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Reviewing literature on rolling forecasts, benchmarking and customer profitability

A management accounting perspective

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Abstract

Increasingly complex and dynamic business environment leads to the introduction of contemporary management accounting innovations. Rolling forecasts, benchmarking and customer profitability are becoming more popular among practitioners worldwide, and these tools are increasingly propagated in the beyond budgeting literature. This paper reviews the existing set of conventional wisdom, academic and practitioner literature which has been accumulated on rolling forecasts, benchmarking and customer profitability since their emergence till February 2012. This evidence is used to gain insight into how the three innovations have been adopted in management accounting literature, how they have been researched and how they have been communicated. Conclusions are drawn on the knowledge accumulation of the three innovations and the role of Beyond Budgeting as a channel in the diffusion process.

Foreword

This thesis is written as a part of the Master of Science program in Economics and Business Administration at NHH (Norwegian School of Economics). The course “Advanced Management Accounting” has inspired us in writing the master thesis in management accounting.

The study is done in a form of a literature review, which broadens our understanding of both academic writing and research in management accounting. Writing a literature review is not an easy task as it requires broad expertise and knowledge of the field as well as advanced analytical and research skills.

During the writing process we have learned to cooperate, create synergies and benefit from our unique skills and knowledge. We have encouraged and learned from each other, which has been a very rewarding experience overall.

We would like to thank our supervisor Trond Bjørnenak for his guidance, valuable comments, suggestions and contribution to our research. Trond has taught us how to increase value of our study and how to improve our academic potential. We greatly appreciate his help.

Finally, we would like to thank our families and friends for supporting us.

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1 Introduction

Current business environment can be characterized as increasingly complex and dynamic. Traditional management accounting tools, such as annual budgeting, are claimed to be less relevant when confronted with enduring competition (Hope & Fraser, 2003a). Companies are searching for more flexible management accounting tools, and as a result management accounting innovations (MAI) are constantly being introduced and developed. MAI is defined in the accounting literature as an idea that society perceives as something new (Ax & Bjørnenak, 2007).

Beyond Budgeting Roundtable, a consortium of companies organized to promote the alternatives to traditional management accounting tools, proposes a new leadership model which is based on a set of principles. Beyond Budgeting primarily encompasses a change in management style and culture; it puts existing management tools into a new frame of leadership, organization and processes. Beyond Budgeting through compliance with a set of associated principles is supposed to set the organizations free from the "annual performance trap" (Hope & Fraser, 2003a).The concept of Beyond Budgeting can be regarded as a management accounting innovation that "houses" other innovations (Ax & Bjørnenak, 2007). Among those alternatives are balance scorecard, benchmarking, customer profitability measurements, rolling forecasts, etc. For example, rolling forecasts are increasingly being adopted by the companies following beyond budgeting since they are more adaptive and hence can better support company planning and control processes.

Accordingly, rolling forecasts, benchmarking and customer profitability analysis are some of the new tools that are increasingly gaining popularity among practitioners across the world. These management accounting innovations follow the adoption of more conventional tools like traditional budgeting. Kovachev and Ross (2009) in their CIMA management accounting survey show that management accountants use on average 33 tools across a range of operational, managerial and strategic functions. Within the operational functions, variance analysis and overhead allocation are the most popular costing tools. The three most popular budgeting tools are: financial year forecasts, cash forecasts, and rolling forecasts (where rolling forecasts have not yet peaked in popularity as indicated by managers' intentions to introduce this tool in their company within 2 years). Among the profitability analysis tools, managerial interest is very high in product/service profitability analysis and customer profitability analysis. Within the managerial functions, balanced scorecard is the most widely used performance management tool. As for the other management accounting tools – benchmarking is the dominant tool (Kovachev & Ross, 2009).

Researchers primarily use two perspectives in the analysis of MAI: diffusion studies and innovation design studies. While diffusion studies concentrate on the adopters of innovations and the reasons innovations are being adopted by certain types of companies; innovation design studies outline the key design elements of innovations and create taxonomies of those elements. Both types of studies have contributed to the innovation literature by providing an insight into the ways new innovations can be developed and implemented.

Preceding research studies have been devoting more attention to the analysis of such innovations as activity-based costing, balanced scorecard, economic value added, or total quality management, (Ax & Bjørnenak, 2007; Naranjo-Gil, Maas, & Hartmann, 2009; Zawawi & Hoque, 2010), while other innovations such as benchmarking or value-based management have received much less attention in the academic literature (Zawawi & Hoque, 2010). Although benchmarking is not a completely new topic in academic research, it has been studied mostly from the management and strategic perspectives rather than from the accounting perspective (Holloway, Francis, & Hinton, 1999; Dattakumar & Jagadeesh, 2003). While there are a number of company publications about customer profitability reporting and rolling forecasts, it appears that the tools have been given less attention in academic literature.

This study hence attempts to address three management accounting innovations: rolling forecasts, benchmarking, and customer profitability. All of these three tools possess common traits: they are being propagated by the Beyond Budgeting movement followers; their popularity among practitioners appears to be high (coming after traditional tools); and current research coverage of these tools is relatively low. Accordingly, the aim of the study is to examine the existing set of management accounting literature on rolling forecasts, benchmarking and customer profitability and identify whether the adoption of these three MAIs can really be attributed to Beyond Budgeting, which is considered as one of the communication channels in the diffusion of innovations.

Lukka and Granlund (2002) in their communication structure research emphasize the importance of communication between different research genres. Lukka and Granlund (2002) base their study on the assumption that advanced communication structures have a positive influence on the development of knowledge. Analysing differences in the development of research genres, one can identify important actors in the diffusion process of MAIs. Communication structure analysis assesses the degree of research fragmentation and allows understanding of the dialog between different actors. Applying both communication structure and innovation diffusion theories, it is possible to understand the diffusion process deeper and consequently identify the gaps in academic dialogue. Lukka and Granlund (2002), for example, conclude that research in activity-based costing is not designed in a way to increase accumulation of knowledge. Furthermore, the provision of communication structure overview will serve as guidance for future researchers willing to complete an empirical innovation diffusion study. After all, analysing communication structures of several broad phenomena, we can draw conclusions about the communication between academia and practitioners.

One of the important contributors to the innovation diffusion theory, Abrahamson (1991), suggests that diffusion process is influenced by supply and demand side factors. The format of this study allows us to understand more the supply-side perspective of the diffusion process by identifying the links between different publication genres. Several research questions are hence established to assist in reaching the study's objective.

- To what extent have rolling forecasts, benchmarking and customer profitability been adopted in conventional wisdom, academic and practitioner publications?
- To what extent has research in rolling forecasts, benchmarking and customer profitability been motivated by Beyond Budgeting movement?
- To what extent does the accumulation of knowledge occur in the research of rolling forecasts, benchmarking and customer profitability, and are there any robust communication channels developed?

Our exploratory study contributes to the existing management accounting literature in the following ways. The analysis of trends, patterns and references in publications will shed the light on how the management accounting education, research and practice have been influencing each other throughout time and whether Beyond Budgeting serves as a robust communication channel in the diffusion process of rolling forecasts, benchmarking and customer profitability. Then, we will identify if there are similar relationships exhibited across the three different MAIs. Finally, present study will serve as a guide to management accounting researchers by addressing further research opportunities for rolling forecasts, benchmarking and customer profitability.

The remainder of the paper is composed as follows. The concepts of beyond budgeting, rolling forecasts, benchmarking and customer profitability are introduced and developed. The selection, nature and key dimensions of the literature are then explained. This is followed by the literature analysis structured according to its type and key dimensions. Finally, some concluding remarks and further research opportunities are discussed.

2 Introduction to three management accounting innovations

Despite the widespread use of budgeting, practitioners and academics consider it far from perfect, since it encourages “myopic decision-making” and “dysfunctional budget games” (Hansen, Otley, & Van der Stede, 2003). This unease has resulted in a concept called “Beyond Budgeting”, an idea proposing the abandonment of budgetary contracts and ex ante performance targets.

Beyond Budgeting movement is developed and promoted by the Beyond Budgeting Roundtable (BBRT), an organization founded in the UK in 1997 with more than 60 companies from all over the world as its members (Hope & Fraser, 2003a). BBRT is a network of companies that are willing to change their performance management system, share their experience and learn from each other. Organization is based on a set of principles that encourage companies to adopt effective business processes. Beyond Budgeting promotes two sets of principles. “Process principles” allow developing adaptive organizational environment by improving planning, coordination and control in the organization, and “leadership principles” support better customer service by means of constant benchmarking, teamwork and by encouraging decision making at all organizational levels (Starovic & Jackson, 2004).

According to the Beyond Budgeting founders, budgets cause undesirable, unethical and dysfunctional behaviour; they are too time consuming, expensive and rigid (Hope & Fraser, 2003a). Budget implementation changes the behaviour of employees as they are constantly under pressure to achieve the desired targets. However, as time passes and business environment changes it is more and more difficult to achieve the desired business target planned a year ago. Budgeting as a fixed performance contract prevents positive changes in the organization. It was previously successfully applied in command and control cultures, where all major decisions were made by a small group of executives and company had hierarchical structure. In a modern adaptive company with a matrix structure, budgeting prevents effective decision making and strategy implementation. Therefore, Beyond Budgeting founders conclude that budgets should be abandoned altogether.

BBRT promotes a management philosophy that supports company success factors (Bunce, 2007). Budgeting is considered old-fashioned tool that has been used for ages and has not developed much. Budgeting opponents list a number of problems associated with budgets: they are not focused on strategic objectives, add little shareholder value, strengthen vertical command and control, encourage gaming, use obsolete information that is not relevant, discourage people from thinking strategically, reinforce departmental conflicts, etc. (Hope & Fraser, 1999; Ekholm & Wallin, 2000).

BBRT describes best cases of implementing beyond budgeting in such companies as Svenska Handelsbanken, UBS and ALDI. Companies have implemented a coherent management model – adaptive, innovative and holistic – which supports leadership, management processes and information systems (Hope, Fraser, Bunce, & Roosli, 2006).

The beyond budgeting model allows responding to changes in the environment immediately, as well as operating at lower cost, finding and keeping the right customers, generating a better company climate, creating shareholder wealth, attracting talented workforce, minimizing gaming behaviour, etc. (Hope, Fraser, Bunce, & Roosli, 2006).Several tools are found useful by the beyond budgeting founders. Among them are: balanced scorecard, benchmarking, economic value added, key performance indicators, customer relationship management, rolling forecasts, six sigma, target costing, etc. (Hope & Fraser, 2003a). In the following sections we are going to address rolling forecasts, benchmarking and customer profitability in more detail: we will clarify the concepts used in management accounting, describe the tool's implementation process, emphasize the associated benefits and drawbacks, and link the innovations to the budgeting debate.

2.1 Rolling forecasts

Rolling forecasts along with revised budgets, variable budgets and rolling budgets are some of the concepts discussed in the contemporary management accounting literature (see Figure 1 below). However, most of the publications lack clear definitions of the concepts. Therefore, for the discussion and further analysis it is important to distinguish and define these concepts.

Figure 1. Some types of budgets
Adapted from Bergstrand (2009, p. 141).

Revised forecasts (continuously updated forecasts) have already been discussed by Barrett and Fraser III back in 1977. Revised forecasts are updated regularly and provide a forecast of the operating result for the portion of the budget period still remaining. Authors argue that budgets serve multiple roles in the organization and are unable to meet all management expectations, which leads to the introduction of an additional technique – revised forecasts (Barrett & Fraser III, 1977).

Variable budget is defined as a relationship between key income statement and balance sheet items that is adaptable according to changes in main external variables (Bergstrand, 2009). Since budget is based on certain assumptions and external conditions can change after the budget approval, the budget information can become quickly irrelevant. Variable budget is constantly adjusted with the changes in company environment (e.g. sales volume) and makes it possible to complete a variance analysis.

Rolling budget, or continuous budget, is defined as a budget that has a fixed time span (Horngren, Datar, & Rajan, 2011). It is updated regularly (monthly, quarterly, yearly) and provides an overview of the coming periods.

Rolling forecasts have substantial differences in its definition among several authors. Sivabalan (2011) interprets rolling forecasts as short-term budgets for medium-term horizon. De Leon, Rafferty and Herschel (2012, p. 7) consider rolling forecasts as a part of the budgeting process that “iteratively compels an organization to focus on the future”. Sorvari (2010) explains that rolling forecasts are compiled as projections of consolidated income statement, cash flow statement and capital expenditure for the company. Bergstrand (2009) defines rolling forecasts as a projection of a small number of key variables that are updated on a rolling basis.

Forecasting as such has existed for a long time; however original forecasts did not have a rolling nature and covered only the remainder of a budget year, disrupting planning and investment decisions when they come to an end. Consequently, rolling forecasts have appeared from the need for more frequently updated information about the end of the planning period. Normally rolling forecasts are updated quarterly and look one year ahead predicting changes in sales, profit, costs and investments. As opposed to budgets that are typically created by controllers, creation of rolling forecasts is attributed to every organizational unit (Bergstrand, 2009).

To conclude, the definitions are sometimes inconsistent and hence it is difficult to compare the concepts based on the information provided. As opposed to rolling budgets, rolling forecasts represent an unbiased, expected outcome (separate from a target); they typically have less line items, shorter time horizon, and more frequent updates.

Rolling forecasts preparation and use

Sivabalan (2011) reflects that successful implementation of rolling forecast requires skilled accountants who understand the environment where a company operates fairly well, technical systems that allow saving time on the preparation process, and the ability of employees to analyse the forecast information and predict future trends. Consequently, not all companies benefit from the rolling forecast implementation. On the contrary, it can be harmful to implement the technique in a company that is not able to handle it.

Montgomery (2002) defines key conditions for the rolling forecast preparation and usage. Essentially, the technique should be strategically oriented (long-term); it should not be as detailed as a budget and include only key income statement and balance sheet items; modelling and statistical applications should be used to understand the trends, analyse a dataset and set reasonable targets (reflecting new external and internal information). Moreover, forecasts should be closely integrated with budgeting, providing up-to-date information necessary for the budget creation.

Rolling forecasts are created quickly, but the number of employees involved in their creation tends to vary. Trust inside the organization is expected for the system to work effectively (Starovic & Jackson, 2004; Bergstrand, 2009).

A forecast is considered reliable if it satisfies certain conditions: it is actionable, unbiased and gives an estimation of the risks involved (Tabatabai, 2009). A forecast is actionable if it is relevant, specific and reasonably accurate for the decision being made. Freedom from bias means that the forecast has equal chances to overestimate and underestimate the actual numbers. One way to avoid a forecast bias is to implement a Forecast Scorecard technique: it evaluates the historical projections as compared to actual numbers and determines the bias direction and magnitude. Range Forecast driver-based method is typically used, when it is vital to understand the risk associated with the forecast.

Lorain (2010) argues that organizations use rolling forecasts to manage weaknesses of traditional budgeting. Rolling forecasts allow companies to advance financial and operational management, speed up decision-making process and devote more time to value-added activities. Rolling forecasts encourage continuous learning, flexibility, communication inside and outside the company, improved corporate culture and corporate vision. Rolling forecasts are used for cash flow projections in debt management, financial communication and tax planning.

Clarke (2007) emphasizes that rolling forecasts are known and used for more than 50 years due to the benefits they bring to an organization. Companies are willing to adopt rolling forecasts since they are more accurate than budgets, they assist in achieving company objectives and supplying useful information for the effective risk-management. Rolling forecasts allow companies to discover new business opportunities, develop negotiation effectiveness and assist in budgeting creation (Clarke, 2007).

Organizations with rolling forecasts have a different planning culture. While in traditional budgeting system there is a certain period during which the planning is done, rolling forecasts are updated throughout the year and thus managers can plan their workload associated with forecasting themselves.

Rolling forecasts are primarily used to fulfil the information function. They can give accurate projections to estimate capital expenditures for the future, show the trends in key performance indicators, support decision making and cash management, and assist in strategy implementation (Hope & Fraser, 2003a).

Beyond Budgeting founders emphasize that rolling forecasts should be primarily used to improve strategic management and learning within organization and to empower employees; they are not targeted for control purposes (Hope & Player, 2012). Rolling forecast results should not be related to performance evaluation and rewards; therefore they should be free from bias and show objective projections for key performance indicators.

Rolling forecasts are related to company strategy and they assist in its implementation (De Leon, Rafferty, & Herschel, 2012). Moreover, the technique promotes flexible resource allocation and planning in the organization. According to Millman (2007), forecasts focus on value-added activities; while budget creation, on the contrary, is too cumbersome and time-consuming, focusing on the process rather than value per se.

Rolling forecasts show operational trends, thus assisting in timely decision-making process. Additionally, the tool is used for the lease renewal process, insurance facilities and customer and supplier relationships. During the restructuring process, rolling forecasts can support capital structure negotiations with stakeholders by providing an accurate prediction of company's liquidity and cash flow position (Tormey, 2007).

Most of the publications state only the benefits of using rolling forecasts; however some authors also state the limitations of their use. Preparation process can be costly and time consuming if not automated, since a forecast is reviewed and updated several times per year and it is too complex for accountants without sufficient training (Lorain, 2010).

Bergstrand (2009) notes that rolling forecasts have certain drawbacks. Constant forecasting throughout the year can lead to an increase in managers' workload. Coordination of profit centres can decrease due to the lack of one common budget. Additionally, performance evaluation will be more difficult to carry out.

According to Bergstrand (2009), rolling forecasts are more effective for certain types of companies. Moreover, they will be successful in knowledge industries such as IT and telecommunications where freedom of action is high and certainty of forecasting is low. Moreover, the success of rolling forecasts implementation depends on the cultural environment where the company operates. Rolling forecasts are effective in Scandinavian companies where more trust between employees is present and democratic forms of company management are popular.

Findings about rolling forecasts and budget debate

Many studies present rolling forecasts as the main alternative to budgets (Lorain, 2010; Sivabalan, 2011). Beyond Budgeting propagators view budgets as static, cumbersome and time-consuming and creating little value for an organization (Hope & Fraser, 1999; De Leon, Rafferty, & Herschel, 2012). Alternatively, rolling forecasts and a combination of other performance management tools are suggested to improve the performance management process.

Founders of the Beyond Budgeting movement, Hope and Fraser (1999), believe that rolling forecast introduction will improve company’s competitive position and increase shareholder value. While share price reflects firm’s ability to cooperate strategically and form partnerships, budgets are unable to assist in this process. Budgets are not designed to manage intangible assets, focusing too much short-term and ignoring key drivers of shareholder value.

Researchers and practitioners, inspired by beyond budgeting propagators, have questioned the budgeting effectiveness and investigated the willingness of top executives to abandon budgets altogether. Such articles as “Is the annual budget really dead?” (Ekholm & Wallin, 2000) and “Bye bye budget” (Gurton, 1999) provide some explanation of the budgeting process role in the modern world and the attitude of controllers towards innovative performance management tools.

BBRT founders assume that rolling forecasts should replace traditional budgets. Beyond budgeting companies use relative measures rather than fixed targets (Starovic & Jackson, 2004). In current rapidly changing environment, there is a need for flexible, adaptive organizations able to produce customer-oriented products and services. Rolling forecasts allow companies to manage performance gaps as compared to world-known benchmarks (Bunce, 2007). Thus performance evaluation is supposed to be done by benchmarking rather than using projections in the budget made at the beginning of the year. Higher profitability in the organization can only be achieved with adaptive processes, however organizations with budgets lose adaptability, responsiveness and customer intimacy (Bunce, 2007).

To assist in understanding the rolling forecast/budget debate, we will discover the differences between the two techniques, the link between them and the prospects of each technique in the organization.

Tanlu (2009) gives the major points of difference between budgets and rolling forecasts: rolling forecasts are dynamic and require regular update as opposed to budgets that are prepared only once a year. Rolling forecasts are not prepared for the fiscal year and they are less detailed than traditional budges including only key performance indicators. Additionally, rolling forecasts are not targeted at delegation, evaluation and motivation, which are considered important budgeting functions (Lorain, 2010).

The final period of rolling forecasts is continuously projected onwards that allows managers to review operations regularly. Incorporating cause and effect relationship in rolling forecasts, organizations align the decisions with strategy and company environment and consequently create shareholder value (De Leon, Rafferty, & Herschel, 2012).

Hope and Fraser (2003b) state that rolling forecasts differ from budgets in the following ways: they do not have a fixed finish line, are not as detailed as budgets, and they are more accurate since they are updated frequently. Lorain (2010) gives an approximation that only 8-10 indicators are included in the rolling forecasts.

There are quite many elements that rolling forecasts can be segregated into, such as horizon, accuracy, costs, etc. Few of those have been touched upon in different literature, as summarized in the Table 1 below:

Table 1. Elements of rolling forecasts

	Viewpoint	Author
Time horizon	6 months	Katz (2010)
	12 months	Hunt (2003)
	5-8 quarters	Hope & Fraser (2003b)
Frequency	Monthly	Hunt (2003)
	Quarterly	Hope & Fraser (2003b)
Number of line items	Less than budget	Fanning (1999); Montgomery (2002); Hope & Fraser (2003b);Lorain (2010); Lamoreaux (2011)
Number of people involved and effort	Only a few people, easy	Hope & Fraser (2003b); Clarke (2007); Hope & Player (2012)
	The same as for budget	Fanning (1999)
	Much work and qualified personnel	Sivabalan (2011)

Montgomery (2002) describes a system that relates company strategic plan, forecasting and a budget. An ideal planning cycle includes both budgets and rolling forecasts and connects them with strategy (see Figure 2 below). While strategic plan drives rolling forecast preparation, forecast transforms broad-based long-term strategic initiatives into key financial and operational indicators that are consequently used in the creation of budget. Budget is a plan that incorporates the trends, statistical information and key performance indicators reflected in the continuous forecasting process.

