

THE LINK BETWEEN AUDIT COMMITTEES, CORPORATE GOVERNANCE QUALITY AND FIRM PERFORMANCE: A LITERATURE REVIEW

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Abstract

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This literature review evaluates 117 empirical research studies on audit committee (AC) composition, resources and incentives (period 2007 through 2015). Regulators all over the world try to increase AC effectiveness that should have a positive impact on corporate governance quality. I briefly introduce the theoretical, normative and empirical AC framework that comprises an adequate structure of the state-of-the-art of empirical research in this field. This is followed by a discussion of AC monitoring process which aims to enhance corporate governance quality and is structured as follows: (1) financial reporting quality; (2) internal audit quality and (3) external audit quality. I will then evaluate the impact of AC on (4) firm performance. I will summarise the key findings in each area, and provide a description of the analysed proxies for corporate governance quality and firm performance. Numerous studies have shown a positive impact of the AC's financial expertise on earnings quality. In this context, AC financial expertise has recently been increasingly specified, wherefore positive impacts of accounting, legal or industry expertise were measured either separately or in combination. Both the number of studies conducted and the observed significances are significantly lower for the other components of the monitoring process (internal and external audit quality) and the firm performance. Finally, I will discuss the current limitations of the studies and give useful recommendations for future empirical research activities in this topic.

Keywords: Audit Committee, Financial Accounting, Audit, Firm Performance

1. INTRODUCTION

Empirical research on the impact of audit committees (AC) on corporate governance quality is one of the key research activities from an international perspective (DeFond and Zhang 2014, 306). AC implementation, composition and resources play a key role in ensuring adequate corporate governance quality in public interest entities (PIEs). According to the Sarbanes-Oxley Act 2002 (SOX), publicly listed companies must implement an AC comprising a financial expert and fully independent members. This is due to the trend towards separation into executive and non-executive directors within the board. The implementation of an AC is considered crucial for driving professionalism, which in turn should enhance corporate governance quality. According to the underlying framework, the AC performs a central monitoring function in relation to 1) financial reporting quality, 2) internal audit quality, and 3)

external audit quality. Moreover, increased capital market confidence in the AC's activities should translate into 4) firm performance. In recent years, empirical corporate governance research has placed a stronger focus on these interdependencies. Since the SOX was passed, this line of research has become dominant in the USA (Brennan and Kirwan 2015; Bédard and Compennolle 2014; Malik 2014; Pathak et al. 2014; Ghafran and O'Sullivan 2013). Despite the controversial discussion since the financial crisis of 2008/09, and the resulting increased significance of AC pursuant to the European audit regulation 2014, empirical studies on the effects of AC have also been conducted in other judicial areas, such as the EU member states (e.g. Wu et al. 2015; Loukil 2014; Zaman et al. 2011). Insofar, the SOX regulation has a great impact on the composition of AC in other regimes by adopting these "best practice".

This issue is economically relevant because regulating the AC composition and its resources

restricts the (self-) organisation within the board, as well as corporate flexibility. Broader requirements and job profiles for the AC are justified as a reaction to earlier accounting scandals and management fraud which requires the professionalisation of the AC (DeFond and Zhang 2014, 306). Standard-setting bodies hold that AC can contribute to capital market efficiency, as they ensure adequate quality for financial reporting, as well as internal and external audits. Ideally, such AC actions should go hand-in-hand with enhanced firm performance.

The objective of this contribution is to evaluate 117 empirical studies (archival, experimental, and surveys with multivariate statistics) on the influence of AC on corporate governance quality and firm performance. On account of the research density in the US capital market, as well as the central, regulatory adaptations through the SOX, only empirical studies with samples from 2004 or later will be included (post-SOX), but not AC arrangements in the previously unregulated environment (pre-SOX). Moreover, both "classic" variables of AC composition and resources (financial expertise, independence, meeting frequency, size), and "new" variables (diversity, tenure, multiple directorships, overlapping memberships, stock compensation and ownership) will be included. Former literature reviews also limit their theoretical assessment to principal-agent conflicts, which is insufficient for determining the complex, and sometimes conflicting, effects of certain variables (e.g. multiple directorships).

The evaluation corresponds to the methodology of vote counting of previously established significances (Light and Smith 1971). This showed that up to the point of the review, most of the included studies have examined the impact on financial reporting quality in general, and specifically the impact on earnings quality. In line with the objective of the SOX, numerous studies have provided empirical evidence of a positive impact of the AC's financial expertise on earnings quality (primarily on the basis of accruals quality). Financial expertise is increasingly specified (accounting, legal or/and industry expertise). In addition, a positive correlation between AC independence and earnings quality is empirically established in a comparatively high number of cases. Evidence and heterogeneous correlations continue to be insufficient for other composition and resource variables, e.g. stock compensation, multiple directorships, overlapping memberships and social ties. These areas, therefore, require significant future research. Compared to the existing financial reporting quality, few studies have examined the impact of AC on internal and external audit quality and firm performance, and measured definite significant correlations. This heterogeneity is due to the different perspectives in the literature, whereby the relationship between AC and the internal and external auditor may be complementary or substitutive (e.g. Malek 2014, 87). If the AC is subordinate and complementary to the auditor, it would actively demand an expansion of the internal and external audit activities. If the relationship is substitutive, lean auditing suggests that the AC would disburden the internal and external auditor, resulting in a reduction in necessary audit resources.

This literature review makes several contributions to the present literature because it synthesises a number of major new insights from the literature and offers a new and rich discussion of future research avenues. In contrast to former reviews on that topic, also non-US settings were included to stress the international relevance of AC composition and resources on corporate governance quality. Secondly, we only focus on post-SOX studies because of the great regulatory changes in AC. Furthermore, we also include firm performance as an output variable and present the main results of the empirical research via vote counting. The following review is aimed at researchers, regulators and practitioners alike. It provides starting points for future research activities in the context of investigating economic effects of AC, while also raising practitioner awareness of the progress of AC composition and resources in their organisation. The findings also provide an important impetus for the initiation of an impact assessment of the adjustments relating to AC activities (e.g. following the SOX) from a regulatory perspective.

This review is structured as follows: First, the AC framework is presented from a theoretical, normative and empirical perspective (chapter 2), followed by an appraisal of the empirical study findings (chapter 3), whereby an introductory presentation of the methodology (chapter 3.1) precedes a discussion of the impact on financial reporting quality (chapter 3.2), internal audit quality (chapter 3.3), external audit quality (chapter 3.4), and firm performance (chapter 3.5). Finally, the review considers restrictions of existing empirical research and makes recommendations for future research activities (chapter 4).

