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## **Viability of Budgets in Uncertain Environments**

A multiple-case study of budgeting practices

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## Abstract

**Title:** Viability of Budgets in Uncertain Environments: A multiple-case study of budgeting practices

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**Course:** BUSN79 Degree Project in Accounting and Finance

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**Supervisor:** Peter W. Jönsson

**Purpose:** The purpose of this study is to examine the use and perception of budgeting in complex organizations that are exposed to uncertainty, in order to better understand the debate about usefulness of budgets. In addition, the study intends to identify and analyze the purposes fulfilled by budgets in the case of the analyzed companies.

**Methodology:** This multiple case study has followed a qualitative, abductive research strategy. The empirical data has been collected through semi-structured interviews. The results were complemented with secondary data such as official websites and annual reports.

**Theoretical perspectives:** The theoretical framework is based on relevant theory in the field of budgeting and environmental uncertainty.

**Empirical foundation:** The empirical data was generated from four interviews with three companies. Additional information was retrieved from the companies' websites and annual reports.

**Conclusions:** The findings of this study show that the budgeting processes in today's business environment have changed due to factors such as complexity and uncertainty. In contrast to the criticism against budgeting, empirical findings suggest that budgets remain an important management tool. Yet, there is no universal budgeting approach and neither traditional budgeting nor better budgeting or beyond budgeting can be viewed as universally superior.

**Key words:** Better Budgeting, Beyond Budgeting, Environmental Uncertainty, Rolling Forecast, Traditional Budgeting

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Lund, May 25<sup>th</sup>, 2018

Eudochia Prohntichi and Jonina Cadri

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## **1. Introduction**

*This chapter sets the scene for the thesis. It starts by introducing the reader to the general background of the topic, and then it provides a discussion that surrounds the research problem, which leads to the purpose of the thesis, and research questions to be addressed. Finally, the chapter outlines the structure of the thesis.*

### **1.1 Background**

Budgeting has long been considered one of the most important management control systems (Armstrong et al. 1996; Ekholm & Wallin, 2000; Hansen et al. 2003; Horngren et al. 2012). Therefore, budgeting is one of the most extensively studied topics in management accounting (Covaleski et al. 2007). Budgeting is argued to have many benefits, and one of them is enabling organizations to control costs and achieve desired financial goals that are important for their survival (Merchant, 1998). Originally being developed to be used as a tool for controlling costs, nowadays, the budgetary framework is considered to be more strategically focused, assisting managers to translate business objectives into action plans, to communicate those objectives and to assess performance (Hansen et al. 2003). Budgeting helps to improve organizations' efficiency through planning and coordination, and supports both control and learning (King et al. 2010). Umaphathy (1987, p. 311) considered budgeting as a "wonderful management accounting technique" which enables managers to rejuvenate their organizations.

Although budgeting is an important control system for many organizations, in recent years criticism towards traditional budgeting has increased (Eckholm & Wallin, 2000; Hansen et al. 2003; Hope & Fraser, 2003; Neely et al. 2003). The basis of this criticism is the inability of traditional budgeting to keep up with changes and requirements of today's business world. Current business environment is much more uncertain and complex than before, and the rigidity of traditional budget serves to stifle responsiveness to change (Wallander, 1999; Hope & Fraser, 2003). According to Bescos et al. (2003 cited in Hansen et al. 2003), the degree of environmental uncertainty is one important contingency factor which can be a major driver of dissatisfaction with traditional budgeting. Chentall and Moris (1986) also argue that environmental uncertainty makes planning problematic because future events become more unpredictable, and that negatively affects the usefulness of traditional budgets for control purposes, because the initial targets become quickly outdated. Moreover, Hope and Fraser (2003) point out that budgeting is expensive because much time is spent on the budgeting process, even though the benefits are not clear due to environmental uncertainty. Therefore, budgeting is neither a value-adding activity, nor provides necessary information for decision making in the future (Hope & Fraser, 2003).

The critique towards traditional budgeting has led to the development of two alternative budgeting approaches, namely 'Better Budgeting' and 'Beyond Budgeting', reflecting the idea of improving or abandoning budgeting, respectively (Hansen et al. 2003). Both approaches consider that traditional budgeting is mismatched to today's rapidly changing and uncertain environment. Better Budgeting, on one hand, focuses on enhancing the traditional budgeting

process to overcome its shortcomings (Libby & Lindsay, 2010; Neely et al, 2003). Beyond Budgeting advocates, on the other hand, favor complete abandonment of budget as it is inherently flawed (Gurton, 1999; Wallander, 1999; Hope & Fraser, 2003), using eye-catching titles such as: “Budgeting – an unnecessary evil” (Wallander, 1999) and “Bye-bye budget” (Gurton, 1999).

## **1.2 Problem Discussion**

In recent years, critique towards budgeting has been a growing topic of debate (Hansen et al. 2003; Hope & Fraser, 2003; Neely et al. 2003). Yet, studies have shown that budgets are still extensively used, and most companies do not have plans of abandoning it (Ekholm & Wallin, 2000; Libby & Lindsay, 2010). According to Hansen et al. (2003), one reason might be because companies are used to preparing budgets, which are deeply ingrained into the organizational culture. However, Hansen and Van der Stede (2004) claim that the multiple facets of budgeting and diversity of purposes that the budget serves can also explain why budgets are still being widely used in many companies.

Ekholm and Wallin (2000) claim that the abandonment of budgets might not be as spread as its promoters claim, and that there seems to be resistance to radical changes amongst organizations when it comes to budgets. The same authors emphasize that budgeting benefits outweigh the costs and that “the annual budget is perceived to be so important that cannot be abandoned altogether” (Ekholm & Wallin, 2000, p. 527). Moreover, they conclude that many of the assumptions and criticism exposed by the Beyond Budgeting proponents, Hope and Fraser, are over-generalized. Yet, Ekholm and Wallin (2000) agree that traditional budgets do have room for improvement, in order to overcome its common shortcomings.

A study by Libby and Lindsay (2010) indicates that budgeting still maintains a crucial role in companies’ management control system. Furthermore, the authors show in their research that some of the issues associated with budgeting, such as the extensive amount of time involved in the budgeting process or budgeting incapacity for strategy implementation, are not supported by companies’ feedback, which might challenge the validity of some of the critiques in question. Overall, Libby and Lindsay’s study suggests that organizations try to improve the budgeting process, rather than abandon it completely.

A quantitative research conducted by Stolt (2003) shows that 84% of the largest companies, listed in Sweden still use fixed annual budgets. Budgets are not fundamentally defective, and respondents prefer to improve their budgeting system instead of abandoning it. Furthermore, the survey results highlight that the majority of surveyed companies operate in an uncertain environment.

With reference to the arguments stated above, it can be argued that budgets are amongst the most controversial management tools. Taking into account the contradictory findings related to budgeting, the authors of this thesis are interested to examine the current budgeting processes of three well-established companies, and analyze what purposes budgets fulfill in the context of

these companies to gain a better understanding of the relevance of budgets in today's business environment.

### **1.3 Purpose and Research Questions**

Given the problem discussion, the purpose of this thesis is to examine the use and perception of budgeting in three well-established companies that are exposed to uncertainty, in order to better understand the debate about usefulness of budgets. In addition, the study intends to identify and analyze the purposes fulfilled by budgets in the context of environmental uncertainty and business complexity. Accordingly, the paper addresses the following two questions:

1. What budgeting approaches do the case companies use?
2. What purposes does budgeting fulfill in these three well-established companies that operate in an uncertain environment?

### **1.4 Outline of the Thesis**

The thesis is organized as following. Chapter two explains which methods have been used and how the study was accomplished in general, followed by a discussion regarding the validity and reliability of the study. Subsequently, chapter three addresses relevant literature that was used for analyzing the empirical findings. Afterwards, chapter four contains the empirical findings generated by the three case studies. Based on the empirical material, an analysis and discussion of results are presented in chapter five. Lastly, chapter six presents the findings and conclusion of the thesis. The chapter also presents contributions and limitations of the present research, and suggestions for future research.



## **2. Methodology**

*This chapter presents the research methodology adopted in this thesis. First, the overall research strategy and design are discussed, followed by the chosen approach for the theoretical review. Further, the selection process of the case companies and the interview guide design are presented. Thereafter, the data collection method is presented and discussed, followed by the techniques used to analyze data. Finally, the validity and reliability of the study are assessed.*

### **2.1 Research Strategy and Design**

The research strategy refers to the overall orientation of a research study, and can be divided into two distinctive approaches: quantitative research and qualitative research (Bryman & Bell, 2011). This thesis intends to identify the budgeting practices adopted in today's competitive and uncertain environment, and analyze their purposes. Considering the aim of the thesis, the most suitable strategy to follow is a qualitative based research. The choice is supported by more factors. First, qualitative research seeks to acquire in-depth and detailed data that has not been limited by predetermined questions (Bryman & Bell, 2011). Moreover, it allows the researchers to dig deeper than the surface and study a phenomenon or a situation thoroughly (Silverman, 2005). Thus, the chosen research strategy provides the variety and depth of data required to interpret and analyze the phenomenon under study. Furthermore, qualitative research focuses on understanding the context, rather than generalizing the findings, and the researchers have the opportunity to explore the subject in the "real world" (Robson, 2002), which suits the purpose of this thesis. Consequently, the research is flexible and tolerant to ambiguity, while providing results which are context-specific.

While the main advantage of the qualitative research approach is its ability to reflect the uniqueness of a particular case or situation and get a deep understanding into the chosen topic (Flick, 2009), there are some shortcomings related to the use of this type of approach. First, the results might be subjective; and additionally, it might be difficult to replicate the study as well as generalize the findings (Bryman & Bell, 2011). These shortcomings are discussed in more detail in section 6.2.

Qualitative research can be carried out in different ways (Bryman & Bell, 2011). In the context of this thesis, a multiple case study was deemed appropriate. A case study design allows in-depth, multi-faceted explorations of complex issues in their real-life settings, by answering "how" and "why" questions (Yin, 2009). Extending the research to more than one case can improve the quality of the research (Yin, 2009), and also gives the opportunity to compare the different case studies with each other to create a better understanding of the studied phenomenon (Eisenhardt & Graebner, 2007).

### **2.2 Literature Review**

According to Saunders et al. (2009), reviewing the literature critically provides the foundation on which the research is built. The purpose of reviewing the literature depends on the approach intended to be followed, which is either a deductive or inductive reasoning approach (Saunders

et al. 2009). Bryman and Bell (2011) emphasize that there is no straightforward distinction between these two reasoning methods, but the separation rather serves as a tendency.

This thesis follows an abduction approach, which contains a mix of both inductive and deductive elements (Alvesson & Sköldbberg, 2009). First, a deductive approach was used by conducting a comprehensive literature review on traditional budgets and alternative budgeting concepts, and developing a provisional theoretical framework to set a ground for the interview design and further analysis. On the other hand, the thesis has an inductive element, since parts of the provisional theoretical framework have been refined and customized, and the final research questions have been formulated after data collection was undertaken. This hybrid deductive-inductive strategy allows the authors to go back and forth between theory and empirical data. According to Bryman and Bell (2011), it is common that the data collection process affects the relevance of the chosen literature and the development of the theoretical framework.

The definition and interpretation of budget may differ among authors and organizations. Therefore, it is important to clarify the perspective adopted in this thesis, by defining the terms: traditional budget, Better Budgeting and Beyond Budgeting. Traditional budget is a quantitative expression of a proposed plan of action by management for a specified period of time (Horngren et al. 2012), which is a static version that is not meant to change during this time period. Recent literature on new developments in budgeting has introduced new concepts, such as Better Budgeting and Beyond Budgeting (Hope & Fraser, 2003, Neely et al. 2003). There is ambiguity related to these two concepts, and the conceptualization of new budgeting approaches is not clear cut. In this thesis, Better Budgeting reflects the idea of improving the traditional budget, and using improved budgeting methods (Neely et al. 2003); and Beyond Budgeting reflects the process of completely abandoning budgeting within organizations (Hope & Fraser, 2003).

Furthermore, the purposes of budgets are also discussed by several authors, such as Welsch et al. (1988), Drury (2004) and Ax et al. (2009). In this thesis, the budgeting purposes are presented as defined by Anthony et al. (2014) who divide them into four groups, namely planning, accountability, process and ritual, which summarize the main purposes stated from the above mentioned authors.

