Summary

Value-based Management Control Systems:
An Analysis of Design and Use

This dissertation is centered around the following problem definition: Why do Dutch companies use Value-based Management, how is VBM implemented and in what way does it affect decision making in business units in order to create economic value. The next three sub-questions are posed to find the answer: (i) Why manage for value and how to express value creation? (ii) How to design and implement a management control system that enhances value creation? and (iii) How do Dutch companies apply VBM and to which extent does VBM affect their management control system?

Based on definitions and descriptions from VBM literature, the following characteristics are generally shared in common:

- VBM takes all costs of capital into account. Where accounting profits only include the cost of debt (interest), economic value is only created when net profits also exceed the costs for debt as well as for equity.
- VBM is a managerial approach. Applying VBM takes more than calculating a measure that includes the cost of capital. It is an approach where techniques, concepts, and tools are used to meet the firm’s objectives, relating to all organizational functional areas (e.g., production, logistics, strategy, finance, accounting, and human resources) and levels.
- VBM is built around value drivers. This stresses the fact again that it is not about the calculation, but about the variables that are related to the calculation. These activities can be expressed in both financial and nonfinancial terms, and involve all organizational levels. Ways to operationalize this ‘break-down’ is by using for example the Balanced Scorecard or a ‘value tree.’

Based on these aspects, I will define Value-based Management as follows:

Value-based Management is a managerial approach to create value by investing in projects exceeding the cost of capital and by managing key value drivers.

In literature various reasons are mentioned why companies would manage on economic value. Firstly, it is recognized that traditional accounting measures have shortcomings, such as (i) alternative accounting methods may be used, (ii) risk is excluded, (iii) investment requirements are excluded, and (iv) the time value of money is ignored. Secondly, a threefold developments fueled the need to manage a business: (i) shareholder activism, (ii) capital activism, and (iii) manager activism. Lastly, the absence of a share price (for non-listed firms) or competition were reasons to create a benchmark based on economic value, in addition to regulatory requirements.

1 A ‘value tree’ is a system to depict the variables of economic profit into new variables that have impact on the former variable. It is comparable with the ‘Dupont chart’ for ROI. This way the variables can be broken down to the lowest level in the organization and can include both financial and non-financial variables. Rappaport (1998) speaks about ‘macro’ and ‘micro’ value drivers for referring to generic and operational value drivers.
In applying VBM the capital markets play a more important role than when using bookkeeping measures such as Return on Investment or profits, because the cost of capital for both debtholders as well as shareholders are taken into account. This is the first perspective from which I will discuss VBM: Performance Metrics and Capital Markets. In other words: do VBM metrics, which are developed to express value creation, eliminate the agency problem between shareholders (principal) and management (agents)? After all, with implicitly taking the required return of shareholders into account when evaluating a company’s performance, one may expect that the conflict of interests would reduce. For that purpose I made a distinction between cash flow based measures (Economic Concept of Profit: Shareholder Value Analysis, Cash Flow Return on Investment, and Cash Value Added) and accounting-based measures (Accounting Concept of Profit: Residual Income, Economic Value Added, Economic Profit, and Cash Value Added).

One important note should be made regarding practically all these measures: determining the cost of capital is rooted in some subjective assumptions. The Weighted Average Cost of Capital is therefore disputable, and as a consequence also the calculated value creation. For instance, according to finance literature one should use the target capital structure, while this structure is affected by many factors and varies over time. Besides, judgments and assumptions need to be made which may go beyond management’s influence. In addition, the required rate of return for shareholders is subject of discussion as well. The widely used Capital Asset Pricing Model is for example a method that is criticized in literature frequently. As a result of these inefficacies, the outcome of the measures is not objective anymore. A solution that is mentioned in literature is to manage on changes in economic value, since in that case the ‘delta’ in value is based on similar assumptions, and therefore one can evaluate whether value is created or destroyed.

Ideally these measures should correlate strongly with share prices to judge if they provide the intended solution for the agency problem. Empirical evidence cannot support this assumption. My research therefore concludes that implementation of VBM should not be initiated for reasons of better relationships with the capital markets or boosting share prices.

Do these measures than have any internal use, to control the company? Or: can we speak of Value-based Management Control? To find an answer to this question, I first describe the relation between strategy and the ‘resource-based view of the firm’ (RBV). A resource is the basis of a competitive advantage only if that resource (i) is difficult to buy and sell, (ii) is difficult to replicate, (iii) is difficult to substitute by another resource, and (iv) its advantage cannot be competed away by ex-ante competition (for instance when a government organizes an auction to sell a frequency for mobile telephone services). Besides ‘resources’, ‘capabilities’ make part of the RBV. These refer to management’s and employees’ specific skills and knowledge to reconfigure and deploy the company’s resources leading to a sustainable competitive advantage. An extension of the RBV, the ‘dynamic capabilities approach’, explores how valuable resource positions are built and acquired over time. The notion of ‘dynamic’ is devoted to addressing the continuous renewal of organizational capabilities, thereby matching the demands of (rapidly) changing environments. They are rooted in a firm’s managerial and organizational processes.
Empirical research shows that companies that manage for value indeed use and control their resources and capabilities more effectively.

