (hydrophobic) substance, while the negative image is water-retaining (hydrophilic).

During the printing process, the dampening rollers apply water, which covers the blank portions of the plate but is repelled by the emulsion of the image area. Hydrophobic ink, which is repelled by the water and only adheres to the emulsion of the image area, is then applied by the inking rollers. The plate rolls against a cylinder covered with a rubber blanket, which squeezes away the water, picks up the ink and transfers it to the paper with uniform pressure. The paper passes between the blanket cylinder and a counter-pressure or impression cylinder, and the image is transferred to the paper. Because the image is first transferred, or offset to the rubber blanket cylinder, this reproduction method is known as offset printing. In this method, the paper does not come in direct contact with the metal plates. The mechanism used in offset printing is shown in Figure 4.

Figure 4: Offset Printing Mechanism



Offset Printing Machines

Different types of machines are used according to the number of colors required for the respective product i.e., single colored, two-colored or four-colored machines.

The simplest offset printing machine is a single-color machine which has only one drum and on which only one-color printing can be done. For having more colors, the same paper has to be passed again through the machine using different colors. More sophisticated machines have higher number of drums. Two-color machine has two printing stations and thus can print two colors in a single pass. Then there is the modern 4-color printing machine which can print all colors shades in a single pass of the paper through the machine. Offset machines, with higher number of drums, are also available. Five or six color machines are used for creating special effects in printing, such as adding UV (Ultraviolet) as a part of the print.

Figure 5, Figure 6 and Figure 7 respectively show single-color, two-color and four-color offset printing machines. The number of stations, corresponding to the number of colors the machine can handle, can be seen in the pictures.

Figure 5: Single-Color Offset Printing Machine



Figure 6: Two-Color Offset Printing Machine**Figure 7: Four-Color Offset Printing Machine**

The most common brand of offset printing machines used by the local Publishing sector is Heidelberg. This is a German brand which is the most popular brand of printing machines all over the world. The modern press was invented in Germany and the country has managed to maintain its dominance in this technology even after five centuries.

The local Publishing sector is characterized by the use of old machines. Use of new printing machines is limited to some very large printing units due to very high cost of those machines. Rupee depreciation over the last few years has also made the option of importing new machines very difficult. That is why even the large printing enterprises in the country prefer to operate with a combination of new and old printing machines. Hence, the proposed project has been based on old, used machines.

The price of the old printing machine is usually linked with its year of manufacturing which decides the age of the machine. Along with that, the features of the machine and its usage hours are also taken into consideration while determining its price. Local large and medium printing units mostly use printing machines manufactured in 1990s and 2000s decades. Some large units may also have printing machines of 2010s decade. Small printing units mostly use machines of 1980s decade. Some small or micro units may also be found using machines of 1970s decade.

Flexographic Printing

Another important type of printing technology is Flexographic printing, also known as Flexography. It is a form of printing process which utilizes a flexible relief plate. It can be used for printing on almost any type of substrate, including plastic, metallic films, cellophane, and paper. It is widely used for printing on the non-porous substrates. Figure 8 shows a flexographic printing machine.

Figure 8: Flexographic Printing Machine



Just like in offset printing, Heidelberg is also an important brand of flexographic printing machines.

Digital Printing

Digital printing is a method of printing from a digital-based image directly to a variety of media. It is used for small-run using large-format and/or high-volume laser or inkjet printers. In digital printing, there is no need to replace printing plate, whereas in analog printing the plates have to be repeatedly replaced. This results in quicker turnaround time and lower cost in digital printing. Figure 9 shows a digital printer.

Figure 9: Digital Printer

Some common brands of digital printing machines are Canon, Konika, Heidelberg, Sharp and Xerox.

Screen Printing

Screen printing, also known as silkscreen printing, is a technique where a mesh is used to transfer ink (or dye) onto a substrate, except in areas made impermeable to the ink by a blocking stencil which is usually fixed in a wooden frame. Figure 10 shows the screen-printing process.

Figure 10: Screen Printing Process

Publishing Products for this Study

The proposed Publishing House will use offset printing and offset paper to produce multiple products. The proposed product portfolio of the publishing house includes the following products:

Books

A book is a medium for recording information in the form of writing or images, typically composed of many pages bound together and protected by a cover. The proposed publishing house will produce single and multi-colored books having 100 double-sided pages.

Notebooks

A notebook (also known as a notepad, writing pad, drawing pad, or legal pad) is a book or stack of paper pages that are often used for purposes such as recording notes or memoranda, other writing, drawing or scrapbooking. The proposed project will produce single and multi-colored notebooks having 80 double-sided pages.

Pamphlets

A pamphlet is a little booklet with a soft (usually paper) cover that briefly addresses a particular subject of interest. A pamphlet, by definition, is a small, unbound booklet that is used to advertise or provide information on a single subject. These are mainly used for informing rather than direct selling. The proposed project will sell the pamphlets in sets of 100 with each pamphlet consisting of a single page.

Brochures

A brochure is a corporate marketing instrument used to promote a product or service offering. It is a tool that is used to circulate information about the product or service. A brochure usually includes the pictures of the products or the services which are being promoted.

Letterheads

A letterhead, by definition, is a heading on the topmost sheet of business paper. It carries business name, address, contact details and logo. The letter heads are used in all the official written communications carried out by the businesses.

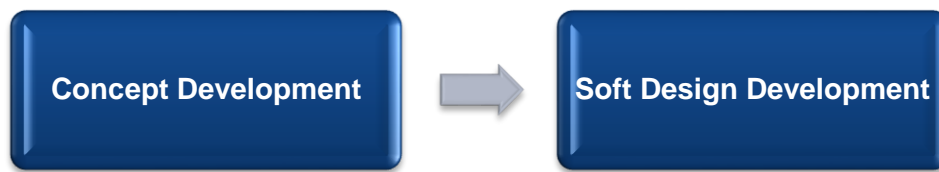
5.1. Production Process

The process of developing a printed product involves many sequential steps. Most of the processing steps are common for all types of products. However, some steps are different for different products, with respect to the final uses of those products. The process flow for operating a publishing house is broadly classified in three main sections:

- Pre-Press section
- Press section
- Post-Press section

Pre-Press Section

Pre-press section includes all the activities before the material gets to the printing machine. Figure 11 shows the process flow diagram for Pre-Press section.

Figure 11: Process Flow Diagram for Pre-Press Section

Brief description of the process for “Pre-Press Section” is provided hereunder:

Concept Development

The first step is developing the concept of the final product. This is done in close coordination with the customer. All the requirements of the customer are incorporated in the concept, on the basis of which an initial design is developed by the Design Department. Different parameters such as the page size, title design, back cover, page layout, number of pages, etc. of the products are decided during the concept development phase. In some cases, the concept is developed by the customer and provided to the printing enterprise where the Design Department evaluates and provides suggestions to improve the concept. In case there are any technical limitations to implement the concept, the customer is informed about those, and necessary changes are made in the product concept.

Design Development

Based on the agreed concept of the final printing product, the designers develop a design. This is made on computer using different softwares, such as Photoshop, Illustrator, Corel Draw, etc. The final design is sent to the customer for approval and test copies of the approved design are printed. The printed design is reviewed and approved by the customer before any further activity may be done.

Figure 12: Design Development

Press Section

Press section is where actual printing is carried out. The substrate and the ink are the two main raw materials required for printing. In addition, some special chemicals, varnishes, etc. may also be required for having some special effects in the final printed product. Raw materials preparation is carried out in the press section before printing may be carried out. Figure 13 shows the process flow diagram for Press section.

