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Capital Controls: Meaning, Types, Benefits and Downside

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Abstract

Capital controls are when the governments of nations restrict the inflow and outflow of capital into the economy. In a free market economy, there should be and would be no borders. However, this is not the case in reality. Countries want to ensure that their economies stay relatively stable in the long run. Some economies, therefore, impose some form of capital controls. The majority of the economies in the western developed world do not impose capital controls. Instead, economic movement of capital is left to the free will of the markets. However, this is not the case all over the world as a wide variety of capital controls can be found in different countries. Implementing capital controls makes the economy stable. Stability must not be confused with growth here! Capital inflows restrict the inflow of funds into the economy. They do so by scaring the fly by night investors out of the market. Only investors that see long term potential in a country will invest their own money even after capital controls are in place. Thus, since there is a smaller inflow of funds, the outflow is almost negligible. Nearly all the funds that come in the country stay for a long duration of time. Hence, both the upside and downside are bound by a limited range. The biggest benefit of capital controls is that it prevents overheating in economies. This means that it prevents investors from pumping and dumping an economy. Investors cannot flood the economy with funds drive up output and prices and then suddenly leave causing everything to crash! Till domestic investors do not become strong enough to compete with foreign capital, some form of capital controls needs to be in place.

Keywords: Capital Controls, Implementing capital controls, Capital inflows

1.0 INTRODUCTION

In the previous few articles we have come across different metrics that can be used to choose amongst competing projects. These metrics help the company identify the project that will add maximum value and helps make informed decisions to maximize the wealth of the firm. We saw how the NPV rule was better than IRR and the profitability index and how decisions based on NPV are supposedly more accurate. However, we need to understand that there is a difference between how the NPV rule is stated in text books and how it is applied in real life worldwide. This difference arises because when we consider capital budgeting, we are working under the fundamental assumption that the firm has access to efficient markets. This means that if the required rate of return is greater than the opportunity cost of capital, or if the project has an NPV greater than zero, the firm can always finance its projects by raising money from the markets even if it doesn't have any. Thus for practical purposes, the money at the firm's disposal is unlimited. However, in reality this may not be the case. True, that firms can always raise money and bigger firms can raise as much funds as they want to, but many times firms themselves place restrictions on the amount of fund raising that they undertake. These restrictions could be placed because of the following reasons:

- Raising more equity could dilute the existing ownership interest
- There may be debt covenants preventing the firm from raising more debt
- Raising more funds either by debt or equity may make the firm appear riskier and may take the cost of capital even higher

This restriction placed on the amount of capital that the company has, nullifies the assumption inherent in capital budgeting. Thus, what happens in real life is a slightly modified version of capital budgeting. Financial analysts have a name for this. They call it "Capital Rationing". So capital rationing is nothing but capital budgeting with modified rules. Now instead of choosing every project that has an NPV greater than zero, the firm uses a different approach. All projects with a positive NPV qualify for a possible investment. These projects are then ranked according to their

attractiveness. The firm then invests in the top3 or top 5 projects (based on their resources). So, here a finite amount of capital is being rationed amongst projects as opposed to an infinite capital assumption.

1.1 Profitability Index

But, how does the firm decide which projects are the most attractive? Simply ranking the projects with higher NPV will be incorrect. This is because we are not paying attention to the input we are putting in. We are simply paying attention to the output which is obviously incorrect. What if a project with a slightly higher NPV requires double the investment as compared to another project? Is it still a good bet? Obviously not and to solve this problem and ration capital effectively, companies have come up with a metric called the Profitability Index. The profitability index is nothing but the NPV of the project divided by the amount of its investment.

$$\text{Profitability Index} = \text{NPV} / \text{Investment}$$

So we are simply looking at the NPV amount per dollar of investment. Projects with highest NPV per dollar of investment are considered more attractive and the investment dollars are first allocated to them so that the returns of the firm are maximized.

