

UNIVERSITY OF KWAZULU-NATAL

Title

**STRIKING A BALANCE BETWEEN AGILE FORECASTING
AND TRADITIONAL BUDGETARY PRACTICES**

By

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Abstract

Budgeting is one of the most important, successfully utilised and useful tools which almost every major organisation relies on for the setting of strategic goals and the subsequent measurement against these goals. However, despite its success, rapid changes in the business environment within which many organisations operate necessitate the need for greater agility in financial planning which traditional budgets and forecasts are not necessarily geared for.

The aim of this study was to explore alternatives to traditional budgeting approaches within South Africa with focus on the applicability of an agile approach, understanding the level of detail required from a forecasting perspective and determining whether there are agile substitutes for the level of detail required.

The study also considers the accuracy of an agile forecasting approach and includes a component on forecasting free cash flow which is increasingly becoming an important measure of organisational performance. The study concludes with an identification of industry types that agile forecasting could be most suited to.

A quantitative method was used in the study, making use of a survey questionnaire to gather data from 60 respondents. Most respondents indicated that trading profit within their organisations is influenced by a small number of critical business drivers, suggesting suitability for an agile forecasting approach. Respondents still indicated a requirement for detail to conduct performance evaluation but a slight opportunity to apply high level alternatives exists.

The study found that despite the complexities and potential to not be perfectly accurate that respondents are largely open to the concept of an agile forecasted free cash flow. However, respondents expect a greater degree of accuracy in other forecast statements, deviating from a concept of agile forecasting, being the gain of insights as opposed to accurately predicting the future.

The research concluded with the majority of respondents indicating that agile forecasting would be suitable to all industries with the specifically highlighted industries being manufacturing, FMCG, and banking respectively.

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1. CHAPTER 1 : INTRODUCTION

Nearly every major business organisation carries out a budgeting process prior to its forthcoming financial year in order to give financial expression to strategy, provide yardsticks to managers to achieve commonly understood targets and provide a framework for the analysis of results.

Two of the main criticisms of standard budgeting practices are (1) that they take up significant amounts of time and (2) that no matter how well the budget is prepared, it rapidly becomes out of date and therefore less useful (Niels and Per Nikolaj, 2014). This is usually because traditional budgets often involve a high degree of granularity hence the significant time required for their preparation and completion. The rapidly changing environment in which most organisations now find themselves operating in means that by the time a lengthy budget is prepared, it is no longer relevant.

The concept of the Rolling Budget which has long been introduced involves the addition of a new budgeting period, typically a month, once the current period has been completed. This helps to counter redundancy by ensuring that the budget always extends by a uniform distance into the future (such as 12 or 24 months for instance). Due to the requirement for constant updating however, rolling budgets require a significant amount of work in every reporting period to prepare the next incremental update. Therefore, despite being highly geared to focus ongoing attention to the organisation's objectives, they are considered the most onerous budgeting alternative.

One of the over-riding reasons for the amount of work that goes into a typical budget is the level of detail required in budgets, primarily in order to manage individual cost or profit centres, as well as the consolidation of these components into a consolidated budget for the business, whilst conforming to detailed accounting practices.

The reason for this study is to establish whether a balance could be struck between agile forecasting in a way that organisations can be responsive to changing environments whilst at the same time being efficient in the use of budgeting techniques such that the process is not overly onerous on the business in terms of conforming to accounting standards.

1.1. Background to the Study

The background to this study encompasses two main themes:

1. Budgeting as a method for management control; and
2. Agile forecasting as a method for being responsive to the business environment

1. Budgeting as a method for management control

There already exists significant research on budgeting for management control with research conducted by amongst others the Big Four accounting firms (PricewaterhouseCoopers, Deloitte, Ernst & Young, and KPMG).

In addition, there has also been significant research on the topic of *Beyond Budgeting* and *Better Budgeting* by professional accounting bodies such as CIMA (Chartered Institute of Management Accountants) and ACCA (Association of Chartered Certified Accountants) both of whom consider alternative budgeting methods. These include amongst others a CIMA Topic Gateway, titled *Beyond Budgeting* (CIMA, 2007) and a joint KPMG and ACCA report titled *Planning Budgeting and Forecasting – An eye on the future* (KPMG and ACCA, 2015).

However, the bulk of research centres on budgeting models and there is a lack of material specifically around the actual trade-off between environment responsiveness and management control.

2. Agile forecasting as a method for being responsive to the business environment

Agile forecasting is focused on forecasting in a manner by which the organisation is more aware of its future environment and as such become able to be more responsive to its environment. This differs from budgeting for management control which is primarily utilised as a yardstick by which management performance is measured.

However, unlike budgeting for management control, agile forecasting does not intend to budget each financial line item down to the lowest level of detail. Instead agile forecasting focuses on modelling the key revenue and cost drivers which impact the business. Less significant values could simply be inflation driven based on the prior year actual values.

Agile forecasting may be considered in relation to Traditional Budgeting and Beyond Budgeting by the following continuum:

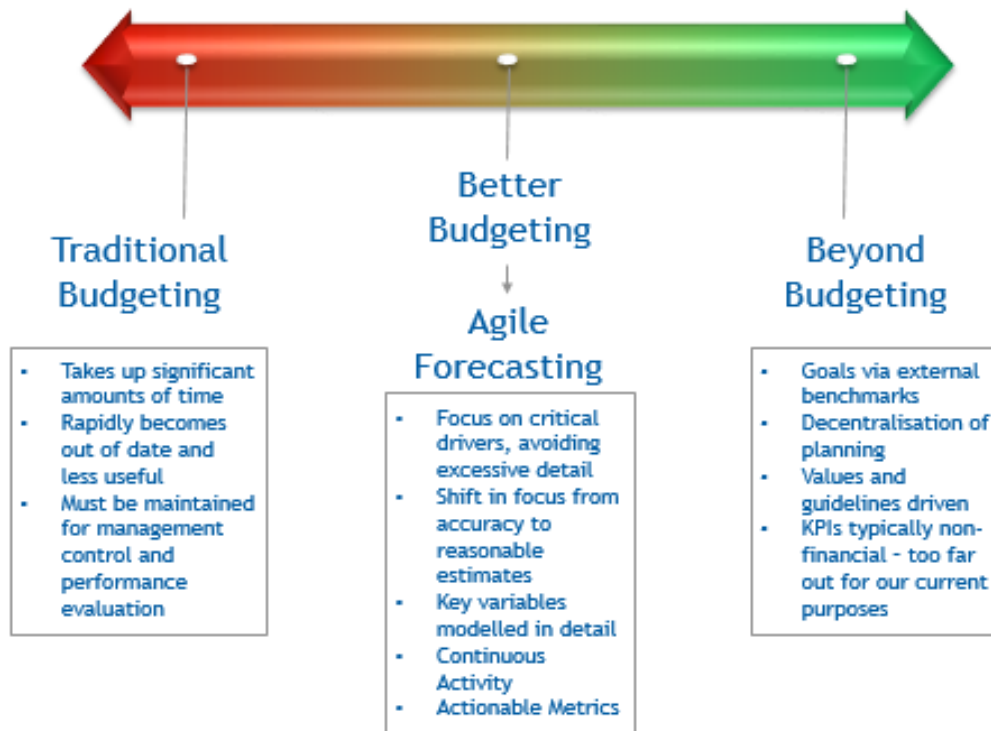


Figure 2.1 Continuum of budgeting approaches (Jhavary, 2016)

Agile forecasting tends to balance speed with accuracy by limiting inputs to only the most influential factors enabling the pressure-testing of assumptions about long-term performance drivers. This supports the visualisation of trends for pertinent factors such as working capital, cash flow and capital.

Agile forecasting supports the anticipation of changes in the operating environment by developing upside and downside scenarios for top-line forecasts as well as detailed action plans. This is broadly referred to as what-if planning.

Due to its high level, particularly in comparison to traditional budgets, agile enables organisations to differentiate controllable and uncontrollable factors behind results such that action can be focused on areas that matter.

1.2. Problem Statement and Justification

Based on experience around the implementation of budgetary and rolling forecast systems, one of the biggest challenges for finance professionals has been the time and data intensity which when combined with standard budgets and bi-annual year-end forecast estimates becomes overly onerous for financial departments.

When conducting standard budgeting and bi-annual forecasting processes together with more agile rolling forecasts there is often a consideration of whether to drop one of either the

rolling forecast process or the standard budget and bi-annual forecast process in favour of the other particularly because of the amount of resources required to run both approaches in tandem.

The research problem in this paper is thus whether organisations in South Africa can adopt agile budgets or forecasts which do not necessarily conform to traditional budgetary practices down to a granular level of detail and to determine at which point detail could be discarded in favour of agility such that the agile forecasting process remains a useful tool but is easier to implement and run.

1.3. Purpose of the Study

The purpose of this study is to explore alternatives to traditional budgeting approaches within South Africa with specific focus on testing the applicability of an agile approach to forecasting.

This involves testing the level of detail required from a budgeting and forecasting perspective within a South African context and determining whether there are agile substitutes for the level of detail required.

The study then considers factors related to the accuracy of an agile approach to ensure its relevance as an alternative to traditional budgeting.

As free cash flow (defined in detail in the literature review) is increasingly becoming an important performance measure of organisations due particularly to its use in funding future growth, a further purpose of this study is to explore an agile approach to free cash flow forecasting.

Finally, the study intends to identify whether there are specific organisation types for which agile forecasting would be ideally suited.

1.4. Objective of the Study

Budgeting is one of the most important, successfully utilised and useful tools within management accounting which almost every major organisation relies on for the setting of strategic goals and the measurement against these goals (Réka, Stefan, & Carols, 2014).

However, despite its success, the speed at which markets are changing necessitate the need for greater agility. Rapid changes in technology, globalisation, and volatile markets are

just some of the factors influencing the rapid change in the operating environment which business are exposed to.

The objectives of this study are therefore:

- To explore options that provide greater agility in financial planning and determine how well received it would be by forecasting professionals in South Africa.
- To determine how far an organisation can go in terms of agility when planning over financial granularity
- To explore factors influencing forecast accuracy and considerations around free cash flow with respect to agile forecasting
- To understand whether certain types of organisations are better able to shift away from standard budgeting procedures and more importantly whether these organisations could be responsive enough to benefit from the insights gleaned from an agile forecasting approach.

1.5. Research Questions

1. Will traditional budgets still be relevant if granularity is dropped in favour of focusing primarily on key business drivers?
2. How much of granularity can be overlooked whilst still maintaining the value of the forecasting process?
3. What are the factors influencing forecast accuracy and considerations around free cash flow with respect to agile forecasting?
4. Are there specific business types which agile forecasting would be best suited to?

1.6. Expected outcomes

The expected outcomes of this study would be initially to gain insight into how financial professionals view budgeting in terms of management control versus financial planning and understand their perception of agile forecasting as a tool for ensuring that the organisation is consistently following a plan that is up-to-date.

Once the distinction of financial planning is emphasised, the outcome would be to identify the level of detail that finance professionals would adapt for their business types.

The study would not be complete without an exploration of accuracy and a determination of agile forecasting focusing on free cash flow.

Finally, the study should be able to identify specific business types which would be better suited to agile forecasting and provide a framework for enabling agile forecasting in the most efficient, non-onerous manner possible.

1.7. Delimitations/Scope of the study

The focus of this study is limited to budgets and forecasting within the financial function.

1.8. Expected limitations of the study

Whilst there exists considerable research on alternative budgeting techniques such as *Beyond Budgeting*, there is limited material on agile forecasting, or a standardised framework for its approach as agile forecasting is a relatively recent concept supported by the emergence of technology such as financial modelling tools.

Due to the exploratory nature of this study, a broad approach shall be taken by considering a sample from various industry sectors where participant organisations have an annual revenue exceeding R100m.

It was expected that this could result in limited granular focus and further research potentially focusing on specific industries may be considered following the outcomes of this study.

As this study is focused on large organisations, it was expected to limited representation due to the exclusion of smaller organisations. In a study on the differences in forecasting behaviour between large and small firms concluded that larger organisations tend to employ more complex approaches which take longer to finalise and are more rigid whereas smaller organisations tend to achieve a more timely result but which is more subjective (Henry, Paul, John, & James, 1996).

1.9. Assumptions

Single non-consolidated budget

Many divisions or departments, particularly within a large organisation could typically each prepare a budget which is then consolidated at a group level. For the purposes of this study, I shall exclude the consolidation of budgets and assume the preparation of only a single set of budgetary financial statements.

1.10. Outline of the Study

The study will be divided into 6 Chapters.

- Chapter 1: Introduces the study, the problem statement that necessitates the need for the research and identifies the primary objective of the research.
- Chapter 2: Represents a literature review and funnel approach discussion of budgeting, forecasting, and alternatives to financial planning. This chapter highlights the limitations of traditional budgeting from a strategic perspective and introduces various viewpoints of alternative methods.
- Chapter 3: Cover the research methodology, including the structure of the questionnaire, selection of the sample and extent of the responses.
- Chapter 4: Presents the biographical information of respondents and presents the empirical findings of the research.
- Chapter 5: Discusses the biographical information of respondents in relation to the research findings and discusses the overall research findings.
- Chapter 6: Presents a final summary, conclusions and recommendations for future research.

1.11. Conclusion

This chapter introduced the need for this study and outlined the research objectives and questions. The scope of the study and expected outcomes were defined and the relevant assumptions highlighted.

2. CHAPTER 2 : LITERATURE REVIEW

2.1. Introduction

This chapter introduces the purpose of traditional budgeting and forecasting and goes on to discuss the challenges faced with traditional approaches, particularly in relation to strategic decision-making.

The various definitions of budgeting, forecasting and financial planning are compared and contrasted and alternative approaches such as better and beyond budgeting are introduced and the subsequent literature on agile forecasting as an alternative is expanded upon, with specific focus on its value to strategic decision-making.

2.2. Budgeting

2.2.1. Definition

The Chartered Institute of Management Accountants (“CIMA”) defines a budget as

“A quantitative statement for a defined period of time, which may include planned revenues, assets, liabilities and cash flows. A budget provides a focus for the organization, aids the co-ordination of activities and facilitates control” (CIMA, p6, 2005).

2.2.2. History

The concept of budgeting was first introduced during the 1920s primarily as a mechanism for cost and cash flow management within large industrial organisations. It has subsequently grown in use since then and is now one of the paramount tools for the planning and controlling of organisations (Uyar, 2009).

2.2.3. Purpose

The joint publication by CIMA and ICAEW based on a round table event focused on budgeting states that budgets provide an overall framework of control which simply put, makes the management of organisations possible. Large companies in particular would struggle without such a framework.

The report points out that budgets have traditionally been used for a number of purposes including cost-cutting and value creation. From a cost-cutting perspective, budget models were traditionally centralised and highly bureaucratic. The value creation view of budgets is

one that is more evolved and somewhat shifts away from a control objective to one which sets about creating value to meet the objectives set for management (Jackson and Starovic, 2004).

In his research on the interpretation of budgets in Finland, Kihn (2011) discussed how budgets are necessary for effectively communicating expectations to employees in order to coordinate activities across the organisation as well as to allocate resources within an organisation. However, he notes that these are often interpreted by managers in completely different ways and thus the delicate considerations of behavioural and interpretational aspects of budgeting are introduced. His research goes further to discuss the primary differences in the interpretation of budget targets, being forecasts, motivational targets, and use as a tool for performance management (Kihn, 2011).

Kihn concluded that budget targets impacted people's thinking and behaviour but that people affected the manner in which budgets are interpreted and used as a management practice. This introduces the topic of subjective interpretations where managers often understand targets and objectives in different and sometimes contradictory ways which leads to impairment of the intention of the management control objective of budgets (Kihn, 2011).

In a 2014 literature review on budgeting, Réka et al. cite budgets as the most powerful tool for management control. Apart from management control, traditional budgets are used to extend the authority and influence of senior management whilst limiting the autonomy of lower-level managers, thus historically playing a crucial role in organisational power politics.

Réka et al. state that the major objective of budgeting is to support management in strategy implementation. The review includes a discussion on the evolution of budgets from traditional cash and profitability budgets to more modern techniques such as zero based budgeting and beyond budgeting. The review concludes that traditional budgeting requires revitalisation and refreshing (Réka et al., 2014).

2.2.4. Link between Budgeting and Strategic Management

Alignment between strategic planning and budgeting

In his paper on integrating strategic management and budgeting, Tim Blumentritt (2006) highlights one specific problem with traditional planning processes, being misalignment between strategic planning and budgeting.

He proposes that by integrating strategic management with financial planning, more realistic and beneficial results can be achieved which in turn supports financial and strategic

performance. He emphasises the use of standing strategic review committees for regular assessment of planning versus strategic management and highlights the need for flexible planning to account for change (Blumentritt, 2006).

He concludes that planning is seen as a tool to provide a sense of direction and confidence to management for the facilitation of organisational success but points out that due to the isolation between budgeting and strategic planning, the benefits of strategic planning are often mitigated (Blumentritt, 2006).

Link between strategy and performance management

In an assessment of the link between organisational strategy and performance management via a case study approach of firms in New Zealand, Ralph W. Adler (2011) concluded that performance management systems should be dependent on the organisation's strategies. The paper identifies a situation of strategic archetypes that are outdated and disconnected from the possibility of firms competing out of necessity rather than choice which are referred to as confrontation strategies.

The paper argues that firms, particularly with confrontation strategies, would benefit from the deployment of lean organisational structures, empowerment and multiskilling of employees, as well as improved coordination. Organisations performance management systems are meant to be a function of their strategies. He concludes that this can be achieved through strategy-based incentives, greater reliance on interactive strategic planning and engagement via real-time management tools (Adler, 2011).

2.2.5. Link between Budget Flexibility and Budgetary Control

In light of the growing literature on the contrast between the focus of budgets for the purpose of management control versus the emerging preference for greater flexibility, Frow, N., Marginson, D. & Ogden, S. (2010) produced a paper which explores the role of budgeting in the context of the more flexible alternatives necessary in conditions of uncertainty

Drawing on the case study evidence on a single organisation, the paper introduces continuous budgeting to reconcile the conflicting objectives of management control and flexibility in uncertainty and identifies that it enabled managers to prioritise the revision of plans and allocation of resources in order to meet the organisation's strategic objectives. It also highlights the imposition of strict accountabilities in conjunction with continuous budgeting to ensure that managers remained committed to achieving the organisation's as well as their own financial targets (Frow et al., 2010).

The paper concludes that the abandonment of traditional budgeting is not necessarily the best option but raises conditions for it to be used both for management control as well as flexibility under uncertain conditions (Frow et al., 2010).

2.3. Budgeting Discussion

2.3.1. Issues

Budgetary Slack

Budgetary slack is the deliberate under-estimation of revenue or over-estimation of expenses by managers to improve their chances of meeting their targets and has been identified as one of the primary unsolved problems in budgetary controls. Dunk and Perera (1997) conducted a field study investigation in Sydney, Australia into the relationship between participative budgeting and budgetary slack based on two views. The first argues that managers intentionally use participation to create slack, while the other argues that managers reduce slack in their budgets. In attempting to reconcile these views, it has been suggested that executive evaluative styles and information asymmetry are important factors which may influence this relation.

The study proposes that the relationship between participation and budgetary slack arises from a process of interactions between the parties involved. Although managers were aware that participation provided the opportunity to build slack into their budgets, they did not always attempt to do so for moral, ethical and career advancement reasons (Dunk and Perera, 1997).

Psychological Implications

Magner, Johnson, Little, Staley & Welker (2006) have conducted a study on the fairness of budgetary procedures which considers the behavioural reactions of managers towards budgetary fairness. These reactions typically stem from the fact that the operating unit's budget affects the personal rewards (material and psychological) that managers' garner from the organisation. Managers often have unfavourable perceptions of their unit's final budget which consequently results in negative attitudes and behaviours.

This suggests the erosion of the value budgets as a management tool since budgets that are considered unfair result in the wrong psychological impact. The study underscores the importance of promoting formal budgetary fairness in budgetary systems (Neely, A., Sutcliffe, M. R. & Heyns).

Rapidly changing business environment

In 2009, Ali Uyar conducted an evaluation of budgeting approaches (traditional budgeting, better budgeting, and beyond budgeting) in Malaysia and introduces a comparison to the perception of budgets in Bahrain, Australia, Japan, and Poland. He also introduces the ongoing debate regarding the usefulness of traditional budgets.

He identifies that volatile input costs, turbulent financial crises, rapid social changes, accelerated technological changes, and a more challenging economic environment necessitate organisations adopting more sophisticated management tools over traditional ones which are no longer sufficient in responding to changing conditions and that organisations now require more responsive management tools than traditional ones.

He pointed out that whilst most respondents in his research indicated they would not be able to continue without budgets, the expectation is that reliance purely on traditional methods would result in an organisation falling behind competitors. He concludes by identifying two approaches for moving toward away from traditional approaches, being (1) revising the traditional process which is essentially an evolutionary change, and (2) abandoning it completely in favour of a beyond budgeting approach (Uyar, 2009).

