# INVESTMENT APPRAISAL PROCESS IN THE BANKING & FINANCE INDUSTRY

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| Abstract | We have studied how the banking and finance industry performs investment appraisal, measures subsequent follow-up and designates project success or failure. Furthermore, the authors looked into the extent of use of the new generation value management models. The result shows that firms are not using the same measurement scale in all stages of a project. Moreover, there is a tendency to shift from traditional appraisal methods to the new generation value management models. | |
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# Investment appraisal process in the Banking & Finance industry

## A Case Study

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### Abstract

We have studied how the banking and finance industry performs investment appraisal, measures subsequent follow-up and designates project success or failure. Furthermore, the authors looked into the extent of use of the new generation value management models. The result shows that firms are not using the same measurement scale in all stages of a project. Moreover, there is a tendency to shift from traditional appraisal methods to the new generation value management models.

**Key words**: Investment appraisal, DCF methods, Project, Value Management Techniques, Shareholder Value Analysis

# 1. Introduction

## 1.1 Background

Finding a reliable method of investment appraisal is not only a matter of concern for managers of a company. It is also increasingly important to investors and shareholders. As a result, the search for consistent method is always a crucial point in project management. Since many years practitioners and academicians have been crafting various methods of measuring the profitability of a project. Of the most widely used and acclaimed tools, those based on the time value of money, called the discounted cash flow (DCF), techniques are widely used. Under this group, the net present value (NPV) and the internal rate of return (IRR) are commonly known (Akalu, 2001). Recently, however, some companies are becoming doubtful about the capability of these methods to correctly gauge their project profitability. This gives a green light for researchers to reassess the various issues around the problems of the standard methods of investment appraisal (Beenhakker, 1975; Damodaran, 2000). As these methods are highly confined with financial data, they are unable to capture the other side of information for project management decision. Furthermore, the scope of application of these methods is limited to certain types of projects. For instance, the DCF method is condemned for its inadequacy to appraise soft projects such as ICT[1] and R&D, which leads the management to select projects on intuition, experience and rule of thumb methods (Tam, 1992). In addition, the retail banking practice reveals the unproductiveness of the ICT projects after once executed using the standard appraisal methods (Harris, 2001). Hence, searching for alternative methods of investment appraisal becomes the concern of both the academic and business professionals. In response to this, various models are made available, which are designed either to substitute or cure some of the problems of the traditional investment appraisal models.

Proposals such as the real option model, the shareholder value analysis (SVA), the economic value added (EVA), etc., can be mentioned as an example (Boer, 2000; Benaroch, et al, 1999; Adler, 2000). However, the above methods are not also free from critics. The real option theory is found complex, demands enormous computational work and requires additional data (Adler, 2000, P. 16; Tallon, et al, 2000). Furthermore, the EVA doesn't contain the concept of time value of money, the basic ingredients of value measurement.

## 1.2 The Research

The authors are undertaking a series of case studies that describes the practice of project management from appraisal to commissioning. Our goal is to perform an in-depth analysis on the current practices of capital budgeting in selected companies. In particular, we are interested as to how these companies perform investment appraisal, subsequent follow-up and measurement of project success or failure. We hope that the research will reveal the gap, if any, between theory and practice; and look into the extent of use of the new generation value management models.

The case study focuses on ten companies, which are selected from six industries: Banking & Finance, Chemicals, Oil & Gas, Printing & Publishing, Utilities, and Retails; and from two counties, the Netherlands and the United Kingdom. This grouping will enable us to analyze the practice both within and across industry and country. For the purpose of investigation, the case analysis is done on

[1] Information Communication Technology.

firm-by-firm basis, but reports are produced on industry groupings. In this paper, we present the findings of companies operating in the Banking & Finance Industry.

Since much of the collected information is proprietary, companies prefer to be anonymous. For simplicity of the discussion, however, we give codes as BF-01 and BF-02 for respective Banking and Finance companies.

