

The Effects of a Transition from Traditional Budgets to Rolling Forecasts:

A Case Study of Aker Solutions

KRISTER AASE SÆSTAD & ERLEND MEVIK

SUPERVISOR
Rafael Heinzelmann

University of Agder, 2019
Faculty of Business and Law
Department of Economics and Finance

Master

Abstract

Increasingly volatile and fluctuating market conditions has contributed to the emergence of new innovations within management control systems and management accounting practices. This thesis focuses on rolling forecasts, that facilitate the potential use of dynamic management tools such as Beyond Budgeting. We examine how these two phenomena have been incorporated in the practices of the global engineering company, Aker Solutions, that moved from traditional budgets to rolling forecasts in 2013. By applying qualitative research method, the thesis aims to study how the transition from traditional budgets to rolling forecasts has affected Aker Solutions, and whether this transition has contributed towards implementing the Beyond Budgeting philosophy.

Our main findings indicate that their ability to adapt to market changes has increased, due to more frequent updates of the forecasted data. We find that the total time consumption in the elaboration of forecasts has been both reduced and better utilized compared to the previous budgeting practice. The thesis discover that the impact of rolling forecasts is perceived differently within the organization. It suggests that employees in positions closer to the top management sees a greater impact of the transition compared to the ones at project level. The top management have a more comprehensive overview of the organization and the forecasting process, while project controllers focus solely on the data within their own division.

We find evidence pointing towards a dynamically managed organization. Long term targets and objectives are connected to the superior values and directed with a clear corporate mindset. The organization empowers a great amount of trust to their employees, and a high level of authorization is provided to each project in regard to make decisions without strict monitoring by the top management. However, the study finds that that the organization is facing a challenge in terms of performance evaluation, as there is a lack of ability to evaluate each project holistically, in line with the Beyond Budgeting philosophy.

Acknowledgements

This thesis is written as a part of the Master of Science in Business Administration at the University of Agder (UiA), and our major is in Management Accounting (Økonomisk styring).

We would like to express our sincere gratitude to Aker Solutions in Egersund for great cooperation and facilitating for the conduction of this research, by letting us have access to the organization. Without their contribution, this thesis would not have been feasible. A special thanks goes to all the employees who took their time to organizing, participating and providing knowledge through meetings and interviews.

We would like to express our thankfulness to our supervisor, Rafael Heinzelmann, for great advices, constructive discussions and guidance. His strong knowledge within Management Accounting and Management Control Systems has been very helpful for us in the elaboration of this thesis. The supervision is highly appreciated.

Kristiansand, May 29th, 2019



Krister Aase Sæstad



Erlend Mevik

Table of Contents

ABSTRACT	1
ACKNOWLEDGEMENTS	2
1. INTRODUCTION	6
1.1 BACKGROUND OF THE THESIS	6
1.2 RESEARCH QUESTIONS TO BE INVESTIGATED	7
1.3 RELEVANCE AND PURPOSE	7
1.4 SHORTCOMINGS AND LIMITATIONS	8
1.5 STRUCTURE	9
2. LITERATURE REVIEW	10
2.1 DEVELOPMENT OF BUDGETING PRACTICES	10
2.2 TRADITIONAL BUDGETING	11
2.2.1 Critique of traditional budgets	12
2.3 DYNAMIC MANAGEMENT CONTROLS	15
2.3.1 Beyond Budgeting	15
2.3.2 Twelve principles of Beyond Budgeting	16
2.3.3 Activity-based management in Beyond Budgeting	19
2.4 ROLLING FORECASTS	20
2.4.1 What is a rolling forecast?	20
2.4.2 The forecasting process	21
2.4.3 Rolling forecasts in a Beyond Budgeting environment	22
2.5 CRITIQUE OF BEYOND BUDGETING AND ROLLING FORECASTS	22
2.5.1 Disadvantages with Beyond Budgeting	22
2.5.2 Disadvantages with rolling forecasts	23
3. METHODOLOGY AND RESEARCH DESIGN	25
3.1 RESEARCH ON MANAGEMENT ACCOUNTING PRACTICES	25
3.1.1 Case-based research	26
3.1.2 Ensuring the quality of data	26
3.1.3 Qualitative research methods	28
3.1.4 Qualitative interviewing	28
3.2 RESEARCH DESIGN	30
3.2.1 Planning	30
3.2.2 Collection of data and evidence	31
3.2.3 Conducting the interviews	33

4. EMPIRICAL SETTINGS	34
4.1 ABOUT AKER SOLUTIONS	34
4.1.1 Organizational structure	34
4.1.2 Core values	35
4.1.3 Organization chart	35
4.2 EMPIRICAL FINDINGS.....	36
4.2.1 Planning process.....	36
4.2.2 Financial reporting process	36
4.2.3 Benchmarks and scorecards.....	37
4.2.4 Bonus and incentives.....	37
5. ANALYSIS.....	38
5.1 ROLLING FORECASTS IN AKER SOLUTIONS	38
5.1.1 Reacting to market changes.....	38
5.1.2 Hierarchical position affects how employees perceives the impact of rolling forecasts.....	39
5.1.3 A smooth, natural transition	41
5.1.4 Different perceptions regarding time consumption.....	42
5.1.5 The “old mindset” problem	44
5.1.6 A selection of parameters and principles forms the forecasting process	47
5.2 BEYOND BUDGETING IN AKER SOLUTIONS	49
5.2.1 Target setting and rewards within the organization	49
5.2.2 Lack of ability to evaluate performance	52
5.2.3 Empowering trust and autonomy within the organization	53
5.2.4 Allocation of resources	55
5.2.5 Other minor influences.....	56
6. CONCLUSION	58
6.1 RESEARCH QUESTION 1	58
6.2 RESEARCH QUESTION 2	60
6.3 CONCLUDING REMARKS	62
LIST OF REFERENCES.....	64
FIGURES AND TABLES	70
<i>Figure 1: 12 Principles of Beyond Budgeting (BBRT, 2016), pp. 16.....</i>	<i>70</i>
<i>Figure 2: Traditional Forecasts versus Rolling Forecasts (Hope, 2010), pp. 21</i>	<i>70</i>
<i>Figure 3: The Forecasting Process (Bergstrand, 2009), pp. 22</i>	<i>70</i>
<i>Figure 4: Organization Chart (Aker Solutions, 2019), pp. 35.....</i>	<i>70</i>

<i>Table 1: Summary of interviews, pp. 32.....</i>	<i>70</i>
APPENDIXES	70
<i>Appendix 1: Interview guide, pp. 71</i>	<i>70</i>
<i>Appendix 2: Reflection notes – Erlend Mevik, pp. 74.....</i>	<i>70</i>
<i>Appendix 3: Reflection notes – Krister Sæstad, pp. 77.....</i>	<i>70</i>

1. Introduction

The initial phase of the thesis aims to present background information, introduce the research questions and to address the purpose and relevance of the study. In addition, we highlight the shortcomings and limitations related to the thesis, as well as a description of the applied structure.

1.1 Background of the thesis

Budgeting is described as the cornerstone of the management control process in organizations (Hansen, Otley & Van der Stede, 2003). Although many researchers identified several dysfunctions from the very start (Becker, Messner & Schäffer, 2012), the traditional budget is still the main accounting system in most organizations. However, due to the understanding of the limitations of budgets, many firms tend to move away from this practice. The main concerns are the restrained possibility to adapt to market changes (Bergstrand, Bjørnenak & Boye, 1999), and difficulties in terms of using the budget for planning and performance evaluation (Hansen et.al, 2003). Unstable and changing market environments creates problems for management control systems, such as budgets, due to its lack of dynamic abilities (Bjørnenak & Kaarboe, 2011).

The former CEO of Handelsbanken, Jan Wallander, abandoned the budget already in the late 60's. In average, he made the bank more profitable than every other domestic bank the following years (Wallander, 1999). While Wallander gave employees more power and authority and decentralized the organization, other professionals have in recent years developed his idea. Bjarte Bogsnes, Jeremy Hope and Robin Fraser have been among the most influential people within the field, with the latter two founding the membership organization, Beyond Budgeting Round Table (Bogsnes, 2009).

Mainly, traditional budgets are too time consuming and costly, in addition to providing low utility value and constraining flexibility and responsiveness (Hoff, 2016). The literature suggests a number of new tools that contributes to dynamic management controls and accounting, including rolling forecasts. Morlidge and Player (2010) describe this phenomenon as *“a financial estimate of likely future outcomes, where the company thinks it will be (..)”*

updating its forecasts several times a year. This practice is one of several principles of the Beyond Budgeting idea (Bogsnes, 2009), which focuses on decentralizing companies' decision-making process and making them meet success factors (Hope & Fraser, 2003, p. 212).

Empirically, this thesis is set into context of the global engineering organization, Aker Solutions. They are exposed to a highly fluctuating market where organizations invest in a variety of projects. Hence, revenues and activity-level are based on whether they win or lose project assignments. In recent years, the organization has experienced both ups and downs. In 2013, they decided to move away from traditional budgeting methods and implement rolling forecasts, to become more adaptable and reactive to market changes.

1.2 Research questions to be investigated

We will attempt to respond to the following superior research question:

How does the transition from traditional budgets to rolling forecasts affect Aker Solutions?

More specifically, the thesis will examine how employees involved in the rolling forecasting process, in different hierarchical positions, have experienced the change in budgeting practice. We also aim to explore whether this transition has led to increased dynamic management in the organization, by answering the following research question:

Does this transition contribute towards implementing Beyond Budgeting?

1.3 Relevance and purpose

The purpose of the study is to investigate how a transition from traditional budgets to rolling forecasts affects an organization in its daily operations.

This practice has been applied by several organizations in recent years, and a variety of research is already presented by academics. Many researchers point at the replacement of budgeting with dynamic management controls, today often referred to as Beyond Budgeting (Hope and

Fraser, 1997; Hansen et.al, 2003; Bogsnes, 2009; Kaarbøe & Bourmistrov, 2013). As mentioned, rolling forecasts are part of the Beyond Budgeting philosophy. However, we find limited research regarding how those phenomena are incorporated together in organizations (Bourmistrov & Kaarboe, 2013). By applying a case study approach, we want to raise the awareness of this topic, and investigate how rolling forecasts are able to change the way an organization is managed.

1.4 Shortcomings and limitations

The analysis of this thesis is influenced by a few shortcomings and limitations, concerning statistical generalizability and the perspectives of time and variety.

Generalizability and relevance to other organizations is problematic as this is a case study focusing on one particular organization in a specific environment. We cannot draw any conclusions from their perception of the investigated phenomena to other organizations. The application of rolling forecasts and Beyond Budgeting Beyond Budgeting in case study research are highly dependent on contextual factors, even though it is within the same industry (Cooper & Morgan, 2008). However, the theoretical framework is applicable to anyone, and e.g. perceived advantages and disadvantages could be generalized to other businesses.

The variety perspective concerns limitations in the collected data. Aker Solutions is a major organization, but our data collection is limited to the plants and management of the southwestern region of Norway. Statistical generalization of rolling forecasts and Beyond Budgeting practices might thus be problematic, also bearing in mind that the number of respondents is not necessarily large enough. In addition, a few of the respondents experienced some difficulties in remembering how the budgeting practices were before the implementation of rolling forecasts. This might affect the findings of this thesis.

Lastly, as this is a master's thesis, the study is limited to a certain period of time. Thus, the results of the study could be different if it had been conducted at another date.

1.5 Structure

This research paper is divided into six chapters. In chapter one, the topic is introduced, as well as the problem statement, purpose of the thesis and other important background information.

Chapter two deals with the literature review, presenting relevant theory which is important for the study.

Chapter three describes the methodology and research design applied to conduct the research.

In chapter four we describe the empirical settings, including organizational structure, financial planning system and other management tools. A detailed description of Aker Solutions' rolling forecasting process is also compiled. This information is important in order to maximize the understanding of the analysis in chapter five.

Chapter six marks the end of the study, and we present the conclusions and main findings of the research.

2. Literature review

The purpose of this chapter is to present the theoretical framework for this paper, which will form the base of the analysis. It starts with a presentation of the development of budgeting processes, describing how practices have changed. Thereafter follows an explanation of the traditional budget and its related critique. Finally, we present theory of recent practices which provides different solutions; rolling forecasts and Beyond Budgeting, as well as identifying the related risks and disadvantages.

2.1 Development of budgeting practices

Organizations started using budgets in the 1920's as a tool for managing costs and cash flows (Hope & Fraser, 2003). Ever since the post-war period, budgets have been a fundamental way of managing businesses and organizations. It has been a useful tool within management accounting, focusing on command, hierarchy and control (Hope & Fraser, 1997; Ekholm & Wallin, 2010). However, this phenomenon soon caught the attention to recognized researchers such as Argyris (1952), Wildavsky (1964) and Hopwood (1974). Their studies showed early evidence of the dysfunctionality of budgets (Becker, Messner, Schäffer, 2012).

Although the traditional budget has often been seen as bureaucratic and cumbersome, it was a cornerstone of an organization's management accounting system until the 1990s (Hope & Fraser, 2003). However, due to rapid market changes, the corporate mindset and working conditions were transformed and new solutions were presented. Internationally, several organizations saw that their traditional products had become outdated and they were forced to regularly change their plans. As the industrialized countries grew and were able to deliver better products, they tried to find dysfunctions within their control systems, rather than thinking about how to decipher the signals (Bergstrand, 1999). According to Hansen, Otley and Van der Stede (2003), using budgets for planning and performance evaluation were among the concerns.

The first pioneer of changing the practice is said to be the Swede, Dr. Jan Wallander (Hope & Fraser, 2003). He believed that the use of traditional budgets was an outmoded way of managing a company, as well as a cumbersome way of reaching conclusions which were either

“commonplace” or wrong (Wallander, 1999). Instead, he argued that one should create forecasts to make a projection of the future; thereby using the organization’s historical experiences, combined with a limited number of measures that shows if the organization is on the right track. Hope and Fraser (2003), along with others, used his ideas to further develop the budgeting practices which today is known as “Beyond Budgeting”.

2.2 Traditional budgeting

Hope & Fraser (2003, p. 212) define the budget as: *“A plan expressed in financial terms, a basis for controlling performance, an allocation of resources, an entitlement to spend, and a commitment to a financial outcome”*.

The board of a company will often require a plan for the business, which provides a healthy return on the invested capital (Bergstrand et.al, 1999). Handling on the behalf of the owners, means that its necessary to make a strategy that outlines how to the money should be used and the expected return. Another common viewpoint in large organizations is that an instrument is needed to coordinate the activities of the different entities. In many companies, components are manufactured in different units, and they feel the need to coordinate quantities and progress so that the total production leads to the desired result. Budgets are tools to build motivation among employees, and by including them in the preparation-process, it leads to a feeling of responsibility and increased understanding of the business. In addition, by creating self-interest, employees are more likely to focus on increasing profitability (Bergstrand et.al, 1999). This is also shown in a study by Lidia (2014), where it is stated as one of the main advantages of budgets. The study adds two more advantages; budgets ability to assist planning and coordination in addition to allowing effective control and help towards achieving the objectives set by the management.