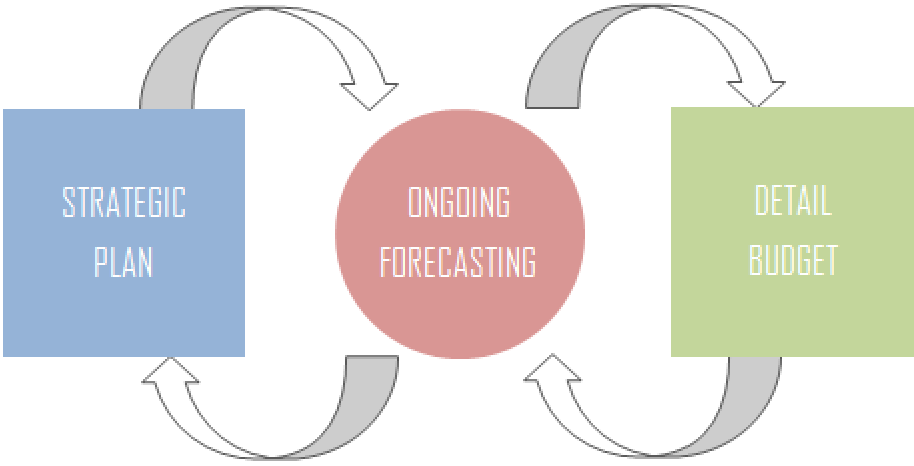

Figure 2. Integrated planning cycle
Adapted from Montgomery (2002, p. 42).

Lorain (2010) predicts that rolling forecasts will play a greater role in the future. Yet, budgets are still in use in most of the organizations. Lorain (2010) suggests that rolling forecasts can be a perfect addition to traditional budgeting system; however they will not replace it in the future. Malkovic (2011) provides some reasons why budgets are still being used and why many companies expect to use them in the future. The board of directors is not willing to abandon budgeting since it is a key element in the corporate governance system: it controls managers' behaviour and make them feel responsible for their actions. Moreover, rolling forecasts are not primarily designed for the same purpose as budgets. While most publications tend to present rolling forecasts optimistically, the common opinion is that they should serve as an additional performance management technique to traditional budgeting and that rolling forecasts will not replace budgets in the future.

2.2 Benchmarking

Benchmarking is not a new tool: it is just a new name for the concept that existed earlier in the public sector. Governmental entities were forced to implement a concept similar to benchmarking in the 1970s, long before it was widely used in the private sector. Public companies had to benchmark themselves against similar organizations to show accountability for the use of resources to the governmental authorities (Bowerman, Ball, & Francis, 2001). The term *relative performance evaluation* is an alternative name to what is known today as benchmarking (Dopuch & Gupta, 1997). Benchmarking method is used not only in economics and business administration but also in information technology, financial management, facilities management, human resources, utilities, insurance and education (Alstete, 2008). Benchmarking has been broadly applied in finance and accounting functions, including planning and budgeting, billing, accounts receivable, accounting systems development, payroll, credit collections, financial analysis and internal auditing (Elnathan, Lin, & Young, 1996).

Benchmarking, as defined by Elnathan, Lin and Young (1996, p. 40), "is a process by which an organization targets key areas of improvement, studies the best practices of others, and implements processes and systems to enhance its own performance". Benchmark is a reference point that is typically used for comparison. According to Azhar and Omar (2008), companies can compare practices, functions, activities, products or performance against a benchmark. They add that benchmarking is particularly useful in industries where cost effectiveness is important and competition is tough.

Comparing business processes, companies gain understanding of the ways to improve business models and as a result the company performance (Wood, Barrar, & Jones, 1998). The most common example of implementing benchmarking is the case of Xerox Corporation. Xerox is an American multinational company, a leader in its segment in the 1970s. Xerox implemented benchmarking when it started facing an increased competition from Japan in the late 1970s (Kennedy, 2006). Japanese firms were able to cut costs and sell products cheaply thus winning the market share. Xerox decided that there was a need to understand the cost structures and business processes of Japanese competitors. Nowadays, Xerox implementation model of benchmarking is considered one of the best in the world. The company is still using a broad range of benchmarking sources: trade journals, consultants, annual reports, professional conferences and presentations to understand the processes that underlie superior performance (Tucker, Zivan, & Camp, 1987).

A broad range of benchmarking taxonomies provided by academics and practitioners reflect an extensive conceptual framework, flexibility of the technique and various potential areas of tool usage inside a company.

Roth (2005) distinguishes two types of benchmarking: competitive and best-practice benchmarking. Competitive benchmarking is performed by comparing company performance indicators with those of direct competitors. Such approach is an efficient way to identify performance gaps and learn industry-specific methods of cost effectiveness. During the best-practice benchmarking process, the best practices of international top performing companies are examined. Company business functions that are not industry specific such as human resources, finance and accounting can be improved with the best-practice benchmarking implementation.

Brabazon and Brabazon (2000) have identified benchmarking focusing on different business segments such as business processes, products, employees and customers. Evaluating business processes an organization can discover problems in the production or support functions and identify process bottlenecks. Products comparison is useful in product quality and performance gap analyses. Benchmarking of customers can be useful in customer loyalty rate analysis and customer profitability analysis. Comparing employee profiles across companies can assist in overall service quality examination.

Elnathan, Lin and Young (1996) define two dimensions for benchmarking classifications: information gathering methods and information sharing methods. Organizations can gather information about the products, functions (processes, practices and costs) and strategy. Thus there are three types of benchmarking: product benchmarking, functional benchmarking, and strategic benchmarking. Additionally, there are two most common methods of information collection. Unilateral method is applied when information is collected independently by a company, including the use of trade associations and clearinghouses. Conversely, cooperative benchmarking implies cooperation between companies and joint agreements. Cooperative benchmarking can be conducted using databases (company data is stored in a common database and database operators provide access for a fee), consultants (data is collected by professionals that have agreements with a number of organizations) and group discussions (direct communication between companies involved in benchmarking in the form of company visits and electronic communication) (Elnathan, Lin, & Young, 1996).

Fleisher and Bensoussan (2007) present four types of benchmarking: internal, external, other industry and global best practice. Internal analysis involves benchmarking of business functions inside the organization. Such comparison is typically effective for big international companies with many departments and business processes. External benchmarking means the comparisons between companies in the same field (direct competitors). Other industry comparison involves organizations in different industries that are not in direct competition.

Global best practice benchmarking allows companies to learn best practices of the top world performers and their unique business approaches.

Benchmarking preparation and use

Benchmarking has gained significant popularity in recent years, and according to Bain and Company survey it was the top used management tool in 2010. Management tools and trends survey conducted by Bain and Company since 1993 shows executives' attitudes towards new performance management tools (Rigby & Bilodeau, 2011). Walgenbach and Hegele (2001) notice that benchmarking is now promoted by a number of state research institutions.

Elnathan, Lin and Young (1996) believe that an effective benchmarking process should include 5 stages. First, an organization should choose activities to be benchmarked. It is common to have several areas of improvement, although it is recommended to include no more than five fields in the analysis (Smith, 2007). As a rule of thumb, it is more profitable to start the improvement process from firm's weakest functions since the benchmarking gap is wider, which leads to elevated benefits. Brabazon and Brabazon (2000) emphasize that internal competitive analysis should be included as a first step in the benchmarking implementation, during which research objectives are defined and preliminary findings are analysed. In the second stage benchmarking team should be created and trained. It is important to have an appropriate training for the employees, so that benchmarking is implemented in the right way. In the third step benchmarking partners are chosen. A preference is given to large successful companies that possess a solid experience in benchmarking. The fourth stage is the most time- and effort-consuming and it is devoted to the extensive analysis of received results, the comparison of business processes and underlying business models. In the final stage a company should take action and implement successful business techniques. During all five stages it is necessary to develop a benchmarking culture inside the organization. All employees are participants in the implementation process, and they directly or indirectly contribute to the benchmarking success. Therefore company environment should support democratic relations between employees and encourage initiative and cooperation (Elnathan, Lin, & Young, 1996). It is also increasingly important to identify the performance metrics that will be used in the comparison to ensure apples-to-apples evaluation (Rigby & Bilodeau, 2011). In this way the same performance measure will be consistently compared across companies and appropriate conclusions will be drawn.

Benefits of benchmarking are discussed by several authors. Chenhall and Langfield-Smith (1998) consider positive benchmarking effect on the employee commitment and motivation by establishing precise and impartial expectations grounded on the experiences of other organizations. According to Naranjo-Gil, Maas and Hartmann (2009), benchmarking is an element of the continuous improvement process: it helps organizations to set reasonable goals and constantly strive to achieve them. Benchmarking implementation leads to an improvement of performance leading to diminishing performance gap between organizations (Helden & Tillema, 2005).

Bain and Company (Rigby & Bilodeau, 2011) lists common uses of benchmarking: performance improvement, costs comprehension, strategic advantage enhancement and organizational learning. Benchmarking has a great potential of encouraging innovation thinking inside the organization and it allows companies to set reasonable goals (Hope & Player, 2012).

Benchmarking activities are typically performed in groups; consequently it encourages team work and internal communication. Benchmarking culture is best developed inside democratic companies with an active employee involvement in the decision making process. In such way, employee satisfaction is improved and innovative thinking encouraged. Moreover, benchmarking method is easily comprehensible leading to lower implementation efforts from employees as compared to other performance management tools (Curpăn, Nisulescu, & Manea, 2008).

Nevertheless, along with benefits, benchmarking has certain drawbacks and limitations. Therefore, it is important to implement the tool in a right way. As Llewellyn and Northcott (2005, p. 556) put it “benchmarking can erode competitive advantage as organizational processes become similar”. While narrowing the performance gap between organizations, benchmarking can lead to a decrease in profitability of the best performers. Benchmarking strategy is best suited for public organizations that strive to provide best service rather than increase in market share.

Benchmarking effectiveness is limited by quality of information provided for benchmarking. It is important to compare companies with similar strategies to ensure compatibility of benchmarking data. Right choice of a benchmark is crucial, but there is no certainty whether an appropriate benchmark is available for analysis. Moreover, benchmarking is implemented best in stable environments; in uncertain conditions it is more difficult to compare the data (Brabazon & Brabazon, 2000).

Kennedy (2006) points out that benchmarking implementation implies changes inside a company, however many employees are resistant to change due to an increased effort and more responsibility. Therefore, employees may oppose introduction of benchmarking and thus decrease the implementation benefits.

Comparing companies that are far apart in their performance can yield the most benefit. However it is less beneficial to compare companies with similar performance, structure and processes. Overall, benchmarking can lead to convergence of management practices if companies just reproduce business processes without understanding of the business functions and activities underlying them. Functions and processes in a company are interconnected, thus benchmarking study should involve the analysis of the effect of new techniques implementation.

Organizations involved in benchmarking are not always willing to provide correct information for benchmarking purposes as they do not want to increase competition. Additionally, benchmarking should not be used as a punishment tool – rather it should encourage and empower employees to improve business processes. Therefore, quality of information should be continuously monitored to ensure appropriate comparisons (Hope & Player, 2012).

Denrell (2005) points out at another problem of benchmarking implementation: selection bias. Selection bias means "relying on samples that are not representative of the whole population" (Denrell, 2005, p. 114). If companies choose only successful companies for a comparison they will not have a whole idea of success factors and implementation failure rates.

Findings about benchmarking and budget debate

Elnathan and Kim (1995) predict that cooperative form of benchmarking will increase together with the size of benchmarking group in the future as environment becomes more volatile. Consequently companies become more different and the benefit from benchmarking process increases.

According to Wood, Barrar and Jones (1998), benchmarking of service activities is more profitable than benchmarking of products as performance gap is wider in the service sector. He notices that benchmarking accounting activities is extremely profitable as resource usage differs dramatically between companies.

Benchmarking is very often implemented by companies facing fierce competition and forced to cut costs in order to stay competitive (Azhar & Omar, 2008).

According to Bain and Company survey benchmarking usage increased dramatically in the crisis periods (Rigby & Bilodeau, 2011). In the turbulent conditions benchmarking is considered as a safe and reliable tool.

Elnathan, Lin and Young (1996) notice that benchmarking effectiveness evaluation is extremely difficult as nonfinancial variables are affected first and the effect on financial indicators come with a lag. Moreover, benchmarking effectiveness increases over time as companies gain more experience. Therefore, companies should provide long-term rather than short-term commitment to benchmarking.

In the beyond budgeting literature benchmarking is viewed as a target setting tool: an alternative to traditional budgeting, benchmarking allows setting realistic targets as compared to the best companies in industry (Hope & Fraser, 2003a; Wallander, 1999). Additionally, benchmarking is used for evaluation purposes: to assess company performance as compared to the best internal and external benchmarks. Beyond Budgeting is based on a set of 12 principles of company management and one of the performance measurement principles includes the use of benchmarking.

2.3 Customer profitability

Current business environment is increasingly complex and competitive. Globalization and competition in the marketplace challenges companies to find new ways of increasing shareholder value. One of the possible solutions is to identify product and customer profitability and effectively manage them (ICAEW, 2002). According to Wayland and Cole (1994), many companies generate 80% of their sales with 20% of their customers, and consequently they have to find new ways to retain profitable customers and move loss-making customers to the profitable niche.

Customer profitability analysis is an essential part of customer accounting. Along with other methods of customer profitability calculation (customer segment profit analysis, lifetime customer profitability analysis and customer valuation) it contributes to understanding of company performance and provides crucial information crucial for company’s decision making and strategy formulation.

Customer profitability analysis (CPA) is defined as a difference between customer revenues and costs over a certain time period (Lind & Strömsten, 2006). CPA is created and used primarily by finance and marketing specialists allowing companies to identify the most profitable group of customers and costs related to different customer groups. Customers can be divided into groups according to their contribution to company profits: profitable customers, break-even customers and customers eroding profits (IMA, 2010). All three groups require separate strategy and programs: profitable customers are the most valuable customer group and they should be retained; breakeven customers and customers eroding profits can become profitable if an appropriate customer strategy is applied. CPA results are used in pricing, discounting and marketing decisions (CIMA, 2009).

Customer profitability analysis is of great help to marketing specialists having negotiations with customers, assisting in price determination for different customer categories and making service decisions (Waters, 2005). In marketplace CPA allows companies to understand their current market share and customer base (Noone & Griffin, 1997). Overall, CPA helps organizations to improve strategic decision making and consequently increase company profitability.

Even though customer profitability is mainly presented as a marketing topic, accounting and finance researchers address customer profitability from another perspective focusing on the implementation process and the calculation of costs and revenues.

Foster and Gupta (1994) argue that many customer profitability publications are based on the three assumptions: all costs incurred by a company are variable customer costs, it is possible to assign the costs to the customers/customer groups and only one period transactions are analysed. It is important that costs can be divided between customers according to their consumption patterns and an appropriate cost driver exists.

Customer profitability analysis is increasingly used in mergers and acquisitions activities as it provides valuable insight to the one of the most important company assets – employees. Many companies make acquisitions to gain broader customer base and customer profitability analysis becomes a crucial part of the process (Selden & Colvin, 2003).

Customer value depends on numerous factors including: types and quantity of products acquired, net interest margin, customer relationship time span, initial costs and service costs (Payant, 2003). Customer profitability calculation model becomes more complex as more and more parameters are included in the analysis.

There are several ways to measure customer profitability and the most popular are: customer profitability analysis, customer segment profit analysis, lifetime customer profitability analysis and valuation of customers as assets (customer franchise management).

Customer profitability analysis is aimed at exploring differences between revenues and costs during certain time period for a customer. Similarly, customer segment profitability analysis targets a customer group rather than one customer.

Measuring customer profitability over the short term can be misleading as loyal customers add significantly more value than one-time customers due to high initial costs of customer acquisition and time-varying spending (Hope, 1998).

Lifetime customer profitability analysis identifies customer profitability for the lifetime of the customer relations, considering the difference between future revenues and costs. Such analysis is beneficial for companies with a broad range of customers, which have different purchasing habits, and significant customer retention and acquisition costs (CIMA, 2009).

Customers are assets, according to the customer valuation analysis, and they generate future cash flows. Customer equity is calculated as Net Present Value of future cash flows associated with them. Customer valuation analysis is the most complex method as it incorporates an estimation of several parameters including customer cash flows, cost of capital (typically company cost of capital is applied) and the expected time horizon of customer relationship. It is the only method that does not apply accrual accounting data, but rather uses future cash flow estimations (Lind & Strömsten, 2006).

Projecting future cash flows from customers can become a complex process; therefore many companies assume that historical customer behaviour patterns can be good predictors of future cash flows.

According to Wayland and Cole (1994), companies can increase shareholder value by concentrating on the customer acquisition, retention and development.

Lind and Strömsten (2006) identify four different customer relationships and recommend an appropriate type of customer profitability calculation for each of them (see Table 2 below): transactional, integrative, facilitative and connective.

Table 2. Customer accounting techniques

	Customer profitability analysis	Lifetime customer profitability analysis	Customer segment profitability analysis	Customer valuation analysis
Time span	One period	Many periods	One period	Many periods
Customer relationships	Transactional	Integrative	Facilitative	Connective
Calculation type	Accrual based	Accrual Based	Accrual Based	Cash flow

Transactional relationships are associated with standardized products, customers are fairly homogenous and the company does not adapt its operations for customers. Customer profitability analysis is the best way to calculate and manage profitability in such scenario.

In the facilitative customer relationships the products are homogenous; however the company devotes much effort to establish customer relationships.

Integrative customer relationships are based on a close cooperation with customers. Such relations are crucial for the company's short-term success.

Connective customer relationships mean close customer cooperation. However, such relationships are not very profitable as they require large company investments into the relationship building but bring only marginal revenues. Connective customer relationships are typically linked to other types of customer communication and they can contribute positively to the profit creation in an indirect way (Lind & Strömsten, 2006).

Customer profitability preparation and use

Activity-based management (ABM) is a management technique that applies activity-based costing to conduct a value-chain analysis and improve company performance. Customer profitability analysis is typically included as a part of ABM. ABM is typically implemented together with balance scorecard to improve company's strategic vision and business performance management.

A recent popularity of activity-based management is primarily attributed to the change in companies' cost structures. Many organizations now face a more complex environment as number and variation of products increases, customers become more heterogeneous and product delivery system becomes global.

Mechanization has led to a tremendous decrease in the costs of direct materials and direct labour. As a result, direct costs are diminishing while indirect overhead costs constitute a huge share of the total expense. Indirect costs cannot be easily attributable to products or customers therefore ABM has appeared as a new way to deal with the increased complexity. Additionally, ABM allows identifying excess capacity and managing it and consequently improving the performance. Analysing cost drivers consumption, companies can effectively manage costs and increase profit margins (Cokins, 2004).

In customer profitability analysis – revenues, expenses, assets and liabilities are assigned to customers or customer groups causing them. The main purpose of such analysis is to control costs and manage customers (Howell & Soucy, 1990). In modern world it becomes more difficult to control costs of different customers and measure customer profitability as even the customers buying the same product mix can have different profitability rates.

ABC (activity-based costing) is a commonly used tool in customer profitability analysis to allocate cost to customers. ABC is typically conducted in several steps. First, activities that form cost pools in an organization are identified. Second, cost drivers causing the consumption of resources are stated. Third, all costs are allocated to cost objects according to the consumption of resources. Cost objects can be products or customers. Even customers buying the same products differ in their resource consumption due to different service costs, number of orders, etc. (van Raaij, 2005).

Customer profitability analysis results should be approached with caution: it is important to make the right conclusions and find the right data for the analysis. Searcy (2004) warns companies that a reduction in customer related costs will not lead to the decline in total costs. Fixed costs typically constitute a huge proportion of total costs, if a smaller proportion of overhead is assigned to a one customer group, transferring costs to other customer groups. Unless a company eliminates excess capacity, a reduction in customer overhead will not lead to increased profits. Devine, Lammert and O'Clock (2005) clarify that unprofitable customers should not be dropped as this will not likely improve the company performance.

Following Brabazon (2000) customer profitability analysis does not take into account customer life cycle effect, customers' migration patterns and change in customer behaviour over time: the longer a customer stays with the company – the more profits it brings.

According to Foster, Gupta and Sjoblom (1996) customer profitability analysis can become an expensive process as computer systems and programs should be installed and employees need to receive appropriate training. Moreover, to accurately project customer revenues, costs and variations in consumer preferences, special data capture systems are desired.

For a system to work effectively, management team should be convinced that a company needs organizational improvements and that customer profitability analysis is needed. Employee incentive schemes should be adjusted to motivate customer profitability actions (ICAEW, 2002).

Following the ABC criticism, companies may encounter difficulties in determining appropriate cost pools and cost drivers. While it is relatively easy to find cost drivers for some activities, it can be a major problem for other activities (CIMA, 2009). Usage of ABC approach involves another danger. ABC is a complex costing method and its effectiveness is based on an assumption that costing data is free from bias and errors. As stated by Datar and Gupta (1994), increasing the number of cost pools in an organization can lead to an increase in specification and aggregation errors. Trying to reduce those errors, companies can encounter measurement error. After all, errors will eventually lead to wrong customer profitability information and wrong strategic decisions.

Findings about customer profitability and budget debate

Interest in customer profitability analysis began growing in the 1990s and peaked in the 2000s. Some academics attribute the growth of customer profitability to the ABC popularity, others – to the development of a balance scorecard (McManus & Guilding, 2008). Researchers study different aspects of customer profitability, including the factors causing variances in profitability among different customer groups, profitability calculation process and the links between customer loyalty, customer acquisition, customer retention and customer profitability (Pete & Cardoş, 2010).

In many companies customer profitability analysis is combined with the use of a balance scorecard, where customer profitability is one of the dimensions linked to company profitability. Additionally, customer profitability analysis provides useful data for key performance indicators analysis and strategy formulation.

It is argued that customer profitability is more beneficial in a complex environment, for companies facing uncertainty, with a diverse customer base. Additionally, customer profitability encourages more efficient allocation of marketing resources between customers (Cardinaels, Roodhooft, & Warlop, 2004). It was found that customer size is not necessarily related to customer profitability (van Triest, 2005).