### 1.3 The Banking & Finance industry

The financial sector is one of the business sectors where diverse project decision making is taking place. Certainly, these decisions affect both the short term and long term profitability of the business and the end value of shareholders. Financial institutions undertake various investment decisions, ranging from information technology to real estate. Among these, ICT projects are the most common. The nature and type of these projects vary from installing ATM to Internet banking, including office automation for cost reduction. All these investments involve a great deal of project management decision.

Many researchers don't include financial institutions in their capital budgeting or project related researches (Biddle, et al., 1997; Arnold and Hatzopoulos, 2001;Cools, 1993, P.216). The very reason given is that their balance sheet structure is not similar to other companies so as to compare and contrast their performances (Klijnsmit, 2001; Copeland, et al., 2000). This is true if one analyzes the financial data of these companies against non-financial institutions. However, the argument may not hold true for studies, such as this one, which deals with the methods of investment appraisal within financial institutions. It is true that firm comparison and comparative analysis are difficult tasks as no two firms are the same in all respects (Vermeulen, et. al., 1994; Wijst, 1990).

The remaining part of this paper is structured as follows. Section two deals with the method of data collection. Section three analyzes the investment appraisal process in the companies. And section four concludes the case study.

## 2. Methodology

Data is collected from two sources: face-to-face interview and archives. From the structured outline, interview questionnaires are developed on the following four main themes: company history, investment appraisal process in the company, problems of the standard investment appraisal methods, and on the prospects of other methods, such as, SVA, EVA, etc., as investment appraisal tool.

The above four topics are sent, one-week in advance, to the participant companies, in order to give enough time for the discussion. The interview took from 90 to 150 minutes with a possible extension of the discussion (via telephone line or e-mail) during case analysis. The whole discussion is tape recorded, with prior permission of the interviewee, for further analysis and documentation. In addition, relevant documents are also collected where available.

The financial data is fetched from the Henley Management College (UK), databases, and RIBES[2] archives which comprises the published annual accounts and reports. Furthermore, the data stream is also used for market related information. In addition, the draft report is sent to the participant companies for comments and further improvements. All suggested comments and improvements are incorporated in this paper.

[2]Rotterdam Institute for Business and Economic Studies.

# 3. Investment appraisal

## 3.1 Introduction

Although not under their current name, the two companies have been operating in the banking and finance sector for more than 175 years. As they were in the same business, they have been facing very similar category risk of doing business. Furthermore, the two companies have been operating in a similar (European) economic environment.

These companies are the results of long process of restructuring, mergers, acquisitions and takeovers. Hence, their growth and development may trace back to their history. According their historical profile, BF-02 had under gone about 67 mergers, acquisitions and takeovers. On the other hand, BF-01 had 6 mergers, acquisitions and takeovers.

As their main activity is banking & finance, the major source of their income should be interest income. In 1999, 79.5% and 56.4% revenue is fetched from domestic operation for both BF-02 and BF-01 respectively (see Table 1). In this regard, BF-02 has more domestic presence than BF-01 does.

Table 1

Operating Performances (%) 1999

| Description | BF-01 | BF-02 |
|---|---|---|
| Revenue: Domestic | 56.4 | 79.5 |
| Revenue: Foreign | 43.6 | 20.5 |
| Income: Interest | 80.6 | 77.2 |
| Income: Non-interest | 19.4 | 22.8 |

In order to obtain further insight, banking and finance peer group is formed with those public listed companies operating in Western Europe and with more than $10 billion sales value. A total of 47 companies are included in this group.

Accordingly, in terms of asset book value, BF-02 is more than half (58%) of the BF-01 (Table 2). However, the median value of EAIT for BF-02 is remarkably high compared to BF-01.

Table 2
The Median value 1995-1999 ($ BL)

| Description | BF-01 | BF-02 | Peers |
|---|---|---|---|
| Total Assets | 444.28 | 260.84 | 10226.2 |
| Revenues | 27.55 | 22.48 | 905.11 |
| EAIT[3] | 1.9 | 3.5 | 43.24 |
| No of Employees | 92.24 | 80.17 | 2038.6 |

Returns are also compared against the peers (Table 3). In this case, the two companies perform better than their peers do. However, BF-02 was doing much more better than BF-01.