2.3.2. Challenges

In a 2010 publication titled “*Breaking the Cycle: The Case for Eliminating the Budget*” which is based on the findings from a 2007 PwC Budget and Forecasting Study and a 2007 PwC study of organisations in the United States with annual turnover greater than \$2 billion, PwC discuss the following challenges with traditional budgeting:

- **Budgets cannot keep pace with the constantly evolving business environment, making them obsolete**

The report stresses on outputs from the annual budgeting cycle becoming outdated yet variances continue to be reported, analysed, and explained (PwC, 2010).

- **Traditional budget and planning processes are costly and time consuming**

The extensive resources devoted to traditional budgeting is particularly prevalent within finance departments and individual business units. Yet the return from the value extracted is not commensurate. In their 2007 study, PwC found that 60% of participating organisations had an annual budget cycle exceeding 3 months and that only 12% completed in less than 2 months (PwC, 2010).

- **There is a risk that budgeting and planning processes divert attention away from the most relevant performance management activities**

The report suggests that the use of annual budgets as a primary driver of compensation plans and rewards enforces behaviours that are not always in line with the company's best interests. It then raises the question of how conventional budgets assist with effective management of the cost base when the majority of organisations have not linked the preparation of budgets to business drivers except for a few direct variable costs. Finally, it points out the lack of non-financial performance measures as a shortcoming within traditional budgeting (PwC, 2010).

The publication makes reference to the 2007 PwC study of organisations with annual revenues greater than \$2 billion which found that only 17% of company executives were "very satisfied" with their budgeting processes; only 32% believed that their budgeting processes were "highly aligned" with performance; and nearly 44% felt that the link between budgeting and strategy required the most improvement (PwC, 2010).

2.3.3. Consideration for a change from Traditional Budgeting

In 2001, a team from the Centre for Business Performance at Cranfield School of Management and Accenture's Finance & Performance Management Service Line conducted a substantial review of planning and budgeting practices worldwide with the goal of establishing the best practices in the field and identifying increased value as a result of enhanced planning and budgeting (Neely et al., 2001).

The majority of the organisations engaged in the study were evolving their planning and budgeting processes in their own customised way. It found that no single company had the perfect approach but the strengths and weaknesses identified through the study resulted in the devising of the following list of best practices:

1. Forecasts should be assumption-based and not opinion-based. This supports scenario analysis as when the environment changes, the assumptions can be changed with the result being a quickly generated accurate new forecast.
2. Budgets should be 'lean' rather than 'mean'. The cost of financial planning and reporting can be reduced through investment in centralised IT solutions which reduce duplication of effort and focuses the review process on key financial measures as opposed to measuring every line item.
3. The focus should be the competition (or business environment) rather than the budget. The focus should be external with targets not based on existing performance but on reference to external benchmarks.

4. Reviews should be action-oriented rather than explanation-oriented. This is achieved by focusing less on the past and more on the future.
5. Organisations should be managed strategically and not financially. Improved organisation performance is achieved through good strategies and not through better financial management.

The review concluded the importance of budgets being aligned to strategy and highlighted the need for processes to be value-based, continuous, consequential, and focused on identifying and managing the true drivers of shareholder value (Neely et al., 2001).

In a model based study on four companies in the Netherlands focusing on the factors which play a role in the acceptance of changes to the traditional budgeting process, Waal, A. D., Hermkens-Janssen, M. & Ven, A. V. D (2011) present a framework called the evolutionary adoption framework (EAF) which considers four aspects that play a role in the acceptance of traditional management control:

1. Activities in the adoption process
2. Motives of the involved stakeholders
3. Constraints that could influence the activities
4. Order and interaction of activities

By selecting two organisations who were considering a change from traditional budgeting and two who weren't, it was possible to derive a mutual comparison.

The study concluded that a certain level of dissatisfaction needs to exist within an organisation before it searches for alternative budgeting methods and that the lack of a need for change due to the existing process considered efficient is the primary reason for organisations avoiding change (Waal et al., 2011).

The study highlights that the existing budgeting process may be institutionalised within the organisation especially if it has been in place for a long period of time and if compensation incentives are tied to it, making it very difficult to change. The recommendation in this type of scenario is to adopt an evolutionary and slower change process (Waal et al., 2011).

The best practices indicated above open the discussion to budgeting alternatives.

2.3.4. Alternatives to Traditional Budgeting

Beyond Budgeting

The concept of Beyond Budgeting is championed by the Beyond Budgeting Institute, the principles of which aim to offer an alternative in light of the well documented weaknesses of traditional budgeting.

CIMA defines beyond budgeting as:

“An idea that companies need to move beyond budgeting because of the inherent flaws in budgeting especially when used to set contracts. It is argued that a range of techniques, such as rolling forecasts and market related targets, can take the place of traditional budgeting” (CIMA, p7, 2005).

The Beyond Budgeting Institute defines beyond budgeting as:

“Beyond budgeting is about rethinking how we manage organisations in a post-industrial world where innovative management models represent the only sustainable competitive advantage. It is also about releasing people from the burdens of stifling bureaucracy and suffocating control systems, trusting them with information and giving them time to think, reflect, share, learn and improve. Above all it is about learning how to change from many leaders who have built and managed “beyond budgeting” organisations” (BBRT, 2016).

In their journal on Beyond Budgeting, Hope and Fraser (2003), identify Beyond Budgeting as a coherent management model to enable performance management to respond to volatility within the marketplace by empowering front-line managers to make decisions. They highlight the importance of the Beyond Budgeting approach shifting the approach of budgeting from an annual fixed performance contract to a more adaptive management process which takes advantage of opportunities in its operating environment and mitigates risks resulting from market volatility (Hope and Fraser, 2003).

CIMA's Topic Gateway Series on Beyond Budgeting identifies the two main advantages of beyond budgeting as being:

- A more adaptive process than traditional budgeting
- A decentralised process as opposed to traditional budgeting where strategy leaders plan and control organisations centrally.

It describes the six common principles of beyond budgeting which are:

1. A governance framework based on clear priorities and boundaries

This is to support front line teams making decisions enabled by a supportive management style that promotes community spirit and results in a seamless service to customers.

2. A high-performance climate based on visible and relative success at all levels within the organisation

This is promoted via internal competition, peer based performance reviews and a sense of customer ownership.

3. Empowered front line teams who can make decisions in line with the organisation's strategic goals and governance principles

The focus is to abandon a safety-first approach and open up the strategy process throughout the organisation, promoting high standards, expectations and benchmarks.

4. Responsibility for value creating systems handed down to teams

This empowers small units within the organisation with the freedom and accountability to manage their own resources.

5. Customer focused teams

This results in greater accountability and leads to more satisfied customers

6. Information systems which are open and ethical

Information generated is more reliable, transparent, and ethical (CIMA, 2007).

In their journal which considers the implications of beyond budgeting, Goode and Malik (2011) investigate whether the proposal that Beyond Budgeting will reinvigorate management accountings contribution in business operation and performance. They identify that the implications of a Beyond Budgeting system are a decentralised organisation structure and performance measures which are relative to competitors.

They agree that traditional budgets are outdated and are significantly less relevant for the current environment and highlight the risk that traditional budgets can have a negative impact on shareholder value. They conclude that whilst Beyond Budgeting has an important role to play in the future, it is unlikely to be as fully adopted as expected by the BBRT (Beyond Budgeting Round Table) due to management likely to encounter difficulty in completely abandoning all principles of traditional budgeting due to the way it is settled in business culture. They suggest a partial adoption of Better Budgeting techniques to counter the key failings of the traditional system (Goode and Malik, 2011).

In his article for ACCA on Beyond Budgeting, Shane Johnson (2015) explains that Beyond Budgeting is a recent viewpoint that challenges traditional budgeting which is criticised for tending to lack flexibility and which forces a fixed approach in an ever-changing world.

He concludes that the beyond budgeting model is particularly relevant to organisation's within a developed economy and suggests that other organisations would also see benefits from the model based on its value delivery within a rapidly changing environment. He notes that successful application of the beyond budgeting model requires significant organisational, cultural and managerial change else it is doomed to failure.

In his master's thesis on Beyond Budgeting (also published on the Beyond Budgeting Institute's website), Jón Brynjar Ólafsson (2015) adds to the existing literature on the topic by analysing how the Beyond Budgeting model has affected the operations of Össur hf., a global orthopaedic company headquartered in Iceland. His research includes coverage of a holistic view of the 12 principles of Beyond Budgeting which talks to avoidance of controlling via a central plan and detailed rules, trusting members of the organisation, and the requirement for fast and efficient feedback in order for management to take quick action.

He concluded with an assessment of the success of the implementation of each of the 12 principles of Beyond Budgeting at Össur hf., specifically highlighting the principle of trust which already existed within the organisation's culture but management's insistence on seeing detailed reports of activities within sales regions indicated a top-down management philosophy for which he recommended a mind-set change to fully promote the beyond budgeting model to senior executives (Ólafsson, 2015).

Better Budgeting

In their case study on beyond budgeting, Niels and Nikolaj conclude that beyond budgeting literature leaves many questions unanswered. One pertinent question is if budgets are unsuitable for the current business environment, why are they still so widely used? (Niels and Per Nikolaj, 2014).

Robert C. Rickards' 2006 journal article based on case studies considers the difference between the alternatives to traditional budgeting which are primarily beyond budgeting and better budgeting. In this article, he summarises that Beyond Budgeting has more to do with a new management model and way of thinking than actual budgeting itself. He points out that Better Budgeting focuses on simplifying traditional budgeting by improving its functional and institutional aspects, such as reducing the number of planning objects only to those deemed crucial to the company's success. These core or main processes are then analysed in detail, planning them from the ground up rather than simply looking at their historical trend.

He concludes by highlighting the risk associated with a complete shift to beyond budgeting due to its revolutionary approach and suggests that a better budgeting model is less susceptible to failure due to its evolutionary approach (Rickards, 2006).

In a thesis which examines whether the principles of the beyond budgeting model are entirely separated from any budgeting approach, Mejzini and Seidel (2015) acknowledge that beyond budgeting is considered a management control system that operates independently from budgets. The investigation centres on a case study of a Swedish company, Svenska Handelsbanken which is considered the role model for beyond budgeting.

The investigation on Svenska Handelsbanken revealed that while the principles of beyond budgeting are predominantly different from any budgeting approach, certain areas such as staff and cash flow planning, capital investments, resource allocation, and the control functions partially overlap with traditional budgeting approaches.

The study suggests that these principles have to be refreshed to break free from budgeting and really go 'beyond' and introduces the concept of 'better budgeting' which it identifies as a hybrid between traditional and beyond budgeting. Better budgeting encompasses approaches such as rolling forecasts, activity-based budgeting, and the balanced scorecard (Mejzini and Seidel, 2015).

In their 2003 study on alternatives to traditional budgeting methods, Neely, Bourne and Adams identified the following five better budgeting techniques (Neely et al., 2003):

1. **Activity Based Budgeting** – which involves planning and controlling along the lines of value-adding activities and processes. Resource decisions would involve structuring the organisation's activities in line with customer and commercial demands.
2. **Zero Based Budgeting** – where expenditures must be re-justified during each budget cycle, as opposed to basing budgets on prior periods. This avoids building on inefficiencies from historical budgets.
3. **Value Based Management** – involves the evaluation of all expenditure plans as project appraisals and assessing expenditure in terms of how much shareholder value they will lead to creating. This is a systematic approach to the creation of shareholder value over time.
4. **Profit Planning** – assesses whether an organisation generates sufficient cash, creates economic value and attracts sufficient financial resources for investment. This forces the consideration of long and short-term commercial prospects when preparing forecasts.
5. **Rolling Budgets and Forecasts** – more responsive to changing environment but requires greater resources to administer. This leads to improved forecast accuracy as it solves the problems associated with outdated budgets.

In his master's dissertation aiming to develop a framework that helps companies identify their budgeting problems and address them more efficiently with Better Budgeting methods, Marcus Wienhold (2015) explained a comprehensive list of budgeting problems which act as a checklist for companies to identify and evaluate which problems they are facing.

Based on a survey that tested the framework, the results pointed to a strong correlation between the implementation of certain Better Budgeting methods and the reduction of certain traditional budgeting problems (Wienhold, 2015). This further reinforces the idea raised by Mejzini and Seidel (2015) earlier of better budgeting being a hybrid between traditional and beyond budgeting.

2.3.5. Budgeting to Accounting Standards

The International Public Sector Accounting Standard prepared by the International Public Sector Accounting Standards Board (IPSAS) issued a standard on Presentation of Budget Information in Financial Statements which is integrated into the Standard of Generally Recognised Accounting Practice (GRAP) that is currently utilised within the public sector in South Africa (IPSAS, 2007).

This standard defines the manner in which budgets within the public sector are to adhere to accounting standards.

In his journal article on accrual accounting and budgeting within OECD member countries, Jón R. Blöndal (2003) identifies that there is significantly greater acceptance of accruals for financial reporting than for budgeting but alludes to budgets not being taken seriously as a result.

He concludes that about half of all member countries adopt accruals to some degree with great variations in the extent of their adoption and notes that the private sector has historically adopted accruals in budgeting (Blöndal, 2003).

2.3.6. Other Considerations

Social considerations when changing from traditional budgets

An earlier case study on a Swedish organisation, Svenska Handelsbanken (introduced earlier in the thesis by Mejzini and Seidel (2015)), was conducted by Cäker and Siverboin (2014) to explore the role of and interaction between organisational structure, technocratic control and socio-ideological control. Management control is traditionally a top-down activity that uses a process of planning and then measuring performance to take corrective action with the core focus of the activity being the implementation of strategy. Traditionally in

decentralised settings, monitoring strategic alignment has primarily been restricted to management controls such as results control.

The study confirmed that socio-ideological controls have a vital role in ensuring strategic alignment but that they are insufficient on their own. It highlighted that through the establishment of a high level of hierarchical communication and supportive monitoring that empowerment throughout the organisation and to decentralised units is enabled (Cäker and Siverbo, 2014).

Behavioural Considerations

Leach-López, M. A., Stammerjohan, W. W., Lee, E. & Stammerjohan, C. A.(2015) conducted a study in 2015 on the relationship of budget participation conflict to job performance of managers in South Korea with the purpose of examining its effect on job performance and the subsequent effect of job satisfaction and job tenure on this relationship. Budget participation conflict is defined as the difference between a manager's actual budget participation and the same manager's preferred level of budget participation. The key consideration in the conflict being that budget instructions in South Korea are typically handed down by an organisation's strategic department with little consideration of the actual business environment. The lack of input afforded to lower level managers results in their lack of understanding, particularly when they are expected to explain variances (Leach-López et al., 2015).

The findings of the study suggested that while budget participation conflict does not directly impact job performance, it definitely has a negative impact on job satisfaction which in turn can significantly influence job performance. It also found some marginal impact of job satisfaction on job tenure, suggesting by increasing job satisfaction, job tenure can be marginally increased. The study also found that job performance and job satisfaction can be improved by minimizing budget participation conflict (Leach-López et al., 2015).

2.4. Forecasts

2.4.1. Definition

Forecasting is defined as a planning tool that assists management in its attempts to cope with the uncertainty of the future by relying on past and present data as well as analysis of trends (Latham and Prowle, 2013).

CIMA defines a forecast as:

“A prediction of future events and their quantification for planning purposes” (CIMA, p17, 2005).

2.4.2. Purpose

Forecasts are typically used to track the performance of the business trajectory. This is typically so that remedial decisions can be taken to realign performance with targets in the case of underperformance or to maximise on an emerging opportunity (KPMG and ACCA, 2015).

In their 2013 study on forecasting practices in the private sector, Deloitte aimed to develop a set of criteria and methodology for assessing forecasting and described solutions that the private sector developed to meet the challenges of forecasting (Deloitte, 2013). The study found that forecasting is imperative for:

- Taking preventive actions to mitigate risk and pursue opportunities;
- Continuously assess the relevance of organisational targets;
- Improving the organisation’s responsiveness to market factors;
- Ensuring that the latest performance expectations are communicated;
- Identifying emerging market opportunities;
- Allocating resources to where it will deliver optimum value;
- Directing resources to ensure that targets are achieved;
- Evaluating the future cash position and the organisation’s ability to meet its obligations;

The items outlined above signify the importance of forecasting in relation to responsiveness to market factors and an organisation’s ability to adopt a flexibility approach to its planning.

2.4.3. Challenges

In his paper in conjunction with IBM, Steve Player (2009) identifies that traditional forecasts seek to mitigate some of the problems of traditional budgets (described earlier in the report) by first updating budget numbers for a fiscal period with some of the actual results achieved during that period and then updating the budget numbers for the remaining period based on emerging market information. This updated forecast is then compared against original targets to determine whether they will be achieved (Player, 2009). He goes on to highlight the following criticisms of traditional forecasting:

- **Static forecasts cannot keep pace with the constantly evolving business environment, making them obsolete**

He highlights that financial forecasts are typically performed on a predefined schedule, typically quarterly or half yearly and only forecast to the end of the current fiscal period, which he refers to as 'forecasting to the wall', criticising the fact that focus is shifted purely to year-end results as opposed to continued organisational direction (Player, 2009).

- **Confusing forecasts with targets**

Further, the level of detail typically used in traditional forecasts mirror the budget, thereby also mirroring the pitfalls of a traditional budget. He further criticises traditional forecasts for managers often confusing forecasts with targets. Targets are typically medium term goals or aspirations of where an organisation wants to go which get quantified into annual targets. Forecasts highlight the organisation's strategic direction via current trends. By blending the two, there is risk of obscuring the details of what needs to happen and hampers the discussion of the risks associated to achieving the goals (Player, 2009).

- **Insisting on forecast accuracy in an unpredictable world**

Player (2009) criticises the focus on achievement of forecast accuracy, stating that some organisations go to the point of providing incentives to achieve accuracy which seems highly irrational in today's volatile business environment. He highlights that the purpose of forecasting is to help decision makers shape outcomes, not predict the future and that the focus should be on understanding how to respond to circumstances.

Inflexible Forecasts

In his 2011 article for KPMG, Chris Moore describes making projections as often being an extensive and bureaucratic exercise which collects large chunks of data and produces an inflexible forecast too late to support key decisions. Despite benefits such as its use in driving performance, and identifying risks and opportunities, many organisations continue to struggle with forecasting.

A high degree of uncertainty results in organisations having to forecast and then re-forecast many times over. He explains that inflexible forecasts are due to both a deficit in technical competence as well as incorrect cultural attitudes (Moore, 2011).

Outdated Tools

Moore goes on to state, based on findings at the Planning and Budget Share Forum held in the United States in 2011, that many models in use by organisations today are based on historical trends. But standard models based on time series averages rarely capture events well, if at all and current economic conditions highlight these shortcomings (Moore, 2011).

2.4.4. Key Trends in Forecasting

Mark Ng (2011), in his article based on KPMG's international report, *Being the best: Insights from leading finance functions* outlined the following key trends in forecasting:

- **Driver-based forecasting**

The forecast should consist not only of financial measures but key drivers of the business. When an organisation has a better understanding of the relative impacts of these drivers and the interaction between them, its forecasting will be more accurate and it will be able to make more informed decisions.

- **Forecasting fewer things in greater detail**

In the current business climate, rolling forecasts which are revised regularly are vital to understanding the organisations current and future financial situation. As such, organisations need to anticipate and react to changes in a nimble manner, achieved through forecasting fewer items more often.

- **Focus less on calendars but on events**

Forecasts should not be driven purely by a forecasting calendar but should also be triggered by external factors impacting the organisation (such as competitor or regulatory changes) and internal events (such as manufacturing breakdowns, the loss of a major client, delayed product launches or product innovation).

- **Look outwards for sources of data**

Many organisations face challenges in forecast reliability due to the quality of input data. Leading companies make greater use of external data such as external government or economic information which helps to determine consumer demand and economic drivers (Ng, 2011).

2.4.5. Other Considerations

Forecasting Technology

Scenario analysis which considers alternative possible outcomes by analysing possible future events is a key area where technology can assist greatly. The Delphi method and

other mathematical algorithms are often used to assist research planners compare index results. As a result technological forecasting can be used to simulate the effect that present actions could have in terms of achieving desired outcomes (Chen-Chun, L., Ying-Hwa, T., Joseph, Z. S. & Yi-Ming, L., 2010)

Due to the greater frequency at which forecasts are required by business and the resultant administration required to deliver this higher frequency, significant focus has been placed on forecasting technology.

In 2015, KPMG and ACCA conducted a study representing the view of over 900 finance professionals from more than 50 countries to assess how planning, budgeting, and forecasting integrate to create a framework of corporate visibility focusing on the activities that deliver growth and accurately allocate resources to support strategy (KPMG and ACCA, 2015). The report focused on how Enterprise Performance Management (EPM) support the businesses planning, budgeting and forecasting processes by providing the appropriate processes and technology and stresses on the importance of extracting and gathering the right data in order to perform data analytics (KPMG and ACCA, 2015).

Many major technology providers including SAP, Oracle and IBM offer EPM tools which support forecasting. The study does however point out that technology is an enabler and not a solution.