1.2 Types of Capital Rationing

As discussed in the previous article, capital rationing is a form of capital budgeting. In capital rationing we change the unlimited capital assumption of capital budgeting and we try to choose projects with the finite capital that we have on hand. This finite capital may be in the form of capital that the firm already has or it may be in the form of a decision to raise a limited amount of capital in the future. Either way, the amount of capital available at the company's disposal for decision making is finite and it is known. There are two types of capital rationing. They have been explained in this article:

1.2.1 Soft Rationing

Soft rationing is when the firm itself limits the amount of capital that is going to be used for investment decisions in a given time period. This could happen because of a variety of reasons:

- The promoters may be of the opinion that if they raise too much capital too soon, they may lose control of the firm's operations. Rather, they may want to raise capital slowly over a longer period of time and retain control. Besides if the firm is constantly demonstrating a high level of proficiency in generating returns it may get a better valuation when it raises capital in the future.
- Also, the management may be worried that if too much debt is raised it may exponentially increase the risk raising the opportunity cost of capital. Most firms have written guidelines regarding the amount of debt and capital that they plan to raise to keep their liquidity and solvency ratios intact and these guidelines are usually adhered to.
- Thirdly, many managers believe that they are taking decisions under imperfect market conditions i.e. they do not know about the opportunities available in the future. Maybe a project with a better rate of return can be found in the future or maybe the cost of capital may decline in the future. Either way, the firm must conserve some capital for the opportunities that may arise in the future. After all, raising capital takes time and this may lead to a missed opportunity!

This type of rationing is called soft because it is the firm's internal decision. They can change or modify it in the future if they think that it is in their best interest to do so. Also, companies usually implement this kind of rationing on a department basis. From a master investment budget, departmental investment budgets are drawn and each department is asked to choose projects on the basis of funds allocated. Only in case of an extremely attractive project are the departmental restrictions on capital investments compromised.

1.2.2 Hard Rationing

Hard rationing, on the other hand, is the limitation on capital that is forced by factors external to the firm. This could also be due to a variety of reasons:

- For instance, a young startup firm may not be able to raise capital no matter how lucrative their project looks on paper and how high the projected returns may be.

- Even medium sized companies are dependent on banks and institutional investors for their capital as many of them are not listed on the stock exchange or do not have enough credibility to sell debt to the common people.
- Lastly, large sized companies may face restrictions by existing investors such as banks who place an upper limit on the amount of debt that can be issued before they make a loan. Such covenants are laid down to ensure that the company does not borrow excessively increasing risk and jeopardizing the investments of old lenders.

So hard rationing arises because of market imperfections and because of limitations created by external parties.

1.3 Types of Capital Controls

Minimum Stay Requirements: A lot of countries have a sort of lock in period when it comes to capital investments. This means that they allow free movement of capital in and out of the country. However, there should be a certain time gap between the inward movement and the outward movement. This is called as a lock in period or as a minimum stay requirement.

Limitations: Some countries limit the amount of money that every entity can remit out of the country. Since the limitations are based on the number of entities, this provides an incentive for companies to form several legal entities and evade the law!

Caps on Asset Sales: In many countries certain groups of assets are classified as strategic. These assets are then not sold to foreigners. Such economies allow free movement of capital in and out of the economy but not in certain sectors. For instance, Canadians have protected their agricultural investments. Foreigners are free to invest in other sectors of the economy but not in agriculture.

Limit the Currency Trading: Some countries want to limit the amount of foreign currency that is available for trading in the Forex market at any given point of time. This is because they want to maintain currency pegs i.e. fixed exchange rates. This helps them plan their economic activity better especially if they are an export oriented economy. Changing forex rates means that their competitiveness in the international market changes every minute. Capital controls are an effective way to avoid this issue!

1.4 Estimating Project Cash Flows: Part 1

Prima facie, capital budgeting may seem like a very simple task. After all, it has just 3 steps. The first is to find the cash flows, the second is to find the appropriate discount rate that represents the time value and riskiness of those cash flows and the third step is to use both these inputs and discount the cash flows at the chosen rate. However, in practice it is not that straightforward. There are many complications that arise during the process. Complications usually arise because neither of the variables that we are using in the projection is certain. We are therefore, at best choosing estimates. Deciding whether we have the right estimates is very important. A slight change could bring about a completely different valuation. In this article, we will first see how we can derive cash flows from accounting profits and then we shall have a closer look at some of the complications that may arise in the process of estimating cash flows.