Figure 13: Process Flow Diagram for Press Section



Brief description of production process for “Press Section” is provided hereunder.

Raw Materials

- **Paper**

Paper is the most common raw material used as substrate¹ for publishing. For offset printing, paper is mostly used in the form of sheets. There are some applications like newspaper printing on offset printing machines where the paper is supplied in the form of reels. Paper sheets of different sizes are used for printing which is decided by the type and size of the printing machine. Offset paper sheets used for printing are shown in Figure 14.

Figure 14: Paper Sheets for Printing



¹ In printing, a substrate is the base material that the image will be printed on such as paper, glass, plastic film, or other textile products as in canvas printing.

The proposed publishing house will use paper sheet which is 23 inch wide and 36 inch long. The other important specification of paper is its specific weight which is measured in grams per square meter (gsm). Grammage of the paper used for publishing applications generally falls in the range 55-100 gsm. Offset paper sheets are supplied in the form of ream which is a bundle of 500 sheets.

- **Ink**

Along with paper, the other important raw material is ink. Offset printing uses four types of inks based on CMYK color model, also known as Process-Color or Four-Color model. CMYK stands for Cyan, Magenta, Yellow and Key (Black) which are the four-color plates used in offset printing. The complete set includes four types of inks which are used on different stations of the printing machine to obtain the required colors in the final print. Any spot colors can be made from a combination of the process colors. Inks can be water-based or UV curable. Standard Four-Color model is shown in Figure 15.

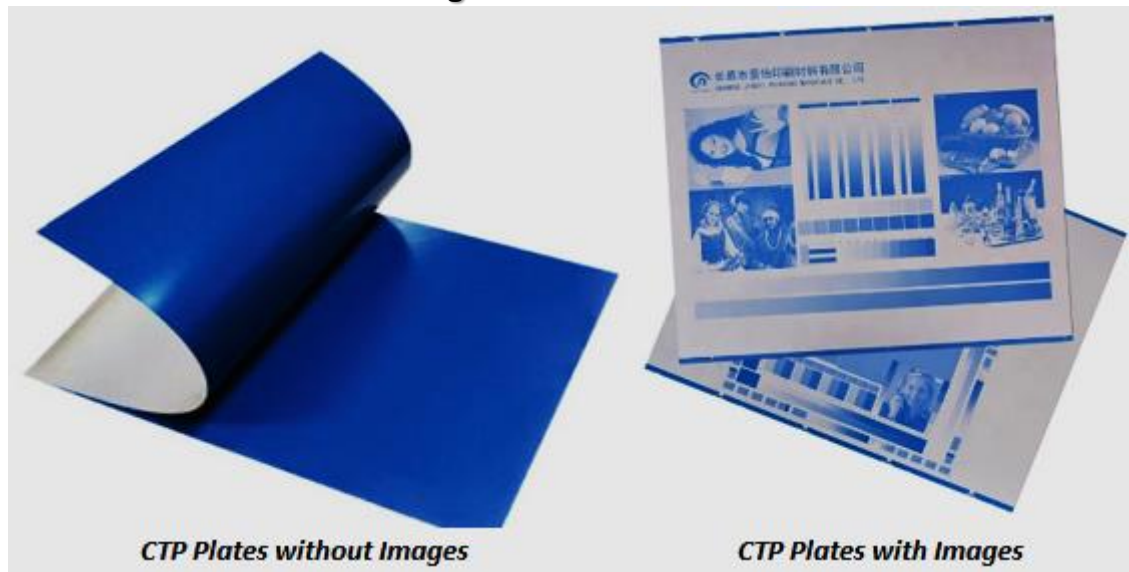
Figure 15: CMYK Colors



- **Printing Plate Making**

Printing plate making is a very important operation through which the images that need to be printed on the substrate are transferred from the computer onto the plates. This process is known as Computer-to plate (CTP) and the plates used in this process are known as CTP plates. CTP uses laser beams to transfer image directly onto the printing plate. This is a newer technology which has replaced the previously used Computer-to Film (CTF) technology in which a photographic film was exposed and transferred to the plate. For offset printing, aluminum plates are used.

CTP process is considered to be a specialized process and is carried out on an expensive machine. Therefore, most of the printing enterprises subcontract this job to specialized CTP plate making enterprises which act as service providers for them. Hence, in the proposed publishing house, CTP plates of size (23 inch by 36 inch) will be procured from CTP plater makers and used for printing. Figure 16 shows a CTP Plate.

Figure 16: CTP Plate

Paper Cutting

For offset printing, the paper sheets have to be cut in the required sizes as per requirement of each job. This cutting is carried out using a cutting press which can cut multiple sheets in one stroke. This ensures the uniformity of the sheets size and produces neat edges of the cut paper. A paper cutting machine is shown in Figure 17.

Figure 17: Paper Cutting Machine

Offset Printing

The proposed publishing house project uses old, single-color and two-color machines. Paper sheet feeding method is used in which the paper is cut in the form of sheets before printing and fed into the entry side of machine.

Inks of the required colors in the required quantities are filled into the designated chambers in the machine. If four colors are to be used, the sequence in which the four types of inks are used, is black-cyan-magenta-yellow.

Aluminum plates of the text/images to be printed, prepared by CTP process, are affixed to plate cylinders in the printing machine. The machine automatically wraps the plate on the cylinder. Each printing station requires a printing plate which means that one color machine requires one plate and two-color machine requires two plates. All machine parameters are set as per the specific requirements of each printing job.

Paper sheets are fed into the printing machine one by one from one side and printed copies are received at the other end of the printing machine. Each printing station prints only a single color on one side of the paper. For printing on the other side, the same paper has to be passed through the machine again.

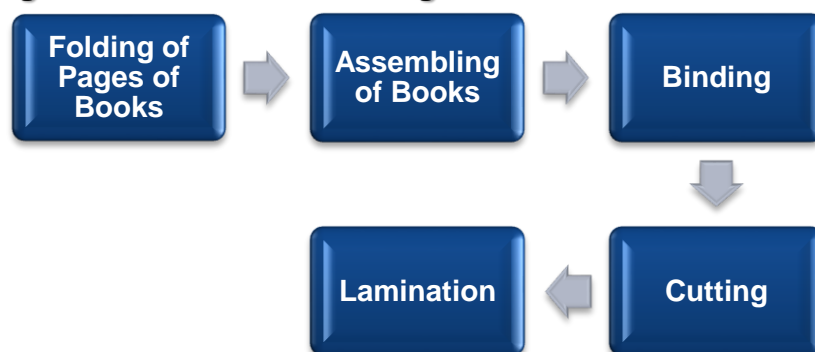
Initially, the machine is run to print test copies which are checked for their clarity and colors. Any required adjustments in machine settings are made to ensure that the printed product meets the required specifications.

Printing practices differ in some respects with the type of final product. For example, for printing books, notebooks, magazines, etc., the paper is printed on both sides. For such jobs, one sheet of paper has to pass through the printing machine twice.

Post-Press Section

The operations in the post-press section differ with respect to the type and final use of the printed product. Different processes are used depending upon whether the final product is for packaging, publishing, commercial or for any other use. Figure 18 shows the process flow diagram for Post-Press section.

Figure 18: Process Flow Diagram for Post-Press Section



Brief description of production process for “Post-Press section” is provided hereunder.

Folding of Pages of Books

Pages of books, magazines, etc. are printed on both sides of the paper. Those have to be folded in the form of books. This is commonly done using a folding machine. Unfolded sheets are fed from the entry side of the machine and folded sheets received at the other end. Folding machine is shown in

Figure 19.