Statistical methods based on recent data and trends are often employed by forecasters and these are often incorporated within technology solutions.

Forecasting with Spreadsheets

Player (2009) who's work with IBM was introduced earlier maintains that whilst spreadsheets are powerful productivity tools, they are not suited for collaboration and integrated cross-organisational communication as forecasts typically require multiple iterations and continuously changing assumptions, raising the risk of error and leading to excessive time required to collect and validate data.

Business Analytics

In a conceptual paper on the use of analytics in performance management Schläfke, M., Silvi, R. & Moller, K (2012) provide several insights for management accounting research. Their outlook is that analytics provide competitive advantages that are not fully explored in traditional performance management systems.

More relevant to this paper however is their view that business analytics can be utilised to validate relationships within traditional processes. This represents a critical method of identifying key metrics or variables discussed as fundamental to agile forecasting later in this paper.

They conclude by highlighting the consequences of increased IT and analysis skills required by an organisation willing to embark on a performance management system supported by data analytics (Schl fke et al., 2012).

In an article on the top trends in Management accounting, Gary Cokins (2014) raises the topic of embedding business analytics within EPM methods and states that progressive accounting functions realise that analytics competency and capabilities provides a competitive edge.

He states that with analytics, an organisation can obtain rich insights into how projects or actions support the implementation of strategy and through correlations analysis, better insight can be gained into what is driving costs (Cokins, 2014).

2.5. Relationship between Budgets and Forecasts

CIMA states that while budgets help organisations articulate, share and implement strategies, forecasts are used to anticipate whether the budgets will be met:

- Budgeting is generally focused on helping management think about the business strategically, identifying milestones and the resources necessary to achieve them, and informing employees of the business direction.
- Forecasts indicate whether the plan will be achieved and highlight areas where the organisation is falling short so that action can be taken to achieve the budget (CIMA, 2008).

In the KPMG and ACCA study introduced earlier, one of the major talking points was that executives should be incentivised appropriately based on flexed performance that takes account of changes within the organisation's market environment, rather than meeting budgeted targets (KPMG and ACCA, 2015).

This essentially highlights the key difference between budgets and forecasts in that budgets which are prepared prior to the fiscal year become outdated and partially lose relevance due to internal and external factors and it is necessary for a more up-to-date form of planning in the form of forecasts. This identification also points to the need to remunerate executives based on flexed conditions.

2.6. Budgeting and Forecasting in a South African Context

In a study of budgeting, forecasting and financial planning as a strategic tool in the Eastern Cape, Shaheed Abrahams (2012) conducted a survey based study on the manufacturing industry in the region. His findings showed that all companies within the sample prepare annual budgets which typically takes between two and four months to approve, followed by forecasts incorporating actual results and updated assumptions.

The majority of respondents felt that an update or revision of the annual budget is necessary due to a rapidly changing business climate and that this should be supported by tools and planning systems. It is interesting to note that in line with a long-term financial planning approach, 60% of the respondents indicated that they made use of specialist financial planning software while the remainder used spreadsheets. All respondents indicated that they used variance analysis to measure budget and forecast accuracy.

The study concluded by noting that all respondents in the sample indicated that budgeting and forecasting information provides direction and keeps the organisation competitive (Abrahams, 2012).

2.7. Agility and Rolling Forecasts

Rolling forecasts were one of the items introduced under Better Budgeting.

In their report on why budgeting fails, one of the key guiding principles recommended by Horváth and Sauter (2004) is to abandon fixed budgets in favour of a continual planning process, the idea being that organisations should set direction not just through year end but continuously into the near future. Their recommendation to help balance short-term and medium-term thinking is by constantly focusing management on the next five quarters.

According to Horváth and Sauter, rolling forecasts accomplish two important things:

- Focuses management attention away from a purely year-end focus; and
- Creates the environment for targets to move as conditions change which in turn enables organisations to take advantage of unforeseen opportunities or mitigate unforeseen risks.

Interestingly, they identify that rolling forecasts force less detail which they see as a positive (Horváth and Sauter, 2004).

2.7.1. Agility

In his study based on Aberdeen's 2013 Financial Planning, Budgeting, and Forecasting survey, Nick Castellina (2013) talks to the need for agility in forecasting due to forecast accuracy being lost due to outdated data and changing scenarios. The survey illustrated the following as key pressures faced by organisations in planning, budgeting, and forecasting:

- Market volatility creating the need to dynamically account for change
- Rising operational costs
- Traditional budgeting and forecasting processes too timely and resource-intensive
- Corporate drive for growth
- Inability to trace business performance success to its critical components

He noted that the vast majority of respondents in the survey (435) listed market volatility as a major factor and that forecasts prepared in a given month may be based on outdated business conditions by the next month and that as time progresses the forecast becomes increasingly less accurate. (Castellina, 2013).

One of the key conclusions of his study is that organisations should automate the forecasting process using technology enablers such as business intelligence tools, financial planning tools, Enterprise Resource Planning and Enterprise Performance Management (introduced earlier) with a view to enabling data discovery and speeding up the forecasting process.

2.7.2. Rolling Forecast Definition

Rolling forecasts are defined as a financial estimate of likely future outcomes based on a set of existing assumptions and economic forecasts which continuously look a uniform distance into the future (Morlidge and Player, 2010).

CIMA defines rolling forecasts as:

“Plans or budgets that are continuously updated by adding a further accounting period when the earliest accounting period has expired. A rolling forecast is continually updated, whereby each time actual results are reported, a further forecast period is added and intermediate period forecasts are updated” (CIMA, 2005).

2.7.3. How Rolling Forecasts Work

In their 2013 paper on rolling forecasts, Zeller and Metzger identify that rolling forecasts provides a constant planning horizon based on a consistent flow of data originating from various departments within the organisation.

The organisation's management is required to identify key variables or metrics to forecast which focus on whether or not the organisation's strategy is succeeding thereby enabling management to respond quickly if required (Zeller and Metzger, 2013).

2.7.4. Guidelines to setting up Rolling Forecasts

As opposed to traditional budgeting, this is a decentralised process for which Zeller and Metzger (2013) outline the following key guidelines:

- **Focus on critical drivers and avoid excessive details**

Management should be careful in its selection of key metrics and focus on those which can allow corrective action to be taken.

This was also emphasised by Player (2009) who stated that organisations often confuse accounting detail with useful management information and highlighted that the more detailed pumped into plans, particularly non-critical items, the more variances need to be calculated and explained. It is crucial that managers determine the key factors which actually drive their business so that focus is accurately channelled.

- **Shift focus from accuracy to reasonable estimates**

Over-specifying accuracy wastes time and resources with only marginal improvement in reliability.

- **For key variables, avoid using prior year values as a base**

The objective should be to measure reality for key drivers and not projected goals. Applying a growth percentage to prior year values for instance is not the objective.

- **Ensure that the rolling forecast process is a continuous activity**

Player (2009) talks to finding the right timeline relevant to the business and not simply adopting a best practice of say, five quarters, for instance. He also advised the use of varying time horizons for different decisions which could be isolated by focusing on specific drivers.

- **Ensure that metrics are actionable and that management is able to adjust these to impact performance**

These metrics should point management in the correct direction for performance improvement.

2.7.5. Advantages of Rolling Forecasts

Zeller and Metzger (2013) introduced above conclude that the rolling forecast is a forward thinking and dynamic process which highlights changes in the organisation's critical variables for decision making to allow management to respond timeously and as a result can provide superior results over traditional budgeting. They also highlight the inclusion of Beyond Budgeting leadership practices discussed earlier in this paper.

The outcomes of the Aberdeen Group's 2013 Financial Planning, Budgeting, and Forecasting survey introduced via the study by Nick Castellina (2013) earlier in this report identify the following advantages for organisations who adopt rolling forecasts:

- They are twice as likely to have real-time updates to key financial metrics as organisations who don't.
- 50% of these organisations receive automated alerts via their rolling forecast systems based on internal business events which can trigger changes to forecasts.

Scenario Planning

Player (2009) talks to the enhancement of rolling forecasts to support scenario planning which management can adopt to identify possible future outcomes and their possible triggers. This is the ability to perform "what if" scenarios and change analysis.

Moore (2011) states that focusing on a range of situations is more important than being precise with just one.

Interrelation with other Management Control Systems

In their broad perspective analysis on the role of rolling forecasts, Liang and Ordasi (2015) found that rolling forecasts interrelate well with other control systems to support the organisation's objectives. They noted that rolling forecasts should be integrated with other control processes not operated in isolation (Liang and Ordasi, 2015).

Greater focus on strategic objectives

Liang and Ordasi (2015) also found that in line with the theme of rolling forecasts empowering lower level managers (decentralisation discussed under Beyond Budgeting earlier in the report) and requiring less detail than traditional budgets, resulting in greater focus being placed on the organisation's strategic objectives, mission and vision, and critical success factors (Liang and Ordasi, 2015).

2.7.6. Rolling Forecasts in a South African context

Seechoonparsad (2010) conducted a study in South Africa around the role of rolling forecasts in an uncertain environment and the changes to existing financial processes as a result, with specific focus on the banking industry. The research investigates whether the planning processes in banks have adapted to accommodate environmental uncertainty and explored whether banks have adopted rolling forecasts within their planning processes.

The research found that uncertainty in the environment did result in banks changing their financial planning processes but none of the respondents used rolling forecasts although some did adopt some of the principles of rolling forecasts. The report recommends that a strong change management component needs to be included in any project which involves adjusting the level of planning detail that the organisation is accustomed to and that rolling forecasts should be adopted for organisational direction and not as a basis for performance remuneration (Seechoonparsad, 2010).

2.7.7. Automation of Rolling Forecasts

In an article on replacing annual budgets with Business Intelligence Driver-Based forecasts De Leon, L., Rafferty, P. D. & Herschel, R. (2012) conduct an analysis of intelligence-supported, driver-based rolling forecasting.

They identify that business-intelligence driver-based forecasts offer an improved approach over traditional budgeting with the key strengths being:

- Alignment with data-driven management
- Adoption of non-static financial modelling techniques that are more responsive to the environment
- Exploitation of business intelligence technology

The article supports the view for driver-based planning discussed earlier in the literature review in that it supports greater flexibility for responding to uncertainty and also to allow for “what-if” scenario analysis. The report concludes that harnessing business intelligence technology streamlines the process and converts what is a tedious annual process with debatable value into a focused and efficient planning tool for management (De Leon et al., 2012).

In a 2015 publication on cost management and profitability focusing on the financial services sector, Ernst & Young emphasise the importance of having reliable, relevant and timely information on costs and profitability to stay competitive.

The report discusses how the automation of cost management and profitability analysis, once mature, provides organisations with an enhanced understanding of their costs and a better understanding of channel profitability, leading onto customer profitability. This inevitably leads to better organisational performance (Ernst & Young, 2015).

2.8. Cash Forecasting

In their research on cash flow management in Serbia, Milojević and Miletić (2014) describe cash flow management as one of the most important instruments for monitoring and controlling the normal functioning of the business, based on properly compiled cash flow statements and their interpretation. The research was performed via a survey of Serbian companies. The results suggested that businesses with continuous and seasonal profile cash needs tend to have better knowledge of the subject (Milojević and Miletić, 2014).

Their study identified that future cash flows are critical in the determination of the future market value of an organisation. Their findings showed that whilst organisations which were cash sensitive were well versed in cash flows, a significant portion of respondents did not understand its value and the study concluded that there is a greater need for professional education and literature on the topic of cash flows in the business context. (Milojević and Miletić, 2014)

Whilst significant literature on alternatives to traditional budgeting and forecasting exist, the majority talks to the relinquishment of detail in favour of agility and focus on key business drivers with regard to organisational performance from a primarily commercial perspective.

Very little literature talks to cash forecasting which differs from the core of traditional budgeting and forecasting metrics and which typically relies significantly on a full set of financials as well as additional supporting data to prepare. Further cash flow is seen more as a treasury focus hence less focus on the topic by the bulk of management research. However, as companies are increasingly including cash flow as an organisational target as well as the emerging popularity of free cash flow, I felt it necessary to include in this paper.

2.8.1. Definition

Cash flow forecasting is defined as the process of predicting cash flows with the purpose of managing the liquidity requirements of an organisation and provides management with the necessary information for making investment decisions. A good cash flow forecast identifies when cash is available, how much, and how long it is available for (Sawdon, 2007).

2.8.2. Purpose

In his research on the importance of cash flows over net income, Pablo Fernandez (2006) highlights the importance of cash flow as a key indicator of organisational performance by contrasting it against the common metric of net income which he concludes is somewhat of an arbitrary figure as it is obtained following the assumption of certain accounting hypothesis whereas cash flow is purely a single figure that is not subject to any personal criterion (Fernández, 2006).

In an article on cash flow statements for ACCA's Accounting and Business Magazine, Graham Holt (2010) explains that cash flow information provides critical insight into an organisation's ability to generate cash and its needs to utilise these cash flows. Cash flow statements are typically classified to relate to the operating, investing, and financing activities of the organisation (Holt, 2010).

- Cash flows from operating activities - primarily relates to the core revenue activities of the organisation and indicate its ability to repay loans, maintain operations, pay dividends and make investments without resorting to external funding.
- Cash flows from investing activities - represent the extent to which expenditures are made to generate future income.
- Cash flows from financing activities - predict the claims on future cash flows by providers of capital to the organisation.

2.8.3. Free Cash Flow

Definition

Free cash flow is defined as the cash flow generated by the core operations of the business after deducting investments in new capital (Koller, T., Goedhart, M. & Wessels, D., 2010).

CIMA's Official Terminology offers a broader definition of free cash flow as "cash flow from operations after deducting interest, tax, preference dividends and ongoing capital expenditure, but excluding capital expenditure associated with strategic acquisitions and/or disposals and ordinary share dividends" (CIMA, p91, 2005).

Relevance to performance evaluation

An increasingly important metric for measuring organisational performance is Shareholder Value Analysis (SVA) which was developed by Rappaport in 1998 and is used to evaluate the organisation as a whole as well as assess alternative strategic decisions. The calculation of Shareholder Value Analysis is highly dependent on the expected value of future operating free cash flows (CIMA, 2009).

2.8.4. Challenges with Cash Forecasting

In a paper on cash flow forecasting, Blumen and Moses (2006) outlined the frustration that in order to perform cash flow forecasting, heavy reliance is placed on internal information from a variety of data sources as well as external information which is difficult to automate. They suggest the use of business intelligence solutions to:

- Integrate source data from a number of different sources
- Maintain a history of information to support trend analysis which drives forecast models

The paper highlights the extent of estimates required from various sources in order to support a business intelligence solution. Internally, this also requires significant changes to an organisation's existing financial reporting processes due to the level of granularity required to support cash flow forecasting requirements (Blumen and Moses, 2006).

2.9. Conclusion

This chapter considered the issues and limitations of traditional budgeting and forecasting and explored the relationship between the two. It is evident that budgeting despite its limitations is still used by many organisation as a means of management control. However, despite its theoretical link to strategy, a key limitation of budgeting being its likelihood of obsolescence, makes it unresponsive to the changing environment and thus inappropriate for use in strategic decision-making within a constantly changing operating environment.

Alternative approaches to budgeting were introduced with agile approaches expanded upon. Detailed focus was placed on rolling forecasts and the strategies for their successful adoption. This was supported by a discussion on the automation of rolling forecasts which is an increasingly important factor in their adoption given technological advancements in this area.

Cashflow forecasting was discussed with specific focus on free cash flow forecasting due to its emerging use as a key performance measure within larger organisations and within a South African context was discussed in line with the geographical focus of this research.

3. CHAPTER 3 : METHODOLOGY

Budgets have both an ex-ante and an ex-post use (Joshi, P. L., Jawahar, A. M. & Wayne, G. B., 2013).

Traditional ex-ante uses include:

- They are used as financial planning tools, estimates of future outcomes or forecasts that strategy team has agreed upon.
- They are used for the communication of expectations to business units or employees and thus to co-ordinate activities across different areas of the organisation.
- They are used to coordinate the allocation of resources within the organisation and often serve as formal authorisation to a manager to spend a given number of funds on specific activities.

Traditional post-ante uses include:

- They can be used as a framework of responsibilities and benchmarks against which actual results will be compared against for unit and managerial performance evaluation and reward.

As evident from above, there are two main purposes of budgets, namely:

- (1) Planning activities; and
- (2) Performance evaluation

The focus of this paper is around budgeting for planning activities, otherwise known as forecast planning. As such, the focus is one of ex-anti, specifically with respect to planning in response to a changing business environment.

Whilst it is safe to assume that many organisations would be unwilling to shift focus away from budgeting for the purposes of management control, it is likely that agile forecasting would have to be conducted in addition to budgeting for management control and a significant consideration of the study would be to determine whether the effort of agile forecasting in addition to budgeting for management control would be worthwhile.

3.1. Introduction

The purpose of this chapter is to present an overview of the various research methods applied in this study. The questionnaire design, sample selection, data collection techniques and an account of the actual response rate are covered in this chapter.

3.2. Research Design and Rationale

1. Will traditional budgets still be relevant if granularity is dropped in favour of focusing primarily on key business drivers?

A quantitative approach will be used for this study on the relevance of planning budgets which are partially modelled at a less detailed level as opposed to a granular level.

Under the assumption that traditional budgets are detailed and time consuming, this questions the level of detail expected of traditional budgets by respondents within South Africa in order for them to still consider these budgets reliable and useful.

2. How much of granularity can be overlooked whilst still maintaining the value of the forecasting process?

A quantitative approach will be used for determining the optimum level of detail at which budgeting for planning purposes is carried out. For instance, it would be expected that revenue and cost of sales line item details on an income statement would be modelled in detail as these would typically have a significant impact on business performance.

Similarly, trade receivables and cash on a balance sheet would be modelled in great detail as it leads to cash forecasting which is critical to a business's planning function. To provide an alternate point of view, this survey seeks to understand the perception of respondent's views of factors which may be considered necessary from an accounting point of view but not necessarily directly relevant to performance evaluation or commercial analysis of the operating environment.

3. What are the factors influencing forecast accuracy and considerations around free cash flow with respect to agile forecasting?

A quantitative approach would be adopted for this study for which the intention is to identify the controls used to test and iteratively refine the accuracy of agile forecast models.

Due to the challenging requirement of free cash flow forecasting, this study also considers the sample population's perception to agile cash flow forecasting, its potential value if not perfectly accurate, and the approaches which could be utilised to improve its accuracy.

4. Are there specific business types which agile forecasting would be best suited to?

Whilst this is an exploratory study, due to time limitations, a quantitative approach will also be adopted to try and identify which business types are better suited to employ an agile forecasting approach.

For instance, for an income statement of a manufacturing entity, cost of sales would be paramount but for a service entity focus on operating expenditure may be considered more important depending on the type of costing methodology employed by the business.

Particular focus would be placed on those participants who have already implemented and thus experienced agile forecasting within their respective organisations.

3.3. Study Area

The study area will be South Africa due primarily to it being my country of residence but also due to its mature and diverse industrial landscape which covers a broad range of industries, the majority of which already employ budgeting and forecasting practices. Furthermore, the quality of accounting practitioners in South Africa is of a high standard with South African qualified Chartered Accountants considered of a particularly high quality throughout the world.

3.4. Target Population

The target population shall comprise of:

- Finance professionals currently involved in budgeting and/or forecasting within industry.
- Financial consultants with a history of implementing budgetary or forecasting systems for industry.
- Experienced partners and directors of big 4 audit firms.

If possible, there would also be an inclusion of operations managers who have been involved in the preparation of budgets at a detailed level to provide an alternative view from a pure financial one.

The aim will be for the majority of respondents to hold a professional accounting qualification such as Chartered Accountants (designation CA (SA)) and Chartered Management Accountants (designation ACMA, CMGA or FCMA, CGMA).

3.5. Sampling Techniques

The sample population for this study is finance professionals at the organisations with annual revenues greater R100m. Any respondent from an organisation with annual revenue less than R100m is removed from the sample.

A stratified sampling technique shall be employed whereby the primary stratification of the sampling frame is by broad industry group:

- Manufacturing
- Supply Chain and Distribution
- Retail Distribution
- Media
- Financial Consulting
- Banking
- FMCG
- Public Services
- Auditing
- ICT
- Construction
- Healthcare
- Telecommunications

3.6. Sampling Size

The aim was to sample at least 50 respondents spread across all the industry sectors involved in budgeting for forecasting and financial planning purposes. A total of 101 questionnaires were sent out and a total of 60 suitable responses were obtained from companies with revenue greater than R100m per annum. A copy of the questionnaire is enclosed in Appendix 1.

3.7. Research Instruments

Questionnaires shall be used for all research questions as a purely quantitative approach is adopted.

3.8. Pre-testing

In order to pre-test the survey, 20 aspiring professional accountants were sampled. The sample consisted of a small portion of SAICA (South African Institute of Chartered Accountants) article clerks and a larger portion of CIMA part qualified candidates currently working in industry.

