

ARTICLE ON
GREENFIELD PROJECTS AND ITS FINANCING
(PART-1)

Introduction

A Greenfield project/investment means a project/investment which is started from scratch level i.e. creation of new industrial factory & infrastructure and which is not constrained by prior work. It is constructing on unused land where there is no need to remodel or demolish an existing structure. But over time the term has become more metaphoric.

Some examples of Greenfield projects are new factories, power plants or airports which are built from scratch. On the contrary those facilities which are modified/ upgraded are called Brownfield projects, viz. expansion, diversification and modernization of existing industrial concern.

Greenfield Investing is also termed as an alternative to other forms of investment, such as mergers and acquisitions, joint ventures, or licensing agreements. Greenfield Investing is also mentioned in the context of Foreign Direct Investment. In Foreign direct investment where a parent company starts a new venture in a foreign country by constructing new operational facilities from the ground up. In addition to building new facilities, most parent companies also create new long-term jobs in the foreign country by hiring new employees.

Green field investments are also occur when multinational corporations enter into developing countries to build new factories and/or stores. Developing countries often offer prospective companies tax-breaks, subsidies and other types of incentives to set up green field investments. Governments often see that losing corporate tax revenue is a small price to pay if jobs are created and knowledge and technology is gained to boost the country's human capital.

Valuation of Green Field Project

Typically for project valuation the different risk return models of finance help us determine the discount rate to be applied on the expected cash flows. The common practice is to look up the cost of capital of the firm undertaking the project if the project has the same risk profile as the firm's existing operations. If the project is in a new line of activity we seek the cost of capital for "typical" firms engaged in that line of activity. If using CAPM (Capital Asset Pricing Model) the almost standard practice is to go for "bottom up beta".

The cost of capital so obtained is for running firms. Is it justified to take the same cost for green field project? Greenfield projects create facilities from scratch. Even if a project follows a standard, tried and tested technology still such a project should have more risks than established firms in that line.

After all, there can be delays in the start of work, under-estimation of costs and deadlines, uncertainty over climatic and geological conditions, very high initial fixed costs with no guarantee as to when cash flows will be positive, etc. Another important feature of a new project is potentially conflicting relationships with subcontractors. Thus new projects launched in different sectors have the risks associated with those sectors (captured in the cost of capital of established firms) and many other risks that are not captured in capital market data as these risks are not present (as they are now overcome) in the firms which supply those capital market data.

In a recent research, researchers (one from BNP Paribas and the other from ESCP Europe) examined the need of factoring in a specific Greenfield risk for projects involving the construction of new facilities. They sought from capital markets data whether firms specializing in creation of new facilities are perceived as being more risky than companies in the same sector that did not invest in new facilities.

If investors are assumed to be diversified, only demanding extra return for the firm specific risks they assume, the beta of Greenfield companies should be higher than companies that only replace or upgrade existing assets. They identified such firms in the energy sector - the wind farms and energy transportation segments. Both types of firms operate in same regulatory environment and their risks are comparable at most levels, except for the Greenfield risks. Firms in energy transportation have a base of established assets, but wind farms firms will need to build new infrastructures on a massive scale over coming years. This led them to conclude that the wind farm risk is a Greenfield risk.

They identified three listed pure play firms in the wind farm segment and four firms active in energy transportation. Using this sample, they extracted the Greenfield risk premium. By focusing on firms specializing in wind farms and energy transportation they avoided some of the errors that can arise with wide, multi-sector samples, but on the other hand the sample is perhaps less representative of the risk they are trying to measure.

They found the weighted average cost of capital of wind farm firms is higher than that of energy transportation firms and that the expected additional return from wind farm firms is between 1.85% and 2.28%.

The research has some design limitations- first the sample size is rather small but more importantly the construction risk for wind farms may not necessarily be comparable to the construction risks in other sectors. We must also note that generally there is a wide margin of error when estimating the parameters required for computing the cost of capital.

Notwithstanding these limitations, the researchers recommend using a Greenfield premium of between 1.5% and 2.5%, when valuing such projects, which is compatible with their simulations and also consistent with the practices of a number of firms.