Beyond Budgeting allows companies to become more adaptive and flexible when facing competitive, global and constantly changing environment. High level of freedom for all employees and a free information flow are essential for companies that adopt beyond budgeting. Customer focus is essential in beyond budgeting companies. Customer profitability measurement is used for evaluation purposes (to appraise customer-oriented teams responsible for different customer segments) and for program development purposes in different customer groups (Daum, 2002).

3 Method

Literature review as a research strategy allows us to gather information from a broad range of sources and understand the development of rolling forecasts, benchmarking and customer profitability. Literature reviews have certain advantages over empirical surveys: they allow interpreting and connecting findings of different authors and addressing broader questions than empirical studies do (Baumeister & Leary, 1997). A complete literature review should include a theoretical base for research, an analysis of publications related to the field of study and suggestions for future research; it should be original, comprehensive, critical and contextualized (Hofstee, 2006). It is important in literature reviews to explain the relationship of the study to existing publications and its contribution to the field. Literature reviews meet several objectives: theory development, theory evaluation, surveying the state of knowledge on a particular topic, problem identification, understanding the historical development of theory or research in a particular field (Baumeister & Leary, 1997). Current study is primarily aimed at understanding the state of knowledge about the three innovative tools, integrating existing findings and proposing future research questions. At the moment there is no published literature review on the individual tools or the comparison of the development of the three chosen management accounting tools. Therefore, the review will provide the conceptual base for future studies of management accounting innovations. It is necessary to develop several dimensions for the classification of articles and further analysis. Study dimensions serve as tools to answer the research questions and reach the research objective.

3.1 Dimensions

Aside from the three literature types (textbooks, academic publications, and practitioner publications), the empirical work in this study is structured around several dimensions which are assumed to comprehensively represent the character of the literature. They are classified as: literature volume, authorship, research method, focus and beyond budgeting relevance.

Volume

One of the most readily observed parameters of the literature on the MAIs is volume. Volume can be measured ranging from the number of pages written on the subject in a textbook to the number of articles published in a journal. This measure of publishing activity makes the comparison of interest in a tool convenient, both indicating relative importance of the topic across different tools and across different sources of publications. Volume dimension can also be split into different time periods, which allows understanding the historical development of the literature – revealing periods of significant interest in a topic or facilitating the analysis of other literature dimensions.

Authorship

Analysing the origin of the published article, one can define the originators and the followers of the innovative ideas. Researchers in different countries have different backgrounds and interests. Thus authorship dimension can be useful in analysing the differences in geographical development and the interpretations of management accounting innovations. It also informs whether an article has originated from an individual or team work. Authors of the publications can be classified into several groups: academics, practitioners, consultants or journalists. These groups are affiliated to university faculty members, individuals working in industry, consultancy or publishing agencies. Merchant and Van der Stede (2007) observe that most advances in management accounting field have originated in practice. There is a significant difference between the focus of practitioners and academics in management accounting research (Cleaver & Evans, 1991).

Research method

Research method dimension is used to identify the research methods that current literature set is based on, identifying possible gaps in research. Although there is no standard classification of research methods that is consistent across literature analyses, our study parts the literature into the following groups: conceptual papers (which develop ideas without using data or modelling); case studies (observations under natural settings in a single organization); survey study (using questionnaires to collect data from respondents in a sample of organizations); analytical modelling study (involving mathematical proof of propositions or using analytical techniques). Additionally it is important to understand why those research methods have been chosen and what barriers and problems have been encountered during the data collection phase. These methodology classifications are also indicative of how the research has progressed over time and across different literature sets.

Beyond budgeting relevance

New concepts that are being studied and the beyond budgeting movement are closely linked. Propagators of the beyond budgeting ideas tend to publish articles about rolling forecasts, benchmarking, customer profitability reporting, and other new tools. Beyond Budgeting movement can significantly influence the diffusion of the studied innovations. Learning more about the impact of the supply-side organizations on the diffusion process and the Beyond Budgeting Roundtable in particular will help us to understand the impact of the BBRT's ideas on the innovation diffusion and adoption.

3.2 Approach

Literature review is a complex process consisting of several stages. Webster and Watson (2002) provide useful recommendations for the researchers writing a literature review. They classify literature review typologies into two categories: writing about the mature topic with a significant number of published research articles, and writing about the emerging topic with only a few available articles. While in the first case it is necessary to synthesize the broad body of literature, in the second case a new conceptual model should be proposed for the analysis.

The three chosen innovative instruments fall into different categories of literature reviews. Rolling forecast is an emerging topic and the academic literature on this topic is very scarce. At the same time benchmarking and customer profitability reporting are researched in the academic literature to a greater extent, although in other disciplines than management accounting. While all of the researched tools are of great interest to the companies, it is important to distinguish the main focus of accounting researchers in academia and to identify potential deviations between the topical coverage and the issues considered important by managers. Consequently, a combination of several research approaches and techniques should be applied.

The first step in the process of writing a literature review is to choose the relevant set of research publications. We refer to other studies in management accounting that have implemented literature reviews to increase the validity of our selection process of journals and articles.

Right keyword search is especially important for the emerging topics with a low number of publications, hence several related keywords are used in the search, e.g. 'rolling forecast', 'rolling financial forecast', 'rolling budget', and 'continuous budget' (even though the concepts of rolling forecasts and rolling budgets are different, we are interested in the development of both concepts since they are interrelated). Index page is used as a starting point in the analysis of textbooks. Following fields are chosen for the keyword search in academic publications: title, abstract and author-supplied key words. As for the practitioner literature, full text is looked into in order to find relevant articles. Literature search is limited to publications in English language issued before February 2012 due to natural time constraints.

Literature for the research is divided into three categories: conventional wisdom (textbooks), academic literature (scientific journals) and practitioner literature (professionally-oriented journals). One of the major research tasks is to analyse and systematize the information in each of the 3 categories, identifying patterns and gaps in the literature. Additionally, it is necessary to analyse the relationships between the three literature categories and the ways the interest in practice affects the academic research.

Conventional wisdom literature analysis is limited to the three world-known textbooks in management accounting written by: Drury (*Management and Cost Accounting*), Garrison (*Managerial Accounting*) and Horngren (*Cost Accounting: A Managerial Emphasis*). Two of the three mentioned textbooks are published in the USA and one in the UK. By evaluating textbooks from the UK and the USA, we can draw conclusions not only on the development of rolling forecast, benchmarking or customer profitability concepts, but also on the geographical differences in the tools usage. Only several editions available in the NHH library are reviewed, although they make the longitudinal analysis of conventional wisdom literature possible:

- Charles T. Horngren’s *Cost Accounting: A Managerial Emphasis* series
  - ✓ Editions: 6th (1987), 8th (1993), 10th (1999), 11th (2002), 12th (2005), 13th (2008), 14th (2011)
- Colin Drury’s *Management and Cost Accounting* series
  - ✓ Editions: 1st (1985), 6th (2004), 7th (2007)
- Ray H. Garrison’s *Management Accounting* series
  - ✓ Editions: 7th (1994), 11th (2006), 12th (2007), 14th (2012)

Top 30 accounting journals chosen from the Lowe and Locke (2005) article form the basis for analysing academic journals. It allows us to narrow the search and find the most relevant and valuable articles on rolling forecasts, benchmarking and customer profitability published in the top accounting journals. Journal rankings are complex and reflect the number of citations, download rate and survey results (Chan, Chan, Seow, & Tam, 2009). Therefore, by reviewing the most cited journals, one can find the main ideas presented in the academic literature.

The primary list of practitioner journals is based on two research articles that review management accounting literature: Bjørnenak and Mitchell (2002) and Selto and Widener (2004). The practitioner journal names (in italic) and articles coverage can be found in Table

3 below, among which are the above mentioned 30 accounting journals. Journals *"Accountancy Age"*, *"CFO"* and *"Financial Executive"* have been added to the search, for they have been indicated to contain relevant information about the investigated management accounting tools.

Table 3. Accounting journals reviewed in the study

Journal name	*Origin*	*Approach*	*From - To*
Abacus	AU	EBSCO	1965, vol. 1 (1) - 2011, vol. 47 (4)
Accounting & Finance	AU/NZ	EBSCO	1993, vol. 33 (1) - 2011, vol. 51 (4)
Accounting and Business Research	UK	EBSCO	1982, vol. 12 (46) - 2011, vol. 42 (1)
Accounting Education	UK	EBSCO	1992, vol. 1 (1) - 2012, vol. 21 (1)
Accounting Forum	AU	EBSCO	1999, vol. 23 (1) - 2003, vol. 27 (4)
		ScienceDirect	2004, vol. 28 (1) - 2011, vol. 35 (4)
Accounting History Review	UK	EBSCO	1990, vol. 1 (1) - 2011, vol. 21 (3)
Accounting Horizons	US	EBSCO	1987, vol. 1 (1) - 2011, vol. 25 (4)
Accounting Review, The	US	EBSCO	1926, vol. 1 (1) - 2012, vol. 87 (1)
Accounting, Auditing & Accountability Journal	AU	Emerald	1988, vol. 1 (1) - 2012, vol. 25 (2)
Accounting, Organizations and Society	UK	ScienceDirect	1976, vol. 1 (1) - 2012, vol. 37 (2)
Auditing: A Journal of Practice & Theory	US	EBSCO	1981, vol. 1 (1) - 2012, vol. 31 (1)
Behavioral Research in Accounting	US	EBSCO	1989, vol. 1 (1) - 2011, vol. 23 (1)
British Accounting Review, The	UK	ScienceDirect	1988, vol. 20 (1) - 2011, vol. 43 (4)
Contemporary Accounting Research	CA	EBSCO	1984, vol. 1 (1) - 2011, vol. 28 (5)
Critical Perspectives on Accounting	CA	ScienceDirect	1990, vol. 1 (1) - 2012, vol. 23 (2)
European Accounting Review, The	EU	EBSCO	1992, vol. 1 (1) - 2011, vol. 20 (4)
Financial Accountability & Management	UK	EBSCO	1985, vol. 1 (1) - 2012, vol. 28 (1)
International Journal of Accounting, The	US	EBSCO	1965, vol. 1 (1) - 2011, vol. 46 (4)
Issues in Accounting Education	US	EBSCO	1983, vol. 1 (1) - 2011, vol. 26 (4)
Journal of Accounting and Economics	US	ScienceDirect	1979, vol. 1 (1) - 2012, vol. 53 (1/2)
Journal of Accounting and Public Policy	US	ScienceDirect	1982, vol. 1 (1) - 2012, vol. 31 (1)
Journal of Accounting Education	US	ScienceDirect	1983, vol. 1 (1) - 2011, vol. 29 (1)
Journal of Accounting Literature	US	EBSCO	2002, vol. 21 (1) - 2010, vol. 29 (1)
Journal of Accounting Research	US	EBSCO	1963, vol. 1 (1) - 2011, vol. 49 (5)
Journal of Accounting, Auditing & Finance	US	EBSCO	1986, vol. 1 (1) - 2012, vol. 27 (1)
Journal of Business Finance & Accounting	UK	EBSCO	1974, vol. 1 (1) - 2011, vol. 38 (9/10)
Journal of International Financial Management & Accounting	US	EBSCO	1989, vol. 1 (1) - 2012, vol. 23 (1)
Journal of Management Accounting Research	US	EBSCO	1989, vol. 1 (1) - 2011, vol. 22 (1)
Management Accounting Research	UK	ScienceDirect	1990, vol. 1 (1) - 2011, vol. 22 (4)
Review of Accounting Studies	US	EBSCO	1996, vol. 1 (1) - 2011, vol. 16 (4)
Accountancy	UK	Factiva	1986, vol. 97 (1109) - 2003, vol. 132 (1322)
		EBSCO	2003, vol. 132 (1323) - 2012, vol. 148 (1421)
Accountancy Age	UK	Factiva	1986, Apr 10 - 2005, May 25
		EBSCO	2005, May 26 - 2011, Mar 10
Accountancy Ireland	IE	Factiva	1997, vol. 29 (1) - 2004, vol. 36 (6)
		EBSCO	2005, vol. 37 (1) - 2012, vol. 44 (1)

Business Finance	US	EBSCO	2004, vol. 10 (6) - 2011, vol. 17 (3)
CFO	US	EBSCO	1994, vol. 10 (1) - 2012, vol. 28 (1)
Charter	AU	EBSCO	2009, vol. 80 (8) - 2012, vol. 83 (1)
Chartered Accountants Journal	NZ	EBSCO	2003, vol. 82 (10) - 2012, vol. 91 (1)
Financial Executive	US	EBSCO	1985, vol. 1 (1) - 2012, vol. 28 (1)
Financial Management	UK	EBSCO	1993, vol. 71 (7) - 2012, Feb
Harvard Business Review	US	EBSCO	1922, vol. 1 (1) - 2012, vol. 90 (1/2)
Journal of Accountancy	US	EBSCO	1965, vol. 119 (1) - 2012, vol. 213 (2)
Management Accounting Quarterly	US	EBSCO	1999, vol. 1 (1) - 2011, vol. 13 (1)
Strategic Finance	US	EBSCO	1999, vol. 81 (1) - 2012, vol. 93 (8)

The search is firstly carried out using the major scholarly publications databases, such as Business Source Complete, Emerald Insight, or ScienceDirect. Second important step is a review of references from the identified set of literature. In this way it is possible to identify the original sources of ideas and relevant publications that have not been found in the main search. A consequent logical step is to look forward and identify the sources of literature that cite the existing set of found publications. The research tool called 'Web of Knowledge' serves the purpose of accessing such citation databases to find the followers of the ideas that have been previously omitted in the search.

After completing the literature search, all publications are read and key ideas outlined. The main task is to classify the publications and identify the patterns in the literature. The successful literature review should be logically structured around the central concepts rather than the authors of the literature (Webster & Watson, 2002).

The study is not limited to the analysis of communications between the three identified literature types: conventional wisdom, academic and practitioner. Present study findings will be compared to the ABC communication structure analysis of Lukka and Granlund (2002). Additionally, it is important to understand the influence of researchers from other disciplines on the development of research around the three studied tools: rolling forecasts, benchmarking and customer profitability.

4 Results

It is revealed that management accounting research of rolling forecasts, benchmarking and customer profitability is very scarce. While the number of hits that search engine provides is quite high for each management accounting innovation, relevant academic and practitioner articles for our analysis constitute only a fraction of the total hits: 27 out of 185 for rolling forecasts, 66 out of 976 for benchmarking, and 22 out of 176 for customer profitability (4 instructional cases in academic journals have not been included in the analysis). The figures from the search results can be found in the Table 4 below.

Table 4. Relevant hits out of total hits in all journals

Journal name	*Rolling forecast*	*Benchmarking*	*Customer profitability*
Abacus	0 (0)	0 (0)	1 (1)
Accounting & Finance	1 (1)	0 (2)	0 (0)
Accounting and Business Research	0 (0)	0 (1)	0 (0)
Accounting Education	0 (0)	0 (3)	2 (2)
Accounting Forum	0 (0)	1 (2)	0 (0)
Accounting History Review	0 (0)	0 (0)	0 (0)
Accounting Horizons	0 (0)	0 (0)	0 (0)
Accounting Review, The	0 (0)	0 (2)	0 (2)
Accounting, Auditing & Accountability Journal	0 (0)	0 (1)	0 (0)
Accounting, Organizations and Society	1 (1)	3 (4)	1 (1)
Auditing: A Journal of Practice & Theory	0 (0)	0 (0)	0 (0)
Behavioral Research in Accounting	0 (0)	0 (0)	0 (0)
British Accounting Review, The	0 (0)	1 (1)	1 (1)
Contemporary Accounting Research	0 (0)	0 (0)	0 (0)
Critical Perspectives on Accounting	0 (0)	0 (0)	1 (1)
European Accounting Review, The	2 (2)	1 (1)	0 (0)
Financial Accountability & Management	0 (0)	6 (9)	0 (0)
International Journal of Accounting, The	0 (0)	0 (0)	0 (0)
Issues in Accounting Education	0 (0)	1 (2)	0 (2)
Journal of Accounting and Economics	0 (0)	2 (2)	0 (0)
Journal of Accounting and Public Policy	0 (0)	0 (0)	0 (0)
Journal of Accounting Education	0 (0)	0 (1)	0 (2)
Journal of Accounting Literature	0 (0)	0 (0)	0 (0)
Journal of Accounting Research	0 (0)	0 (1)	0 (0)
Journal of Accounting, Auditing & Finance	0 (0)	0 (1)	0 (0)
Journal of Business Finance & Accounting	1 (1)	0 (1)	0 (0)
Journal of International Financial Management & Accounting	0 (0)	0 (0)	0 (0)
Journal of Management Accounting Research	0 (0)	3 (3)	0 (0)
Management Accounting Research	0 (0)	6 (7)	0 (0)
Review of Accounting Studies	0 (0)	0 (0)	0 (0)

Accountancy	2 (18)	5 (90)	0 (3)
Accountancy Age	0 (14)	2 (76)	1 (8)
Accountancy Ireland	1 (9)	2 (48)	0 (12)
Business Finance	1 (21)	1 (32)	1 (9)
CFO	2 (24)	1 (103)	0 (9)
Charter	2 (2)	0 (6)	0 (0)
Chartered Accountants Journal	1 (7)	1 (45)	0 (5)
Financial Executive	2 (16)	8 (97)	0 (16)
Financial Management	4 (30)	14 (172)	9 (51)
Harvard Business Review	1 (10)	3 (140)	2 (22)
Journal of Accountancy	2 (6)	1 (52)	1 (2)
Management Accounting Quarterly	1 (3)	1 (12)	0 (11)
Strategic Finance	3 (20)	3 (59)	2 (16)
	27 (185)	**66 (976)**	**22 (176)**

4.1 Rolling forecasts – conventional wisdom

Rolling forecasts and rolling budgets – two related but not identical concepts – are given different attention in the reviewed textbooks.

Rolling budgets concept has been used by textbook authors for several decades. The 6th edition (1987) of Horngren and Foster's textbook already contains some information about continuous budgets. In the 8th edition (1993) by Horngren, Foster and Datar a definition of rolling budgets is given. They define rolling budget as a budget that is always available for the specified period in the future. The definition and a brief explanation of rolling budgets also appear in 10th, 11th, 12th and 14th editions (1999, 2002, 2005, and 2011 respectively) of *Cost Accounting: A Managerial Emphasis* textbook.

Rolling forecasts are not included in the index pages of Horngren's textbooks. The trend towards rolling forecasts due to the popularity of Beyond Budgeting is mentioned in the 14th edition; however no further information is provided.

Drury does not review rolling forecasts either, although rolling budgets and its definition are provided in his textbooks.

Garrison does not discuss rolling budgets, but he uses the concept of continuous or perpetual budgets instead. The given definition of continuous budgets is similar to the Horngren's and Drury's rolling budgets. Rolling forecasts, on the other hand, are mentioned only once in the 11th edition of the book (an example case of Borealis is provided).

As we compare the number of budgeting pages in different textbook editions (see Table 5 below) we understand the interest in budgeting topics in academia. Budgeting topics cover around 13% of the last 14th edition of *Cost Accounting: A Managerial Emphasis* textbook. Consequently, budgeting is considered an important issue and is given considerable attention. Nevertheless, rolling forecasts are not given attention in the three chosen world-known textbooks, and hence no valid conclusions can be drawn with respect to the differences between the rolling forecasts presentation in the US and UK textbooks.

Table 5. Rolling forecast in conventional wisdom

Edition	*Year*	*Rolling forecast pages*	*Rolling (continuous) budget pages*	*Budgeting pages*
Horngren's *"Cost Accounting: A Managerial Emphasis"* series				
6th	1987	0	1	114
8th	1993	0	1	126
10th	1999	0	1	112
11th	2002	0	1	110
12th	2005	0	1	94
13th	2008	0	0	118
14th	2011	0	1	118
Drury's *"Management and Cost Accounting"* series				
1st	1985	0	1	90
6th	2004	0	1	166
7th	2007	0	1	94
Garrison's *"Managerial Accounting"* series				
7th	1994	0	1	106
11th	2006	1	1	98
12th	2007	0	1	87
14th	2012	0	1	83

4.2 Rolling forecasts – academic journals

Apparently only five academic articles matched our search parameters. The articles are classified according to the dimensions chosen in the method section. However, due to the limited number of publications such analysis is not complete since it does not provide a broad overview of the ideas presented. Additionally, it is reasonable to gain an in-depth understanding of the structure and content of those articles by analysing each of the five articles in detail. The findings are supplemented after the presentation of dimension results.

Volume

The first academic article on rolling forecasts has been published already in 2000; however the topicality of the management accounting innovation remained flat up till 2009, when the tool seems to have regained its relevant importance in academia. It has been signified by four articles published in period 2009-2011 (see Figure 3 below). Two of the articles have been written by the same authors, Ekholm and Wallin, one back in 2000 and the other in 2011; while the other three articles have been written by different authors.

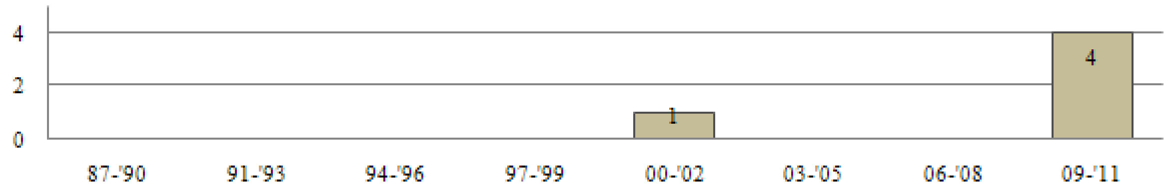

Figure 3. Volume of academic articles on rolling forecasts

Authorship

From the journal perspective, it comes out that no articles have been published in US journals, while 2 appeared in UK journals and 3 in other journals (*European Accounting Review* and *Accounting & Finance*). Authors, all of whom are academics, originate from different parts of the world, however dominated by Finnish researchers (Ekholm and Wallin have contributed two articles on rolling forecasts in academic journals).