The aim for a higher proportion of aspiring CIMA candidates was due to the greater focus of the CIMA syllabus towards budgeting and forecast and the general trend of CIMA candidates of being involved within these disciplines, even during the attainment of practical experience necessary for the professional qualification.

By analysing the responses of the afore-mentioned target audience, the survey was modified to provide more context to the questions initially distributed as it was discovered that not all pre-survey participants were familiar with agile forecasting. It also emerged that not all participants had exposure to concepts such as intercompany transactions (a component of group accounting). As a result, explanatory case studies were added to provide context to the questions.

Upon analysis of results, it was found that the results to certain questions did not adequately correspond to research objectives and these questions were subsequently modified in order to correspond to the research objectives and ensure that meaningful insights could be obtained from the final survey results.

3.9. Validity and Reliability

Content Validity

In order to ensure that the measures on the survey questionnaire are adequate in terms of the concept and are representative in terms of the research topic, they have been assessed by two management accounting academics from South African academic institutions who represent my expert panel. One academic focuses on CIMA studies whilst the other focuses on management accounting from an MBA perspective.

Criterion-Related Validity

To ensure concurrent validity, the aim was to achieve an even split between Chartered Accountants (CA (SA)) who are typically known for focusing on management controls due to their audit background and Chartered Management Accountants who are typically more forecast planning orientated as a result of CIMA studies.

The mix also correlates to the contrasting theme of traditional budgeting (via the Chartered Accounting academic focus) and alternative budgeting and forecasting approaches (via Chartered Management Accounting academic focus).

3.10. Data Collection Techniques

Field data collection for the quantitative study relating to all four research questions were conducted through questionnaires using QuestionPro which collects actionable data and allows for detailed analysis of results.

Prior to the distribution of questionnaires, each respondent was contacted by the researcher either telephonically or through social media to introduce the study and explain its objectives.

In addition to the telephonic communication, an email was sent to willing respondents shall detailing the reasons for the study. A disclaimer relating to the confidentiality of information, clarity that the respondents were in no way obliged to answer the survey, and commitment that they could stop the survey at any point was included both on the email as well as on the questionnaire.

The questionnaire provided the option for participants to provide their email addresses should they wish to receive the outcome of this research. All participants who participated in the survey indicated that they wish to receive the outcomes of this research.

3.11. Data Analysis

The key consideration within the framework would be the justification of an agile forecasting approach to strategic planning as either an alternative to budgeting or in conjunction with budgeting. I anticipate that the overwhelming majority of respondents would feel adversely about replacing the standard budgeting process as its uses in terms of setting out targets for managerial and unit performance would be difficult to replace particularly as a result of its consistency.

I however anticipate that respondents would be open to the idea of agile forecasting to be used in conjunction with standard budgeting as it is a more relevant form of financial planning in a constantly changing operating environment and as a result also anticipate that respondents would see it as a comfortable replacement for existing reforecasting processes (as opposed to the budgeting process).

The survey questions have been structured in a manner to allow cross-evaluation of answers from questions across the survey and not consigned to a single research question.

As mentioned earlier there would be cross-analysis required based on respondent industry and their appetite for agile forecasting. There would also be focus on existing adopters of agile forecasting and their perception towards its use.

Further cross-analysis includes the perception of Chartered Accountants to agile forecasting versus the perception of Chartered Management Accountants.

3.12. Logistical and Ethical Considerations

I have covered the costs of this research on my own. The cost was primarily the use of QuestionPro (www.questionpro.com) which offers a survey package that suits my research requirements over the course of the research including pilots and initial surveys at a cost of \$120 (R1,560 at current exchange rates).

Due to the competitive nature of large organisations from which respondents shall be selected, specific budgeting and forecasting practices may be of a sensitive nature. As such, questions within the survey cannot explore too deep from an individual respondent's perspective as confidential information around the respective organisation's strategic approach to budgeting may be exposed.

A sanitised summary of results are included in the study to exclude the possibility of any competitive information being released knowingly or unknowingly. The summary is sanitised by removing participant names and potential organisation related information such as email addresses.

3.13. Conceptual Framework and Measurement of Variables

The variables measured in the questionnaire include the budgetary process type, the intention of the forecasting process, the importance of being responsive to the organisations environment, the organisation type, and the detail at which specific items should be forecasted

Measurement of the Variables in the Research

Independent Variables	Measurement
Confirmation of whether respondent is employed by an organisation with annual revenue > R100m	yes; no
Number of business variables considered critical to organisational performance	Numeric
Percentage of organisation's trading profit impact by critical variables	Percentage
Existing use of agile forecasting	yes; no

Opinion of whether detailed variance analysis is necessary for non-key items	yes; no
Opinion of whether free cash flow can be forecasted in an agile manner	yes; no
Opinion of agile forecasting within respondent's organisation	valuable; not valuable
Opinion of agile forecasting within respondent's industry	valuable; not valuable
Dependent Variables	Measurement
Respondent's age	Numeric
Respondent's job title	number of respondents per job title
Respondent's years of experience in financial planning	Numeric
Respondent's qualifications	number of respondents per qualification
Organisation's broad industry group	number of respondents per industry group
Exchange listed status of respondent's organisation	listed; not listed
Respondent's opinion of industry most suited to agile forecasting	number of respondents per industry group
Moderating Variables	Measurement
Time of existing budget process	time in months
Focus of existing budgeting process	strategic; management control
Opinion of whether intercompany transactions are necessary when forecasting	yes; no
Opinion of whether purely accounting entries are necessary for forecasting	yes; no
Level of accuracy expected from an agile free cash flow	high; medium; low
Value of a non-accurate free cash flow forecast	high; medium; low
Value of iteratively tweaking forecast model	yes; no
Mediating Variables	Measurement
Opinion of whether detail within traditional budgets is necessary for performance tools	yes; no
Whether an organisation's existing budget provides for non-key variances	yes; no
Preference between straight-forward or flexed approach to testing accuracy	straight-forward; flexed

3.14. Conclusion

This chapter outlined the research strategy applied to this project which was a quantitative approach. The design of the questionnaire, sample selection and extent of responses was also discussed in this chapter.

4. CHAPTER 4 : EMPIRICAL FINDINGS AND PRESENTATION OF RESULTS

4.1. Introduction

This chapter presents an overview of the respondent's biographical details together with high level details of the organisations they work for. This is followed by the findings of the research objectives based on a survey conducted to assess the perception towards agile forecasting of individuals from a broad range of industries in South Africa. A combination of figures and tables are used to present the findings which are based on the descriptive summary of the survey responses.

4.2. Biographical and Organisational Details of Respondents

The first part of the questionnaire consisted of seven questions to obtain biographical information of the respondents such as age, job title, number of years' experience in budgeting and forecasting, qualifications, industry group of employer, whether the employer is listed on an exchange and whether the employer's annual revenue exceeds R100m.

a. Current age in years

A total of 60 participants completed the questionnaire. According to their age distribution, the mean age was 34.7 years with a standard deviation of 6.3 years. Further, about two thirds of the participants were 35 years or younger (Figure 4.1).

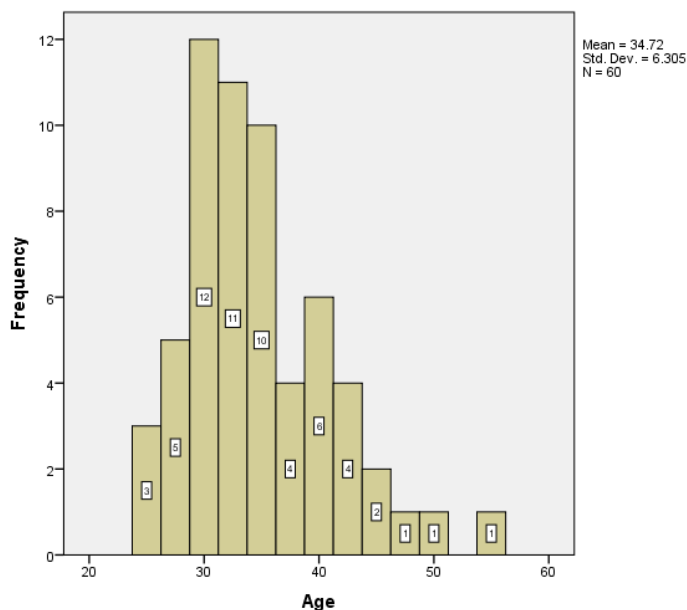


Figure 4.1 Distribution of age of participants

b. Current job title

Table 4.1 summarises the distribution at work of the participants. The highest frequency of participants were financial managers (18.3%), financial analysts (8.3%), financial directors (8.3%), and management accountants (8.3%) respectively. All these groups are typically involved in budgeting at forecasting to a large degree.

Of the list of respondent titles only the following are not strongly likely to be directly involved in budgeting and forecasts in their current positions:

- Financial accountant
- Commercial analyst
- Partner (Big 4)
- Senior financial accountant
- Rest of Africa Finance Change
- Acting Executive Finance Own Accounts
- CEO
- Business Intelligence Analyst
- Assistant Audit and Technical Manager
- Head of Advisory

The afore-mentioned list comprises makes up 26.7% that are not highly likely to be involved with forecasting, suggesting that the remaining respondents (73.3%) are highly likely to be actively involved in budgeting and forecasting.

Table 4.1: Distribution of Position at work

Position	Frequency	Percent
Financial Manager	11	18,3%
Financial Analyst	5	8,3%
Financial Executive/Director	5	8,3%
Management Accountant	5	8,3%
Financial Accountant	4	6,7%
Commercial Analyst	3	5,0%
CFO	3	5,0%
Financial Controller	3	5,0%
Head of Finance	2	3,3%
Partner (Big 4)	2	3,3%
Snr Financial Manager	2	3,3%

Commercial Manager	1	1,7%
Senior Financial Accountant	1	1,7%
Rest of Africa Finance Change	1	1,7%
Acting Executive Finance Own Accounts	1	1,7%
Director (Big 4)	1	1,7%
Chief Strategy Officer	1	1,7%
CEO	1	1,7%
Business Intelligence Analyst	1	1,7%
Senior Business Manager	1	1,7%
Senior Manager - Management Consulting	1	1,7%
Assistant Audit and Technical Manager	1	1,7%
Treasury Manager	1	1,7%
General Manager	1	1,7%
Consolidation Manager	1	1,7%
Head of Advisory	1	1,7%
Total	60	100

c. Years of experience in budgeting, forecasting, or financial planning

With regards to years of experience in budgeting, forecasting, or financial planning, it was found that half of the participants had five or more years of experience (Figure 4.2).

90% of respondents had 2 or more years of experience in budgeting and forecasting while a sizable number (65%) had 4 or more years of experience.

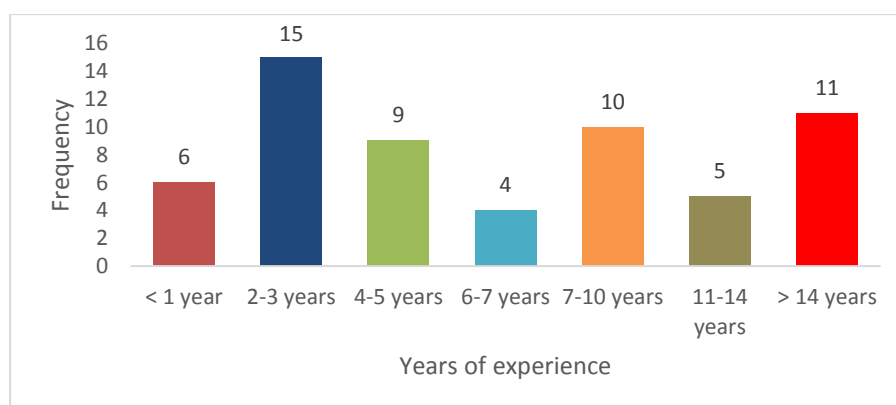


Figure 4.2: Frequency distribution of forecasting experience in years

d. Qualifications

Of the 60 respondents, 77% belong to professional accounting bodies with 60% of total respondents being chartered accountants (CA(SA)), 15% of total respondents being CIMA members, and 1 respondent belonging to SAIPA.

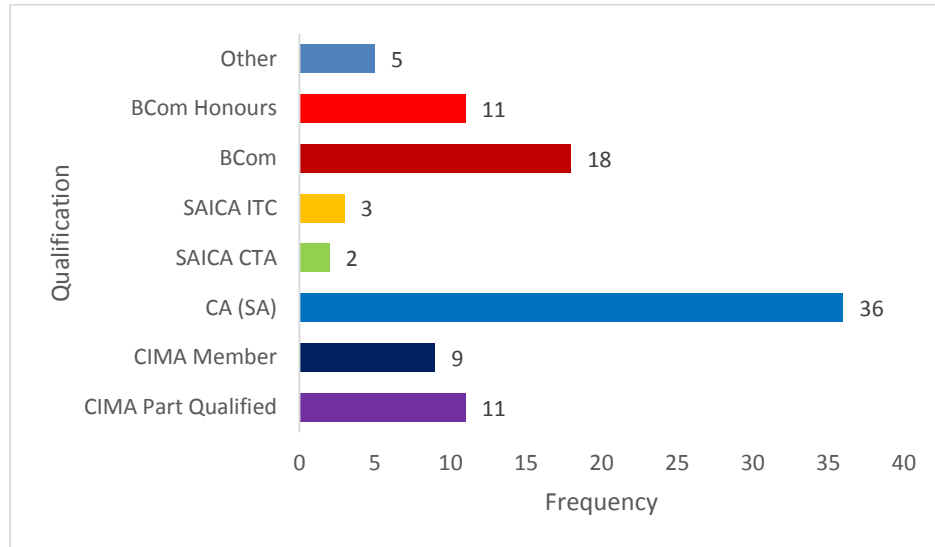


Figure 4.3: Academic qualifications/professional associations

e. Broad industry group of employer

It was found that a fifth (22%) of the participants were from the media industry followed by supply chain and distribution (17%) and manufacturing (13%) respectively (Figure 4.4).

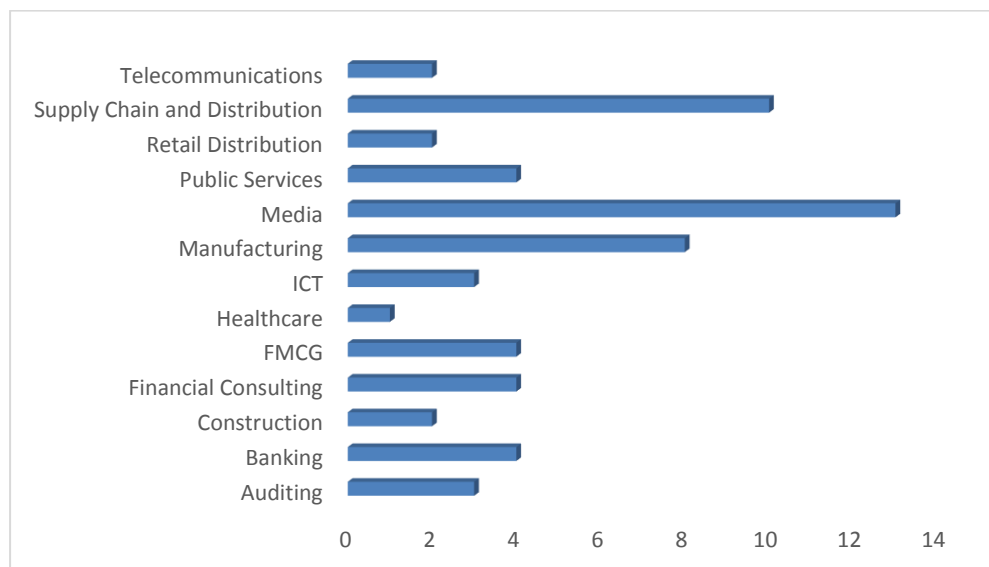


Figure 4.4: Organisation's broad industry group

f. Determination whether employer/employer group is listed on an exchange

According to figure 4.5, 62% of respondents worked for organisations which are listed on an exchange with a third of the companies not listed. This indicates that the majority of respondents belong to fairly large organisations. Large organisations typically engage in detailed budgeting and forecasting processes supporting the view that the majority of respondents are involved in financial planning at a relatively high level of intensity.

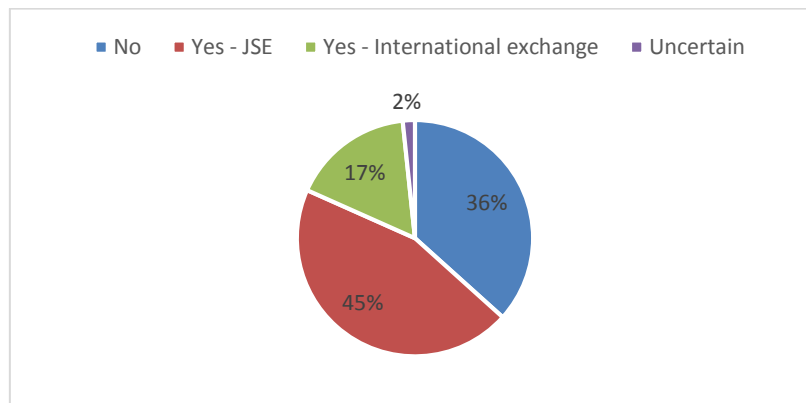


Figure 4.5: Exchange listed

The conclusions of biographical details from respondents are as follows:

- Completed questionnaires were received from 60 respondents where the organisations' annual revenue exceeded R100m.
- The questionnaires were completed by experienced practitioners with 65% of respondents having 4 or more years of experience in budgeting and forecasting.
- All respondents have achieved a tertiary qualification with 77% having a professional accounting qualification.
- Respondents from a variety of industries were surveyed although the broad majority of responses centred around media, FMCG, ad supply chain and logistics.
- 62% of the respondents were from organisations which were listed on a trade exchange.

4.3. Achievement of the Respective Study Objectives

4.3.1. Research Question 1

Will traditional budgets still be relevant if granularity is dropped in favour of focusing primarily on key business drivers?

a. **How many business variables do you consider as critical to impacting your organisation's performance?**

Respondents were asked how many key factors (variables) are responsible for impacting business performance. A third of the participants (37%) indicated that between 5-6 variables are critical whereas 25% of the participants reported that greater than 10 variables are critical to impacting their organisation's performance (Figure 4.6).

Therefore, 65% of respondents feel that their business performance is impacted by 6 or less key variables.

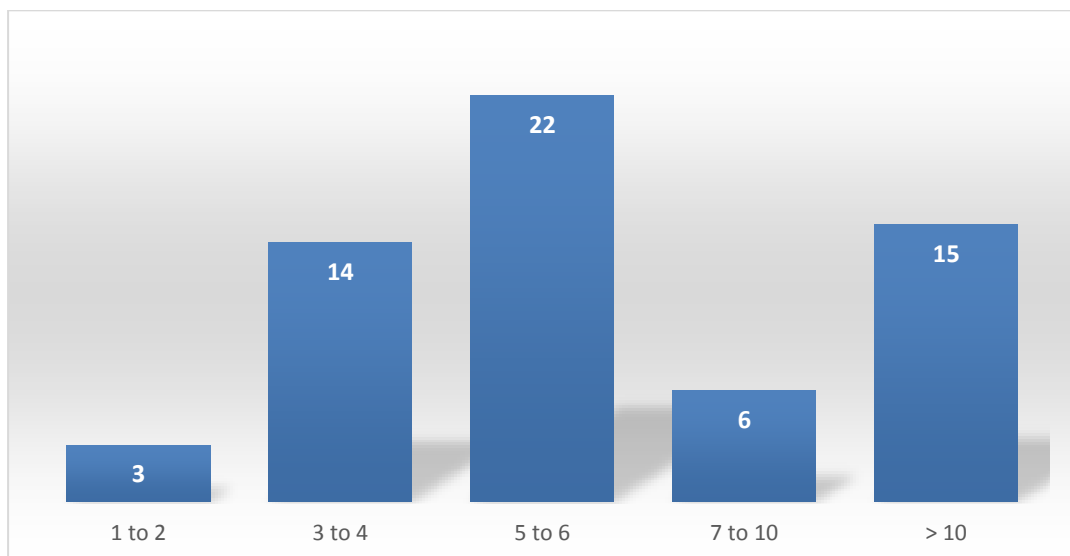


Figure 4.6: No of business variables as critical to impacting your organisation's performance

Table 4.2 shows the frequency of stated critical variables by respondent industry.

Some interesting observations from this table are as follows:

- The majority of supply chain and distribution responses stated between 5-6 critical variables.
- Manufacturing centred close to a median of 5-6 critical variables.
- Banking majority was greater than 10 critical variables

- Media was the only industry where frequency was observed across all ranges of critical variable categories.