There is consensus in literature that there is no budgeting approach that could be applied everywhere, and each organization should design its budgeting system depending on the context and environment in which it operates (Merchant & Van der Stede, 2007; Hansen, 2011). Weber and Linder (2005) present a model that aims to help companies to determine which budgeting approach (i.e. traditional budgeting, Better Budgeting or Beyond Budgeting) is most suitable for their specific case, by considering two contextual factors: environmental uncertainty and company's complexity. The authors of this thesis use Weber and Linder's (2005) model in order to describe the organizational context of the case companies and discuss their budgeting approaches.

### **2.3 Case Selection**

In order to select the right participants for the study, a full list of companies that use alternative approaches instead of budgeting was found from online databases, as well as from literature and previous research in the field. Given the time limitation for the completion of thesis, it was seen as appropriate to contact those companies that are closer to the current location, which is why companies' offices in Lund, Malmö, Gothenburg and Copenhagen were firstly approached. During the research, people concerned with the function of finance and budgeting were identified as potential candidates for the interview. Each of them was initially contacted by their email address acquired through the official website of the company. The email explained the topic and the purpose of the paper to provide them with the main idea of the research. This process was then followed up by face to face and phone interviews.

Out of 15 of the companies that were contacted, three of them were interviewed and serve as the empirical foundation of the study. These companies belong to different industries; however, the interviews only cover a specific department and not the organization as a whole, which will be further addressed in the limitations section. It should also be made clear that one of the interviewed companies asked to remain anonymous and therefore, the name of the company and the interviewee will not be disclosed. For this reason, it is chosen to be referred as Company Beta which is a multinational food packaging and processing company. The other two chosen companies are Alfa Laval which provides solutions for the heavy industry and AstraZeneca, a global biopharmaceutical business.

### **2.4 Data Collection**

When conducting a qualitative research, primary and/or secondary data can be used. This makes it possible to obtain information from different sources that include interviews, observations, documentations or archival records (Yin, 2009).

Secondary data refers to data that has been previously collected by other research in the field and it is helpful in answering the research question (Saunders et al. 2009). In order to acquire the necessary information and build the theoretical framework, search engines such as Google Scholar, Emerald, Science Direct and LubSearch were used to identify what previous research has already established. Secondary data was found through various keywords such as traditional budgets, Better Budgeting, rolling forecasts, Beyond Budgeting, budgeting criticism, environmental uncertainty and complexity. Additionally, some of the data was gathered from companies' documents and other relevant reports published on their official website. To present the Beyond Budgeting concept, literature was found to be limited, thus the official website of the Beyond Budgeting Roundtable (BBRT) was used, in addition to the Hope and Fraser (2003) book.

With regards to primary data, it was collected through interviews. They serve as the main source of information, mainly because of their in-depth nature and the advantage of acquiring valuable information that cannot be collected through other sources (Yin, 2009). Stake (2010) argues that interviews offer the opportunity to gather information from individuals with different perspectives and positions, which can prove to be valuable for the study. Additionally, they are

helpful in guiding researchers in answering and understanding “how” and “why” behind certain situations (Yin, 2003).

## 2.5 Interview Guide Design

Use of interviews serves to gather reliable data and information that contributes to the objectives of the study. When designing the interview, it is important that the structure is consistent with the aim and objectives of the study (Saunders et al. 2009) and is tailored to answer the main research question (Bryman & Bell, 2011).

For the purpose of our explanatory study, semi-structured interviews are most appropriate (Saunders et al. 2009). They contain a list of key themes, but at the same time they can be adapted according to the situation and continuity of the conversation. Additionally, these types of interviews are suitable since they allow inclusion of additional questions that may arise for analyzing further details or clarifying certain aspects (Saunders et al. 2009). A list of the interview questions can be found in Appendix 1.

According to Saunders et al. (2009), when choosing between open and closed questions, those with an open structure are seen as most advantageous as they do not lead or imply a certain answer from the respondent. Therefore, questions were initially designed but adapted during interviews, depending on the case company and the particular answers of previous questions as suggested by these authors. This gave participants the opportunity to include their own knowledge as well as encourage talking about their personal perceptions and experience. Saunders et al. (2009). At the same time, open questions allow exploration of new areas where knowledge was previously limited (Bryman & Bell, 2011).

The questions of the first part of the interview serve as an introduction of the interviewees, including their position in the company and participation in the budgeting processes. The second part is concerned with the budgeting processes not only for the specific department where the participants work, but for the company as a whole. Through this section information is obtained to make an analysis of the type of budget or forecast that the company uses. The following sections deal with the purposes that the budget fulfills while building relationships between the budgeting purposes and the environment where they operate. With the permission of the participants, the interviews were audio-recorded and transcribed. An overview of the interview details is also presented in the table below:

*Table 1: Overview of the interview details*

<b>Company</b>	<b>Interviewee</b>	<b>Form</b>	<b>Date</b>	<b>Duration</b>
Alfa Laval	Per-Ola Johansson	Semi-structured face to face	02.05.2018	60 min
AstraZeneca	Per Hall	Semi-structured phone	30.04.2018	30 min
AstraZeneca	Marcus Vagnebohrn	Semi-structured phone	04.05.2018	60 min
Beta	Manager Beta	Semi-structured face to face	03.05.2018	60 min

## **2.6 Data Analysis**

In order for qualitative data to be useful, it needs to be analyzed, understood and linked to theory (Saunders et al. 2009). According to Yin (2009) there are five techniques for analyzing data in a case study research, which include cross-case synthesis, explanation building, pattern matching, time-series analysis and logic models. Out of five methods, pattern matching was deemed appropriate since it allows to build a framework from existing theory and use it to analyze the findings (Saunders et al. 2009). Additionally, the iterative approach enables theory and findings to develop each other.

Moreover, given the multiple case study, cross-case synthesis is also seen as appropriate to present data from individual cases in a consolidated table. This technique is mostly used when analysis of findings is based on arguments rather than numeric results and at the same time it is helpful in order to make comparisons between cases. (Yin, 2009)

## **2.7 Validity and Reliability**

Qualitative research is often criticized for lacking scientific rigour with poor justification of the methods selected, and lack of transparency in the analytical procedures (Noble & Smith, 2015). Bryman and Bell (2011) also criticize qualitative research for being impressionistic and subjective. In order to assess the quality of this thesis, four evaluation criteria suggested by Yin (2009) are reviewed, namely: construct validity, internal validity, external validity, as well as reliability.

Construct validity can be strengthened by using several different empirical sources (Yin, 2009). This has to a certain extent been achieved by conducting four interviews, and using other empirical sources such as internal documents and annual reports. Yin (2009) emphasizes that case studies have received criticism in terms of its lack of robustness, and being subject to researcher bias. The authors of this thesis asked the interviewees and also external parties to read the paper, in order to avoid misinterpretations and consequently strengthen the construct validity.

The use of multiple cases in contrast to single case studies is preferable in terms of the reliability and the robustness of the results (Yin, 2009), and increases the internal validity of the thesis. Concerning the external validity, which refers to the extent the findings can be generalized (Yin, 2009), the case study methodology is not suitable for making generalizations. However, it is important to mention that the aim of this thesis is not to generalize the conclusions drawn, but rather provide a contextualized understanding of budgeting practices adopted by well-established companies in today's uncertain environment.

Lastly, reliability refers to the possibility of a completely new researcher to reconstruct the study with similar results as the first researcher by using the same approach (Yin, 2009). In order to represent reliable data, the research process and its outcome have to be accurately documented. This approach was also applied to this thesis, and respectively, it is likely that a study performed under the same circumstances will obtain similar findings.

### **3. Theoretical Review**

*The following chapter contains the theoretical framework of the thesis. It is divided into four subsections, starting with an introduction to environmental uncertainty and budgeting. Further, the concept of traditional budgeting is present, its purposes and criticism towards it. Following subchapters include alternative approaches to traditional budgeting, namely Better and Beyond Budgeting.*

#### **3.1 Environmental Uncertainty and Budgeting**

Environmental uncertainty refers to the difficulty an organization faces in predicting the future because of incomplete information or changing conditions (Germain et al. 2008). According to Merchant and Van der Stede (2007), environmental uncertainty is related to the broad set of factors that, individually and collectively, make it difficult or impossible to predict the future in a given area. Uncertainty can originate from changes in natural conditions, the political or economic climate, or the actions of competitors, customers, suppliers, and regulators. The degree of uncertainty is higher when the pace of technology is higher, the business cycle longer, and the farther one tries to look into the future (Merchant & Van der Stede, 2007).

Environmental uncertainty is an aspect that has been studied extensively in research in the field of management accounting. According to Chenhall (2003) and Agbejule (2005), environmental uncertainty plays an important role in how managers perceive and use information generated by management accounting systems. Chenhall (2003) suggests that if management control systems are used in uncertain environments, then tight financial controls (i.e. formal controls) will be used together with an emphasis on flexible, interpersonal interactions (i.e. informal controls). In response to environmental uncertainty, managers often use their flexibility and discretion to better adapt to environmental changes. For example, Merchant (1981) indicates that budgeting can be applied in different ways in different firms and some of these variation can be explained by different degrees of environmental uncertainty among organizations.

Budgets are recognized as important formal control tools (Anthony et al. 2014; Simons, 2000; Merchant & Van der Stede, 2007). Traditional budgets are believed to be suited to companies in which the process of transforming input into outputs are well known, and relatively uncomplicated (Perrow, 1970; Mintzberg, 1983). Uncertainty causes predictions to be difficult, and thus hinders budgetary processes (Hartmann, 2000). Ekholm and Wallin (2011) found a significant negative relationship between environmental uncertainty and the perceived usefulness of traditional annual budgets. Criticism towards the traditional budgeting has been notably increased in the last decades, and has given rise to a number of alternatives (i.e. Better Budgeting, Beyond Budgeting), which are discussed in later chapters.

Weber and Linder (2005) also suggest that with the increase in environment uncertainty, organizations need to change their budgeting system. Figures 1 indicates that traditional budgeting, and to a lesser degree better budgeting, are not suitable for handling environmental uncertainty. The Beyond Budgeting model is more appropriate for organizations with a high level of environmental uncertainty.

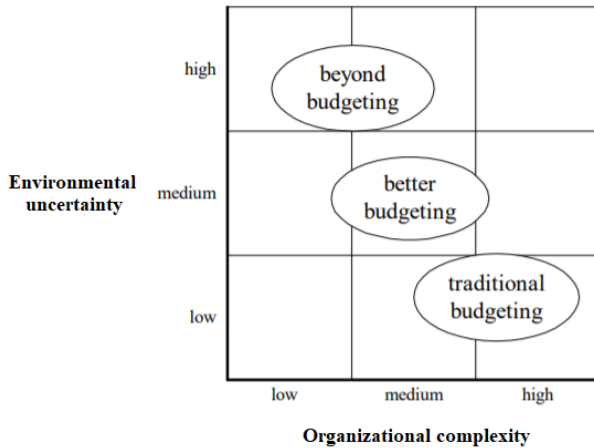


Figure 1: Effectiveness and efficiency of traditional budgeting, better budgeting and beyond budgeting

Source: Weber and Linder, 2005, p. 24.

As can be seen in the figure above, Weber and Linder (2005) investigate two contextual factors that impact the extent of budget use: environmental uncertainty and company's complexity. While traditional budgeting, and to a lesser degree Better Budgeting, are quite robust with respect to complexity, they have problems handling environmental uncertainty. Weber and Linder's findings suggest that there is a trade-off between company's complexity on one hand, and environmental uncertainty on the other. For instance, the Beyond Budgeting model, according to them, is suitable in today's highly volatile business environment, however it is not suited for ensuring effective and efficient coordination in complex contexts.

The degree of environmental uncertainty is determined using different measures in different studies. Tosi et al. (1973) examine three environmental uncertainty measures: sales volatility, earnings volatility, and technology volatility. Ghosh and Olsen (2009) determine environmental uncertainty based on the sales volatility over the prior five-year period, and argue that sales volatility is a better proxy, compared to technology volatility. Prior management and accounting literature (Kren, 1992; Milliken, 1987) also suggest that sales volatility is an appropriate measure for firm's environment.

As with environmental uncertainty, organizational complexity is a relative issue and researchers have different views on what it is and how to measure it. When a company is in the initial stage, its organizational complexity is usually low, because the outputs and inputs are few, and the management system is simple. With the market share of products increasing, the organizational complexity will grow to a higher level (Liu et. al. 2015). According to Weber and Linder (2005), organizational complexity is a measure of its size and heterogeneity (i.e. number of different manufacturing processes) as well as its entourage (i.e. market diversity and customers served).

