

In practice asset investments are determined by using capital budgeting techniques- Discuss.

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Researches show that investment decisions which are made, no matter in large or small businesses are mostly dependant on Capital Budgeting techniques. According to Jones and Smith (1982), one of the first published works dealing with the use of present value calculations to assess nonfinancial investments was in 1887 by an American civil engineer concerned with the economics of railway construction (Jones and Smith, 1982). It is also seen that Fisher's (1907) seminal work called 'The Rate of Interest' was the first work in the American economic literature to discuss net present value as a criterion for appraisal of alternative investments (Fisher, 1907). Capital Budgeting, frankly speaking is "the process of generating, evaluating, selecting and following up on capital expenditures" (Study Finance, 2007), or in other words "the planning process used to determine a firm's long term investment".

According to Maccarrone (1996), capital budgeting has received an increasing attention over the last few years and further believes that most studies have focused either on the relationships between investment decisions and financial theory or on behavioural aspects of Capital Budgeting (Maccarrone, 1996). Also looking at the research paper by Fourcans (1987), where he says that the capital budgeting process is of critical importance to the success of all multinational companies, it can be judged that capital budgeting plays a vital role for any management decision that takes place amongst the organization. There are also glimpses of risk and uncertainty involved while using the capital budgeting techniques in the research by Fourcans (1987) which shows an understanding that businesses while using these techniques do take certain amount of risks for the answers to turn out to be in-accurate in nature (Fourcans, 1987).

As mentioned before, majority of investment decision which take place are mostly backed up by capital budgeting techniques, but in real life, not all companies follow the same type of techniques. The type of techniques they use sometimes depends on their size or on the position of the business in the market. In this report we will be looking at different business positions and list the type of techniques they use based on research.

Also we will be looking at the risks and uncertainty involved in capital budgeting techniques because theories and researches suggest that quite a lot of time the results from capital budgeting are inefficient and in-accurate.

Technically speaking, every investment project is worth the go if the net present value (NPV) is positive, but according to Holmén (2005) this is not always the case. The NPV is computed by forecasting the project's cash flow and discounting them at a discount rate that reflects the price charged by the capital markets for the risk of the cash flow. For investors with well-diversified portfolios, it is only the project's systematic risk that affects its value: the project's idiosyncratic risk should not be considered. Capital markets imperfections such as costly external financing and bankruptcy costs are mostly ignored when it comes to the way capital budgeting techniques are used (Holmén, 2005). This reason is also backed up by Stulz (1999) who believes that there are certain aspects which are neglected while making decisions based on NPV (Stulz 1999). There is no doubt that NPV is the most commonly used technique, but there are also other alternates like payback period and use of earnings multiples that are used. The payback is seen as perhaps the most seriously flawed method, because it ignores the time value of money and cash flows beyond an arbitrary cut-off date. Surprisingly, Graham and Harvey (2001) report that 57% of the CFOs (Corporate Finance Organizations) in their survey of US firms always or almost always use the payback method in capital budgeting decisions, compared to the 76% that use the NPV method (Graham and Harvey, 2001). The use of the payback method seems even more popular in Europe, as reported by Brounen, de Jong, and Koedjik (2004). They found out that the payback method is the most frequently used method among firms in UK, Germany, and France, and it is also very common in the Netherlands, where it is the second most popular method after the NPV (Brounen, de Jong, and Koedjik, 2004, pg 71-101).

As we saw previously in the report, different companies have different methods of using capital budgeting. If a company is large and is in a very stable position then they might consider using more complex techniques with higher expectancy rates. This is because they have the time to achieve what they budgeted for as they have more share in the market and can afford taking risk to a certain level. As mentioned in the research done by Holmén (2005), it has been found out that mostly large companies prefer using the NPV method of capital budgeting rather than the other available methods (Holmén, 2005)

Even the survey done by Ryan and Ryan (2002) proves that vast majority of large companies with more capital investments prefer using NPV and IRR (Internal rate of return) techniques. Patricia and Glenn's research was done on the Fortune 1000 companies and amongst their research it was judged that 49.8% of large firms use NPV and 44.6% use IRR with the probability of using each more frequently being 85.1% and 76.7% respectively (Ryan and Ryan, 2002).

