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ECONOMIC ANALYSIS OF ENERGY CONSERVATION

5.1. ECONOMIC ANALYSIS OF INVESTMENT

The objective of financial management is profit maximisation and the objective of a firm is to maximise its wealth. In the field of energy management, energy conservation, investment would be required to meet out new technology. The result of investment is not only limited to energy savings but other associated benefits such as improved product quality, increased productivity etc. are there.

The investment decisions are commonly known as capital budgeting or capital expenditure decisions. The capital budgeting involves the following steps :

1. Consideration of investment proposals including alternatives.
2. Application of suitable evaluation technique for selecting the project.
3. Estimation of profits, cash flows and analysis of cost benefit of the project or scheme.
4. Estimation of available funds and utilisation thereof.

The need for investments in energy conservation can arise under following circumstances

1. For new equipment, process improvement etc.
2. To provide staff training
3. To implement or upgrade the energy information system.

The plan to purchase plant, machinery and equipment becomes a capital budget, the decision making process necessary to develop a wise plan is called capital budgeting.

The following are some of the cases where heavy capital investment may be necessary:

1. Replacement
2. Expansion
3. Diversification
4. Research and Development
5. Miscellaneous.

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Investment Decision or Capital Budgeting Decision

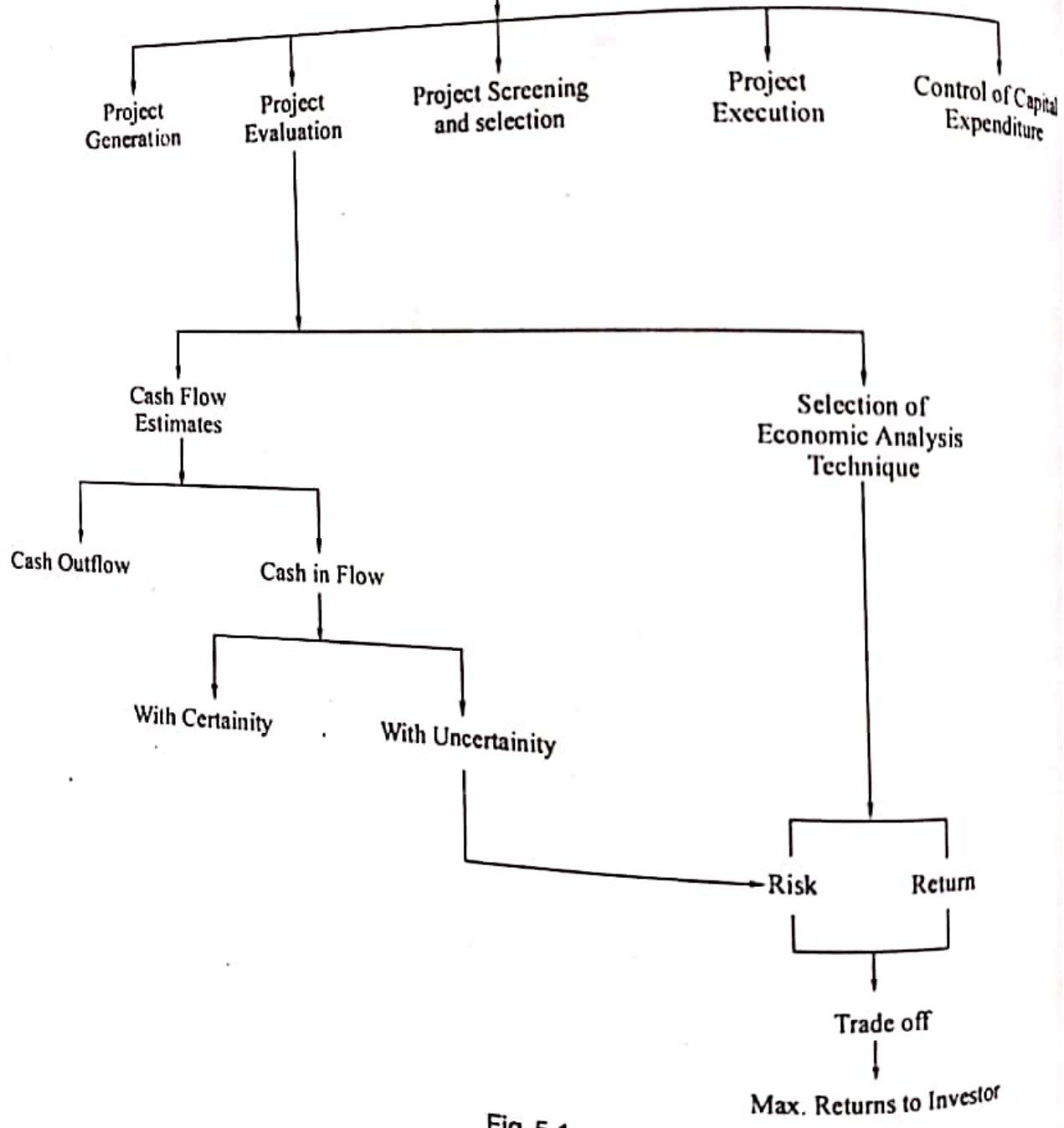


Fig. 5.1.