2. AC FRAMEWORK

2.1. Regulatory framework

From an international perspective, AC activities are believed to have a positive impact on corporate governance quality (Pathak et al. 2014; Ghafran and O'Sullivan 2013). All companies listed on a US stock exchange must implement an AC as a permanent committee of the board of directors. All AC members must be financially independent of the management and must not themselves be members of the executive management. SOX (section 407) required the SEC to adopt rules that require companies to disclose whether the AC has at least one member who is a financial expert. The SEC's rule then requires a company to disclose whether they have at least one financial expert and if they do not then why they do not. The financial expert can be either an accounting expert or an expert in other areas of finance (DeFond and Zhang 2014, 306). Specific listing standards, e.g. those of the New York Stock Exchange (NYSE), also dictate that all AC members must be financially literate. Other great AC regulations focus the responsibility for hiring the external auditor and the pre-approval of non-audit services to strengthen auditor independence. Apart from the AC requirements, the SOX has also extended the internal control system's set-up, steering and monitoring requirements. Under section 302 SOX, effective since August 2002, management is required to verify their conclusions

about the effectiveness of the company's internal control procedures. Section 404 SOX on accelerated filers, effective since November 2004, requires companies to include a management assessment of the effectiveness of the internal control structure and procedures in the annual report; the firm's public accountants must verify this assessment. Finally, according to section 301 SOX, the AC's monitoring responsibility is not limited to financial reporting, but also extends to the internal control system and the internal audit effectiveness. Similarly, section 404 (b) SOX requires the external auditor to assess the effectiveness of the internal control system in relation to the financial reporting.

The impact of the SOX has also spilled over into other judicial areas. For instance, the European standard setter reacted to the regulatory development in the USA as early as 2006. Ever since, PIEs have categorically been obliged to establish an AC which is explicitly required to monitor the financial reporting, as well as the internal and external audit in the one-tier and in the two-tier system (Velte and Stiglbauer 2011). However, a number of member state options exist, and these have been extended following the conclusion of the European audit regulation 2014. In addition to the appointment of at least one financial expert with special experience in accounting or audit, a majority of independent AC members is provided for across the EU since 2014. As a compromise, member states have been granted the option to waive this requirement if all AC members are also members of the supervisory board in a two-tier system. However, the AC as a whole must have industry expertise now. This sector-specific knowledge can be qualified as an important supplement to the financial expertise of a single AC member which would ensure adequate corporate governance quality in the European member states.

2.2. Theoretical framework

The literature generally justifies the economic necessity of AC with the principal-agent theory (Ross 1973; Jensen and Meckling 1976), according to which an AC reduces conflicts of interest and asymmetric information between management and investors. The AC is a central monitoring authority of the management, as well as the internal and external auditors, and it informally shares information with all three corporate governance bodies. Thus, even though the management prepares the financial reports, the AC has a significant shared responsibility for the achievement of adequate quality, for instance through the financial accounting audit. The AC also performs important monitoring activities in relation to external auditor independence which may also be compromised by non-audit services, or by generating adequate internal audit resources (e.g. as part of the budget allocation). These activities may result in positive market reactions (e.g. enhanced firm performance). Using agency theory as a basis tends to imply a focus on the AC's independence from the management aimed to ensure appropriate monitoring (Velte and Stiglbauer 2011). Incentive-based compensation for AC members is a classic tool for overcoming conflicts of interest between management and investors (Lynch and William, 2012). While it is recognised that management

compensation should comprise a balanced mix of fixed and performance-related components, long-term incentives have played a key role in the financial crisis in 2008/09. But AC compensation arrangements are heterogeneous from an international perspective and no consensus has been found (Campbell et al. 2015). From an agency theory perspective, the management compensation system cannot be applied to the AC due to the increase in conflicts of interest. Conversely, compensation comprising only fixed components provides little incentive for enhancing the AC's monitoring quality in the interest of the shareholders. Moreover, according to agency theory, the existence of multiple directorships, social ties and overlapping memberships may increase the risk of conflicts of interest due to the associated power (Bruynseels and Cardinaels, 2014).

Apart from principal-agent theory, other subordinated theoretical explanatory approaches for the economic effect of AC are used, e.g. the alternative concept to stewardship theory (Donaldson and Davis 1991; Davis, Schoorman and Donaldson 1997). While agency theory provides a negative management image, stewardship theory holds that AC members should act as "good stewards", and engage in a relationship of close cooperation with the management, as well as the internal and external auditor (Velte and Stiglbauer 2011). This means that the AC primarily fulfils a consulting function, rather than a monitoring function. In this context, the financial expertise becomes vital for the AC's ability to actively contribute to management consultations in relation to financial reporting. Tenure, social ties, meeting frequency and committee size can also have a significant impact on the consulting quality within the AC throughout the financial reporting process, and in relation to the internal and external audit.

Alternatively, the economic significance of AC composition can be justified with the resource dependence theory (Pfeffer and Salancik 1978) which explains the development of competition-related resources, as well as the steering of the corporate environment. It presents the AC as a cooperation body characterised by members' connections to other persons and organisations. In this context, financial expertise, diversity, multiple directorships, overlapping memberships, tenure and social ties are key AC resources for future conditions of competition. Pooling key resources under the AC primarily requires members to be selected with a view to ensuring diversity (e.g. gender, age, internationality, education) (Qi and Tian 2012; Gul et al. 2013). Thereafter, committee size and meeting frequency can also infer availability and use of extensive resources. However, it should be noted that from a theoretical perspective, the economic impact of both committee size and meeting frequency is heterogeneous. While the resource-based approach regularly assumes a positive impact on corporate governance quality, agency theory provides for a potential increase in conflicts of interest and coordination problems which may lead to inefficient compromises or minimal solutions (Cheng 2008, 157). Next to the principal agent-, stewardship- and resource dependency theory, also other theories are mentioned in the literature, but in fewer cases (e.g. institutional or managerial hegemony theory; Cohen et al. 2008).