This also shows the importance of management control at this point, which is defined as ‘the process by which managers influence other members of the organization to implement the organization’s strategies’ (Anthony & Govindarajan, 2004: 7). It involves addressing the general question: are our employees likely to behave appropriately? This question can be decomposed to the following control problems: (i) lack of direction – when the employee does not know what is expected from him, (ii) motivational problems – when the employee knows what is expected, but does not want to, and (iii) personal limitations – when the employee knows what is expected, also wants to, but is incapable to do so due to for instance lack of education or required skills. If these problems cannot be dealt with by means of activity elimination, automation, centralization, or risk sharing, the following control methods can be applied: results control, action control, personnel control, and cultural control. Since the VBM-metrics are developed to control all activities by one measure, it follows that these metrics are applied as results control. According to Merchant & Van der Stede (2003), this implies that the metrics need to meet the following criteria: congruence (with organizational objectives), precise, objective, timely, and understandable.

Based on analysis and empirical research, given the complexity and the noise in metrics it becomes questionable whether it would suit to apply financial results control in VBM. This counts for both the cash flow based metrics as well as the accounting based metrics. However, a company can be seen as a portfolio of investments which is managed at corporate level. Top management does in that case not interfere in how to develop and maintain the resources and capabilities, as long as subordinates create value (the earlier mentioned ‘delta’ in the measure). Top management transfers therefore the responsibility to lower organizational levels, and does apply VBM-metrics in financial results control. From this perspective, understandability of the measure is important to create awareness at lower hierarchical level for including the cost of capital when allocating resources and capabilities. Higher management then only decides about continuation or divestment of activities on the premise of value creation.

In a second approach top management links RBV and VBM more explicitly in its use for performance management, to manage the resources and capabilities as value drivers themselves in action and personnel control. In this light, the organization controls its value drivers by means of forecasts of the future value when deciding about allocating resources. Control is aimed at actions to be taken to allocate resources to their best value creating potential, while personnel is trained to improve their capabilities in the organization’s best interest. Value creation is consequently the result.

In line with the above results from my literature review, I conducted empirical research myself with five Dutch companies\(^2\) questioning (i) what their reasons are to implement VBM, (ii) which metric they use, (iii) how VBM is implemented, (iv) what the effects are on behavior and attitude, (v) what the effects are on decision making, and finally (vi) what the effects are on performance. With each company I held two interviews: one at corporate level, to find the reasons and expected effects of VBM, and the second at a lower level in the organization where managers and employees are actually subject to VBM. During these

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\(^2\) ABN AMRO Bank, Akzo Nobel, Heijmans, Schiphol, and Sigma (anonimized).
interviews I asked for – and received – examples and documents (even confidential) as supporting ‘evidence’ for their statements. In addition I used publicly available information to supplement the data collection. The interviews were transcribed and mailed to the interviewees to correct, verify, and authorize. During and after writing the cases the interviewees have been contacted frequently to fill out some ‘blind spots’ in the cases, discuss developments in VBM at the organization, and in the end to approve the case descriptions. These follow-ups took place at the interviewees’ offices, by e-mail or by phone. During these occasions the interviewees also consulted colleagues to provide my requested information. That way I was able to triangulate the information in order to improve the reliability and validity of my research.

The conclusions follow the three sub-questions to my problem definition.

(i) Why manage for value and how to express value creation?
1. The reasons to implement VBM are:
   a. To deal with the pressure from the capital markets, both from a debtor’s point of view (credit rating), as well as from shareholders (lagging share price).
   b. To meet (external) reporting requirements, for instance the Basel II agreement or the Dutch Competition Authority.
   c. To motivate entrepreneurial behavior.
   d. To have one uniform language to control the entire organization with mutual comparability.
   e. To appraise and select investments, that need to exceed the cost of capital.
   f. To create awareness for working capital, in order to reduce invested capital and consequently the capital charge.
   g. Catalyzing events, such as the appointment of new Board Members, active shareholders who complain about a company’s diverse activities, or financial distress.