In the research paper by Ekanem (2005), it is said that small firms normally use the technique called 'bootstrapping' in making their capital investment decisions. Bootstrapping represents an approach to decision-making that is grounded in the previous experience of key decision-makers and their organisations and the largely informal routines that they develop from this. The concept of bootstrapping is not simply away of owner-managers finding a solution to a problem or a sort of 'fire fighting', it is a notion of what they are bringing to solve the problem, i.e. reliance on past experience (Ekanem, 2005).

Collis and Jarvis (2000) say that financial management in small firms is concerned with how owner-mangers use financial management information to plan and control their operations (Collis and Jarvis, 2000). Consequently, Peel and Wilson (1996) argue that 'if financial management practices in the small firm sector could be improved significantly, then fewer firms would fail economic welfare would be increased substantially' (Peel and Wilson, 1996).

Assessment of the financial management practices used in small firms tends to be based solely on the standards and practices used by large companies, with relatively little attention being paid to the practices actually used by small firms. These standards and practices can be criticised on at least three counts. First, the financial management practices of large firms are neither conclusive nor indisputable. On the contrary, they are controversial and ever changing (Johnson and Kaplan, 1987). Second, the larger companies themselves, even with highly skilled and experienced staff, do not always adhere strictly to these standards, nor are they able to avoid serious failures in financial management practice (Jarvis et al., 1996). Third, many research studies have demonstrated that small firms do not operate under the same conditions as large companies nor do they inhabit the same kinds of economic and financial environments (Curran, 1990).

These differences in the operating environments are due to differences in the level of risks and uncertainty (McMahon and Stanger, 1995). Consequently, small firms have limited ability to control or shape the external environment and are usually less able to forecast even relatively short periods ahead compared to large firms (Jennings and Beaver, 1997). In other words, the distinctiveness of the small firm demands financial management strategies tailored to its needs rather than scaled-down versions of those developed for the different needs and situations of large companies (Jarvis et al., 1996). So we can see that small firms do not operate under the same conditions as large firms do because the financial and operational environments of small firms are unstable and investment decision making of small firms are sometimes more influenced by behavioural factors which in normal terms large firms don't quite actually face.

Taylor III (1998), in his research mentions that there are 2 perspectives of investment appraisal results, local and global. Local measurements evaluate the performance of an organizational unit smaller than the organization as a whole. Maximizing performance on a local level will be maximizing performance on some organizational unit smaller than the whole. Examples of local measures include traditional financial measures such as payback, internal rate of return, and net present value. Whereas Global measures evaluate organization performance of the whole system. Maximizing performance on a global level will be maximizing the organization as a whole. Global financial measures include measures such as net profit, return on investment, and cash flow (Taylor, 1998).

Above we saw how capital budgeting techniques differ in large and small companies. Now we will look at whether or not the techniques differ in the private and public sector of the business. The research paper by Brealey, Cooper and Habib (1997) shows how investment decisions are made in each of the sector. In their paper they say that "Recent developments, such as privatization and the private finance initiative, have raised the issue of which assets should be owned by the public sector and whether assets have different values in the public and private sectors" (Brealey, Cooper and Habib, 1997). This clearly shows us that there is a difference of opinion in the use of capital budgeting techniques being used in each of the sector. The research continues to tell us that where there are complete and well-functioning capital markets, the managers of private sector firms will maximize the welfare of shareholders by undertaking all projects that increase shareholder wealth.

Further on the paper mentions that the shareholder wealth is measured by the NPV which shows that what the equivalent risk is in the capital market. They also say that there is considerable debate involved as to whether the NPV method of evaluating is the risk is efficient or not but in normal terms it is used because what actually matters at the end of the day is return which will be achieved from the project, and NPV being the best method of showing the expected positive return. The research paper also mentions that the investment appraisal methods used in the public sector are more or less of the same type (by using NPV) as in both the sectors the end result is the same, which is, getting the most return from the project and fulfilling the interest of shareholders to the maximum (Brealey, Cooper and Habib, 1997).