Research method

Several study methods have been employed in the research of rolling forecasts (see Table A 3 and Table A 4). Researchers from Finland, Ekholm and Wallin (2000), examine the validity of the budgeting criticism in their survey of 650 large Finnish companies. Sivabalan, Booth, Malmi and Brown (2009) conduct a cross-sectional mailed survey of senior accountants from Australia holding a CPA. Hansen (2011) completes a mathematical modelling using linear-Exponential-Normal model (LEN) to find out the effect of a budgeting type on the different organizational functions. Frow, Marginson and Ogden (2010) complete an in-depth analysis of the company in the form of a case study, discovering the unique feature of the continuous budgeting model. Ekholm and Wallin (2011) design an internet-based survey questionnaire to understand the roles of fixed and flexible budgets.

Focus

Mainly, articles on rolling forecasts/budgets can be classified into 3 categories: those that primarily focus on rolling forecasts/budgets; those that deal with budgeting in general; and those where several performance management tools are discussed. Budgeting criticism is the primary issue that is being discussed in academic articles, as indicated in Table A 5. Rolling forecasts/budgets have not been central in any of the academic articles, although they have been presented as one of the key performance management tools in an article in *European Accounting Review* in 2011.

Similarly, the identified articles differ in their standpoint regarding the definition of rolling forecasts/budgets: in some of them both rolling forecasts and rolling budgets are recognized, while in the others only rolling forecast or rolling budgets are named (see Table A 6). Apparently, rolling forecasts are identified in 4 out of 5 articles, in two of which both rolling forecasts and rolling budgets are distinguished.

Beyond budgeting relevance

With regards to the beyond budgeting movement, articles can be separated into three categories: those that have been motivated by beyond budgeting; those that are aware of beyond budgeting and link to it; and those that are unrelated to beyond budgeting. In total, academic articles on rolling forecasts/budgets are motivated by or at least linked to beyond budgeting (see Figure 4 below or Table A 7). As it appears, the first academic article that has been written on rolling forecast in 2000 was stimulated by the beyond budgeting movement.

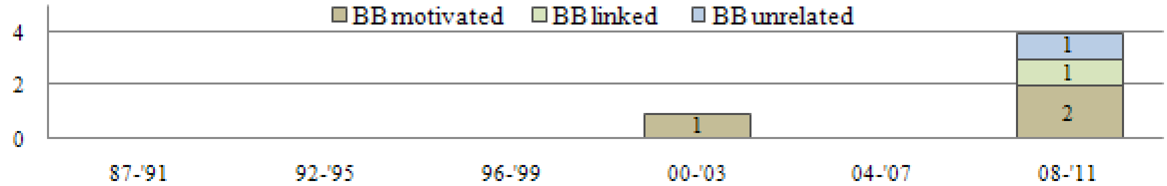

Figure 4. Beyond budgeting relevance in academic articles on rolling forecasts

In-depth

All the identified articles explain budgeting problems and suggest possible solutions, including the introduction of the rolling forecasts. Therefore, the article review will start with the problems stated by different authors and continue with the advantages of rolling forecasts and the author’s perspective on how rolling forecasts can improve the traditional budgeting system.

Researchers from Finland, Ekholm and Wallin (2000), try to understand budgeting criticism from the practitioner perspective evaluating the opinions of CFOs and controllers of the companies. Authors use the two step approach in their examination of budgeting criticism. First, they evaluate the theoretical basis of the criticism by reviewing the literature on the subject. Second, they conduct a survey in order to find out whether practitioners agree with the criticism coming from academia. Taken as a whole, theoretic critique is dominated by Hope and Fraser publications on the Beyond Budgeting movement. According to the critics, budgeting does not meet the challenges of the information age, encourage rigid planning, incremental thinking, is time-consuming, unable to reflect changes in the environment, is short-term focused, uncertain and risky, and encourages appropriation thinking.

The survey results have shown that companies would like to keep the traditional budgeting system, constantly improving it. Budgeting system is used in the companies primarily for planning and control and evaluation purposes. Three criticisms of budgeting have been found the most crucial: it is too rigid, leads to incremental thinking and cannot signal changes in the environment. Both radical and conservative companies view rolling forecasts favourably and it is concluded that there is a relationship between the budgeting criticism and the approach towards rolling forecasts. Moreover, most respondents expressed the view that rolling forecasts can replace the budget. It was concluded that budgeting is not dead since it is still an instrument allowing to maintain the company internal effectiveness but there is a need for other mechanisms (such as rolling forecasts) to supplement it and increase the external effectiveness. As a result three types of budgeting systems have been outlined: a traditional system, a hybrid system and a forecast system – with the hybrid system being the most common. Moreover, budgeting system choice is affected by the sector where company operates: “old economy” companies are less willing to abandon budgets.

Rolling forecasts are viewed as the remedy of budgeting problems. Rolling forecasts benefit from the flexible approach, rely on up-to-date information, lead to more timely allocation of resources. However, rolling forecasts do have certain drawbacks creating the feeling of uncertainty, being difficult to apply for bonus system organization. Authors discuss the residual earnings model of Ohlson (1995) and the market inefficiency model to understand the company value creation process. It is concluded that both internal and external effectiveness are needed for the companies to succeed in the information age.

Sivabalan, Booth, Malmi and Brown (2009) have analysed three types of budgeting reasons: evaluation, planning and control. They suggested the possible explanation of the fact that most companies do not want to abandon the budgets completely while budgets are heavily criticized. Budgets are used primarily for planning and control and the critique is focus on the evaluation function. Rolling forecasts are used in addition to traditional budgets and serve the same purposes (planning and control). It was concluded that budgets are used for many different purposes. The majority of the respondents use both budgets and rolling forecasts. Budgets and rolling forecasts are used for the same reasons but for different time horizons.

Frow, Marginson and Ogden (2010) suggest the ways to solve the problems stated by the budget opponents. Continuous budgeting is a new approach that is used in Astoria, a US-based international company. While completing an in-depth analysis of the company in the form of a case-study, the authors identified the key features of continuous budgeting: it is used together with other management control tools, it is used interactively, it assists in achieving the company strategy and is used in target-setting. Continuous budgeting allows combining organic and mechanistic control systems in order to adapt to the changing environment, empower innovativeness and learning while achieving financial objectives.

Ekholm and Wallin (2000) apply real options perspective to understand the impact of strategy and environmental uncertainty on budget choice. They divide all budgets into two types: fixed and flexible. Fixed budgets are accepted once a year while flexible budgets are changed more often. It was found that both fixed and flexible budgets are used by the companies with a strong emphasis on strategy. The study has not found the relationship between the increased environmental uncertainty and the use of flexible budgets. Therefore, it is not expected that flexible budgets will replace fixed ones in the future.

To conclude, all authors shared an opinion that rolling forecasts cannot replace traditional budgeting system. However, it is beneficial for a company to combine fixed and flexible budgets with other management control tools while facing the competitive environment. See Table A 8 for the summary of in-depth analysis of academic articles on rolling forecasts.

4.3 Rolling forecasts – practitioner journals

Volume

Since 1999 there have been published a total of 22 articles in the chosen practitioner journals that are related to rolling forecasts/budgets (see Figure 5 below). The number of articles in practitioner journals exceeds four times the number of articles published in academic journals for the same period reflecting that practitioner journal audience show greater interest in the technique than the academic one. However, it is still difficult to determine any pattern in the publishing activity of practitioner articles. Nevertheless, one can notice that rolling forecasts have gained higher interest among practitioners from 2003 onwards as compared to the periods before that.

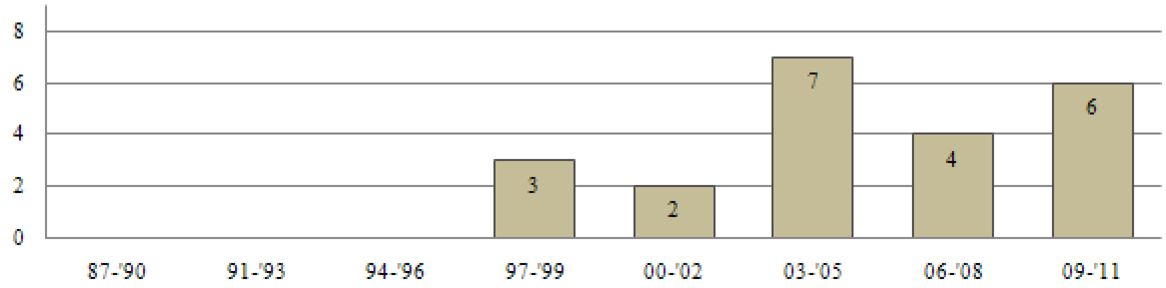

Figure 5. Volume of practitioner articles on rolling forecasts

Authorship

Consultants and journalists lead in the number of publications in practitioner journals (see Table A 1). Journalists contribute the most to the number of publications (41%). Consultants are also important contributors of rolling forecast articles (30%) indicating that they can have significant influence to the supply-side of the diffusion process. Practitioners and academics, on the other hand, are uncommon to write about rolling forecasts in the practitioner literature. It is consistent with the scarce findings of rolling forecast articles in academic journals.

There are geographical differences in the authorship distribution of rolling forecasts publications (see Table 6 and Table 7 below). The majority of the publications have a US journal origin however there are also articles from the UK and the rest of the world. Journalist have written a majority of articles in the US journals (and overall), however consultants dominate in the UK journals and across the world. Apparently, practitioners have their articles published in either UK or US journals, but none have been identified in other journals.

Table 6. Authorship of practitioner articles on rolling forecasts: journal and country profile

	UK journals		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Academic	-	-	1.0	8	1.0	25	2.0	9
Consultant	2.5	42	2.0	17	2.0	50	6.5	30
Practitioner	1.5	25	3.0	25	-	-	4.5	20
Journalist	2.0	33	6.0	50	1.0	25	9.0	41
	6.0	100	12.0	100	4.0	100	22.0	100

Most of the articles in the UK journals are written by authors from the UK (92%); however there is also a number of Americans publishing their articles in the UK journals (8%).

Likewise, 79% of all published US articles are written by Americans and the rest by the authors from the UK. Accordingly, authors from the US write mostly in their own country (95%), while authors from the UK are more spread between the US, the UK and Ireland.

Table 7. Author country of origin: practitioner articles on rolling forecasts

Author base	*UK journals*		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
USA	0.5	8	9.5	79	-	-	10.0	45
UK	5.5	92	2.5	21	1.0	25	9.0	41
Australia	-	-	-	-	2.0	50	2.0	9
New Zealand	-	-	-	-	1.0	25	1.0	5
	6.0	100	12.0	100	4.0	100	22.0	100

It reveals that only 1 out of 22 articles on rolling forecasts/budgets has been jointly written by authors of different affiliation: consultant and practitioner Clarke and West (2007) have shared their efforts in *Financial Management* journal (see Table A 2). In general, consultants have written only in specialist management accounting journals in the UK (*Financial Management*) and in the US (*Strategic Finance*), although their articles appear in more general accounting journals in Ireland (*Accounting Ireland*) and New Zealand (*Chartered Accountants Journal*).

Academics, as the least contributors to rolling forecast research, appear only in *Management Accounting Quarterly* (US) and *Charter* (Australia). Seemingly, journalists haven't contributed to rolling forecasts literature in specialist management accounting journals, such as *Management Accounting Quarterly*, *Strategic Finance*, or *Financial Management*; while they appear to be the only source of authorship in such general accounting journals as *Accountancy* (UK), *Journal of Accountancy* (US), or *CFO* (US).

Focus

Similarly to academic articles on rolling forecasts, practitioner articles are classified into 3 groups: those that primarily focus on rolling forecasts/budgets; those where budgeting in general is the main concern; and those that discuss several performance management tools. Table A 5 depicts the distribution of these 3 categories in practitioner journals across time. Half of the articles (11 out of 22) in practitioner journals primarily focus on rolling forecasts/budgets. It appears that rolling forecasts have gained higher interest throughout the years: from 1 out of 3 articles in period 1997-1999 to 5 out of 6 in the period 2009-2011.

As for the focus between rolling forecasts and rolling budgets, authors in practitioner journals primarily use rolling forecast concept, 18 out of 22, although one article dating back to 1999 used both rolling forecast and rolling budget concepts (see Table A 6). From 2006 onwards authors in practitioner journals write only about rolling forecasts (and not rolling budgets). The last article on rolling budget has been written by academics in *Management Accounting Quarterly* in 2004.

Beyond budgeting relevance

There are 3 practitioner articles found in 1999 (the earliest date in the timeline) and all of them are related to the beyond budgeting movement (see Figure 6 below). However, later period 2000-2007 can be marked with very low beyond budgeting relevance: only one article has been motivated by and one linked to beyond budgeting out of 13 articles published in that period. Relevance seems to have "regained" in the recent period 2008-2011. In total around 40% of all practitioner articles are motivated by or at least linked to beyond budgeting – reflecting a strong connection between beyond budgeting diffusion and rolling forecasts interest in practitioner publications. No patterns, however, can be identified with regards to beyond budgeting relevance and the practitioner journal where an article is published (see Table A 7).

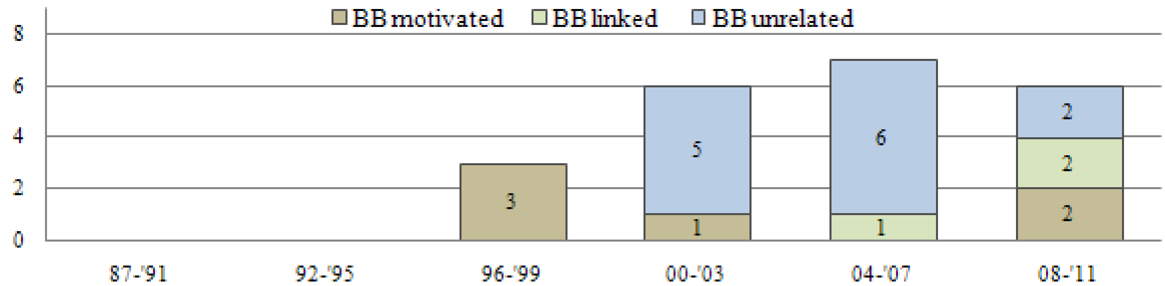

Figure 6. Beyond budgeting relevance in practitioner articles on rolling forecasts

4.4 Benchmarking – conventional wisdom

The earliest reference to benchmarking in management accounting textbooks appears in Horngren's 8th edition of *Cost Accounting: A Managerial Emphasis* (1993), prior to which the concept was not recognized in management accounting textbooks. Three are types of benchmarking defined there: benchmarking the accounting items that are reported in the accounting system; benchmarking the items that are not reported in the accounting system; and benchmarking non-financial variables. It is stated that all three types of benchmarking are equally important. On the whole, Horngren's textbooks have more pages on benchmarking than Drury's *Management and Cost Accounting* or Garrison's *Managerial Accounting* series.

14th edition (2011) of *Cost Accounting: A Managerial Emphasis* textbook has a separate part in the chapter devoted to benchmarking and variance analysis. There benchmarking is defined as "the continuous process of comparing the levels of performance in producing products and services and executing activities against the best levels of performance in competing companies…" (Horngren, Datar, & Rajan, 2011, p. 244). An example of benchmarking in the airline industry is provided to explain the ways to benchmark costs.

Then again, benchmarking is integrated into different textbook chapters throughout time. In Garrison's 11th edition benchmarking is included in the discussion of Total Quality Management, while in the 14th edition - benchmarking is a part of the chapter on Activity-Based Costing. Drury in his 6th edition textbook includes benchmarking as a part of a chapter on cost management.

Table 8. Benchmarking in conventional wisdom

Edition	*Year*	*Benchmarking pages*	*Financial performance measurement pages*
Horngren's *"Cost Accounting: A Managerial Emphasis"* series			
6th	1987	0	40
8th	1993	8	32
10th	1999	3	33
11th	2002	6	34
12th	2005	3	34
13th	2008	5	34
14th	2011	4	33
Drury's *"Management and Cost Accounting"* series			
1st	1985	0	24
6th	2004	2	46
7th	2007	2	26
Garrison's *"Managerial Accounting"* series			
7th	1994	0	60
11th	2006	1	64
12th	2007	1	57
14th	2012	1	54

On the other hand, while Drury and Garrison provide only a definition and short description of benchmarking practice, Horngren includes more information with relevant examples, cases, problems in data collection, and definitions.

To understand the relative importance of benchmarking in academic textbooks, it is necessary to compare the number of pages devoted to performance measurement issues with the number of pages on benchmarking (see Table 8 above). Financial performance measurement chapter in Horngren's textbook is relatively short and a considerable attention is devoted to benchmarking. In Drury's and Garrison's textbooks financial performance measurement chapters are longer, but benchmarking is described more briefly.

There is no clear pattern observed in the historical number of pages on benchmarking. There is some variation in benchmarking pages in different editions of Horngren's textbooks (with the most written back in 1993), while benchmarking content in Drury's and Garrison's textbooks is relatively stable.

4.5 Benchmarking – academic journals

Volume

A total of 24 academic articles on benchmarking matching our search criteria have been identified. First academic article on benchmarking has appeared back in 1995 (see Figure 7 below). Since then and until 2006 academic research of benchmarking in management accounting has carried on with an average of 2 articles per annum. Afterwards, publishing activities has somewhat come to a standstill, with only 2 academic articles written in the five-year period of 2007-2011. From another point of few, the period 1996-1999 might be noted as the peak of academic activity around benchmarking in management accounting, after which it has gradually faded away.

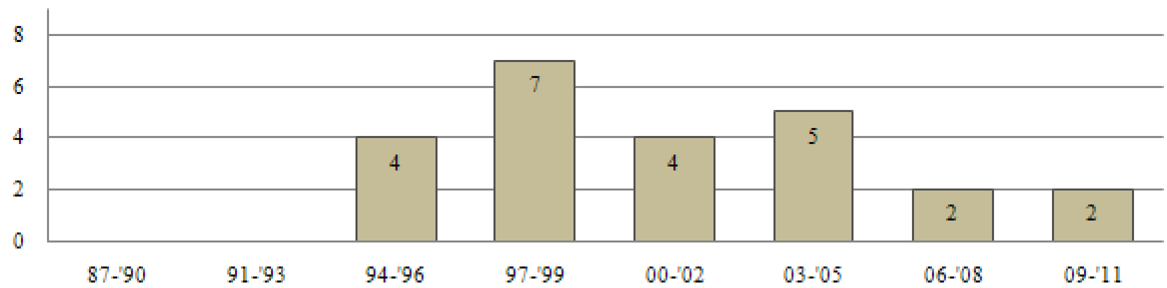

Figure 7. Volume of academic articles on benchmarking

Authorship

All articles on benchmarking in academic journals have been written solely by academics, except for one paper in US journal *Issues in Accounting Education* that has been jointly written by an academic and a practitioner. The number of articles that have appeared in US journals constitute only one fourth of the academic journal literature, where *Journal of Management Accounting Research* dominate in the number of articles. UK journals constitute a total majority – 75% of academic articles on benchmarking (with *Financial Accountability & Management* and *Management Accounting Research* dominating). Yet, there are also two articles published in other countries: in journals *Accounting Forum* and *European Accounting Review*. As for the author base of these articles, authors originating from the UK and the USA dominate in the contribution to the accounting knowledge of benchmarking, followed by the authors from continental Europe and the rest of the world (see Table 9 below). Similar to the other tools, articles in US journals have been written solely by academics from the USA, and US authors tend to publish mainly in US journals. On the other hand, the authors' origin countries in UK journals are more diverse (although authors from the UK dominate).

Table 9. Author country of origin: academic articles on benchmarking

Author base	*UK journals*		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
USA	0.3	2	6.0	100	-	-	6.3	26
UK	7.0	44	-	-	1.0	50	8.0	33
Netherlands	2.0	13	-	-	0.7	33	2.7	11
Australia	2.0	13	-	-	-	-	2.0	8
Spain	1.0	6	-	-	0.3	17	1.3	6
Italy	1.0	6	-	-	-	-	1.0	4
New Zealand	1.0	6	-	-	-	-	1.0	4
Sweden	1.0	6	-	-	-	-	1.0	4
Canada	0.7	4	-	-	-	-	0.7	3
	16.0	100	6.0	100	2.0	100	24.0	100

Then again, among academic publications on benchmarking there are more authors who have contributed more than one article to the pool of knowledge. For example, US academic Elnathan has written one joint article with an academic in *Journal of Accounting & Economics* in 1995, and another one with two academics in *Journal of Management Accounting Research* in 1996. Then, UK academic Ball has published two papers in 2001: one individual in *Accounting Forum* and another joint in *Financial Accountability & Management*. Moreover, some of the authors have jointly written several articles: academic

Northcott from New Zealand has cooperated with academic Llewellyn from the UK and published one article in *Management Accounting Research* in 2003 and another article in *Accounting, Organizations and Society* in 2005. Other examples include a duo cooperation of Australian academics and a trio cooperation of UK academics.

Research method

A couple of methods have been employed in academic research of benchmarking. Case and field studies are the most popular research methods among authors in academic articles on benchmarking, which amount to more than one third of various methods employed (see Table B 3). Then follow surveys, reviews and technical theory developments, all of which, including case studies, comprise 92% of research methods employed. There is also one econometric and one experimental study that have been published in the USA and in the UK respectively. Comparatively, one can notice that authors in UK journals tend to employ case studies more than any other method (8 out of 16 articles used case or field studies); then in US journals authors perform econometric and technical theory development more often than other methods (3 out of 6 articles used these two methods). From the journal perspective limited by the total number of academic articles on benchmarking, only *Financial Accountability & Management* and *Management Accounting Review* journals utilize case studies more often than other methods, however other journals either employ more varied methods or have published only just article on benchmarking. As for the progression of research methods during time, no pattern can be identified for it seems that all methods have been somewhat equally popular among academics, apart from the point that no case or field studies have been employed since 2006 (see Table B 4).