Figure 19: Book Folding Machine**Assembling of Books**

A published product, such as book, magazine, etc. has its content pages which have to be arranged in a proper sequence. Along with those, there is a title page and back cover which also has to be assembled along with the inside content pages. The printed pages are thus first assembled in the proper form of book, magazine, etc. This process is mostly carried out manually in the local publishing houses. The folded pages are stacked in the form of a semicircle in the proper sequence of page numbers. A person sitting in the center picks the pages in the proper sequence to assemble those in the proper order. Figure 20 shows the process of books assembling.

Figure 20: Assembling of Books

Binding

Next step in the post-press operation is binding. Different techniques may be used for binding. For books with smaller number of pages, stapling may be used. For books with larger number of pages, stitching or gum binding is normally used. In the proposed project stapling and gum binding techniques have been used.

A simple stapling machine is shown in Figure 21. The operator fixes the required number of staples on the assembled pages as per the requirement of the job. Depending upon the requirement of the client, the title and back cover may also be stapled; or for a finer finish, they may be attached to the main book using gum.

Figure 21: Stapling Machine



Gum Binding is a common binding technique used for most of the published products like books, magazines, etc. Binding is carried out by using an automatic gum binding machine shown in Figure 22.

Figure 22: Gum Binding Machine



Cutting

The bound books are passed through a final cutting operation to remove any excess paper and to ensure that all the pages are exactly of the same size. This is done using a cutting machine. Figure 23 shows the final book cutting operation.

Figure 23: Final Cutting of Books

**Lamination**

The title of some books is laminated using lamination machine; like the one shown in Figure 24.

Figure 24: Lamination Machine



5.2. Installed and Operational Capacities

The capacity of the printing house is defined by the printing machines. The proposed unit will have maximum annual capacity of producing 1,359,000 sets of publishing products. This project is financed through 100% equity. The project is assumed to attain 60% capacity utilization in the first year of operations. The production capacity utilization is assumed to increase at a rate of 10% per annum, achieving a capacity utilization of 90% in the 5th year of operations. During the first year of operations, 815,400 sets of publishing products are produced using 4 offset printing machines. Table 1 depicts the installed and operational capacities of the proposed publishing house. Table 2 and Table 3 separately show the annual installed capacity of multi-color printing machine and single-color printing machine per product. Table 4 and Table 5 show the product assumptions. Table 6 shows annual production in number of sets.

Table 1: Installed and Operational Capacity (Sheets)

Machine	Sheets per Hour	Number of Machines	Total Sheets per/hour	Sheets per day	Sheets per Annum-per product
Multi-Color Printing					
Offset Printing Machines 2 color (2000-2010)	4,000	2	8,000	56,000	16,800,000
Single-Color Printing					
Offset Printing Machines single color (2000-2010)	3,000	2	6,000	42,000	12,600,000
Total					29,400,000

Table 2: Break up of Annual Capacity of Printing Multi Color Sheets

List of Products	Capacity-Sheets per Annum @100%	Multi-Color % Production	Sheets per Annum-per product
	A	B	C=(A*B)/Printing sides
Books-Multi colored	16,800,000	42.9%	3,600,000
Notebook-Multi colored		14.3%	1,200,000
Pamphlets		14.3%	1,200,000
Brochure		14.3%	1,200,000
Letterhead		14.3%	2,400,000

Table 3: Annual Installed Capacity of Single-Color Printing

List of Products	Capacity-Sheets per Annum @100%)	Multi-Color % Production	Sheets per Annum-per product
	<i>A</i>	<i>B</i>	$C=(A*B)/\text{Printing sides}$
Books-Single colored	12,600,000	50%	3,150,000
Notebooks-Single colored		50%	3,150,000

Table 4: Product Assumptions-1

List of Products	Assumption	Printing Sides	Page Size / Box Dimensions	Required Number of Pages in 1 Set	Paper Specs (gsm)
Book-Multi colored	100 pages (200 sides)	2	A4	100	80
Book-Single colored	100 pages (200 sides)	2	A4	100	80
Notebook-Multi colored	80 pages (160 sides)	2	A4	80	80
Notebook-Single colored	80 pages (160 sides)	2	A4	80	80
Pamphlets	Set of 100 pages (200 sides)	2	A4	100	113
Brochures	Set of 100 pages (200 sides)	2	A4	100	113

Letterheads	set of 100 Pages (200 sides)	1	A4	100	100
Book Front and Back Covers	Set of 2 pages per book/ notebook	1	A4	2	260

Table 5: Product Assumptions-2

List of Products	Percentage Proportion	Number of Pages in 1 Impression (23x36 inches)	Number of Pages in 1 Set	Sheets required to Print 1 Set
Book-Multi colored (100 pages)	30%	8	100	13
Book-Single colored (100 pages)	15%		100	13
Notebook-Multi colored (80 pages)	10%		80	10
Notebook-Single colored (80 pages)	15%		80	10
Pamphlets (Set of 100)	10%		100	13
Brochures (Set of 100)	10%		100	13
Letterheads (Set of 100)	10%		100	13
Total	100%			

Table 6: Annual Production of Final Product (No. of sets)

List of Products	Sheets per Annum	Annual Production Units @100% Capacity (no. of products)	Annual Production Units @60% Capacity (no. of products) Year-1
Book-Multi colored (100 pages)	3,600,000	288,000	172,800
Book-Single colored (100 pages)	3,150,000	252,000	151,200
Notebook-Multi colored (80 pages)	1,200,000	120,000	72,000
Notebook-Single colored (80 pages)	3,150,000	315,000	189,000
Pamphlets (Set of 100)	1,200,000	96,000	57,600
Brochures (Set of 100)	1,200,000	96,000	57,600
Letterheads (Set of 100)	2,400,000	192,000	115,200
Total	15,900,000	1,359,000	815,400

6. CRITICAL FACTORS

Before making the decision to invest in a Publishing House business, one should carefully analyze the associated risk factors. Important factors to be considered are as follows:

- Awareness / knowledge of markets and the demand trends for products
- Availability of good quality raw materials
- Good relationship with the clients
- Hiring of skilled labor with regular training
- Selection of appropriate machinery
- Assurance of timely order fulfillment
- Ability to generate work orders through networking
- Quality designing and Printing

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The demand for setting up the Publishing House is higher in larger cities. Majority of Publishing Houses exist in big cities of Pakistan. The cities where major printing related activities are being carried out and have ready supply of raw materials, are the suitable locations for establishing Publishing House business. Therefore, the geographical potential for investment in this business is higher in big cities like Karachi, Lahore, Islamabad, Peshawar, Rawalpindi, Quetta, Faisalabad, Hyderabad, Gujranwala, Multan, or any other major city. The ideal location for the project may be preferably in small industrial clusters/estates of printing sectors in cities. Selected location should be easily accessible.

8. POTENTIAL TARGET MARKETS / CUSTOMERS

Pakistan's Printing sector has been growing over the past decades. Printing is an important industry all over the world. Packaging and publishing are the two main segments of the sector. The size of global book publishing industry in 2022 was USD 112 billion.² The other important subsector of publishing is newspaper publishing; the size of which is slightly less than that of book publishing subsector.