## **3.2 Traditional Budgeting**

### **3.2.1 The Concept of Budgeting**

Budgeting is commonly regarded as a cornerstone of management control (Hansen et al. 2003; Anthony et al. 2014), and is traditionally described as an accounting tool that organizations use for implementing strategies (Horngren et al. 2005; Østergren & Stensaker, 2011). Every organization has plans and objectives derived from their long-term strategy. The aim of budgeting is to give those plans and objectives financial value making the progress easily measurable, and to transform the strategic ideas into understandable operative actions. Horngren et al. (2012) define budgets as a management's quantitative expression of an expected plan for a specified period, and as an aid to coordinate and implement what is needed to be done to achieve the plan. According to Anthony et al. (2014), an operative budget usually covers one year, but it can easily include the following two or three years (Wallander, 1999).

Preparing budgets is a comprehensive process where the length of the preparation, format, level of detail, and horizon might differ across organizations (Bergstrand, 2009; Merchant & Van der Stede, 2007). The budgeting process can be divided into three phases that consist of budget creation, budget follow up and budget analysis (Merchant & Van der Stede, 2007).

Bergstrand (2009) affirms that many employees and managers throughout the organization are involved in the budgeting process, and each level within an organization has different information that is valuable in the budget's preparation. Therefore, in general, the budgeting process is a back-and-forth movement between top and lower management. According to Anthony et al. (2014), there are three main approaches that can be employed when developing budgets: (1) top-down approach – where top management decides on the budget and lower level management is responsible for the budget execution; (2) bottom-up approach – where the lower level management creates their own budget, and all various sub-unit budgets are then consolidated to corporate level; and (3) iterative approach – which starts out like bottom-up budgeting, but is then repeated one or more times until top management is content with the consolidated budget amounts.

Budgeting involves important parts of a management control system, e.g. planning and coordination, as well as motivation and performance evaluation; and according to Covaleski et al. (2007, p. 587), “virtually every aspect of management accounting is implicated in budgeting”. Further, Malmi and Brown (2008) incorporate budgeting as one of the components of the cybernetic controls in their management control system package. As a basic cybernetic control, budgeting involves setting targets of performance, measuring performance, comparing the performance with targets and providing information concerning unwanted variances.

The budgeting system can be used for various purposes, and each organization designs their system to address its most important problems. Some of the most common budgeting purposes are discussed in the next sub-section.



### **3.2.2 Purposes of Budgeting**

Companies' budgeting systems vary considerably. There is no universal format for budget design that could be applied everywhere, and therefore each organization should design its budgeting system to address its particular issues (Merchant & Van der Stede, 2007; Hansen, 2011). Anthony et al. (2014) divide the purposes of budgets into four groups, namely planning, accountability, process and ritual, which are discussed below.

#### ***Planning***

Planning is decision-making in advance. Forward thinking forces managers to formally consider alternative courses of actions, evaluating them carefully and deciding on the best alternative (Izhar, 1990). Planning and budgeting system serve as a powerful form of action control, forcing managers to think about the future and make decisions in advance (Merchant & Van der Stede, 2007). The planning process helps managers to develop a better understanding about the organization's opportunities and challenges, and minimizes the risk of quick unconsidered decisions (Drury, 2004).

An important role of planning is *resource allocation*, implying that the resources of the organizations are to be distributed in the best efficient way, in order to achieve the targets (Greve, 2011). Another planning role is *coordination* among different departments within the organization. The budgeting process forces the sharing of information among organization (Merchant & Van der Stede, 2007), and the budget serves as a tool to ensure that all parts of the organization follow the same plan. The organization can succeed only if each department fulfills its part of the plan.

#### ***Accountability***

Managers at different levels within the organization prepare budgets. As these budgets are approved, the same managers commit to fulfilling the targets and are made accountable for it. The accountability purpose includes, at least, two different roles: namely, monitoring and motivation.

The budget is viewed as a benchmark against which the actual performance is evaluated, and it is used as a formal mechanism to *monitor*, or control, the progress of the organizations towards its goals. During the preparation process and at the beginning of the period, the budget is a planning tool; and at the end of the period, it is a control tool (Shim & Siegel, 2008). Malmi and Brown (2008) also claim that the focus of budgeting, as a control mechanism, is on planning acceptable levels of behavior and evaluating performance against those plans. The objective of budget as a monitoring mechanism is to minimize the variances between actual and desired conditions (Hanson, 1966).

*Motivation* through budgets is mainly achieved through the setting of goals and targets. People perform better, and are usually more motivated, when they have specific goals to achieve, that are neither too easy or too difficult (Merchant & Van der Stede, 2007). Furthermore, research shows that active participation in the budget setting process will result in greater individual

commitment to the organization and its goals. The increased commitment will thus lead to increased personal motivation (Locke, 1996; Ax et al. 2009). At the other end of the spectrum, Kennedy and Dugdale (1999) emphasize that setting difficult targets can lead to demotivation and under-performance. These risks are amplified under the impact of unforeseeable and uncontrollable events.

### ***Process***

The actual process of budgeting is as beneficial as the budget itself. According to the process' purpose, budgeting is not so much related to the actual budget as it is to the budgeting process. The usefulness of the actual budget might be limited due to uncontrollable factors outside of the organization. However, that does not eliminate the benefits of some useful activities performed during the preparation of the budget, such as reflection and communication.

The budgeting process forces managers to take some time and *reflect* about organization's matters in a longer-perspective. In doing so, the managers develop a better understanding about the company's opportunities and threats, strengths and weaknesses, and the effects of alternative solutions (Merchant & Van der Stede, 2007). During the reflection process, they will also probably conclude that they do not have all the answers themselves and need to *communicate* to other people to find them. In order to have a functional organization, there needs to be a clear line of communication between all parts of the organization, and therefore budgeting serves as an important channel of communication (Emmanuel et al. 1990). Furthermore, budgets serve the purpose of communicating the future strategy of the organization, and assist top management to communicate the goals and objectives to lower management and each individual employee (Mintzberg, 1994; Drury, 2004; Greve, 2011). The reflection and communication activities may prove extremely valuable, even if the actual budget turns out to be of less value.

### ***Ritual***

In some cases the budget has become a ritual and is no longer used for management control, but for other reasons. Some companies have been using budgets for such a long time that it became a *habit*, and the management does not even consider the possibility of not using them. Furthermore, many organizations would be seen as unprofessional if they did not prepare budgets. This is especially the case for publicly traded companies, which, amongst other reasons use budgets to instill a sense of *legitimacy* (Anthony et al. 2014).

Despite the above-discussed purposes and the widespread use of budgets, the criticism and dissatisfaction towards traditional budgeting has grown during the last decades. The reasons are elaborated in the next sub-chapter.

### **3.2.3 Criticism of Budgeting**

Although budgeting is an important control system for many organizations, over the years criticism towards traditional budgeting has increased (Eckholm & Wallin, 2000; Hansen et al.

2003; Hope & Fraser, 2003; Neely et al. 2003). Budgeting has been deemed “broken” (Jensen, 2001), “a thing of the past” (Gurton, 1999), or an “unnecessary evil” (Wallander, 1999).

The increasing environmental uncertainty and increasing competitive pressure are among the main arguments made by the budget critics. Due to the fixed nature of budgets, adaptation to changes is slower. Therefore, the budgets have been commonly criticized for not being able to meet the requirements set by the rapidly changing environment and unpredictable business context of today (Hansen et al. 2003; Hope & Fraser, 2003; Libby & Lindsay, 2010; Østergren & Stensaker, 2011). Budgets work reasonably effectively in a rather stable environment (Otley, 2001), whereas in today’s unstable environment, organizations aim to attain competitive advantage through innovation, learning, flexibility, and adaptation (Frow et al. 2009). Daum (2002) also emphasizes that in a dynamic business environment, managers should be looking to exceed targets and budgets, and not be restricted by them. Some of the most discussed limitations of traditional budgeting are listed below:

- Budgeting consumes a lot of managerial time, which makes it a costly process and the benefits may not be worth the costs (Wallander, 1999; Hansen et al. 2003; Anthony et al. 2014). Budgets are believed to add little value, especially considering the time required to prepare them (Hansen et al. 2003);

- Budgets limit responsiveness and flexibility, and are often a barrier to change, due to their fixed nature (Gurton, 1999; Hansen et al. 2003; Anthony et al. 2014);

- Budgets are rarely strategically focused, and are often contradictory. In a study by Kaplan and Norton (2001), a majority of companies indicated that their budgeting and performance review process were done separately from the strategic planning process;

- The use of the budget, as a fixed tool, leads to unreliable performance evaluation and promotes budget gaming. (Hansen et al. 2003; Jensen, 2001) The results from the study conducted by Libby and Lindsay (2010) suggest that gaming is a commonly recurring phenomenon in relation to the budget process.

Libby and Lindsay (2010) subdivide the criticism of budgeting into two main directions: some researchers argue that the problems with budgeting stem from the way budgets are used, and consequently, some improvements are possible, while others claim that budgeting processes are fundamentally imperfect. These directions are further discussed in the next two chapters.

### **3.3 Better Budgeting**

Better Budgeting stays loyal to the budget as a management tool, but argues for the improvement of the budgeting process (CIMA, 2007). This approach is focused on making traditional budgets more simplified by improving some of its aspects. Therefore, it is recommended that organizations carry out budgets only for their core activities and processes. To achieve Better Budgeting, changes within the organization will be incremental rather than radical. Additionally, the implementation process is relatively easy since the required instruments are already available. (Rickards, 2006)

Researchers suggest various alternative tools that can fulfill the necessary budgeting purposes. Neely et al. (2003) describe how budgets can be improved through other management techniques such as Activity Based Budgeting, Zero Base Budgeting, Value Based Management, Profit Planning and Rolling Forecasts. For the purpose of the thesis, focus will be the analysis of forecasts and rolling forecasts which are currently used by the case companies.

### **3.3.1 Forecasts and Rolling Forecasts**

The recent shift in the budgeting practices related to abandonment of the traditional budget and replacement with other simplified tools (Libby & Lindsay, 2010; Østergren & Stensaker, 2011; Anthony et al. 2014) reflects the critique against budgeting.

Depending on industry characteristics and their business cycle, various companies have decided to adapt their budgeting processes by including more forecasts during the year. In this case, the time frame of the budgets remains the same, however they are updated after certain intervals to make necessary adjustments (Hayes, 2002). Research shows that rolling forecast are also a widely used tool from organizations. Their growing importance is especially linked with the purposes of planning and resource allocation (Aho & Järvinen, 2013; Lorain, 2010), serving as a supporting block for management processes (Hope, 2007). A rolling forecast can be defined as an estimate of the future financial position of company, based on its current situation (Morlidge & Player, 2010). According to Anthony et al. (2014), the main distinction from the annual budget is that a rolling forecast can be planned at any period without being restricted to the calendar year. This is important if companies want to be flexible and proactive in order to deal with problems on time (Hope, 2007). Anthony et al. (2014) points out the main characteristics of these forecasts such as the fact that they overlap each other and have a low level of detail. The later happens because when using rolling forecasts, the focus is only on a number of KPIs and not all the aspects that are included in the annual budget (Anthony et al. 2014; Hansen, 2010). The way forecasts are prepared will differ from one company to another, however, concerning the revisions, for most of the companies, revisions and updates are usually performed after each quarter (Anthony et al. 2014; Lorain, 2010).

Research describes rolling forecasts as dynamic and flexible tools. In her 2010 study, Lorain shows how rolling forecasts are useful for daily decision-making process by offering an accurate prediction of what will happen in the near future, unlike budgets that remain static. Additionally, implementation of a rolling forecast will enable a better link between the planning process and the overall strategy by speeding up the decision-making process and allocating time to other valuable activities. This way, companies have the power of creating a results-based environment, unlike traditional budgets that in most cases remain a projection from the past. (Lorain, 2010).

Rolling forecasts can also serve a tool for proactive leadership (Zeller & Metzger, 2013). The frequent update makes them more accurate (Hope, 2007; Lorain, 2010; Sivabalan et al. 2009) and responsive. Implementing rolling forecasts will enable managers to focus their attention towards understanding the external events that will drive change and deepen their understanding of how the organization can become more successful (Player, 2009). Companies

can track changes in the market so that they can adapt and organize resources in improving productivity (Lorain, 2010) as well as will be able to react on time to different situations (Hansen, 2010). They allow the company to close the gap that might arise from the difference between a forecast and the actual target, and thus, it enables leadership team to react timely to different contingencies. Their flexibility and forward-thinking nature creates the superiority over the traditional budget (Zeller & Metzger, 2013).