Table 4.2: Frequency of stated critical variables by respondent industry

Industry	Frequency of Stated Critical Variables					Total
	1 to 2	3 to 4	5 to 6	7 to 10	> 10	
Auditing		1	1	1		3
Banking			1		3	4
Construction		1	1			2
Financial Consulting			2	1	1	4
FMCG		2	1		1	4
Healthcare			1			1
ICT		2	1			3
Manufacturing	1	2	3		2	8
Media	1	3	4	2	3	13
Public Services	1	1	1		1	4
Retail Distribution				1	1	2
Supply Chain and Distribution		1	5	1	3	10
Telecommunications		1	1			2
Total	3	14	22	6	15	60
Percentage	5.0%	23.3%	36.7%	10.0%	25.0%	

- b. **What percentage of your organisation's trading profit do you think is impacted by the key variables referred to in the previous question?**

More than a third of the participants mentioned that >70% of the organisation's trading profit is impacted by the number of variables that was indicated in the question above. (Figure 4.7).

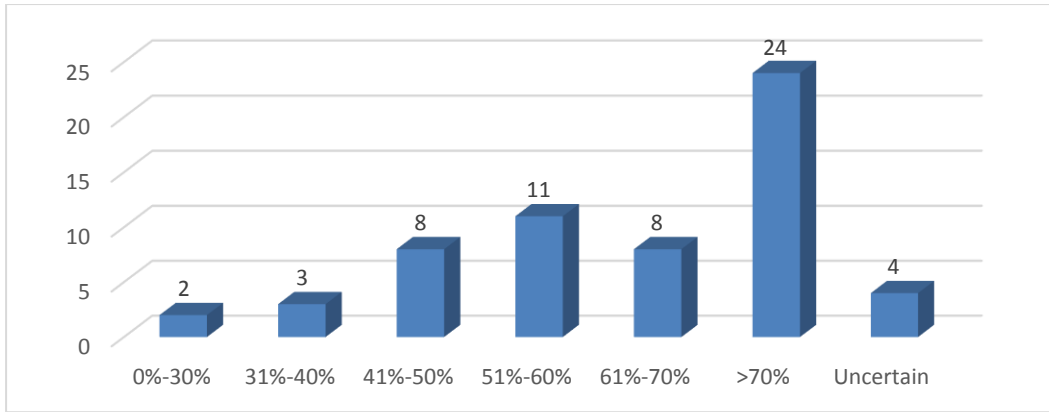


Figure 4.7: Percentage of organisation's trading profit impacted by the key variables

Table 4.3 shows a cross-tabulation of the responses to the number of critical variables and the responses to the percentage of trading profit that participants felt these critical variances impacted.

It is observed that the highest correlations exist between the following crosses:

- Of those who cited 3-4 critical variables, the majority stated that these impact more than 70% of trading profit.
- Of those who cited 5-6 critical variables, the majority stated that these impact more than 70% of trading profit.
- Of those who cited 7-10 critical variables, the majority stated that these impact more than 70% of trading profit.

Table 4.3: Cross-tabulation between the number of critical variables and the percentage of trading profit they impact

	0%-30%	31%-40%	41%-50%	51%-60%	61%-70%	>70%	Uncertain	Row Totals	Mean
1 to 2	0	0	1	0	0	1	1	3	5.333
	0%	0%	33.33%	0%	0%	33.33%	33.33%	5%	
	0%	0%	12.5%	0%	0%	4.17%	25%		
3 to 4	2	1	3	3	0	4	1	14	4.000
	14.29%	7.14%	21.43%	21.43%	0%	28.57%	7.14%	23.33%	
	100%	33.33%	37.5%	27.27%	0%	16.67%	25%		
5 to 6	0	1	3	3	6	9	0	22	4.864
	0%	4.55%	13.64%	13.64%	27.27%	40.91%	0%	36.67%	
	0%	33.33%	37.5%	27.27%	75%	37.5%	0%		
7 to 10	0	0	0	1	1	4	0	6	5.500
	0%	0%	0%	16.67%	16.67%	66.67%	0%	10%	
	0%	0%	0%	9.09%	12.5%	16.67%	0%		
> 10	0	1	1	4	1	6	2	15	5.067
	0%	6.67%	6.67%	26.67%	6.67%	40%	13.33%	25%	
	0%	33.33%	12.5%	36.36%	12.5%	25%	50%		
Column Total	2	3	8	11	8	24	4	60	
Column Percent	3.33%	5%	13.33%	18.33%	13.33%	40%	6.67%	100%	
Mean	2.000	3.333	2.625	3.545	3.375	3.417	3.250		

c. How long does your organisation's existing budget process take from commencement to finalisation?

Most of the participants highlighted that the budget process takes two or more months from commencement to finalisation (72%) (Figure 4.8).

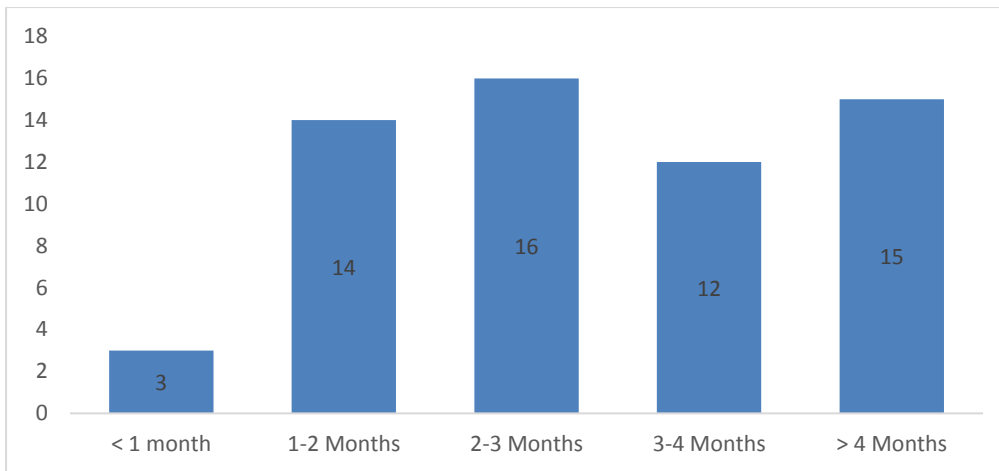


Figure 4.8: Time budget process take from commencement to finalisation

Figure 4.9 shows the frequency of time to complete the budgeting process in relation to the number of critical variables cited as impacting organisational performance. It is interesting to observe that 5-6 critical variables are the most prominent for all stated budget process times except greater than 4 months where the number of critical variables cited is greater than 10.

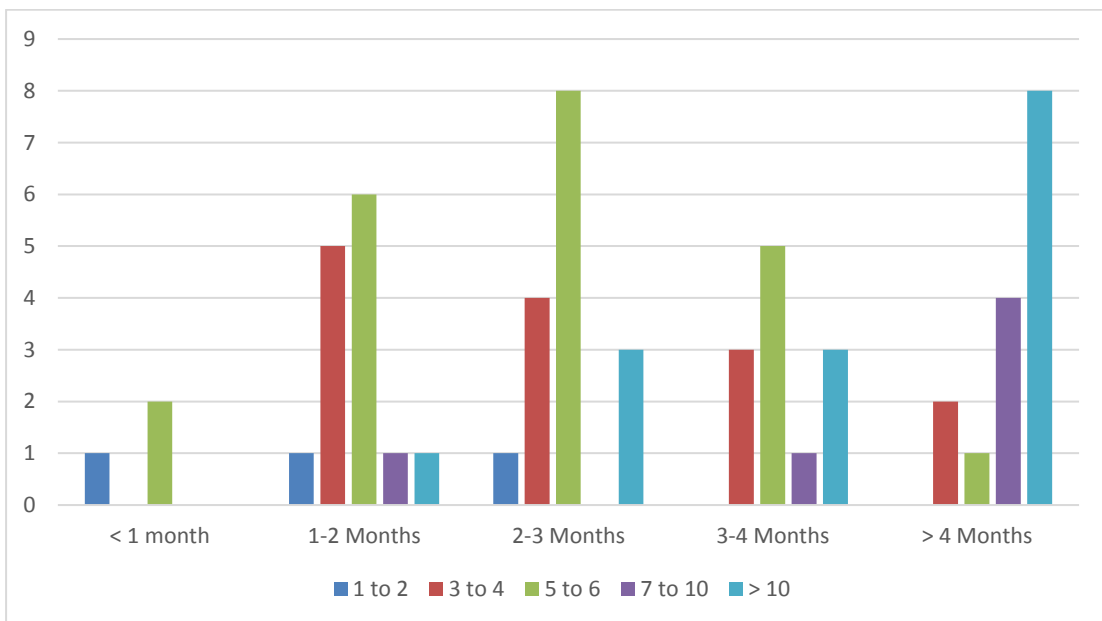


Figure 4.9: Frequency of time to complete budgets in relation to cited number of critical variables

- d. **Within your organisation, do you feel that your budgeting process is geared more towards strategic direction or more towards management control?**

More than half of the participants (55%) mentioned that the budgeting process is geared more towards management control (Figure 4.10).

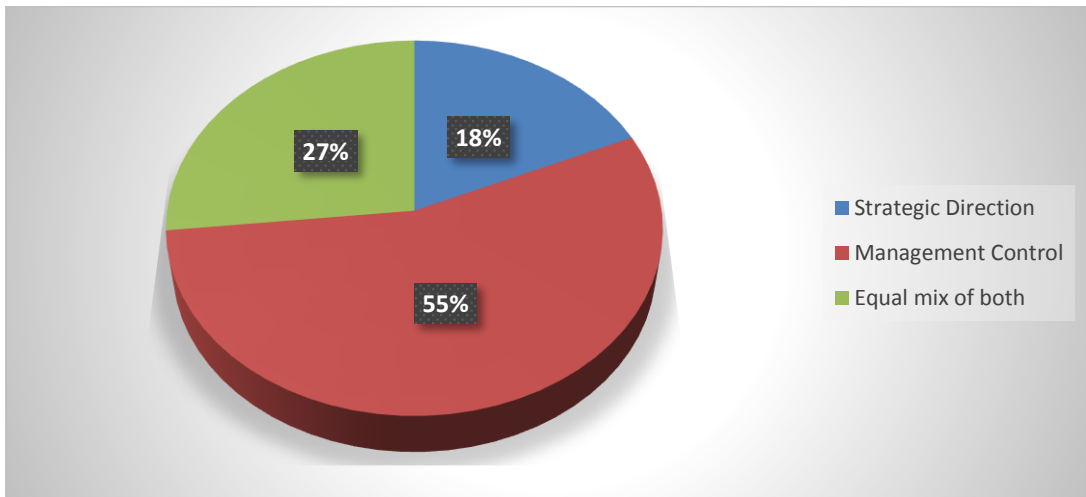


Figure 4.10: Strategic direction of budgeting process of the organization

Figure 4.11 shows the frequency distribution of the number of critical variables in relation to the strategic focus of the budget as outlined above in Figure 4.10. Some organisations where budgets are geared towards strategic focus have between 3 to 6 critical variables.

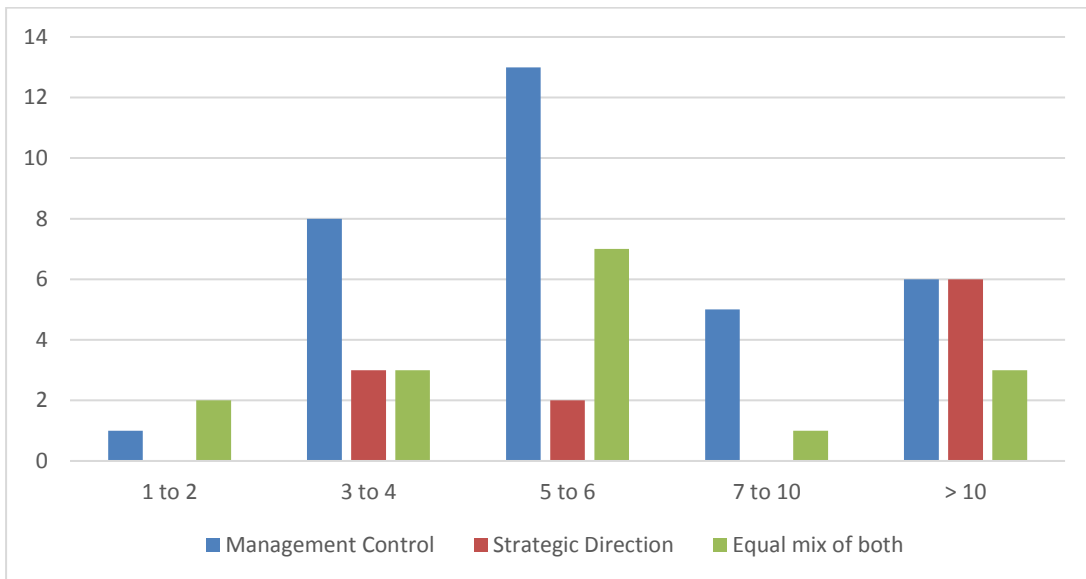


Figure 4.11: Strategic direction of budgeting process in relation to the number of critical variables

- e. Do you currently employ any form of agile forecasting in your organisation? If yes, has it replaced the traditional budgeting process for strategic decision-making? For management control?

According to figure 4.12, more participants (60%) indicated that their organisation currently does not employ any form of agile forecasting.

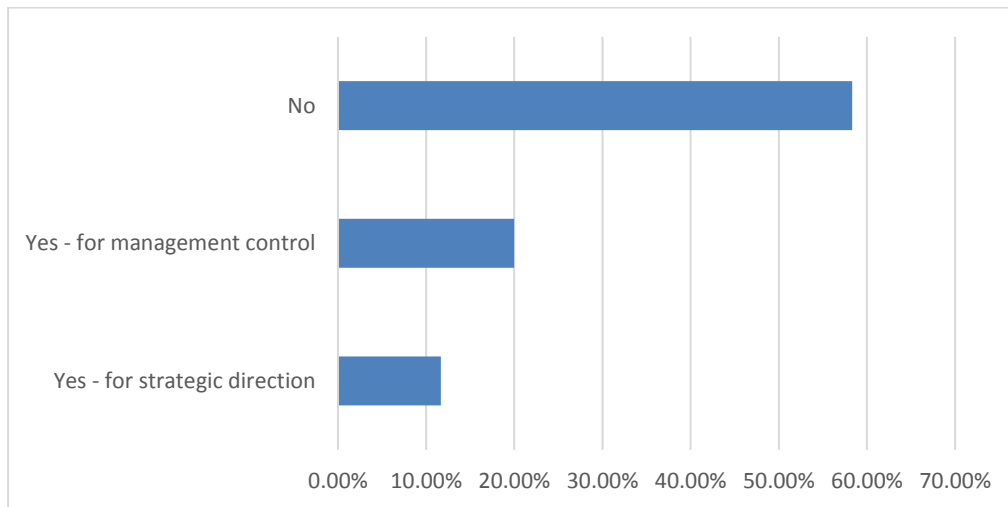


Figure 4.12: Respondents already employing agile forecasting within their organisations

Of the respondents who listed already adopting agile forecasting within their organisations, Figure 4.13 shows the distribution of the number of variables cited as critical by the respondents.

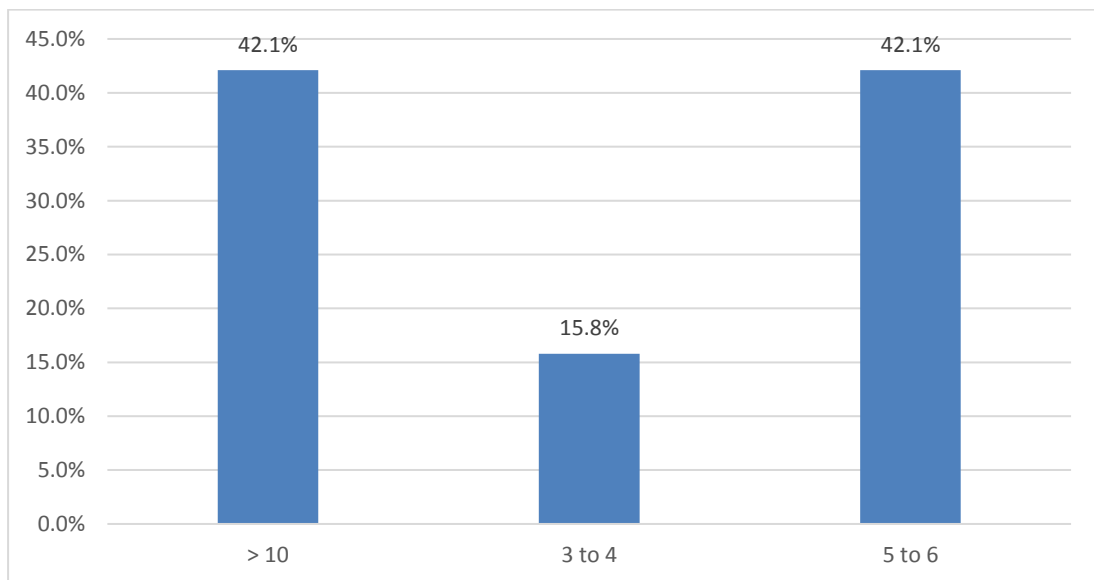


Figure 4.13: Distribution of cited critical variables of respondents already employing agile forecasting

4.3.2. Research Question 2

At what point within the budgeting process could detail be overlooked?

a. **In your opinion, is detail within traditional budgets necessary for performance tools such as variance analysis within your organisation?**

The clear majority of participants (87%) positively reported that detailed traditional budgets are necessary for performance tools such as variance analysis within the organisation (Figure 4.14).

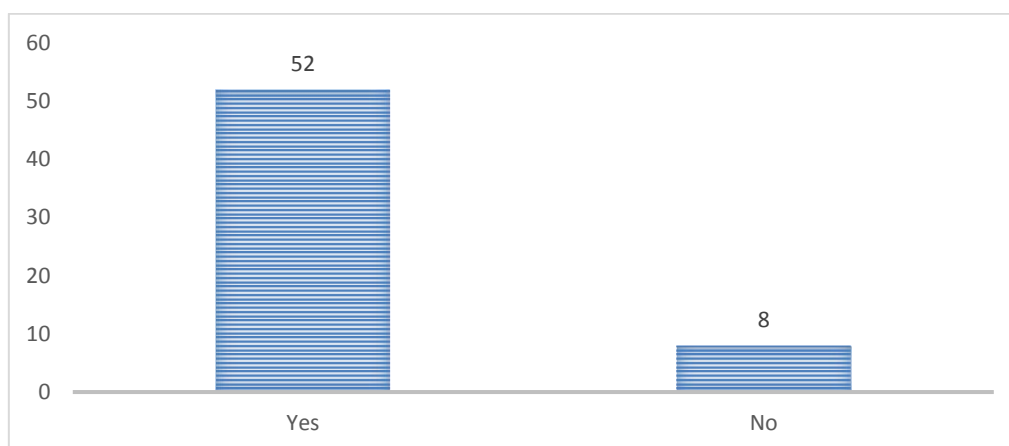


Figure 4.14: Traditional budgets necessary for performance management tools within the organisation

Table 4.4 shows the distribution of respondents who feel that detail is necessary for performance tools versus those who don't in relation to their forecasting experience in years.

Table 4.4: Perception of detail necessary for performance tools in relation to years of experience in forecasting

Experience	Detail necessary for performance tools		
	No	Yes	Total
< 1 year	1	5	6
2-3 years	2	13	15
4-5 years		9	9
6-7 years	1	3	4
7-10 years	3	7	10
11-14 years		5	5
> 14 years	1	10	11
Total	8	52	60

b. **Does your organisation's existing budget process provide for non-key variances?**

Just over half of the participants (54%) positively indicated that organisation's existing budget process provides for non-key variances followed by over a third

(38%) who indicated that their budget process does not focus on non-key variances (Figure 4.15).

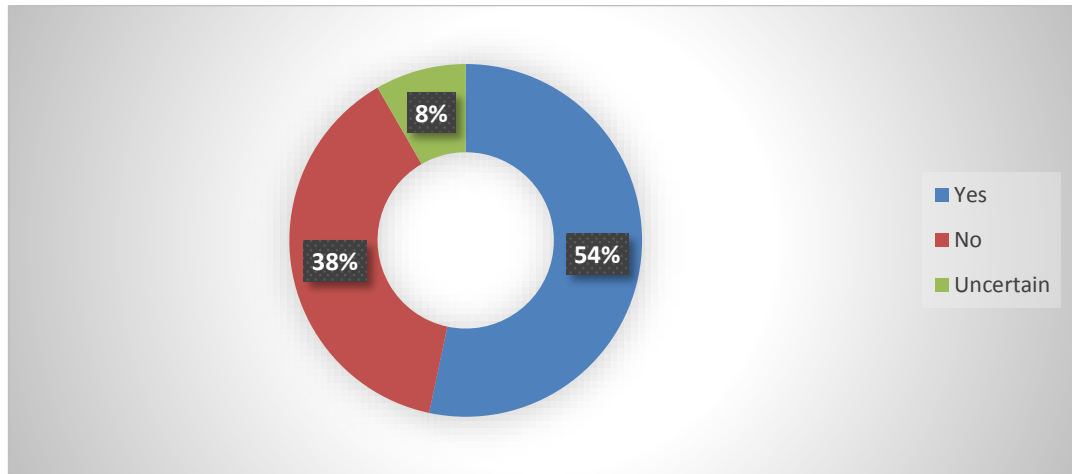


Figure 4.15: Organisation's existing budget process provides for non-key variances

- c. **In your opinion, do you think that detailed variance analysis is necessary for non-key items? Or do you feel that variance analysis conducted at a high level is sufficient for non-key variances?**

When asked whether detailed variance analysis is necessary for non-key items or whether variance analysis conducted at a high level is sufficient for non-key variances, 68% of the participants reported that a high-level variance analysis is sufficient for non-key variances (Figure 4.16).