Most of the purchasers from local corporate companies, educational institutions, and other organizations will be the potential target customers for the printed materials. The business clients operating in important metropolitan cities, such as Lahore, Karachi, Peshawar, Quetta, Faisalabad, Sialkot, Rawalpindi, and Hyderabad, will be key

² <https://www.ibisworld.com/global/market-size/global-book-publishing>

prospective markets for the proposed endeavor because the bulk of the target consumers belongs to business sectors. Offset printing is the most commonly used printing technology, with are around 2,000 publishers in the country.³

Another indicator which can be considered a direct measure of the growth of Printing industry is the growth of Paper & Board sector. As per the Economic Survey of Pakistan 2021-22, Paper & Board sector witnessed a growth of 8.5%. Since a dominant share of the local production of paper and board is consumed locally, this increase in production is directly absorbed by the local Printing industry which indicates a positive growth of the industry.

Another indicator to assess the growth of the local printing industry is the imports of paper and board. After passing through the COVID-19 period, the imports of coated and uncoated, which slowed down, was seen to reverse its trend in the positive direction.

Printing industry of Pakistan has shown subsequent growth, mostly in the urban areas of the country. According to Pakistan Press and Publication Regulatory Authority, there are approximately 7,000 printing presses registered in the country.⁴ Printing Press/ Publishing industry has been on a steady growth and is expected to continue its growth in the long run, despite the boost in technology and introduction of new reading applications.⁴

In 2021, Pakistan's total exports of printed products were USD 16.09 million which were distributed between fifteen different types of products. Pakistan's exports of printed products have been oscillating over the last ten years; with an overall downward trend. The exports touched the maximum of USD 23 million in 2014 and followed a downward trend to reach USD 16.1 million in 2021. There was a drop of 28% in 2020 which was the period when the world was hit by COVID-19. The year 2021 saw a recovery when the exports increased by 44% to reach USD 16.1 million

Pakistan's total imports of printed products in 2021 were USD 141.9 million which makes Pakistan a net importer of these products with a trade deficit of USD 137 million. Just like exports, there is an oscillating trend in Pakistani imports of Printing industry as well. Overall trend in imports has been declining. The highest imports of USD 895.5 million during the last ten-year period were reported in the year 2013.

International trade of published books is reported under HS 4901. This is the largest category among the eleven different product categories included under HS 49, the main HS code representing published products. Pakistan's total exports of published products in 2021 were USD 4.9 million of which USD 2.85 million was contributed by

³https://www.commonwealthofnations.org/sectors-pakistan/business/printing_and_publishing/#:~:text=The%20printing%20and%20publishing%20industry,and%20Urdu%2C%20Pakistan's%20main%20languages.

⁴<https://www.sbp.org.pk/departments/ihfd/Sub-Segment%20Booklets/Printing%20Press.pdf#page=18&zoom=100,92,109>

exports of books. Pakistan's imports of this product were USD 15.6 million which means that Pakistan is a net importer of published books.

Pakistan's major trading partners for books in 2021 are shown in Figure 25. UK was the largest importer of books from Pakistan; with 19% of Pakistan's total exports of books going there. USA, Saudi Arabia and Afghanistan respectively were the second, third and fourth largest destinations of Pakistan's exports of books; respectively accounting for 16%, 15% and 8% shares of the total books' exports. Other notable countries importing books from Pakistan were Kuwait and Qatar.

Figure 25: Pakistan's Trading Partners of Books (HS 4901)



UK was also the largest exporter of books to Pakistan. In 2021, Pakistan imported books worth USD 7.13 million from UK; which accounted for 46% of the total imports of books into Pakistan. Malaysia, USA and China were the second, third and fourth largest exporters of books to Pakistan.

Potential clients for the published products will primarily include purchasers from neighborhood business ventures, instructive establishments and different associations. As larger part of the objective client has a place with business portions, hence, the business clients working in major urban centers like Lahore, Karachi, Peshawar, Quetta, Faisalabad, Sialkot, Rawalpindi, Hyderabad, etc. will be the key possible business sectors for the proposed venture.

9. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the proposed Publishing House. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are attached as annexure of this document.

All the figures in this financial model have been calculated after carefully considering the relevant assumptions and target market.

9.1. Project Economics

All the figures in this financial model have been calculated after carefully considering the relevant assumptions and target market.

9.2. Project Cost

Table 7 provides fixed and working capital requirements for establishment and operations of the Publishing House.

Table 7: Project Cost

Description of Costs	Amount (PKR)	Reference
Land	-	9.2.1
Building / Infrastructure	732,991	9.2.2
Machinery & equipment	69,800,000	9.2.3
Allied equipment	66,000	9.2.4
Furniture & fixtures	395,000	9.2.5
Office equipment	678,300	9.2.6
IT Equipment	1,070,000	9.2.7
Office vehicles	424,200	9.2.8
Security Against Building	911,250	9.2.9
Pre-operating costs	2,055,778	9.2.10
License	25,000	
Total Capital Cost	76,158,519	
Working Capital Cost		
Equipment spare part inventory	290,833	
Raw Material Inventory	4,557,073	
Upfront building rent	704,363	
Cash	1,000,000	
Total Working Capital	6,552,269	
Total Project Cost	82,710,787	

9.2.1. Land

The proposed Publishing House will be established in a rented building to avoid the high cost of land. Suitable location for setting up a Publishing House business can be easily found on rent. Therefore, no land cost has been added to the project cost. Total space requirement for the proposed unit has been estimated as 3,375 sq. feet (15 Marla). Breakup of space requirement is shown in Table 8.

Table 8: Breakup of Space Requirement

Description	% Break-up	Area Sq. ft.
Raw Material Store Room	14%	473
Design Area	5%	169
Printing Area	33%	1,114
Cutting/ Folding/ Binding Area	10%	338
Finished Goods Store room	14%	473
Executive Office	6%	203
Admin and Accounts Department	4%	135
Parking and Gate area	8%	270
Washroom	6%	203
Total	100%	3,375

9.2.2. Building

There will be no cost of building construction since the proposed business will be started in rented premises. However, there will be a renovation cost required to make the building usable for the business. The proposed project requires electricity load of around 55 KW for which an electricity connection under the Industrial Supply Tariff three phase will be required. Building rent of PKR 303,750 per month has been included in the operating cost. Table 9 provides details of building renovation cost.

Table 9: Building Renovation Cost

Cost Item	Unit of Measurement	Total Units	Cost/Unit (PKR)	Total Cost (PKR)
Paint Cost	Litre	100	800	80,388
Labour Cost	Sq. Feet	10,049	15	150,728
Curtains	Number	2	6,000	12,000
Blinds	Number	2	7,000	14,000
Glass Partitions & Doors	Sq. Feet	726	600	435,375
Carpet	Sq. Feet	506	80	40,500
Total				732,991

9.2.3. Machinery and Equipment Requirement

Table 10 provides details of machinery and equipment required for establishing a Publishing House.

Table 10: Machinery and Equipment Requirement

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Offset Printing Machines 2 color (2000-2010)	2	17,000,000	34,000,000
Offset Printing Machines single color (2000-2010)	2	9,000,000	18,000,000
Die Cutting Machine	3	1,200,000	3,600,000
Gum Binding Machine	3	1,500,000	4,500,000
Sheet Cutting Machine	2	900,000	1,800,000
Stapling Machine	2	700,000	1,400,000
Folding Machine	2	2,000,000	4,000,000
Lamination Machine	2	500,000	1,000,000
Generator 50 KVA	1	1,500,000	1,500,000
Total Cost (PKR)	19		69,800,000

9.2.4. Allied Equipment

Table 11 provides details of the allied equipment requirement of the project.