1.4.1 Deriving Accounting Profits from Cash Flows

Capital budgeting is completely dependent upon cash flows. It is not concerned with the accounting profits of a project. Yet, most of the times analysts will have financial statements that talk about the accounting profit. So, they have to derive the cash flows from the accounting profit. This can be done by undoing the two adjustments that accountants make to come at the profit:

1. Accountants count income in the period it is earned. As opposed to this, cash flow needs to be accounted for in the period that it was received. Hence the numbers need to be adjusted.
2. Also, accountants segregate the cash outflows into expenses and asset creation. But when you consider cash, it's just an outflow. So once again, this assumption also needs to be undone while computing the cash flows that need to be discounted.

1.4.2 Only Incremental Cash Flows

Secondly, it is important to consider each project as a separate investment and we must consider only the incremental cash flows that arise as a result of this investment decision. Consider for example that we decide to open

up a restaurant in a property that we have already rented out for \$10,000 a year. The cash inflow from this restaurant is expected to be \$25,000 a year. In this case, even though the nominal value of cash inflows is \$25,000, in reality we are earning just \$15,000 of additional money. Hence we will use \$15,000 for our cash-flow calculations and not \$25,000. The key is to consider the value of your firm with and without the investment. The idea is to look at both possible scenarios and decide which one we want to be in. This part can be counter-intuitive for many people. But remember that we are only considered with the additional dollars that we will make as a result of this investment. Why should we consider what we are already earning from past projects into consideration to decide whether or not we should invest in the next one?

1.4.3 Incidental Effects

Also, it is important to consider the incidental effects of some projects. In theory, projects work in isolation. But we know for a fact that in reality that is not the case. The fate of many projects is usually interconnected. Let's say a car company is deciding whether or not it should introduce a new model of car. Now, let's also say that this new model's sales will decrease the sale of another model produced by the same company. They will cause the sale of the old model to drop by \$12,000. So, while calculating the cash inflows from the new model, we must subtract \$12,000 from it. This is because without the project the company has the \$12,000 but with the project, the company stands to lose \$12,000. It may make additional money but \$12,000 is an incidental cost that is being paid to undertake this project. Hence, to gauge the real value of the project, incidental costs must also be taken into account.

1.5 Estimating Project Cash Flows: Part 2

This is not because they are difficult to calculate. It is just because the course of action taken is opposite to what would have been taken in the case of accounting. Accounting is concerned with matching expenses to the relevant period. But in cash flow analysis, the matching concept doesn't apply! Also, implicit costs are sometimes used in calculation. This article will look forward at clearing some more of those confusions.

1.5.1 Opportunity Costs

Opportunity costs are notional or implicit costs. This means that the money never actually leaves our pockets. They are not expenditures in reality. Rather, they are fictional expenditures. Opportunity cost is the value of the next best alternative which has been foregone to allocate resources to a project. Let's consider a scarce resource i.e. your time. Let's say reading and watching movies are the **only two** possible alternative uses that you could have made of your time. So, each time you watch a movie, you are not reading and each time you read, you are not watching a movie. Therefore, reading is the opportunity cost (next best alternative) of movies and vice versa. Similarly, when the firm invests its money in project A, it is automatically not investing its money in project B. So the returns of project B (which we did not earn in reality) have to be foregone. The objective of capital budgeting is to ensure that the company can make the best possible choice when faced between conflicting alternatives. So it is imperative that the alternative must be accounted for. It is for this reason that the opportunity cost of project B should be taken in to account while deciding whether or not project A must be undertaken. Thus, opportunity costs which are not a type of explicit cost and which would have simply been ignored in accounting are being used in cash flow calculations for corporate finance.

Estimating this opportunity cost can sometimes be very difficult. If there is a ready market for the asset for which we need to know the opportunity cost, then we can use the prices being reflected in the market as a barometer. However, if no ready market exists, the prices have to be estimated. This can sometimes be a problem. Companies can employ trained appraisers to help determine the saleable value which can be used as the opportunity cost. Another important point is that the opportunity cost of Project A cannot have a value greater than A. If it has a value greater than A, then that project should be selected and A should become the next best alternative, isn't it?

Incremental Working Capital

Just like in case of capital expenditures, we will only consider the incremental cash outflow which results from an increase in working capital because of the new projects. The old working capital should obviously be excluded from any calculations since it will remain unaffected whether or not the project is undertaken. We need to be careful to calculate the amount of working capital that will be required. This is because the working capital will usually be simply rolled over from one period to another. So, we invest one amount and it keeps rolling on till the end of the project and seldom requires more cash infusions. Many times, this amount may be left over at the end of the project

and it is added to the cash inflows while calculating the Net Present Value. Once again, we are doing the counterintuitive. In accounting working capital was always an expense. Here, at the end of the project, we may add it to the cash inflow! There are still some more peculiarities about cash flow calculations which we will consider in the next article.