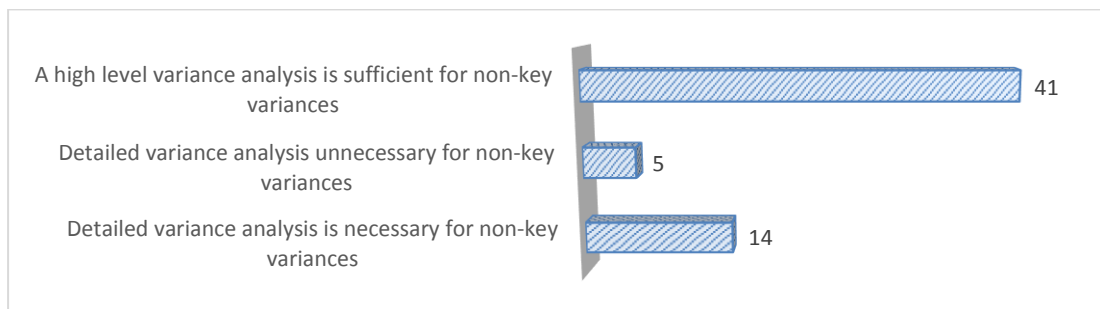


Figure 4.16: Perception whether detailed variance analysis is necessary for non-key items.

Table 4.5 shows a cross-tabulation between the respondent's views on whether detailed variance analysis is necessary for non-key variances and their responses to the percentage of trading profit impacted by key variables (discussed earlier in the findings).

Of the respondents who indicated that critical variables impact 51% or more of trading profit, 52% (31 respondents) are of the opinion that only a high-level variance analysis is sufficient.

Table 4.5: Cross-tabulation between the need for detailed variance analysis for non-key variances and responses to the % of trading profit

% of Trading Profit Impacted by Key Variables	Detailed variance analysis necessary	Detailed variance analysis unnecessary	High level variance analysis sufficient	Row Total
0%-30%	1	0	1	2
	50%	0%	50%	
	7.14%	0%	2.44%	
31%-40%	1	0	2	3
	33.33%	0%	66.67%	
	7.14%	0%	4.88%	
41%-50%	2	1	5	8
	25%	12.5%	62.5%	
	14.29%	20%	12.2%	
51%-60%	3	1	7	11
	27.27%	9.09%	63.64%	
	21.43%	20%	17.07%	
61%-70%	0	1	7	8
	0%	12.5%	87.5%	
	0%	20%	17.07%	
>70%	6	1	17	24
	25%	4.17%	70.83%	
	42.86%	20%	41.46%	
Uncertain	1	1	2	4
	25%	25%	50%	
	7.14%	20%	4.88%	
Column Total	14	5	41	60
Column Percent	23.33%	8.33%	68.33%	100%
Mean	4.571	5.000	4.854	

- d. In your opinion, do you think that by forecasting non-key items at a higher classification and then applying a historic distribution to break these items down to a lower level for variance analysis would be sufficient?

Most of the participants (80%) feel that by forecasting non-key items at higher classification and then applying a historic distribution to break these items down to a lower level would be sufficient for variance analysis.

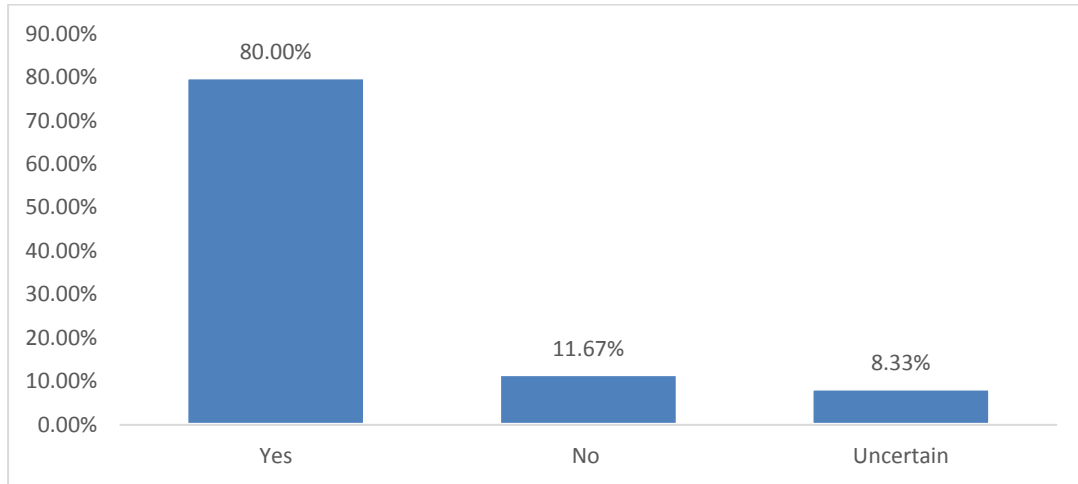


Figure 4.17: Sufficiency of forecasting non-key items at a higher level

Figure 4.18 shows the relationship between the percentage of trading profit impacted by critical variables in relation to the opinion of whether forecasting non-key items at a higher level would be sufficient or not.

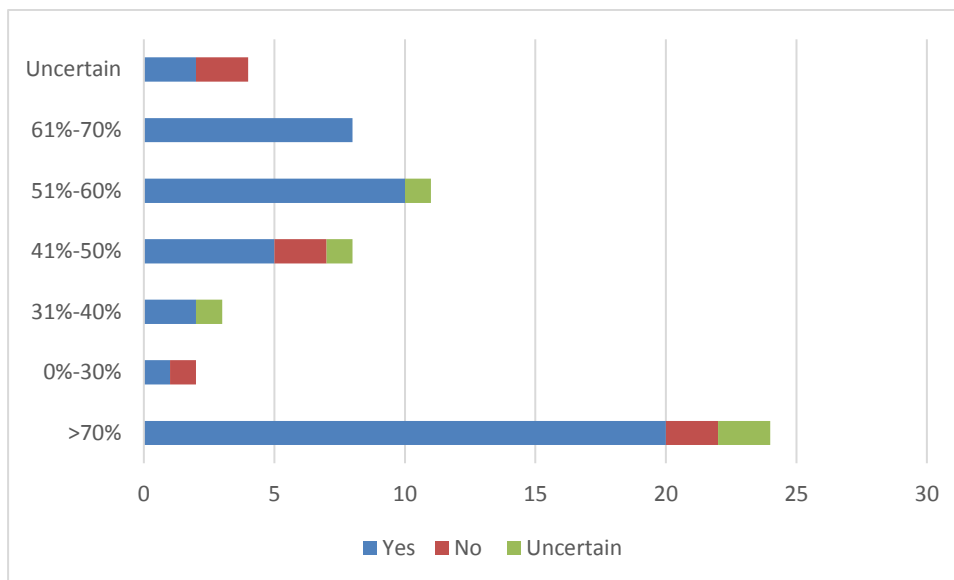


Figure 4.18: Sufficiency of forecasting non-key items at a higher level in relation to trading profit impact of critical variables

- e. In your opinion, if agile forecasting with the intention of responding commercially to the environment at a group level, do you feel it necessary to maintain the intercompany transaction process between divisions or do you feel that forecasting the group at a consolidated level would be adequate?

Over half of the participants indicated that they would maintain the intercompany transaction process (57%) with only 38% indicating that they would forecast solely as group, ignoring intercompany transactions (Figure 4.19).

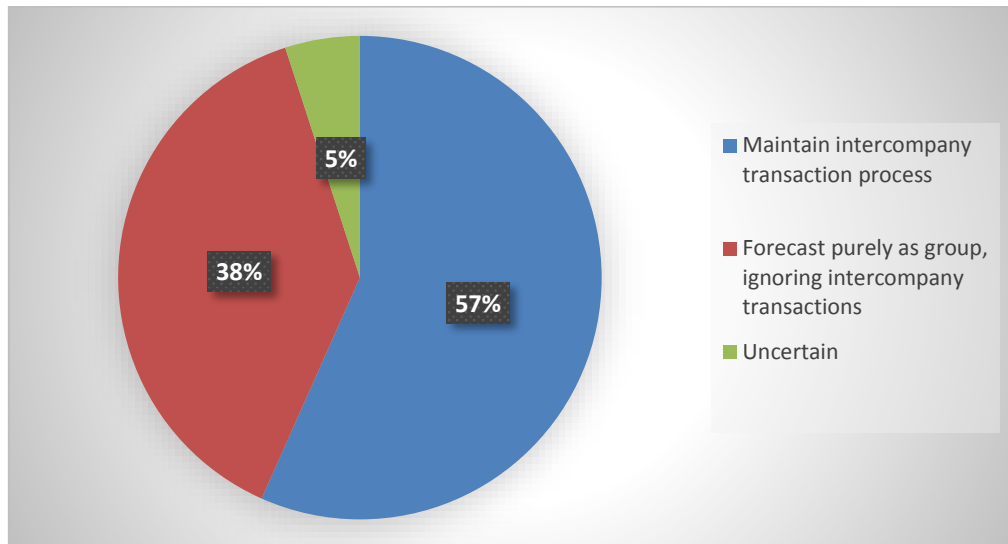


Figure 4.19: Intercompany transactions

Figure 4.20 shows the afore-mentioned views of forecasting intercompany transactions split by whether the respondent's organisation is JSE listed, unlisted or listed on international exchange.

This evaluation is of particular importance as generally listed organisations comprise of multiple business units which typically consolidate into a group and respondents from such large organisations are expected to have a better understanding of intercompany transactions and the approach to forecasting them.

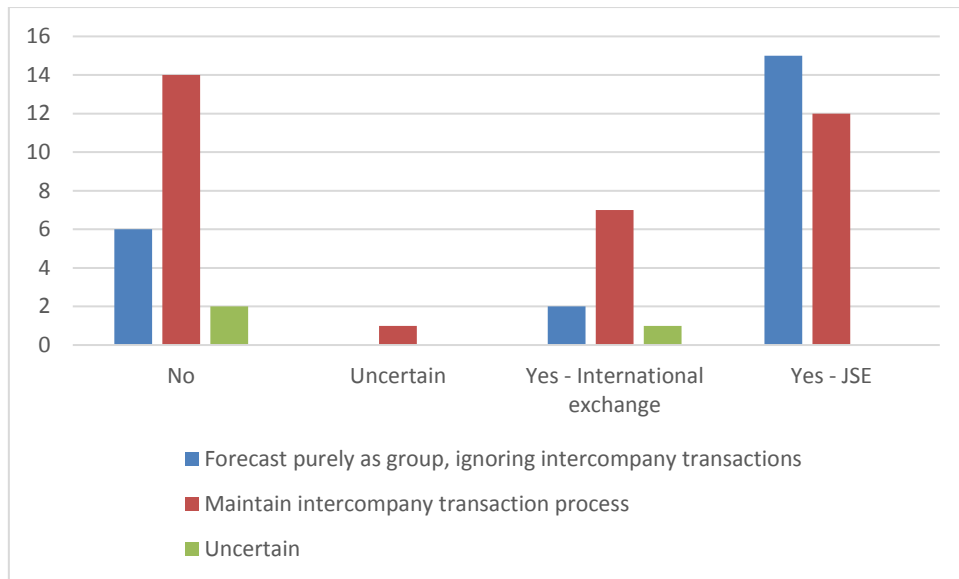


Figure 4.20 Intercompany transactions by organisation listing status

- f. **In your opinion, how important is the forecasting of accounting entries such as depreciation?**

When participants were asked about the importance of forecasting what may be considered purely accounting entries, over a fifth (21%) did not find it necessary and only 32% found it very important (Figure 4.21).

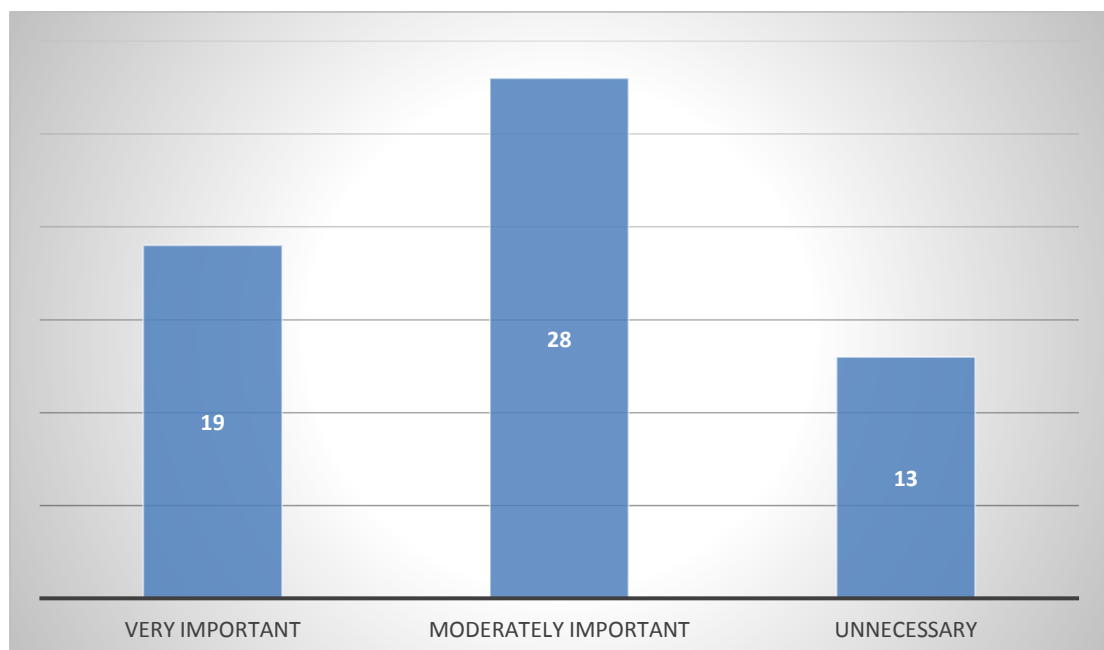


Figure 4.21: Importance of forecasting

- g. Under the assumption that key revenue and trading profit items are forecasted in great detail, what in your opinion should be the method used to forecast the remaining items to arrive at a trading profit or bottom line forecast number?

Just under two thirds of respondents (59%) felt that it would be best to inflation drive the remaining forecast items by line item.

This suggests an appreciation of an agile approach whilst recognising that not all non-key line items are inflated at the same rates.

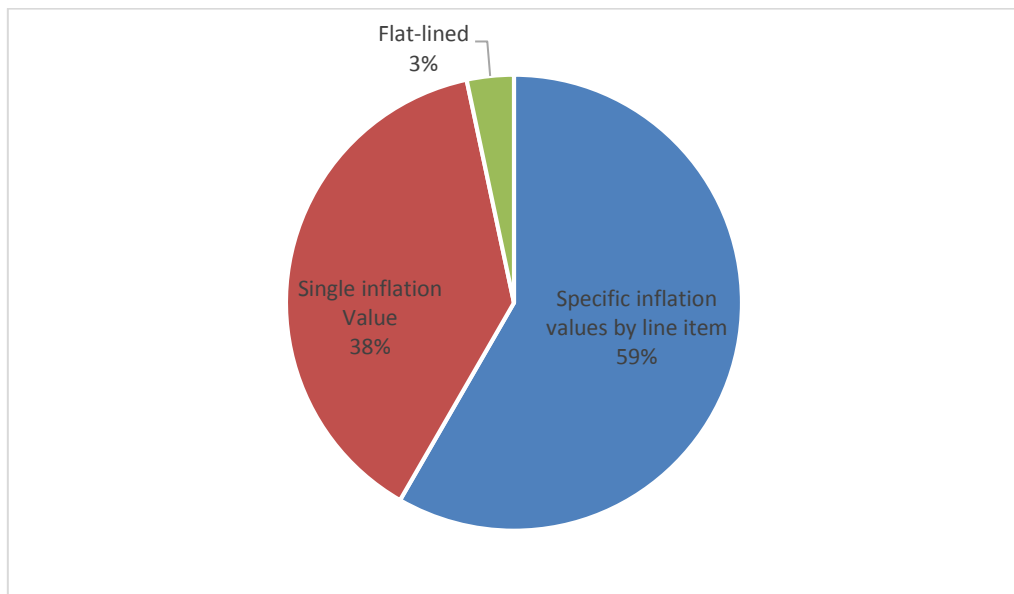


Figure 4.22: Forecasting of non-key items

4.3.3. Research Question 3

Are there methods for securing the accuracy of agile forecasts and can an agile approach be used to accurately forecast free cash flow?

a. **In your opinion, would agile forecasting of income statements and balance sheets contain sufficient detail to drive an accurate free cash flow forecast?**

Free cash flow statements typically require great levels of detail and often require manual inputs for specific items which may not be included on a typical income statement or balance sheet.

The majority of respondents (60%) felt that a forecast income statement and forecast balance sheet would contain sufficient detail to drive a forecast free cash flow statement.

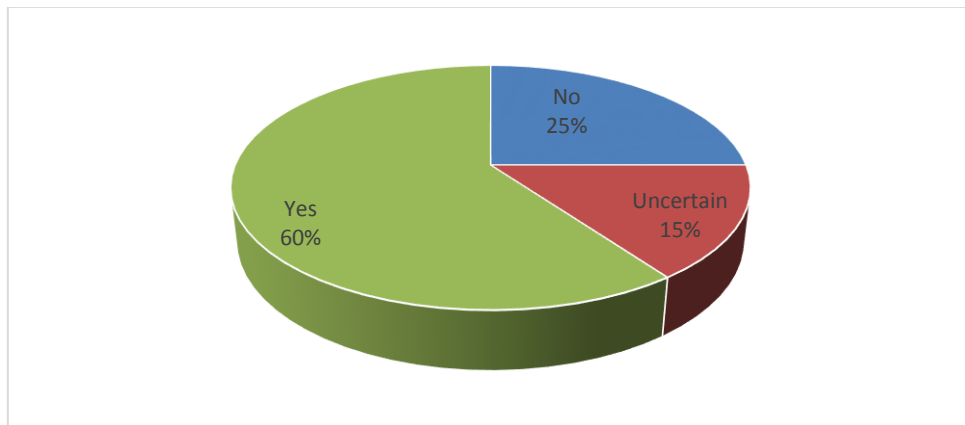


Figure 4.23: Forecasting free-cash flow

As many listed organisations employ enterprise performance management tools which often include functionality for automation of free cash flow reports, Figure 4.24 shows respondent's views on the possibility of forecasting free cash flow purely based on an agile forecast income statement and balance sheet by listed status.

Whilst a high correlation exists between listed status and a positive expectation of an agile forecast free cash flow, there also exists a positive relation between unlisted status. Figure 4.24 shows that the majority of respondents, whether at listed or unlisted organisations, believe that free cash flow can be forecasted purely from values derived from a forecast income statement and balance sheet.

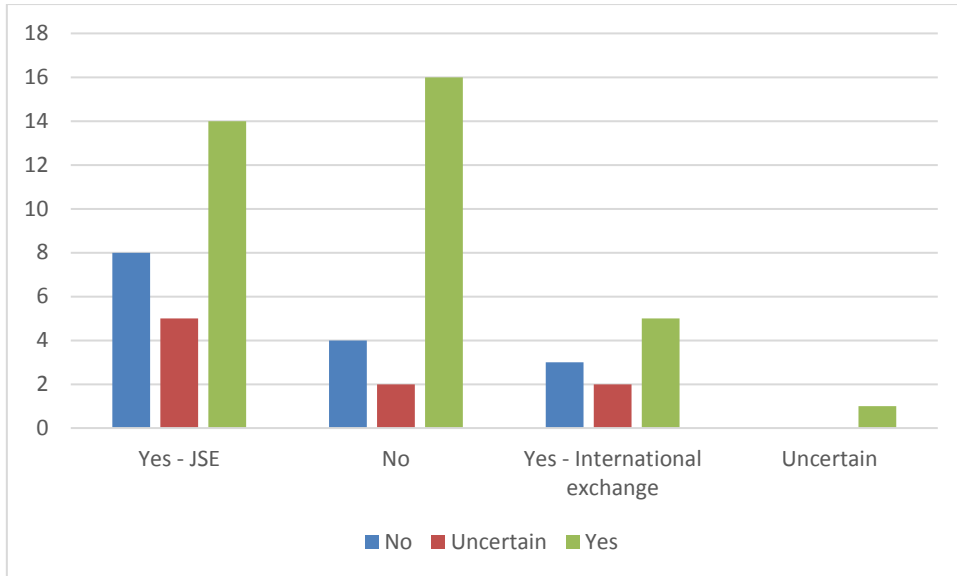


Figure 4.24: Forecasting free-cash flow by listing status

b. What level of accuracy do you think cash flow forecasting would provide based on a uniform 12 month forecast to the future?