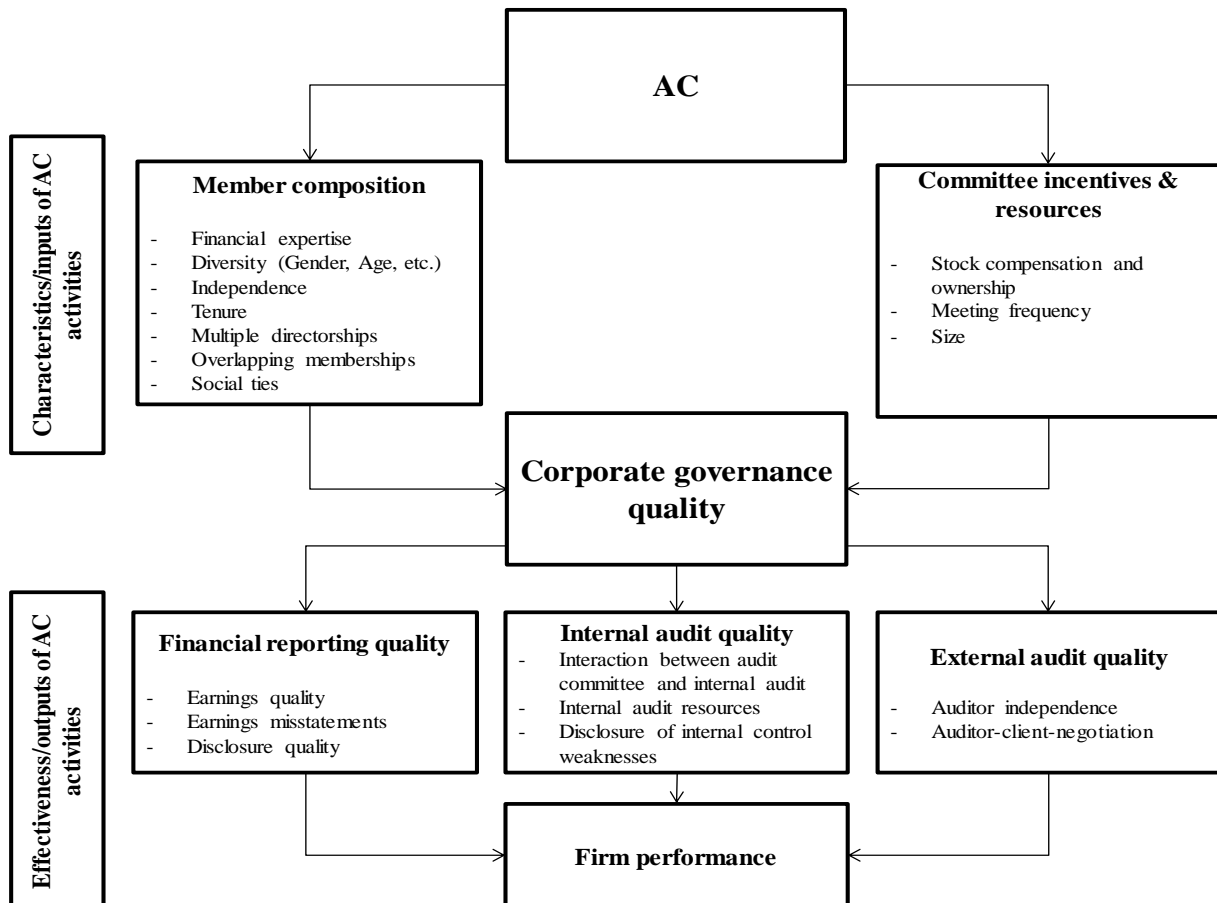
2.3. Research framework

For of this literature review, an AC research framework is useful to structure the main strengths of research (Figure 1). With this, the link between certain AC characteristics or inputs of AC activities and AC effectiveness or outputs of AC activities are stressed for the main contents of this literature review. The SOX regulation shed light on the importance of financial expertise and independence. As AC must supervise the financial statements and the in- and external auditors, financial expertise increases their knowledge about the financial accounting data. Independence is also a key aspect to guarantee an objective supervision. Apart from this, other variables get much attraction in current empirical research, e.g. diversity, tenure, multiple directorships, overlapping memberships and social ties are included as member specific factors. They may also have a great impact on AC effectiveness. Furthermore, variables for the measurement of committee resources and incentives must be included. Meeting frequency and AC size are "classical" control variables in empirical AC result that do have an influence on AC outputs. As a newer and controversial variable, stock compensation and ownership of the AC members are focused on resources and incentives. All these variables are included in the monitoring process, whereby AC effectiveness should be reflected in the enhanced quality of financial reporting, and the internal and external audit, as well as stronger firm performance. For the assessment of the impact on financial reporting quality, a differentiation is made between

earnings quality, earnings misstatements and disclosure quality. The internal audit quality is determined through the interaction between AC and internal audit, internal audit resources and disclosure of internal control weaknesses. Finally, external audit quality is organised into auditor independence and auditor-client negotiation.

Existing frameworks provided by Malik (2014), Ghafran and O'Sullivan (2013), DeZoort et al. (2002) and Turley and Zaman (2004) are modified. The framework of Malik (2014) is not very convincing in detail because composition, responsibilities and compensation are structured as input factors and auditors, management and earnings management/internal control deficiencies as separate output factors. Also the structure of Ghafran and O'Sullivan (2013), that made a distinction between AC composition, resources and diligence as AC characteristics and external audit quality, financial reporting quality and internal audit quality as financial reporting process is critical. De Zoort et al. (2002) did not structure the different items of AC output resp. effectiveness, but analyse four different attributes of input factors (composition, authority, resources and diligence). It seems to be useful to have a clear focus on the different outputs of AC effectiveness, insofar we decided to separate in financial reporting, internal audit, external audit as attributes of corporate governance quality and firm performance. There is no literature review on empirical AC research so far that has a clear structure on these AC output factors to our best knowledge.

Figure 1. AC research framework



3. REVIEW OF AC RESEARCH

3.1. Data

The empirical studies included in this literature review are established by comparing international databases (web of science, Google scholar, SSRN, EBSCO, science direct) and libraries. Here, a targeted search is conducted for the keywords “audit committee(s)” in combination with “audit”, “financial reporting”, “internal audit(s)”, “external audit(s)”, “firm performance”, or technically associated terms (e.g. “financial accounting” or “earnings equality”). In parallel, the search was either widened by the addition of the broader term “corporate governance”, or narrowed by the addition of specific appointment variables (e.g. “multiple directorships”, “financial expertise”). In the further course of the literature review, contributions were examined for the suitability of their study design. While there is a main research dominance on the US capital market, there is no limitation on a special country. The reason for this decision is that recent studies also analyze the non-US environment, e.g. EU member states (Germany, Spain, the UK, Ireland, Italy, France, Belgium), Australia, New Zealand, Canada, Jordan, India, Indonesia, Bangladesh, South Africa, Korea, Malaysia, China, Hong Kong, Singapore, the United Arab Emirates, Saudi Arabia, Bahrain, Egypt, Brazil, Pakistan and Tunisia. After the SOX, several countries conducted similar regulations on AC composition, resources and incentives, so that the SOX 2002 can be classified as an international catalyst for a global AC regulation initiative.

Only empirical studies whose sample covers the period after the commencement of the SOX 2002, and which use multivariate statistics have been included. The SOX AC rules that would have affected the variable examined in the studies were not effective for most companies until 2004. Insofar, the all of the included studies should have samples of 2004 or later. Apart from the increased complexity of the findings which necessitates a temporal limitation of the study inclusion, the increased regulatory density for the AC makes a comparison between US-based studies before and after the SOX impossible. Given that research is predominantly focused on the US capital market, the temporal limitation is adequate. Moreover, the economic impact of AC implementation frequently examined before the SOX has not been taken into account. While archival studies are the dominant research method, individual experiments and interviews measuring economic correlations between selected AC variables and corporate governance quality through multivariate analysis have also been included. A total of 129 studies has been identified. For quality assurance reasons, only the contributions published in international journals with double blind review have been included. This resulted in a sample reduction by 11 working papers and 1 dissertation to 117 studies.