1.6 Estimating Project Cash Flows: Part 3

Continuing from the previous two articles, we will look at some more counterintuitive steps that need to be taken to calculate the cash flows which should then be discounted to arrive at the worth of the project. This article will cover the concepts of how sunk costs should be treated as well as how allocated overheads may at times be different from the overhead value that we have to use in our cash flow calculations.

1.6.1 Sunk Costs

Sunk costs are expenses that have happened in the past that will not be affected by the current decision. The second part is very important. Defining sunk costs just as expenses that have happened in the past would be inappropriate if our current decisions affect them. Consider a case when the firm has already spent \$1 million on a project. However, the project has turned out to be unsuccessful till date. It has not churned out any positive cash flows till date. Now, the company is faced with a choice. The choice is whether it should invest more in the project that it has spent \$1million on or whether it should pursue a new project. The important point is not the answer. The important point here is the thought process that will be used to arrive at the answer. The correct thought process understands that \$1m already spent has nothing to do with the new choice they are faced with. The incremental dollars also deserve their best use and hence the decision must be taken solely on the basis of NPV of additional money that is going to be spent. The old \$1m is not affected by the decision that has to be taken now. Hence it is irrelevant and must be completely ignored during the decision making.

1.6.2 Allocated Overhead Costs

Overheads are costs that cannot be assigned to any activity directly. Assigning them within the company's different departments and projects therefore becomes a problem. This problem is solved by accountants through the concept of allocation. Since the track of where the money was actually spent cannot be kept, accountants assume a basis and costs are allocated on that basis. The problem is that these allocated costs may not be good for our cash flow analysis purpose. For instance, consider the fact that there are 3 departments A, B and C. The total overheads of the company now are \$100. The allocation base used is labor hours and the proportion in which these costs are split is 2:2:1. Hence A, B and C have allocated overheads of \$40, \$40 and \$20. Now, consider what happens when the 4th department is introduced. The fourth department has an additional overhead cost of \$20 taking total overheads to \$120. However, based on the labor hours' basis the new ratio is 3:3:1:3 Based on this the overheads allocated to department A, B, C and D are \$36, \$36, \$12 and \$36 respectively. So, for department D, we have an allocated overheads cost of \$36 as opposed to incremental overheads cost of \$20. Since, cash flow analysis is all about incremental costs, it is essential that we take into consideration the incremental costs and not the allocated costs while performing the calculations.

2.0 CAPITAL BUDGETING AND THE TREATMENT OF INFLATION

Inflation is an ever persistent condition in today's economy. The purchasing power of money has been reducing year after year for decades now. Apart from the occasional recession where money may gain real value, the usual case is a loss of value. Investors are investing money today. They want to be compensated for the inflation and still get a return over and above it. This simply means that they want to gain value in real terms. It is important for us to understand this while coming up with our cash flow estimations. This is because projects never give all of their cash flows in the same period. Cash flows from projects are usually spread out over many years, even decades. The treatment of inflation therefore becomes very important to come up with the correct value. Minor changes in the assumptions about inflation are capable of producing massive changes in the expected return from the project. A viable project may become unviable simply by tweaking the inflation numbers a little bit. This article will explain how inflation needs to be treated while performing these calculations:

2.1 Inflation Affects Different Components Differently

First, we need to understand that inflation never affects all the components of the income statement uniformly. Therefore, assuming a uniform rate for all the components might give theoretically correct answers, but in practical life it will be a blunder. For instance, consider the fact that labor costs will go up every year. Employees usually expect to be paid a hike every year. Also, the cost of raw materials is expected to go up every year. Tax rates change every year. However, the increase in sales price cannot match these changes. It will usually be either more or less than the percentage change in other components. Sales price is market driven and we can't just raise it without incurring any loss. The bottom line therefore is that a good analyst will study the past record of each of these components in terms of their inflationary tendency. He/she will then try to make forecasts about the future trends that are likely to prevail. Based on this, every component should have its own unique rate of inflation. In more detailed analyses, inflation forecasts will vary year to year depending on how the analyst predicts the economy to behave.