Table 11: Allied Equipment Requirement

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Mechanical Tool Kit	2	7,000	14,000
Electrical Tool Kit	2	6,000	12,000
Printing Tool Kit	2	20,000	40,000
Total Cost (PKR)			66,000

9.2.5. Furniture & Fixtures Requirement

Table 12 Provides details of the furniture and fixture requirement of the project.

Table 12: Furniture and Fixture Requirement

Cost Item	Number of Items	Unit Cost (PKR)	Total Cost (PKR)
Executive Tables	1	60,000	60,000
Executive Chairs	1	30,000	30,000
Office Table	4	20,000	80,000
Office/Visitors Chairs	10	15,000	150,000
Sofa Set	1	45,000	45,000
Racks	2	15,000	30,000
Total			395,000

9.2.6. Office Equipment Requirement

Details of office equipment required for the project is provided in Table 13.

Table 13: Office Equipment Requirement

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Air Conditioners	3	120,000	360,000
Exhaust Fan	10	4,500	45,000
Bracket Fan	5	10,500	52,500
Ceiling Fan	8	8,000	64,000
Pedastal Fan	5	11,000	55,000
Water Dispenser	2	25,000	50,000
Wi-Fi / Internet Router	1	3,500	3,500
LED Bulbs	161	300	48,300
Total Cost (PKR)			678,300

9.2.7. IT Equipment

Details of IT equipment required for the project is provided in Table 14.

Table 14: IT Equipment

Cost Item	No.	Unit Cost (PKR)	Total Cost (PKR)
Designer Laptops	2	200,000	400,000
Laptops/ Computers	2	100,000	200,000
Desktop Computers	2	50,000	100,000
Office Printer	2	120,000	240,000
CCTV Cameras (2MP)	20	3,000	60,000
DVR	2	15,000	30,000
LED TV (32")	1	40,000	40,000
Total Cost (PKR)			1,070,000

9.2.8. Office Vehicle Requirement

Details of office vehicle required for the project is provided in Table 15.

Table 15: Office Vehicle Requirement

Cost Item	Number of Vehicles	Unit Cost (PKR) (A)	Registration and Plate Charges(B)	Total Cost (PKR) (A+B)
Loader Rickshaw	1	300,000	15,000	315,000
Motorcycle	1	120,000	6,000	126,000
Total Cost (PKR)	2			441,000

9.2.9. Security against Building

Details of security against building for the project are provided in Table 16.

Table 16: Security against Building

Cost Item	Months	Unit Cost (PKR)	Total Cost (PKR)
Security Against Building	3	303,750	911,250
Total (PKR)			911,250

9.2.10. Pre-Operating Cost

Details of pre-operating cost for the project are provided in Table 17.

Table 17: Pre-Operating Cost

Cost Item	Number/ Months	Hiring before Year 0	Total Cost (PKR)
Administration exp.		1	445,000
Utilities expense			214,778
Machinery Installation			1,396,000
Total Cost			2,055,778

9.3. Financial Feasibility Analysis

The financial feasibility analysis provides the information regarding projected Internal Rate of Return (IRR), Net Present Value (NPV) and Payback period of the study, which is shown in Table 18.

Table 18: Financial Feasibility Analysis

Description	Project
IRR	43%
NPV (PKR)	76,512,806
Payback Period (years)	3
Projection Years	10
Discount rate used for NPV	25%

9.4. Financial Feasibility Analysis with 50% Debt

The financial feasibility analysis provides the information regarding projected IRR, NPV and payback period of the study on the basis of Debt: Equity Model (50:50) with the interest rate of KIBOR+3%, which is shown in Table 19.

Table 19: Financial Feasibility Analysis with 50% Debt

Description	Project
IRR	41%
NPV (PKR)	92,973,917
Payback Period (years)	3.12
Projection Years	10
Discount rate used for NPV	22%

9.5. Breakeven Analysis

Breakeven analysis of the proposed project is shown in Table 20.

Table 20: Breakeven Analysis

Particulars	Amount First Year (PKR)	Profitability Ratio
Sales	283,662,000	100%
Variable Cost	245,146,861	86%
Contribution	38,515,139	14%
Fixed Cost	25,886,163	9%
Breakeven		
Breakeven (Sets)		548,033
Breakeven Revenue (PKR)		190,650,243
Breakeven Capacity		40%

9.6. Revenue Generation

Table 21 provides details for revenue generation of Publishing House during the 1st year of operations, based on 60% capacity utilization.

Table 21: Revenue Generation-Publishing House

Products	Intial Capacity @ 60% (Sets)	Price per Set (PKR)	Revenue (PKR)
Book-Multi colored (100 pages)	172,800	370	63,936,000
Book-Single colored (100 pages)	151,200	350	52,920,000
Notebook-Multi colored (80 pages)	72,000	280	20,160,000
Notebook-Single colored (80 pages)	189,000	270	51,030,000
Pamphlets (Set of 100)	57,600	480	27,648,000
Brochures (Set of 100)	57,600	480	27,648,000
Letterheads (100 pages)	115,200	350	40,320,000
Total			283,662,000

9.7. Variable Cost Estimate

Variable cost details are given in Table 22.

Table 22: Variable Cost Estimate

Particulars	Cost (PKR)
Paper Cost	192,780,000
Ink Cost	12,075,300
Front and Back Cover page for Book/Notebook	5,460,183
Lamination Cost	712,800
Other Materials Cost (Glue/ Pins, other materials etc)	7,711,200
Direct Electricity	1,218,169
Direct Labour	18,660,000
Factory vehicle running and maintenance cost	425,943
CTP Plates Cost	2,340,000
Generator Running Expense	487,268
Machinery maintenance cost	1,745,000
Communications expense (phone, internet etc.)	558,000
Office vehicles running and maintenance expense	425,943
Indirect Electricity	547,054
Total	245,146,861

Table 23: Raw Material Cost

List of Product	Paper Cost per Set (PKR)	Ink Cost per Set (PKR)	Front and Back Cover page for Book/Notebook	Lamination Cost	Other Materials Cost (Lamination, Glue, Pins, etc) (PKR)	Total Raw Material Cost (PKR)
	<i>A (Table 24)</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E= (Ax4%)</i>	<i>F= (A+B+C+D+E)</i>
Book-Multi colored (100 pages)	238	24	10	1.8	10	282
Book-Single colored (100 pages)	238	12	9	1.8	10	270
Notebook-Multi colored (80 pages)	190	4	9	1.8	8	213
Notebook-Single colored (80 pages)	190	4	9		8	210
Pamphlets (Set of 100)	325	33			13	371
Brochures (Set of 100)	325	33			13	371
Letterheads (Set of 100)	250	13			10	273

Table 24: Paper Cost Calculation

List of Products	Raw Material	Price per Ream (PKR)	Sheets per Ream	Price per 23x36 Sheet (PKR)	Price per A4 Paper (PKR)	Paper Cost per Set (PKR)
		A (Table 26)	B	C=(A/B)	D=C/Sheets required (Table 5)	E=D x Required Pages in 1 set (Table 4)
Book-Multi colored	Offset Paper 80 gsm	9,500	500	19.00	2.4	238
Book-Single colored	Offset Paper 80 gsm	9,500		19.00	2.4	238
Notebook-Multi colored	Offset Paper 80 gsm	9,500		19.00	2.4	190
Notebook-Single colored	Offset Paper 80 gsm	9,500		19.00	2.4	190
Pamphlets	Offset Paper 113 gsm	13,000		26.00	3	325
Brochures	Offset Paper 113 gsm	13,000		26.00	3	325
Letterheads	Art Paper 100 gsm	12,000		24.00	3.0	250