Nearly two thirds of respondents (62%) felt that a 12-month free cash flow forecast driven an agile forecast income statement and balance sheet would provide a medium level of accuracy. Only 18% felt that the free cash flow forecast would be highly accurate and 20% felt that the accuracy would be low.

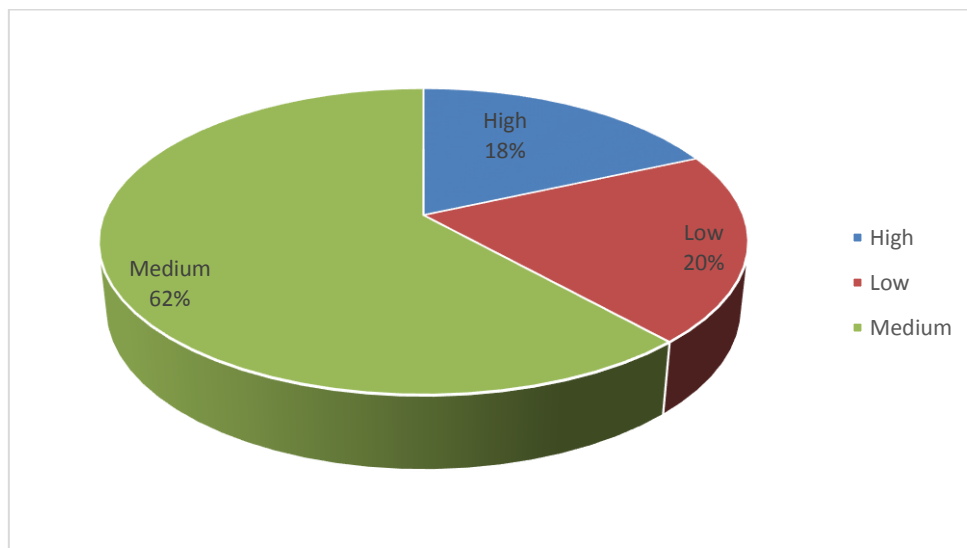


Figure 4.25: Level of agile forecast free cash flow accuracy

Of the participants who felt that an agile forecasted free cash flow would provide a medium to high level of accuracy, the times to complete their budgets are displayed in the following figure (Figure 4.26).

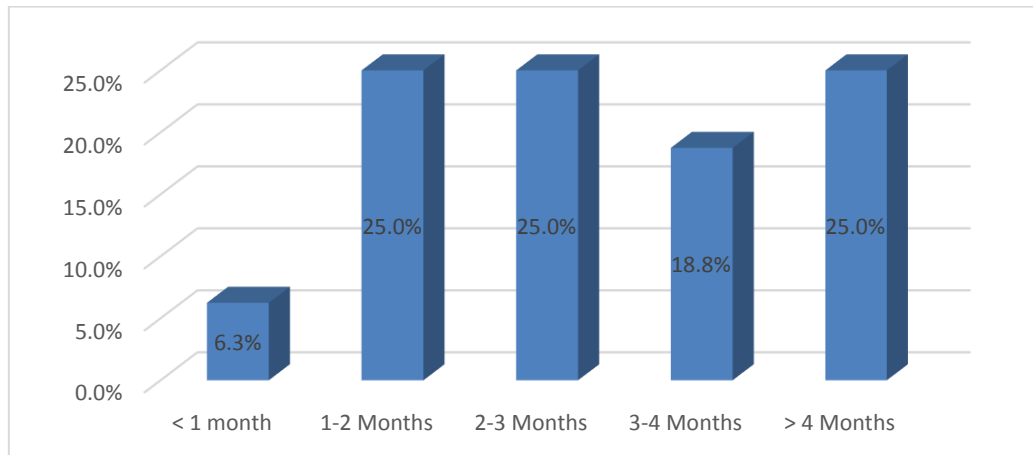


Figure 4.26: Distribution of time taken to complete budgets by respondents who indicated a medium to high level of accuracy expected of agile forecasted free cash flow

- c. **In your opinion, would a forecast free cash flow even if not 100% accurate lead to an improved understanding of cash flow and the resultant improvement of overall cash flow forecasts?**

An overwhelming majority (78%) of participants felt that an agile forecast free cash flow, even if not 100% accurate would lead to an improved understanding of cash flow.

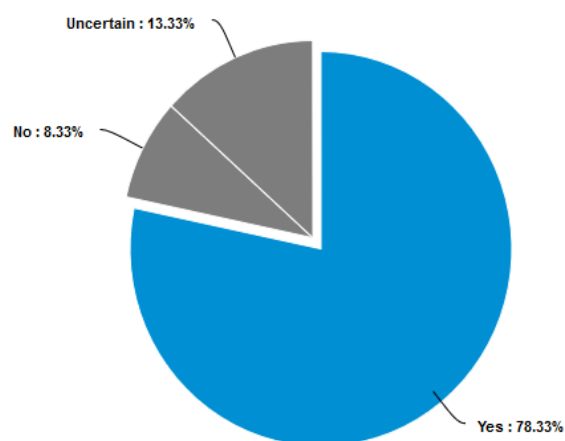


Figure 4.27: Perception of value of agile forecasting to improve understanding of free cash flow

- d. **In a bid to improve the accuracy of an agile forecast model, do you think it would be valuable to invest the time comparing prior period agile forecasts against actual results to test the accuracy of the forecast model so that it could be tweaked?**

Nearly all respondents (98%) felt that the accuracy of the model could be improved by tweaking once forecast values are compared to actual values.

More pertinently, despite the process of iterative tweaking based on actuals being a timeous process, the respondents felt that there would be value in this effort.

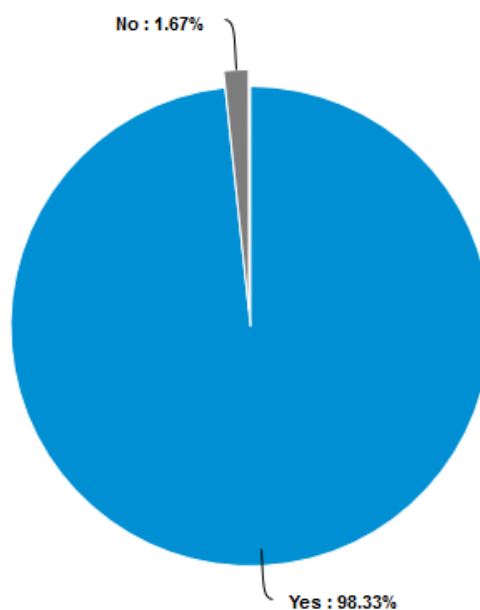


Figure 4.28: Perception of value in comparing forecasts against actual values

- e. **In order to test the accuracy from the question above, would you recommend a straight-forward comparison against actuals or a flexed approach based on key variables?**

The majority of respondents felt that a flexed approach should be adopted when comparing prior period forecasts against actuals to test the accuracy of forecasts.

A flexed approach is one which considered the actual key output during the period under review and adjusts the forecast model per this output.

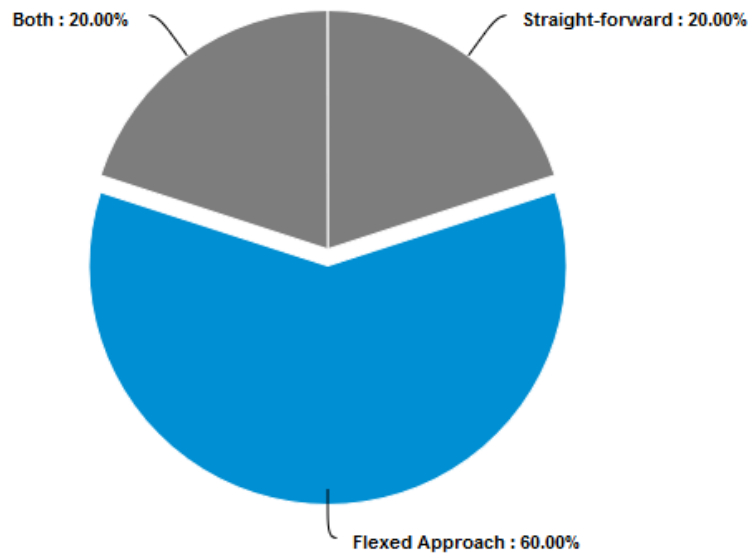


Figure 4.29: Approach when comparing prior period forecasts to actual results for the purposes of variance analysis

4.3.4. Research Question 4

Are there specific business types which agile forecasting would be better suited to?

a. **In your opinion, do you feel that agile forecasting would be a better tool for strategic planning within your organisation?**

85% of respondents felt that agile forecasting would be a better tool for strategic planning within their organisations, with 7% feeling that it wouldn't and the remaining 8% uncertain.

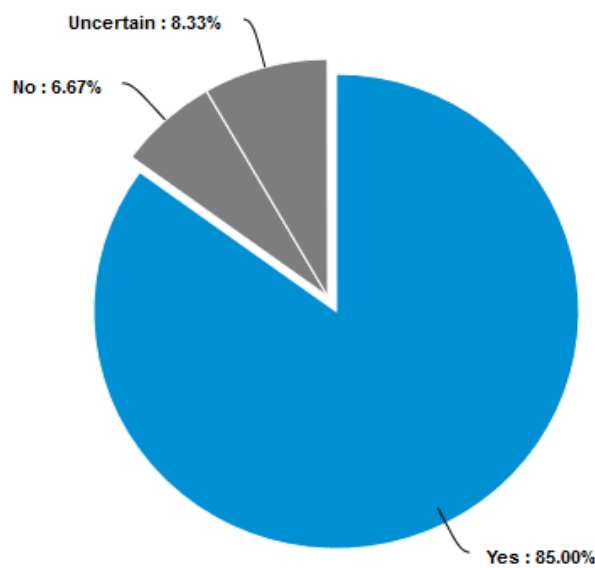


Figure 4.30 Perception of whether agile forecasting would be a better tool for strategic planning within respondents' organisations

Table 4.6 shows a cross-tabulation of respondents who indicated that they currently use agile forecasting within their organisations (Y-Axis) and those who believe that it would represent a better tool for strategic planning (X-Axis). Of the 19 respondents who are currently using agile forecasting, 90% (6 for strategic direction and 11 for management control) feel that it represents a better tool for strategic planning.

Table 4.6: Cross-tabulation between adopters of agile forecasting and who believe that it is a better tool for strategic planning

	Yes	No	Uncertain	Row Totals	Mean
Yes - for strategic direction	6	0	1	7	1.286
	85.71%	0%	14.29%	11.67%	
	11.76%	0%	20%		
Yes - for management control	11	1	0	12	1.083
	91.67%	8.33%	0%	20%	
	21.57%	25%	0%		
No	30	2	3	35	1.229
	85.71%	5.71%	8.57%	58.33%	
	58.82%	50%	60%		
Uncertain	4	1	1	6	1.500
	66.67%	16.67%	16.67%	10%	
	7.84%	25%	20%		
Column Total	51	4	5	60	
Column Percent	85%	6.67%	8.33%	100%	
Mean	2.627	3.000	2.800		

Figure 4.31 shows the distribution of industries of respondents who's organisations are currently employing some form of agile forecasting and who responded in Figure 4.25 above that they believe that agile forecasting represents a better tool for strategic planning within their organisations.

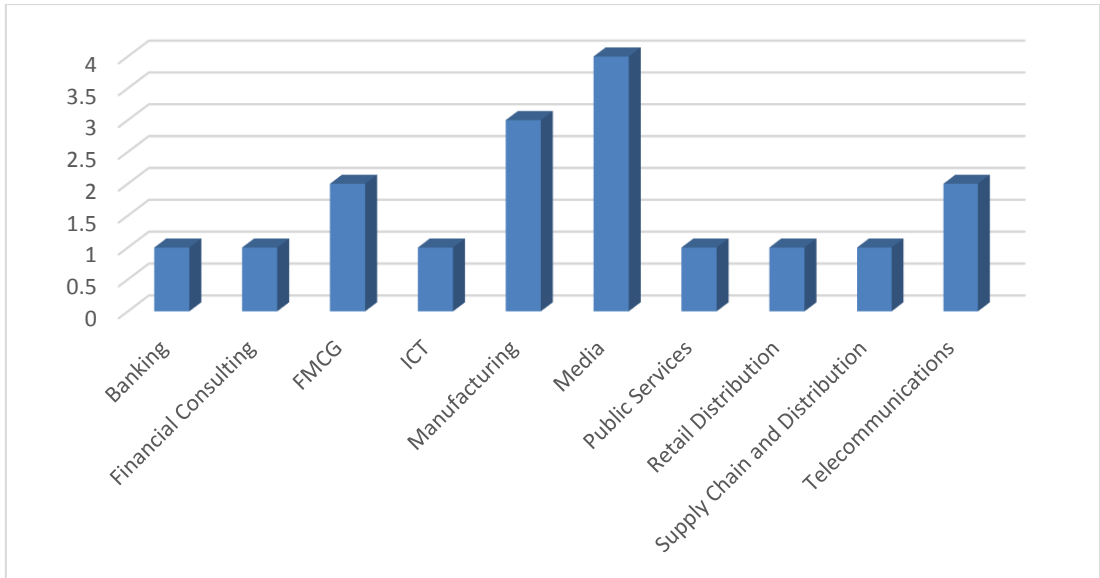


Figure 4.31 Industry distribution of respondents currently employing agile forecasting and who believe that it is a superior tool for strategic planning

b. **In your opinion, do you feel that agile forecasting would be a better tool for strategic planning within your industry?**

82% of respondents feel that agile forecasting would represent a better tool for strategic planning within their industries. Whilst this is lower than the response in the previous question, there is still a positive correlation.

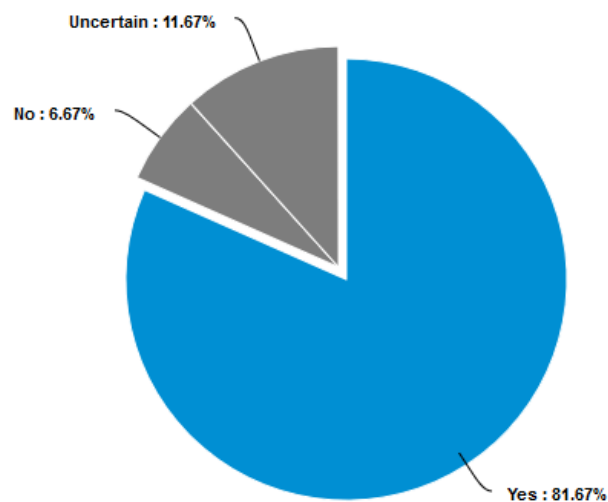


Figure 4.32 Perception of whether agile forecasting would be a better tool for strategic planning within respondents' respective industries

c. **What industry do you think would be best suited for agile forecasting?**

Half of the respondents felt that agile forecasting would be suited to all industries, following by manufacturing (18%) and FMCH (13%).

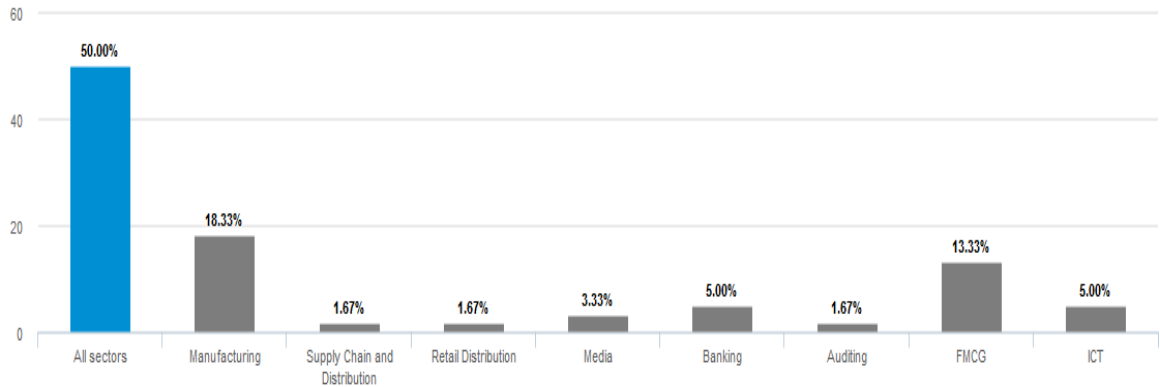


Figure 4.33 Perception of industry most suited for agile forecasting

Table 4.7 shows the distribution of responses to the most suitable industry for agile forecasting by respondent forecasting experience.

All experience ranges tend to agree with its suitability to all industry sectors

Those with 6 to 14 or more years of experience appear to feel that agile forecasting can be successfully applied to manufacturing.

The rest of respondents tend to be spread more across a variety of sectors.

Table 4.7: Distribution of industries best suited for agile forecasting by respondents with greater experience in forecasting

Recommended Sector	Respondent experience in forecasting							Total
	< 1 year	2-3 years	4-5 years	6-7 years	7-10 years	11-14 years	> 14 years	
All sectors	1	6	5	3	5	2	8	30
Auditing	1							1
Banking	1	1	1					3
FMCG		4	1		2	1		8
ICT	1		1		1			3
Manufacturing	1	3	1	1	2	1	2	11
Media	1					1		2
Retail Distribution							1	1
Supply Chain and Distribution		1						1
Total	6	15	9	4	10	5	11	60

4.4. Conclusion

This chapter presented an overview of the biographical details of the respondents as well as the empirical findings of the study. The results were presented in the form of tables and graphs. The primary conclusions to emerge from this chapter are:

- Completed questionnaires were received from 63 respondents of which 3 were removed due to not being at organisations with annual revenue greater than R100m. Of the 60 remaining respondents, 73.3% were actively involved in budgeting and forecasting with 65% having 4 or more years of experience in budgeting, forecasting or financial planning.
- Of the 60 respondents, 77% of the sample belong to a professional accounting body and all respondents have achieved tertiary qualification at minimum.
- 70% of the sample identified that between 3 and 10 critical variables impact more than 70% of their organisations' trading profit supporting an agile approach to strategic forecasting yet the majority indicated their budgeting process is geared more towards management control.
- The overwhelming majority of respondents (87%) indicated a need for detail within budgets to support performance evaluation but 68% of the sample felt that a high-level view for non-key variances would be sufficient.
- 60% of the sample feel that free cash flow can be automated based on the outcomes of a forecast income statement and balance sheet and the majority felt that even if an automated forecast free cash flow was not perfectly accurate that it would still offer significant value by means of greater understanding of cash flow movements.
- The majority of respondents (85%) felt that agile forecasting would be a better tool for strategic planning within their respective organisations and 50% of the sample felt that it could be applied to all industries.

5. CHAPTER 5 : DISCUSSION OF FINDINGS

5.1. Introduction

As stated in the introduction to this study, two key criticisms of traditional budgeting are that they generally take too long to complete and rapidly become out of date. The objectives of the study were achieved by performing an in-depth study on the topic as presented in the literature.

The empirical study involved a survey questionnaire sent to participants across a range of industries in South Africa. In this chapter, the findings of this study are discussed.

5.2. Findings: Research Objective 1

To explore options that provide greater agility in financial planning and determine how well received it would be by forecasting professionals in South Africa

The length of time it takes to prepare and finalise a budget is a supporting factor for reducing granularity. Based on Figure 4.8, 72% of respondents indicated that their budget takes more than 2 months, with 20% indicating that their budget takes 3-4 months and 25% indicating that their budgets take more than 4 months to complete respectively. This supports the two main criticisms of traditional budgeting in that they take up significant amounts of time and rapidly become out of date and therefore less useful (Niels and Per Nikolaj, 2014). In his research on budgeting as a strategic tool, Shaheed Abrahams (2012) also found that the majority of the respondents from his study (from the manufacturing sector in the Eastern Cape, South Africa) indicated that it took between 2-4 months to finalise and approve a budget.

Figure 4.6 indicates that the majority of respondents (65%) feel that 6 or less business variables have a critical impact on organisational performance. In addition, Figure 4.7 indicates that 72% of respondents expect that these critical business variables impact more than 51% of trading profit. It is interesting to note that based on the cross-tabulation (Table 4.3) that of the 72% of respondents who indicated that the critical variables impacted more than 51% of trading profit, 43% indicated less than 7 critical variables and 10% indicated between 7-10 critical variables respectively. These findings correlate with the insights of Mark Ng (2011) who in his KPMG report on forecasting trends supports the move to driver-based forecasting and towards forecasting fewer items but in greater detail.

Figure 4.7 shows that most respondents recognise that the bulk of trading profit is impacted by these few critical business variables. This is reinforced by Table 4.3 which shows that

majority of participants who cited between 3 to 10 critical variables expect that these variables impact more than 70% of trading profit.