The following overview of current empirical research in the area of AC influence on corporate governance and firm performance allows a systematic mapping and analysis of the current international state of research for this AC framework, for the first time. A quantitative literature analysis in the form of vote counting

(Light and Smith 1971) focuses the significant findings and their respective signs but ignores the specific coefficient values. The underlying primary studies are assigned the expressions significant positive (+) and significant negative (-).

This literature review made several contributions to the present literature because it synthesises a number of major new insights from the literature and offers a new and rich discussion of future research avenues. In contrast to former reviews on that topic, also non-US settings were included to stress the international relevance of AC composition and resources on corporate governance quality. Secondly, we only focus post-SOX studies because of the great regulatory changes in AC. Furthermore, we also include firm performance as an output variable and present the main results of the empirical research via vote counting. The analysis provides crucial added value compared to previous surveys of empirical AC research (Brennan and Kirwan 2015; Malik 2014; Pathak et al. 2014; Bédard and Compagnolle 2014; Ghafran and O'Sullivan 2013; Carcello et al. 2011a; Bédard and Gendron 2010; Cohen et al. 2004; Turley and Zaman 2004; Velte 2009; DeZoort et al. 2002). The former studies are limited in view of these factors. Brennan and Kirwan (2015) only deal with qualitative studies. In this review, we mainly concentrate on empirical-quantitative results. Bédard and Compagnolle (2014) only analyse the impact on external audit quality and include a subjective selection of empirical studies. In this review, not only external audit quality but also internal audit quality, financial reporting and firm performance is included. Malik (2014) analyses 27 studies from the post-SOX until 2012, whereby both the structure and the study selection differ. Pathak et al. (2014) limit their analysis to the impact of AC on financial reporting quality, and only include 20 selected studies from both before and after the SOX. Turley and Zaman (2004) focus on pre-SOX studies. The analysis by Ghafran and O'Sullivan (2013) holds a highly significant position amongst the existing literature reviews because it shows the status of empirical quantitative research according to a similar AC framework across the period 2003-2012. However, it also includes pre-SOX studies, and its focus tends towards a management discipline. Bédard and Gendron (2010) include 103 AC studies between 1994 and 2008 (pre-SOX sample) in 18 international journals. Cohen et al. (2004) and DeZoort et al. (2002) equally conducted literature reviews based on studies from the period 1980-2000. In addition to the structured literature reviews, some meta-analyses can also be found (Pomeroy and Thornton 2008; Garcia-Meca and Sanchez-Ballesta 2009; Lin and Hwang 2010). However, these meta-analyses are often limited to the impact of AC on financial reporting quality. As we expect new results from the post-SOX-era and from a broad range of corporate governance quality and firm performance attributes together with a vote counting approach for this review a fruitful basis for deducting research limitations from the present studies and for future research recommendations is given. After the SOX, finer measures for “classical” variables as expertise and independence and new variables of AC effectiveness (e.g. social ties) were examined so that the relevance of this review is stressed.

Table 1. Count of published papers cited

Panel A: publication year: number of studies				
Total	Financial reporting quality	Internal audit quality	External audit quality	Firm performance
	2008: 1 2009: 1 2010: 4 2011: 10 2012: 12 2013: 12 2014: 11 2015: 14	2007: 2 2009: 3 2010: 3 2011: 2 2012: 1 2013: 5 2014: 1 2015: 1	2009: 2 2010: 2 2011: 1 2012: 2 2013: 5 2014: 5 2015: 3	2010: 1 2011: 3 2012: 1 2013: 5 2014: 3 2015: 1
Total: 117	65	18	20	14
Panel B: state: number of studies				
	<ul style="list-style-type: none"> • USA: 28 • Australia: 9 • Malaysia: 7 • UK: 3 • China: 3 • Italy: 2 • Spain: 2 • France: 2 • New Zealand: 1 • Korea: 1 • Germany: 1 • Egypt: 1 • Belgium: 1 • Bahrain: 1 • Singapore: 1 	<ul style="list-style-type: none"> • USA: 13 • Belgium: 1 • Tunisia: 1 • Italy: 1 • UK: 1 • Saudi-Arabia: 1 	<ul style="list-style-type: none"> • USA: 10 • Australia: 2 • Malaysia: 2 • UK: 2 • Spain: 2 • France: 1 • Pakistan: 1 	<ul style="list-style-type: none"> • USA: 5 • India: 3 • Malaysia: 2 • Indonesia: 1 • Australia: 1 • Hong Kong: 1 • Singapore: 1 • Jordan: 1 • Canada: 1
Total: 117	65	18	20	14
Panel C: content: number of studies				
	<ul style="list-style-type: none"> • Earnings quality: 50 • Earnings misstatements: 8 • Disclosure quality: 7 	<ul style="list-style-type: none"> • Internal control weaknesses: 9 • Internal audit resources: 5 • Interaction with internal audit: 3 • Other: 1 	<ul style="list-style-type: none"> • Auditor independence: 10 • Auditor-client-negotiation: 10 	<ul style="list-style-type: none"> • Tobin's Q: 5 • ROA: 3 • Cost of equity: 3 • Cumulative abnormal return: 2 • ROA, stock price, EPS: 1
Total: 117	65	18	20	14
Panel D: journals: number of studies				
	<ul style="list-style-type: none"> • Academy of Accounting and Financial Studies Journal: 1 • Accounting & Business Research: 1 • Accounting & Finance: 3 • Accounting & Finance Research: 2 • Accounting & Taxation: 1 • Accounting Horizons: 1 • Accounting Review: 4 • Advances in Accounting, incorporating Advances in International Accounting: 1 • Auditing: 5 • Australian Accounting Review: 1 • British Accounting Review: 1 • Business Management Review: 1 • Contemporary Accounting Research: 3 • Corporate Governance: 1 • International Journal of Academic Research in Accounting, Finance and Management Sciences: 1 • International Journal of Accounting: 2 • International Journal of Accounting and Financial Reporting: 1 • International Journal of Auditing: 2 • International Journal of Business Governance and Ethics: 1 • International Journal of Business Research: 2 • International Journal of Business: 1 • IUP: 1 • Journal of Academy of Business and Economics: 1 • Journal of Accounting & Economics: 1 • Journal of Applied Business Research: 3 • Journal of Banking, Finance & Accounting: 1 • Journal of Business Ethics: 4 • Journal of Contemporary Accounting & Economics: 1 • Journal of Corporate Finance: 1 • Journal of Management & Governance: 3 • Journal of Managerial Issues: 1 • Managerial Auditing Journal: 5 • Problems and Perspectives in Management: 1 • Procedia: 1 • Research Journal of Finance and Accounting: 2 • Review of Accounting & Finance: 1 • Review of Accounting Studies: 1 • Review of Business Research: 1 • Singapore Management Review: 1 • Universal Journal of Accounting and Finance: 1 	<ul style="list-style-type: none"> • Accounting & Taxation: 1 • Accounting Horizons: 2 • Accounting Review: 3 • Auditing: 2 • Contemporary Accounting Research: 2 • International Journal of Accounting: 1 • International Journal of Auditing: 3 • IUP: 1 • Journal of Accounting & Public Policy: 1 • Managerial Auditing Journal: 2 	<ul style="list-style-type: none"> • Accounting & Finance: 2 • Accounting Review: 3 • Auditing: 2 • British Accounting Review: 1 • Corporate Governance: 1 • Economic Modelling: 1 • International Journal of Accounting: 1 • International Journal of Business Management: 1 • International Journal of Business Research: 1 • Journal of Accounting, Business & Management: 1 • Journal of Accounting & Economics: 1 • Journal of Banking, Finance & Accounting: 1 • Journal of Public Budgeting, Accounting & Financial Management: 1 • Managerial Auditing Journal: 1 • Quarterly Journal of Finance & Accounting: 1 • Series: 1 	<ul style="list-style-type: none"> • Accounting & Finance: 1 • Accounting Horizons: 1 • Accounting Review: 1 • Auditing: 1 • Contemporary Accounting Research: 1 • Corporate ownership & control: 1 • European Accounting Review: 1 • International Management Research: 1 • IUP: 3 • Journal of Corporate Finance: 2 • Malaysian Accounting Review: 1
Total: 117	65	18	20	14