Focus

Benchmarking publications are systematized according to the scope dimension. Some articles are primarily focused on benchmarking as an accounting practice; other articles embrace several management accounting practices at once; while other publications cover a broad range of management accounting questions classified as management accounting article.
As it appears overall, majority of publications predominantly focus on benchmarking: there are 13 articles on benchmarking in specific, 5 articles on management accounting practices and 6 articles on management accounting in general (see Table B 5). If one separates the articles by the journal's country, it comes out that all articles in US journals are focused on benchmarking as a primary issue, but academics in UK journals also tend to write about benchmarking as one of the management accounting practices that they cover or divert to

management accounting as a whole. Yet, it appears that benchmarking as a specific issue has been popular among authors in UK journals only in the period 1999-2005. For example, an article on benchmarking in specific that has been published in Australian journal *Accounting Forum* falls into this time span as well – it appeared in 2001. Other than that, no focus patterns in academic articles on benchmarking have been discovered.

Beyond budgeting relevance

No reference to beyond budgeting movement or any related concepts has, however, been identified in academic publications on benchmarking.

4.6 Benchmarking – practitioner journals

Volume

Accordingly we have identified 39 articles in practitioner journals that touch upon benchmarking in management accounting (from a total number of 932 hits that include keyword "benchmarking"). As it follows from the Figure 8 below, the first article has been published back in 1987 and then there is a four-year research gap in 1988-1991, after which the publication activities begin to intensify– reaching a peak of publishing activity in periods 1997-1999 and 2006-2008. Later, the authors in practitioner journals have somewhat lessened the amount of publications on benchmarking – only one article has been written in practitioner journals during the period from 2009 to 2011.

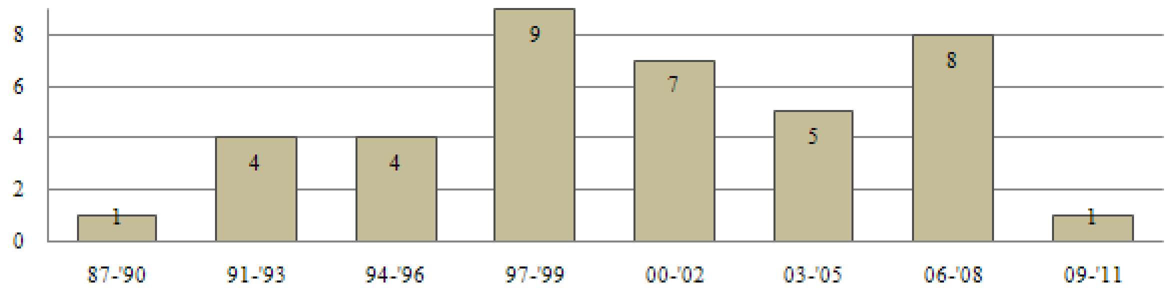

Figure 8. Volume of practitioner articles on benchmarking

Authorship

Authors of all affiliations have contributed to the dissemination of knowledge on benchmarking in practitioner journals: practitioners (30%), consultants (28%), academics (26%) and journalists (15%), which is quite different from the other two tools. The first article has been published in 1987 in *Harvard Business Review* through a collaboration of an academic and two practitioners in the USA. Consultants and journalists have picked up the benchmarking issue only in 1995, after which the involvement of all author affiliations has been somewhat even (see Table B 1).

From the journal's origin perspective, there is an equal amount of articles on benchmarking in both UK and US journals (18 each), but 2 articles also come from Ireland's and 1 from New Zealand's journal (see Table 10 below). In the UK most articles have appeared in *Financial Management* journal, while in the USA – in *Financial Executive* journal. Consultants and academics lead in publishing activity in UK journals, while practitioners lead in US journals. It comes out that journalists in US journals have written about benchmarking more than consultants in US journals and the same amount as practitioners in UK journals, making journalists an important force in the supply side of diffusion process.

Table 10. Authorship of practitioner articles on benchmarking: journal and country profile

Authorship	*UK journals*		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Academic	5.5	31	4.3	24	0.5	17	10.3	26
Consultant	6.5	36	3.5	19	1.0	33	11.0	28
Practitioner	4.0	22	6.2	34	1.5	50	11.7	30
Journalist	2.0	11	4.0	22	-	-	6.0	15
	18.0	100	18.0	100	3.0	100	39.0	100

Table 11 below exhibits authorship pattern with regards to the country of origin. Authors that have written articles on benchmarking in US practitioner journals come solely from the USA, which is similar to the pattern exhibited in US academic journals. As for UK journals, apart from authors from the UK there also are some from Australia and the USA. Authors that have written articles in other countries' journals *Accounting Ireland* and *Chartered Accountants Journal* originate from the respective countries – Ireland and New Zealand. It comes out that authors from the UK have written exclusively in UK journals.

Table 11. Author country of origin: practitioner articles on benchmarking

Author base	*UK journals*		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
USA	0.5	3	18.0	100	-	-	18.5	47
UK	15.5	86	-	-	-	-	15.5	40
Australia	2.0	11	-	-	-	-	2.0	5
Ireland	-	-	-	-	2.0	67	2.0	5
New Zealand	-	-	-	-	1.0	33	1.0	3
	18.0	100	18.0	100	3.0	100	39.0	100

In addition to the common collaborations between authors of same affiliations, there have also been 4 articles published in four different journals through joint work of academic and consultant, academic and practitioner, and consultant and practitioner (see Table B 2).Other than that, no differences in authorship preferences could be assigned to specific journals.

Focus

Similar to the articles on benchmarking in academic journals, articles in practitioner articles are classified according to scope: those that focus on benchmarking in specific; those that discuss several management accounting practices; and those that cover management accounting in general. It turns out that practitioner articles write mainly about benchmarking as a main issue: 31 articles fall into ‘benchmarking’, 4 articles into ‘management accounting practices’ and 4 into ‘management accounting’ classifications (see Table B 5). There seem to be no difference between the articles published in US and UK practitioner journals; neither does it seem that the scope has changed throughout time. From the authorship perspective, it is mostly academics and practitioners that write about management accounting and the corresponding practices. On the other hand, consultants and journalists tend to be more distinct in their publications, primarily focusing on benchmarking.

Then, benchmarking articles in practitioner journals are classified as theory or practice related. Theory development articles include such issues as discussions of the concepts, literature and the assumptions underlying implementation of the tools. Conversely, practice-related articles include more specific cases of one or several companies, attitude and opinions towards the tool from industry experts. Overall, 43% of the articles in practitioner journals are theory related, which is for the most part due to publications in UK journals, since authors in US journals write mainly about practice – 14 out of 18 articles (see Table B 6). Also, it is partly due to the moderate number of academics that contributed to benchmarking knowledge in practitioner journals: in that order 8 out 9 articles written by academics are theory related (see Table B 7). Strangely, consultants that have written in UK and other journals also focus on theory more than on practice in articles on benchmarking, while consultants in US journals are solely linked to practice. Consequently, practitioners and journalists cover practice issues for the most part.

Beyond budgeting relevance

Only one benchmarking article in practitioner journals has been identified that links to the beyond budgeting movement: it is a joint work of a consultant and a practitioner written in

2006 in US journal *Strategic Finance*. The authors are merely informed of this new budgeting concept, but they do not elaborate on the concept further in their article.

4.7 Customer profitability – conventional wisdom

Horngren defines customer profitability analysis as "the reporting and assessment of revenues earned from customers and the costs incurred to earn those revenues" (Horngren, Datar, & Rajan, 2011, p. 510). Horngren's textbook includes the discussion on several important issues: customer profitability profiles, revenue and cost analysis of a customer, ways to measure customer profitability and relevant examples illustrating how customer profitability analysis can be implemented. Horngren discusses customer cost hierarchy consisting of: customer output unit-level costs, customer batch-level costs, customer sustaining costs, distribution channel costs and corporate sustaining costs. Primarily the first three cost categories should be assigned to customers as they can be affected by changes in customer behaviour. Distribution channel and corporate sustaining costs can be changed only at the corporate level and thus they do not directly affect customer profitability.

Drury gives a definition of customer profitability analysis. An example illustrating the implementation methods of customer profitability and pareto analyses is used to describe how customer profits are generated: approximately 80% of profits come from 20% of customers. Such analysis helps in identifying the top customers that generate the most profits.

Garrison gives an example of using activity-based costing in customer profitability and describes customer profitability reports. Only in one of the four reviewed editions of the book there has information on customer profitability: it appeared only in 12th edition (2007) and disappeared in later editions.

Overall, the number of pages in Horngren's textbook on customer profitability has grown steadily since 1993 (see Table 12 below). Drury and Garrison devote much less attention to customer profitability – the just define the concept and give an example of its implementation. These findings are consistent with the findings of Bates and Whittington (2009).

Bates and Whittington (2009) make a significant contribution to the understanding of conventional wisdom literature on customer profitability. They reviewed and classified 18 accounting textbooks to understand customer focus in academia. None of the 18 textbooks has a broad coverage of customer profitability and overall volume of customer related text is fairly low. Authors conclude that customer profitability is not a part of the main questions in management accounting.

Table 12. Customer profitability in conventional wisdom

Edition	*Year*	*Customer profitability pages*	*Activity-based costing pages*
Horngren's *"Cost Accounting: A Managerial Emphasis"* series			
6th	1987	0	0
8th	1993	3	8
10th	1999	9	42
11th	2002	6	40
12th	2005	7	42
13th	2008	7	44
14th	2011	13	44
Drury's *"Management and Cost Accounting"* series			
1st	1985	0	0
6th	2004	3	42
7th	2007	2	26
Garrison's *"Managerial Accounting"* series			
7th	1994	0	7
11th	2006	0	64
12th	2007	3	62
14th	2012	0	63

4.8 Customer profitability – academic journals

Initially, we have identified 10 academic articles on customer profitability that match our search parameters, but after closer examination 4 of those articles have been excluded from the analysis for they are instructional case studies intended for educational purposes rather than providing findings from carried out research. These four omitted articles have been published in US journals *Issues in Accounting Education* and *Journal of Accounting Education*, yet another two academic articles found in a similar UK journal *Accounting Education* match the relevance criteria and hence are included in the analysis.

Volume

Accordingly, only 6 academic articles on customer profitability have been recognized (see Figure 9 below): the earliest article was published in 2002 and the latest in 2010 with a research gap in period 2005-2007. As the total number of academic articles is extremely low, it is difficult to understand the patterns in publishing activity related to customer profitability.

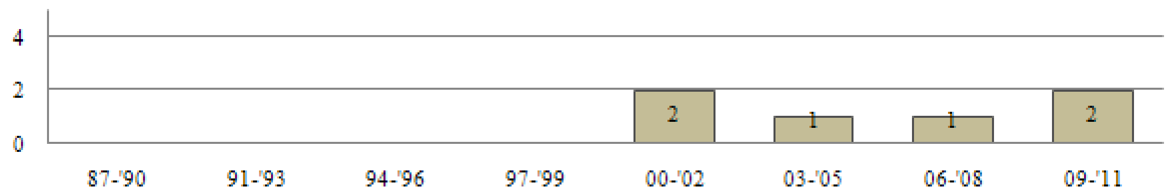

Figure 9. Volume of academic articles on customer profitability

Authorship

All academics articles on customer profitability have been written by academics only. From the journal perspective (see Table 13 below), it comes out that the majority (4 articles) have been published in UK journals (*Accounting Education*; *Accounting Organizations and Society*; and the *British Accounting Review*),one in Australian journal (*Abacus*) and one in Canadian journal (*Critical Perspectives on Accounting*). Apparently, all of the articles have been published in different journals except for two that appeared in *Accounting Education* journal. From the authorship perspective, most academics originate from Europe: just UK and Dutch academics constitute more than half of the authors. Then again, one of the Dutch authors, Cardinaels, has contributed two academic articles to the existing knowledge on customer profitability: one has been written in *Abacus* in 2004 in cooperation with two Belgian academics, while the other one in *Accounting, Organizations and Society* has been written in 2008 independently. Then again, none of the authors originate from the USA, partly due to the fact that we have excluded four instructional case studies as mentioned previously. Also, none of the authors from the UK and other countries have published their articles in US journals either.

Table 13. Author country of origin: academic articles on customer profitability

Author base	*UK journals*		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
USA	-	-	-	-	-	-	-	-
UK	1.5	38	-	-	1.0	50	2.5	36
Netherlands	1.0	25			0.3	17	1.3	19
Australia	1.0	25			-	-	1.0	14
Belgium	-	-	-	-	0.7	33	0.7	10
New Zealand	0.5	13	-	-	-	-	0.5	7
	4.0	100	-	-	2.0	100	6.0	100

Research method

Several research methods have been employed in academic articles on customer profitability as well. Three of the methods: case and field studies, experiments and reviews – they are equally popular among academics in UK and other journals (see Table C 3). Cardinaels, for example, has implemented experimental design studies in both of his articles: first, along with other academics in *Abacus*, he examines the impact of customer profitability reports on resource allocation decisions; and later, writing alone, he examines the profit impact of customer profitability report's presentation format with respect to decision maker's cost accounting knowledge. Then, the extent of customer focus in leading management accounting textbooks has been reviewed in *Accounting Education*, and extant customer accounting techniques and approaches have been reviewed and critiqued in *Critical Perspectives on Accounting*. Also, a longitudinal case study of profitability reporting in a bank has been brought about in *British Accounting Review*, and a case study of applying the BCG matrix in customer profitability analysis has been illustrated in *Accounting Education*. Other than that, interest in customer profitability has been expanded by four case studies in US journals, but they have been left out for being rather instructional. From what is comprehended, one can see that case studies are the first research methods to have been implemented in academic articles on customer profitability back in 2002, supplemented by experimental studies in 2004 and 2008, and completed by reviews in 2009 and 2010 (see Table C 4).

Focus

Articles on customer profitability in our analysis can be primarily divided into three main areas: those that primarily focus on customer profitability, those that focus on customer accounting as a broader issue, and those that cannot be attributed to customer profitability or accounting explicitly and thus relate to management accounting in general. Customer profitability articles include measurement, classifications, benefits and drawbacks of the technique; customer accounting publications include the discussions on several customer-related subjects including customer satisfaction, customer loyalty, customer profitability, etc.; management accounting articles cover the broadest range of accounting issues. This classification provides information about the importance of customer profitability as a separate issue, the levels of literature's specification and generalization, the connection between customer profitability and other topics in management accounting.

As it appears from the limited number of academic articles, the focus distribution is somewhat even: three articles relate to customer profitability in specific, while one article covers broader issues of customer accounting and two articles relate to management accounting in general (see Table C 5). Yet, there does not seem to be any focus pattern among published customer profitability articles with regards to time or journal profiles.

Beyond budgeting relevance

There seems to be asymmetry in connection between beyond budgeting literature and customer profitability publications. Beyond budgeting is not mentioned in any academic publications on customer profitability, although customer focus and customer profitability are imperative in beyond budgeting literature.

4.9 Customer profitability – practitioner journals

Volume

Subsequently we have identified 16 practitioner articles on customer profitability that match our search criteria (with a total number of 168 hits). The first article has been published back in 1993 while the most 3 recent articles are attributed to year 2008. On average, 1-to-3 articles have been published annually in practitioner journals, although a couple of three-year gaps have occurred in practitioner publishing activity in 1995-1997 and 2009-2011. From the other point of view, it might look like interest in customer profitability has been increasing throughout time (see Figure 10 below).

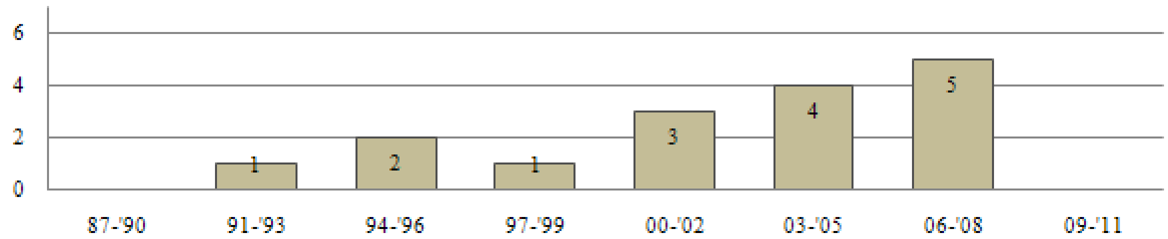

Figure 10. Volume of practitioner articles on customer profitability

Authorship

It comes out that most of the articles in practitioner journals have been written by authors with some academic background – they constitute around 35% (see Table C 1). The lead is followed by consultants (25%) and practitioners (24%). Journalists are apparently the smallest contributors to articles on customer profitability in practitioner journals – only 16% of publications have been written by them. The spread of knowledge on customer profitability in practitioner journals has been initiated in 1993 by an academic Smith in UK journal *Financial*

Management. Actually, all of the articles published in period 1993-2000 have appeared in *Financial Management*. Then again, this journal leads in the number of articles on customer profitability published overall – 9 out of 16 articles appeared in *Financial Management*. No other relations can be identified between the authorship of articles and their publishing date, except for that journalists have started writing about customer profitability only since 2003.

As for the journals' origin in general, there is only one UK journal *Accountancy Age* in addition to *Financial Management*, which consequently dominate the publishing activity in US journals: *Harvard Business Review*, *Journal of Accountancy*, and *Strategic Finance*. No articles on customer profitability have appeared in other countries' practitioner journals. From the Table 14 below, it follows that practitioners are as active in publishing activity as academics in UK journals, but they are rather inactive in US journals. Journalists, on the other hand, write on customer profitability in the USA than in the UK.

Table 14. Authorship of practitioner articles on customer profitability: journal and country profile

	UK journals		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Academic	3.5	35	2.2	36	-	-	5.7	35
Consultant	2.0	20	2.0	33	-	-	4.0	25
Practitioner	3.5	35	0.3	6	-	-	3.8	24
Journalist	1.0	10	1.5	25	-	-	2.5	16
	10.0	100	6.0	100	-	-	16.0	100

On the whole, authors originating from the UK have written more articles on customer profitability than authors from the USA (41% and 35% respectively), while there also are some authors from Australia, Ireland and France that have contributed to practitioner journals (see Table 15 below). Similar to the authorship of the two other tools, US authors write mostly in US journals, which is also true the other way around – authors that publish in US journals originate from the USA. Analogous pattern is exhibited in UK journals – most

Table 15. Author country of origin: practitioner articles on customer profitability

Author base	*UK journals*		*US journals*		*Other journals*		*Total*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
USA	-	-	5.7	94	-	-	5.7	35
UK	6.5	65	-	-	-	-	6.5	41
Australia	2.5	25	-	-	-	-	2.5	16
Ireland	1.0	10	-	-	-	-	1.0	6
France	-	-	0.3	6	-	-	0.3	2
	10.0	100	6.0	100	-	-	16.0	100

authors originate from the UK as well, but they countries of origin are more diverse than in US journals. It appears that authors from countries other than the USA and the UK tend to publish in UK journals more, which is partly due to the low popularity of accounting journals in the authors' own country of origin.

Most of the practitioner articles on customer profitability have been written either individually or jointly by authors of the same affiliation, but there three articles that have been written by academics in cooperation with either a practitioner or a journalist (see Table C 2). As one can see, consultants and practitioners have written mostly in management accounting journals like *Strategic Finance* or *Financial Management*, while journalists have written in more accounting general journals like *Business Finance* and *Accountancy Age*. No other patter related to author combinations can be identified.

Focus

Just as academic articles on customer profitability are divided into three main areas, so are practitioner articles (see Table C 5). As it appears, more articles focus on customer accounting as a general issue (and 1 article can be attributed to management accounting as a broader topic), yet only 7 out of 16 articles directly relate to customer profitability. There are twice as many US articles that focus on customer accounting than on customer profitability in specific, yet in the UK there are more articles that focus on customer profitability than on customer accounting, suggesting that customer profitability as an issue might have gained more popularity among UK practitioners than among US practitioners. As for the time, journal and authorship differences and patterns related to focus in practitioner articles, none have been identified.

As a second step, all practitioner articles on customer profitability are divided into two groups: theory development articles and articles focusing on practical issues i.e. examples of implementation of the tool in different companies. Theory development articles include such issues as discussions of the concepts, literature and the assumptions underlying implementation of the tools. Conversely, practice-related articles include more specific cases of one or several companies, attitude and opinions towards the tool from industry experts.

Overall there are more articles on customer profitability related to the theory discussion rather than practice. Articles in the practitioner journals do not focus much on the company case studies and examples given the fact that the target audience of such journals is primarily business people. Most of the publications on customer profitability in practitioner journals are aimed for an educational function: to give an explanation and the possible uses of the technique. Starting from the first publication in 1993 and until 2004 all practitioner articles focused only on theory, but after that more practice-related issues of customer profitability have been introduced and discussed in the articles (see Table C 6). As for the distribution of authorship with regards to theoretical or practical focus of customer profitability articles, it comes out practitioner and journalists discuss mostly practical/exemplified issues, while academics and consultants talk about related concepts and solutions from an isolated standpoint – without providing examples of companies that implemented the tool successfully (see Table C 7).

Beyond budgeting relevance

None of the practitioner articles are related to the beyond budgeting movement. Our findings for both academic and practitioner articles on customer profitability are in asymmetry with the beyond budgeting literature, which emphasizes the importance of customers and propagate the use of customer profitability.

5 Discussion

5.1 Conventional wisdom

The dynamic evolution of management accounting in the last decade results in changing the content of the mainstream management accounting literature. Such dynamism leads to the lack of consistent framework of tools, institutions and concepts that shape management accounting today (Hoffjan & Wömpener, 2006). As management accounting covers more questions, it relates more to other research fields such as marketing, management and finance – increasing the number of interdisciplinary discussions and publications.

Content of the three studied textbooks (Horngren's *Cost Accounting: A Managerial Emphasis*, Drury's *Management and Cost Accounting*, and Garrison's *Managerial Accounting*) is considered representative of the conventional wisdom in management accounting. Comparing the findings for the three tools we come to a conclusion that all of them are not extensively covered in the world-famous textbooks.