2.2 The Golden Rule

The golden rule when it comes to capital budgeting and inflation is that we must be consistent in our treatments of inflation. The keyword is consistency. If we have real cash-flows, we must discount them at the real rate of interest. On the other hand, if we have nominal cash flows (usually the case), we must discount them at a nominal rate of interest. This might seem obvious, but is a common mistake to use the wrong discount rate. We have earlier studied a formula to convert nominal rates to real rates and vice versa. The formula is as follows:

$$(1 + \text{nominal rate}) = (1 + \text{real rate}) * (1 + \text{inflation rate})$$

2.3 An Approximation to the Golden Rule

This formula maybe required if you are doing precise calculations. If the intent is to come up with an approximate figure, simple back of the hand calculations will suffice. Hence, if the nominal rate is stated at 12% and the inflation rate is stated at 4%, it is a reasonable assumption to assume 4% as the real rate of return. Obviously the resultant numbers will not be precise but they will provide a good approximation which is exactly what is required sometimes. Despite all the forecasting techniques and calculations, analysts are usually way off the mark when it comes to predicting inflation rates. This is not because of their shortcomings but rather because of the unpredictable nature of the economy. Nonetheless, they try to refine their methods time and again in the quest to get the inflation numbers right.

2.4 Capital Budgeting and Depreciation

Depreciation is an important concept in capital budgeting. This is because it is a non cash expense and ideally should not have any effect on the cash flows. This is the reason why it is added back during cash flow calculations. Since the amount of depreciation never actually left our bank account in the form of expenses, we still have it in cash. So prima facie, it may appear like depreciation had no effect whatsoever. First, we deducted it while calculating the net income in the income statement. Then we added the same amount back while calculating cash flows, thus nullifying its effect. However, there is more to depreciation. Depreciation affects cash flows in an indirect manner. The effect of the same has been described in this article.

2.4.1 Depreciation and Taxation

It is true that depreciation is a non-cash expense. However, depreciation is tax deductible. So the amount of depreciation we pay affects the amount of taxes we pay. Remember while calculating net income we remove the depreciation and amortization figure from EBITDA to arrive at Profit before Tax. This is the amount on which tax is levied and we get the Profit after Tax figure. Therefore, the higher the depreciation amount, the lower will be the taxable profit and as a result the lower will be the amount paid as tax. Depreciation, therefore indirectly affects the cash flow by reducing the amount of taxes paid and hence a high depreciation may actually have a positive impact on the cash flows!

2.4.2 Depreciation Tax Shield

The exact amount of taxes that were reduced because of depreciation can be calculated. This is known as the depreciation tax shield. Let's understand this with the help of an example:

	With Depreciation	Without Depreciation
EBIDTA	\$2000	\$2000
Depreciation	\$500	\$0
PBT	\$1500	\$2000
Tax @ 40%	\$600	\$800
PAT	\$900	\$1200

Now, as we can see that when we consider depreciation the tax paid is lower by \$200 i.e. we pay \$600 in taxes as opposed to \$800. Therefore, \$200 is the tax shield. However, we need not go through the entire calculation to come up with the amount of the tax shield.

2.4.3 Shortcut to Determine the Amount of the Tax Shield

The calculation can be simplified. We can consider that for every \$1 that we have in depreciation, we have saved \$0.40 in taxes. Thus to find out the amount of the tax shield all we need to do is multiply the amount of total depreciation by the ongoing tax rate. Consider for example $\$500 * 0.40$. This is equal to \$200, which is the exact amount we derived from the lengthy calculation above. We need to understand that the tax shield amount will vary with the depreciation amount. So, accelerated depreciation methods will provide a higher tax shield upfront as compared to straight line methods. Also, since we are going to discount the values of these tax shields, the concept of time value of money applies. It is for this reason that accelerated method of depreciation will be preferred to straight line methods.