Haka and Krishnan (2005) make a link between the organizational learning and use of rolling forecast. Their main idea is that frequent updates will enhance and improve the learning within the organization. Managers will be able to make better predictions when they are aware of environmental uncertainties and thus, learning will increase. This is restricted when companies use the traditional budget, since employees will carry out their usual daily tasks and activities to accomplish the fixed annual goal. However, forecasts will be more necessary under conditions of environmental uncertainty and rapidly changing environments (Ekholm & Wallin, 2000; Lorain, 2010).

Overall, research emphasizes that rolling forecast should be seen as a strategic opportunity and not a heavy task for the organization, identifying aspects where changes or improvements are needed to increase profitability and ensure organizational success (Player, 2009).

### **3.4. Beyond Budgeting**

#### **3.4.1 The Concept and Features of Beyond Budgeting**

The Beyond Budgeting concept was introduced as a response to the traditional budgeting problems. The institution backing up the development of this movement is the Beyond Budgeting Roundtable (BBRT) (Becker et al. 2010), which hold radical beliefs by supporting the idea that budgets should be eliminated (Libby & Lindsay, 2010; Becker et al. 2010), excluding the opportunity to work towards their improvement. Since the main goal of Beyond Budgeting is to abandon annual budgets, it makes it a flexible management model, and at the same time, it encourages managers to reconsider the management practices that are used to govern their organizations (Hope & Fraser, 2003; bbrt.org).

#### **3.4.2 Beyond Budgeting Principles**

The solution to the budgeting problem is complex and given this complexity, the implementation process of Beyond Budgeting needs to be divided in smaller sections. For this reason, establishing a set of principles could serve as a starting point (Bogsnes, 2016; Hope & Fraser, 2003) and create the necessary conditions towards having a flexible and fluid organization (Rickards, 2006). Beyond Budgeting includes twelve principles divided in two sets; leadership and management processes principles, representing a management philosophy where consistency between the two is crucial (Hope & Fraser, 2003; Bogsnes, 2016 and bbrt.org). At the same time these changes need to be radical to ultimately make organizations more agile. Making radical changes to leadership culture means basing it on values and not control, enabling transparency and autonomy through the organization. At the same time management processes should include relative targets instead of absolute ones as well as a comprehensive

and integrated performance evaluation measurements (Bogsnes, 2016). The most important condition is that to go Beyond Budgeting, organizations must apply and adopt all twelve principles (Hope & Fraser, 2003).

### **3.4.3 Why go Beyond Budgeting**

Research points out to various reasons organizations decide to abandon the traditional way of doing budgets. Hope and Fraser (2003) recognize that the majority of organizations intend on building more adaptive processes that will be more value-adding for the organization. These flexible processes will foster trust and lead to a wholesome organization. At the same time it is seen as an opportunity to decentralize, diminish bureaucracies and transfer power to employees who are in the front lines (Hope & Fraser, 2003; Hansen et al. 2003). Decentralization creates opportunities for employees to use their own independent judgement as well as enables their creativity towards reaching goals (Hope & Fraser, 2003; Østergren & Stensaker, 2009; Player, 2003). This self-controlling form will have its positive impact on employee motivation as well (Rickards, 2006).

The Beyond Budgeting proponents argue that not having a fixed budget, will turn planning into an accurate process as it will be adapted to evolving situations instead of continuing to remain to a fixed course of action that might not be relevant anymore (Hansen et al. 2003). Not preparing budgets results in reductions not only related to cost, but in time as well (Hope & Fraser, 2003; De Waal, 2005) which could be allocated to other useful activities. While the internal environment becomes more flexible, innovation and trust can also be fostered easily within the organization (Hope & Fraser, 2003).

### **3.4.4 Critical Evaluation of Beyond Budgeting**

Despite the many benefits highlighted in Beyond Budgeting studies, conflicting evidence whether Beyond Budgeting can be beneficial for an organization is also present (Kaarbøe, et al. 2013). In practice there is limited evidence that companies make radical changes to their internal structures (Aho & Järvinen, 2013) and only few of them have managed to eliminate budgets which leads only to a small number of users (Neely et al. 2003; Rickards, 2006). At the same time, for many organizations and researchers, Beyond Budgeting is a complex and abstract concept and therefore, it cannot be considered as a simple tool to implement (Kaarbøe et al. 2013). It is also questioned how organizations will continue to function without the presence of budgets since it is evident that the main purposes that annual budgets fulfill remain relevant and need to be accomplished (Aho & Järvinen, 2013).

Budgets add value because of their ability in providing security and stability which cannot be achieved under the Beyond Budgeting approach. Referring to resource allocation aspect, Rickards (2006) emphasizes the importance of knowing how resources will be allocated beforehand in order to avoid problems such as unused capacity, growth in inventory and other production related issues. Another important reason is related to the cultural aspect since budgets are rooted deep in the organizational culture, flowing with other parts of the company (CIMA, 2007). On the other hand, Beyond Budgeting itself is not congruent with current norms of the organization, and therefore radical changes are needed. Difficulties arise since the

transformation process is not easy due to the fact that managers are often reluctant to fundamentally change their leadership and management style (Becker et al. 2010).

Beyond Budgeting also gives a lot of emphasis to the importance of decentralization, when evidence show that the degree of decentralization cannot be the same for all organizations since industry and other aspects need to be considered (CIMA, 2007; Libby & Lindsay, 2010). In their 2010 study, authors Libby and Lindsay examine budgeting practices in North American companies to evaluate whether budgets are really value adding for organizations, or if they should be completely abandoned. Findings indicate that even though budgets face a lot of criticism, they are still used by the vast majority of the companies with the main argument that the benefits of using them outweigh the costs.

Lastly, there is not enough empirical evidence related to the implementation process of Beyond Budgeting as well as a lack of success or failure cases during the implementation process (Rickards, 2006). Hope and Fraser's argument for going Beyond Budgeting is therefore seen as universal and general (Libby & Lindsay, 2010; Rickards, 2006), mainly because it is hard to believe that organizations would still use budgets if they were unreliable. Organizations, whether they are big or small need a roadmap and an understanding of where the company is heading which is made possible through the preparation of the budget (CIMA, 2007). Overall, there are numerous firms that are successful while using budgets as a controlling and planning tool (Libby & Lindsay, 2010).

Overall, the fact that companies continue to use budgets as an overall control framework within the organization indicates their usefulness and puts Beyond Budgeting ideas into question. Despite the ideas that Beyond Budgeting encourages, in most cases, traditional budgets still remain relevant and the dominant tool for management control for most of the organizations (Player, 2003; Rickards, 2006)

## 4. Empirical Findings

*This chapter consists of the empirical material that is used for analysis. Each of the three cases is outlined separately, starting with a brief description of the company. Next, the budgeting approach is presented, including a description of the purposes that budgets fulfill. Finally, case presentations end with concluding remarks for each company.*

### 4.1 Alfa Laval

#### Background

Alfa Laval is a world-leading supplier of products and solutions in the areas of heat transfer, separation and fluid handling, which employs around 17,000 people worldwide. The company's products are used in many industries, such as food and beverages, chemicals and petrochemicals, pharmaceuticals, and biofuels. Alfa Laval sells its products in around 100 countries and has its own sales organizations in over half of these countries. Furthermore, the company has 42 major production facilities spread across four continents (Alfa Laval, 2018).

The interview was conducted with Per-Ola Johansson, Accounting Manager for one of Alfa Laval's manufacturing business units, with a turnover of about 3 billion Swedish krona, and 1,200 employees. Hence, the biggest focus of the case presentation is on the Operations division of the company. Operations play a pivotal role in ensuring the company is able to keep its promise to customers by delivering the right quality and the right documentation at the right time (Alfa Laval, 2017).

Alfa Laval operates in a highly competitive environment. Yet, its strong global presence in more than 100 countries, coupled with a diverse portfolio of offerings, provides a competitive edge. Furthermore, the company continuously strengthens and expands its product offering through acquisitions. As the company provides products and solutions to various industries, there are different factors that drive the demand. While the Marine division demand is driven by the new vessel in the marine sector, the Food and Water division's growth is driven by the increase of quality of life in many parts of the world. This could offer the company a diversification benefit that limits the effects of fluctuations in the business climate. Historically, the decreases in orders received did not fluctuate more than ten percent (Alfa Laval, 2017). The evolution of company's net sales for the last five years is presented in Appendix 2.

The Operations division faces numerous challenges every day. It is highly dependent on deliveries of raw materials, such as stainless steel, carbon steel, copper and titanium, for its manufacturing process. The prices of some raw materials are volatile, and the supply of titanium has occasionally been limited. (Alfa Laval, 2017) Consequently, the price development and limited supply of raw materials constitute main factors of risk and uncertainty for company's operations.



## Budgeting Approach

The budgeting approach is not uniform across the company, and differs among departments depending on their nature and type of activity. For example, manufacturing business units use traditional cost of goods sold budgets, which are prepared to calculate the manufacturing costs that are expected to be incurred for each product. These are prepared in the final quarter of the previous fiscal year and, once approved, are fixed. It is important to mention that, in general, Alfa Laval's customers are not that sensitive to price changes, therefore it is not necessary to recalculate the manufacturing costs more than once a year. The company is known for its high quality and does not rely on low prices as a driver for growth.

Other divisions, such as Research and Development (R&D) and sales units use 12-months, or quarterly rolling forecasts. The forecasts "roll" forward so that new quarters are added gradually while leaving the historic quarter behind, as depicted in the figure below. The updates are done at a very detailed level, all components being revised.

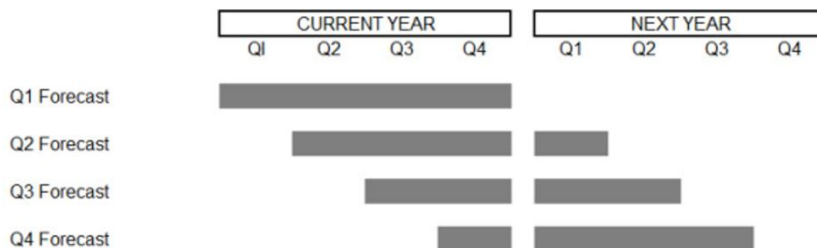


Figure 2: Rolling forecast process at Alfa Laval.

With respect to R&D business units, the rolling forecasts enable greater flexibility than traditional budgets would do. For example, new opportunities are not postponed for the next year simply because there are no funds left, and resource allocation depends on innovative potential, and is not restricted by budgets. Compared to the R&D units that reflect only expenses, the sales units have full profit and loss (P&L) responsibility. As mentioned above, the manufacturing units calculate the cost for each of the products, which are also reflected in the sales units' P&L rolling forecasts as the cost of goods sold. Therefore, the cost of the product is fixed and does not change, as other components do, but only the deviations are reflected and further analyzed.

The long-range planning at Alfa Laval is more strategically oriented, encompassing the following strategic priorities: products, market presence and continuous improvement work being performed in all areas of the company (Alfa Laval, 2017).

## Purposes of Budgeting

### Planning

Planning and coordination are crucial for the company's success. The Operations division produces and delivers the orders generated by the sales divisions, and therefore they need to share information and coordinate their activities. Moreover, the manufacturing business units

have to closely work with the procurement teams, as the direct materials comprise about 70 percent of the cost of goods sold (Alfa Laval, 2017).

There are different challenges Alfa Laval might face. For example, if the demand for a product increases considerably, the manufacturing units might need more space, technology, and other resources. Another challenge is related to the development of new products at an initial stage when it is not known how successful will they be. These examples highlight how important the coordination between different divisions is, starting from R&D to sales. According to Mr. Johansson, the coordination and communication activities are well-established within the company, and it is easy to obtain the necessary information from other divisions, however it is the complex nature of the company, and the time spent, that make the process challenging.

### ***Accountability***

The budgets and rolling forecasts are developed using a bottom-up approach, where lower level management creates the budget for their sub-units, and then these are consolidated to corporate level. A lot of people are involved in the budgeting process, and a lot of resources are spent respectively. This can be explained by the company's culture. Even though the company is global, its Swedish origin defines its corporate culture. Team spirit and open communication between managers and employees, employees' participation and engagement are values emphasized within the company. The size of the company, in combination with its culture, makes the decision-process slow.

Alfa Laval is quite decentralized, which means that most of decisions are made by mid-level and lower-level managers. In most areas of the business, employees are responsible for small parts of the company, and within that part they are given freedom in decision-making. However, there are special guidelines for hiring new employees, or making an investment above a certain amount of money, which requires approval at a higher-level.