As academic textbooks have shown, conventional wisdom has been informed by the existence of rolling budgets already since 1985 (Drury's *Management and Cost Accounting* 1st ed.). Nevertheless, it appears that rolling forecasts have not gained the same interest among scholars: while topics on budgeting cover considerable part of the textbooks (e.g. more than 100 pages in Horngren's textbook series), not a single definition of "rolling forecast" has been provided. Notwithstanding that rolling forecasts have been introduced in Garrison's *Managerial Accounting* 11th ed. (2006), they are apparently left out in further editions – 12th (2007) and 14th (2012). This is particularly peculiar given that rolling forecasts were at that time gaining popularity both in practitioner and academic literature. Then again, Horngren in 14th ed. of *Cost Accounting: A Managerial Emphasis* (2011) has remarked that rolling forecasts and beyond budgeting are "new cutting edge topics" in management accounting. This remark can be subtly linked to the appearance of 4 newly published academic articles on rolling forecasts/budgets in the period 2009-2011. Nevertheless, no traces of evidence or references to either academic or practitioner articles on rolling forecasts can be identified, leaving conventional wisdom somewhat isolated from academia and practice.

Benchmarking and customer profitability, although quite eminent in other disciplines, have appeared in management accounting textbooks somewhat later – in 8th edition of Horngren's *Cost Accounting: A Managerial Emphasis* (1993). Apparently, the interest in these two tools is initially higher than for rolling forecasts. While interest in benchmarking remains relatively stable throughout time, customer profitability has now gained somewhat more attention than it used to have when the concept first appeared in the management accounting textbooks.

From the corresponding authors perspective, Horngren happens to contribute the most to the diffusion of knowledge about both benchmarking and customer profitability, and rolling forecasts have been enlightened to a very small extent by all three authors. Garrison, on the other hand, appears to contribute the least to the spread of all three investigated tools: he has not built up knowledge on either rolling forecasts or benchmarking (with less than 1 page written in each edition), while customer profitability as an issue is covered only once in 2007 (with 3 pages) and left out in further and prior editions.

Except for the above mentioned occurrence of customer profitability in Garrison's textbook, different editions of textbooks differ only marginally for all three tools. Ferguson et al. (2008) refer to it as monotonous homogeneity: some authors are not willing to make changes in different textbook editions and as a result new innovative questions do not appear in the new editions.

Textbooks have always been considered conservative in terms of content as compared to other publications. While textbook content reflects both the supply and the demand side forces, a conflict of interest between the needs of lecturers, students and researchers can arise. On the other hand, limited information provided in the textbooks might be attributed to the influence from academia. Practitioner publications are not the main source of knowledge for conventional wisdom. Textbooks only include concepts that are verified and established in the academic publications (Hoffjan & Wömpener, 2006).

Beyond budgeting is mostly an issue in practice, and academics are mostly interested in researching more advanced tools, like activity-based costing and balanced scorecard. Hence ABC and BSC are discussed in the textbooks to a greater extent. Then again, former popularity of budgeting topics in the textbooks can be attributed to olden times, when authors were involved in both academia and practice-related issues. Since rolling forecasts, benchmarking and customer profitability have not received much attention in the academic journals, textbooks do not include an extensive overview of the three tools either.

5.2 Academic publications

Rolling forecasts

Although the number of academic articles on rolling forecasts/budgets is rather small (only 5), the prevalence of authors from Finland might be partly attributed to the beyond budgeting movement. Nordic countries are considered the region where there is a strong debate on the budget usefulness and where Beyond Budgeting ideas emerged (Ekholm & Wallin, 2011). Consequently, researchers in Nordic countries are particularly interested in the budget usefulness, the development and the alternatives for traditional budgeting. In particular, Ekholm and Wallin are the first authors to publish an academic article that embraces rolling forecasts (back in 2000), and consequently they have contributed another article on rolling forecasts/budgets in 2011 – both of the articles have been motivated by the beyond budgeting movement. Malmi is another Finnish author who in cooperation with other three academics from Australia, Sivabalan, Booth and Brown, touched upon rolling forecasts in an academic article of 2009; but no link to beyond budgeting movement can unfortunately be identified. Nonetheless, the connection between academics' country of origin and their involvement in research of rolling forecasts and beyond budgeting should not be overlooked.

Still, academic research of rolling forecasts is, however, rather dispersed. Not only there is a gap in academic research between 2000 and 2009, but the research methods employed and theories applied are very much unlike. One thing that brings them together is that they are not propagating rolling forecasts to the same extent as authors in the practitioner journals do.

Benchmarking

Benchmarking is an interdisciplinary concept and it has attracted high levels of interest in different areas since its emergence. It is applied in manufacturing to compare products across companies, in management to compare managerial processes, and in finance to compare profitability and financial ratios. Benchmarking is also used in accounting primarily to compare costs and is considered a part of performance measurement system. While benchmarking of products is the most developed area, benchmarking in accounting is a relatively new concept. Ball (2001) emphasizes the lack of conceptual understanding of benchmarking in accounting seeing that the original definition comes from other disciplines.

Benchmarking research has been conducted in different areas including: public sector (Ball, 2001), hospital (Llewellyn & Northcott, 2005), bank (Helliar, Cobb, & Innes, 2002), health care sector (Naranjo-Gil, Maas, & Hartmann, 2009), university (Arnaboldi & Azzone, 2004), local government (Bowerman, Ball, & Francis, 2001), public schools (Dopuch & Gupta, 1997), transportation and distribution (Wouters, Kokke, Theeuwes, & van Donselaar, 1999).

Previous academic studies have attempted to identify the differences in benchmarking in the private and public sectors (Ball, 2001; Llewellyn & Northcott, 2005; Helden & Tillema, 2005). Llewellyn and Northcott (2005) point out that benchmarking is more suitable for public sector rather than private sector as it leads to the standardization of the organizational processes and eliminates performance differences and competitive advantage. Such model benefits public organizations such as hospitals by reducing costs and diminishing organizational differences (Llewellyn & Northcott, 2005).

Benchmarking in the public sector is compulsory in some governments and typically organized by an external organization (Bowerman, Ball, & Francis, 2001). In the public sector benchmarking has been primarily developed to show accountability rather than to improve performance.

While in private sector benchmarking is associated with the paradigm of "new management accounting solutions" and the lost relevance debate, in public sector it is enforced by the "new public management model" (Ball, 2001). Additionally, benchmarking is a part of the innovation diffusion process: companies imitate the best practice techniques and spread new ideas (Kouzmin, Löffler, Klages, & Korac-Kakabadse, 1999).

In the current study most of the academic articles include research in the public sector. There are several possible reasons for the dominance of public sector research. Typically, it is easier to benchmark relatively homogenous organizations and public sector organizations (for example, schools are best for such analysis). Comparing similar organizations, one can identify performance gaps and needs for improvement. Additionally, it is relatively easier to collect data from public organizations than from private ones.

Ball (2001) demonstrates how new management accounting ideas have been transferred from private to public sector. She notices that benchmarking appeared in the private sector due to the need to remain competitive; however public sector has to adopt new solutions in the new environment.

Some studies refer to relative performance indicators (RPE) as forms of benchmarking and discuss their implementation factors (Northcott & Llewellyn, 2003).

Case study research method is dominant in the academic articles on benchmarking. Case study approach is applied to make an in-depth analysis of the usage of benchmarking in companies, identify benefits and drawbacks of the tool usage, understand the implementation of benchmarking in a specific context, find out the fraction of companies that use benchmarking, etc. While trying to identify the reasons for the companies to implement an innovative tool, researchers use several theories: contingency theory, new institutional sociology and old institutional sociology (Johansson & Siverbo, 2009).

Returning to the benchmarking classifications, academic articles typically include discussions on competitive and functional benchmarking types. Global best practice benchmarking has not received much attention.

Among all researched academic journals *Financial Accountability & Management* journal from the UK has got the most articles published on benchmarking. As the journal is not a specialized accounting journal, discussions in the articles usually include information from other disciplines as well. Therefore, benchmarking has not yet become an accounting issue to a full extent.

First academic article on benchmarking in accounting has appeared in 1995 and all articles are equally spread over time. Authors of the articles come from different geographical regions including: the UK, New Zealand, Australia, Spain, Netherlands and Canada. It can be concluded that benchmarking has become a multinational research issue.

Customer profitability

Customers are becoming a central issue in many companies as customer loyalty influences company costs, customer behaviour patterns influence demand for products and production cycles, while customer profitability affects the firm value. The body of marketing literature has developed to explain the role of customers in the business world. Customer profitability is generally discussed in the context of marketing development and is considered primarily a marketing question. However, it is also researched from a different angle by accountants: they are interested in the customer profitability calculation process, performance effects of customer profitability calculations, environment effect on the customer profitability success. Customer profitability analysis is frequently discussed in the context of activity-based costing and strategic management accounting (Roslender & Hart, 2010).

Overall, the number of academic articles on customer profitability is very low. Customer profitability accounting research emerged only in the 21st century: the first academic article was published in 2002. Consequently, customer profitability has not yet become a main area in management accounting. Bates and Whittington (2009) show that customer profitability is extensively used by companies; however it is still not a major question in academia. It appears that there is no clear link between the needs of practice and academic research on customer profitability.

A limited list of authors writing about customer profitability includes one author from Netherlands, Cardinaels, who has contributed two academic articles. Additionally, one comprehensive literature review is included in the analysis written by Bates and Whittington (2009). Academic authors come from different countries including the UK, the USA, Australia, Netherlands and Belgium.

Authors use different methods in their research including experimental study, review, case and study. Most of the articles are written by European researchers and they use qualitative research approaches. Qualitative research methods typically allow deeper understanding of organizational processes and research mechanisms. As Lee, Collier and Cullen (2007) put it, geographical differences in methodology are significant: America has a long tradition of quantitative research, while Europe is famous for qualitative publications.

Overview

Academic articles are in general more critical and sceptical than practitioner articles. Academic publications target researcher audience and researchers needs, they are not propagating the tools but rather investigating the relationships, patterns and gaps in research. Additionally, academic articles on all three tools cover a wider range of topics than practitioner articles, which have a narrow question and a shorter discussion.

As the number of articles on all three tools is very low, the knowledge base is still at the emerging stage of development. Volume of benchmarking academic articles is the highest among the three tools and the lowest volume of articles is published on rolling forecasts. While rolling forecasts research includes both quantitative and qualitative techniques, customer profitability publications are primarily qualitative.

Apparently only articles on rolling forecasts refer to the beyond budgeting movement. While beyond budgeting publications propagate the use of the new management accounting techniques and explain the role of rolling forecasts, benchmarking and customer profitability in the new organizational environment without budgets; academic articles on benchmarking and customer profitability do not refer back to the beyond budgeting ideas. Therefore the role of the beyond budgeting movement in the innovation diffusion remains unknown.

5.3 Practitioner publications

Authors have become active in writing articles on rolling forecast, benchmarking and customer profitability sooner in practitioner journals than in academic journals, which can be possibly attributed to less demanding publishing requirements in practitioner journals.

Respectively for each management accounting innovation, the contribution of articles that comes from practitioner journals is almost twice as big as than from academic journals.

Then again in practitioner journals, just like in the academic journals, the articles on benchmarking have appeared much earlier than the articles on rolling forecasts or customer profitability. So is the total volume of articles on benchmarking larger than the volume of both rolling forecast and customer profitability articles. Nevertheless, the publishing activity of authors in practitioner journals that write about benchmarking have lessened during the last couple of years (with only one article written in period 2009-2011); the publications on customer profitability have always been low and inevitably no publications appeared during the same period 2009-2011; as for rolling forecasts, year 2011 seems to exhibit a second peak of publishing activity after 2003. Consequently, the dissemination of knowledge about rolling forecast, which is the last of three tools that have appeared in practitioner journals, is about to build up in coming years.

Academics, consultants and practitioners play significant role in the diffusion of all three management accounting practices, but journalists, apparently, are significant contributors to the literature development as well. In particular, journalists have provided more articles on rolling forecasts than any other author affiliations – around 41%; as for the benchmarking and customer profitability articles, journalists have written less than any other author. On the other hand, academics turn out to have written very little on rolling forecasts as compared to the other authors – just 9% of articles; yet academics have provided around one fourth of benchmarking articles and one third of customer profitability articles.

Approximately 70% of all articles on rolling forecasts, benchmarking and customer profitability have been written solely, and the rest have been written through the cooperation of two (21%), three (6%) or four (3%) authors of the same (20%) or different (10%) author affiliations. It follows that there is partial accumulation of knowledge through joint collaborations between academics, practitioners, consultants and even journalists: the most comes about in articles on customer profitability and the least in articles on rolling forecasts. Yet, for all the three tools together (10%) cooperation between authors of different affiliations appear to be slightly lower than in the articles on activity-based costing (12%) that appeared in practitioner journals during the period 1987-2000 (Bjørnenak & Mitchell, 2002).

In contrast, there are some authors who have contributed more than one article to the literature on rolling forecasts, benchmarking and customer profitability. Consultants and practitioners usually publish their articles in one practitioner journal. And predominantly, there are academics who have written in both practitioner and academic journals. Overall it comes out that there is progression of knowledge for all three tools: there are authors who spread their ideas and knowledge throughout time and in different journals (both practitioner and academic); but since the total number of articles written on the subject is somewhat low as compared to the other management accounting tools, like activity-based costing or balanced scorecard, this development appears rather insignificant.

Practitioner journal *Financial Management* (ex: *Management Accounting*) from the UK turns out to be dominant with regards to the number of collaborations between authors (as notified above) who write about either rolling forecasts, benchmarking or customer profitability. Moreover, *Financial Management* is dominant in terms of total volume of articles for each of the three tools as well. In general, there are more articles on rolling forecasts published in US journals than in UK journals; even amount of benchmarking articles in both US and UK journals; and more customer profitability articles in UK journals than in US journals. Perhaps rolling forecast as a tool is most popular among management accountants in the USA and customer profitability analysis and reporting are most popular in the UK, but benchmarking practices have gained strong interest in both the USA and the UK.

Overall, US practitioner journals are home-oriented for all three tools (rolling forecasts to a smaller extent): almost all authors who publish in the US journals originate from the USA, and the other way around – authors from the USA mostly publish in the US journals. The UK and other countries' practitioner journals have a much more international range of authorship for all the tools as well. Similar findings have been found in the articles on activity-based costing (Bjørnenak & Mitchell, 2002).

Articles in practitioner journals are more specific than in academic journals in terms of their focus: authors in practitioner journals primarily write about the tool under question, while in academic journals the issues discussed are broader (budgeting and its criticism are more significant than rolling forecasts; management accounting and various practices outweigh benchmarking; and customer accounting is prevalent over customer profitability). When comparing the three tools in practitioner journals, benchmarking articles appear to be the most specific, followed by rolling forecasts and then customer profitability articles. Academics and consultants tend to discuss theory development (concepts, literature, underlying assumptions), while practitioners and journalists are more related to practice – they provide examples of successful implementations of the tools and opinions from industry experts.

Similar to the academic journals, in practitioner journals the relevance to beyond budgeting movement is not as apparent in benchmarking and customer profitability articles as in rolling forecasts articles. Actually no authors who have written about benchmarking and customer profitability in practitioner journals are motivated by beyond budgeting – nor do they refer to the idea or associated concepts. This is quite peculiar since propagators of beyond budgeting typically link to relative performance measurement (or benchmarking) and customers as the crucial aspects of successful management model; but no identified authors in academic and practitioner journals actually refer back to the concept. Possibly, the interest in benchmarking and customer profitability has been impacted by other (than management accounting) disciplines, where these two tools have originated from.

Then again, articles on rolling forecasts do refer back to beyond budgeting (which propagate rolling forecasts too), although this link is not as strong in the practitioner as in the academic journals – approximately only half as many are motivated by or linked to beyond budgeting movement. Moreover, none of the authors of practitioner articles has Nordic region as their place of origin, which can partly explain such low association of articles with beyond budgeting.

6 Conclusion

This study has aimed to provide a comprehensive overview and analysis of the existing literature on rolling forecasts, benchmarking and customer profitability in management accounting context and identify their relationship to the Beyond Budgeting movement. The method employed in the study, which promotes classification of the literature by its type and corresponding dimensions, has allowed answering two of the research questions: one related to the extent of the MAIs' adoption in conventional wisdom, academic and practitioner publications; and the other related to the extent of Beyond Budgeting's role as an innovation's diffusion channel. In order to assess the extent of knowledge accumulation for the three MAIs (as the last research question), we need to refer to the citation analysis and the communications structure.

6.1 Communications structure

Rolling forecasts

As we have established previously, conventional wisdom is informed about rolling forecasts to some extent, but it has not built any additional knowledge on the idea. Neither conventional wisdom refers to academic or practitioner publications with regards to rolling forecasts, nor academic or practitioner journals grasp any knowledge about rolling forecasts from conventional wisdom. Then, we have to determine whether academic and practitioner publications share any communication channels.

Essentially, authors of different affiliations do not cooperate in writing articles on rolling forecasts, except for one example when a consultant and a practitioner have written a joint article in *Financial Management* in 2007. Accumulation of knowledge, however, might also occur throughout time. Figure 11 below represents all 27 articles on rolling forecasts found in academic and practitioner journals, sorted from 1999 to 2011.

As it comes into view, there is partial communication between authors in academic journals, in practitioner journals and between these two publication genres. For example, there is communication within one practitioner in 1999: Fanning refers to Hope and Fraser in *Financial Management*; and within one academic journal, *European Accounting Review*, when Hansen (2011) refers to Ekholm and Wallin (2000).

There is also communication across journals within both practitioner and academic publication genres. Since practitioner articles do not usually have a works cited section in

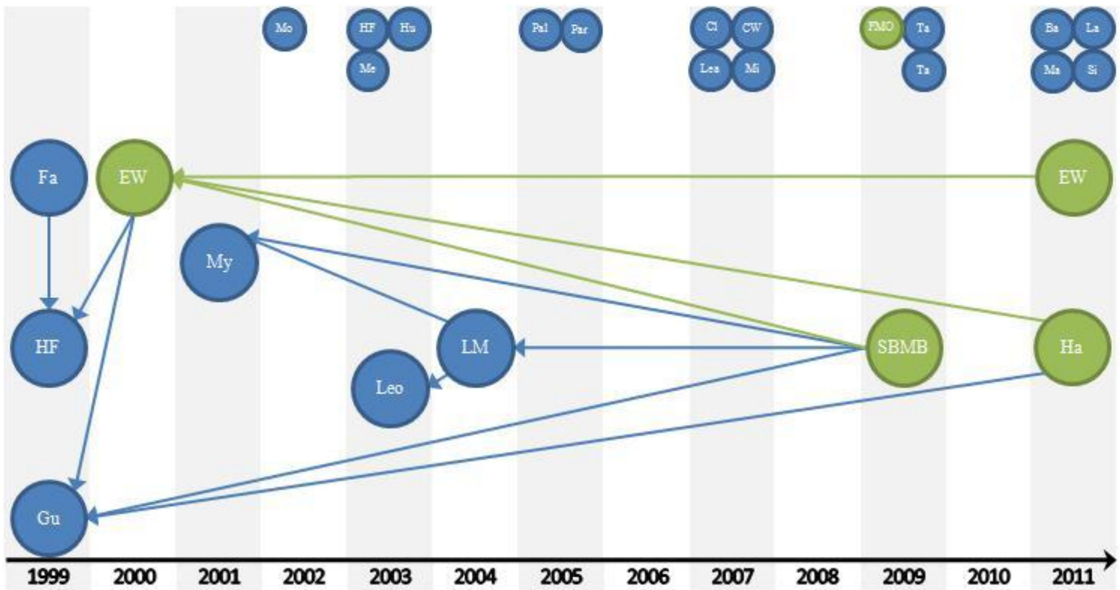

Figure 11. Citation pattern of academic and practitioner articles on rolling forecasts
Note: Practitioner articles are denoted by blue circles and academic articles by green circles. Small shapes represent articles that are not active in the knowledge accumulation, while bigger shapes and associated represent the citation pattern of the literature. An arrow facing the shape implies that the pointed article is being referred to by another article as denoted by the beginning of the arrow-pointed line.

their text (as academic articles do), it is difficult to trace the link of knowledge accumulation. Nonetheless, some practitioner articles do include the references list. Myers (2001) from *Journal of Accountancy* and Leone (2003) from *CFO* have been cited by Lynn and Madison (2004) in *Management Accounting Quarterly*. Among academics, Ekholm and Wallin (2000) from *European Accounting Review* have been cited by Sivabalan, Booth, Malmi and Brown (2009) from *Accounting & Finance*.

Communication between the two publication genres does also appear, but it is one-sided only: academics cite practitioners. For instance, Ekholm and Wallin (2000) in *European Accounting Review* refer to Gurton (1999) in *Accountancy*.

Nonetheless, one can see many practitioner articles that have not been communicated in the academic journals. Academic articles in the period 2009-2011 do not transfer the knowledge between each other either. In view of that, most of the articles on rolling forecasts are dispersed in their focus, which is supported by the in-depth findings in the results section.

To sum up, rolling forecasts as an issue in accounting research is insignificant, and the genre of most articles can be attributed to the consulting research (Lukka & Granlund, 2002). Conventional wisdom as such has not yet emerged and thus there is no communication with the other two publication genres. On the other hand, rolling forecast and beyond budgeting have a potential to become cutting edge topics in the future as notified in the last edition of

Horngren's textbook. Academic publications are rather limited so far, but it appears that there is some learning from the past (the article from 2000), which serves as a good starting point. Practitioner publications seem to follow the tendencies from the real world pretty well – the relative volume of articles increases throughout the years. Then again, academic publications do not catch up with practitioner publications so well, not after the first academic article in 2000. Altogether the extent of research on rolling forecasts, as compared to the research on activity-based costing (Bjørnenak & Mitchell, 2002), is very low and it does not seem to gain as much popularity.

Benchmarking

Conventional wisdom is isolated from academic and practitioner publications on benchmarking as well. Management accounting textbooks are informed of benchmarking, but none of them actually refer to the articles in academic or practitioner journals. No inverse relation has been identified either: publications do not refer to the textbooks.

