



PUNJAB BOARD OF INVESTMENT & TRADE

Steel Multi-Grain Silo

Business Plan

Dr. Suhail Saleem

Director Projects

Cell: +9203458880151 +92-333-8918507

Punjab Board of Investment & Trade

23 Aikman Road, GOR 1, Lahore, Pakistan

PABX: + 92 (0) 42 99205201 - 06

Fax: = 92 (0) 42 99205171 Web: [http:// www.pbit.gop.pk](http://www.pbit.gop.pk)





Contents

Executive Summary	4
Rationale	4
Project Summary & Funding Requirements	4
Capital Structure	4
Financial Analysis.....	5
Market Overview	5
Legal Structure of the Project	6
Companies.....	6
Private Company.....	6
Single-Member Company	6
Public Company.....	7
Implementation Plan	7
Financial Plan for Projects	8
Assumptions.....	8
Performa Financials	9
Project Financial Structure.....	10
Sensitivity	11
SWOT Analysis	12
Strengths	12
Weaknesses	12
Opportunities.....	13
Threats	13



Executive Summary

Rationale

The Silo project has one overriding aim in mind:

Enhance Punjab province's food security by increasing the long term multi-grain storage and management capacity of the province.

The most interesting aspect, from an investor point of view is that considering the above, at present, long term storage capacity in the form of proper silos is virtually non-existent. Considering the fact that the Government procures and stores grain as a policy, any investment in a silo project has an automatic and secure revenue stream in the form of rentals.

The need of the industry today is modern silos, which can store grain that may effectively be fumigated and provide protection against insect infestation. Godowns and warehouses do not provide adequate protection against potential infestation. They cannot be made gas impermeable to facilitate fumigation. They do not have temperature or humidity control required to preserve the quality wheat.

Silo projects will ensure bringing the grain storage industry in Pakistan in line with the international best practices in multi-grain storage and handling. The existing storage facilities are insufficient for the large increase in production and this has co-relation with food security.

Project Summary & CAPEX Requirements

Total land required → 2 Acres (8 Silos to be developed)

6,250 ton capacity per Silo → Total capacity 50,000

Project Location → Multiple locations in Punjab province.

Total estimated CAPEX → PKR 370 Million (USD 3.5 Million)

Capital Structure

The project has been conceived with a 0% debt; however leverage would lead to higher net returns for the investor.



Financial Analysis

Project IRR → 17.53%

Project NPV → PKR 320 million

Profit after tax (Year 1) → PKR 14 Million (USD 133,680)

Market Overview

Pakistan is primarily an agrarian economy with the agriculture sector contributing over 22% to the national GDP. Pakistan has two principal crops seasons, namely the *kharif*, the sowing season of which begins in April-June and harvested during October-December while *rabi*, begins in October-December and harvested in April-May. Besides this, Punjab's prime natural resources are arable land and water. About 69% of Punjab's total land area is under cultivation and is watered by one of the largest irrigation systems in the world¹. Punjab irrigates three times the area than Russia.

Wheat is the main Pakistani dietary staple and the GOP considers it the key strategic commodity. 80 percent of farmers (45 percent of the total population) depend on it for their livelihood. As a result, it is the basis of the country's food security.

Considering the above, the GOP's agricultural policy is heavily centered on wheat through price support programs, storage strategies and export interventions. In 2014/15 wheat production was at 25.0 million tons.

Grain storage in Pakistan is primarily in the public sector and is the responsibility of Pakistan Agricultural Storage and Services Corporation (Passco) as well as the four provincial food departments. Passco and the provincial departments are also responsible for regulation of agricultural commodity markets and for activities of provincial seed and fertilizer storage agencies.

Self-sufficiency in food grains requires adequate facilities for its storage. The existing storage facilities available are insufficient at various levels for large increase in production. Large-scale

¹ 2009 Statistical Pocket Book of the Punjab, Bureau of Statistics



grain storage problem exist due either to traditional methods of seed storage or shortage of commercial grain storages and their management.

This, therefore, presents a highly lucrative opportunity for investing in the agribusiness value chain for “best practice storage solutions” of agricultural produce where current post-harvest losses can be transformed into economic gain.

Legal Structure of the Project

The final legal structure of the project will depend on the decision of the investors and other potential stakeholders who undertake the project and financial model they settle upon.