One of the company's priorities is to further strengthen its competitiveness, and grow its market position. Consequently, the targets are especially challenging when it come to sales divisions. The company adopts a variable remuneration system for its sales staff, and besides their base salary, the variable element is dependent on meeting the targets. Even though the company is cost conscious, the targets for manufacturing units are more relaxed. Employees receive feedback on achieving the targets, and special attention is devoted to significant negative deviations from budgets/ rolling forecasts, which are followed by a thorough variation analysis.

### ***Process***

An important aspect of the budgeting process at Alfa Laval is the interaction between individuals involved in the budgeting process. Due to being a complex company, the budgeting process requires extensive information exchange between different teams and business units. Besides enhancing communication within the company, budgets serve as a tool for aligning all business units to company's overall strategy. The budgeting process is more than setting targets and

achieving them. Participation in the budgetary process is equally important, making sure that all decision makers are working towards the same goal.

### ***Ritual***

The company has a strong financial focus, and it aims at realizing its business concept, while simultaneously meeting the financial targets established with regards to growth, profitability and return. Only by achieving or exceeding these targets, it can create the necessary foundation for its continuous development, simultaneously generating increased value for shareholders. (Alfa Laval, 2017)

Being listed on the Stockholm Stock Exchange, Alfa Laval is supposed to make projection about future earnings and performance. These are based on the company's rolling forecast reporting, which is respectively based on a number of rather detailed assumptions, such as volume growth, cost development, cost structure, R&D, etc. (Alfa Laval, 2017). A successful projection is desirable, as it has an impact on company's credibility. In this respect, Mr. Johansson highlights: "You can be sure about one thing when it comes to forecasts, it will never be correct, it is all a question of how wrong it is".

### **Concluding remarks**

The interviewee emphasizes that the budgeting process plays an important role and adds value to the company; and believes that "it will be very strange to not have any forecasts". It would be very difficult, if not impossible, for a complex company like Alfa Laval to operate without any budgets. For instance, it could be dangerous to produce and sell without having a clear picture what the manufacturing costs are.

Yet, there are still some problems with the current budgeting process. First, it is extremely time consuming, considering that in interviewee's business unit, around 300 out of 1,200 employees, or 25 percent, are involved in the budgeting process. Mr. Johansson also emphasizes that the forecasts are prepared at a too detailed level. In this respect, he sees opportunities of optimizing the budgeting process in the future, in terms of simplifying the process and updating only the most relevant information. Overall, the benefits of the budgeting activities outweigh the costs related to them.

## **4.2 AstraZeneca**

### **Background**

AstraZeneca is an Anglo-Swedish multinational pharmaceutical and biopharmaceutical company employing around 60,000 people in more than 100 countries. The company has a portfolio of products for major diseases areas including cancer, cardiovascular, gastrointestinal, infection, neuroscience, respiratory and inflammation, which are used by millions of patients worldwide. (AstraZeneca, 2018)

Two interviews were conducted, the first one with Per Hall, R&D Finance Director for an R&D unit with a turnover of about 220 million US Dollars and 1,000 employees. The second interview was conducted with Marcus Vagnebohrn, R&D Global Finance Director, managing two Biotech units within R&D. Therefore, the case presentation is related to the specific context of the R&D division, which is the core of the company, generating patents and exclusive rights over time.

The company operates in a highly-uncertain environment. The main challenges it faces are related to expiring patents, competition from and growing use of generic medicines, obtaining regulatory approval, securing reimbursement for new medicines, improving R&D productivity, and attaining pricing and sales sufficient to generate revenue and sustain the cycle of innovation. (AstraZeneca, 2017) AstraZeneca's net sales for the last five years are presented in Appendix 2.

R&D is divided into functions, or project groups, that are aimed at developing new drugs. Drug discovery and development is financially risky, and is the major challenge for the pharma industry. The process of developing a drug can take approximately 15 years and often requires hundreds millions of US Dollars. Mr. Hall states that, if a drug development project is unsuccessful, is better to be abandoned at an early stage of the process. Moreover, the company does not invest in projects which outcomes are unclear.

### **Budgeting Approach**

The sooner AstraZeneca terminates a project that will not deliver real value, the better. Therefore, an efficient budgeting process is critical in an R&D uncertain environment, as it can save the company considerable resources. The budgeting approach further explained refers specifically to the R&D department of the company.

The budgeting process starts in Q2, when a strategic review is carried out, considering the company's current position and opportunities from a scientific perspective. Company's wide targets for the next year are set in July, and this forms the basis for the budget that is initiated in Q3. R&D operates in a matrix with: (1) functions that are responsible for delivering the projects, and that respectively have an operational budget; and (2) project organization that is responsible for the Therapeutic Area (TA) direction and the external expenditures spent to implement strategic initiatives, and that respectively has a project budget. Functions in R&D get an indicative target in early Q3 and guidance on TA portfolio to support. Next, the functions provide feedback on the indicative budget and scope for the next year. The R&D leadership team consolidates the information, decides if any of the indicative budgets should be adjusted, and provides the final budget targets in Q4. By late Q4 all functions have a budget for next year. The budget is then revised each quarter (i.e. forecast).

It is important to reiterate that AstraZeneca operates with a financial risk. For example, the first interviewee's R&D unit's net budget is 5.5 billion US Dollars, but the gross budget could be closer to 6.0 billion US Dollars. The difference of 500 million US Dollars serves to mitigate the uncertainties under which the unit operates. The risk adjustment of 500 million dollars is necessary because projects have plans based on success. Experience shows that not all

projects are successful, and some of the projects do not develop at the pace the team initially planned. It is impossible to know in advance which project will experience difficulties or not develop as expected. R&D monitors the projects development on a monthly basis, and over the years, it has been successful in managing its overall budget.

Besides the annual budgets, AstraZeneca develops a detailed three-year business-plan and a ten year long-range projection to support the delivery of its strategy (AstraZeneca, 2017). The goal is to align the strategy and the business planning processes.

## **Purposes of Budgeting**

### ***Planning***

AstraZeneca's success depends on the development and successful launch of innovative new drugs (AstraZeneca, 2017). Coordination and communication between R&D and other functional group, such as Operations and Commercialization, are crucial. Budgets serve as a tool to facilitate information-sharing. Both interviewees believe that is relatively easy to obtain the needed information from other departments, and the company is continuously working on improving transparency.

Resources are key in R&D, and are one of the main cost drivers. Therefore, resource allocation is well addressed during the budgeting process. Each function has a Finance Business Partner (BP) who coordinates the budget, and links the function with company's objectives. The Finance BP liaises with the head of R&D Finance when it comes to targets, timing, portfolio to support, etc. There is also a process in place, called Delegation of Authority, which stipulates who can take what decision. The approval dollar limit is at a given amount if the decision is supported with a budget and at a much lower limit if it is not supported by the budget.

Operating in the pharmaceutical sector carries various inherent risks, and the company is used to operate in this kind of environment. Therefore, budget variances should not come as a surprise. These are flagged early in the year and come with suggestions on how to mitigate the risk. If one function requires additional resources during the year, and these are crucial for projects' success, then the R&D leadership team could reallocate funds from other functions, so that the overall budget is still met.

### ***Accountability***

The budget is a tool for supporting the overall corporate strategy, developed by top management. Top management also determines wide targets for next year, which serve as the basis for next year's budget preparation. The annual budgets are prepared using an iterative approach, but still keeping it at a fairly high level, and employees not being too much involved in the budget development. Mr. Vagnebohrn states: "Let the scientist do science and let professional do professional work". The biggest cost in R&D is manpower, which accounts for approximately 70% and is relatively stable. However, the rest are project costs and outsourcing activities, and might fluctuate.

Budget deviations rarely come as a surprise, due to the nature of the business and the risks associated with the development of new drugs. Everyone has a good understanding of the opportunities and risks involved, and the reason of the deviations respectively. While the targets are challenging, deviations are not necessarily perceived as negative outcomes. The company operates in a matrix, with R&D projects moving cross all functions, and is extremely important that all functions know what the objectives, resources, the timetables, etc. are. If a problem is encountered in one function, it is likely to have an impact on other functions as well. Moreover, if necessary, funds and resources might shift from one function to another. Hence, information sharing and flexibility are crucial for the success of R&D.

### ***Process***

Resources are allocated according to needs. The development of pharmaceutical products is a lengthy process, involving significant financial resources. Therefore, while achieving budget targets is desirable, variations are acceptable. Usually, there are fair justifications for deviations from budget, and there is a common understanding that there is a balance between what you deliver and the cost involves; thus if a function over-delivers, it also spends more money. Yet, it is important to investigate and understand the reasons behind budget variations.

Quite specific and different than in other organizations, according to Mr. Vagnebohrn, is the flexibility within the company to reallocate resources where needed. The company takes a holistic view when it comes to budgeting. In the sense that functions do not look at only what is good for them, but at the company as a whole.

The budgeting process is time consuming, but the time spent on it is not dramatic. The process is managed by Finance Business Partners. Local managers do not spend that much time on budgeting, because they provide only high level input. Top management members spend roughly 10% of their time on the budgeting process. The heads of functions are measured on how well they delivered to the budget, and this partly influences their yearly bonus. R&D's quarterly results are public and announced internally. At the end of the year, the results are made public on a Group level.

### ***Ritual***

The budgets' timeframe has changed over the years. During the '80s the budgets covered a five-year period, and during the 90's the focus was on three years, and later changed to a one-year budget. According to Mr. Hall, the R&D portfolio changes too much, and therefore it becomes obsolete and brings no value if it cover a period of more than one year.

Mr. Hall is result-oriented, being listed on the London and New York Stock Exchanges. Company's primary goal is to develop and successfully launch innovative new drugs, and keep the overall commitment to shareholders. Hence, R&D is crucial in order to sustain future growth. According to Mr. Vagnebohrn, all activities come down to delivering R&D output and sales target, and earnings per share. Budgets serve as a framework to make sure that the company does not overpromise to investors and analysts.

## **Concluding remarks**

Currently, the company is going through a Finance Transformation project, which will improve the budgeting process and facilitate the information-sharing at a Group level. According to both interviewees, a budget is necessary within R&D, the question is how detailed this should be. Manager Hall believes that budgeting based on cost drivers is enough, followed by a revised forecast. An agile and flexible budgeting process adds value to the company, and is preferred over a rigid long-term plan. Furthermore, he emphasizes, that there is no universal budget approach applicable to all companies, or even to all departments within a company. According to him, organizations need to identify their cost and value drivers, and let these lead them to the budgeting process.

AstraZeneca has a holistic approach to budgets, which helps it to maintain its overall commitment to investors. According to Mr. Vagnebohrn, budgets are important in communicating the company's strategy, and the projections about future performance to the public. Being a science-led business, trying new things is in its genes and that also refers to budgeting. While the company is open to new budgeting approaches, it does not consider the idea of completely abandoning the budgeting process.

## **4.2 Beta**

### **Background**

Beta is a global leader in the food processing and packaging industry, employing around 24,000 people worldwide. Their diverse portfolio provides solutions which meet the needs of hundreds of millions of people in more than 160 countries. Beta manages six innovation centers, eleven technical centers, five R&D centers and 55 production plants around the world. (Company's website, 2018)

The interview was conducted with one of the managers in the Development & Engineering (D&E) department, and thus, the case presentation is put in the context of this specific department. D&E investments are a crucial success factor, as they enable the company to fulfill customers' needs with speed and quality. Since the company and the interviewee wish to remain anonymous, in this paper the company will be referred to as Beta and the interviewee as Manager Beta.

For Beta, there are always a number of challenges present as the company operates in a competitive environment. Being a global leader, makes the company highly targeted by other competitors in the market. However, their position is facilitated from the company's reputation and early presence in the industry, which in turn defers the competition. The industry is slow-moving and the company is highly dependent on the competence of its employees. Additionally, the typical nature of the business is fairly long-term, with products that have a relatively long life-cycle. Environmental concerns also put pressure to deliver the final output according to all standards and norms and respecting the environmental resources during the process. For D&E in particular the challenge relates to the difficulty in being able to predict accurately which

projects will move further as challenges will arise along the way. As stated by Manager Beta, despite the increasing competition and recent changes, the company has been able to handle them successfully.

### **The Budgeting Approach**

According to the interviewee, the company has in place an annual budget which can be described as the last step in the strategy process. Before preparing the budget, management teams of different departments start by gaining an understanding of the macroeconomic situation for the next year, to be able to drive and steer the organization in the right direction for the long term. This is followed with a submission of a three-year plan in April. This plan is designed on a general level and serves as a direction for the upcoming three years. When talking about D&E in particular, expenses are what matters the most as well as the ability to measure the investment that is going to be needed for the next three years.