This correlates to the guidelines set out by Zeller and Metzger (2013) on rolling forecasts in that organisations should focus on a fewer number of critical drivers and avoid unnecessary or excessive detail.

Returning to the consideration that budgets take extensive time to prepare, Figure 4.9 demonstrates a correlation between the amount of time respondents state that their budgets take to prepare and complete and a small number of critical variables cited. A lower number of critical variables having a high impact on trading profit is particularly relevant to organisations who take longer to finalise their budgets as this indicates that agile forecasting can be effectively applied to mitigate the time effects of their budgets to improve their overall responsiveness to the operating environment.

More than half of the respondents indicated that the budgeting process within their organisations is geared more toward management control with only 18% indicating that budgets were used for strategic direction (Figure 4.10). This suggests that the primary purpose of budgets in South Africa is management control but does not necessarily mean that budgets in South Africa completely exclude elements of strategic planning within the process. It should be noted however, as Tim Blumentritt (2006) points out, there is often isolation between budgeting and strategic planning which mitigates the benefits of strategic planning.

Figure 4.12 further shows that only 12% of respondents indicated adoption of agile forecasting for the purposes of supporting strategic decision-making. It is interesting to note that of those participants who indicated that their organisations have already adopted a form of agile forecasting, 42% indicated more than 10 business critical variables, suggesting that agile forecasting is not constrained to organisations with only a few critical business variables.

5.3. Findings: Research Objective 2

To determine how far an organisation can go in terms of agility when planning over financial granularity

Respondents were asked their opinion of whether granularity within traditional budgets is necessary for performance tools such as variance analysis. Figure 4.14 shows that bulk of respondents felt that granularity is required for performance management. This correlates with the review by Réka et al. (2014) in which budgets are considered a powerful tool for

management control with which targets are used to extend the influence of senior management by creating a basis for comparison of the performance of lower-level managers. The concept of management control is further reinforced by Figure 4.15 in which just over half of the participants indicated that their existing budgets cater for non-key variances.

Table 4.4 supports the view above in that even more experienced respondents felt the need for detail within budgets to fulfil the purpose of performance management. This is clearly in practice as Figure 4.15 identifies that more than half of the organisations provide for non-key variances.

Whilst variance analysis is highly valued, the level of granularity is not entirely necessary as evidenced by Figure 4.16 which shows that 68% of respondents felt that a high-level variance analysis is sufficient for non-key variances. This view is reinforced by Table 4.5 which that of the 62% of total respondents who prefer a high-level variance analysis for non-key items, the critical variables cited impact more than 51% of their organisations' trading profit.

The overwhelming response of participants to approaching variance analysis for non-key items is to forecast at a high level and apply a historic distribution to break down line items to a lower level for variance analysis purposes (Figure 4.17).

Following an insight into participant's views on the use of budgets for performance management and their willingness to drop granularity on items of lower importance, the survey turned to respondent's views on the enforcement of accounting practices when forecasting.

Figure 4.19 shows that just over half the respondents would enforce intercompany transactions when forecasting commercially as a group. This indicates a preference towards internal performance management even when the focus is commercial forecasting and is a reminder of the strong theme of budgeting for management control in South Africa. More specifically, this requires a greater level of granularity when forecasting. To obtain a more representative view based on experience within larger organisations, respondents were categorised into classifications from listed and unlisted organisations, the idea being that listed organisations are generally larger and involve multiple divisions and hence the participants from listed organisations would have more familiarity with the requirements of agile forecasting for intercompany transactions. The result (Figure 4.20) was a strong correlation between respondents from JSE listed organisations and a perception that intercompany transactions do not need to be forecasted.

Figure 4.21 shows that 32% of respondents feel that the forecasting of accounting entries is very important, 47% moderately important and 23% felt it unnecessary. This is an interesting outcome from a strategic forecasting perspective as the forecasting of accounting entries such as depreciation have minimal commercial impact. This response contrasts with the research conducted by Player (2009) who found that accounting detail is often confused with useful management information.

Figure 4.12 shows that when proposed alternatives to forecasting non-key items, just under two thirds of respondents indicated adopting an approach of specific inflation values by line item, followed by a general inflation driven approach.

5.4. Findings: Research Objective 3

To explore factors influencing forecast accuracy and considerations around free cash flow with respect to agile forecasting

In a bid to understand the perceived complexity of forecasting free cash flow by respondents, a question was posed as to whether an agile forecasted income statement and balance sheet would contain sufficient detail to drive a reasonably accurate free cash flow. Figure 4.23 showed that the bulk of respondents feel that this is possible and Figure 4.24 shows the high correlation of this view is evenly spread when the population is segmented into organisation listed status.

Figure 4.25 indicates that 80% of respondents feel that this type of agile forecasted free cash flow at minimum offers a medium level of accuracy (62% medium and 18% high expectation of accuracy. Free cash flow is typically forecasted at the end of a budgeting process due to its reliance on preceding items such as the forecast income statement and balance sheet. This means that free cash flow, despite its importance is often the most out-of-date component within the budgeting process. In light of this consideration, a comparison of the time indicated by respondents to complete budgets versus the number of respondents who expected a medium to high level of accuracy from an agile forecasted free cash flow (Figure 4.26). The result suggests that the majority of respondents whose budgets take more than a month to complete would be reasonably comfortable with the accuracy.

In their paper on cash flow forecasting, Blumen and Moses (2006) highlighted the frustration of the reliance of detailed internal information required to perform cash flow forecasting. In relation, the majority of respondents felt that even if an agile forecasted free cash flow wasn't accurate, it would still be beneficial by improving a greater understanding of factors impacting cash flow within the organisation (Figure 4.27).

In terms of improving the accuracy of agile forecasting, the question was posed as to whether there would be value in dedicating time to iteratively tweak the forecast model following a comparison to actuals. Figure 4.28 showed that 98% of respondents agree with this approach to improving accuracy.

Whilst forecast accuracy is important, Player (2009) argues that some organisations go to extreme lengths focusing on the achievement of forecast accuracy. The purpose of agile forecasting is to gain insights in order to direct outcomes, and not to predict the future.

5.5. Findings: Research Objective 4

To understand whether certain types of organisations are better able to shift away from standard budgeting procedures and more importantly whether these organisations could be responsive enough to benefit from the insights gleaned from an agile forecasting approach

Figure 4.30 shows that 85% of respondents feel that agile forecasting would be a better tool for strategic planning within their organisations. Table 4.6 shows that of those respondents who have already adopted some form of agile forecasting, 90% are of the opinion that it represents a better tool for strategic planning within their respective organisations.

Figure 4.32 shows that 82% of respondents feel that it would be a better tool for strategic planning within their respective industries.

Figure 4.33 shows the distribution of the industries that respondents felt would be most suited to agile forecasting, with the majority feeling that agile forecasting would be suited to all industry sectors. Of this, Table 4.7 shows that respondents with more experience tend to favour agile forecasting for all sectors and manufacturing respectively.

5.6. Conclusion

This chapter discussed the findings related to each of the research objectives. The main conclusions emerging from this chapter are:

- The discussion found that most respondents identified that a few critical variables account for a significant portion of impact on trading profit.
- There is a tendency to cling to detail despite the minimal value offered in terms of strategic planning.

- Free cash flow forecasting can be automated and add value via improved cash flow understanding even if not perfectly accurate.
- The bulk of respondents felt that agile forecasting could be suited to all industries, manufacturing, FMCG, and banking respectively.

These conclusions are discussed in greater detail in the next chapter.

6. CHAPTER 6 : SUMMARY AND CONCLUSIONS

6.1. Conclusion of Findings: Research Objective 1

There is a clear recognition that budgets in South Africa follow a more traditional approach geared towards management control. Given the lengthy time that businesses spend preparing and finalising budgets, there is a strong likelihood that these budgets are often out-of-date and therefore less relevant.

Based on the research findings, most respondents indicated that a handful of critical variables impact a high proportion of trading profit whilst enduring lengthy budget periods. This suggests that South African organisations are primed to adopt a less granular and more agile approach to budgeting.

We can conclude that the majority of respondents in the survey are aligned with the idea of focusing on fewer variables in greater detail with the understanding that these variables drive the bulk of organisational performance.

6.2. Conclusion of Findings: Research Objective 2

There is strong evidence to suggest that whilst respondents are comfortable with the traditional granularity of detailed variance analysis, they are still likely to prefer a high-level approach to non-key items when presented with an alternative such as a high-level variance analysis, potentially broken down using a historic distribution if lower level detail is required. The fact that the bulk of their organisations provide for non-key variables hints at a routine-related comfort with detailed variance analysis processes.

It appears that despite the lack of commercial value, detail in the form of forecasting intercompany transactions and pure accounting entries are still preferred in the South African context. However, after segmentation of the sample population it was found that those respondents more familiar with larger groups favoured the exclusion of forecasting intercompany transactions. There would be value in organisations identifying non-value adding detail within their forecasting process and reducing these in order to focus more attention on variables which have greater operational impact.

6.3. Conclusion of Findings: Research Objective 3

There is evidence from the above that despite the internal and external data requirements when forecasting free cash flow, there exists strong support from the respondents for agile

forecasting of free cash flow, with particular focus on shortening the time of free cash flow forecasts.

Respondents recognise the value of forecasting free cash flow even if not perfectly accurate as the value of understanding the factors impacting free cash flow is considered more important. This correlates with the work of Player (2009) who emphasises forecasting to develop an understanding of how to respond to future circumstances.

The overwhelming majority of respondents identified that significant effort should be invested in ensuring the accuracy of agile forecasts. This deviates partially from an agile approach which is geared more towards gaining insights as opposed to a highly accurate prediction of the future. A greater recognition needs to be developed whereby organisations appreciate that forecasting should focus more on insights as opposed to accuracy.

6.4. Conclusion of Findings: Research Objective 4

Based on the positive response of 90% of those already experiencing agile forecasting within their organisations, it appears well received. The industries of these respondents are broadly distributed. The media industry is perhaps overly pronounced as a significant portion of respondents were from this industry.

A strong correlation exists between those respondents who see value in agile forecasting as a strategic tool within their organisations and those who see it as a superior strategic tool within their respective industries.

Whilst the bulk of respondents feel that agile forecasting would be well suited to all sectors, those which are specifically highlighted were manufacturing, FMCG and banking, respectively.

6.5. Areas for Future Research

Chapter 1, par 1.8 page 6 outlined the delimitation of the study. To make the study more manageable, the study was focused on South African organisations with an annual revenue greater than R100m. Based on the current research objectives, future research may include a broader survey to determine the suitability of agile forecasting to smaller organisations.

In addition, research can be undertaken to develop a detailed framework of agile forecasting which could be applied as a generic model when organisations are newly adopting an agile forecasting approach.

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APPENDIX 1

Good day You are invited to participate in my MBA dissertation survey which considers the perception of agile forecasting relative to traditional budgeting within South Africa with the aim of exploring options that provide greater agility in financial planning.

This survey is aimed at individuals currently or previously involved in budgeting and forecasting within organisations in South Africa. This survey will ask you several questions about budgeting approaches within the organisation that you work for and your perception of agile forecasting. It will take approximately 8-12 minutes to complete.

The study is expected to enrol 50 participants in total across South Africa, is self-funded and will provide no direct benefits to participants other than a greater understanding of forecasting perception in South Africa following dissemination of study results.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSS/1689/016M).

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. The results of this survey will be used within by final MBA dissertation, which will be made available to all participants who provide their e-mail address.

In the event of any problems or concerns/questions you may contact the researcher at abjhavary@outlook.com or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

CONSENT

By checking the 'I Agree' box below, you agree that you:

- Have been informed about the study;
- Understand the purpose and procedures of the study;
- Declare that your participation in this study is entirely voluntary and that you may withdraw at any time;
- If you have any further questions/concerns or queries related to the study you understand that you may contact the researcher (details above)
- If you have any questions or concerns about your rights as a study participant, or if you are concerned about an aspect of the study or the researchers then you may contact the UKZN Humanities & Social Sciences Research Ethics Committee (details above).

The first question requesting your name is solely for consent and will not be included within the research data.

I Agree

Please list your full name (for the purpose of consent)

Please list your email address if you would like to receive feedback of the survey. (This is optional)

Please list your current age in years.

Please list your current job title

Please list your number of years of experience in budgeting, forecasting, or financial planning

1. < 1 year
2. 2-3 years
3. 4-5 years
4. 6-7 years
5. 7-10 years
6. 11-14 years
7. > 14 years

Please list your qualifications

1. CIMA Part Qualified
2. CIMA Member
3. CA (SA)
4. SAICA CTA
5. SAICA ITC
6. BCom
7. BCom Honours
8. Other _____

Please list your organisation's broad industry group

1. Manufacturing
2. Supply Chain and Distribution
3. Retail Distribution
4. Media
5. Financial Consulting

6. Banking
7. Auditing
8. Public Services
9. Pharmaceutical
10. Healthcare
11. FMCG
12. ICT
13. Telecommunications
14. Other _____

Does your organisation's annual revenue exceed R100m?

1. Yes
2. No

Is your organisation listed on an exchange or form part of a group that is listed on an exchange?

1. No
2. Yes - JSE
3. Yes - International exchange
4. Uncertain
5. Other _____

How many business variables do you consider as critical to impacting your organisations performance?

1. 1 to 2
2. 3 to 4
3. 5 to 6
4. 7 to 10
5. > 10

What percentage of your organisation's trading profit do you think is impacted by the key variables referred to in the previous question?

1. 0%-30%
2. 31%-40%
3. 41%-50%
4. 51%-60%
5. 61%-70%
6. >70%
7. Uncertain

How long does your organisation's existing budget process take from commencement to finalisation?

1. < 1 month
2. 1-2 Months
3. 2-3 Months
4. 3-4 Months
5. > 4 Months

Within your organisation, do you feel that your budgeting process is geared more towards strategic direction or more towards management control?

1. Strategic Direction
2. Management Control
3. Equal mix of both
4. Uncertain

Do you currently employ any form of agile forecasting in your organisation? If yes, has it replaced the traditional budgeting process for strategic decision-making? For management control?

1. Yes - for strategic direction
2. Yes - for management control
3. No
4. Uncertain

In your opinion, is detail within traditional budgets necessary for performance tools such as variance analysis within your organisation?

1. Yes
2. No
3. Uncertain

Does your organisation's existing budget process provide for non-key variances?

1. Yes
2. No
3. Uncertain

In your opinion, do you think that detailed variance analysis is necessary for non-key items? Or do you feel that variance analysis conducted at a high level sufficient for non-key variances?

1. Detailed variance analysis is necessary for non-key variances
2. Detailed variance analysis unnecessary for non-key variances
3. A high level variance analysis is sufficient for non-key variances

CASE: Your organisation has adopted an agile approach to forecasting, focusing on critical variables but still wanted to maintain a detailed variance analysis process involving non-key items.

In your opinion, do you think that by forecasting non-key items at higher classification and then applying a historic distribution to break these items down to a lower level for variance analysis would be sufficient?

1. Yes
2. No
3. Uncertain

CASE: INTERCOMPANY TRANSACTIONS

Many organisations consist of multiple divisions operating as separate legal entities, involving

intercompany transactions to facilitate divisional performance appraisal.

In your opinion, if agile forecasting with the intention of responding commercially to the environment at a group level, do you feel it necessary to maintain the intercompany transaction process between divisions or do you feel that forecasting the group at a consolidated level would be adequate?

1. Maintain intercompany transaction process
2. Forecast purely as group, ignoring intercompany transactions
3. Uncertain

CASE - ACCOUNTING ENTRIES

In your opinion, how important is the forecasting of accounting entries such as depreciation?

1. Very important
2. Moderately important
3. Unnecessary

Under the assumption that key revenue and trading profit items are forecasted in great detail, what in your opinion should be the method used to forecast the remaining items to arrive at a trading profit or bottom line forecast number?

1. Single inflation Value
2. Specific inflation values by line item
3. Flat-lined

CASE: Free Cash Flow

It is believed that free cash flow can be forecasted with minimal manual input based on a forecast income statement and components of a forecast balance sheet.

In your opinion, would agile forecasting of income statements and balance sheets contain sufficient detail to drive an accurate free cash flow forecast?

1. Yes
2. No
3. Uncertain

What level of accuracy do you think cash flow forecasting would provide based on a uniform 12 month forecast to the future?

1. High
2. Medium
3. Low

In your opinion, would a forecast free cash flow even if not 100% accurate lead to an improved understanding of cash flow and the resultant improvement of overall cash flow forecasts?

1. Yes
2. No
3. Uncertain

In a bid to improve the accuracy of an agile forecast model, do you think it would be valuable to invest the time comparing prior period agile forecasts against actual results to test the accuracy of the

forecast model so that it could be tweaked.

1. Yes
2. No

In order to test the accuracy from the question above, would you recommend a straight-forward comparison against actuals or a flexed approach based on key variables?

1. Straight-forward
2. Flexed Approach
3. Both

In your opinion, do you feel that agile forecasting would be a better tool for strategic planning within your organisation?

1. Yes
2. No
3. Uncertain

In your opinion, do you feel that agile forecasting would be a better tool for strategic planning within your industry?

1. Yes
2. No
3. Uncertain

What industry do you think would be best suited for agile forecasting?

1. None
2. All sectors
3. Manufacturing
4. Supply Chain and Distribution
5. Retail Distribution
6. Media
7. Financial Consulting
8. Banking
9. Auditing
10. Public Services
11. Pharmaceutical
12. Healthcare
13. FMCG
14. ICT
15. Telecommunications
16. Other _____

APPENDIX 2



12 October 2016

Mr Abu Bakr Yousuf Jhavary (201500542)
Graduate School of Business & Leadership
Westville Campus

Dear Mr Jhavary,

Protocol reference number: HSS/1689/016M
Project title: Striking a balance agile forecasting and traditional budgetary practices

Full Approval – Expedited Application

In response to your application received on 06 October 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully,



Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Mr Ajith Ramgoon
Cc Academic Leader Research: Dr Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj

Humanities & Social Sciences Research Ethics Committee

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100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

APPENDIX 3

Agile Forecasting			
ORIGINALITY REPORT			
% 6	% 4	% 2	% 5
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	Journal of Accounting & Organizational Change, Volume 7, Issue 4 (2011-11-05) Publication	<%	1
2	zerlina.emeraldinsight.com Internet Source	<%	1
3	www.pwc.com Internet Source	<%	1
4	www.som.cranfield.ac.uk Internet Source	<%	1
5	Journal of Accounting & Organizational Change, Volume 7, Issue 3 (2011-09-24) Publication	<%	1
6	Submitted to School of Economics and Management, Lisbon Student Paper	<%	1
7	Submitted to Association of Chartered Certified Accountants Student Paper	<%	1
8	www2.cimaglobal.com Internet Source	<%	1

9	www.myassignmenthelp.net Internet Source	<% 1
10	ftp.cdc.gov Internet Source	<% 1
11	Frow, N.. "Continuous budgeting: Reconciling budget flexibility with budgetary control", Accounting, Organizations and Society, 201005 Publication	<% 1
12	Submitted to Oxford Brookes University Student Paper	<% 1
13	Submitted to Kensington College of Business Student Paper	<% 1
14	Submitted to Greenwich School of Management Student Paper	<% 1
15	www.barclaysafrica.com Internet Source	<% 1
16	Submitted to American Public University System Student Paper	<% 1
17	Submitted to Laureate Higher Education Group Student Paper	<% 1
18	Submitted to West Virginia University Student Paper	<% 1

19	Submitted to University of Wales, Bangor Student Paper	<% 1
20	Submitted to Royal Holloway and Bedford New College Student Paper	<% 1
21	www.associatedcontent.com Internet Source	<% 1
22	Submitted to South Bank University Student Paper	<% 1
23	issuu.com Internet Source	<% 1
24	Submitted to Hamdan Bin Mohammed Smart University Student Paper	<% 1
25	cs3.brookes.ac.uk Internet Source	<% 1
26	www.arcplan.com Internet Source	<% 1
27	Submitted to Marist College Student Paper	<% 1
28	Submitted to RDI Distance Learning Student Paper	<% 1
29	www.ifac.org Internet Source	<% 1
30	Submitted to UNITEC Institute of Technology Student Paper	<% 1

31	Submitted to Coventry University Student Paper	<% 1
32	www.fatih.edu.tr Internet Source	<% 1
33	Submitted to Southampton Solent University Student Paper	<% 1
34	www.primavera.ru Internet Source	<% 1
35	Submitted to University of Abertay Dundee Student Paper	<% 1
36	Submitted to Eiffel Corporation Student Paper	<% 1
37	Submitted to Victoria University Student Paper	<% 1
38	www.cpaaustralia.com.au Internet Source	<% 1
39	Submitted to Manchester Metropolitan University Student Paper	<% 1
40	Submitted to University of Pretoria Student Paper	<% 1
41	Submitted to University of Birmingham Student Paper	<% 1
42	Submitted to Queensland University of Technology	<% 1

Student Paper

43 Submitted to Open Learning Centre <% 1
Student Paper

44 Submitted to University of KwaZulu-Natal <% 1
Student Paper

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