The most common form of legal entities that are formed in the sector is the Private Limited Companies or Special Purpose Vehicles, which can, in the long run, be listed as Public Limited Companies.

Companies

Private Company

A private company can be easily formed by a minimum of two members (except for a single member company) and may commence its business immediately after its incorporation. A private company, through its Articles of Association (AoA):

- Restricts its members to transfer shares
- Limits the number of its members to fifty
- Prohibits any invitation to the public to subscribe for its shares or debentures.

Single-Member Company

An individual is entitled to obtain corporate status by forming a single member company and avail privileges of limiting the liability. All the shares are vested with a single member, however he / she is required to nominate two individuals, one of whom shall become nominee director in case of death of the single member and the others shall alternate nominee director to work as a nominee director in case of non-availability of the nominee director. A single-member company is required to appoint a qualified company secretary and to write “SMC” in addition to Private Limited with its name.



Public Company

A public company can be formed by three members or more. It is entitled to commence business after obtaining a commencement of business certificate from the Registrar of Companies. A public company does not have any restrictions with regard to the maximum number of members and transferability of the shares. A public limited company should have a minimum of three members and have the option to get their securities listed on a stock exchange. A listed company may also buy back its own shares subject to conditions specified in the Companies Ordinance, 1984

A company cannot be listed unless it has made a public issue which is subscribed by at least 500 members. However; this is applicable for listing of shares. For listing of securities other than shares, minimum number of members is three.

Implementation Plan

- **Selection of site**
- **Feasibility study and External environmental analysis**
- **Incorporation of a separate entity** (eg. Private company)
- **Approval of the project from Concerned Development Authority**
 - **Steps involved in the approval process:**
 - Submission of an application to department
 - Detailed attachments with an application (CNIC, Personal Details)
 - Meeting the evaluation criteria for an application
 - Processing of an application
 - Preliminary planning permission
 - Submission of the plan
 - Scrutiny of the ownership documents (name of mauzas, marking of land to be acquired)
 - Water supply and drainage plan



- **Construction Phase**
 - Completion of site preparation tasks
 - Grading and road improvements/construction where applicable
 - Equipment transportation
 - Equipment installation
- **Maintenance**
 - Day to day maintenance
 - Long-term maintenance and up-keep
 - Potential alterations and extensions

Financial Plan for Projects

Financial planning is a critical activity for every business. For new enterprises, the preparation of financial projections is integral to the business planning process. For larger sectors, financial planning forms a part of annual budgeting and plays an important role in long-term planning, business appraisals, corporate development etc.

Assumptions

In practice, financial planning models are much more complex as they must accommodate multiple time periods (months, quarters and years) and handle hundreds of variables relating to sales, costs etc. The volume of data mounts up very quickly when each variable is multiplied by the time horizon, for example, by twelve months. The list below is of typical assumption and variables used to generate a final set of financial projections:

Assumptions and Estimates		Units	Basis
Capacity Per Silo	6,250	Tons	
Number of Silos	8	Units	
Total Capacity in Tons	50,000	Tons	
6250 Ton Steel Silo Cost	46,256,472	PKR	* PBIT Internal Research Siraj Sons (Prefabricated Steel Silo @ \$154,000 installed + PKR 3.5 Million base Cost)
Total Cost of Silos	370,051,775	PKR	* Total Cost includes cost of foundation, land, construction, machinery etc.
Land Cost Per Acre	6,500,000	PKR	Calculated @4 Million / Acre
Total Land Required	2	Acres	* 1 Acre required for 2 Silos
Total land Cost	13,000,000	PKR	
Total Capex Required	370,051,775	PKR	
Total Capex in Dollars	3,558,190		Using Exchange Rate of PKR 104/\$
Capacity Utilization(tonnes)	40,000	Tons	* Calculated at 80% of total capacity as per discussion with the Food Dept. Punjab
Rental Rate(per ton)	2,000	PKR	*FC started the quote price from 3000/ton
Growth Rate/ Escalations	10.00%		*inflationary growth
Operating Cost	2.00%		*CAPEX includes wages,salaries,utility expenses and other general daily expenses
Maintenance & Repairs	1.50%		*CAPEX includes general up-keep expenses of the facilities
Depreciation rate (20 Years)	5.00%		* 20 Year Useful Life
Discount Factor	10%		*keeping in view of the KIBOR rate of 6.63% + 400 bps
Corporation Tax	33%		