More than half the evaluated contributions focus on the impact of AC on financial reporting quality (65). In addition, there are studies on external audit quality (20), internal audit quality (18) and firm performance (14). The analyses were published or prepared within the period 2007-2015. As explained above, US samples dominate all research strands. Many of the research findings were published in top accounting, finance and corporate governance journals, e.g. "Auditing" (10), "Accounting Review" (11), "Managerial Auditing Journal" (8), "Accounting & Finance" (6), "Contemporary Accounting Research" (6) and "Accounting Horizons" (4) (see Table 1).

3.2. Financial reporting quality

Earnings quality is central to the measurement of the impact of AC on financial reporting quality; estimation of earnings management (EM) is very popular. According to agency theory, an opportunistic accounting policy promotes existing asymmetric information between management and shareholder, because exercising options and utilising discretionary powers in financial reporting is in conflict with decision usefulness. Through its monitoring actions, the AC should provide management incentives to reduce EM. Consequently, earnings quality becomes a better key decision-making tool for investor decisions.

From an international perspective, the estimation of EM frequently focuses on abnormal accruals (Dechow et al. 2010, 353). Abnormal accruals are the difference between the annual result (based on the income statement) and the operational cash flow, i.e. it shows results of the financial year not affecting cash (e.g. changes in provisions, depreciation of assets). The accruals models assume that the existence of accruals has no negative impact on quality if their amounts are not excessive. Only if they can be classed as abnormal or discretionary, opportunistic management behaviour as an accounting policy will be associated with reduced earnings quality (Dechow et al. 2010, 353). Accruals models showing an accounting policy in the accounts after the balance sheet date are highly popular in empirical research, as both their calculation and the procurement of the data is easy. In contrast, specific margins for separate balance sheet items (e.g. goodwill impairments) or accounting policy before the balance sheet date ("real" EM) are only taken into account in very few cases. Roychowdhury (2006) defines real EM as "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations" (Roychowdhury 2006, 337). In previous empirical research, three different dimensions of real EM have been established: sales manipulation, reduction of discretionary expenditures, and overproduction (Roychowdhury 2006; Cohen and Zarowin 2010).

The first popular accruals model (see also Gros and Worret 2014) was developed by Jones (1991), who expected an association between change in revenues or gross property, plant, equipment and a number of discretionary accruals. The non-discretionary accruals are determined through a regression, using the time-series model. The modified Jones-model by Dechow et al. (1995) is

designed to eliminate the presumed tendency of the original Jones-model to measure discretionary accruals with an error when discretion is exercised over revenues. The authors added the difference in accounts receivables as a factor in the regression term and implicitly assume that the change in accounts receivables is caused by EM conducted by the company. The forward-looking Jones-model by Dechow et al. (2003) enhances the modified Jones-model by adding an additional variable in the regression term. In order to account for the non-discretionary change in accounts receivables, a company-specific relation factor is determined to indicate the company-specific relation between accounts receivables and revenues. Also, the regression term controls for strongly increasing revenues by adding the growth rate of revenues for each company, due to the assumption that strongly growing companies are also associated with higher amounts of accruals. Prior research has shown that a positive association between the surplus and the accruals of a company exists (McNichols, 2000). Therefore, Kothari et al. (2005) extended the modified Jones-model by adding return on assets (ROA) as an explanatory variable in the regression model. Furthermore, the model by Dechow and Dichev (2002) does not extend the modified Jones-model, but develops a new approach instead. The authors assume that a number of working capital accruals in the current period depends on the cash flow from operations in the current, previous and following period. Typically, the standard deviation of residuals is used as a firm-specific metric for accounting or audit quality. However, accounting or audit quality can also be measured at the firm-year-level using the absolute values of the residuals for a specific year.

Other models for estimating earnings quality exist. However, these have rarely been included in existing empirical studies (see also Dechow et al. 2010). Earnings persistence is one of these models. It is assumed that companies with more consistent earnings have a more "sustainable" earnings stream which will constitute a more useful input into discounted cash flow-based equity valuations. Another benchmark is earnings smoothness. The literature states that the smoothing of transitory cash flows can improve earnings persistence and earnings informativeness. However, management attempts to smooth permanent changes in cash flows will lead to delayed earnings and a less informative earnings number. Another possible variable is timely loss recognition. There is a demand for timely loss recognition to combat natural management optimism, and it, therefore, represents high-quality earnings. Such asymmetric accounting represents a special kind of prudence or "earnings conservatism". Another measurand of earnings quality is the earnings response coefficient. This is based on the concept that investors respond to information that has value implications. A higher correlation with value implies that earnings better reflect fundamental performance. Moreover, earnings variables such as small profits and small loss avoidance have been identified as an indication of EM relating to one specific dimension of earnings quality. Similarly, researchers have proposed that small earnings increases could indicate EM based on a statistically unusual number of companies with small decreases in earnings documented by Burgstahler and Dichev (1997) and that meeting or

beating an analyst forecast is an indication of EM based on the “kink” in the distribution of forecast errors: reported earnings less consensus analyst forecasts (e.g. Degeorge et al. 1999).