Libby and Lindsay (2010) mentions budgets ability to translate qualitative strategies and objectives into action plans, which connects different hierarchical levels. Hansen and Van der Stede (2004) highlights operational planning, objectives communication and strategy setting as ways of making use of budgets. In addition, Bunce et al., (1995) remarks budgets’ use for other reasons, such as cost-control, resource allocation, performance measurement, cash-flow and

investment management. It is also a tool used to decide how to reward managers (Nugus, 2009), calculating rewards for employees and making decisions related to pricing (Uyar and Biligin, 2011).

2.2.1 Critique of traditional budgets

During the emergence of Beyond Budgeting as well as other dynamic management tools, the traditional budgets have been criticized from several researchers. The critical points below are mostly based on the principles of BBRT, previously published on their website and now available in Hoff (2016).

Time consuming and costly

The preparation of a budget is cumbersome and costly, especially for larger organizations. This can at times affect other important activities, which also need attention (Hoff, 2016). Preparing the budgets takes on average four to five months, it involves many people and absorb valuable time for important people such as financial managers and senior executives (Hope & Fraser, 2003).

Motivating unethical behaviour

Boards focusing on deviation from the budget might encounter situations where sub divisional leaders abstain to report all earnings in good times to save for periods with minor setbacks. This behaviour has in some occasions led to financial crime (BBRT; Hoff, 2016). Sometimes, one could be influenced by events in the future, which directly encourage excessive resource consumption. While there is enough money for one year, other tasks might be planned the following year, which requires the entire budgetary framework. This might lead to an investment on something useful for the upcoming year, rather than leaving the money unspent, when it can lead to cutbacks in the next budget (Bergstrand, et.al, 1999).

Provide little value

The majority of people are critical to budgets and many of those are extremely negative (Bogsnes, 2009). People feel that the rituals are too bureaucratic, and that budgets are influenced by too many details. Spending time to analyse and create basis for improvements are prioritized (Hoff, 2016).

Weak connection between budgeting and strategy execution

For an organization to function effectively, budgets must be aligned with its strategy, with appropriate strategic planning and introduction of performance processes (Neely, Bourne, & Adams, 2003). The problem is that all strategic planning is conducted by the top management, while division managers and employees have no influence on the decisions (Hoff, 2016).

Does not focus on shareholder value

Many organizations believe that the planning and budgeting process within their business is broken, in the way that it does not help them reaching their goals. Researchers suggest that organizations focus on value measurement, rather than value management, which limits the focus on value creation (Heyns, Reilly, Smythe & McCarthy, 2003). Another point is that negotiations are conducted, where the goal is to achieve spacious budgets. In other words, there is no focus on maximizing the shareholder value (Hoff, 2016). This quote highlights the situation: *“The budgeting process becomes an intense political game characterized by lobbying, forced haste, delays, buried truths and lies”* (Morrow, 2003, p. 321).

Budgets constraints responsiveness and flexibility, and are often a barrier to change

For many organizations, the competitive situation can be prone to sudden change. In this case, the budget cannot be used as a management tool if it does not keep up with these changes. It is rather worthless if, at each periodic reporting, long explanations are required about conditions that nobody in the business can influence (Hoff, 2016).

Inhibits product and strategy development

According to Neely et.al. (2003), budgets add little value, and tend to be bureaucratic and discourage creative thinking. Organizations tend to focus on what the budget says and let potential opportunities pass. Development projects might have a life span which extends through several budget periods and does not follow the management cycle that the budget envisages. In an organization with a rigid budget culture it is probably hard to implement projects that do not follow the budget structure (Hoff, 2016).

Creates a culture of dependency

Employees might settle with only meeting the budget requirements, but not making any further efforts. Many do also feel that the budget gives a false sense of security (Hoff, 2016). However, they should create culture of responsibility rather than dependency, where leaders' challenges

assumptions and risks, involving everyone in the strategy, and empowering teams to make decisions (Hope & Fraser, 2003).

Maintaining instead of reducing costs

According to Hope & Fraser (2003), budgets have been turned into “fixed performance contracts” that force managers at all levels to commit to delivering specified financial outcomes, even though many of the variables are beyond their own control. In addition, budgets provide poor value, they fail to address current competitive imperatives, and they lead to dysfunctional behaviour (Hope & Fraser, 2003).

Identifying the real problem

Bogsnes (2009) identify the main concern for organizations as their lack of willingness to change. Their faith in traditional budgets are holding them back and they will change existing practices rather than completely abolish it. There is evidence that corporations using budgets struggles to keep up with those that have changed their practice (Bogsnes, 2009, p. 5). The main problem might not be the many disadvantages of traditional budgets, but not being able to realize a bigger problem. Many organizations fail to connect budgeting problems to other weaknesses in the management model. The reason might be their blind faith in the following myths that has dominated management thinking (Bogsnes, 2009, p. 3):

1. No centralized control = chaos and anarchy.
2. Good performance = hitting the budget numbers.
3. No budgets = cost explosion.
4. No individual bonuses = worse performance.
5. More details = more quality.
6. “What you need to know” is simply enough for the company - if they can explain something means that they have control.

2.3 Dynamic management controls

In recent years, the spotlight has been directed towards management control systems' lack of dynamic abilities. Due to changing business environments, several people claims that organizations should alter the way they are governed (Bjørnenak & Kaarboe, 2011). Bogsnes (2009) argues that one should replace budgets with dynamic management tools when the surroundings are unstable. In this part of the paper we will conduct a deeper investigation into some of those tools.

2.3.1 Beyond Budgeting

The principle of Beyond Budgeting originates from Jeremy Hope and Robin Fraser as they established the Beyond Budgeting Round Table Institute (referred to as BBRT) in 1998 (BBRT, 2019). In the following years, several professionals have contributed to further develop the management model. Bjarte Bogsnes, Chairman at BBRT and Senior Advisor Performance Framework at Equinor, is among the most influential people for its evolution. He is the person behind the implementation of Beyond Budgeting in Equinor, Scandinavia's largest company (Bogsnes, 2009).

Hope & Fraser (2003, p. 212) define Beyond Budgeting as: *“A set of guiding principles that, if followed, will enable an organization to manage its performance and decentralize its decision-making process without the need for traditional budgets. Its purpose is to enable the organization to meet the success factors of the information economy (e.g. being adaptive in unpredictable conditions).”*

The purpose is to offer an alternative management model based on the decision-making needs of front-line managers. Beyond Budgeting supports relative targets and rewards, continuous planning, resources on demand and dynamic cross-company coordination. Decentralizing performance responsibility, involving more local employees in goal-setting and increasing the sense of ownership is supposed to be the driving forces for continuous improvement (Hope & Fraser, 2003).

In some academic literature, Beyond Budgeting tend to be understood as already existing in organizations that has implemented rolling forecasts as their budgeting method (Becker, 2014). According to representatives from the BBRT, this is among the most common misunderstandings of the concept (Bogsnes, 2009, p. 73). To fully succeed with budget abandonment, one must be able to move away from the ‘command-and-control’ culture in organizations. These cultures will always undermine the effectiveness of other tools such as rolling forecasts and balanced scorecards (Hope & Fraser, 2003; Becker, 2014).

Bogsnes (2013) compare the principle of Beyond Budgeting with the traffic flow. Traffic lights works as a centrally regulated system, programmed in time intervals, based on assumptions on expected traffic volumes and patterns. Red means stop, green means drive. While approaching a roundabout, however, the drivers apply real-time assumptions as a guidance for their decisions. Either you spot an opening in the traffic flow, or you react to threats (meeting cars) as you observe the actual situation. In other words, decision-making takes place at a level closer to the situation and at the right time.

2.3.2 Twelve principles of Beyond Budgeting

Hope & Fraser (2003) along with BBRT have formed a set of 12 guidelines an organization should follow to release themselves from the “annual performance trap”. The principles are based on their own observations of what works in practice and is not suggested as a “checklist”.

Leadership principles	Management processes
1. Purpose – Engage and inspire people around bold and noble causes; not around short-term financial targets	7. Rhythm – Organize management processes dynamically around business rhythms and events; not around the calendar year only
2. Values – Govern through shared values and sound judgement; not through detailed rules and regulations	8. Targets – Set directional, ambitious and relative goals: avoid fixed and cascaded targets
3. Transparency – Make information open for self-regulation, innovation, learning and control; don’t restrict it	9. Plans and forecasts – Make planning and forecasting lean and unbiased processes; not rigid and political exercises
4. Organization – Cultivate a strong sense of belonging and organize around accountable teams; avoid hierarchical control and bureaucracy	10. Resource allocation – Foster a cost-conscious mind-set and make resources available as needed; not through detailed annual budget allocations
5. Autonomy – Trust people with freedom to act; don’t punish everyone if someone should abuse it	11. Performance evaluation – Evaluate performance holistically and with peer feedback for learning and development; not based on measurements only and not for rewards only
6. Customers – Connect everyone’s work with customer needs; avoid conflicts of interest	12. Rewards – Reward shared success against competition; not against fixed performance contracts

Figure 1: 12 principles by BBRT (BBRT, 2016)

These 12 principles include both leadership principles and management processes. They both support and depend on each other, process drives behaviour and vice versa. How the managerial processes are set up must support the desired leadership behaviours (Bogsnes, 2009). Thus, implementing the Beyond Budgeting phenomenon cannot be done by focusing on just a few principles - they all have to relate to each other. Below follows a closer explanation of the principles:

Purpose

This principle is connected to the existence of the organization; why do people want to work there? When the organization serves a greater purpose and when people are treated fairly, employees' engagement to work should be increased. Hence, they will be more eager to work towards reaching ambitious goals (Bogsnes, Larsson, Olesen, Player, Röösl, 2016).

Values

The important statement is that people should be bound to a common cause, through values. This principle is closely related to 'purpose' and these should be seen in combination to each other (Bogsnes et.al, 2016).

Transparency

The members of BBRT emphasizes transparency as an important aspect for organizations. According to Bogsnes et.al (2016) it helps creating a positive image both within and outside the organization, as well as functioning as a control mechanism.

Organization

By applying a self-regulating, autonomous and independent structure, the performance level of the employees should be positively affected. Organizing around accountable teams will strengthen the customer relation and thus increase the ability of being responsive and flexible to their wants and needs, as they will have greater control of the market in which they are responsible for (Bogsnes et.al, 2016).

Autonomy

This term concerns the importance of decentralized and self-regulating units within the organization. One should aim to increase the level of trust and avoid adding extra rules and regulations. Providing individual managers authorization for their own units is a way to engage

performance among employees, keeping decision-making that only affects the respective project, within the project (Bogsnes et.al, 2016).

Customers

If a process is not, directly or indirectly, serving the customer, it should be stopped. This principle is set to emphasize the importance of conducting actions only if they serve the customer, as it is the ideal of high-performing and effective organizations. The importance of avoiding conflicts of interest with customers is vital, and individual bonuses e.g. related to sales should thus be avoided (Bogsnes et.al, 2016).

Rhythm

Business processes should be based on the rhythm and dynamics of the organization. This will ensure agility, relevance, effectiveness and efficiency. By keeping an agile approach, one will easier be able to respond to unexpected market changes and events. This principle is closely related to the importance of forecasts and the avoidance of annual budgets (Bogsnes et.al, 2016).

Performance evaluation, targets and rewards

The key to succeed with Beyond Budgeting, is to be able to define “good performance” and “how do we get good performance” in the organization (Bogsnes, 2009, p.111). According to Bogsnes, performance evaluation starts with ensuring quality in target setting. It should be about outperforming peers; benchmarking your company towards your natural competitors, not reaching a certain number in the budget. Simplified, this process should address where the company is headed (Østergren & Stensaker, 2011). In Beyond Budgeting theory, it is argued that the SMART principles should be used with caution (Bogsnes, 2009, p.28):

“Specific - but not a straitjacket

Measurable - but do not forget words

*Achievable - but do not forget Aristotle**

Relevant - do not forget strategy or what you aim for

Time bound - do not leave it for year-end”

The target setting can be summarized by Aristotle’s words: “The problem is not that we aim too high and miss, but that we aim too low and hit”.

Forecasting, planning and dynamic resource allocation

According to Kaarbøe and Bourmistrov (2013), forecasting, planning and dynamic resource allocation are the other tools that helps enabling better forward-looking and strategy-oriented decision-making. The planning process comes after the target-setting and addresses the approaches on how to reach the ambitious targets. When both the targeting- and planning processes are completed, one will get an overview of all strategic goals and actions, as well as who is responsible for those.

Dynamic resource allocation is an approach where resources are allocated continuously and dynamically based on when it's needed, and not on a yearly basis (Østergren & Stensaker, 2011). The authors advocates that this kind of allocation is beneficial based on a strategic point-of-view. Managerial focus is changed in a way that, as long as the overall financial capacity is in place, "good" projects will not be turned down due to budget constraints. In addition, dynamic resource allocation covers the company as a whole, rather than unit-by-unit. This ensures that the overall best projects will receive financial support, no matter which business unit it comes from.

2.3.3 Activity-based management in Beyond Budgeting

Activity-based management (ABM) concerns the measurement and management of the organization's capacity (Kaplan & Anderson, 2003), providing benefits for a Beyond Budgeting organization in four ways. Firstly, estimating the need for capacity, by using trends and current forecasts, redeploying capacity elsewhere if needed. Secondly, ABM is useful for calculating full cost, especially for customers with highly customized demands, revealing if the contract is profitable or not. Thirdly, one must avoid costs that should not be incurred, improve the processes and consider whether it is worth doing. Finally, ABM supports a horizontal process view of the organization (Hope & Fraser, 2001).

2.4 Rolling forecasts

2.4.1 What is a rolling forecast?

Replacing annual plans with rolling forecasts is one of the main principles within Beyond Budgeting for organizations to release themselves from the ‘annual performance trap’ (Hope & Fraser, 2003; Bogsnes, 2009; Becker, et.al., 2012). Change is continuous for both small and large businesses, and the business environment is unstable. For organizations to be able to generate shareholder value, they must act and react to changes in the market (Zeller & Metzger, 2013). Rolling forecasts will hence serve as a navigational tool for an organization to become ‘future ready’ and improve its ability to anticipate (Morlidge & Player, 2010). Morlidge and Player (2010) define rolling forecasts as *“a financial estimate of likely future outcomes, where the company thinks it will be, based on current assumptions and economic forecasts about the environment and the organization’s plan.”*

Hope & Fraser (2003) and Bogsnes (2009) argues that observations have shown that the mentioned 12 principles of Beyond Budgeting could be crucial for a business’ chance to be successful. Rolling forecast caters particularly to process principles such as goals, rewards and controls, which are based on relative measures, marked against trends and continuous improvement (Zeller & Metzger, 2013).

The approach is used by leading organizations either in combination with or as a complete replacement to the traditional budget, navigating the business as conditions change (Zeller & Metzger, 2013). Looking at the traditional approach, the length of the horizon expands and contracts depends on when the forecast is conducted. In a rolling forecast perspective, the horizon is ‘rolling forward’, such that the level of visibility will be more consistent (Morlidge & Player, 2010).