Table 25: Ink Cost Calculation

List of Products	Ink Cost (% of Paper Cost)	Ink Cost per set (PKR)
	A	$B=A \times \text{Paper Cost}$ (Table 24)
Book-Multi Colored (100 pages)	10%	24
Book-Single / Dual colored (100 pages)	5%	12
Notebook-Multi colored (80 pages)	2%	4
Notebook-Single / Dual Colored (80 pages)	2%	4
Pamphlets (Set of 100)	10%	33
Brochures (Set of 100)	10%	33
Letterheads (100 pages)	5%	13

Table 26: Paper and Ink Basic Cost

Description	Unit	Dimensions (Inches)	Total Cost Price (PKR)
Offset Paper 80 gsm	Reams (500 Sheets)	23x36	9,500
Offset Paper 100 gsm	Reams (500 Sheets)	23x36	12,000
Art Paper 113 gsm	Reams (500 Sheets)	23x36	13,000
Art Card 260 gsm	100 Sheets Packet	23x36	6,500
Ink	kg		1,800

Table 27: CTP Plates Cost

Cost Item	Number of Plates Required per Annum	Price per Plate (PKR)	Total Cost (PKR)
CTP Plates	1,800	1,300	2,340,000

Table 28: Direct Labor

Designation	No.of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
Production Manager	1	100,000	1,200,000
Designer-Skilled	2	60,000	1,440,000
Printing-Skilled	5	50,000	3,000,000
Printing-Unskilled	10	30,000	3,600,000
Cutting-Skilled	3	35,000	1,260,000
Cutting-Unskilled	6	25,000	1,800,000
Folding & Assembling -Unskilled	6	25,000	1,800,000
Binding-Skilled	3	35,000	1,260,000
Binding-Unskilled	6	25,000	1,800,000
Packing and Loading-Unskilled	5	25,000	1,500,000
Total			18,660,000

Table 29: Machinery Maintenance Cost

Cost Item	Machinery Cost (PKR)	Rate	Total Cost (PKR)
Maintenance Cost	69,800,000	5%	1,745,000
Total (PKR)			1,745,000

9.8. Fixed Cost Estimate

Table 30 provides details of fixed cost for the project.

Table 30: Fixed Cost Estimate

Description of Costs	Amount (PKR)
Administration expense	5,580,000
Administration benefits expense	1,212,000
Building rental expense	3,645,000
Office expenses (software, stationery, entertainment, janitorial services, etc.)	279,000
Promotional expense	1,418,310
Insurance expense	704,363
Depreciation expense	11,165,524
Professional fees (legal, audit, consultants, etc.)	50,000

Amortization of legal, licensing, and training costs	2,500
Amortization of pre-operating costs	411,156
Bad debt expense	1,418,310
Total Fixed Cost	25,886,163

Table 31: Staff Salaries

Post	No. of Employees	Monthly Salary (PKR)	Annual Salary (PKR)
CEO	1	150,000	1,800,000
Marketing Officer	1	60,000	720,000
Driver-Loader Rickshaw	1	25,000	300,000
Accounts and Admin Incharge	1	50,000	600,000
Store Incharge	2	40,000	960,000
Security Guard	3	25,000	900,000
Office Boy	1	25,000	300,000
Total Cost (PKR)			5,580,000

9.9. Human Resource Requirement

For the 1st year of operations, the human resource requirements are projected in Table 32.

Table 32: Human Resource Requirements

Description	Number of Employees	Salary Per Month Per Person (PKR)	Annual Salaries(PKR)
CEO	1	150,000	1,800,000
Production Manager	1	100,000	1,200,000
Production Staff-			
Design-Skilled	2	60,000	1,440,000
Printing-Skilled	5	50,000	3,000,000
Printing-Unskilled	10	30,000	3,600,000
Die Cutting-Skilled	3	35,000	1,260,000
Die Cutting-Unskilled	6	25,000	1,800,000
Folding and Assembling-Unskilled	6	35,000	1,800,000

Binding-Skilled	3	35,000	1,260,000
Binding-Unskilled	6	25,000	1,800,000
Packing and Loading-Unskilled	5	25,000	1,500,000
Indirect Staff-			
Marketing Officer	1	60,000	720,000
Driver-Loader Rickshaw	1	25,000	300,000
Accounts and Admin Incharge	1	50,000	600,000
Store Incharge	2	40,000	960,000
Security Guard	3	25,000	900,000
Office Boy	1	25,000	300,000
Total	57		24,240,000

10. CONTACT DETAILS

In order to facilitate the potential investors, contact details of some relevant vendors to the proposed project is given in Table 33.

Table 33: Contact Details

Name of supplier	Type of supplies	Email/ Website	Contact Number
Hashmi Technology and Training (Karachi)	Machinery	info@hashmitechnologies.com	0321 4211332
Hameed Trading Company (Lahore)	Machinery	www.hameedtrading.com	+92-42-37170238
Five Fingers Export (India)	Machinery	https://www.5fingers.in/	+91-8046045277
Haotian Machinery (China)	Machinery	tinalv@weifanghaotian.cn	+86-15006606182
Jiangyin light industrial Machinery Co. Ltd (China)	Machinery	http://en.jiangnanmachine.com/	+86-510-86381260
Khalil Corporation (Karachi)	Paper	www.khalilcorporation.com	+92 21 322 144 41
Real Paper (Karachi)	Paper	https://www.realpaperpk.com	+92 21 32588158
Allied International (Karachi)	Paper	http://www.highmark-trading.com/	+92 21 36728235
Shanghai Chenjie Printing Material Co. Ltd	Ink	http://chenjie2020.dance515.com/	+86-021-61311286
Zhongliqi Printing Material Co. Ltd	Ink	http://www.sublimation-ink.org/	+86-373-2611121

11. USEFUL LINKS

Table 34: Useful Links

Name of Organization	Website
Small and Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
National Business Development Program (NBDP)	www.nbdp.org.pk
Government of Pakistan	www.pakistan.gov.pk
Securities and Exchange Commission of Pakistan	www.secp.gov.pk
State Bank of Pakistan	www.sbp.org.pk
Pakistan Association of Printing & Graphic Arts Industry	www.papgai.org/
Printing Corporation of Pakistan	http://www.pcp.gov.pk/
Trade Development Authority of Pakistan	www.tdap.gov.pk
Federal Board of Revenue	www.fbr.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Sindh Small Industries Corporation	https://ssic.gos.pk
Small Industries Development Board	https://small_industries_de.kp.gov.pk
Directorate of Small Industries Balochistan	https://balochistan.gov.pk/departments
Industries and Commerce Department Balochistan	www.dgicd.gob.pk
Industries and Commerce Department Sindh	www.industries.sindh.gov.pk
Department of Industries and Commerce, AJK	www.industries.ajk.gov.pk
Department of Industries and Commerce AJ&K	www.industries.ajk.gov.pk