3.0 EQUIVALENT ANNUAL COSTS

In the previous articles we have seen how we can convert a possible future stream of cash flows to its present value today to make investment decisions. We choose amongst competing projects and the one with the highest NPV is usually selected. But sometimes this may not be the appropriate thing to do. Consider the fact that the firm has to choose between two types of software to run its day to day operations. Now both this software is identical in the sense that they do the same job in pretty much the same manner. However, their costs are different and so is the duration of their licenses. Software A costs \$20,000 upfront, has a life of 4 years and the company will have to pay \$2,500 as annual maintenance charge to the vendor. Software B, on the other hand costs \$10,000 upfront requires an annual maintenance charge of \$3000 for 3 years which is the duration of its license. Now, how does the company make a financially prudent decision and choose the more cost effective software.

3.1 The Problem:

Under normal circumstances, this would have been a pretty straightforward decision. The NPV of both the software could have been computed. Since we are talking about costs and not revenues, we would have selected the one with the lowest NPV. But there is a slight problem. The life of both the software is different. One will have to be renewed after 4 years while the other will have to be renewed after 3 years. So, the value of a future cash flow is contingent upon the decision that we make now. So, just looking at the NPV will be making a decision with incomplete information! The bottom line is that since the life of both these software is different; we can't really decide amongst them on the basis of NPV alone.

3.2 The Concept of Equivalent Annual Costs

Here we have the concept of equivalent annual costs to the rescue. The approach to the problem is simple if we look at it from this point of view. We now have lump sum NPV's which can be derived from the costs that have been stated above. Assuming a discount rate of 10%, the NPV of software A and software B is \$25,386 and \$15,873 respectively. Our common sense approach would tell us to choose software B because of its lower NPV, but we just discussed why that would not be a wise choice because the duration of their licenses is different.

So, instead we start to view them as if we have taken this software on rent. This means that we will convert the NPV for software A into an annuity for 4 years, whereas that of software B for 3 years. By doing so, we will be able to bring both the costs down to an annual level. It is like choosing between software A or software B on the basis of which has the lowest annual rental payment. This nullifies the fact that they have different license durations.

3.3 Solution with Equivalent Annual Costs

Now, if we consider the present value of software A as \$25,387, assume a 10% discount rate, the annual cost would be \$8,008 for a period of 4 years. Similarly, the present value of software B is \$15,873, assuming the same 10% discount rate, the annual cost of software B would be \$6,382 for a period of 3 years. Since, the costs are annual, the number of years really do not matter. We are therefore facing a choice between an annual rent of \$8,008 and \$6,382. \$6,382 is the lower rent and therefore software B is a more financially prudent choice. Now, just to clarify, we are not taking the software on rent. We are buying it outright. The assumption regarding renting out the software was a metaphor to ensure that the concept of equivalent annual costs becomes easier to understand.

3.4 Separation of Investing and Financing Decisions

We have already seen that there are a lot of differences that arise between what we have learned in accounting and how we use it in corporate finance. The separation of financing and investing decisions is one such important concept. It is important because we have to make a very important adjustment based on this principle. That adjustment is the fact that we do not subtract interest costs while calculating the cash flows that a project will generate. This is different from accounting where we were used to subtracting the interest costs to calculate our income. So here we must remember that we have to exclude interest costs from our calculation. Failure to do so is one of the most common mistakes that are made by students.

3.4.1 Understanding What an Investing Decision and a Financing Decision Really Is?

When we take up a project, we really need to understand that we are making two decisions not one. The first decision is regarding the assets that we must invest in. This means that if we are opening up a restaurant we need to consider what the real estate would cost, what the improvements would cost to create the desired ambience, what the kitchen equipment would cost and so on. Then we must consider the returns that these investments will generate. This is the investing decision. Now, the above investments could be done from spare cash that the company has, the company could sell more stock to raise the funds or they could even borrow to raise the funds for the project. How the company raises money for the project is an investment decision? Each of the above options has its own related costs.

For instance, debt will have interest cost, equity will have dividend cost etc. But that does not really change the cash flows of the project, does it? The restaurant (investment) will generate the same returns regardless of how it is financed. Financing merely changes the people entitled to those profits. It does not change the amount of profits that are earned by the project.

3.4.2 The Procedure to Separate Investments and Financing Decisions

It is for this reason that we must first see the project without its financing costs to check whether it is viable. This simply means that the investment decision must be separated from the financing decision. Once the viability of the project has been established, the company can then conduct a separate analysis to determine how the project needs to be financed. The company can check whether an all debt financing is better than using all of their own cash or whether a combination of the two is required. However, this decision pertains to capital structure and not to capital budgeting.