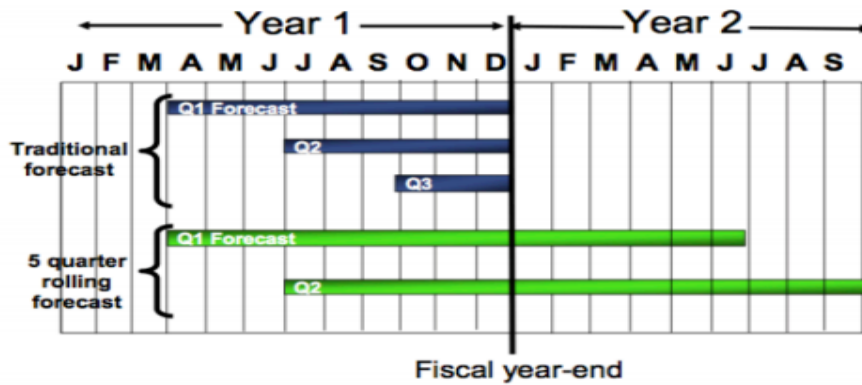


Figure 2: Traditional forecast vs. Rolling forecast (Hope, 2010).

2.4.2 The forecasting process

Rolling forecasts are built on the basis of an organization's financial and strategic plan (Miller, Allen, Schnittger & Hackman, 2013). It is based on what we *think* will happen in the future, not what we *want* to happen (Bogsnes, 2009, 134). Morlidge and Player (2010) argues that a forecast does not have to be a precise prediction of the future, but rather that we should embrace if the future turns out differently. The aim is that we want to 'know the future' in order to be able to affect the outcome (Morlidge & Player, 2010).

Typically, rolling forecasts have a five-quarter horizon, although this is not a definite rule on how to deal with the approach (Bogsnes, 2009). Likewise, it is most common to create new forecasts quartetly (Bergstrand, 2009). The target is to facilitate decisions about new projects, initiatives and corrective actions by ensuring high forecasting quality (Bogsnes, 2009). Thus, for the strategy to succeed, it is important that the management choose *relevant* parameters and forecasting data related to what drives the mechanisms in the forecasts. Orders, sales, costs, profits and cash flows are typical variables that are used (Hope & Fraser, 2013). Those variables must provide enough insight, such that the management are able to adapt quickly to changing environments (Zeller & Metzger, 2013). According to Bogsnes (2009), forecasts should be both 'something you do for yourself' and 'actionable', in order to help achieving the desired good performance.

According to Bergstrand (2009), the forecasting process typically start with division managers at the lowest level delivering their forecasts to their superiors. This material is reviewed and

used by the managers at the next level to form their own opinions, before it is sent further up the system. Hence, we see the pattern of the process. However, different parties could disagree in some points, but there will be little time for discussion as the forecasts have to be passed on. The higher management will thus make the decision of what material to pass on to the next level. It is important that every involved party of the management are aware of their full responsibility of the forecasts they deliver (Bergstrand, 2009). The figure below shows how the forecasting process is decentralized and function as a bottom-up approach:

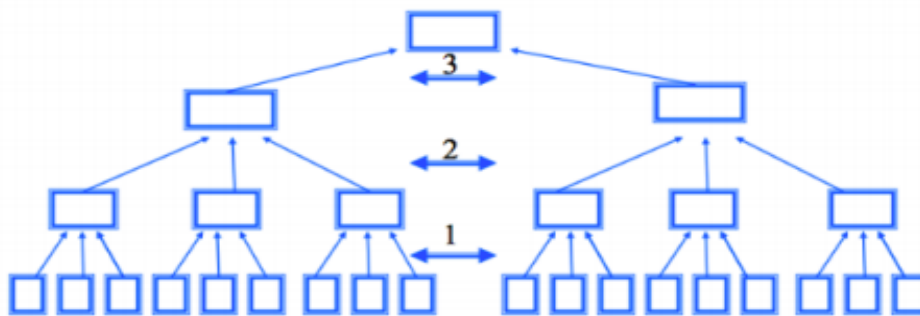


Figure 3: The forecasting process (Bergstrand, 2009).

2.4.3 Rolling forecasts in a Beyond Budgeting environment

Rolling forecasts in a traditional organization are used for helping managers meet current year's budget. They have no other strategic purpose. Often it is no more than a recompilation of the budget, leading managers to take appropriate actions that enables them to meet agreed targets. In Beyond Budgeting organizations, rolling forecasts have a different purpose. It aims to guide managers breaking away from an annual budgeting cycle, and take decisions based on a moving picture of information concerning likely outcomes and existing trends (Hope & Fraser, 2001).

2.5 Critique of Beyond Budgeting and rolling forecasts

2.5.1 Disadvantages with Beyond Budgeting

The Beyond Budgeting philosophy has contributed towards a change in focus, which has altered from reaching the budget numbers to placing on top of the ranking list in the industry

(Østergren & Stensaker, 2011). This could bring different synergies, and in the study, they shed light on some negative consequences of implementing Beyond Budgeting;

- (1) the ambition problem, which states that due to high ambitions, top managers could push division managers excessively. Future targets are set based on relative benchmarks to competitors, which could lead to high pressure towards division managers.
- (2) the sub-optimization game problem. New games could emerge in connection with dynamic resource allocation. E.g. if a project-deciding criterion involve subjective dimensions that are open for interpretation.
- (3) the employee exchange problem, which concerns the risk of a sub-unit not getting any projects. Such situations require that the employees are highly flexible and that their competencies can be used for different purposes in other divisions with more activity.

Despite the fact that a few studies have been conducted (e.g. studies of Bogsnes, Wallander, etc.), there might still be a general lack of knowledge about how Beyond Budgeting concepts work in practice (Kaarboe & Bourmistrov, 2013). However, Rafael Heinzelmann (2019) states that these concepts work well in Scandinavian organizations. The societal culture recognized by a high level of trust and low authority (Johansson, 2013), together with the unique government model is hence important (Heinzelmann, 2019). Greve et.al (2017; Heinzelmann, 2019) argues that there is a tendency in Scandinavian business systems pointing towards a participative management style and corporate culture. This research corresponds well to Strang & Mayer (1993) who argues that the likelihood of a successful adoption of the concept depends on how well it aligns with existing institutional norms, and if it corresponds well to local needs (Becker et.al, 2012).

2.5.2 Disadvantages with rolling forecasts

Uncertainty and designing reward systems

Due to constant changes, rolling forecasts might introduce the feeling of uncertainty among managers. Furthermore, it can be difficult to design a fair bonus system, based on rapid changes. Challenges regarding implementing rolling forecasts in the expense of traditional budgets might occur since it might not fulfil the motivation, as it is based on the rewards system (Gurton, 1999).

Require highly skilled workforce

The demand on highly skilled managers will increase, since it is required to successfully implement rolling forecasts. Accountants who can understand the environment of the organization and employees who can predict future trends are also needed (Sivabalan, Booth, Malmi & Brown, 2009). In contrary, it might be destructive for companies without qualified staff to implement rolling forecasts, as they are not capable of handling the transition (Starovic & Jackson, 2004).

Increase in total workload

As budget planning is done several times a year instead of only once during the budgeting period, the total workload is likely to increase (Bergstrand, 2012).

Biased behaviour

Problems such as 'gaming' may occur, as managers are asked by their superiors to provide their expected forecasts, and the sub-ordinate deliver dishonest numbers on purpose (Hope, 2010). He also argues that 'micro-management' could be a problem. This happens when supervisors use forecasts for control rather than planning purposes, which leads to evaporation of trust in the organization.

3. Methodology and research design

The purpose of this chapter is to describe the methodological approach used to investigate the problem statement of our thesis. According to Saunders, Lewis & Thornhill (2012), methodology can be defined as: *“the theory of how research should be undertaken, including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods adopted.”* Hence, our methodological approaches will be carefully explained in this chapter in order to reflect the reality in a good manner.

3.1 Research on management accounting practices

The nature of accounting is broadly studied, understood and intervened, and it has proven to be a complex phenomenon. Across time, management accounting has changed significantly; adopting new forms, devices and roles (Chapman, Cooper & Miller, 2009).

Accounting academics tend to have different perceptions of what can be regarded as theory within management accounting and control. While some academics rely on nearly all existing literature, other authors perceive theory as an orienting set of ideas or explanatory concepts (Ahrens & Chapman, 2006; Malmi & Granlund, 2009). Nevertheless, both empirically and theoretically, it seems to be important to study management accounting practices *“in the context in which it operates / in action”* (Hopwood, 1983). This is due to the complex interplay between management accounting institutions, practices and understandings (Heinzelmann, 2012).

Studies of accounting in action have further contributed towards the understanding that *“management accounting practices are constantly changing and becoming what they are not”* (Hopwood, 1983; Baxter & Chua, 2003). This forms the basis of how our case-based research is conducted.

3.1.1 Case-based research

Case studies have been compiled for a long time and it is the origin of most of the empirical studies out there (Flyvbjerg, 2011; Yin, 2014). This kind of research is known by various terms, such as: “field studies, interpretive studies, qualitative research, small sample studies, action and constructive research” (Cooper & Morgan, 2008, p. 160). It focuses either on a single case or a small number of cases, in order to get an in-depth understanding of its specificities (Heinzelmann, 2012; Heinzelmann, 2017). A case study should catch the particularity and complexity of a single case, to understand its activity under important circumstances (Stake, 1995).

In general, we can distinguish between two approaches. The first approach is the pre-defined- and structured process, used by both Yin (2009) and Eisenhardt (1989). Yin presents a rigorous six-step process, consisting of designing, preparing, data collection, collecting evidence, analysing, and reporting (Yin, 2009, p. 24). Eisenhardt presents a similar approach with these eight steps: getting started, selecting cases, crafting instruments and protocols, entering the field, analysing data, shaping hypothesis, unfolding literature and reaching closure (Eisenhardt, 1989, p. 533).

The second approach states: “*accentuate the importance of taking the unique and context-dependent characteristics of case studies seriously*” (Heinzelmann, 2012, p. 40). This approach can be seen as “soft” compared to the pre-defined- and structured process, as it aims to enhance the understanding of single cases. “Hard” approaches rely on validity, reliability and generalizability, which is a sharp contrast to soft approaches that refuse these concepts and introduces other quality criteria (Stake, 1995).

3.1.2 Ensuring the quality of data

Good research is generally recognized by high-quality data, concerning the level of reliability, validity and generalizability. Rogers (1961; Saunders et.al, 2012), argues that: “*scientific methodology needs to be seen for what it truly is, a way of preventing me from deceiving myself in regard to my creatively formed subjective hunches which have developed out of the*

relationship between me and my material”. In other words, the aim is to reduce the possibility of getting the wrong answer.

Reliability refers to the consistency of the findings; if the data collection techniques and analytical procedures would provide equal results if they were repeated or replicated by someone else in the future (Saunders et.al, 2012). However, in qualitative research, reliability is not based on outsiders achieving the same results, but that the results make sense to them (Guba & Lincoln, 1985). This is related to the fact that structured data collection techniques are not used, and the dialogue in the interviews could affect the results. In addition, observations are highly dependent on each situation and the context, which makes it difficult for others to achieve equal results (Johannesen et.al, 2011).

Validity is generally explained as the extent to which the information collected actually represents the reality of what is studied (Saunders et.al, 2012). The term can be divided into *external-* and *internal validity*, depending on what kind of research that is conducted.

Internal validity refers to the ability of the questionnaire to measure what it is intended to measure (Saunders et.al, 2012). Our case study is based on a qualitative approach, which should minimize the risk of misunderstandings during our interviews. The interviewees have the opportunity to express themselves and ask “follow-ups”, to ensure that misunderstandings are avoided. In addition, our research will be based on internal documents and reports from Aker Solutions, to make sure we have the correct understanding of the collected data.

External validity is concerning the extent to which the research results from a particular study are generalizable to all relevant contexts (Saunders et.al, 2012). Our case study is based on insight from different employees within Aker Solutions, and thus their answers may not be representative of the population. We chose this particular case study in order to explore the transition from traditional budgeting to rolling forecasts in depth, not as a generalization across businesses. However, the applied theory has been used by several organizations from different industries in previous years. Therefore, we believe that our conclusions from the study could be valuable for other organizations in equal situations, at least to some extent.

According to Heinzlmann (2012; Keating, 1995), there are other tactical approaches applicable to ensure the quality of data within a qualitative case study. The target is to ensure

different criteria of ‘good’ qualitative research. One criterion concerns “*the reflexive interplay between empirical material and theory*” (Alvesson & Sköldbberg, 2008; Heinzlmann, 2012, p. 42). Fulfilling this criterion will thus be important for our research to provide a better understanding of the material.

3.1.3 Qualitative research methods

Qualitative research methodology consists of a variety of methods. By applying qualitative methods, the researcher aims to investigate “how” and “why” questions related to the subject (Heinzlmann, 2012). According to the latter, it is crucial to use a broad selection of evidential sources in the data collection process.

Methods such as ethnographies, interviewing and texts are central within qualitative research. Ethnography is the attempt to describe a culture by doing observations (Bogdan & Biklen, 2007). Interviewing is the most common qualitative research technique (Heinzlmann, 2012; Gubrium & Holstein, 2002) and basically means questions asked and answers given (Bogdan & Biklen, 2007). Texts encompasses resources gathered from publicly available databases, as well as private documents from the respective organization examined in the research.

Our empirical research is mostly built on qualitative interviews with employees at Aker Solutions. We describe this process in further detail below.

3.1.4 Qualitative interviewing

Qualitative interviewing is based on conversation (Kvale, 1996) where researchers ask questions and listen to respondents, while they give their answers (Rubin and Rubin, 1995). In this respect, we can see similarities to standardized surveys, but unlike the survey interview, participants of the qualitative interview tend to be more constructionist than positivist (Holstein and Gubrium, 1995). The interview should collect information, gather understanding and acquire active meaning of interviewees situation, in order to generate interpretations, (Heinzlmann, 2012) and be able to portray ongoing social processes (Warren, 2002; Rubin & Rubin, 2012). In addition, collecting data from various people with different positions in the

organization are contributing towards obtaining valuable information (Stake, 2010). The major strength of this type of data collection is its production of credible results by linking it to solid evidence, embedded in a context (Rubin & Rubin, 2012).

One typology that is commonly used, relates to the level of formality and structure of the interviews. They are seen as either semi-structured or unstructured, most commonly known as in-depth interview, focused- (Saunders et.al, 2012) and problem-centred interviews (Witzel, 2000). Semi-structured interviews will often contain a list of themes and key questions, although this might vary. Unstructured interviews do not use any predefined questions (Saunders, et.al, 2012). They are more informal and explore a more general area of interest, where the interviewee is given the opportunity to talk freely about events, behaviour and beliefs. Problem-centred interviews, on the other hand, studies socially relevant problems and characterizes the organization of processes of cognition and learning (Witzel, 2000). The focused interview fosters a predefined purpose and lets the interviewer exercise greater direction over the interview (Merton, Lowenthal & Kendall, 1990, p. 6), while letting opinions emerge through the response (Saunders et.al, 2012).