2. VBM metrics
   a. Simplicity is more important than accuracy. In order to manage the value drivers rather than the calculations, the calculations are held as simple as possible to prevent distraction of attention to the metric.
   b. Different metrics are applied for different purposes. The companies apply metrics to enable benchmarking on Total Shareholder Return, select (dis)investments and for control purposes.
   c. Limited adjustments are made to operational performance and Capital Charge. The companies try to relate internal and external reporting as close as possible. In order to keep calculations simple, adjustments to operational performance and invested capital are very limited. The capital charge is also held as simple as possible, by means of applying one corporate Weighted Average Cost of Capital, or a WACC per division/business unit at best.
   d. Absolute measures are less applied than relative performance measurement. The absolute EVA or EP numbers (or drivers) are relativized by evaluating performance on improvements rather than the absolute figures. Where already relative metrics are applied (e.g., a RONA-percentage), they are benchmarked against for example the WACC.
(ii) How to design and implement a management control system that enhances value creation?

3. Design
   a. By introducing a single, uniform VBM-metric with causally related value drivers throughout the company, a ‘common language’ is created throughout the organization. This contrasts with the varying performance measures between corporate entities before.
   b. To introduce a capital charge and thresholds for investments that had to exceed the cost of capital, attention was drawn to the balance sheet in addition to the profit & loss account.
   c. To redesign strategic and business processes, in order to assign more responsibilities to lower levels in the organization, capabilities were developed of managers and employees. This had to result in a more entrepreneurial spirit and more businesslike culture to align their interests with those of shareholders. Managers and employees are in these processes held accountable for activities that contribute to value creation within their control.
   d. Performance rewards are value-based and linked to responsibilities.

4. Implementation
   a. Implementation is directed by corporate headquarters. Although companies may have a decentralized organizational structure, the implementation process is centrally directed. Lower hierarchical levels may have their own responsibility in implementation, but based on directives from headquarters regarding for instance definitions and training.
   b. Attention is focused on value drivers instead of the calculations. To direct attention to how value is created instead of how much value is created, the focus is on the value drivers rather than the resulting figure from calculations.
   c. Implementation and control is supported by information systems, intranet, and VBM-specific tools. Value-based behavior is facilitated by tools and instruments that generate calculations and support decision making by providing the necessary data without too many manual efforts.
   d. The implementation process is effected in one run. Pilot projects do not seem to be necessary for successful implementation.
   e. Many managers and employees are trained in different VBM topics, depending on their position in the company.
   f. Consultants support the implementation, especially in training staff and support staff to structurally implement a VBM program.

(iii) How do Dutch companies apply VBM and to which extent does VBM affect their management control system?
   a. The companies apply predominantly flat, decentralized structures.
   b. Targets are set lower into the organization in line with the value-based strategy.
   c. Decision rights lie at decentralized level.
   d. Communication is based on dialogues instead of top-down.
   e. Strategy development is based on value creation and involves lower hierarchical levels.
   f. Targets are determined at corporate level using a uniform measure and translated lower into the organization. At lower levels targets are translated into financial or operational value drivers.
   g. Resources are managed and assigned to the most value-adding activities, based on strategic plans and budgets.
h. Budgeting still is an important instrument, but rooted in value creation and plans that follow from dialogues.

i. Performance measurement has extended financial measures with (non-financial) value drivers.

j. Management reporting is based on balance sheets and profit & loss accounts, aligned with strategy.

k. Performance-based rewards are related to value-based measures, either the outcome or the drivers.

The case organizations do not provide unambiguous evidence that share prices increase after implementing VBM, alike the conclusion from literature. However, this view may be distorted due to external circumstances that affected the capital markets, as for instance the 9/11 attack. The exact relation between the individual share prices and market index is a study by itself, and beyond the scope of this research project.

Regarding the effects on control, attention is focused on value drivers and activities that managers and employees can influence and carry responsibility. It appears that VBM resulted in more efficient and effective use of assets, as well as that product/activity/client portfolios are managed more actively.

From my research the following general conclusions can be drawn:

1. Implementation of VBM resulted in a common language throughout the company since one common objective is aimed for. All activities are related to that objective.

2. Managers and employees are held accountable for activities (value drivers) within their control and that contribute to value creation.

3. A change in awareness and behavior of the managers and employees when making decisions to consider implications on the profit and loss account as well as on the balance sheet.

This shows that when implementing VBM a mix of control methods is applied. In the pre-VBM period the companies predominantly applied financial results control (for instance regarding budgets) based on bookkeeping measures such as Return on Investment. With the application of VBM it is supplemented with action controls (value drivers), personnel controls (entrepreneurial behavior to reduce the conflict of interests between shareholders and managers), and cultural controls (more businesslike with setting targets).

The case company characteristics show that VBM is applicable with different strategies, in both listed and non-listed firms, in service and manufacturing, in centralized and decentralized organization, and in companies with widely diversified activities or geographic dispersion as well as focused or local activities. As long as the focus is on value drivers and not on the calculations. Various interviewees made clear that a VBM metric is only a result but not the means. The management control system will therefore have to be designed and used to direct attention to value drivers and make employees aware of the effects of their activities on the economic value of the company.