The three-year plan is then broken down into smaller parts through a top-down approach. The budget for the next year is finalized and approved in December and it stays frozen for the next year. Being frozen does not necessarily mean that the budget will not be changed as restatements can happen, depending on specific situations. On top of the budget, Beta uses forecasts which are submitted three times during the year. It should be made clear that Beta does not use rolling forecasts, instead their forecasts are in the form of updates as a reassurance for senior management team that the company is on the right track. They are also necessary to reflect the monetary effect of possible changes that might happen during the year. The same approach is also applicable for other business units, apart from the fact that other divisions have a P&L perspective to reflect their costs and sales.

### **Purposes of Budgeting**

According to Manager Beta, budgets are a commitment in front of the board, which can be considered as an overall purpose of the budgeting process. Budgets are closely linked to the strategy, representing a manifestation of the growth strategy in monetary terms. Particularly for the D&E department, budgets are used mainly for the purpose of planning and accountability, however, other functions are not left behind.

### ***Planning***

In terms of planning, it is necessary for Beta to plan ahead for the upcoming year. The budget is formulated through a top-down approach which requires a comprehensive effort from the finance team and little involvement from lower levels of the organizational structure, as the latter is seen as counterproductive.

For the D&E department, planning helps to determine the resources that are needed in different areas within D&E. Being a research department, competence and resources are the necessary inputs to deliver accordingly to the plan. The company uses a matrix to determine the need for competence, combined with a platform that registers the necessary resources which are then used to measure the cost of a specific project. Planning also helps to avoid the risk of not



working on the right kind of projects, or identifying at early stages of the projects, if money needs to be shifted to another part.

Additionally, planning helps in terms of coordination issues and communicating the strategic initiatives. According to Manager Beta, their communication to employees is not in terms of money, rather goals are expressed as percentage of growth or other KPIs of the BSC. It is also emphasized that communication functions properly and is easy to be obtained throughout the organization.

### ***Accountability***

Considering the global presence, the size and organizational culture of Beta, accountability is also an important aspect. Despite the top-down approach, managers are given a lot of responsibility and at the same time freedom to operate and make decisions. From this perspective, the budget is necessary for control purposes as it is important for the management to control and avoid unnecessary spending of resources. However, variances between the targets and the actual performance are not common for Beta. This is supported by the strict and rigid government system that ensures resources are spent the right way. However, in Manager's Beta belief, further steps can be taken for the organization to be more stringent and set more challenging targets for the future to reinforce their competitiveness in the market.

The performance of employees is indirectly linked with budgets. The company has a variable compensation system in place, where the performance is closely linked with the KPIs of the Balanced Scorecard. The interviewee stated that even though employees get remunerated accordingly from a financial perspective, they are mostly encouraged to deliver and create a positive impact on a global perspective.

### ***Process***

The budgeting process is also important for Company Beta, however given the top-down approach of formulating budgets, the interaction is mostly between the finance team. Overall, communication is enhanced during the strategy formulation, which allows managers to have a deeper understanding of external factors with potential influence for the company. This continuous process is realized through quarterly updates and is then reflected in the budget to make it as realistic and accurate as possible.

Additionally, being able to review and identify changes during the year helps the company in understanding projects that should be developed next. For example, if environmental developments are favorable for the company, this means they will need to review the budget to invest more in environmental projects and identify areas where it is possible to make less spending. According to Manager Beta, the process itself is important for ensuring alignment between organizational units and working towards a common goal.

## ***Ritual***

Legitimacy is another important reason for the preparation of budgets at Beta. Even though the company is private and not listed, it has a strong focus on the financial outcomes and budgets ensure legitimacy for the owners of the company. The budget is closely related to the culture that is already established within the company, representing a way of thinking and acting.

## **Concluding remarks**

According to Manager Beta, the budget is a blessing and a curse at the same time, however the end result is positive, and budgets are beneficial. In his beliefs, to be able to operate without a budget, a specific type of environment, culture and relationships among employees are needed. This means Beta does not consider the possibility of removing them, especially given the size and the responsibility towards owners. Additionally, Beta is currently going through organizational changes, which makes budgets necessary to reflect them and make the future strategic direction even more clear. However, the D&E department will be mostly influenced, while for other parts changes will come in the form of “evolutions rather than revolutions” (Manager Beta, 2018).

The company also encounters some problems during the process of budget preparation, mostly related to the time invested. However, this is kept under control since the commitment is mostly required from the finance team, allowing time to be spend properly on other activities. Efforts from senior management levels of the organization to simplify the budgeting process even further are also present.

## 5. Analysis and Discussion

*In this section, empirical data for each of the cases is analyzed and discussed in connection with relevant literature. The chapter starts with an analysis of the budgeting purposes, while making comparisons between them. Next, the budgeting approach adopted by the case companies and the environment in which they operate is analyzed and discussed. The chapter ends with a discussion of the applicability of the Beyond Budgeting concept.*

### 5.1 Purposes of Budgets

This section analyzes the features of the overall budgeting practices among organizations and the comparative analysis is structured according to the categories of the above-mentioned purposes of budgets.

#### ***Planning***

Even though the increased environmental uncertainty has weakened the role of planning (Chentall & Moris, 1986), it is argued that a certain degree of planning is still necessary within the organization (Ekholm & Wallin, 2000). The statement is applicable for the case companies, as they have approached the budget shortcomings by including more frequent forecasts in their annual budgets, or by adopting other flexible instruments such as rolling forecasts. Lorain (2010) also argues that implementation of rolling forecasts can be attributed to the rapidly changing environment.

In all the case companies, budgets seem to be extensively used for planning purposes. The empirical data shows that long-range planning is strategically oriented and is used as a guide for the future direction of the company. This supports findings from literature regarding the close relationship between budgets and the strategy implementation (Horngren et al. 2005; Østergren & Stensaker, 2011). Action plans are formulated and then they are distributed in certain departments, to realize the main purposes of the use of budgets for planning; namely, resource allocation and coordination. Both of these aspects are given high importance from the interviewees of the case companies even though they are not studied explicitly.

Planning differs between departments and different purposes of the budget can be used according to specific departmental needs. Findings indicate that in manufacturing units, planning is mostly needed for cost and revenue purposes, which seems to be the case for Alfa Laval's manufacturing department, while for the R&D department in all case companies, budgets mostly serve as the basis for resource allocation as suggested by Sivabalan et al. (2009). Empirical findings show that planning helps companies to allocate their resources to achieve the desired targets, in line with the findings of Greve (2011). For Alfa Laval and AstraZeneca, the implementation of a rolling forecast enables greater flexibility since resource allocation will depend on future opportunities and innovation potential, not to the limit specified in the budget.

To be able to carry on with these activities, Merchant and Van der Stede (2007) suggest proper coordination to facilitate the process. For Alfa Laval information sharing is necessary especially

for coordination between divisions. In the manufacturing department, budgets serve the purpose of calculation of cost which will be transmitted to the other divisions. This means departments can get an insight into each-other's activities as stated by Drury (2004). Coordination is also recognized as a crucial aspect for the two other companies. They acknowledge the fact that changes in demand for products, or problems that may arise will have an impact across various departments and therefore, these changes need to be communicated and reflected. In this context budgets serve as a tool to facilitate information sharing. Moreover, whether analyzed companies have traditional budgets in place or have implemented rolling forecasts, they find it relatively easy to obtain information across organizational divisions.

### ***Accountability***

Empirical findings show that case companies use budgets as a controlling device to monitor the progress against actual results, to compare and decide the future direction of the organization. This is in line with the theoretical use of budgets for controlling and monitoring purposes described by Anthony et al. (2014).

It is evident that companies put different importance on meeting the budget target. For Alfa Laval and Company Beta meeting the budget is important due to the strong financial focus, while for Astra Zeneca the end result is what matters the most. This is supported by the company's flexibility in reallocation of resources which allows them to embrace opportunities that might be beneficial, even though they exceed the budget. This shows signs of lesser tight control, compared to the other two companies. However, it is also attributed to the high uncertainty of the pharmaceuticals industry compared to the slow-moving industry in the case of Alfa Laval and Company Beta.

The approach of the budget is more top-down for Company Beta and AstraZeneca and bottom up for Alfa Laval with a high degree of participation from mid-level and low-level managers. Churchill (1984) shows how a top-down approach leads to better economic projections as well as avoids unnecessary spending of time from low level managers, which fits the priorities of both Company Beta and AstraZeneca. In contrast, Alfa Laval's approach allows participation due to the information and knowledge that lower levels of the organizations have, and therefore can contribute to reducing information asymmetry (Cheng, Chen & Shin, 2014). This characteristic can also be attributed to the culture of the company, which aims to make employees feel inclusive and give them the opportunity to influence the decision-making process as suggested by Covaleski et al. (2007).

Budgets are also used as a monitoring device to ensure that the costs no not exceed the limits. In line with the findings of Merchant and Van der Stede (2007), budget numbers also fulfill the needs for information from external parties. This seems to be the case for Alfa Laval and AstraZeneca being listed companies, and for Company Beta to reflect legitimacy in the eyes of its owners.

Lastly, the fact that none of the companies will evaluate the performance of employees or managers only through looking at budget figures is also in line with the theory of Churchill

(1984). It states that using budgets as the base for performance evaluation reduces accuracy because of the possibility of gaming and the managerial influence on target setting by increasing or decreasing their likelihood of achievement (Churchill, 1984).

### ***Process***

Interviews show that whether it is a simple forecast or a rolling forecast, the activities carried out during the budgeting process itself will enable the organization to determine if they are headed to the right direction. All the interviewees agree that an understanding of possible influences from internal and external factors helps them identify future opportunities and challenges, and will therefore lead to better decision making. This supports the findings of Drury (2004) and Merchant and Van der Stede (2007). As budgets are closely linked with the overall strategy of the organization, for all the case companies they also serve as a means of communicating goals and objectives reflected in the studies of Mintzberg (1994); Drury (2004) and Greve (2011).

Adoption of rolling forecast was deemed appropriate for Alfa Laval in the R&D and sales units, given the dynamic market in which they operate. In the long-run, this has made the organization more flexible as Frow et al. (2009) suggests and helped in maintaining its competitiveness in the market. Additionally, the process has also led to an increased organizational learning (Hansen et al, 2003 and Haka & Krishnan, 2005) supported by the frequent communication and evaluation of internal and external contingencies. On the other hand, for AstraZeneca and Company Beta adding updates along the year, ensures flexibility and quick response to different contingencies.

Apart from the uncertainty related to budgets, time spent on budgeting also represents a challenge for the case companies. The empirics support findings from literature that show budgets as time consuming (Hansen et al. 2003). However, it is noted that inefficiencies that may come up along the process are acceptable for the organizations as this will not endanger the overall business activities. Therefore, the budgeting process can be described as satisfactory, with benefits that outweigh the costs of preparing them.

### ***Ritual***

Legitimacy is also a motive for case companies to prepare budgets. The strong financial focus seems to be more present for Alfa Laval and Company Beta and as stated from their managers, budgets represent a commitment that the company will perform according to objectives and expectations. On the other hand, AstraZeneca is more focused on the delivery of the final output of its operations.

It is also evident that all of the case companies come from a long history of preparing budgets, to the extent that they have become institutionalized. This might explain the reason why removal of budgets is not considered by none of them. However, simplifications are possible, especially for Alfa Laval. Even though the company is using rolling forecasts in R&D and sales units, these contain a high level of detail, contradicting the findings of Lorain (2010) that state that rolling forecasts should be focused on a number of KPIs and have a low level of detail.

Overall, to be able to operate without budgets is seen as difficult, especially considering complexity and the need to have a clear path for the future. This is found to be contradictory with literature that shows how budgets become less relevant in the face of uncertainty (Ekholm & Wallin, 2011; Hartmann, 2000). For this reason, instead of completely removing the budget, companies would rather make improvements to the process as suggested by Ekholm and Wallin (2000) and Libby and Lindsay (2010).

### **Concluding remarks**

Churchill (1984) mentions that two main purposes of budgets are planning and control and is the organization itself who can decide on the most important purpose to be fulfilled. For Alfa Laval and Company Beta there seems to be a mix between planning and control purposes with emphasis mostly placed on planning, while for AstraZeneca planning is more important than control. This is in line with Churchill (1984), who argues that revisions and forecasts are more typical for companies that put more emphasis on planning rather than control. Additionally, there is a greater importance on planning and control reasons, rather than use of budgets as an evaluation method. Ritual is also a motive for case companies to prepare budgets. For Alfa Laval and AstraZeneca, as listed companies, budgets represents a commitment for investors, while for Company Beta they serve as assurance for the owners of the group. The overall process results beneficial for all of them. The table below is a shows the importance that each of the budgeting purposes have for the analyzed case companies.