In this thesis, semi-structured interviews are prepared and conducted using an interview guideline, which helps both respondents and the interviewer to proceed in a structured manner. Knowing that the respondents might possess important information that can be valuable for the thesis, but will not be answered through our predefined questions, a balance between structure and openness is essential. Interviews should aim to create dialogue by employing follow up questions (Kreiner & Mouritsen, 2005, p. 154), especially to form answers that are optimized for our purpose. Digging deeper into the meaning of the answer, makes us better suited to get information that were previously vaguely answered. Asking for practical examples, experiences of interviewees and strategic decisions in conflicting situations helps receiving accurate answers (Heinzelmann, 2012). Furthermore, creating a scenario which make the interviewee comfortable is vital since interviews are artificial in terms of the situation, and the interviewee might try to communicate a professional self-image, which might govern interviews to pure presentations (Czarniawska, 2002). It is hard to know how many interviews are necessary, the most important part is to facilitate good quality and gather enough information (Johannessen, Kristoffersen, & Tufte, 2004), but still avoid getting too much data (Ryen, 2002). Our focus was to bring fixed questions combined with a variety of potentially relevant sub-questions to

pick up during the interview. Hence, we asked those which suited the interviewee and the situation, based on how the interview proceeded and how well our questions were answered.

Researcher- and participant error

Researcher error might occur in the process of gathering, interpreting or analysing the data. However, by recording the data and keeping a high degree of structure, the risk of researcher error is reduced (Saunders et.al, 2012).

Participant error is related to any factor which could affect the way a participant performs (Saunders et.al, 2012). In our case we refer to the interview setting. The interviews were scheduled and conducted at the interviewees' preferred time and location in Egersund and Stavanger. Thus, we aimed to minimize the risk of interference with their normal work duties, to reduce the level of participant error. There is still a risk of bias in the way interviewees respond to the questions asked. The interviewers body language, comments or tone could affect the response, and we therefore had in mind not to reveal any personal opinions about the discussed topics.

3.2 Research design

The research design is described as: *“a blueprint or plan for the collection, measurement and analysis of data, created to answer your research questions”* (Sekaran & Bougie, 2016). We decided to form our research based on the above mentioned Yin's six-step model for qualitative case-based research (Yin, 2014).

Our case selection is guided by the theoretical interest about management accounting and changes in budgeting practices within organizations. Thus, the research design is set to facilitate the solution of the research questions.

3.2.1 Planning

In the planning phase we choose a topic and a field of study that were of our common interest. We wanted to find a topic that were not highly documented, which would give us an opportunity

to create valuable content. After a brief period of evaluating each interesting topic, we decided to explore the Beyond Budgeting theory in relation to a specific company. The next phase was to identify companies that had not already switched to Beyond Budgeting or preferably had changed their budgeting recently.

Our initial connection with Aker Solutions started in December 2018. We saw an announcement in social media where the organization approached students writing theses during the spring of 2019. Hence, one of the authors contacted Aker Solutions with the purpose of writing a master's thesis. We were soon selected by representatives and made a decision to base our thesis on this organization. After discussing our thoughts with some of their representatives, it emerged that they started using rolling forecasts a few years ago. This made us consider analysing the impact of the implementation, and rather include Beyond Budgeting in context of rolling forecasts as its own research question.

3.2.2 Collection of data and evidence

In the very beginning of January 2019, the organization invited all the selected students to a common meeting at their plant in Egersund. We received a presentation of the organization, a tour on the construction site, as well as information on what they could provide us with during the elaboration of our thesis. A couple of weeks later, we decided our final topic. We kept in touch with the HR Business Partner of the department, via mobile phone and email, until we got assigned an internal supervisor from the organization. This person has been helpful in terms of approaching the interviewees and provide us with necessary information.

In this thesis, the applied sampling method can be recognized as nonprobability sampling, as findings from this study cannot be confidently generalized to the population. Furthermore, we see different kinds of nonprobability sampling, in our case, using the judgement sampling. By applying this method, we can choose interviewees who are in the best position to provide us with the information needed (Sekaran & Bougie, 2016). Since our research questions involves exploring practices within Aker Solutions, we could only speak to employees with the right information and experience from dealing with the in-house budgeting practice. All interviews were conducted using the same guideline in a semi-structured way. Hence, the interviewee had to answer to questions asked by us, while given the opportunity to discuss the topic. The

interview guideline consisted of categories including several sub-questions. These categories were:

- Aker Solutions' implementation of rolling forecast
- Today's forecasting process
- The previous budgeting method
- The phase after the implementation of rolling forecast
- Other dynamic models
- Rolling forecast and changes in the market
- The decision-making process
- Performance measurement

In total, five interviews were conducted, as illustrated in the table below. For the respondents to be able to explain freely and in detail, the interviews were held in Norwegian. The information was recorded via an audio device. All of the interviews were transcribed and analysed shortly after the completion. After this process, we sent the transcriptions of all interviews back to the organization to avoid misunderstandings regarding the collected data. If necessary, we also got the opportunity to contact the respondents at a later time in case more information was needed.

	Respondent	Date	Length
<i>Respondent 1</i>	Senior Project Controller	21.03.19	27:15
<i>Respondent 2</i>	Department Manager	21.03.19	35:48
<i>Respondent 3</i>	Senior Project Controller, Brownfield	22.03.19	48:50
<i>Respondent 4</i>	Vice President Project Controlling, Brownfield	22.03.19	51:40
<i>Respondent 5</i>	Business Manager, Project Leadership	22.03.19	41:41

Table 1: Summary of interviews

3.2.3 Conducting the interviews

The months ahead of the interviews we had been reading important theory and gained knowledge of the organization to increase our chance of asking proper follow-up questions. Hence, we elaborated the questionnaire with the purpose of giving respondents the opportunity to discuss and reflect from different perspectives.

In the end of March, we travelled to Egersund and Stavanger to conduct the interviews. We spent the first day at the plant in Egersund. By arrival we had a meeting with our internal supervisor from Aker Solutions, discussing the different interviewees' tasks and why they were selected. Furthermore, we got a briefing of necessary information, such as organizational structure and areas of business, to secure that we had sufficient background information ahead of the interviews. We spoke to two people in Egersund, and three people in Stavanger.

One of the interviews were conducted by phone, while the others were face-to-face. We had no significant issues doing it that way, but the face-to-face interviews were favourable since we got to see the interviewee and could observe body language and facial expressions. Every interview started equally, but we tailor-made questions based on what we felt matched their knowledge and what they could provide. The opinions were mostly the same, but with different perspectives, which were useful for our analysis of the thesis following the interviews. After summarizing the interview sessions, we were satisfied with the results and the amount of opinions we gathered. However, we saw that a couple of questions could have been answered in more detail.

Even though this approach provided us with great insight, we also encountered challenges. Some of the answers might have been influenced by how the questions were asked, directly or indirectly, leading the interviewees to say "what we want to hear". It was also challenging to ensure that each interviewee was asked the right questions based on their areas of expertise, as people working in a project division generally did not have enough knowledge about the processes going on at top management level, and vice versa. A third issue was the gap between our theoretical view and the respondents practical view, where we had to amplify the purpose of the questions asked in regard to theory.

4. Empirical settings

In this chapter we present the empirics which forms the foundation of the analysis. The information is gathered from Aker Solutions' website, as well as internal documents and information received from the organization.

4.1 About Aker Solutions

Aker Solutions is a global provider of engineering, design, production systems and services to the oil and gas industry. The company provide subsea production equipment and offshore field design, as well as carrying out maintenance, modifications work and services to oil and gas fields. Headquartered in Fornebu, Oslo, the organization consists of approximately 15 000 employees distributed over 20 countries and 53 different locations. They are represented in all major offshore oil and gas basins across the world.

Their strategy builds on the company's vision to be a leader in forging a sustainable future for the global energy industry and the world it serves. Through alliances with other businesses, they aim to deliver innovative and cost-effective solutions.

4.1.1 Organizational structure

A reorganization was completed during 2016. The management realized that a significant number of processes were compiled in parallel at different places. By gathering the processes together, they would be able to reduce duplication of work as well as simplifying their employees' jobs.

The new strategy was implemented to stimulate its competitiveness and ability to serve customers. It has five main priorities; customers, partnerships, innovation, operational excellence and services. More detailed, the reorganization streamlined the business structure to better reflect the workflow during the whole process of a customer relationship. Work methods,

organizational setup and geographic footprint were simplified, products and services were standardized, and efficiency was boosted by the use of new digital technologies.

As of November 1st, 2016, Aker Solutions has been divided into the following organizational areas; customer management, concept development, products, projects and services.

4.1.2 Core values

Aker Solutions wants to be recognized with the word **integrity**. It is supposed to be the guideline of how the company deal with the below mentioned values:

- Customer Drive
- Health, Safety and Environmental Mindset
- People and Teams
- Open and Direct Dialogue
- Hands-on Management
- Delivering Quality Results

4.1.3 Organization chart



Figure 4: Organization chart, Aker Solutions

Project- and base organization

This research is mostly based on the perspectives from the project area in the business, which is basically where the lion's share of their earnings come from. The base organization consists of the supporting processes, which have to be included in the pricing of the projects. Our interviewees are in different positions, mainly within the Brownfield Controlling section. For the sake of order, the Brownfield projects denotes extensions, remodelling and satellites on already existing fields.

4.2 Empirical findings

4.2.1 Planning process

Aker Solutions has an annual strategy process in which high level financial plans for the next five years are prepared and approved by the board of directors. More detailed rolling financial forecasts for the current and next year are updated every quarter and presented as a part of the chief financial officer report to the board of directors.

4.2.2 Financial reporting process

The monthly reporting process starts with the forecast update at the individual project level including an evaluation and approval process related to risks and opportunities of the projects. All the various projects submit a standardized report to a central database each month, except January and July. This enables management to review the quality of reported figures, evaluate performance and identify potential "red flags" in projects. The financial reporting department at group level reports to the chief financial officer and is responsible primarily for both external- and internal management reporting. What was previously divided into two separate processes; one budgeting- and one forecasting process, are now replaced by one rolling forecast that is updated four times a year.

Business Units report financial figures in a financial management consolidation system on a monthly basis, and those figures are used for both external and internal management reporting. Each of the delivery units and their delivery centres are responsible themselves for analysing financial performance based on actual and forecasted figures. They prepare management

reports with financial results compared to forecast, sensitivities, operational challenges and various other figures that is reviewed by executives and senior management. The reports from the delivery units are composed to one report for each delivery centre which thereby is discussed in monthly meetings between the CFO and the delivery centre management. While the meetings on monthly basis are focusing on financial performance and sensitivities in the reported figures, the quarterly meetings also include business operational performance as well as relevant strategic issues (Aker Solutions, 2018, p. 12).

4.2.3 Benchmarks and scorecards

Aker Solutions use benchmarking as an important tool, especially in the bidding processes. At first their own calculations and beliefs are considered, before a comparison with the competitors pricing are conducted in the end.

The management group use balanced scorecard (BSC) as a strategic management tool. Aker Solutions' strategies are often set with a 5-year perspective, and the BSC is based on the organization's superior goals and values, divided into areas such as people, financials and customers. Several of the targets are based on other measures than numbers, as the financials are just a part of the superior objectives.

4.2.4 Bonus and incentives

The bonus and incentive system are common for the Aker Group as a whole, set to embrace help and to avoid distortions. Development plans are created with individual targets connected to the strategy. Each department has a certain number of objectives to meet, and in line with Beyond Budgeting theory, ambitious and long-term targets are set to facilitate motivation for each individual. By the completion of targets, new objectives are created. There lies an ambition behind the targets to beat them, or to minimize the losses, by as much as possible.

5. Analysis

In this part of the paper, we address the research questions through discussion and analysis of the empirical data in context of the theoretical framework. In addition, we will analyse whether this implementation has contributed to the organization moving further towards a dynamic management form. This will be analysed in context of the 12 principles of Beyond Budgeting, previously presented in the literature review.

5.1 Rolling forecasts in Aker Solutions

5.1.1 Reacting to market changes

The top management of Aker Solutions started a process in back in around 2010, considering implementing a new budgeting tool; the rolling forecasts. This process took approximately three years before the implementation was successfully completed in 2013. Behind such an implementation, there must be an underlying motivation. The Vice President (VP) of Brownfield Controlling explains:

“The primary motivation is the recognition that when you create a budget for an organization like ours, with several different projects... You are in position of many offers, and you don’t know which of those you will win and which you will lose. From you create the annual budget in September until it is approved in December a lot of data has changed. Some projects you expected to win, you ended up losing, and vice versa. So... the assumptions of expected income changes rapidly; the consequence is that you attend the board meetings with incorrect information because things have suddenly changed.” (Respondent 4)

This statement illustrates that traditional budgets might not have been sufficient enough for the organization to keep pace with the rapidly changing market environment. Traditional budgets could constrain responsiveness and flexibility and are often a barrier to change. It cannot be used as a management tool if it does not keep up with these changes (Hoff, 2016). The need of more frequently updated financial numbers was one important motivational aspect to move away from the traditional budgets. Another respondent approves to this mindset:

“Unexpected things occur all the time, so the forecasts are in every single case updated consecutively. Previously, if we had much growth, e.g. that the scope of work was doubled, the annual budget was locked, resulting in major deviations. By the use of rolling forecasts, this can be updated frequently, and the deviations become smaller.”
(Respondent 2)

Aker Solutions aim to keep a flexible cost-base, e.g. by renting premises. In combination with the rolling forecast model, it will be easier to react to market changes in case of less activity and related redundancies. By renting premises, the organization avoid the risk of being in position of expensive properties they are not able to get rid of.

However, there are some disagreements on whether it is the implementation of the rolling forecast model itself or other conditions that has contributed towards a better adaptation to the market. One of the Senior Project Controllers (SPC) argues that it might be due to the development of the market conditions itself, not as a direct consequence of the new model:

“I am not sure if this is about the tools or systems that we use. I actually think that the changes are market-driven. You need to be in careful, careful control of your costs, as the market demands it. The margins are so tight now, much tighter than before... and the values are so high. We can't afford to scamp in the budgeting process.”
(Respondent 3)

The way the respondents perceives the changes could depend on their former employee background, experience, as well as their position within the organization. It is interesting to see that employees at different hierarchical levels, with different tasks, have different perceptions on the impact of the new budgeting system. This forms the next point of the analysis.