4.0 GETTING CREATIVE WITH CAPITAL BUDGETING

From the past few articles, it may seem like capital budgeting has a pre-determined procedure. All the possible scenarios that can occur have been thought of and appropriate solutions for all of them have already been developed. While this makes “capital budgeting” a good subject, it also removes the creativity from it. There is a general perception that jobs pertaining to finance and capital budgeting are boring and lack creative potential. As we shall see in this article, this is definitely not the case. The subject does provide room for ample creativity. Here are some examples:

4.1 Timing of the Project

Our NPV rule says that if a project has a positive NPV, it is financially viable. The NPV rule does not say that the project needs to be undertaken immediately. As many creative professionals have shown before, the NPV of a project can be magnified just by waiting for some time before you execute it.

Consider the case of a building construction. You have conducted your analysis and it shows that given the cash inflows and outflows listed on your schedule, the project is a good bet. Does that mean you should execute it immediately? Well, this wouldn't be the case if you found out additional information. What if you found out that the government was about to declare an area near your proposed building site to be a "tax-free zone" for corporations. You would obviously expect a lot of companies to set up their shop there and this would increase the property prices, isn't it? Also, what if you find out that the government is about to create an underground train line linking that area to the centre of the city.

Now, obviously it would make sense to wait, right? The NPV of the project is positive now. But it will be many times larger, if we waited for some more time. (Assuming that the information is credible). So, a positive NPV does not mean that the project should be executed immediately. Any project always has two implicit options. One is to execute it right away and the other is to execute it at a later date. Many times projects with negative NPV turn around positive in a few years. The real task of the financial manager therefore is to be aware of this information that could affect their project and look into the future. What is in the present can be easily seen and discounted even by a computer!

4.2 Re-Engineering

Many times companies are faced with this decision regarding whether or not they must re-engineer the way in which they operate. This may include shutting down for a few days and then re-opening with completely different equipment, processes etc. These projects are usually viewed by financial managers as an all or nothing game. They will calculate the NPV for the entire project as a whole before they make a decision. Now, creative financial managers on the other hand realize that it doesn't have to be an all or nothing game. They pick and choose parts of the project and work out with combinations. They will try and find out if it is in the best interest to execute the entire project now or would executing 25% at a time for the next 4 years lead to a higher NPV. The real point here is that the goal is to maximize the NPV. There will be given scenarios which are known to everyone. The trick is to think about the project in terms of time, partial implementation etc which are not the scenarios people would commonly think of. Like in all other professions, a good financial manager is a creative financial manager. He/she will find ways and means of maximizing the NPV.

4.3 The Fallacy of Creative Destruction

There is a widely held view that creative destruction is the cause of all business cycles. This explanation is used to convince people that business cycles are a good phenomenon. On the other hand, this explanation does not provide any insight as to why business cycles have been there only for a couple of centuries at maximum. Before 1800's the concept of business cycles did not exist even though the concept of capitalism and free enterprise did exist. In this article, we will have a closer look at why the belief that creative destruction causes business cycles is fundamentally flawed.

4.5 What is Creative Destruction?

Creative destruction is a term coined by famous economist Joseph Schumpeter. He was of the opinion that capitalism is dynamic. It can never be stationary. The very purpose of capitalism is to find newer, better and more efficient ways to produce or transport goods. To understand the concept better one has to imagine a mature market. A mature market has experienced firms that provide employment to a large number of people. Creative destruction means that every few years, a new technology will create a new market parallel to this mature market. In the beginning, the newer market is much smaller than the mature market. This is because the consumers take the time to switch from an old technology to more modern technology.

However, over a period of time, this switch does happen. In the course of this switch, the newer markets become bigger and more powerful gradually whereas the older markets become bankrupt. This bankruptcy and the subsequent boom have been termed as the process of creative destruction. The idea is that creative destruction is good for the economy. This is because in the short run it creates destruction. However, in the long-term, it creates a much better and more efficient utilization of resources.

4.5.1 Historical View of Creative Destruction

Schumpeter has created this theory of creative destruction to interpret any past event in the light of this destruction. Economic historians have then argued that this is the phenomenon that has been driving economic growth during known periods of economic history. For instance, the printing press is said to be a work of creative destruction and so are the other machines during the industrial revolution. The railroads are also said to have caused creative destruction. Later, the oil industry, iron, and steel and automobile are all said to have created wealth through this same process of creative destruction.