Estimate for Wheat Storage Facility of 50,000 Metric Tons							
	Description	Capacity	Unit		Cost/Unit	Extended Price	Origin
Land							Local
	220x360						
	No. of Acres		2		6,500,000	13000000	
	Boundary Wall @ 1200/Running Foot		800	Running Feet	1500	1200000	
	Leveling Charges		1		500,000	500000	
	Office + Accommodation @ 2000/sq foot, 4x12x12		576	Sq-Feet	2000	1152000	
Grain Receiving Civil Works							Local
	Parking Shed for 20 Vehicales @ 500/sq-ft		15,000	Sq-Feet	500	7500000	
	Roads for Vehicles Mobility @ 500/sq-ft						
	Weighing Bridge Civil Work		1		200,000	200000	
	Weighing Scale		1		2,500,000	2500000	
	Head House Tower, 4-Story Building		1		20,000,000	20000000	
	Dumping Unit for 4-vehicles Unloading at a time						
	Grating Unit						
	Pre Cleaning Unit						
	Aspiration & Dust Collection Unit						
	Dumping Hoppers & other Mechanical works		1		2,500,000	2500000	
Silo Foundation Civil Works	Foundation Design Works		1		1,000,000	1000000	Local
	Foundation Civil Works		8		6,000,000	48,000,000	
Grain Cleaning							
	Elevators	100 mt/hr	70	ft	20,500	1435000	USA
	Conveyors	100 mt/hr	50	ft	18,000	900000	USA
	Wheat Cleaner	100 mt/hr	1		6,500,000	6500000	USA
	Dust Collector	100 mt/hr	1		2,500,000	2500000	USA
	Graters	100 mt/hr	1		1,500,000	1500000	Local
	Bulk Weighing Scale	100 mt/hr	1		10,500,000	10500000	USA
Steel Silos			8		10,000,000	80000000	USA
	Diameter			72-ft			
	Height			68-ft			
	Capacity with 6% Compaction Factor			6319 mt			
	Standard Ladders, Cages & Platforms						
	Grain Conditioning						
	Centralized PC Based Temperature Monitoring System		1	1-Set	9,000,000	9000000	USA
	Silo Aeration System		8		550,000	4400000	USA
	High Speed Centrifugal Fans Auto controls		16	2/Silo	320,000	5120000	USA
	Ozonator for Fumigation Purpose		1		12,500,000	12500000	
	Air Flow Rate	.12 CFM/Bushel					
	Roof Exhaust Fans		16	2/Silo	260,000	4160000	USA



	Loading System						
	Drag Conveyors	100 mt/hr	625	Feet	18,000	11250000	USA
	Bucket Elevators	100 mt/hr	135	Feet	20,500	2767500	USA
	Truck Loading Bucket Elevator with Metal Chute	100 mt/hr	50	Feet	20,500	1025000	USA
	Unloading System						
	Side Discharge System	100 mt/hr	8		500,000	4000000	USA
	Sweep Augers	50 mt/hr	8		450,000	3600000	USA
	Unloading Augers	100 mt/hr	8		850,000	6800000	USA
	Central Unloading Conveyor	100 mt/hr	300	Feet	18,000	5400000	USA
	Support Structure & Installations		1		15,000,000	15000000	Local
	Towers						
	Cat Walks						
	Pneumatic Controls		1		3,500,000	3500000	Local
	Mechanical Equipments Erection & Installation Works		1		7,500,000	7500000	Local
Electrical Works	Main Control Room		1		7,500,000	7500000	Local
	Control Panels						
	Safety Switches						
	Electrical Cables & Wiring						
	Transformer		1		1,500,000	1500000	
	Interlocking Controls						
	Miscellaneous						
	Total				305909500		
Duties & Inland Freights	Duties						
	Total Import Values				173357500		
	37% of Import Values for Commercial Importers				237499775		
	34% of Import Values for Manufacturer				232299050		
	GRAND TOTAL @ 37%					370,051,775	
	GRAND TOTAL @ 34%					364,851,050	
Silo HS CODE	9406-0030						
		46,256,472	370,051,775.00				