5.1.2 Hierarchical position affects how employees perceives the impact of rolling forecasts

Rolling forecasts as a tool are often applied in a bottom-up approach, where lower level controllers prepare the forecasts in detail, before submitting their proposals to their superiors

(Bergstrand, 2009). At Aker Solutions, employees are a part of the forecasting process in different ways. An SPC argues:

“(...) There are obviously someone who’s responsible for the final decisions - so it is up to them how they will relate to the suggestions we submit. I come up with my proposals, but I never decide how it will be in the end. It is up to the project managers and other involved parties responsible for the project to decide whether any of the financial items should be allocated differently.” (Respondent 3)

This statement is in line with the Business Manager’s thoughts. Application and usefulness of the model varies across the organization, as explained by the Business Manager (BM) and VP:

“The hierarchy in the project works in the way that I have a team consisting of different employees responsible for the financial planning. My team concentrate on the monthly prognosis (which I believe we should include no matter what as an addition to rolling forecasts), while I deal with the rolling forecasts itself. (...) For us working in the projects, the attention to details are much higher than the people further up the hierarchy. They only relate to like 3-4 numbers in which they receive from us.” (Respondent 5)

The perception of change might by depend on their tasks and how these have been transformed. As we see, the SPC’s description of their tasks correspond well to Bergstrands (2009) statement, that they have a higher degree of trust to make proposals after the implementation of rolling forecasts. However, the main change is that the BM’s and their superiors should receive more detailed and frequent proposals. This change might be hard to perceive at lower levels, even though the workload is different. The VP explains further:

“(...) There is a difference. My role is to explain changes that occur, while further down at project level you see more specifically to the customer you’re reporting against. My role is mostly for the internal reporting, while a project controller holds a dialogue with the customer about e.g. what the next cost will be, expected number of hours... so the controller monitors the cost carriers in different disciplines within their project, while I keep an overview of all the projects as a whole.” (Respondent 4)

It seems like the implementation of rolling forecast is more useful to the top- and middle management than employees working in the respective projects. One of the SPC's said that they have 'always' used forecasts at project level, just in a slightly different way. If they knew in the beginning of a project that it would last for five years, they would create a five-year prognosis, covering the whole projected period. The difference now is that these prognoses are updated quarterly, which they were not before. The DM summarizes:

"I don't think the effect is that big at project level - but rather higher up in the organization, as they will be in position of more reliable controlling information."
(Respondent 2)

5.1.3 A smooth, natural transition

According to theory, replacing annual budgets with rolling forecasts is a transition that requires highly skilled staff to succeed with (Starovic & Jackson, 2004). At Aker Solutions, the transition has been perceived as quite natural in terms of following developments in the market. The VP explains:

"I don't think it was a huge transformation, to be fair. I guess we have always kept the budget 'alive' since it was so incorporated. As things happen faster from year to year, we've gradually extended our focus on the forecasting. So I would say it has been a gradual approach before the actual implementation." (Respondent 4)

The respondents are rather consistent in their perceptions of how the transition were performed. It seems like the structure with project divisions is an important aspect in this manner. As previously mentioned, forecasting methods had been present before the implementation of rolling forecasts. Thus, experienced employees were in possession of the skills and knowledge to simplify the adaptive process:

"In the projects, for us working in the Brownfield area... We work in "the same way" either if it's traditional budgets or rolling forecast, because we have to forecast the whole project period anyway." (Respondent 3)

Both the Department Manager (DM) and one of the SPC's approves to this statement. Apparently, it seems to be just minor differences between the budgeting methods, with update frequency as the most significant change:

"Not a lot of training to make it work. We compiled the old budget for the previous year, so now we felt like it actually was just repetition of the same exercise more times."
(Respondent 2)

"There were some new templates, but we just had to 'get into it' a little bit. But now we've had at least three different templates already since the implementation. It hasn't really been a problem at all." (Respondent 1)

Thus, the employees at Aker Solutions were seemingly skilled enough to cope with the new model, and they agree that this was not a 'big deal', at least not in their respective project divisions.

5.1.4 Different perceptions regarding time consumption

In theory, it is argued that implementing rolling forecasts should decrease the time consumption. Hope & Fraser (2003) states that traditional budgets' preparation period takes too long and prevents value-creating work. However, it is important to distinguish between the time consumption for Aker Solutions as a whole and for those heavily involved in the budgeting process. The perceived use of time depends on different factors, and varies a lot based on who are asked. Anyhow, Both SPC's (Respondent 1 and 3) have similar opinions regarding time consumption:

"In traditional budgeting, it was every month the first year, and then quarterly for the years thereafter. Since we now must sum up the quarters, it takes a little more time"
(Respondent 1)

They work closely with forecasting on a regular basis and feel the process as a whole takes a bit more time at their level. The most common argument is that they have got a higher workload. The other SPC further explains:

"Speaking for myself, it may depend on the size of the project and how complex it is. Previously, we made one budget in about 4 months and that was probably easier, but times have changed and we did not have these kind of projects back then... At least not the accounting that we are doing now. I speak for myself in this case, but I clearly use more time now". (Respondent 3)

Seeing that those working with forecasting regularly spend more time, makes it important to question why that is the case. From their perspective, more hours are being put into the budgeting process, but they seemingly think that the quality of the work is better.

"It is clearly worth it. Being predictable, in control, knowing that you can stand up for what you deliver is important. " (Respondent 3)

We see that employees further up the system both agree and disagree. They feel the conducted work are better and provide more value, but seem to think that the time consumption is lower or the same due to better efficiency. This is mostly due to the practice of rolling forecasts, where the process is carried out more often, and employees are therefore well teased. The DM further states:

"A lot of good work has been done at Corporate level in the automation / making use of the figures, so I also think they spend less time there. I am uncertain about the time consumption, but you have more correct data and a better management tool for your business when you have the right numbers all the time" (Respondent 2).

The VP supports this statement and highlights that there might not be any hard evidence of less time consumption:

"We use just as much time, but distribute it better. It is less involvement further down the organization of creating the budget, regarding the time spent. You create better quality, considering that you are constantly working with fresh data". (Respondent 4).

The notion that they spend the same amount of time as before the change, might be affected by other incorporated routines. The Business Manager explains that some of the workload might

not be directly connected to the budgeting process, as they do other work that is not required or a part of the rolling forecasts:

"Earlier, we had a quite accurate monthly prognosis plus a budget, which now is replaced by rolling forecasts. We were previously forced by the "big" system to create these monthly prognoses, but we still do that, not because someone asks us to do so, but because I think we should do it. Mainly, to keep control of our internal economy. This does not currently have anything to do with the budgeting process, so in isolation of the budgeting we spend less time, but in total, about as much time as before" (Respondent 5).

These responses tell us that rolling forecasts, isolated, makes them spend time more efficient and that there is a change in time consumption. The perception of a higher time consumption seems to be based on more required work. This supports Bergstrand (2012), who highlights that rolling forecasts requires a higher workload. However, replacing the cumbersome four-month budgeting process every year with a quarterly forecast, enables them to spend more time on value-creating work. The previous practice often dealt with outdated numbers, risking that more of the time were spent on work that was both less valuable and less beneficial for future usage.

5.1.5 The "old mindset" problem

In a period of change, organizations depend on their employees to follow the new path. To succeed abolishing traditional budgets, companies must move away from the old mindset of 'command-and-control' (Hope & Fraser, 2003; Becker, 2014). Firstly, traditional budgets created a culture of dependency, where employees settled with just meeting the budgeted requirements (Hoff, 2016). Secondly, employees' blind faith in budgets might prevent them to accept the change (Bogsnes, 2009). For us to analyse whether Aker Solutions have succeeded implementing rolling forecasts, we have to identify if current employees have accepted the change, or still keeps the old mindset.

Rolling forecasts emphasizes the importance of a continuous allocation of resources as they are needed across the period, while traditional budgets are recognized with fixed amounts allocated to the items in the beginning of the period. According to theory, traditional budgets could lead

to bad decision-making where people would spend money as they are already 'locked to an item', without being certain that the investment is creating value. In this case, the term "old mindset" means providing themselves more leeway if the budget is already met, and thus having a lower threshold in terms of consuming the leftover resources, even though it might not be necessary. The SPC argues:

"I do not agree with what the theory says in this situation, that if one has money left at the end of the year, one will use all of it. I don't think people do that". (Respondent 3).

This indicates that they have been dynamic for a while. The VP further explains that within their organization, they have always been using a fairly similar practice and that the conditions to succeed after the change were good:

"In projects over several years, they have always had kind of a "rolling forecast". So, they haven't had annual budgets. We already had an incorporated culture with this focus, as opposed to a factory that only produces goods". (Respondent 4).

Employees age and the amount of time they have spent in the organization might be a factor. Older employees who were used to the previous practice, could be more reluctant to the change. The Business Manager argues:

"I don't feel we have any old mindset. If it has anything to do with the fact that myself, at that time, was a relatively young Business Manager, who had a master's degree in Business, I don't know. If you interviewed someone a bit older you might have received another answer. This was first and foremost another way of thinking, but we tackled it well in my team". (Respondent 5)

The VP adds that another factor might be your incorporated preferences and what type of job you have. This builds on what was said regarding different perceptions based on hierarchical position:

"Perhaps on the basic overhead bit, many would have liked to have a traditional budget. At departmental level, some may still have an old mindset." (Respondent 4).

Bogsnes (2009) argues that one problem might be employees' trust in the old practice. Thus, some employees might believe traditional budgets were better to some extent. The transition had both its advantages and disadvantages, but to achieve the desired effect, employees had to accept and embrace the change. Employees have clearly accepted the new practice, but whether the change was needed or well completed, is subject to a debate. The Business Manager says:

"It is fine in the way that you try to obtain a lot of information, but it is often highly uncertain data. If somebody has benefit of it later is very doubtful, I would at least use them wisely. (...)

The organization deals with several projects of different scope. Most of those are minor assignments, which makes it more difficult to predict the future. In the Business Manager's division, they relate to information two years ahead in time:

"Today, we relate to information for 2019 and 2020. We do not decide this, as we have to meet the customer's needs. They also have a one-year perspective in terms of outlook and budgets. Hence, a lot depends on how much resources our customers are handed to spend on the assignments that we conduct for them. In bigger projects, of a value, say... 1 Billion NOK, over a period of 4 years, it will be easier to relate to the future and how much money will be allocated to each budget year." (Respondent 5)

Thus, there is a perception that forecasted data several years ahead might be less useful for some projects, depending on the scope and size of it. In addition, it is argued that the rolling forecasts might have caused disadvantages compared to the previous practice:

"I think that the introduction of rolling forecasts has led to a greater focus on reporting and predictability rather than earnings. From my point of view, one should want to make the most money, because it means we are on the right track and do something right. I am a little sceptical about rolling forecasts and whether it is the right solution, but I have no problems dealing with it. (...) I do not believe in putting away the entire budgeting process and believing that it should go completely smooth". (Respondent 5)

This quote presents interesting thoughts which emphasizes that the old mindset is still present within the organization. People are able to adapt, and it is seemingly not problematic for the

organization. However, there might be concerns regarding the argument that the focus on earnings have decreased. Whether this reflects the reality remains speculations from one person's point of view.

5.1.6 A selection of parameters and principles forms the forecasting process

In the literature review we mentioned that the selection of parameters and forecasting data is crucial to succeed with rolling forecasts. The items should be relevant and related to what drives the mechanisms in the forecasts. Considering that Aker Solutions operate in a competitive business, parameters and data should also provide the company enough insight to respond well to market changes.

The forecasting process is different depending on which department that prepares it. In the customer management department, they have an overview of prospects, opportunities and leads several years ahead in time. Their task is to recommend which projects the organization should aim to win. On the other hand, there is the ones working with financials, who prepares the cost forecasts. One of the SPC's explains the practice for those:

*"(...) We use items such as input for planned remaining hours, input from weight on pre-fabrications and materials. Say... e.g. if we purchase materials based on weight. Then we forecast based on input on weight and based on purchases of packages."
(Respondent 1)*

It seems like the number of people needed and time consumption is important factors in terms of project completion. The other SPC further explains:

*"I need to include information from wherever I can; from procurement, planning - what is in the plans, time consumption, how many people, for how long, potential fluctuations... At one point in time, we must be 500 people, and suddenly we only need 200. So, it is very important to take fluctuations into serious consideration."
(Respondent 3)*

Every project is governed by a contract between Aker Solutions and the customer. Thus, the expected income is set in advance. The organization will prefer to conduct the project early prior to the deadline and as cost-saving as possible, and at the same time provide the necessary quality, as explained by the DM:

“We receive payments in different ways - fixed prices, reversible hours, unit rates, etc. (...) The rates are always ruled by the contract, depending on different factors. So, we build our total forecast on both revenues and costs. And we have plan histograms on when the different parts of the projects are planned to be completed, as well as the required employees; 20 people one month, 40 next month etc. This profile gives you accrued income and costs.” (Respondent 2)

Rolling forecasts seem to be a helpful tool for planning purposes, and provides more updated data than in the previous practice:

“I feel that it provides us with more correctly updated data than before. It is easier to make strategic choices, where we see if you are lacking resources or are in position of too much resources. We might notice it at an earlier time now and are thus able to make changes earlier.” (Respondent 2)

Another important point in rolling forecast theory concerns whether the forecasts are based on historical data, estimates or other relevant factors. Our respondents are quite unanimous in the fact that they use little historical data in their forecasts, mainly due to the unpredictable market environment the organization operate in. The VP explains why:

“There’s little use of historical data. We build our forecasts by collecting actual prospects in the market in which we aim to win, and then decide how many people will be demanded to complete the project. Then we must consider the cost-base - will the market go up or down - and we take decisions based on that. Of course, we do look at what we’ve experienced in the past, as we have been through this procedure several times before. The market has been fluctuating a lot - from the top in 2013 to the very bottom in 2015, for instance, so it is difficult to see clear trends in this market. However, if analysts argue that the oil price and activity will increase, it is easier for us to base

our forecasts on the same trend. So, we need to have a look at ‘the big picture’.”
(Respondent 4)

As the market is so uncertain and difficult to predict in this industry, sensitivity analyses are conducted for each project. This enables them to discover potential pitfalls, uncertainties and other risks related to the projects, as well as introducing plans on how these can be avoided.

5.2 Beyond Budgeting in Aker Solutions

In the literature review, we mentioned how rolling forecast can be seen as a part of Beyond Budgeting. According to BBRT, a common misunderstanding is that Beyond Budgeting already exists in organizations that has implemented rolling forecasts. The second research question of this paper highlights this phenomenon. Thus, our aim is to analyse whether there are any indications if there is an increase of dynamic management in the organization prior to, or in affiliation to the change in budgeting method. The analysis is conducted in context of the 12 principles of Beyond Budgeting.

5.2.1 Target setting and rewards within the organization

Several of the principles from the BBRT concerns the way targets are set, and how values and motivational aspects are incorporated in the practices within the organization. Balanced Scorecard can be seen as the core strategic planning and management system used to connect the dots between the ‘big picture strategy elements’ (Balanced Scorecard Institute, 2019). At Aker Solutions, this tool is used at top management level as a framework for their long-term strategic objectives and measures and keeping these in-line with the superior values of the organization. However, objectives can also be broken down to measure in a perspective closer to the current date. The VP explains:

“Yes, we use kind of a balanced scorecard. The strategy often has a five-year perspective, and you use this to retrieve information on where you want to be at the given time. It is divided into main categories such as financials, people, customers, and

health, safety & environment (HSE). The long-term plans are then broken down for the current year.” (Respondent 4)

To illustrate how the strategic objectives are related to each other, the recent reorganization is exemplified. If one target is to improve the financial numbers, several activities must be compiled in different departments to achieve the desired outcome:

“The financial targets are only a small part of the overall target. We have worked a lot on cost reduction for a long period. In order to do that it was essential that we reorganized and redesigned activities.” (Respondent 4)

Principle no. 1 from the BBRT (2016), ‘Purpose’, states that people should be engaged and inspired around bold and noble causes, not around short-term financial targets. By incorporating different strategic objectives with financial measures in a long-term perspective, Aker Solutions seem to apply the “right mindset” in a theoretical perspective:

“There is a balanced scorecard-mindset, as we have connected it to the six values of the organization. One of them is the achievement of financial numbers.” (Respondent 5)

Further explained, the employees at Aker Solutions, work towards satisfying the six core values of the organization as mentioned in the empirical settings. People working in the respective projects are given high authorization to make their own decisions. This correspond well to the second principle; ‘Values’, stating that one should govern through shared values and sound judgement, rather than through detailed rules and regulations.