Most of the existing significant findings on earnings quality have been deduced for AC financial expertise. The vast majority could show a positive impact on earnings quality, whereby the decisive factors are the specialization of the accounting expert (e.g. Kang et al. 2011), as well as the legal expertise or combination of accounting and legal expertise (Krishnan et al. 2011), a combination of industry and accounting expertise (Cohen et al. 2014), or a combination of accounting, finance & supervisory expertise (Kusnadi et al. 2015). A positive impact on earnings quality can also be shown for AC independence (e.g. Kent et al. (2010). Given that financial expertise and independence has been the focus of regulation since the SOX, this empirical research dominance is not surprising. For other variables of member composition, significances are only established in isolated cases; results are often heterogeneous. With respect to committee diversity, a positive impact on earnings quality was shown for the variables age (Qi and Tian 2012) and gender (Qi and Tian 2012; Gul et al. 2013). The findings on the economic impact of multiple directorships are highly heterogeneous. Both positive (Ibrahim et al. 2009; Sun et al. 2011; De Vlaminc and Sarens 2015; Tanyi and Smigh 2015) and negative (Baccouche et al. 2013; He and Yang 2014; Sun et al. 2014; Garven 2015) correlations are apparent. In addition, Liao and Hsu (2013) established a negative impact of overlapping memberships on earnings quality, while Bruynseels and Cardinaels (2014) showed an earnings quality decline due to social ties. Member tenure can increase (Ghosh et al. 2010; Sultana 2015) or decrease (Sun et al. 2011) earnings quality.

With respect to committee resources, similar heterogeneous results are shown for stock compensation, whereby a differentiation between stock and stock option compensation is not always made. Lynch and Williams (2012) found a positive link for stock compensation and a negative correlation for the stock option. Rickling and Sharma (2013) and Sengupta and Zhang (2015) show a general quality enhancing effect for stock compensation, while Jeong and Kim (2013) and Campbell et al. (2015) found the effect to be negative. Positive effects were also apparent for meeting frequency (e.g. Kent et al. 2010; Kang et al. 2011) and committee size (e.g. Ibrahim et al. 2009; Ghosh et al. 2010).

As a second research strand for measuring financial reporting quality, studies also include earnings misstatements. These are determined through earnings restatements or enforcement releases (e.g. by the Securities and Exchange Commission (SEC)) associated with adverse publicity. This is directly linked to the occurrence of management fraud. In both instances, an error in the financial statements which should have been detected by the AC becomes observable after publication. Careful monitoring of the financial reporting process should provide an incentive for the AC to prevent accounting failures. Due to the large sample population and the publicly available SEC filings, enforcement error findings as a proxy for financial reporting quality are more frequently applied in the US context (e.g., Dechow et al. 1996).

In Europe, a harmonised cross-jurisdictional enforcement system is currently not in place.

In line with the earnings misstatements, the majority of the negative significances for earnings misstatements associated with positive earnings quality are shown for AC financial expertise (e.g. Carcello et al. 2011b; Diehl 2012); in some cases, the specific combination of accounting and industry expertise (Cohen et al. 2014). In isolated cases, negative correlations for AC independence (e.g. Velte and Stiglbauer 2011; George 2012) and gender diversity (Kim et al. 2013) are established. While multiple directorships increase the number of earnings misstatements incidents according to Sharma and Iselin (2012), George (2012) found a negative effect on quality. According to Chiu et al. (2013), overlapping memberships increase earnings misstatements, and according to Sharma and Iselin (2012), the same applies to tenure. However, Kim et al. (2013) found a negative correlation for tenure. Only very few empirical findings exist for committee resources. Kim et al. (2013) found a positive impact of stock compensation, while Diehl (2012) deduces the opposite findings. George (2012) established a lower number of earnings misstatements with increasing meeting frequency.

A third subcategory for evaluating financial reporting quality deals with disclosure quality, i.e. the disclosure level of non-financials (e.g. CSR, corporate governance, compliance). In this context, AC should make the management aware of the need to engage in an “active” communication policy for shareholders to contribute to the reduction of existing information and value gaps (Kent and Stewart 2008). This is due to financial reporting not being equipped to reflect the enterprise value. Voluntary and nonfinancial reporting aims to reduce the value gaps between balanced equity and stock price (e.g. CSR reporting, intellectual capital reporting or integrated reporting). In isolated cases, a positive impact of AC financial expertise (Lee and Fargher 2013; Haji 2015) was established, while Kent and Stewart (2008) showed a negative effect. According to Madi et al. (2014) and Haji (2015), AC independence and the disclosure level are also increased. The same applies to multiple directorships (Madi et al., 2014). For the committee resources, Li et al. (2012) found positive (negative) correlations for stock (option) compensation. Stock ownership also has a negative effect on disclosure quality (Li et al. 2012). However, a positive correlation for meeting frequency has been unanimously confirmed (Kent and Stewart 2008; Li et al. 2012; Allegrini and Greco 2013; Haji 2015). With respect to committee size, both positive (Li et al. 2012; Madi et al. 2014; Haji 2015) and negative (Kent and Stewart 2008) effects have been found.

3.3. Internal audit quality

While there are fewer empirical studies on the impact of AC on internal audit quality, these are becoming more significant over the last years (Lenz and Hahn 2015). Here, the quality is predominantly operationalized through the degree of interaction between AC and internal audit (IA) which can be economically explained with effectiveness considerations, as well as efficiency considerations pursuant to lean auditing (Lenz and Hahn 2015). Thus, the monitoring process is rationalised to utilise synergy effects and prevent duplicate audits

in accordance with the efficiency principle. The resulting potential time reductions while complying with the statutory quality standards supports the investors' information requirements in line with a financial reporting fast close. Multiple empirical studies have shown that the AC bases part of the performance of its monitoring duties on the IA (e.g. Gramling and Hermanson 2006). In order to ensure a reciprocal exchange relationship, many studies examine the informal exchange under exclusion of the management in addition to the number of meetings between the Chief Internal Auditor (CIA) and the AC (Abbott et al. 2010). To date, significant positive correlations have been shown for AC financial expertise (Johnstone et al. 2011; Adel and Maissa 2013; with respect to the AC chair (Zaman and Sarens 2013), AC independence (Zaman and Sarens 2013) and AC meeting frequency (Adel and Maissa 2013) with the degree of interaction, and a negative impact of size (Adel and Maissa 2013) on the same.

In addition to the interactions between AC and IA, which is typically extended to the external auditor in a "three line cooperation", AC influence on IA resources is expected to have a quality enhancing effect. Under the one-tier system, there are no issues with the AC actively contributing to the arrangement (e.g. size, meeting frequency and member selection) of the IA, the determination and handling of the budget (potential outsourcing, audit focus). The IA faces an increased risk of conflicts of interest because the management considers the IA as an assistant for advisory services ("value added services"), rather than a critical monitoring body (Hermanson and Rittenberg 2003).