Capital budgeting techniques which are frequently used these days in every organization do involve certain amount of risk. There is risk involved because of the methods used in investment appraisal do not always give accurate results. Drury and Talyes (1997) in their research say that capital budgeting techniques are being used in the UK and USA for quite a long time and vast majority of companies in UK and USA (according to the survey they conducted) use all the four elements of capital budgeting (NPV, IRR, ARR and PBP). Further they say that “despite the increased usage of the more theoretically sound discounting techniques, several writers in both the UK and USA have claimed that companies are under investing because they misapply or misinterpret discounted cash flow techniques” (Drury and Tayles, 1997).

Other writers like Finnie (1988), Hodder and Riggs (1985) and Kaplan (1986) say that “firms are guilty of rejecting worthwhile investments because the improper treatment of inflation in the financial appraisal; inflation affects both future cash flows and the cost of capital that is used to discount the cash flows” (Finnie, 1988; Hodder and Riggs, 1985; Kaplan 1986).

Amongst the risk involved in the investment appraisal techniques is the use of excessive discount rates. Dimson and Marsh (1994) say that “many UK companies may be using excessively high discount rates to appraise investments and, as a result, these companies are in danger of under investing” (Dimson and Marsh, 1994). Porter (1992) says that “in the USA it has also been alleged that firms used discount rates to evaluate investment projects that are higher than their estimated cost of capital” (Porter, 1992)

Ehrhardt and Daves (1999), in their research for unusual, irregular or extraordinary cash flows, say that the results of capital budgeting do turn out to be in-accurate because of neglecting the cash flows which are: (1) not part of the project's normal operating cash flows; (2) are quite large; and (3) their risk characteristics are different from those of the normal operating cash flows. They also say that in order to maintain accuracy of investment appraisal results, risk-avoidance methods are also to be used. These risk-avoidance methods help to cover any problems which might occur in the future relating to the investment decision being taken, because an allowance was already made for this problem (Ehrhardt and Daves, 1999).

Also in order to receive effective and efficient results from capital budgeting, it is necessary to use these techniques at the right time in the market. Della Vigna and Pollet (2006), in their research paper mention that there is difficulty involved in evaluating the theory of capital budgeting and the difficulty is finding exogenous proxies for investment opportunities. They also mention that while businesses make investment decisions, they should consider the market positions as well, like age structure or income levels etc, this is said to be important because at the end of the day the day everyone targets the market they operate within. They even carried out a survey in which they judged that companies with increasing demands for the future 5 years use more complex capital budgeting techniques in order to achieve the maximum market share, but companies with increasing demands for more than 10 years use targets which are less tight and easier to achieved (Della Vigna and Pollet, 2006).

Conclusion

Concluding from the above content, capital budgeting has increasingly become the most successful tool being used for investment decisions since it was it was firstly used by an American civil engineer in 1887, as mentioned by Jones and Smith (1982) (Jones and Smith, 1982). Even Drury (2006) in his management accounting book mentions that the probability of businesses surviving in this market is high only if they make investment decisions with the help of capital budgeting techniques (Drury, 2006). Also researches show that different tools of capital budgeting are used by firms, large or small, in different market situations and at different stages of the business life cycle.

Potentially, there is a wide array of criteria for selecting projects. Some shareholders may want the firm to select projects that will show immediate surges in cash inflow, others may want to emphasize long-term growth with little importance on short-term performance. Viewed in this way, it would be quite difficult to satisfy the differing interests of all the shareholders (NetMBA, 2006).

It is not always necessary to base investment decisions on the results of capital budgeting or investment appraisal results, as the above mentioned content and theories suggest, there is a certain level of risk and uncertainty involved while carrying out the appraisal process, but this risk and uncertainty can be avoided by taking certain precautions and using risk-avoidance methods, as again researches and theories prove that capital budgeting is the only available and best known tool to use for making asset or capital investment decisions.

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