Table 3
Mean Returns (%) 1995-1999

| Description | BF-01 | BF-02 | Peers |
|---|---|---|---|
| ROA[4] | 0.57 | 1.49 | 0.5 |
| ROE[5] | 17.83 | 35.68 | 11.5 |
| ROI[6] | NA | 5.68 | NA |

Table 4 depicts the average growth of various performance variables. As it can be seen in the table, except the growth in TRS, the rest of variables are higher for BF-02. On the other hand, BF-01 beats the peers' performance in all variables.

Table 4
Five Fear Growth (%) 1995-1999

| Description | BF-01 | BF-02 | Peers |
|---|---|---|---|
| Growth in Assets | 14.82 | 16.69 | 12.3 |
| Growth in Revenue | 15.26 | 15.34 | 11.38 |
| Growth in EAIT | 19.90 | 25.83 | 15.19 |
| Growth in MVA[7] | -9.9 | -18.2 | -10.3 |
| Growth in TRS[8] | 22.70 | 18.40 | NA |

[3]Earning after interest and taxes.
[4]Return on Asset.
[5]Return on Equity
[6]Return on Investment.
[7] Market value added.
[8]Total Return to Shareholders, 1996-2000.

Scholars compare firms' based on market value added and its growth. They argue that these values approximate the present value of a firm, and, hence, indicate the extent of shareholder value of the company (Hilman and Keim, 2001). In this case BF-01 out performs in terms of TRS and MVA growth (Table 4).

In addition, the two companies are also different in their country of origin. This may create a difference in approach to project management emanated from cultural and behavioral settings of the two companies and their management philosophy (Statman and Caldwell, 1987).

### 3.2 The Practice

Each company performs a through investment appraisal process. They have working manuals and detailed procedure guidelines. At the BF-01, project appraisal is centralized to a steering committee, called Project Portfolio Group (PPG), while at the BF-02, the task is devolved to divisional committees, which in tern feed into cross divisional executive committee facilitated by central support function.

The prime objective of these banks is shareholder value maximization. BF-02 operates under this objective for a decade while BF-01 operates since two years. BF-01 measures the achievement of its objective using total return to shareholders, EVA and market capitalization. On the other hand, BF-02 applies a customized SVA model called warranted equity value (WEV) and the NPV model.

Project selection and appraisal is a continuous task for both BF-01 and BF-02. Their methods of appraisal are similar; they use both NPV and Payback Period (PBP) as a major tool. However, BF-01 uses ROI in addition to NPV. Besides to the formal methods, companies use other constraints during project selection. At BF-02, projects with higher cash generating capacity and cost reduction capability may be given a priority among the many candidates. These additional constraints are not clear at BF-01, they are leveled as "rules of conduct of doing business".

Although vary by type, both companies have got R&D projects. BF-01 runs both applied and basic knowledge R&D project, while BF-02's R&D is for new product/service development. When we see their method of appraisal, they greatly vary. BF-02 uses the same method as it does for generic projects, while BF-01 does not use a particular method. Its method is based on "must be done" approach in order to stay in the market.

Risk assessment is found as a basic component of investment appraisal process in financial institutions. BF-01 uses both qualitative and quantitative techniques in its risk assessment. In the case of BF-02, the assessed cost of risk is added into the cost of capital, which is set to be constant across time and projects. However, data is not found with regard to the treatment of assessed project risk at BF-01.

In each company, evaluation of project in progress is done on monthly basis. Respective companies gather the same type of data - cost, time, schedule - in order to evaluate the project in progress. Different from BF-01, BF-02 uses the NPV method to measure the project value. In this process, it was learned that some cost reduction projects show discrepancy between the appraised and actual value. No discrepancy information is obtained with regard to the BF-01.

Measuring the success or failure of a project is also an important component of project management in financial institutions. Cost, time, and meeting specific objectives are the success criteria used by BF-01. However, BF-02 classifies

the methods into financial and non-financial criteria.