Appraisal of Project

In case of greenfield projects, bank normally ask for technical and finance appraisal done by some approved agency which can give unbiased judgment, "whether the project is technically and financially viable or not". The agency does the thorough study about the project. Following may be the area/scope of study for giving the final verdict regarding the project under consideration:

1. Technical aspects of the project i.e. technical feasibility

- a. Availability of the basic infrastructure i.e. land and building, availability of water & power, pollution clearance, environmental issues
- b. Licensing/registration requirements i.e. industrial licence, licence to use the land for industrial purpose if the same was not marked industrial previously, SSI registration, licence to start a project which is in restricted list such as hazardous in nature.
- c. Selection of technology/technical process i.e. whether the technology is new or old, source of the machines (imported or indigenous), study about the suppliers, availability of the service centers for repair and maintenance, process study (whether the process are clearly defined or not). Check out that the technology should not be outdated in the near future. For example flexible packaging system is replacing the existing PVC/PET technology.
- d. Availability of suitable machinery/raw materials/skilled labour etc i.e. whether the machines are suitable for the product under consideration, whether skilled workers are available or not, training of the factory in charge, supervisors & machine operators. Source of raw materials- whether the same is easily available or not.

2. Management Competence i.e. study about following aspects:

- a. If the promoters are new in that particular business, than the entire background of the promoters needs to be study. Thorough study of the previous experience and the project implemented by the promoters should be done.
- b. Whether the existing business are profitable or not
- c. Prior history of successfully implementing the project is available or not
- d. If the project under consideration is backward integration than it may be considered that promoters are not new in that particular segment and they might understand the market and technology.

- e. Net worth of the promoters which indicates the ability of the promoters to bring their contribution in the business
 - f. Technical capabilities of the promoters and supporting staff.
 - g. Educational background of the promoters and key executives require to be study
3. **Commercial Viability:** A project is considered successful only if it is commercially viable. In a layman language demand of the product is either created or already existed than only a relevance of a project to manufacture that particular product arises. For example ITC launched "Bingo" with a view to capture and penetrate the existing market where "Lays" or other some similar products are known among the public and have huge demand. It means demand need not to be created and just information about the product need to spread with strong advertisement and distribution networks.

Hence a market study needs to be done to understand the demand and supply of that particular product in which the company is going to invest. Whether the product may penetrate in the market or not if the existing conditions persists.

4. **Financial Viability:** No corporate house may survive if the project could not give the profit ultimately. The main aim of any investor while investing in a project is that it might give handsome returns that's why they are taking risk of investing such an huge amount.

Cash flow should be able to meet the operating costs, recovers the fixed costs, meet out the cost of interest and ultimately give the returns to investors. Hence after taking into consideration the entire cost of project, estimation the production capabilities, finished product pricing, and all other operational and fixed costs, the future cash flows are works out. Important/key parameters such as Internal Rate of Returns (IRR), DSCR, Debt: Equity Ratio, Current Ratio, Working Capital Cycle, , Payback period, Break-Even analysis, Sensitivity Analysis, Profitability etc are works out which depicts whether a project is financially viable or not.

5. **Economical, political and environment viability:** Study the government policies, views of the political parties regarding particular sector etc. Study about concessions in excise, sales tax and income tax etc along with the grants to have projects in particular region or district. For example to develop/build-up the units in Sansarpur Industrial Area, HP the government offering exemptions from various taxes. Similar is the case with units in Special Economical Zones (SEZ) which enjoys the privilege to have concession in various taxes.

Government views and policies in relation to projects seeking foreign investments in the form of FDI, ECB, PE, JV, VC and other forms of investments.

Clearance from Ministry of Environment and Forest (MOEF) should be placed so that any future constraints in implementation of the project to the extent of environment issues are concerned could be checked timely. For example "Vedanta" is facing the issues of non-clearance for its project site at Niyamgiri. Similar issues are faced by Maharashtra Government in its PPP project with Reliance for building up new Airport in Mumbai.

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