4.5.2 Confusion between Cause and Effect

The mainstream economists agree with the above-stated fact. However, this theory has also been open to several criticisms. One of the biggest ones is that cause and effect are being confused with this theory. The theory of creative destruction argues that changes in technology drive the general boom and bust phenomenon. Critics argue that causality works in the exact opposite direction. This means that instead, it is the general boom that creates technological changes and market disruptions. Some of these disruptions are good for the economy whereas other disruptions are bad. The Technological boom is not the cause of the business cycles. Instead, it is itself caused by the business cycle. For a better explanation, let's look at the points below:

4.5.3 Savings is the Key Factor, Not Technology

Technology is not developed out of thin air. If substantial resources are devoted to any problem, science can figure out a solution. This is also the case with technological developments for business. If significant resources are spent on finding a solution, a newer and better way is usually found. Hence, the problem is not technology. Instead, the real problem is providing substantial resources that enable technology to move forward. Under normal circumstances, people have first to save enough money to channel that towards investments in technology. However, in modern credit driven society, money is created out of thin air. It is this abundance of money that fuels innovation. Prima facie, this may seem to be a good thing.

4.5.4 Wrong Price Signals

Credit creation fills the economy with the money supply. As a result, there is a general feeling of irrational exuberance. Consumer spending spree fuelled by a rise in consumer credit creates wrong price signals. The price of goods and services appear to be different than they would be in the absence of credit. Prices are the primary barometer for market innovation. When market prices go haywire, so does the innovation. Resources get directed towards solving wrong problems or problems which are not that important.

4.5.5 Malinvestments

The correct theory, therefore, is as follows: Credit creation leads to a growth in credit without there being a growth in savings. As a result, people have artificial purchasing power which will inevitably reduce whenever the credit creation is stopped. However, during the boom period purchasing power leads to wrong price signals. These wrong price signals form the basis for investment decisions. As a result, wrong investment decisions are made. This leads to resources being squandered over economic problems which are not important. This entire process can be called malinvestment.

To sum it up, the theory of creative destruction provides a biased and distorted view of the world in order to make the business cycles appear in the positive light.

5.0 CONCLUSION

Benefits of Capital Controls: Implementing capital controls makes the economy stable. Stability must not be confused with growth here! Capital inflows restrict the inflow of funds into the economy. They do so by scaring the fly by night investors out of the market. Only investors that see long term potential in a country will invest their own money even after capital controls are in place. Thus, since there is a smaller inflow of funds, the outflow is almost negligible. Nearly all the funds that come in the country stay for a long duration of time. Hence, both the upside and downside are bound by a limited range. The biggest benefit of capital controls is that it prevents overheating in economies. This means that it prevents investors from pumping and dumping an economy. Investors cannot flood the economy with funds drive up output and prices and then suddenly leave causing everything to crash! Till domestic

investors do not become strong enough to compete with foreign capital, some form of capital controls needs to be in place.

Downside of Capital Controls: There are many economists that oppose capital controls as well. This is because they believe that it is against the functioning of a free market economy. Anything which is against the functioning of a free market economy cannot sustain for long. As a result, capital controls lead to evasion and corruption on a large scale. Companies that want to take their money out of the country do so by any means. There are illegal channels. Also, often they are helped by bureaucrats who help them draft the right import invoice or the right accounting entry which would evade the long arm of the law. Hence, capital control turns out to be a wasteful long and arduous exercise that is often based on political reasons than sound economic ones!

Case Studies of Capital Controls: Economists often point to the Chinese implementation of capital controls to show the success story. The Chinese economy has flourished for more than three decades, and capital controls were fully present during that period. China is now gradually opening up its economy after the domestic sector has become equally strong. Malaysia also benefitted from capital controls during the economic debacle of 1998. Since money could not leave the country as fast as it could leave Thailand and Vietnam, Malaysia got some more valuable time to deal with the conflict. The opposite case has happened in India. The Indian economy was reeling during the period when capital controls were imposed. Post-1991, these controls were lifted, and the Indian economy started booming during that phase. Today, India is amongst the fastest growing countries in the world. To sum it up, there are arguments both for and against capital controls. Whether such controls are suitable for an economy, depend upon the particular situation, and a generalization would be incorrect.

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