The findings in this research strand are fairly manageable. The literature assumes a complementary relationship between AC and IA. The reason given for the positive correlations between AC independence (Abbott et al. 2010), meeting frequency (Anderson et al. 2012; Rizzotti and Greco 2013) and size (Anderson et al. 2012) on the one hand, and IA resources on the other hand, is that the expansion of IA activities is important to an active AC, and consequently, more IA resources are requested.

Last but not least, in empirical AC research, the disclosure of material internal control weaknesses is of key significance to IA quality. Reporting these weaknesses has a negative market effect via the management, and from an agency theory perspective, it should be avoided. An effective AC will insist on detection and disclosure of internal control weaknesses, and resist any negative influence from the management. Due to the obligations under the SOX, this variable of IA quality is examined in the greatest number of studies, and the majority of the significance can be found here. However, the findings are heterogeneous. Thus, AC financial expertise can increase (for non-accounting expert Goh, 2009) or reduce (Krishnan and Visvanathan 2007; Zhang et al. 2007; Hoitash et al. 2009; Chien et al. 2010) the probability that material internal control weaknesses are published. The positive correlations are explained by a higher probability of detection and active disclosure of internal control weaknesses and they also increase IA quality. However, literature also assumes a partially enhancing effect on IA quality for negative correlations, if AC activities are considered as a preventive measure against internal control

weaknesses without disclosure. It is therefore not surprising that contrasting correlations are also found for independence (positive: Zhang et al. 2007; Goh 2009; Bruynseels and Cardinaels 2014; negative: Chien et al. 2010), social ties (positive: Bruynseels and Cardinaels 2014; negative: Naiker and Sharma 2009), meeting frequency (positive: Krishnan and Visvanathan 2007; Munsif et al. 2013; negative: Chien et al. 2010) and size (positive: Goh 2009; Munsif et al. 2013; negative: Chien et al. 2010). Cullinan et al. (2010) derived a positive result for stock option compensation.

3.4. External audit quality

A further focus of empirical AC research is the impact on external audit quality. Across all countries and corporate governance systems, the AC must contribute towards financial reporting quality and IA quality, while also assessing external auditor performance. Based on agency theory, only an external auditor independent from management and with adequate expertise can issue an objective audit opinion and ensure appropriate audit quality, which in turn will have a material effect on AC monitoring activities. Otherwise, the coalition risk between management and the external auditor would rise to the detriment of the shareholders, and potentially poor financial reporting quality might not be documented by the external auditor. Insofar as the focus is placed on the advisory function of the external auditor fulfils for the AC (stewardship theory), external auditor activities significantly contribute to the AC consulting role.

In line with financial reporting quality and internal audit quality, it is also impossible to measure external audit quality directly, therefore a number of proxies are commonly used in empirical research (Knechel et al. 2013; DeFond and Zhang 2014). Apart from expertise, the external auditor's independence is crucial. Since the AC is responsible for auditor choice and the audit mandate, the traditional agency models (DeAngelo 1981a) assume increased competence and independence from the "Big (four)" audit firms, and industry specialists. In addition, auditor ratification is included. A more popular approach is to include audit and non-audit fees to measure auditor independence. The scope of the audit mandate which is often supplemented by the approval of parallel non-audit services (e.g. tax consulting) has a key impact on the arrangement of auditor independence (DeFond and Zhang 2014, 309). A large part of the empirical research assumes that auditor independence increases with increasing audit fees. Here, a complementary relationship between AC and external auditor is assumed insofar as an effective AC increases audit fees to provide enhanced audit quality through a higher time and technical resource potential of the external auditor. If non-audit fees are extraordinarily high compared to the audit fees, external audit quality would fall according to this interpretation. According to the low balling strategy (De Angelo 1981b), the parallel performance of the audit and non-audit services for a client promotes the risk of conflicts of interest through the anticipation of "quasi-rents". If the costs of the initial audit or second verification process are not covered for competitive reasons, the external auditor is motivated to generate additional income from parallel or future non-audit services which

contribute towards covering the initial loss (cross-subsidies). If the management becomes aware of low balling, the auditor may be willing to make a concession in the verification of the financial reporting on account of this financial dependence, which would not exist without the additional mandate. This explains the necessity of AC approval of non-audit services in accordance with the SOX, as well as the commencement of the EU audit regulation 2014, to prevent negative management influence on external audit quality. However, some of the literature considers the relationship between the AC and the external auditor to be complementary; others view it as substitutive (Goodwin-Stewart and Kent 2006). From this perspective, an effective AC closely cooperating with the external auditor would effect a reduction in audit fees in accordance with lean auditing. On the basis of the stewardship theory, the good quality of the AC monitoring activities disburdens the external auditor. It is therefore not surprising that heterogeneous correlations between AC composition and resources and the (non-)audit fees are derived. Ittonen et al. (2010) found a negative link for AC financial expertise. Hoitash and Hoitash (2009) showed increasing (non-)audit fees due to AC financial expertise. According to Rustam et al. (2013) and Loukil (2014), AC independence has a positive effect on audit fees. Johl et al. (2012) also established ethnic diversity as a positive factor of influence on audit fees, while Ittonen et al. (2010) showed a negative impact of gender diversity. Findings are also inconsistent for tenure (positive: Beck and Mauldin 2014; negative: Chan et al. 2013). With respect to social ties, Naiker et al. (2013) show decreasing non-audit fees and Bruynseels and Cardinaels (2014) decreasing audit fees. For the meeting frequency, Rustam et al. (2009) and Loukil (2014) found a positive impact on audit fees, while Ittonen et al. (2010) found a negative one (as well as for size). Hoitash and Hoitash (2009) found a positive impact of meeting frequency and size on audit fees and non-audit fees.

A second subcategory that measures external audit quality deals with the auditor-client negotiation through the AC. An effective AC must adopt an opinion if the management and the external auditor disagree on the interpretation of the financial reporting. If the AC's opinion is in line with the external auditor (e.g. for qualified going concern opinions or recommended earnings restatements), such behaviour is associated with higher external audit quality. According to agency theory, management expects an unmodified opinion, even if the firm is in financial distress or the earnings quality is poor, and it will prevent the reappointment of the existing audit firm and prefer the appointment of an external auditor of lower quality (opinion shopping). The probability of going concern opinion issuance is used as a proxy for auditor competence. It evaluates the probability of the auditor in failing to issue a going concern opinion to a company that subsequently goes bankrupt (Knechel and Vanstraelen 2007). The audit (report) lag is another proxy for audit quality. Audit lag, or audit delay, is defined as the number of days between the fiscal year-end date and the date of the audit opinion. Audit lag does not directly serve as a measure of audit quality, but much rather of audit effort, i.e. the time the auditor requires to complete

the audit, or audit efficiency (e.g., Knechel and Payne 2001; Knechel and Sharma 2010; Knechel et al. 2012). However, thus far, significant correlations could rarely be found in empirical studies. Cassell et al. (2012), Salleh and Stewart (2012) and Sultana et al. (2015) found positive correlations between AC financial expertise and external auditor support through the AC in the event of accounting conflicts with the management. AC independence also has a positive effect on the relationship between AC and external auditor (Sultana et al. 2015; Wu et al. 2015). In contrast, Bruynseels and Cardinaels (2014) hold that social ties lower the probability of the external auditor refusing to issue a going concern opinion for financially distressed firms. For AC resources, it also becomes apparent that long-term stock option compensation has a positive impact on auditor-client negotiation (Keune and Johnstone 2015), while short-term stock compensation may have a negative effect (Keune and Johnstone 2015). Finally, meeting frequency (Cassell et al. 2012; de Andrés Suarez et al. 2013) and size (Apadore and Noor 2013) have a positive impact on auditor-client negotiation.