12. ANNEXURES

12.1. Income Statement

Calculations	SMEDA									
Income Statement	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Book-Multi colored (100 pages)	63,936,000	82,274,976	103,713,484	128,695,469	141,951,103	156,572,066	172,698,989	190,486,985	210,107,145	231,748,181
Book-Single colored (100 pages)	52,920,000	68,099,220	85,843,931	106,521,588	117,493,311	129,595,123	142,943,420	157,666,592	173,906,251	191,818,595
Notebook-Multi colored (80 pages)	20,160,000	25,942,560	32,702,450	40,579,653	44,759,357	49,369,571	54,454,636	60,063,464	66,250,001	73,073,751
Notebook-Single colored (80 pages)	51,030,000	65,667,105	82,778,076	102,717,246	113,297,122	124,966,725	137,838,298	152,035,643	167,695,314	184,967,931
Pamphlets (Set of 100)	27,648,000	35,578,368	44,849,074	55,652,095	61,384,261	67,706,840	74,680,644	82,372,750	90,857,144	100,215,429
Brochures (Set of 100)	27,648,000	35,578,368	44,849,074	55,652,095	61,384,261	67,706,840	74,680,644	82,372,750	90,857,144	100,215,429
Letterheads (100 pages)	40,320,000	51,885,120	65,404,900	81,159,305	89,518,714	98,739,141	108,909,273	120,126,928	132,500,001	146,147,501
Revenue	283,662,000	365,025,717	460,140,990	570,977,450	629,788,128	694,656,305	766,205,904	845,125,113	932,172,999	1,028,186,818
Cost of sales										
Paper Cost	192,780,000	248,075,730	312,717,177	388,042,927	428,011,349	472,096,518	520,722,459	574,356,873	633,515,630	698,767,740
Ink Cost	12,075,300	15,538,899	19,587,892	24,306,125	26,809,656	29,571,050	32,616,869	35,976,406	39,681,976	43,769,219
Front and Back Cover page for Book/Notebook	5,460,183	7,026,345	8,857,210	10,990,691	12,122,732	13,371,373	14,748,625	16,267,733	17,943,310	19,791,471
Lamination Cost	712,800	917,255	1,156,265	1,434,781	1,582,563	1,745,567	1,925,360	2,123,672	2,342,411	2,583,679
Other Materials Cost (Glue/ Pins, other materials etc)	7,711,200	9,923,029	12,508,687	15,521,717	17,120,454	18,883,861	20,828,898	22,974,275	25,340,625	27,950,710
Direct Electricity	1,218,169	1,533,472	1,890,990	2,295,426	2,476,765	2,672,429	2,883,551	3,111,351	3,357,148	3,622,363
Direct Labour	18,660,000	20,470,020	22,455,612	24,633,806	27,023,286	29,644,544	32,520,065	35,674,511	39,134,939	42,931,028
Factory vehicle running and maintenance cost	425,943	469,815	518,206	571,581	630,454	695,391	767,016	846,019	933,159	1,029,274
CTP Plates Cost	2,340,000	2,581,020	2,846,865	3,140,092	3,463,522	3,820,264	4,213,752	4,647,768	5,126,488	5,654,516
Machinery maintenance cost	1,745,000	1,924,735	2,122,983	2,341,650	2,582,840	2,848,872	3,142,306	3,465,964	3,822,958	4,216,723
Total cost of sales	243,128,595	308,460,320	384,661,888	473,278,797	521,823,620	575,349,870	634,368,901	699,444,573	771,198,644	850,316,723
Gross Profit	40,533,405	56,565,397	75,479,102	97,698,654	107,964,508	119,306,435	131,837,003	145,680,540	160,974,355	177,870,095
General administration & selling expenses										
Administration expense	5,580,000	6,121,260	6,715,022	7,366,379	8,080,918	8,864,767	9,724,650	10,667,941	11,702,731	12,837,896
Administration benefits expense	1,212,000	1,329,564	1,458,532	1,600,009	1,755,210	1,925,466	2,112,236	2,317,123	2,541,883	2,788,446
Building rental expense	3,645,000	4,009,500	4,410,450	4,851,495	5,336,645	5,870,309	6,457,340	7,103,074	7,813,381	8,594,719
Indirect Electricity	547,054	590,272	636,903	687,219	741,509	800,088	863,295	931,495	1,005,083	1,084,485
Communications expense (phone, internet etc.)	558,000	612,126	671,502	736,638	808,092	886,477	972,465	1,066,794	1,170,273	1,283,790
Office vehicles running and maintenance expense	425,943	469,815	518,206	571,581	630,454	695,391	767,016	846,019	933,159	1,029,274
Generator Running Expense	487,268	613,389	756,396	918,170	990,706	1,068,972	1,153,420	1,244,541	1,342,859	1,448,945
Office expenses (software, stationery, entertainment, janitorial servi	279,000	306,063	335,751	368,319	404,046	443,238	486,232	533,397	585,137	641,895
Promotional expense	1,418,310	1,825,129	2,300,705	2,854,887	3,148,941	3,473,282	3,831,030	4,225,626	4,660,865	5,140,934
Insurance expense	704,363	598,709	493,054	387,400	281,745	176,091	70,436	1,339,167	1,138,292	937,417
Professional fees (legal, audit, consultants, etc.)	50,000	55,150	60,830	67,096	74,007	81,630	90,037	99,311	109,540	120,823
Depreciation expense	11,165,524	11,165,524	11,108,724	11,310,514	11,310,514	11,233,001	7,943,558	21,141,097	21,035,310	21,411,285
Amortization of pre-operating costs	411,156	411,156	411,156	411,156	411,156	-	-	-	-	-
Amortization of legal, licensing, and training costs	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Bad debt expense	1,418,310	1,825,129	2,300,705	2,854,887	3,148,941	3,473,282	3,831,030	4,225,626	4,660,865	5,140,934
Subtotal	27,904,428	29,935,284	32,180,437	34,988,250	37,125,382	38,994,492	38,305,245	55,743,709	58,701,879	62,463,343
Operating Income	12,628,977	26,630,112	43,298,665	62,710,404	70,839,126	80,311,943	93,531,758	89,936,831	102,272,476	115,406,752
Other income (Scrap Sale)	276,035	304,466	335,826	370,416	408,569	450,652	497,069	548,267	604,738	667,027
Gain / (loss) on sale of machinery & equipment	-	-	-	-	-	-	17,450,000	-	-	-
Gain / (loss) on sale of office equipment	-	-	-	-	-	-	169,575	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	106,050	-	-	-
Earnings Before Interest & Taxes	12,905,011	26,934,579	43,634,491	63,080,820	71,247,695	80,762,595	111,754,452	90,485,098	102,877,215	116,073,778
Subtotal	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	12,905,011	26,934,579	43,634,491	63,080,820	71,247,695	80,762,595	111,754,452	90,485,098	102,877,215	116,073,778
Tax	3,545,775	4,562,821	5,751,762	7,137,218	7,872,352	8,683,204	9,577,574	10,564,064	11,652,162	12,852,335
NET PROFIT/(LOSS) AFTER TAX	9,359,236	22,371,757	37,882,729	55,943,602	63,375,344	72,079,391	102,176,878	79,921,034	91,225,052	103,221,443

