Exploratory Note 24

Capital Budgeting Basics: Introduction and

Incremental Cash Flow

**INTRODUCTION**

Though not traditionally defined this way, a firm is a collection of projects—without projects, either current and/or expected, a firm has neither purpose nor foundation for value. The decision-making process dealing with project selection is known as capital budgeting and, needless to say, firms which make better capital budgeting decisions outperform, on average, those which do not. The next three sessions are designed to introduce you to the valuation of such projects and, by extension, firms under conditions of both certainty and uncertainty. Tonight, we address the valuation of projects in two exploratory notes.

**CAPITAL BUDGETING – AN INTRODUCTION**

The idea of capital budgeting has been mentioned a time or two this semester. What is capital budgeting?

Why is capital budgeting so important?

So, from a finance perspective, a firm pursues projects—that is, the firm makes risky investments—with the expectation of realizing profits sufficient to cover the cost of capital (the cost of the funds used to pursue the projects) and then some. Now, because companies typically do not have unlimited resources, they must optimize project selections. In other words, the firm must be sure to select the projects which will generate the **MOST** value (remember: this is finance; all we care about is money). How do you think we gauge, ahead of time, whether or not a project is likely to be a good one? And what qualifies as “good” anyway?

**INCREMENTAL CASH FLOW – THE BASIS FOR GOOD DECISIONS**

Good capital budgeting tools all analyze cash inflows and outflows. Before we go into any more depth, however, it is important to establish which cash flows are relevant when it comes to analysis. This brings us to incremental cash flow which can be defined as follows:

*Incremental cash flow equals corporate cash flow with the project minus corporate cash flow without the project.*

It is incremental cash flow *only* which is relevant to deciding whether or not to pursue a given project. In other words, a project must be able, on an expected basis, to cover outflows caused by the project itself, but should not be held responsible for outflows that will happen regardless of whether the project is accepted. Is this reasonable? Well, consider this: if office overhead is going to be one million dollars with or without a given project being pursued, should the project necessarily be rejected if it does not cover all or part of this million dollars? Why or why not?

What about the salary of a worker who must be added in order to carry out a project? Is this a relevant cash flow? In other words, should a project in all likelihood be expected to cover this type of cash flow?

**SPECIAL CASH FLOW TYPES – WHICH ARE INCREMENTALLY RELEVANT?**

There are a number of cash flow types, some incrementally relevant and others not, which are deserving of special consideration: sunk costs, opportunity costs, side effects/erosion, net working capital, and tax effects.

***Sunk Costs***

What are sunk costs? Are they relevant to capital budgeting decision making?

For instance, if a pharmaceutical company has invested $100,000,000 in the development of a drug, should this impact the firm’s decision as to whether or not to continue to invest in the project?

What might lead decision makers to take sunk costs into consideration? Was there a behavioral principle that we talked about earlier in the semester which might play a role?

***Opportunity Costs***

What about opportunity costs? How do opportunity costs come up in business? Are they relevant?

If you own a building and can potentially lease it, should this be taken into consideration when you are contemplating whether or not to use it for a manufacturing project?

***Side Effects/Erosion***

What is erosion in a business sense? Is it relevant?

If a project is going to lead to erosion, does that automatically mean that the project should be rejected?

Does the threat of erosion potentially create opportunities for outsiders by making innovation sometimes seem to be too dangerous for established firms?

***Net Working Capital***

What is net working capital again? Are the working capital requirements of a project relevant?

Is a project necessarily bad because it has substantial working capital requirements? Is a project necessarily good because it has working capital requirements which are *de minimus*?

***Tax Effects***

What about tax effects? Are they relevant?

**CONCLUSIONS**

The principles outlined in this note, when combined with the tools in the next, give us a solid framework for making the best decisions possible when it comes to the projects which we are going to select for pursuit.