In addition to working towards the superior values, concrete targets are set at both group and personal level. The objectives should express ambition to encourage inspiration and motivation among the employees. The VP explains the practice:

"Our targets are supposed to be ambitious and set for several years. (...) For development plans, there are individual goals based on the strategy. We want to see how each level in the organization contributes to overall goals. A manager has a certain number of objectives, some of them are suitable for a department and some for another

department. These become individual and are set to empower motivation for each employee. (...) New goals are always created if a target has been reached, one is not satisfied for that reason. There are ambitions in the forecasts, and we will beat targets with as much as possible or minimize losses". (Respondent 4)

These practices seem to correspond well with principle 8 in the Beyond Budgeting methodology; 'Targets', stating that goals should be directional, ambitious and relative, rather than being fixed and cascaded. For Aker Solutions to beat their competitors and get assigned projects, they are dependent on benchmarking their pricing and calculations against their competitors. However, the number of relative targets may be questioned, as we do not have any clear indications that this practice is applied to a great extent.

Each of the projects have their own targets, which is compiled by the Business Manager of the project in cooperation with other parties positioned in the middle- and top management of the organization. Specific tools are used to keep an overview of the respective targets, as explained by the BM:

"We have a software called 'People Performance', where I set goals for the project. By using this software, I can agree on targets with my manager, that he has compiled in collaboration with his manager, etc. Our project targets should reflect the superior targets set by the top management." (Respondent 5).

Furthermore, The DM explains how practices in terms of target setting have changed over the years. This quote supports the claim of a higher level of personal authorization among the staff:

"Previously, the target setting might have been controlled by line managers, but it has become the responsibility of individuals, with a greater influence of their own targets. The overarching goal of projects is delivering according to contracts or achieving better results than the prerequisites of the sale. This is often the goals of the project - in addition to customer satisfaction etc." (Respondent 2).

It seems to be an understanding that there has been a change in practices over the last years. However, there is more uncertainty connected to whether it is a result of the implementation of rolling forecasts or not. The BM argues:

“(...) As a coincidence (in my opinion), the way we set our targets was changed at the same time as the rolling forecasts were implemented. So... I believe it is difficult to tell if the implementation of rolling forecasts is the reason of the change or not. The way we elaborate a target is quite equal, the difference is the opportunity to measure them ‘along the way’.” (Respondent 5)

5.2.2 Lack of ability to evaluate performance

Evaluating every project by how it performs is a part of knowing the organization throughout and identify its weak points. According to theory, performance should be evaluated holistically and not based on measures only. The fact that employees’ have their own development goals is an indicator that principle 11; ‘Performance Evaluation’, seem to be fulfilled to some extent. Nonetheless, we found implications of limitations in the ability to evaluate the performance of each project.

The best illustration was made by Respondent 5, who argued that there is a potential for improvements. He believes that the current method sets goals for the profitability of each project, but that they do not seek the information about the actual performance. In other words, projects with a goal of 10% profitability which achieves 12% will be evaluated as "better than expected". However, in some cases, these projects could have done even better, looking more closely at the data. This results in a persistent problem where some projects have too low expectations. On the other hand, you have projects with too high expectations, which may surpass the real potential, but according to set parameters, underperforms. He believes that the focus on profit and money is absent, which results in poor utilization.

The conclusion of his thoughts is summarized as follows:

“If we are going to successfully implement Beyond Budgeting, current control mechanisms should be replaced.” (Respondent 5)

This statement suggests that there are ways to improve today's practice, and that further development is a necessity in order to govern by the Beyond Budgeting principles in the organization.

5.2.3 Empowering trust and autonomy within the organization

Decentralizing the decision making and engaging trust in the organization is important to be more dynamic, according to BBRT. Principle 4 and 5; 'Organization' and 'Autonomy', highlights the importance of trusting employees to make decisions and make teams accountable for their own actions. This prevents bureaucracy and helps the organization giving employees with deep insight the chance to influence choices to a greater extent. Aker Solutions are dealing with a variety of projects, where each particular project has the trust of the whole organization to make decisions based on their own situation.

With respect to the hierarchy, we spoke both to those working in projects and the Business Manager of a project. Thus, we received valuable information of how they experience their freedom to make decisions on their own, compared to the previous practice. Those working in the projects have an overall perception of great freedom and trust, but clarifies that all decisions are sent to the project's managing staff for approval. The first SPC states:

"We make some decisions ourselves in the project together with the business- and project manager. Occasionally, we send requests "up" if we have questions on how to report. Then we agree how to report if there is something special, e.g. if we change margins etc., then make an agreement with the basic organization". (Respondent 1).

From this point of view, some decisions are still made by the management. However, other employees are encouraged to make proposals. The second SPC argues that project workers are highly involved in decision-making, but agrees that they don't have the final say.

"All decisions are made at this level where I am sitting. We report "up" and have management meetings with the directors, as well as management committee meetings, where the strategy is set. Me and my Business Manager set the foundation, the Project Managers set the conditions. It is not a top down budget, definitely not (...). Us working with financials only create the proposals, which is followed by a discussion with the steering committee, who eventually make a decision in collaboration with the project manager." (Respondent 3).

The DM, on the other hand, says that Aker Solutions have set standards regarding contract placements, due to huge risks and to minimize the chance of failure:

"The project manager has the authority to carry out the project, place orders, call crew, buy material and such things. The process before you enter an offer and what you offer for a job have become stricter, in form of rules. Once you get a contract, the conditions are given, while it is more critical to understand the risk of what you put into the contract. It is possible to incur a risk that is disproportionately large. We have business standards that say how much risk you are allowed to take, e.g. risk of indirect loss at the customer." (Respondent 2).

This answer supports the thoughts of Respondent 1 and 3, but states that the decisions being made, are restricted. Even though decisions are made at project level, we can see a huge impact from the top management, who sets the guidelines and rules. The VP explains:

"Beyond the business model, the decisions are taken far "up". In the daily [projects], many decisions are made. In regard to forecasting, it is the management that has a say about the direction. Since there are so many employees, we must have control over decisions. The process starts with a strategy from the corporate management and then they sit out and identify what they can do in relation to it, a bit of a compromise. We start top-down and build up eventually." (Respondent 4)

Previously, there was a lot of decision making in the budgeting process, as the conditions was set once a year for an annual budget. With the new practice, things are decided more continuously, due to the quarterly updates. In addition, more people have been involved in the process of reviewing data. The Business Manager further explains:

"There is a higher number of stakeholders who review the figures every quarter. Then me and the project manager trim the numbers and decide if it is acceptable." (Respondent 5)

This emphasizes that they might have decentralized the decision making by moving to rolling forecasts. Furthermore, we must investigate whether the current situation is a result of a change or if it has been a practice even before the transition. The Department Manager explains that

they have always wanted the decision making to take place at the lowest possible and reasonable level, but that there has not been a significant change after the implementation. This statement is supported by the BM, although he argues that the level of trust has increased:

“There was no lack of trust in the old system, but we may have gained a greater degree of trust now.” (Respondent 5)

We find clear signs of trust and decentralization which support the principles of Beyond Budgeting in Aker Solutions. The VP adds:

“Our industry is quite marginal, so we are depending on our people, that they understand that we have to be cautious about what we spend our money on.” (Respondent 4)

This correspond well with the findings that employees at every level of the organization have an impact on the business and that both the industry and way Aker Solutions is organized creates this kind of dependency.

5.2.4 Allocation of resources

A central aspect of the Beyond Budgeting philosophy concerns a dynamic allocation of resources continuously as they are needed throughout the period. The BM argues that this practice has not been noticeably changed after the implementation of rolling forecasts: :

“I don’t see a big difference compared to how we did things before. We can set aside money, but it doesn’t mean that we’ll spend them - or that you can spend more. Of course, it is easier to adjust with the new method, but I must underline that we do not see any major changes in this area. (Respondent 5)

Although they do not seem to allocate resources continuously in accordance to theory, the mindset seems quite dynamic. A few years ago, a business opportunity appeared in Brunei, and the management decided to go for it, even though it was not part of the budget. As long as the

business case is good, one would probably get authorization to spend the money. The BM summarizes:

“If there is an opening in the bottom line of the project, money will be spent. The decisive thing is not what we say we’re going to spend, but what opportunities arise.”
(Respondent 5)

Beyond Budgeting supports resources on demand and dynamic cross-company coordination (Hope & Fraser, 2003). Aker Solutions is a complex organization where several projects are carried out in different plants and locations at the same time. Hence, a resource management tool is used to keep an overview of the required resources for each project:

“(.) Models such as ‘resource management’ are used to get an overview of available resources relative to the needs of the projects per location, where... you see after e.g. 6 months if we get the project... do we have the resources, do we need to hire personnel. It works kind of like a project model for the resources. If we don’t have the required capacity at this place, is there another usable location within the group?” (Respondent 5).

5.2.5 Other minor influences

In this last paragraph, we consider the principles that have not been discussed. We have primarily received answers that deal with the already discussed principles, but there are signs of minor influences of the following principles as well.

Transparency

Principle number 3; 'Transparency' deals with making the information available and visible. Hope (2010) argues that rolling forecast will only work in cultures that is underpinned with trust and transparency. According to the VP, being more transparent was an aspect they wanted to improve by the implementation:

"When we switched to RF, we wanted to be transparent, robust and predictable"
(Respondent 4).

Respondent 3 explains that people working in the projects always want to be predictable and transparent, as it makes it easier to cooperate. Whether the organization have actually succeeded at this point is rather unclear, due to different opinions at management level and within the projects. If we shed light to the statements regarding the perceived usefulness of forecasts, there are indications that the transparency between the departments has not been necessarily sufficient. Although, it seems clear that the level of predictability has been improved.

Customers

One of the SPC's explains how they prioritize customers at project level. This supports the sixth principle, connecting everyone's work to customer needs:

"We do not always see exactly what is happening beyond the project level, as it is a large organization. We have the greatest affiliation with our own project (...). For us, the customer will always be the first priority." (Respondent 3).

This statement shows that they work towards fulfilling their customers' needs. It might be hard to tell if this is a clear strategic decision in context of being more dynamic, but it highlights people's commitment to the customers.

Rewards

The twelfth principle states that rewards should be shared success against competition. The SPC in Stavanger explains some features of their system:

"Regarding incentives, no one gets personal bonuses, but projects work according to incentive schemes. After all, it is an agreement on further incentives if the first goals are reached. It is extremely important to reach the set goals because that is where we find our profit. It may be the difference between a great result or not making any money at all". (Respondent 3)

We did not obtain any clear evidence of rewards based on competition in Aker Solutions. However, there are indications that rewards are primarily set based on the incentive schemes, with in-house information and there is not much influence from the competition.

6. Conclusion

In this part of the paper we highlight our findings elaborated from the analysis of rolling forecast and Beyond Budgeting in Aker Solutions. We seek to find out whether our findings correspond with how the impact of the change in budgeting practice should be, according to theory. In addition, we explore the situation of today, how the implementation went, as well as looking at possible improvements regarding the current budgeting practice.

6.1 Research question 1

How does the transition from traditional budgets to rolling forecasts affect Aker Solutions?

By investigating this research question in hindsight of the conducted interviews, we see two possible ways of assessing it. Firstly, the actual changes employees encountered, and secondly, what amount of impact these had. The analysis discovered several similarities between our preconceived beliefs and the given answers from our interviewees. In the end, this resulted in four main factors of impact.

The main reason for implementing rolling forecasts was due to the possibility of reacting to market changes and making the organization more flexible and adaptable. Moving to this practice was intentionally to be able to handle a fluctuating oil market where one can hardly know the future. It was an inevitable change, considering that they are dealing with winning or losing assignments from customers. Nowadays, forecasted numbers are adjusted quarterly, which has resulted in decreased deviations and a greater understanding of their current situation. In this industry, massive growth or decrease in the market could occur quickly. Contracts are often complex and at such scale that they can totally change Aker Solutions' predetermined plans and decide whether they have to expand or reduce employment and investments. Therefore, a budgeting practice where they can easier adapt to market changes has been important, as they previously had almost no possibility to make changes throughout the budgeting period.

To decide what impact the new budgeting practice had on their ability to react to market changes, we need to add that the organization had been making forecasts several years prior to

the change. Therefore, the change itself might not have affected them as much as if it had been implemented from scratch.

The actual impact of the transition might thus be questioned. First and foremost, since organizations in the industry must make decisions based on possible revenue and profit. Aker Solutions are highly dependent on the activity level in their specific market; that customers announce assignments to be conducted. Hence, profitable project assignments would always be considered as good investments, no matter what is listed in the budget. This has always been the case, independent of rolling forecasts or traditional budgets. Budgeted numbers are of less importance for their decision-making, as long as the project has promising future prospects.

From our perspective, changes concerning the implementation of the new budgeting practice affected every level of the organization. However, several answers imply that the closer position employees have to the top management, the greater the impact is perceived. Reasons could be both how much involvement their position have in developing budgets and in what degree it has affected their daily tasks. We notice that employees involved in controlling of projects, cannot identify any big change associated with the implementation. They spot several differences, but do not consider them to be caused exclusively by the rolling forecasts. Their perception is that it has been a natural change, happening over time, as a consequence of keeping pace with the market development.

Our theoretical claims are to a great extent supported by those working closely to the forecasting process. Several answers indicate that the work being done at ground level within the projects are more detailed and communicated more frequently. This affects the managers and enables them to make better decisions based on more reliable information.

Previously, the management could spend roughly four months creating the budget. The implementation of rolling forecasts has made Aker Solutions spend their time more evenly throughout the year. Today, the forecasting process is carried out every quarter rather than creating an annual budget once a year, they have more frequent meetings, and learn to streamline processes. At first glance, opinions indicate that rolling forecasts requires more or the same amount of time, as it is more detailed and increases the workload. However, parts of the previous budgeting routine have been retained, but these are not directly related to the rolling forecasts. If we subtract the time spent in non-rolling forecast related activities, it seems

to be a reduction in time consumption overall. Isolated, more updated and relevant data is used in the elaboration of forecasts. This results in enhanced productivity and utilization of the obtained data in regard to time usage.

In the end, employees seem to have handled the transition thoroughly well. Concerns bypassing the mentality and ability of the employees to adapt, can arise. However, even though people indicate that the previous practice had its strengths, it is no problem for employees to accept and embrace the change. Nonetheless, those that have serviced in the organization for a substantial amount of time and are used to the old practice, might still prefer it and could be more likely to act accordingly. We believe that Aker Solutions, overall, have a solid foundation handling this practice and are likely to cope with other transitions in the future as well. Hence, their corporate mindset has been transformed successfully.

6.2 Research question 2

Does the transition contribute towards implementing Beyond Budgeting?

Due to the close relation between rolling forecasts and Beyond Budgeting, we wanted to analyse whether any other changes had occurred as a consequence of the transition. Our findings indicate that the organization is managed quite dynamically, and that they are willing to apply new approaches in terms of management and leadership.