These companies are among the groups of firms having doubt about the performance of the standard investment appraisal models. Despite the variation in the area of concern, information scarcity is the major issue in their evaluation of these methods. BF-01 has reservations about the risk assessment and method of incorporation into the project using the standard methods. On the other hand, BF-02 is doubtful whether or not these methods provide the real and promised value of the project. In addition, the inability of the models to include the non-financial variables is also crucial issue to BF-02.

The case study companies were asked to enumerate the qualities of best investment appraisal model. According to their responses, a model should provide a room for flexibility and ensure sufficient alternatives to the decision-maker. They also uphold that the method should reflect reality and should be focused on firm objectives. Other characteristics, such as simple to understand, and embracing the time value concepts, etc., are also found important attributes of a good investment appraisal model.

The summary of investment appraisal process of the case companies is presented in Table 5.

Table 5
Summary of Investment Appraisal Process

| Variables | BF-01 | BF-02 |
|---|---|---|
| Project initiation | Continuous | Continuous |
| Investment decision | Centralised | Decentralised |
| Appr. Method - Generic projects | NPV, PBP, ROI | NPV, PBP |
| Appr. Method - R&D, ICT | No specific model | NPV, PBP |
| Objectives measurement | TRS, EVA | WEV (≈SVA) |
| Project in progress: metrics | TCS[9] | TCS, NPV |
| Risk analysis method | No specific model | No specific model |
| Success criteria | TCS | Financial & Non financial |

## 4. Discussions

In the above discussion, we have indicated that financial institutions do run and evaluate projects. They do process their investment in a similar way as non-financial companies do. For some, project management is a continuous task. Hence, as in any company, a significant portion of their balance sheet is affected by the decision made on projects (Paul, 1998).

The case study affirms that the NPV is still widely used among the DCF techniques. This is similar to the findings of many researchers in capital budgeting (Graham and Harvey, 2001; Anrold and Hatzopolous, 2000, P. 608). The method of appraisal for the R&D projects at the BF-01 is in line with the experiences of a number of companies. Since R&D projects are more uncertain than non-R&D projects, their method of appraisal tends to be the rule thumb rather than based on specific models.

On the other hand, the appraisal of R&D projects is a very difficult job. Some propose phase-by-phases evaluation using the DCF techniques, while others advice to experiment the Real Option model or suggest using the technical limit analysis

[9]Time, Cost and Schedule

(Hodder and Riggs, 1985; Merino, 1989). The case study companies apply none of these models. Rather, the qualitative analysis is governing their R&D project appraisal process.

The shareholder value analysis (SVA) is found playing an alternative role for standard investment appraisal model. For instance, it has been used as a tool for ranking performances. For instance, Oliver, Wyman & Company, a consultancy firm, has applied the SVA to rank the global financial firms (The Economist, 2000). Furthermore, financial institutions have started to use the new generation tools, such as EVA, as internal cash flow valuation, and as a tool to analyze franchise and shareholder value creation on projects (Davidson, 1999). The use of TRS by BF-01 and SVA by BF-02 reflects the growing interest to use the newly designed project management models.

Research has shown that financial institutions which applies shareholder value as their methodology performs better than others do (Barfield, 1998). Even to a wider scale, Copeland, et al., (2000) have found that countries operating in line with shareholder value philosophy are more value creative than others are.

Risk analysis is one of the fundamentals of investment appraisal. Although the case study companies don't explicitly state the type of model they use, both qualitative and quantitative tools have been used in their practice. However, similar to the value creation check up during progress evaluation, the companies do not review the extent of projected risk while projects are in progress.

Companies fail to apply uniform methods from the start to the end of the project life cycle. That is, from appraisal (starting) to progress evaluation and final success or failure designation (ending). If one uses diverse measurements on the various stages of a project, it is very difficult to monitor whether a project adds value to shareholder or not. It is also very hard to reconcile the output generated by various models such as DCF, time-cost-schedule and success criteria, and frame into a single metric value.

The application of constant cost of capital across time and projects, observed at BF-02, is contrary to the basic premises of risk and return. As all projects are not having the same risk, the use of linear cost of capital may lead to accept a project that reduces the value of shareholders.

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