*Table 2: Importance of budgeting purposes*

<b>Budgeting Purpose</b>	<b>Company name</b>		
	<b>Alfa Laval</b>	<b>AstraZeneca</b>	<b>Beta</b>
<i>Planning</i>	High	Medium	High
<i>Accountability</i>	Medium	Medium	Medium
<i>Process</i>	Medium	High	Medium
<i>Ritual</i>	High	High	Medium

Adoption of rolling forecasts by Alfa Laval R&D and sales units, has resulted in decrease of the impact of uncertainty on the budget, by making current updates more frequently (Lorain, 2010). However, since Company Beta and AstraZeneca do not use rolling forecasts, is the revisions and updates that help companies to speed up the decision-making process (Gurton, 1999) and time can be allocated on other value-adding activities.

Overall, findings contradict research that portrays budgets as not flexible from preventing the organization to adopt to changes (Hansen et al. 2013). This issue is overcome through frequent updates when the fixed budget is used, or adoption of rolling forecasts where

appropriate. Although it is time consuming, companies agree that budgets still provide benefits for the organization and none of them has plans on abandoning it.

## **5.2 Budgeting Approaches**

The three case companies operate in different industries, and therefore are exposed to various risk factors, uncertainty and complexity levels. Their budgeting approaches also differ. This is in line with Merchant and Van der Stede (2007) and Hansen (2011), who claim that there is no universal format for budget design. Weber and Linder (2005) also argue that neither traditional budgeting nor better budgeting or beyond budgeting can be viewed as universally superior, and organizations have to decide which of the three alternatives best fits their situation, by considering two factors: environmental uncertainty and company's complexity. This subchapter discusses the case companies' budgeting approaches in relation to Weber and Linder's (2005) model, and determines whether it is applicable to all cases or not. Further, the organizational context of the case companies is described in terms of company's environmental uncertainty and complexity.

Environmental uncertainty is considered one of the most researched contingency variables (Chentall, 2003), and also a major driver of dissatisfaction with traditional budgets (Ekholm and Wallin, 2011). The three companies in this study operate in different industries, and therefore experience different conditions of uncertainty. The degree of environmental uncertainty is determined using different measures in different studies. In this thesis, the authors follow Ghosh and Olsen's (2009) approach and determine the environmental uncertainty of case companies based on the sales volatility over the prior five-year period. The results are presented in Appendix 2.

Alfa Laval's net sales improved considerably from 2013 to 2015, but in the following two years, these deteriorated. The relatively high percentage of change during the last five years, indicates that the company operates in an uncertain environment. However, Alfa Laval's global presence, large installed base and technology leadership in several areas strengthen company's competitiveness and provide a strong foundation for achieving its goal for profitable growth. Historically, fluctuations in the business climate have not generated decreases in orders received by more than ten percent (Alfa Laval, 2017).

AstraZeneca's net sales continuously declined since 2015. This is the result of expiring patents and increasing generic competition. Even though AstraZeneca's net sales fluctuate at a lower level than Alfa Laval's, the company's environment is more uncertain, due to the risky and lengthy process of development of pharmaceutical products. A project may fail or be delayed at any stage of the process, which could reduce the company's growth. (AstraZeneca, 2017) According to Merchant and Van der Stede (2007), the degree of uncertainty is higher when the business cycle is longer and the farther one tries to look into the future. Moreover, AstraZeneca faces additional pressure from governments on medicine prices, and delays in regulatory reviews and approvals, which could also affect company's financial results (AstraZeneca, 2017).

Beta's net sales are more stable compared to the other two companies. Even though it operates in a competitive environment, the company has a strong market position due to its early presence in the industry and the technological investments it has made. Consequently, Beta's environment is less uncertain than Alfa Laval's and AstraZeneca's.

The second factor discussed by Weber and Linder (2005) in their paper is company's complexity. Just like environmental uncertainty, complexity is defined and measured in various ways by different researchers. All case companies are well-established organizations, founded decades ago and today being leaders in their industry. Considering this, according to Liu et al. (2015), the case companies' complexity could be relatively high, compared to companies in their initial stage. The authors of this thesis assess companies' complexity by looking at their size and heterogeneity as well as entourage, as suggested by Weber and Linder (2005).

Alfa Laval is a global provider of products in the areas of heat transfer, separation and fluid handling, and employs around 17,000 people worldwide. The company sells its products in approximately 100 countries and has its own sales organizations in over half of these countries. The production structure is also global, encompassing 42 major production facilities spread across four continents. In the last years, the company's structure became even more complex as a result of a number of acquisitions. Alfa Laval's products are used in various industries, such as food and beverages, chemicals and petrochemicals, pharmaceuticals, and biofuels. (Alfa Laval, 2018) Altogether, Alfa Laval is a highly complex organization.

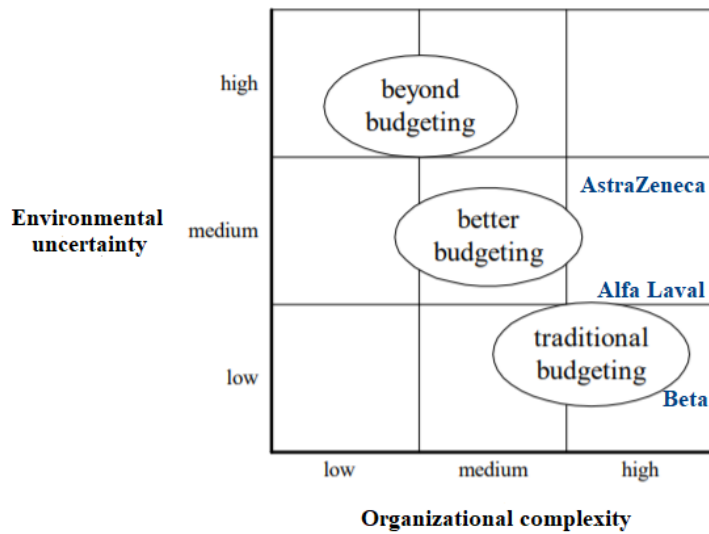
AstraZeneca is a global biopharmaceutical business employing 59,700 people in more than 100 countries. The company has 31 operations sites in 18 countries, where it is working on the development, manufacture and supply of the products; and a total of nine R&D sites in five countries. AstraZeneca has a portfolio of products for major disease areas including cancer, cardiovascular, gastrointestinal, infection, neuroscience, respiratory and inflammation. Company's medicines are used by millions of patients worldwide. (AstraZeneca 2018) All in all, AstraZeneca's complexity is also high.

Beta provides solutions for processing, packaging and distributing a wide range of food products, which meet the needs of hundreds of millions of people in more than 160 countries. The company manages six innovation centers, eleven technical centers, five R&D centers and 55 production plants, and employs more than 24,000 employees around the world. (Beta's website, 2018) Consequently, Beta is also a complex organization.

Below, the three case companies are presented in relation to Weber and Linder's (2005) model. All three companies are well-established global organizations which face a high degree of complexity. Operating in different industries, they are exposed to different risk factors, and consequently face different levels of environmental uncertainty. It is important to highlight that both factors' assessment is subjective, and relates to the perception of the thesis' authors.



Figure 3: Case companies in relation to Weber and Linder's (2005) model



Source: Adapted from Weber and Linder, 2005, p. 24.

According to Weber and Linder's (2005) model, Alfa Laval falls into the traditional budgeting category, which is quite robust with respect to high complexity levels. Even though the company operates in competitive markets, it has a strong position, and therefore faces a relatively low to medium level of environmental uncertainty. The empirical data shows that Alfa Laval does not use uniform budgeting approaches across the organization. While it uses traditional budgets in manufacturing, other divisions (i.e. R&D and sales) use rolling forecasts, which is a Better Budgeting technique according to Libby & Lindsay (2010).

According to Alfa Laval's manager, traditional budgeting is suitable for the manufacturing units, because the processes of transforming input into output are well defined, idea in line with Perrow (1970) and Mintzberg (1983). Moreover, he believes that updating the manufacturing units' budgets during the year would be too time-consuming, and the benefits would not justify the costs. So, while traditional budgeting process is time-consuming, other approaches, such as forecasts and rolling forecasts, require even more time. This is contradicting one of the main critiques against traditional budgets, which states that traditional budgeting consumes a lot of managerial time and resources (Wallander, 1999; Hansen et al. 2003; Anthony et al. 2014). On the other hand, the interviewee believes that for other business units (i.e. R&D and sales), which face more environmental uncertainty, traditional budgets are not suitable, because they limit responsiveness and flexibility. The same idea is promoted by Wallander (1999) and Anthony et al. (2014). Therefore, these units use a different budgeting approach (i.e rolling forecasts) which enables greater flexibility and responsiveness to changes and innovative potential, and which is in line with prior research (Frow et al. 2009; Lorain, 2010; Daum 2002).

AstraZeneca does not fall in any of the three budgeting categories in Weber and Linder's model. However, it is closer to better budgeting, which is more suitable to handle environmental uncertainty, in comparison to traditional budgeting. The empirical data shows that AstraZeneca R&D uses forecasts. Thus, the R&D units use annual fixed budgets which are reviewed quarterly so that adjustments can be made if needed, but the basic budgets remains the same

throughout the period. The budgeting approach AstraZeneca R&D employs is not in line with prior research which states that traditional budgets are not able to meet the requirements set by uncertain environments (Hansen et al. 2003; Libby & Lindsay, 2010; Østergren & Stensaker, 2011), and are effective only in a rather stable environment (Otley, 2001). However, it is important to highlight that compared to the other companies, quite specific for AstraZeneca is the holistic view to budgeting, and the flexibility within the company to reallocate resources where needed.

Beta falls under the traditional budgeting category in Weber and Linder's model. The empirical data suggests that, like AstraZeneca, the company uses forecasts. The annual budgets are derived from company's overall strategy, and updated during the year to reflect changes. Even though it operates in a competitive environment, Beta has a very strong position on the market, and rather low uncertainty and fluctuations in respect to its net sales. In line with prior research (Weber and Linder, 2001; Hansen et al. 2003; Libby & Lindsay, 2010), forecasts are regarded as suitable budgeting tools for the specific organizational context of Beta: highly complex and quite predictable.

### **Concluding remarks**

The discussion above suggests that Weber and Linder's (2001) model is not applicable to all cases. First, there is ambiguity and subjectivity when measuring and assessing a company's levels of environmental uncertainty and complexity. Second, the authors claim there is a trade-off between an organization's complexity and environmental uncertainty. However, AstraZeneca, being a complex organization which operates in a medium to high uncertain environment, challenges this idea. Moreover, Alfa Laval's case suggests that even within the same organization there is no one budgeting approach that fits all units. Therefore, Weber and Linder's model could be used as a point of reference when designing an organization's budgeting process, but should not be used as a clear cut model which fits in all situations. Instead, each company and business unit should design its budgeting system to address its particular needs, as suggested by Merchant and Van der Stede (2007) and Hansen (2011). A certain fact that can be derived from the discussion above is that budgeting, in various forms, is used by all three case companies, and, at this moment in time, is indispensable for them, contradicting Jensen (2001) who claims that budget is a "broken" tool, Gurton (1999) who states that budgets are "a thing of the past", and Wallander (1999) who believes that budgets are an "unnecessary evil".

### **5.3 Beyond Budgeting: the Way Forward?**

The above analysis puts into question many of the ideas of Beyond Budgeting and whether they can be relevant in today's business environment. It is evident that the use of fixed budgets has changed over the years and these evolutions can be attributed to changes in the business environment and work processes (Rickards, 2006). However, these changes and the need for a more forward-looking analysis do not necessarily lead to abandonment of the budget. Findings show that organizations are approaching the criticism towards budgets differently and they mostly choose to supplement the budget, adapt it, rather than abandon it. This alternative way

of Better Budgeting seems to help companies in overcoming some of the limitations of traditional budgets, as stated from Neely et al. (2003).

Looking into the reasons for going Beyond Budgeting, one argument is removing budgets because of their inability to focus on the strategy of the company, which contradicts the findings of this study. Case companies see budgets closely related to their strategy given that budgets are an expression of the strategy in monetary terms, which makes them a reflection of each other. This supports the arguments of Rickards (2006) who states that the budget's purpose does not only rely on controlling and planning but also on the implementation of the strategy.