Due to a higher number of articles, citation pattern for benchmarking is more complicated than the one for rolling forecasts (see Figure 12). Citation map includes mostly academic articles and only three practitioner articles that have been published rather early, in 1994 and in 1996. Even though the number of practitioner articles on benchmarking has remained relatively stable after 1994, academics have not cited practitioners after 1997. Citation pattern is mainly concentrated around one article, namely "Benchmarking and management accounting: a framework for research" by Elnathan, Lin and Young published in 1996. The article provides a useful framework for the analysis of benchmarking in management accounting that did not exist before and is used as a main source of benchmarking knowledge for accountants since 1996. It can be seen from the graph that the majority of articles in the citation diagram refer to Elnathan, Lin and Young (1996).

Analysing the countries of journals in the communication structures, it is obvious that citation pattern is primarily represented locally: authors in the UK journals cite mostly UK journals, while most of the references in US journals have a US origin. Lukka and Granlund (2002) discover similar citation asymmetry and local bias in their study on activity-based costing and conclude that most journals are domestically oriented.

The majority of authors in the academic journals have an academic background, although one article has been written through the cooperation between an academic and a practitioner. Then, academic publications refer to only 3 articles in practitioner journals, which have been written either by academics, journalists or consultants. Not a single article written solely by a practitioner is included in the citations lists of academic publications. Articles in practitioner journals do not include references; therefore it is difficult to understand the communication structure within the practitioner literature.

Since benchmarking is an interdisciplinary issue, it is worth discovering the patterns of knowledge accumulation from the other disciplines as well. While most of the citations in academic articles refer to accounting journals, the literature from other disciplines is also touched upon: organizational behaviour (*Handbook of Organizational Behaviour*, *Research in Organizational Behaviour*), marketing (*Journal of Marketing Research*), management (*California Management Review*, *Academy of Management Review*, and *Strategic Management Journal*), economics (*Journal of Economics*) and other disciplines.

Customer profitability

Just as for rolling forecasts and benchmarking, conventional wisdom is separated from academic and practitioner publications on customer profitability. No communication exists between the management accounting textbooks and academic and practitioner articles: neither of them refers to each other.

Customer profitability communications structure among academic and practitioner publications is graphically represented in Figure 13. The structure is relatively simple including only 5 articles: 2 articles in academic journals and 3 in practitioner journals. First cited article “Customer profitability analysis revisited” by Smith appeared in 1993 and the last article included in the structure was published in 2009. Out of 22 articles that are included in the study, only 5 (22%) are incorporated in the communication structure graph and refer to each other.

From the three articles in the practitioner journals included in the communication structure, one is written by an academic and the other two by consultants. Authors come from different geographic regions including: Australia, New Zealand, the UK, and the USA. The role of academic writers in practitioner journals is rather significant, as 7 out of 16 articles in practitioner journals are written by academic authors.

Communication within accounting is limited, however academic authors still refer to journals in different disciplines: *Journal of Applied Psychology*, *Industrial Marketing Management*, *Journal of Information Science*, *Management Science*, *Journal of Marketing Research*, *Journal of Interactive Marketing*, *Applied Linear Statistical Models*, *European Journal of Marketing*, *Econometrica*, and *Journal of Advertising Research*. For example, in the publication by Cardinaels, Roodhooft and Warlop (2004) “Customer profitability analysis

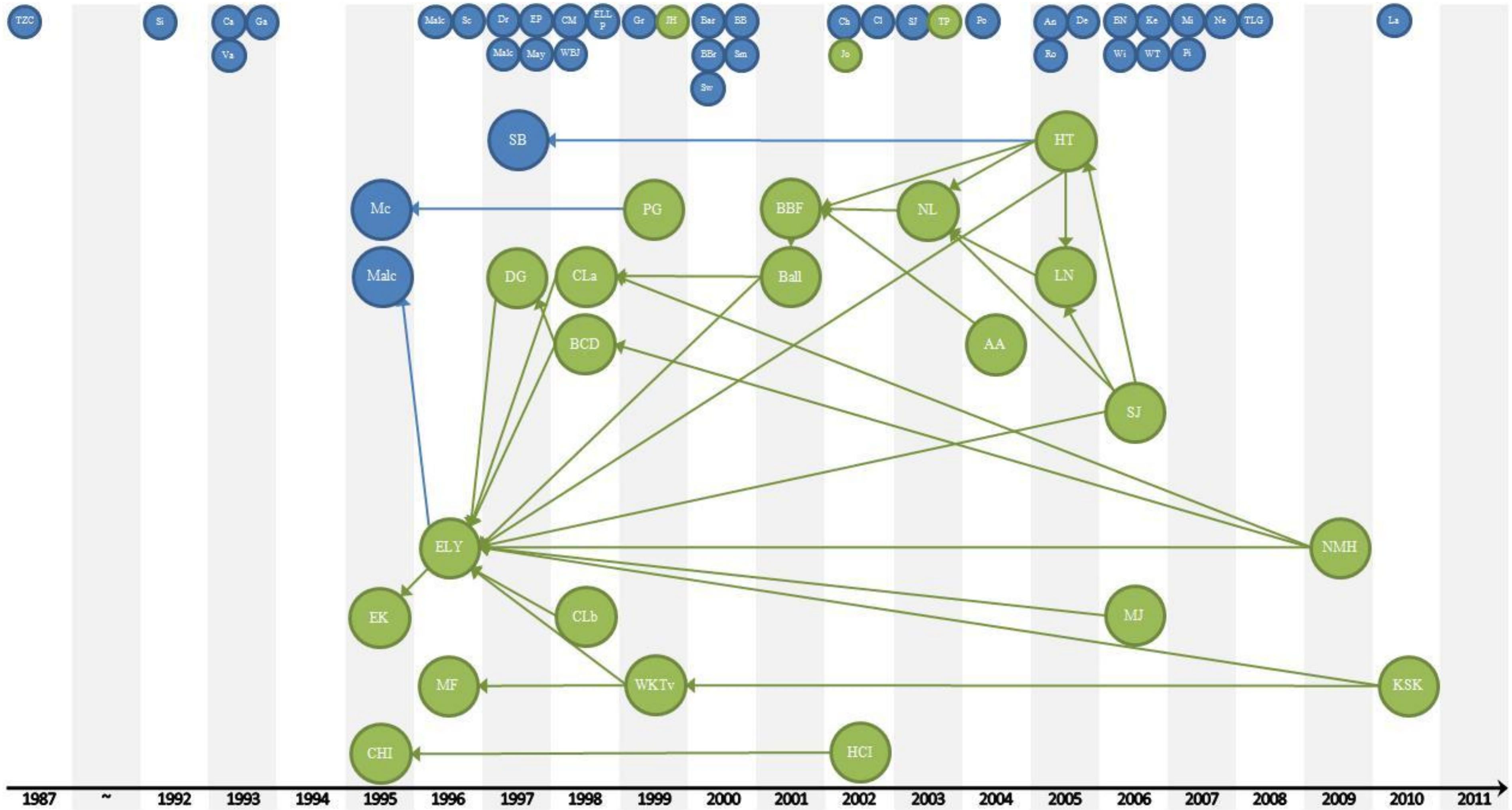

Figure 12. Citation pattern of academic and practitioner articles on benchmarking

Note: Practitioner articles are denoted by blue circles and academic articles by green circles. Small shapes represent articles that are not active in the knowledge accumulation, while bigger shapes and associated represent the citation pattern of the literature. An arrow facing the shape implies that the pointed article is being referred to by another article as denoted by the beginning of the arrow-pointed line.

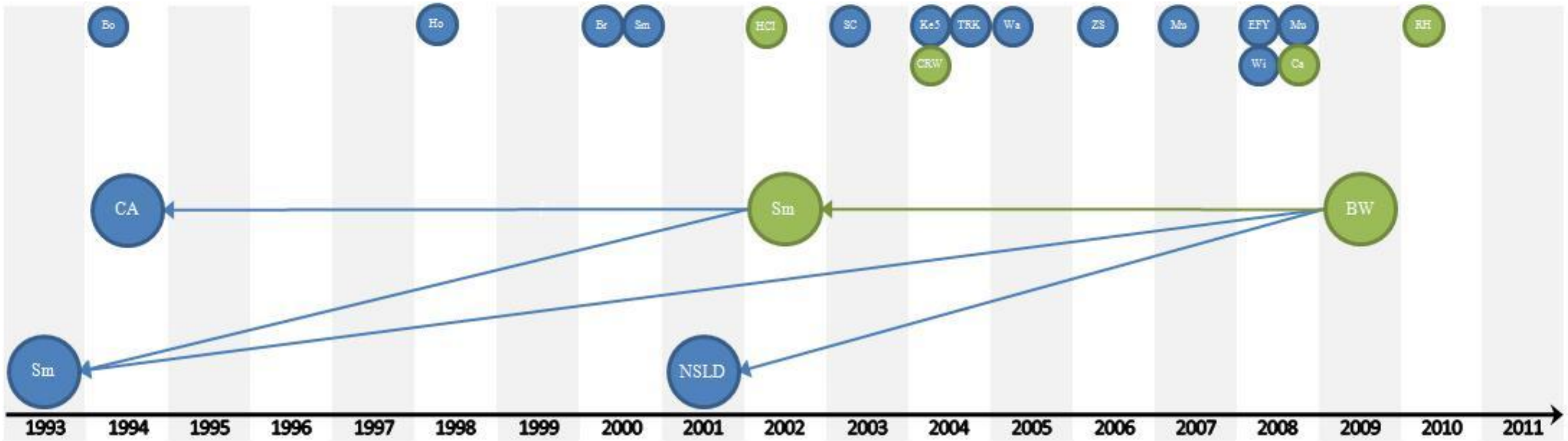

Figure 13. Citation pattern of academic and practitioner articles on customer profitability

Note: Practitioner articles are denoted by blue circles and academic articles by green circles. Small shapes represent articles that are not active in the knowledge accumulation, while bigger shapes and associated represent the citation pattern of the literature. An arrow facing the shape implies that the pointed article is being referred to by another article as denoted by the beginning of the arrow-pointed line.

reports for resource allocation: the role of complex environments" more than half of the references come from non-accounting publications. It can be concluded that academic literature on customer profitability is partly based on the sources from other disciplines.

Overview

Ideally, practical needs and academic research should be connected. Mitchell (2002) distinguishes several communication channels between practitioners and researchers in management accounting: directly via research that is specifically designed for companies, indirectly via educational process, and indirectly when academics publish articles in practitioner journals. Mitchell (2002) states that practical problems drive academic research and the lack of communication between the two groups can result in artificial research that does not solve real life problems.

Conventional wisdom appears to be separate from academic and practitioner publications for all three management accounting innovations. Possibly due to limited information provided in the textbooks, no communication has been identified between the literature genres: conventional wisdom does not refer to academic or practice, and academic and practitioner publications do not refer to conventional wisdom.

Nonetheless, the accumulation of knowledge is recognized between academic and practitioner publications. Benchmarking articles exhibit the most advanced communications structure among the three innovations. This is due to the high number of articles found for benchmarking. Academic authors appear to be most involved in the accumulation of knowledge in the articles on benchmarking, followed by the articles on rolling forecasts and customer profitability. On the other hand, the weakest communication channel between academic and practitioner publications is also exhibited in the articles on benchmarking, followed by the articles on customer profitability and rolling forecasts.

Customer profitability articles appear to be the most dispersed in terms of content – there is no central publication in any accounting journal that the researchers grasp their knowledge from. Instead, accounting researchers extract knowledge on customer profitability from other disciplines – mainly marketing. Yet, rolling forecasts researchers refer to Ekholm and Wallin (2000), and benchmarking researchers refer to Elnathan, Lin and Young (1996).

Mitchell (2002) addresses the lack of communication between academics and practitioners as the "research/practice gap". The development of the three studied innovations appears to follow the general tendency in management accounting. There are several reasons for this. First, academia is not motivated to write in practitioner journals as it is no more popular and prestigious among academics. Second, there is a time gap between the articles being published, introduced into textbooks, communicated to students and then represented in the corporate world. Third, practitioners do not consult management accounting research, since academic publications typically include a good deal of scientific terminology and it is difficult to understand it without appropriate background. As well, practitioners are primarily interested in solving real world problems, while academics concentrate on theories and concepts.

6.2 Contribution

The study contributes to the management accounting knowledge in a number of ways. First, it provides a comprehensive overview and analysis of literature on benchmarking, customer profitability and rolling forecasts. Second, the role of Beyond Budgeting movement is examined for all three innovations. Third, the study identifies communication patterns between various literature types and identifies directions of information flow between various research groups.

Adoption of the MAIs in the literature

In fact, the textbooks do not include much information about any of the three studied tools. While benchmarking and customer profitability have received the most attention in the textbooks, rolling forecasts are not included in most editions of the textbooks, although a similar concept of 'rolling budgets' receives a little bit more attention.

It appears that academic publications do not devote much attention to the three tools either, although practitioner publications discuss them more frequently. The number of associated articles in academic journals is very low as compared to the number of articles on activity-based costing or balance scorecard. Additionally, the tools are typically not regarded as the main issues in the studied articles.

Rolling forecasts are primarily presented along with the budgeting debate issues. The total number of academic articles on rolling forecasts is extremely low signalling that the tool has not attracted high level of interest in the research community. Most academic authors agree on the fact that rolling forecasts will not replace budgets in the near future as they fulfil other functions in an organization. Rolling forecasts receive some attention in practitioner journals. Essentially rolling forecasts can be viewed as a perfect addition to traditional budgeting system, solving problems related to the budget usage and providing missing information to the company.

Benchmarking as an issue in management accounting has emerged earlier than the rolling forecasts topic and its popularity has been higher among both academics and practitioners. Generally, benchmarking encompasses many areas, but benchmarking of costs is discussed primarily. Both public and private sectors are reviewed in management accounting literature on benchmarking: it reveals that benchmarking has been initially implemented in public sector, then adopted in private sector, and later reintroduced in public sector.

Customer profitability as an issue stems from marketing journals and the innovation's research in accounting journals is rather fragmented: both academic and practitioner journals have typically had low publishing activity of the concept. Customer profitability is usually discussed in the context of activity-based costing or strategic management accounting.

Influence of Beyond Budgeting

Beyond budgeting literature describes all the three tools as beyond budgeting innovations. In this regard, rolling forecasts are viewed as an alternative to static budgets. Rolling horizon allows companies to get more up-to-date information and include the analysis of trends and incorporate the effect of some unpredicted events into future forecasts. Rolling forecasts benefit from higher frequency of updating information than it is in traditional budgets.

Benchmarking is ought to replace traditional budgeting as a target setting tool. Traditional budgets are prepared for one year period and thus as environment and conditions change, they quickly become obsolete. Beyond Budgeting founders suggest the use of benchmarks from other companies in the industry for target setting. Such benchmarks allow companies to understand their relative position among industry peers.

Customers focus is an essential part of beyond budgeting. Therefore, measuring customer profitability can be viewed as a part of beyond budgeting.

In reality, academic authors present the three innovative tools differently from the founders of Beyond Budgeting. Rolling forecasts are presented as a supplementary tool to traditional budgets that allows getting rid of some of the drawbacks associated with static budgets. Benchmarking is viewed by academics as a costing method and is used for performance evaluation – to understand the performance differences. Customer profitability is considered primarily an ABC-related concept.

Overall, it seems that academic authors do not include beyond budgeting discussions in their articles, they do not directly refer to beyond budgeting publications in their citations list (except for some rolling forecast articles) and they do not present the three management accounting innovations in the same way as beyond budgeting propagators do. See Figure 14 below for an illustration of the relationship between literature on the three MAIs and the Beyond Budgeting movement.

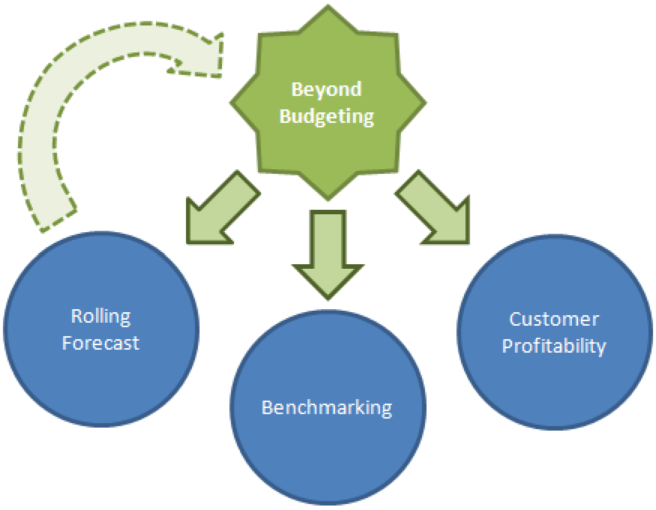

Figure 14. Authors' interaction between Beyond Budgeting and the three MAIs

Accumulation of knowledge

Overall benchmarking' communication structure seems to be the most complicated with many articles referring to each other and one central article that connects all the articles across time. Only three academic articles are not included in the communications structure, while all the rest are linked. As a result, communication pattern between the articles in academic journals is established and accumulation of knowledge occurs throughout time. On the other hand, only three practitioner articles are included in the citation map and thus the communication between academic and practitioner literature genres is limited.

Rolling forecasts communication structure is less complicated than the one for benchmarking as the total number of articles is lower. Additionally, there are relatively more links between academic and practitioner literature.

Customer profitability communication structure is the least developed. Accumulation of knowledge is very limited and fragmented. Sources from other disciplines are heavily used as there is still not enough knowledge of customer profitability currently present in the accounting literature.

6.3 Validity concerns

Generally, there are several issues that might affect the reliability of implemented research. Firstly, content validity confronts the coverage of the subject and whether the proposed research framework addresses all relevant issues to reach the aim of the study – which is to thoroughly review existing set of literature on rolling forecasts, benchmarking and customer profitability and identify their link to the beyond budgeting movement. Three research questions have been proposed to ensure that the scope is not limited. We have addressed three different genres of literature: conventional wisdom (textbooks used in education), academic journals (main force of research activity), and practitioner journals (oriented towards the business community). We have studied the content of all the relevant literature, and then we have utilized the communications structure theory to explore the pattern of knowledge accumulation in the three sources of literature: conventional wisdom, academic and practitioner publications. These aspects are found to be satisfactory to our study.

Secondly, one has to deal with internal validity, or the reliability of our analysis in terms of identifying true causal relationships between different factors and dimensions. Though we have tried to have a heterogeneous view on the subject when we derived our results, some findings may not be explained to a full extent due to other parameters that we could have overlooked in our study.

Third, external validity relates to the extent of generalization of our findings to the whole management accounting knowledge. It stems from the literature selection criteria and the articles inclusion criteria – several other studies are used to select journals for reviewing literature in management accounting.

Although conventional wisdom is limited to three textbooks only, it still attempts to represent the most popular teaching material worldwide. The choice of academic journals is correspondingly higher, which is characterized by the popularity among scholars as well. Although practitioner journals have been intended to represent the literature fully, the selection criteria are rather subjective. Likewise, one of the popular management accounting journals, *Cost Management*, has been excluded due to the access constraints. Also, some other academic and practitioner journals have time-frame constraints, although most of the articles are available for access from 1990s onwards. Then, the quality assessment of articles is much easier in academic journals due to the easiness of publication's structure, which is considered appropriate among scholars. The inclusion of practitioner articles can be subject to variability among other researchers, limiting the number of relevant articles even further.

6.4 Suggestions for further research

It is concluded that some issues in the research of management accounting innovations need further attention. Overall, very few studies focus primarily on rolling forecasts, benchmarking or customer profitability. Typically the studied tools are included in general discussions about budgeting or performance measurement. Therefore, future publications should address the three innovations separately, employing either an innovation design study or a diffusion study.

One avenue of research is to examine the conceptual framework of the three innovations. It is worthwhile to distinguish the definitions used in management accounting as compared to the other disciplines, given that different authors discuss concepts of the tools rather ambiguously.

Then, researchers can further examine the innovation diffusion in literature, recognizing both the supply and the demand side factors. Low adoption rate of the three innovations as well as the communication structure between conventional wisdom and academia can be explored more. Also, future studies should attempt to give an explanation of some distribution channels prevailing over the others and provide an overview of the barriers to diffusion. For example, the reason why beyond budgeting is a weak communication channel in the research of benchmarking and customer profitability could be addressed.

Future studies should also address the adoption of the three management accounting innovations in the corporate world. In particular, the role of consultants and journalists in the innovation diffusion process can be researched further. Then, researchers could attempt to discover the performance effects of the three innovations in a company. Contingency theory could be implemented to understand the effect of some external factors, such as the implementation of beyond budgeting, on the adoption level of the three management accounting innovations. The performance effects of rolling forecasts, benchmarking and customer profitability should be compared to the respective traditional tools as well as some other management accounting innovations, like activity-based costing or balanced scorecard.