An important aspect of Beyond Budgeting concerns how targets are set. Aker Solutions operate with long-term targets linked to strategic plans. By making use of a Balanced Scorecard, connecting the targets with the organization's superior values, they ensure that employees have an intentional direction of their work. Each department has its own objectives and targets, including individual development targets to empower motivation. While target setting was previously controlled more carefully by line managers, the responsibility has moved over in a larger extent to each individual after the implementation of rolling forecasts. However, our interviewees are not able to confirm whether the change in the way targets are set, happened in relation to the new budgeting practice as a coincidence, or if it was a conscious decision taken by the top management.

The organization is divided into different project divisions, where each one of those are structured 'as their own business'. Within the projects, we discovered that Aker Solutions exudes a great amount of trust to their employees. They have the freedom to make their own decisions within the frameworks provided by the contract. To illustrate, the top management sets the frameworks and objectives of the project, while the controllers are given responsibility to create forecasts before discussing these with the Business Manager (for the respective project). In other words, forecasting is recognized as a 'bottom-up' process, where it starts 'top-down' and then gets built up from the bottom within the given frames.

The level of trust in employees has increased in the years after the implementation. Even though there were no lack of trust in the previous system, the organization are more dependant to trust their people today. Previously, when the margins were higher, one could sustain a bit less accurate approach in terms of reporting. However, several indicators point towards a more competitive and marginal industry in the recent years. The common understanding is that due to the tight margins in the market, employees knows they must sustain a lenient approach in terms of accurate reporting standards.

Dynamic resource allocation is another important aspect of Beyond Budgeting. Aker Solutions operate with different systems to keep track of their resources, and we can see signs of a dynamic allocation. If positive business opportunities arise, money will be spent, even if they are locked in the budget or not. However, the organization does not operate exclusively with a dynamic allocation of resources. Money is still set aside, but is not necessarily spent. Therefore, we find no significant change after the transition, although it is easier to adjust in the new practice.

We cannot disregard the fact that the respondents do not unanimously agree on the usefulness and functionality of today's practices. The ability to evaluate the respective projects' performance seems to be unsatisfactory. Today's practice is recognized with a pre-set target of the profit they want to make per project. Even though the project, potentially, could have done better, it seems to be satisfactory for the management as long as this target is met. Hence, we believe that this practice should be developed, as Beyond Budgeting suggests that one should evaluate holistically, not based on fixed targets only.

After exploring the two phenomena, we can see a strong relationship. Using rolling forecasts in relation to Beyond Budgeting includes taking decisions based on a moving picture of information (Hope & Fraser, 2001), exactly as Aker Solutions aims to do, not as a purpose of meeting a predetermined budget. Thus, incorporating rolling forecasts is a clear indication of facilitating dynamic management.

6.3 Concluding remarks

The transition from traditional budgets to rolling forecasts had happened across several years and is not considered as a “real shift”, apart from repeating the practice quarterly. Several of our claims regarding the changes in using the new practice, were either seen as already completed, had been introduced over a long period of time, or not completely finished. The most common explanation was their desire to adapt to market changes. This issue makes it more challenging to conclude whether the recent changes can be fully connected to the implementation of rolling forecasts. It also proves that the organization did not experience the change in practice similarly as explained in theory.

The execution of the forecasting process must be seen in context of the industry Aker Solutions operate in. While some businesses can rely highly on historical data and trends, these are less valuable in the elaboration of forecasts in the oil and gas industry. As the market environment is recognized by a high degree of fluctuations, especially in the past, the organization are not able to base its forecasts on those parameters. Aker Solutions rely on parameters such as oil price and oil consumption, which entails that analysts’ views on the future are highly important.

The perceived usefulness of the forecasting horizon is subject of conflicting views between the respondents. Even though each project division is authorized to make decisions on their own, they are still obliged to create forecasts in accordance with the top management’s directives. This compose a problem where there is a lack of communication between the top management and the ones preparing the forecasts. Theory on rolling forecasts emphasizes the importance of a having a long-term mindset and predicting the market. On one hand, it can be seen as waste of time and resources, as some perceive forecasts beyond one year as less important. However, on the other hand, this could indicate an “old budget-mindset” as some might not notice the advantages of a longer horizon. Compared to the ones at project level, that focuses solely on

their own numbers, the top management seems to see a greater utility value of the forecasts overall. Due to the split opinions, knowledge sharing, and transparency might not have been sufficient within the organization. Top management has a greater overview of the organization, and hence, might be more eligible to evaluate and see the actual usefulness of the forecasts in a longer perspective.

In this paper we see an issue presented by both Bogsnes (2009) and Zeller & Metzger (2013), concerning how rolling forecasts and Beyond Budgeting should be implemented. While Bogsnes would totally abandon the budget, Zeller & Metzger highlights the opportunity to use it in addition to rolling forecast. Aker Solutions does not seem to have any intention of abandoning the budget completely. They see several applications for it in the organization and wants to use both practices for business and management purposes. We must emphasize that today's situation might change, and that there are several indicators pointing towards the organization having the mentality to make a shift, if it is perceived as reasonable.

List of references

Ahrens, T. and Chapman, C. (2006). *Doing qualitative field research in management accounting: positioning data to contribute to theory*. *Accounting, Organizations and Society*, 31(8): 819–841.

Aker Solutions ASA. (2018). *Corporate Governance Report for 2017*. Retrieved from <https://akersolutions.com/globalassets/investors/agm/2018/corporate-governance-report-2017.pdf>.

Argyris, C. (1952). *The impact of budgets on people*. New York.

Alvesson, M. & Sköldberg, K. (2008). *Reflexive Methodology: New Vistas for Qualitative Research*. Sage Publications, London.

Balanced Scorecard Institute. (2019). *Balanced Scorecard Basics*. Retrieved from: <https://www.balancedscorecard.org/BSC-Basics/About-the-Balanced-Scorecard>

Baxter, J.A., and Chua, W.F. (2003). *Alternative management accounting research: Whence and whither*. *Accounting, Organizations and Society*, 28, 97–126

Becker, S. Messner, M. Schäffer, U. (2012). *The Evolution of a Management Accounting Idea: The Case of Beyond Budgeting*. Vallendar.

Becker, S. (2014). *When Organisations Deinstitutionalize Control Practices: A Multiple-Case Study of Budget Abandonment*. *European Accounting Review*.

Bergstrand, J., Bjørnenak, T., Boye, K. (1999). *Budsjettering*. Oslo: Cappelen Akademisk Forlag.

Bergstrand, J. (2009). *Accounting for Management Control*. Hungary: Studentlitteratur AB

Beyond Budgeting Roundtable. (2016). *The Beyond Budgeting principles*. Retrieved 06.02.2019 from: <https://bbrt.org/the-beyond-budgeting-principles/>

Beyond Budgeting Roundtable (2016). *White Paper - Update of Beyond Budgeting Principles*. <https://bbrt.org/white-paper-update-of-beyond-budgeting-principles/>

Bogdan, R., & Biklen, S. (2007). *Qualitative Research for Education: An Introduction to Theories and Methods, 5th Edition*. Pearson.

Bogsnes, B. (2013). *White Paper: The end of Performance Management (as we know it)*. Beyond Budgeting Institute. Retrieved from: <http://bbrt.org/wp-content/uploads/2015/10/The-end-of-performance-management-as-we-know-it.pdf>

Bogsnes, B. (2009). *Implementing Beyond Budgeting*. New Jersey: Wiley.

Bunce, P., Fraser, R., Woodcock, L., (1995). Advanced budgeting: a journey to advanced management systems. *Management accounting research*, Volume 6, issue 3, p. 253-265.

Chapman, C.S., Cooper, D., & Miller, P. (2009). *Accounting, Organizations and Institutions*. USA, New York: Oxford University Press Inc.

Cooper, D. J., & Morgan, W. (2008). Case Study Research in Accounting. *Accounting Horizons*, Vol.22 (No.2), pp. 159-178.

Czarniawska, B. (2002) *Casting the Other: The Production and Maintenance of Inequalities in Work Organizations*. Taylor & Francis Ltd.

Eisenhardt, K. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, Vol. 14, No. 4 (Oct., 1989), pp. 532-550. Academy of Management.

Ekholm, B., & Wallin, J. (2000). *Is the annual budget really dead?* *European Accounting Review*, 9:4, 519-539, DOI: 10.1080/09638180020024007

Flyvbjerg, B. (2011). *Case Study*. In N. K. Denzin, & Y. S. Lincoln, *The Sage Handbook of Qualitative Research* (Vol. 4, pp. 301-316). Thousand Oaks, CA, USA: Sage

Greve, J., Ax, C., Bedford, D.S., Bednarek, P., Brühl, R., Dergård, J., Willert, J. (2017). *The impact of society on management control systems*. *Scandinavian Journal of Management*, Vol. 33, I. 4, pp. 253-266.

Guba, E. & Lincoln, Y. S. (1985). *Naturalistic inquiry*. Beverly Hills. Calif: Sage.

Hansen, S., Otley, D., & Van Der Stede, W. (2003). *Practice Developments in Budgeting: An Overview and Research Perspective*. *Journal of Management Accounting Research*.

Hansen, S., & Van Der Stede, W. (2004). *Multiple facets of budgeting: an exploratory analysis*. *Management accounting research*, Volume 15, issue 4, p. 415-439.

Heinzelmann, R. (2019). *Why does Beyond Budgeting work in Scandinavian Organizations?*

Heinzelmann, R. (2012). 3. Methodology in: *Diverging Identities and Professions in European Management Accounting*, Doctoral Dissertation, University of Innsbruck, pp. 38-53.

Heyns, H. R., Reilly, S., Smythe, S., McCarthy, B. F. (2003) *SHAREHOLDER VALUE ENHANCEMENT*. Minnesota: United States Patent Application Publication.

Hope, J. & Fraser, R. (2001). *Beyond Budgeting: Questions and answers*. Poole, Dorset: BBRT.

Hope, J. & Fraser, R. (2003). *Beyond Budgeting: How Managers Can Break Free from the Annual Performance Trap*. Boston, Massachusetts: Harvard Business School Press.

Hopwood, A. (1983). *On trying to study accounting in the contexts in which it operates*. *Accounting, Organizations and Society*, 8, 287–305.0

Hopwood, A. (1974). *Accounting and human behavior*. Englewood Cliffs.

Johannesen, A., Kristoffersen, L., & Tufte, P.A. (2011). *Forskningsmetode for økonomisk-administrative fag*. Oslo: Abstrakt forlag.

Johanson, D. (2003). *Beyond Budgeting from the American and Norwegian perspectives: the embeddedness of management models in corporate governance systems*, in: Kaarbøe, K., Gooderham, P., Nørreklit, H. (Eds.), *Managing in dynamic business environments: Between control and autonomy*, Cheltenham, pp. 69-91.

Kreiner, K., & Mouritsen, J. (2005). *The analytical interview: Relevance beyond reflexivity*. In S. Tengblad, R. Solli, & B. Czarniawska (Eds.), *The art of science* (pp. 153-176). Copenhagen: Liber.

Kvale, S. (1996). *Interview Views: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage Publications.

Kaplan, R.S & Anderson S.R. (2003). *Time-Driven Activity-Based Costing*. Harvard Business School.

Kreiner, K., & Mouritsen, J. (2005). *The analytical interview: Relevance beyond reflexivity*. In S. Tengblad, R. Solli, & B. Czarniawska (Eds.), *The art of science* (pp. 153-176). Copenhagen: Liber.

Lidia, T. (2014). *Difficulties of the Budgeting Process and Factors Leading to the Decision to Implement this Management Tool*. Bucharest: Elsevier.

Merton, R., K., Lowenthal, M., F., & Kendall, P. L. (1990). *The focus interview: a manual of problems and procedures*. New York: Collier and Macmillan.

Miller, D., Allen, M., Schnittger, S., & Hackmann, T. (2013). *How rolling forecasting facilitates dynamic, agile planning*. Healthcare Financial Management; Health Research Premium Collection.

Morrow, M. (2003). *Activity-based Management*. New York: Managerial Accounting, McGraw Hill Higher Education, p. 321.

Neely, A., Bourne, M., & Adams, C. (2003). *Better budgeting or beyond budgeting?* Measuring Business Excellence, Vol. 7 Issue: 3, pp.22-28, <https://doi.org/10.1108/13683040310496471>.

Nugus, S., (2009). *Chapter 15 - Budgeting*. Financial Planning Using Excel (Second Edition), p. 193, 195, 197-201.

Ryen, A. (2002). *Det kvalitative interjuet: fra vitenskapeteori til feltarbeid*. Norway: Fagbokforlaget.

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative Interviewing: The art of hearing data (Vol. 3)*. California, USA: Sage Publications.

Stake, R. E. (2010). *Qualitative Research: Studying How Things Work*. The Guildford Press.

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students, 6th edition*. England, Essex: Pearson Education Limited.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: a skill-building approach. Seventh edition*. Chichester, West Sussex, United Kingdom: John Wiley & Sons.

Sivabalan, P., Booth, P., Malmi, T., & Brown, D. A. (2009). *An exploratory study of operational reasons to budget*. Accounting and finance, 49(4), 849-871.

Stake, R. E. (2010). *Qualitative Research: Studying How Things Work*. The Guildford Press.

Stake, R. E. (1996). *The Art of Case Study Research*. Sage Publications.

Stake, R. E. (1995). *The Art of Case Study Research*. Sage Publications.

Starovic, D., & Jackson, C. (2004). *Better Budgeting: A report on the Better Budgeting forum*.

Strang, D., Meyer, J. W. (1993). *Institutional conditions for diffusion*. Theory and Society, 22, 487-511.

Uyar, A., Biligin, N., (2011). *Budgeting practices in the Turkish hospitality industry: An exploratory survey in the Antalya region*. International Journal of Hospitality Management. Volume 30, Issue 2, p. 398-408.

Warren, C. A. (2002). *Qualitative Interviewing*. In J. F. Gubrium, & J. A. Holstein, Handbook of Interview Research: Context and Method (pp. 83-101). Thousand Oaks, CA: Sage Publications

Wildavsky, A. (1964). *The politics of the budgetary process*. Boston

Witzel, A. (2000). *The problem-centered interview*. Forum: Qualitative Social Research (22).

Yin, R. K. (2014). *Case Study Research: design and methods (Vol. 5th ed.)*. Los Angeles: SAGE Publications, Inc.

Yin, R. K. (2009). *Case study research, design and methods*. 4th ed. Los Angeles: SAGE.

Zeller, T., & Metzger, L. (2013). *Good Bye Traditional Budgeting, Hello Rolling Forecast: Has The Time Come?* American Journal of Business Education.

Østergren, K. & Stensaker, I. (2011). *Management Control without Budgets: A Field Study of 'Beyond Budgeting' in Practice*, European Accounting Review, 20:1, 149-181, DOI: 10.1080/09638180903487842.