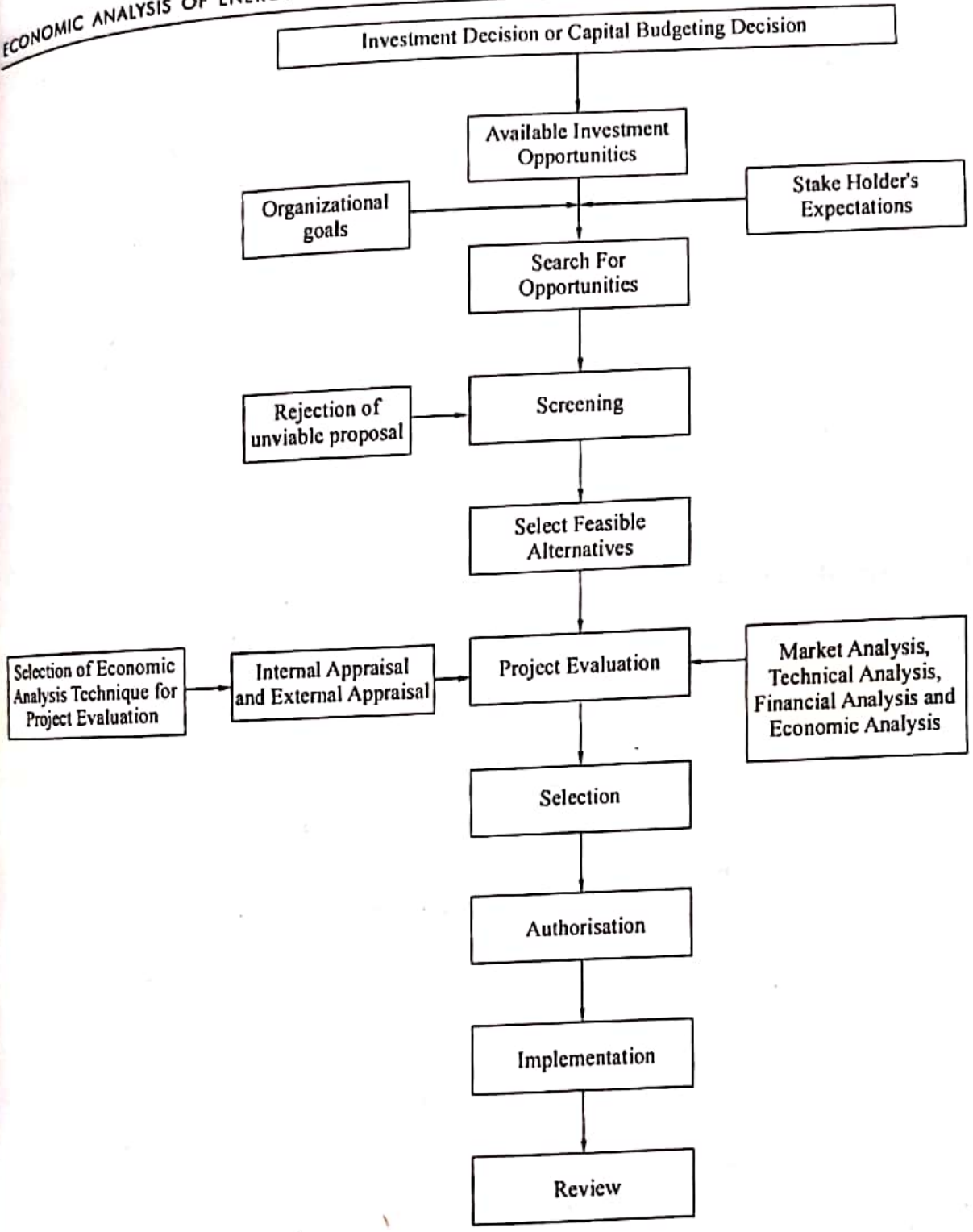


Fig. 5.2.

5.2. ECONOMIC ANALYSIS TECHNIQUE

Before investing in energy equipment, first of all the organisation decides to invest in increasing its energy efficiency. The method adopted for appraisal of capital investment proposals should be a sound one. Any appraisal method should provide the following :

- (i) A basis of distinguishing between acceptable and non-acceptable projects.
- (ii) Ranking of projects in order of their desirability.