Secondly, Beyond Budgeting argues for removal of budgets as a way to ensure decentralization and give more power to employees in the front lines (Hope & Fraser, 2003; Hansen et al. 2003). On the other hand, it can be argued that a decentralized structure does not fit all organizations (CIMA, 2007). For companies such as Alfa Laval, participation from lower levels is important and part of the organizational culture, while for AstraZeneca and Company Beta is more appropriate if decision making is top-down and employees can focus on what they can do best. Moreover, Beyond Budgeting approach is based on management action and freedom (Hope & Fraser, 2003). In this aspect, findings show that accountability is important for all the case companies, as they need to continuously monitor performance against predetermined targets. Even though managers are given a certain degree of responsibility and decision-making, they are held accountable for delivering accordingly. This demonstrates the need to use budgets for control purposes, however it refers mostly to Alfa Laval and Company Beta rather than AstraZeneca, which as stated above, focuses more on the delivery of output.

Another argument of Hope and Fraser for going Beyond Budgeting is that they are costly in terms of time and resources. Even though the case companies agree with this criticism and they acknowledge the fact that budgets take a lot of their time, budgets are still deemed as necessary and the benefits of having them outweigh the costs. The need to plan, allocate resources, control and monitor the activities within the organization remain relevant. Budgets offer the possibility to cover all areas of the organization, and consequently they become an inclusive and useful process (Otley, 1999). Additionally, findings of this study show that budgets can actually facilitate the communication and coordination between different departments. Consequently, the whole process results in added value for the organization, which can not be made possible without the presence of the budget. This contradicts the view of Beyond Budgeting proponents who argue that budgets will not result in added value (Hope & Fraser, 2003).

Furthermore, it appears that Beyond Budgeting has received attention, but there is missing evidence and literature related to it. Even present literature presents conflicting evidence on the benefits of Beyond Budgeting (Kaarbøe, et al. 2013) and limited evidence on companies that have fully adopted this method of functioning (Aho & Järvinen, 2013, Neely, et al. 2003 and Rickards, 2006).

Overall, the lack of budgets might lead to various problems since the business will have no framework for purposes such as planning, coordination and control of its operations (CIMA,

2007). As the interviewees agree, the detailed plans are important and help them determine the future direction based on their current situation. Introducing Beyond Budgeting can be challenging as it takes time get familiar with a new system and new ways of working. Additionally, a drastic cultural change that would be necessary can leave employees dissatisfied. All the case companies have been using budgets for a long time, meaning that budgets are rooted deep in the organizational culture. They acknowledge the fact that abandonment of budgets represents a radical change, making it reconsider its core values and processes. CIMA (2007) In the case companies, an additional barrier for removal of budgets is also the pressure to show legitimacy for owners/shareholders since budgets represent a commitment to deliver according to the promised plan.

### **Concluding remarks**

Although the budgets have changed, it is evident that these changes have not been drastic or radical, instead budgets have been complimented with other tools, leading to the conclusion that budgets are evolving and not being abandoned. It is also noted that the uncertainty where companies operate is getting higher, but parallel to this uncertainty, it seems as the need for planning has increased as well, which is realized through the preparation of budgets. The interviewees of the study highlight that despite the shortcomings of budgets, there will always be necessary to have a plan and baseline for evaluating and comparing performance. Therefore, due to the purposes they fulfill, budgets are seen as irreplaceable.

Overall, the removal of budgets cannot be seen as a standardized solution and is not suitable for all organizations, contrary to the ideas of Beyond Budgeting. In practice the approach is only relevant under specific conditions and specific type of environment as well as further research is needed to better determine these conditions.

## 6. Conclusion

*This chapter comprises the concluding remarks of the paper by summarizing the main findings that answer the research questions. Further, contributions to the topic and limitations are outlined and the section is finalized with suggestions for future research.*

### 6.1 Findings

Throughout the study, it is examined the use and perception of the case companies regarding the budgets, the purposes they fulfill and whether they result in added value in the long-term. Moreover, these conditions are analyzed by taking into consideration the companies' complexity and uncertainty of the environment where they operate.

To be able to determine the usefulness of the budget, first is necessary to look deeper into the functions that budgets fulfill. Findings show that the case companies use budgets for these functions respectively: planning, allocating resources, accountability and for ritualistic purposes. The importance that is placed on each of them is determined from the organization itself and their needs, but in general there is more emphasis on planning and control, compared to other aspects. As empirical findings show, when dealing with manufacturing units, companies are able to fulfill these purposes by maintaining their annual budget but complementing them with frequent updates. On the other hand, for specific departments where being agile and flexible is of highly importance, budgets are replaced with rolling forecasts that seem to be less detailed, more responsive to changes and more preferred under conditions of uncertainty.

Secondly, it is evident that different companies are exposed to various risk factors, uncertainty and complexity levels, and their budgeting approaches differ accordingly. The findings show that complex companies might employ more budgeting approaches across the organization. While traditional budgeting is suitable for business units that are less exposed to uncertainty, it is not appropriate for business units that face more environmental uncertainty, because it limits their responsiveness and flexibility. Instead, for these business units, better budgeting tools, such as rolling forecast, are recommended. The study also suggests that the market position of the company plays an important role in the budgeting approach used. Even though some complex companies operate in competitive and uncertain environment, when being a leader in their industry and having a very strong position on the market, those can rely on fixed budgets. On the whole, the study shows budgets, in any form, are indispensable for complex companies, and their benefits justify the costs.

Additionally, looking further into the suggestion of many researchers for going Beyond Budgeting as a solution for overcoming the budget flaws, findings show that this is not considered as possible and that budgets remain a relevant management control tool. This is attributed to their ability in including many processes, and consequently budgets serve as the direction and target that companies need to strive for. Even though many of its shortcomings such as time and resource consumption are recognized from all the case companies, the dissatisfaction will not necessarily lead to complete abandonment. Companies would rather prefer to adapt and complement the process to achieve what is known as Better Budgeting.

Lastly, research for Beyond Budgeting has identified a lack of success cases, and therefore further research is needed to be able to determine its possibility of being fully implemented. Overall, the findings of this thesis suggest there is no universal budgeting approach, and neither traditional budgeting nor better budgeting or beyond budgeting can be viewed as universally superior.

## **6.2 Contributions and Limitations**

This thesis contributes to the debate about the usefulness of budgets. Employing a qualitative approach, the thesis gives insights about the use and perception of budgeting practices in complex companies that operate in an uncertain environment, and the purposes budgets fulfill and how they might differ depending on the specific context of the company. In addition, the qualitative approach of the thesis complements existing research, which mostly consists of quantitative studies, with a deeper understanding of viability of budgets. Furthermore, the thesis evaluates the applicability of the Beyond Budgeting approach and abandonment of budgets.

Notwithstanding the insights gained, the findings of this study are naturally subject to several limitations. First, the empirical part is based on analyzing only three case companies, and thereby the conclusions cannot be generalized in a statistical sense. Moreover, the three case companies operate in different industries. Consequently, the results might be different when studying three companies in the same industry. Similarly, the companies considered in the study are multinational organizations. Therefore, the results might not be applicable to small and medium enterprises. Another limitation is the fact that the interviews were conducted with members of only one department of the analyzed companies, and their perspectives might not be completely applicable to the rest of the organization. One of the case companies' preference for anonymity, further restricted the authors to disclose some information about their budgeting process, which if published could have broadened the empirical data and added significance to the findings. However, it is important to mention that the aim of this thesis is not to generalize the conclusions drawn, but rather explore and compare the budgeting practices adopted by three different companies, and potentially inspire future research in the area.

Another limitation relates to the definition and interpretation of budgets that might differ among authors and organizations. Moreover, there is ambiguity related to the Better Budgeting and Beyond Budgeting concepts, and their conceptualization is not clear cut. Also, there are not many in-depth studies about how companies design and implement their budgeting system, and because of that it was difficult to find relevant publications to compare the findings of this thesis with, and obtain further contribution.

## **6.3 Future Research**

The findings and analysis of the paper offer the possibility for future research to address the limitations of this study. First it is important to mention that the study and conclusions drawn from it are based on empirical findings that cover only three companies, which means they cannot be generalized. Further research which incorporates more case studies is needed to be able to determine whether these findings are applicable to a larger number of companies.

Additionally, future studies can also focus on a combined approach between qualitative and quantitative research methods to increase the level of accuracy of the findings.

Secondly, derived from the criticism towards budgeting, is important that future research examines the extent to which budgets are beneficial or prevent organizations from being flexible and agile. In this context, it is important to evaluate the usefulness of the budgets and examine them in a broader setting. This relates to a closer analysis regarding the influence of internal factors such as technology or organizational structure, as the study is more focused on environmental uncertainty. Examining the way these factors interconnect with each other will also provide valuable insight.

Future research in the field can examine the impact that different contingencies can have on companies that operate in the same industry. This adds an additional layer to the topic in order to give more accurate conclusions that can be generalized for a specific industry. Given that interviews of the case study were conducted with high level management of the companies, it would also be interesting to get the employee perspective and their perceptions on the usefulness of the budget.

Lastly, literature and case studies regarding Beyond Budgeting were found to be limited. At the same time, current findings show inconsistency on the benefits of going Beyond Budgeting and there is a need for looking into the possibility of fully abandoning budgets. In order to make a further assessment, it is necessary for research to focus on the way principles should be introduced and how companies can deal with the changes during the implementation period. With regards to Better Budgeting, research can study the reasons why some Better Budgeting methods are seen as most advantageous over others.

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## Appendices

### Appendix 1: Interview Questions

#### Background

1. What is your position and how long have you been working for *Company X* in this position?
2. How would you describe the management style of your company?

#### Budgeting

3. Does *Company X* use traditional budgets/ rolling forecasts, or any other short planning tools? (If rolling forecasts → What are the main reasons that determined *Company X* to adopt rolling forecasts instead of traditional budgets?)
4. Are budgets and forecast the same for you?
5. How are the budgets linked to the overall strategy of the company?

#### Budgeting process

6. Could you describe how does *Company X* prepare the budget/ forecast?
  - Top-down/ Bottom-up
  - What is the time-period it covers? (If is one year → Do you also prepare budgets for long term?)
  - Do budgets follow the calendar year? (January-December)
  - How are the objectives / budget for the new financial year established? What is the information basis for target setting?
7. Who is involved in the budget process? How involved are managers and employees in target setting?
8. Who is responsible for coordinating the budgets?
9. Do managers get any instructions about how to achieve the targets, or are they free to decide that on their own? If you get instructions, what type of instructions?
10. In your point of your view, how challenging are these targets?
11. What are the challenges encountered when preparing the budget? How do you approach them?
12. How important in information sharing between departments in the budget preparation process? Is it difficult to obtain information from other departments?
13. How much time does the budgeting process take on you from the average? Could you provide a rough estimate of the total time the average manager spends in budget-related tasks in a year?
14. Do you think the benefits related to budgets out-weight the time and resource invested in budget activities?

## **Budgeting purposes**

15. What are the main purposes of the budget within your department? (eg. coordination, motivation, resource allocation, or anything else) How do you communicate these to the employees?
16. Do you think you could achieve the above mentioned purposes without budgets? (If yes → Please elaborate on that)
17. Are the purposes the same for other divisions of the company?
18. How are the purposes communicated to the whole organization?
19. Do employees receive feedback related to achievement of targets?
20. What rewards - financial and/or non-financial - will managers and other employees gain by achieving the targets? Or, are they punished for not meeting the targets?
21. What actions does the company take to deal with variances in case budget targets are not achieved?
22. How does the resource and responsibility allocation design look like in your company?
23. How does the budget work to support decision-making?

## **Environment**

24. How stable/ predictable is the environment in which you operate? How predictable is the industry in which you operate?
25. How does the company deal with unexpected changes during the year?
26. After setting the targets, are they modified later on during the year? (If yes → Why? When?; If no → Why not?)
27. Do you foresee any changes in the budgeting process at *Company X* in the future? If yes, what could these be?

## Appendix 2: Net sales and sales volatility

In the table below, case companies' net sales and sales volatility for the last five years are presented. Beta's net sales are not disclosed due to its preference for anonymity.

Table 3: Case companies' net sales and sales volatility 2013-2017

Company	Net sales (million SEK) and sales volatility*				
	2013	2014	2015	2016	2017
Alfa Laval	29,801	35,067	39,746	35,634	35,314
+/- %	---	+17.67%	+13.34%	-10.34%	-0.90%
AstraZeneca	25,711	26,095	23,641	21,319	20,152
+/- %	---	+1.49%	-9.40%	-9.82%	-5.47%
Beta	---	-0.32%	+7.47%	-3.62%	+0.57%
+/- %	---				

\*Percentage change between previous and current year

Source: Companies' Annual Reports 2013-2017