Figures and tables

Figure 1: 12 Principles of Beyond Budgeting (BBRT, 2016), pp. 16

Figure 2: Traditional Forecasts versus Rolling Forecasts (Hope, 2010), pp. 21

Figure 3: The Forecasting Process (Bergstrand, 2009), pp. 22

Figure 4: Organization Chart (Aker Solutions, 2019), pp. 35

Table 1: Summary of interviews, pp. 32

Appendixes

Appendix 1: Interview guide, pp. 71

Appendix 2: Reflection notes – Erlend Mevik, pp. 74

Appendix 3: Reflection notes – Krister Sæstad, pp. 77

INTERVIEW GUIDE – AKER SOLUTIONS

1. Purpose

- Map how the transition from traditional budgets to rolling forecasts has affected Aker Solutions, and whether there is a potential to apply Beyond Budgeting.

2. About the interview object

- a. Which position and role do you have in the organization focusing on management accounting?
- b. For how long have you been working in the organization?
- c. What are your main tasks?

3. Om implementeringen av rolling forecast:

- I. When did you implement Rolling Forecasts in your organization?
 - a. When did you start the process and how long time did it take? (From thought to finalization)
- II. Why did you choose to move away from traditional budgets to rolling forecasts? (Motivational aspect)
 - a. Who was 'behind' this decision?

4. About today's budgeting / forecasting process:

- I. Who is involved in the process?
 - a. At which level in the organization are these?
- II. How is the forecasting conducted?
 - a. How much are based on historical data and how much are estimates?
- III. Which parameters do you forecast?
 - a. How many parameters?
 - b. How do you decide which ones to use?
- IV. Do you measure accuracy on whether you hit the forecasts?
- V. How do you communicate the forecasts between each other internally in the organization?

5. The previous budgeting method:

- I. How was the financial planning before rolling forecasts were implemented?
 - a. Tools, budgets, resource allocation, forecasting?
 - b. Time consumption? Did it occur that you had to prioritize the budgeting process ahead of other value creating work?
 - c. How much were you involved?

6. After the implementation of rolling forecasts:

- I. What is your experience of rolling forecasts compared to the previous method?
 - a. Tools, budgeting, resource allocation, forecasting?
 - b. Time consumption?
 - c. How much are you involved?
 - d. Pros and cons with the new method?
 - e. What have you learned during the last years?
- II. According to theory it demands more competency of the employees to follow a system based on rolling forecasts. Do you think you had the necessary competency by the implementation?
 - a. New appointments, training..?
- III. Have you been able to release yourselves from the previous mindset, or do you still have it more or less in mind?

7. Other dynamic models:

- I. Do you apply other dynamic management tools in your operations? (e.g. bal.scorecard)
- II. Thoughts on Beyond Budgeting?
 - a. Could the implementation of rolling forecasts be considered as a step along the way towards implementing the Beyond Budgeting model in the organization?
 - b. If yes – how? (based on “12 principles”, we’ll explain)
 - c. If no – why not?

8. Rolling Forecast and changes in the market:

- I. Do you believe that the change in budgeting method has been advantageous, with a view to adapting to changes in the market?
 - a. In what manner do you believe Aker Solutions were able to adapt to changes in the market in previous years?
- II. To which extent do you believe you have been able to adapt to market changes now compared to before?
- III. Is it easy to regulate the forecasts in order to follow other opportunities in the market?

9. The decision-making process:

- I. How is a decision made? (the process...)
 - a. How is the authority in the local departments compared to the central department within the organization?
 - b. Bottom-up? Top-down? (centralized / decentralized?)
 - c. How much freedom does the employees have to make their own decisions based on their own assessments?

10. Performance measurement:

- I. How is the target setting in the organization? (Personal, teams, departments, divisions, nationally, globally)
 - a. Which tools are used for follow-up of performance and targets? (KPI's, benchmarking...)
- II. How do you map your competitors?

11. Other objections:

- I. Do you have anything else you would like to add?

Reflection notes – Erlend Mevik

Part 1: Master thesis

Due to changing market conditions, we have in recent years seen several new innovations within budgeting practices and control systems. In our thesis, we look at how the transition to the dynamic management tool called rolling forecast has influenced Aker Solutions and whether the change contributed towards implementing the Beyond Budgeting philosophy. This philosophy highlights the importance of relative targets and decentralized decision making. Many firms have made the transition and the term have emerged in Scandinavia in recent years. In the literature, we have focused on both advantages and disadvantages of RF and BB to not be biased, as there might be a significant difference between reality and theory.

Main Findings RQ 1:

- After the implementation, the organization has increased its ability to adapt to market changes, due to more frequent update of their budgeted (forecasted) numbers, illustrated by smaller deviations than before.
- The total time consumption (isolated) in elaborating rolling forecasts relative to annual budgets has decreased.
- Hierarchical position within the organization (project level vs. top management) affects how the change is perceived. People at top management level see a greater benefit with the new method compared to people working at ground level within project divisions.
- While the transition is described as “drastic” in theory, our findings indicate that it has not been like that in this organization. In our case organization, it has rather been perceived as a natural change that had been going on for many years in interaction with market driven factors.

Main Findings RQ 2:

- Long-term targets linked to strategic objectives and organizational values by using a Balanced Scorecard. Individual development targets were previously controlled more carefully by line managers, but the responsibility has moved over in a larger extent to each individual after the implementation.
- Each project division has a great amount of trust from the top management to make their own decisions within given frames. While top management sets the directives, the forecasting is a “bottom-up” process.
- The organization operate with dynamic cross-coordination of resources, as well as dynamic resource allocation to an extent, even though they still haven’t abandoned the budget completely. Money are still set aside to locked items in the budget, but they are not necessarily spent. This has not changed significantly after the implementation.

Conclusion

In general, the change in budgeting practice had positive effects for the organization, both directly and indirectly. We saw that many of their operations were improved and there were few issues regarding the implementation. Furthermore, there was a clear indication of moving

towards a Beyond budgeting mindset, even though that was no clear intention from the management. Not surprisingly, many were not very familiar with the RF and BB terms, but we felt like they had conceived many of the same pros and cons in practice as the theory stated. Overall, the decision to implement rolling forecast was made to forecast the future and make better decisions, but the organization profited in many other ways than just overhauling the budgeting practice. Lastly, we could see that there was no real shift in practice, as they had been completing the transitioning for a severe amount of time. There was also signs of disbelief in in the presented perks from the theory, as the employees did not glorify the new budgeting tool in the same way as the researchers did in the literature review.

Part 2: Linkage to important topics

Internationalization:

In our case, the new budgeting practice is favourable as it makes it easier for the organization to react and adapt to market changes and forces. International trends are a big part of this and is made easier to cope with, using the new practice. Aker Solutions provides products, systems and services to produce energy from sources such as oil, gas and offshore wind. However, new research and innovations regarding energy sources can heavily influence Aker Solutions. E.g. Nuclear Energy, Coal, Hydrogen and Biofuels.

Moreover, we can see that there is not just competition and substitutes which causes a problem. The oil price is a point of concern, as it is highly fluctuating and hard to predict. Therefore, it is important to not focus solely on historical data but being more dynamic by identify other factors that can influence the price. Trends in this industry is hard to perceive and you need to be aware of sudden changes. One example was the oil crash in 2013, further explained in our thesis by an employee in Aker Solutions. An excellent example of the need for rolling forecast, where you can make big changes throughout the year. A new crash like this can happen at any stage and will highly influence all organizations involved.

Another example from our thesis is the project in Brunei, where they got the opportunity to make business in a totally new place. Looking at this, we can see that these kinds of assignments can cause issues for organizations where international and national laws and regulations might be a big issue. However, being more dynamic, helps making sudden investments.

Lastly, international trends and norms. Managing tools, such as budgets, differs around the world. While the US often have large organizations with high power distance between those at ground level and top management, we see totally different approaches elsewhere. The best example is the emergence of Beyond budgeting in Scandinavia, where countries tend to have a low power distance. This philosophy suits the Scandinavian model naturally as it motivates to decentralize decision-making. Our findings are overall very positive towards implementing BB and RF, but there might be a question whether these practices suit other cultures equally as good.

Innovation:

The biggest issue for every company, regarding budgeting, is a practice that work especially for their own purpose. As mentioned already and broadly discussed in the paper, Aker Solutions needed a change. Our interviewees and their answers did not strongly agree that they had to change, rather that it happened because of a natural transition. However, from our perspective, the natural change was caused by a need for a tool where they could keep in pace

with competition. For them, the biggest importance was to be able to constantly change their predetermined plans so they could minimize deviations. Therefore, the innovation in our case is obvious as both rolling forecast, but especially Beyond Budgeting are innovations that was recently implemented. After analysing Aker Solutions case, we can however see that BB is not fully implemented and that will be another case of innovation if they decide to fully implement it. The issue is that they have several aspects where it is a great potential to improve, e.g. the performance evaluation.

Responsibility:

One of the advantages we presented of rolling forecasts were its ability to deal with resources. Dynamic resource management makes them better in utilizing their resources and open way more possibilities to invest. By doing so, they can faster and more efficient evaluate and use money on good market opportunities, where they otherwise would have to solely depend on budgeted numbers. However, this opportunity raises the issue of ethical questions regards investments. In this industry they must be aware of where their money goes. Oil and gas are bad for the climate and it is therefore highly important to conduct research to make ethical decisions. If they solely make decisions based on own profit, it can harm the organizations long term, if it is bad for their reputation, or worse, makes the world a worse place. There are several laws and standards they must follow. In their operations, it is important that they keep within these regulations and do not abuse their power. In addition, the local community close to the shipyards might have opinions regarding their operations, and it is important, especially in the long term to make their own business as closely adaptable for the society as possible.

Lastly, there are several budgeting ethics to follow. They need to handle the decentralized decision-making by not make less effort, as their work is less monitored. Also make the forecast as close to the reality as possible. Don't make gaps and save funds for other purposes than for the organizations good.

Reflection notes – Krister Sæstad

Part 1

In this master's thesis we have examined whether and how a transition in budgeting practices from traditional budgets to rolling forecasts has affected a global engineering company in its operations. In addition, we wanted to see if the change in budgeting practices has contributed for the organization to manage more dynamically in context of the Beyond Budgeting methodology. By shedding light to different theoretical aspects that has previously been outlined by academics and researchers, and comparing with real life routines, we have discovered several interesting findings.

Main Findings RQ 1:

- After the implementation, the organization has increased its ability to adapt to market changes, due to more frequent update of their budgeted (forecasted) numbers, illustrated by smaller deviations than before.
- The total time consumption (isolated) in elaborating rolling forecasts relative to annual budgets has decreased.
- Hierarchical position within the organization (project level vs. top management) affects how the change is perceived. People at top management level see a greater benefit with the new method compared to people working at ground level within project divisions.
- While the transition is described as “drastic” in theory, our findings indicate that it has not been like that in this organization. It has rather been perceived as a natural change that had been going on for many years in interaction with market driven factors.

Main Findings RQ 2:

- Long-term targets linked to strategic objectives and organizational values by using a Balanced Scorecard. Individual development targets were previously controlled more carefully by line managers, but the responsibility has moved over in a larger extent to each individual after the implementation.
- Each project division has a great amount of trust from the top management to make their own decisions within given frames. While top management sets the directives, the forecasting is a “bottom-up” process.
- The organization operate with dynamic cross-coordination of resources, as well as dynamic resource allocation to an extent, even though they still haven't abandoned the budget completely. Money are still set aside to locked items in the budget, but they are not necessarily spent. This has not changed significantly after the implementation.

Conclusion:

The implementation of Rolling Forecast has allegedly happened over several years, even though the actual formal change happened in 2013. People working with different projects have always forecasted the whole expected project period, the difference is that they now have the opportunity to make changes every quarter as new forecasts are conducted. Our case

organization are present in a fluctuating industry (oil and gas), which forces them to be adaptive to rapid changes in the market.

While several aspects seem to be in line with theory, there are also room for improvements. The fact that the ones at top management level sees the impact differently than people within the project could be a consequence of insufficient communication, knowledge sharing and transparency. In addition, we see that there could be improvements in terms of how performance is evaluated. All in all, the transition seems to have worked out well, but we still do not believe that today's use of Rolling Forecast does reach its full potential.

Part 2

Internationalization:

Our case organization is, as mentioned, present in the oil and gas industry, serving customers with their expertise in engineering. This industry is highly dependent on oil price and thus activity in the oil and gas fields. Back in 2013/2014, by the oil crash, the organization experienced huge difficulties. People were terminated from their jobs across the whole industry, resulting in a dramatic decrease in activity. This enlightens the need of Rolling Forecasts, as the organization can make changes and be better prepared if something equal will happen in the future. This phenomenon also illustrates the problematic aspects concerning the use of historical data in their forecasts, as the market is so unpredictable. The OPEC countries are very important in terms of their regulations in oil supply, which are able to affect the whole world market within the industry. In addition, the relationship between Russia and USA (Putin and Trump) is important, as they both are international superpowers with different interests within the oil market.

Another perspective is how organizations are governed across the world. In our thesis we highlight a study from Heinzelmann (2019) that states that Beyond Budgeting work well in Scandinavian organizations due to a societal culture with a high level of trust and low authority. However, this is not necessarily the case in different parts of the world where e.g. Power Distance and level of Individualism are higher (ref. GLOBE, Hofstede, Trompenaar studies). As our case organization is present in 20 countries across the world, the governing practices suggested in our paper might not necessarily be the best option in e.g. Asian countries.

Innovation:

Our topic concerns a type of innovation within management accounting – more specifically a new budgeting practice that is supposed to make the organization more predictable, reactive and adaptive to market changes. This practice is not necessarily a brand new one, as different research has been conducted over a period of time. Bjarte Bogsnes has been among the main pioneers, as one of the founders of the Beyond Budgeting Round Table (BBRT), writing books and giving lectures on the topic.

Nevertheless, the change in budgeting practices has affected the case organization in several ways. As listed in the findings, it has led to more updated and reliable data, making both project divisions as well as middle and top management better able to get their decisions

right. The Rolling Forecasts must be seen in context of the “12 principles of Beyond Budgeting”, which all together is supposed to lead the organization in the right direction. Among those principles you find resource allocation, suggesting that those should be allocated continuously across the period as they are needed, rather than being locked to items in a budget. Our organization use e.g. a resource management tool to easier be able to keep an overview of where resources are needed within the different plants/shipyards. This ensures a smooth process which enhances the efficiency in several areas within the organization.

Responsibility:

The oil and gas industry is subject to a lot of environmental issues, such as emissions from the raw materials they extract. For instance, there have been heavy discussions regarding the establishment of new oil fields outside Lofoten, Norway. Oil and gas are the main reason for huge parts of the worldwide emissions of greenhouse gases.

Our case organization engineer the products, systems and services required to unlock energy, which in many cases concerns the extraction of oil. Hence, the operations should be conducted through efficient use of materials and energy. In addition, they should design their products to have no undue environmental impact.

Another point is waste management. A lot of excess waste which is harmful for the environment is thrown every day. Being able to recycle more of the waste will thus certainly be a step towards more responsible management. A good recommendation from my side will be to ensure that their operations are following the Global Reporting Initiative Standards (GRI) for sustainability reporting to keep a better overview of their corporate responsibility.

Lastly, any organization must be aware of the Health and Safety rules to make sure their employees have safe working conditions. In Norway we have very strict regulations in this area, but the organization still has the responsibility to make sure that these regulations are complied.