12.2. Balance Sheet

Calculations	SMEDA										
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	1,000,000	5,762,112	23,643,993	39,661,855	60,472,164	76,463,675	89,637,853	101,744,493	194,625,130	294,292,424	457,344,918
Accounts receivable		19,428,904	22,215,333	28,259,134	35,312,275	41,122,109	45,357,686	50,029,528	55,182,569	60,866,374	67,135,610
Machinery Spares	290,833	351,585	425,027	513,810	621,138	750,887	907,738	1,097,354	1,326,578	1,603,684	-
Raw material inventory	4,557,073	6,468,205	8,993,458	12,309,213	14,975,499	18,219,327	22,165,797	26,967,108	32,808,427	39,915,027	-
Pre-paid building rent	-	334,125	367,538	404,291	444,720	489,192	538,112	591,923	651,115	716,227	-
Pre-paid insurance	704,363	598,709	493,054	387,400	281,745	176,091	70,436	1,339,167	1,138,292	937,417	-
Total Current Assets	6,552,269	32,943,640	56,138,403	81,535,702	112,107,543	137,221,281	158,677,622	181,769,573	285,732,111	398,331,152	524,480,528
<i>Fixed assets</i>											
Land	-	-	-	-	-	-	-	-	-	-	-
Building / Infrastructure- Renovation Cost	732,991	659,691	586,392	513,093	439,794	366,495	293,196	219,897	146,598	73,299	-
Machinery & equipment	69,800,000	59,330,000	48,860,000	38,390,000	27,920,000	17,450,000	6,980,000	132,595,658	112,706,309	92,816,960	72,927,612
Allied Equipment	66,000	42,900	19,800	86,891	56,479	26,067	114,395	74,357	34,319	150,605	97,893
Furniture & fixtures	395,000	335,750	276,500	217,250	158,000	98,750	750,362	637,808	525,254	412,699	412,699
Office vehicles	424,200	360,570	296,940	233,310	169,680	106,050	42,420	880,707	748,601	616,495	484,389
IT Equipment	1,070,000	695,500	321,000	1,463,365	951,187	439,010	2,001,344	1,300,873	600,403	2,737,100	1,779,115
Office equipment	678,300	576,555	474,810	373,065	271,320	169,575	67,830	1,288,533	1,095,253	901,973	708,693
Security Against Building	911,250	911,250	911,250	911,250	911,250	911,250	911,250	911,250	911,250	911,250	911,250
Total Fixed Assets	74,077,741	62,912,216	51,746,692	42,188,225	30,877,711	19,567,197	10,449,935	138,021,638	116,880,541	98,732,936	77,321,651
<i>Intangible assets</i>											
Pre-operation costs	2,055,778	1,644,622	1,233,467	822,311	411,156	-	-	-	-	-	-
Legal, licensing, & training costs	25,000	22,500	20,000	17,500	15,000	12,500	10,000	7,500	5,000	2,500	-
Total Intangible Assets	2,080,778	1,667,122	1,253,467	839,811	426,156	12,500	10,000	7,500	5,000	2,500	-
TOTAL ASSETS	82,710,787	97,522,978	109,138,562	124,563,738	143,411,409	156,800,978	169,137,557	319,798,710	402,617,652	497,066,588	601,802,179
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		10,132,573	12,902,087	16,148,742	19,876,717	21,990,566	24,337,262	26,944,130	29,842,037	33,065,922	34,580,070
Total Current Liabilities	-	10,132,573	12,902,087	16,148,742	19,876,717	21,990,566	24,337,262	26,944,130	29,842,037	33,065,922	34,580,070
<i>Other liabilities</i>											
Total Long Term Liabilities	-	-	-	-	-	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	82,710,787	82,710,787	82,710,787	82,710,787	82,710,787	82,710,787	82,710,787	128,588,195	128,588,195	128,588,195	128,588,195
Retained earnings		4,679,618	13,525,688	25,704,208	40,823,905	52,099,624	62,089,508	164,266,386	244,187,420	335,412,472	438,633,915
Total Equity	82,710,787	87,390,406	96,236,475	108,414,996	123,534,692	134,810,412	144,800,295	292,854,581	372,775,615	464,000,667	567,222,110
TOTAL CAPITAL AND LIABILITIES	82,710,787	97,522,978	109,138,562	124,563,738	143,411,409	156,800,978	169,137,557	319,798,710	402,617,652	497,066,588	601,802,179

12.3. Cash Flow Statement

Calculations	SMEDA										
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		9,359,236	22,371,757	37,882,729	55,943,602	63,375,344	72,079,391	102,176,878	79,921,034	91,225,052	103,221,443
Add: depreciation expense		11,165,524	11,165,524	11,108,724	11,310,514	11,310,514	11,233,001	7,943,558	21,141,097	21,035,310	21,411,285
amortization of pre-operating costs		411,156	411,156	411,156	411,156	411,156	-	-	-	-	-
Accounts receivable		(19,428,904)	(2,786,429)	(6,043,801)	(7,053,142)	(5,809,834)	(4,235,577)	(4,671,842)	(5,153,041)	(5,683,805)	(6,269,236)
Finished goods inventory		-	-	-	-	-	-	-	-	-	-
Raw material inventory	(4,557,073)	(1,911,132)	(2,525,254)	(3,315,754)	(2,666,286)	(3,243,828)	(3,946,470)	(4,801,311)	(5,841,318)	(7,106,600)	39,915,027
Pre-paid building rent	-	(334,125)	(33,413)	(36,754)	(40,429)	(44,472)	(48,919)	(53,811)	(59,192)	(65,112)	716,227
Advance insurance premium	(704,363)	105,654	105,654	105,654	105,654	105,654	105,654	(1,268,731)	200,875	200,875	937,417
Accounts payable		10,132,573	2,769,514	3,246,655	3,727,974	2,113,849	2,346,696	2,606,868	2,897,908	3,223,884	1,514,148
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(5,552,269)	9,441,730	31,407,569	43,272,326	61,634,214	68,091,135	77,379,424	101,744,493	92,880,637	102,554,998	163,052,494
Cash provided by / (used for) financing activities	82,710,787	-	-	-	-	-	-	45,877,407	-	-	-
<i>Investing activities</i>											
Capital expenditure	(76,158,519)	-	-	(1,550,256)	-	-	(2,115,739)	(135,515,260)	-	(2,887,704)	-
Cash (used for) / provided by investing activities	(76,158,519)	-	-	(1,550,256)	-	-	(2,115,739)	(135,515,260)	-	(2,887,704)	-
NET CASH	1,000,000	9,441,730	31,407,569	41,722,070	61,634,214	68,091,135	75,263,686	12,106,640	92,880,637	99,667,294	163,052,494

13. KEY ASSUMPTIONS

13.1. Operating Cost Assumptions

Table 35: Operating Cost Assumptions

Description	Details
Machinery depreciation	15%
Vehicle depreciation	15%
Office equipment depreciation	15%
IT equipment depreciation	35%
Allied equipment depreciation	35%
Inflation rate	10.3%
Wage growth rate	9.7%
Gas price growth rate	7.9%
Electricity price growth rate	7.9%
Office equipment price growth rate	9.6%
Office vehicle price growth rate	11%

13.2. Revenue Assumptions

Table 36: Revenue Assumptions

Description	Details
Service Charges growth rate	10.3%
Initial capacity utilization	60%
Capacity growth rate	10%
Maximum capacity utilization	90%

13.3. Financial Assumptions

Table 37: Financial Assumptions

Description	Details
Project life (Years)	10
Debt: Equity	0:100
Discount Rate used for NPV (100% Equity)	25%

13.4. Debt-Related Assumptions

Table 38: Debt-Related Assumptions

Description	Details
Project Life (Years)	10
Debt: Equity	50:50
Discount Rate	22%
Debt Tenure	5 years
Grace Period	1 Year
Interest Rate (KIBOR+3%)	19%

13.5. Cash Flow Assumption

Table 39: Cash Flow Assumptions

Description	Days
Accounts receivable cycle (in days)	25
Accounts payable cycle (in days)	15

Small and Medium Enterprises Development Authority

HEAD OFFICE

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

www.smeda.org.pk, helpdesk@smeda.org.pk

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
3 rd Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 helpdesk.punjab@smeda.org.pk	5 TH Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 helpdesk-khi@smeda.org.pk	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 helpdesk-pew@smeda.org.pk	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 helpdesk-qta@smeda.org.pk