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8 Appendix A: rolling forecasts

Table A 1. Authorship of practitioner articles on rolling forecasts over time

	Type of author				*Total*
	Academic	*Consultant*	*Practitioner*	*Journalist*	
1999	-	1.0	1.0	1.0	3.0
2000	-	-	-	-	-
2001	-	-	-	1.0	1.0
2002	-	1.0	-	-	1.0
2003	-	-	2.0	2.0	4.0
2004	1.0	-	-	-	1.0
2005	-	1.0	1.0	-	2.0
2006	-	-	-	1.0	1.0
2007	-	1.5	0.5	1.0	3.0
2008	-	-	-	-	-
2009	-	1.0	-	-	1.0
2010	-	1.0	-	-	1.0
2011	1.0	-	-	3.0	4.0
Total	2.0	6.5	4.5	9.0	22.0
%	9	30	20	41	100

Table A 2. Author combinations in practitioner articles on rolling forecasts

Journal[b]	*Author*[a] *A*	*C*	*P*	*J*	*CP*	*Total*
USA						
Business Finance	-	-	-	1	-	1
CFO	-	-	-	2	-	2
FE	-	-	1	1	-	2
HBR	-	-	1	-	-	1
JoA	-	-	-	2	-	2
MAQ	1	-	-	-	-	1
SF (MA)	-	2	1	-	-	3
UK						
Accountancy	-	-	-	2	-	2
FM (MA)	-	2	1	-	1	4
Other						
Acc IE	-	1	-	-	-	1
CAJ	-	1	-	-	-	1
Charter	1	-	-	1	-	2
Total	2	6	4	9	1	22

Notes: [a]*A = Academic; C = Consultant; P = Practitioner; J = Journalist.*
[b]*FE = Financial Executive; HBR = Harvard Business Review; JoA = Journal of Accountancy; MAQ = Management Accounting Quarterly; SF (MA) = Strategic Finance (Management Accounting); FM (MA) = Financial Management (Management Accounting); Acc IE = Accountancy Ireland; CAJ = Chartered Accountants Journal.*

Table A 3. Research methods used in academic articles on rolling forecasts: journal profile

Method	*UK*		*USA*	*Other*		*Overall*	
	AOS[a]	*JBFA*[b]	-	*EAR*[c]	*A&F*[d]	*n*	*%*
Analytical	-	-	-	1	-	1	20
Case or field study	1	-	-	-	-	1	20
Survey	-	1	-	1	1	3	60
Total	1	1	-	2	1	5	100

Notes: [a]*AOS = Accounting, Organizations and Society;* [b]*JBFA = Journal of Business Finance & Accounting;* [c]*EAR = European Accounting Review, The;* [d]*A&F = Accounting& Finance.*

Table A 4. Research methods used in academic articles on rolling forecasts over time

	Analytical	*Case or field study*	*Survey*	*Total*
2000	-	-	1	1
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-
2004	-	-	-	-
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	-	-	-	-
2009	-	-	1	1
2010	-	1	-	1
2011	1	-	1	2
Total	1	1	3	5

Table A 5. Rolling forecast focus by journal over time

Rolling forecasts / budgeting / performance management tools	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
USA						
Business Finance	-	-	-	0/0/1	-	0/0/1
CFO	-	-	1/0/0	-	1/0/0	2/0/0
Financial Executive	-	-	0/1/0	0/1/0	-	0/2/0
Harvard Business Review	-	-	0/1/0	-	-	0/1/0
Journal of Accountancy	-	0/1/0	-	-	1/0/0	1/1/0
MAQ[a]	-	-	1/0/0	-	-	1/0/0
SF (MA)[b]	-	1/0/0	0/0/1	-	1/0/0	2/0/1
US academic journals	-	-	-	-	-	-
UK						
Accountancy	1/0/0	-	0/1/0	-	-	1/1/0
FM (MA)[c]	0/2/0	-	-	1/0/0	1/0/0	2/2/0
UK academic journals	-	-	-	-	0/2/0	0/2/0
Other						
Accountancy Ireland	-	-	-	1/0/0	-	1/0/0
Chartered Accountants Journal	-	-	0/0/1	-	-	0/0/1
Charter	-	-	-	-	1/1/0	1/1/0
Other academic journals	-	0/1/0	-	-	0/1/1	0/2/1
Total *practitioner*	1/2/0	1/1/0	2/3/2	2/1/1	5/1/0	11/8/3
Total academic	-	0/1/0	-	-	0/3/1	0/4/1

Notes: [a]*MAQ = Management Accounting Quarterly;* [b]*SF (MA) = Strategic Finance (Management Accounting);* [c]*FM (MA) = Financial Management (Management Accounting).*

Table A 6. Rolling forecast concepts used by journal over time

Rolling forecast / both / rolling budget	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
USA	-	-	-	-	-	
Business Finance	-	-	-	1/0/0	-	1/0/0
CFO	-	-	0/0/1	-	1/0/0	1/0/1
Financial Executive	-	-	1/0/0	1/0/0	-	2/0/0
Harvard Business Review	-	-	1/0/0	-	-	1/0/0
Journal of Accountancy	-	0/0/1	-	-	1/0/0	1/0/1
MAQ[a]	-	-	0/0/1	-	-	0/0/1
SF (MA)[b]	-	1/0/0	1/0/0	-	1/0/0	3/0/0
US academic journals	-	-	-	-	-	-
UK						
Accountancy	0/1/0	-	1/0/0	-	-	1/1/0
FM (MA)[c]	2/0/0	-	-	1/0/0	1/0/0	4/0/0
UK academic journals	-	-	-	-	0/1/1	0/1/1
Other						
Accountancy Ireland	-	-	-	1/0/0	-	1/0/0
Chartered Accountants Journal	-	-	1/0/0	-	-	1/0/0
Charter	-	-	-	-	2/0/0	2/0/0
Other academic journals	-	1/0/0	-	-	1/1/0	2/1/0
Total *practitioner*	2/1/0	1/0/1	5/0/2	4/0/0	6/0/0	18/1/3
Total academic	-	1/0/0	-	-	1/2/1	2/2/1

Notes: [a]*MAQ = Management Accounting Quarterly;* [b]*SF (MA) = Strategic Finance (Management Accounting);* [c]*FM (MA) = Financial Management (Management Accounting).*

Table A 7. Beyond budgeting relevance in articles on rolling forecasts by journal over time

Motivated / linked / unrelated	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
USA						
Business Finance	-	-	-	0/0/1	-	0/0/1
CFO	-	-	0/0/1	-	1/0/0	1/0/1
Financial Executive	-	-	0/0/1	0/1/0	-	0/1/1
Harvard Business Review	-	-	1/0/0	-	-	1/0/0
Journal of Accountancy	-	0/0/1	-	-	1/0/0	1/0/1
MAQ[a]	-	-	0/0/1	-	-	0/0/1
SF (MA)[b]	-	0/0/1	0/0/1	-	0/0/1	0/0/3
US academic journals	-	-	-	-	-	-
UK						
Accountancy	1/0/0	-	0/0/1	-	-	1/0/1
FM (MA)[c]	2/0/0	-	-	0/0/1	0/0/1	2/0/2
UK academic journals	-	-	-	-	1/1/0	1/1/0
Other						
Accountancy Ireland	-	-	-	0/0/1	-	0/0/1
Chartered Accountants Journal	-	-	0/0/1	-	-	0/0/1
Charter	-	-	-	-	0/2/0	0/2/0
Other academic journals	-	1/0/0	-	-	1/0/1	2/0/1
Total *practitioner*	3/0/0	0/0/2	1/0/6	0/1/3	2/2/2	6/3/13
Total academic	-	1/0/0	-	-	2/1/1	3/1/1

Notes: [a]*MAQ = Management Accounting Quarterly;* [b]*SF (MA) = Strategic Finance (Management Accounting);* [c]*FM (MA) = Financial Management (Management Accounting).*

Table A 8. Summary of in-depth analysis of academic articles on rolling forecasts

Study name	Author origin / / Research place	Method	Theories applied	Focus	Findings
1) Ekholm & Wallin. (2000). Is the annual budget really dead? *European Accounting Review*	Finland & Finland / Finland (large companies)	Postal survey	Residual earnings model, market inefficiency, competitive strategies	Budgeting criticism relevance: difference between conservative and radical companies, rolling forecasts attitude	Rolling forecasts benefits and drawbacks, purpose, relationship between the conservatism and attitude towards rolling forecasts. Rolling forecasts serve as an additional tool to traditional budgeting and hybrid budgeting system is the most common. Budgeting criticism and rolling forecast attitude are related. “Old economy” companies are less willing to abandon budgets completely.
2) Ekholm & Wallin. (2011). The impact of uncertainty and strategy on the perceived usefulness of fixed and flexible budgets. *Journal of Business Finance & Accounting*	Finland & Finland / Sweden	Internet-based survey questionnaire	Real options theory, structural equation modelling	Relationship between exogenous and endogenous uncertainty and budgeting choice, strategy and budgeting choice. Fixed and flexible budgets	Fixed budget is found less useful when the environmental uncertainty increases. Fixed and flexible budgets should be used together improving company efficiency. It has been found that the degree of strategy accentuation and the usefulness of the fixed and flexible budgets are related.
3) Frow, Marginson & Ogden. (2010). "Continuous" budgeting: reconciling budget flexibility with budgetary control. *Accounting, Organizations and Society*	UK, UK & UK / USA	Case study	Simons’ levers of control	Budgeting and management control systems in the constantly changing environment, Continuous budgeting	Budgeting can be an effective tool for the international company facing volatile environment when it is combined with other control processes. Continuous budgeting is a new approach to traditional budgeting that allows companies to be more flexible while meeting budgetary targets.
4) Hansen. (2011). A theoretical analysis of the impact of adopting rolling budgets, activity-based budgeting and beyond budgeting. *European Accounting Review*	USA / USA	Mathematical modelling	Linear-Exponential-Normal model	Interactions between different budgeting functions. Rolling budgets, beyond budgeting and activity-based budgeting	Rolling forecasts are more successful than activity-based budgeting and beyond budgeting. Rolling budgets and beyond budgeting improve the firm performance when implemented together.
5) Sivabalan, Booth, Malmi & Brown. (2009). An exploratory study of operational reasons to budget. *Accounting & Finance*	Australia, Australia, Finland & Australia / Australia (large companies)	Cross-sectional mailed survey	N/A	Reasons for the use of budgeting and rolling forecasts	Rolling forecasts are used as addition to budgets and are used for the same purposes (planning and control) but for different time horizons. Other alternative budget forms should be considered to be used as evaluation tools. The majority of the respondents use both budgeting and rolling forecasts.

9 Appendix B: benchmarking

Table B 1. Authorship of practitioner articles on benchmarking over time

	Type of author				*Total*
	Academic	*Consultant*	*Practitioner*	*Journalist*	
1987	0.3	-	0.7	-	1.0
1988	-	-	-	-	-
1989	-	-	-	-	-
1990	-	-	-	-	-
1991	-	-	-	-	-
1992	-	-	1.0	-	1.0
1993	1.0	-	2.0	-	3.0
1994	-	-	-	-	-
1995	-	1.0	-	1.0	2.0
1996	-	2.0	-	-	2.0
1997	1.0	2.0	2.0	-	5.0
1998	2.0	-	1.0	-	3.0
1999	-	-	-	1.0	1.0
2000	2.5	1.0	0.5	1.0	5.0
2001	-	-	-	-	-
2002	1.5	0.5	-	-	2.0
2003	-	1.0	-	-	1.0
2004	-	-	-	1.0	1.0
2005	1.0	2.0	-	-	3.0
2006	-	1.5	1.5	1.0	4.0
2007	-	-	3.0	-	3.0
2008	1.0	-	-	-	1.0
2009	-	-	-	-	-
2010	-	-	-	1.0	1.0
2011	-	-	-	-	-
Total	10.3	11.0	11.7	6.0	39.0
%	26	28	30	15	100

Table B 2. Author combinations in practitioner articles on benchmarking

Journal[b]	*Author*[a]							
	A	*C*	*P*	*J*	*AC*	*AP*	*CP*	*Total*
USA								
Business Finance	-	-	1	-	-	-	-	1
CFO	-	-	-	1	-	-	-	1
FE	-	2	3	3	-	-	-	8
HBR	2		-	-	-	1	-	3
JoA	-	-	1	-	-	-	-	1
MAQ	1	-	-	-	-	-	-	1
SF (MA)	1	1	-	-	-	-	1	3
UK								
Accountancy	1	1	1	1	-	-	-	4
Accountancy Age	-	-	1	1	-	-	-	2
FM (MA)	4	5	2	-	1	-	-	12
Other								
Acc IE	-	1	-	-	-	1	-	2
CAJ	-	-	1	-	-	-	-	1
Total	9	10	10	6	1	2	1	39

Notes: [a]*A = Academic; C = Consultant; P = Practitioner; J = Journalist.*
[b]*FE = Financial Executive; HBR = Harvard Business Review; JoA = Journal of Accountancy; MAQ = Management Accounting Quarterly; SF (MA) = Strategic Finance (Management Accounting); FM (MA) = Financial Management (Management Accounting); Acc IE = Accountancy Ireland; CAJ = Chartered Accountants Journal.*

Table B 3. Research methods used in academic articles on benchmarking: journal profile

Method[a]	*UK* *AOS*	*BAR*	*FAM*	*MAR*	*USA* *IAE*	*JAE*	*JMAR*	*Other* *AF*	*EAR*	*Overall* *n*	*%*
Case or field study	-	1	3	4	1	-	-	-	-	9	38
Econometric	-	-	-	-	-	1	-	-	-	1	4
Experiment	1	-	-	-	-	-	-	-	-	1	4
Review	1	-	1	-	-	-	1	1	-	4	17
Survey	1	-	1	1	-	-	1	-	1	5	21
Technical theory development	-	-	1	1	-	1	1	-	-	4	17
Total	3	1	6	6	1	2	3	1	1	24	100

[a]*AOS = Accounting, Organizations and Society; BAR = British Accounting Review, The; FAM = Financial Accountability & Management; MAR = Management Accounting Research; IAE = Issues in Accounting Education; JAE = Journal of Accounting and Economics; JMAR = Journal of Management Accounting Research; AF = Accounting Forum; EAR = European Accounting Review, The.*

Table B 4. Research methods used in academic articles on benchmarking over time

	Case or field study	*Econometric*	*Experiment*	*Review*	*Survey*	*Technical theory development*	*Total*
1995	1	-	-	-	-	1	2
1996	1	-	-	1	-	-	2
1997	-	1	-	-	-	-	1
1998	-	-	-	-	2	1	3
1999	2	-	-	-	-	1	3
2000	-	-	-	-	-	-	-
2001	-	-	-	2	-	-	2
2002	2	-	-	-	-	-	2
2003	2	-	-	-	-	-	2
2004	-	-	-	-	-	1	1
2005	1	-	-	1	-	-	2
2006	-	-	-	-	2	-	2
2007	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-
2009	-	-	-	-	1	-	1
2010	-	-	1	-	-	-	1
2011	-	-	-	-	-	-	-
Total	9	1	1	4	5	4	24

Table B 5. Benchmarking focus by journal over time

Benchmarking / Management Accounting Practices / Management Accounting	*87-'90*	*91-'93*	*94-'96*	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
USA									
Business Finance	-	-	-	-	-	-	1/0/0	-	1/0/0
CFO	-	-	1/0/0	-	-	-	-	-	1/0/0
Financial Executive	-	1/1/0	-	1/0/0	-	3/0/0	1/0/0	1/0/0	7/1/0
Harvard Business Review	1/0/0	0/0/1	-	-	-	1/0/0	-	-	2/0/1
Journal of Accountancy	-	-	-	0/0/1	-	-	-	-	0/0/1
MAQ[a]	-	-	-	-	1/0/0	-	-	-	1/0/0
SF (MA)[b]	-	-	-	-	1/0/0	-	0/1/1	-	1/1/1
US academic journals	-	-	2/0/0	3/0/0	-	-	1/0/0	-	6/0/0
UK									
Accountancy	-	1/0/0	-	1/0/0	1/0/0	1/0/0	-	-	4/0/0
Accountancy Age	-	-	-	-	-	-	2/0/0	-	2/0/0
FM (MA)[c]	-	-	3/0/0	4/1/1	2/1/0	-	-	-	9/2/1
UK academic journals	-	-	0/0/2	1/2/1	2/1/0	3/0/2	0/1/0	0/0/1	6/4/6
Other									
Accountancy Ireland	-	-	-	-	1/0/0	-	1/0/0	-	2/0/0
Chartered Accountants Journal	-	-	-	-	-	-	1/0/0	-	1/0/0
Other academic journals	-	-	-	-	1/0/0	-	-	0/1/0	1/1/0
Total *practitioner*	1/0/0	2/1/1	4/0/0	6/1/2	6/1/0	5/0/0	6/1/1	1/0/0	31/4/4
Total academic	-	-	2/0/2	4/2/1	3/1/0	3/0/2	1/1/0	0/1/1	13/5/6

Notes: [a]*MAQ = Management Accounting Quarterly;* [b]*SF (MA) = Strategic Finance (Management Accounting);* [c]*FM (MA) = Financial Management (Management Accounting).*

Table B 6. Benchmarking perspective in practitioner articles over time

Theory / practice	*87-'90*	*91-'93*	*94-'96*	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
US practitioner journals	0/1	1/2	0/1	0/2	0/2	1/3	2/2	0/1	4/14
UK practitioner journals	-	1/0	3/0	4/3	3/1	0/1	0/2	-	11/7
Other practitioner journals	-	-	-	-	1/0	-	1/1	-	2/1
Total	0/1	2/2	3/1	4/5	4/3	1/4	3/5	0/1	17/22

Table B 7. Benchmarking perspective in practitioner articles: author profile

Theory / practice	*A*[a]	*C*	*P*	*J*	*AC*	*AP*	*CP*	*Total*
US practitioner journals	3/1	0/3	1/4	0/4	-	0/1	0/1	4/14
UK practitioner journals	5/0	4/2	2/2	0/2	0/1	-	-	11/7
Other practitioner journals	-	1/0	0/1	-	-	1/0	-	2/1
Total	8/1	5/5	3/7	0/6	0/1	1/1	0/1	17/22

Notes: [a]*A = Academic; C = Consultant; P = Practitioner; J = Journalist.*

10 Appendix C: customer profitability

Table C 1. Authorship of practitioner articles on customer profitability over time

	Type of author				*Total*
	Academic	*Consultant*	*Practitioner*	*Journalist*	
1993	1.0	-	-	-	1.0
1994	-	2.0	-	-	2.0
1995	-	-	-	-	-
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	1.0	-	1.0
1999	-	-	-	-	-
2000	2.0	-	-	-	2.0
2001	-	1.0	-	-	1.0
2002	-	-	-	-	-
2003	0.5	-	-	0.5	1.0
2004	1.0	1.0	-	-	2.0
2005	-	-	-	1.0	1.0
2006	0.5	-	0.5	-	1.0
2007	-	-	1.0	-	1.0
2008	0.7	-	1.3	1.0	3.0
2009	-	-	-	-	-
2010	-	-	-	-	-
2011	-	-	-	-	-
Total	5.7	4.0	3.8	2.5	16.0
%	35	25	24	16	100

Table C 2. Author combinations in practitioner articles on customer profitability

Journal[b]	*Author*[a]						
	A	*C*	*P*	*J*	*AP*	*AJ*	*Total*
USA							
Business Finance	-	-	-	1	-	-	1
HBR	1	-	-	-	-	1	2
JoA	-	-	-	-	1	-	1
SF (MA)	-	2	-	-	-	-	2
UK							
Accountancy Age	-	-	-	1	-	-	1
FM (MA)	3	2	3	-	1	-	9
Total	4	4	3	2	2	1	16

Notes: [a]*A = Academic; C = Consultant; P = Practitioner; J = Journalist.*
[b]*HBR = Harvard Business Review; JoA = Journal of Accountancy; SF (MA) = Strategic Finance (Management Accounting); FM (MA) = Financial Management (Management Accounting).*

Table C 3. Research methods used in academic articles on customer profitability: journal profile

Method	*UK*			*USA*	*Other*		*Overall*	
	AE[a]	*AOS*[b]	*BAR*[c]	-	*Abac*[d]	*CPA*[e]	*n*	%
Case or field study	1	-	1	-	-	-	2	33
Experiment	-	1	-	-	1	-	2	33
Review	1	-	-	-	-	1	2	33
Total	2	1	1	-	1	1	6	100

[a]*AE = Accounting Education;* [b]*AOS = Accounting, Organizations and Society;* [c]*BAR = British Accounting Review, The;* [d]*Abac = Abacus;* [e]*CPA = Critical Perspectives on Accounting.*

Table C 4. Research methods used in academic articles on customer profitability over time

	Case or field study	*Experiment*	*Review*	*Total*
2002	2	-	-	2
2003	-	-	-	-
2004	-	1	-	1
2005	-	-	-	-
2006	-	-	-	-
2007	-	-	-	-
2008	-	1	-	1
2009	-	-	1	1
2010	-	-	1	1
2011	-	-	-	-
Total	2	2	2	6

Table C 5. Customer profitability focus by journal over time

Customer profitability / customer accounting / management accounting	*91-'93*	*94-'96*	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
USA								
Business Finance	-	-	-	-	1/0/0	-	-	1/0/0
Harvard Business Review	-	-	-	-	0/2/0	-	-	0/2/0
Journal of Accountancy	-	-	-	-	-	1/0/0	-	1/0/0
SF (MA)[a]	-	-	-	0/1/0	0/1/0	-	-	0/2/0
US academic journals	-	-	-	-	-	-	-	-
UK								
Accountancy Age	-	-	-	-	-	0/1/0	-	0/1/0
FM (MA)[b]	1/0/0	2/0/0	0/1/0	0/1/1	-	2/1/0	-	5/3/1
UK academic journals	-	-	-	1/0/1	-	0/0/1	1/0/0	2/0/2
Other								
Other academic journals	-	-	-	-	1/0/0	-	0/1/0	1/1/0
Total *practitioner*	1/0/0	2/0/0	0/1/0	0/2/1	1/3/0	3/2/0	-	7/8/1
Total academic	-	-	-	1/0/1	1/0/0	0/0/1	1/1/0	3/1/2

Notes: [a]*SF (MA) = Strategic Finance (Management Accounting);* [b]*FM (MA) = Financial Management (Management Accounting).*

Table C 6. Customer profitability perspective in practitioner articles over time

Theory / practice	*91-'93*	*94-'96*	*97-'99*	*00-'02*	*03-'05*	*06-'08*	*09-'11*	*Total*
US practitioner journals	-	-	-	1/0	2/2	1/0	-	4/2
UK practitioner journals	1/0	2/0	1/0	2/0	-	1/3	-	7/3
Other practitioner journals	-	-	-	-	-	-	-	-
Total	1/0	2/0	1/0	3/0	2/2	2/3	-	11/5

Table C 7. Customer profitability perspective in practitioner articles: author profile

Theory / practice	*A*	*C*	*P*	*J*	*AP*	*AJ*	*Total*
US practitioner journals	0/1	2/0	-	0/1	1/0	1/0	4/2
UK practitioner journals	3/0	2/0	1/2	0/1	1/0	-	7/3
Other practitioner journals	-	-	-	-	-	-	-
Total	3/1	4/0	1/2	0/2	2/0	1/0	11/5