Financials

Period	0	1	2	3	4	5
Initial Investment	(370,051,775)	-	-	-	-	-
Rental Income		80,000,000	88,000,000	96,800,000	106,480,000	117,128,000
Operating Costs		7,401,036	8,141,139	8,955,253	9,850,778	10,835,856
Maintenance and Repairs		5,550,777	6,105,854	6,716,440	7,388,084	8,126,892
Depreciation		18,502,589	18,502,589	18,502,589	18,502,589	18,502,589
Total Operational Cost		31,454,401	32,749,582	34,174,281	35,741,451	37,465,337
Profit		48,545,599	55,250,418	62,625,719	70,738,549	79,662,663
Tax	(370,051,775)	16,020,048	18,232,638	20,666,487	23,343,721	26,288,679
Profit After Tax		14,022,963	18,515,191	23,456,643	28,892,239	34,871,396
Net CashFlows(PAT + Dep'n)	(370,051,775)	32,525,551	37,017,780	41,959,231	47,394,828	53,373,984
NPV		310,160,609				
IRR		17.53%				
Payback Period		5.93Years				



Project Financial Structure

Project financing structures vary depending upon the project. Usually, a project financing structure involves a number of equity investors, known as 'sponsors', as well as a 'syndicate' of banks or other lending institutions that provide loans to the operation.

They are most commonly non-recourse loans, which are secured by the project assets and paid entirely from project cash flow, rather than from the general assets or creditworthiness of the project sponsors, a decision in part supported by financial modeling. The loans could also be secured against the revenue-producing contracts. Project lenders are given a lien on all of these assets and are able to assume control of a project if the project company has difficulties complying with the loan terms.

A typical project finance structure would be between the Government, Investors, Contractors, Operators, Suppliers, Buyers and Banks. These financing structures would depend on project finance documentation such as:

- Interest rates for Agri Projects; Typically 400 – 450 basis points over Kibor (10 – 11%)
- Engineering, Procurement and Construction Contract (EPC)
- Operational and Maintenance Agreement
- Concession Deeds (Required if Govt Agency is the Contracting Party)
- Shareholders Agreement / JV Agreement
- Loan Agreement

Sensitivity

Both scenario and sensitivity analysis can be useful when evaluating the best possibly investment eventuality. The results of a sensitivity analysis will give the investor an idea of the uncertainty involved with the investment.

In this type of analysis, the investor will make their decision based on how reliable they feel the outcome is based on a certain variable. Scenario analysis considers a number of uncertainties and the possible ways in which they could play out. When conducting scenario analysis, the investor makes a decision based on which of the outcomes they've looked at will be most likely to happen.

In some cases, both types of analysis are used together. By understanding the details associated with sensitivity analysis vs. scenario analysis, investors can determine which one carries more



weight for evaluating their particular investment. In the end, it comes down to the investor's level of comfort with a particular business venture, and this level will vary from person to person.

For the purpose of this project, sensitivities for the following input variables will be considered key.

- Rentable Income : PKR 2000/ton
- Tax rates: 33% for Corporate Entities ;
- Operating Cost: Typically 2% of CAPEX;
- Maintenance & Repairs: 1.5% of CAPEX
- Debt Equity mix: Typically: Project is conceived at 0% Debt. Use of Debt will leverage returns upwards.
- Target finished stocks: Not Applicable ;
- Depreciation rates: Typically 20 years Useful Life for Steel Silo. Land is not Depreciated;

Different Scenarios of the above Input Variables will change the following Output Variables

- Net Present Value
- Internal Rate of Return ;
- Payback Period ;

SWOT Analysis

Strengths

- Wheat is produced in abundance and is the main staple food for most of the population in Pakistan and it is the largest grain source of the country. (Annual production is estimated at 25 million tons)
- Wheat contributes 13.1 percent to the value added in agriculture and 2.7 percent to GDP
- As a policy, the Government not only provides a fixed support price for wheat procurement, but in addition, the Government also arranges and rents storage facilities (whatever currently available in the market) for the grain procured.

Weaknesses

- The Government lacks the resources (financial or otherwise) to develop good quality silo storage facilities.



- Lack of training and awareness in both HR and procedural aspects which might have an adverse impact on how grain is handled and stored.

Opportunities

- Urgent and dire need for storage silos. The reason is that currently, a large percentage of wheat procured gets destroyed in the poor standard storage facilities available (currently either local mud bins are used for storage or jute bags are procured for storage of wheat either in makeshift warehouses or even in the open)
- First Mover Advantage.

Threats

- Competition from new entrants in Silo construction and management business. This however, will possibly become a threat somewhere in the future. At present there is a tremendous amount of headroom for new entrants.