3.5. Firm performance

In addition to the empirical studies on the impact of AC on corporate governance quality, some studies have also analysed firm performance (e.g. Aldamen et al. 2012; Chen and Li 2013). The AC has a major impact on financial reporting, internal and external audit quality, and thus, companies with an effective AC should be better positioned to make more effective financial decisions. Consequently, investors will place more trust in financial reporting processes. Insofar, the AC composition and resources may have a material impact on firm performance (Dao et al. 2013). Various estimates of firm performance are used, which can be categorised into accounting and market-related measures. Accounting measures, such as return on assets (ROA), return on equity (ROE), or economic value added (EVA), are characterised by the ease of their determination and their high degree of controllability through the management. Thus, they are at least supplemented by market-related measures, such as Tobin's Q or market-to-book-value (Brick and Chidambaram 2010). However, their significance is also compromised due to stock market distortions. Other options for determining investor reactions include the cost of equity, abnormal stocks and cumulative abnormal returns. The greatest part of the positive significances were shown for AC financial expertise (Aldamen et al. 2012; Chen and Li 2013; Singhvi et al. 2013; Hamdan et al. 2014; Guo and Yeh 2014) and AC independence (Nuryanah and Islam 2011; Chen and Li 2013; Hamdan et al. 2013; Saibaba and Ansari 2013; Al-Mamun et al. 2014; Guo and Yeh 2014). Dao et al. (2013) found that age diversity negatively affects firm performance. Multiple directorships (Aldamen et al. 2012) and social ties (Chen et al. 2014) increase firm performance. According to Sengupta and Zhang (2015), also stock compensation has a positive effect on firm performance. The same applies to Saibaba and Ansari (2014) findings for AC meeting frequency. With regards to AC size, the heterogeneous results of Hamdan et al. (2013) (positive) and Aldamen et al. (2012) (negative) are in conflict.

4. LIMITATIONS OF FORMER EMPIRICAL RESEARCH AND RECOMMENDATIONS FOR FUTURE RESEARCH

Empirical AC research remains dominant in the US capital market and the one-tier system. While the number of studies under other regimes, and for the two-tier system, has recently increased, a material research gap is still existent, e.g. for EU member states facing the implementation of the EU audit reform regulation 2014. Transferability of the studies to the two-tier system is excluded for several reasons. Under the one-tier system, the AC enjoys unlimited access to information from the internal control system and the IA. Consequently, the AC can play a vital role in its monitoring of the internal and external audit, as well as the monitoring of the financial reporting process, than it would under the two-tier system (Velte and Stiglbauer 2011). In the past, the management board's information monopoly has been critically assessed in the two-tier system. While provisions of rules of procedure and information regimes have helped to increasingly overcome this monopoly of information in recent years, it manifests the separation principle between management board and supervisory board. Furthermore, it must be stressed that certain monitoring activities of the supervisory board under the two-tier system are regularly subject to a plenum, e.g. the financial reporting audit and the reporting thereof to the shareholders. Members of the supervisory board not part of the committee should not absolve themselves. It is therefore not clear, which tasks an AC can assume fully independently under the two-tier system, and which tasks it may only prepare for the supervisory board.

Irrespective of these variations, existing empirical studies are characterised by methodical limitations. In particular, neither the financial reporting quality nor the internal and external audit quality can be determined directly and must be estimated (Dechow et al. 2010). The significance of these substitute measures is limited. This especially affects the frequently used abnormal accruals which are always associated with negative financial reporting quality as a marker for EM (Gros and Worret 2014). In particular, the differentiation between normal and abnormal accruals is characterised by a lack of comparability which is reflected in the diversity of empirical research models. This limited impact of estimate variables also affects the assessment of external audit quality (e.g. based on audit and non-audit fees) or IA quality (e.g. based on meeting frequency) (DeFond and Zhang 2014). Comparatively few empirical studies have directly examined the direct impact of AC on investor reactions, and even here, the firm performance variables (e.g. ROA, ROE) for EM are also associated with limited significance. However, it must be considered that the majority of the studies now conduct sensitivity analyses and robustness checks, and increasingly take endogeneity problems into account, e.g. by using instrumental variables (Larcker and Rusticus 2010).

Hereafter, recommendations for future research activities shall be made. The literature review of empirical research activities on AC composition and resources shows that the principal-agent theory and the shareholder value approach are still dominant. However, research increasingly takes

an interest in the extent to which AC activities can also influence other stakeholders' decision-making behaviour and non-financial reporting (CSR reporting, integrated reporting) (on a current literature review on CSR research in accounting in this journal, see Huang and Watson 2015). According to the legitimacy theory (Shocker and Sethi 1973), an organisation must continuously legitimise itself to society through appropriate CSR management to maintain its status as a "good corporate citizen" (Wood 1991). In order to drive stakeholder value through CSR activities (de Villiers et al. 2011), the appointment of AC members with specific CSR expertise is crucial for CSR management quality. This issue has rarely been included in the empirical research. In the coming years, AC will have to provide greater temporal and technical resources for the monitoring of non-financial reporting to satisfy stakeholder demands, due to the increasing importance of CSR reporting and integrated reporting. Increased requirements result from a lack of standardisation of CSR reporting and integrated reporting due to different CSR reporting guidelines and the principal-based framework of the International Integrated Reporting Council (IIRC). Moreover, an external evaluation of non-financial reporting by an independent body (e.g. external auditor, consultant) is not mandatory in most countries, resulting in an objectivity gap risk (Simnett and Huggins 2015; Cohen and Simnett 2015). Especially with regard to the integrated thinking for integrated reporting, the AC should promote cooperation with the IA and other employees associated with the internal control system. On the other hand, the AC should push for a voluntary external audit of non-financial information to increase stakeholder confidence in non-financial reporting quality. The consideration of diversity within the AC and its inclusion in a diversity report are directly linked to CSR reporting. This focuses on the impact of gender diversity on the monitoring process and firm performance, as well as other diversity variables, e.g. age, education, international background, etc. Compared to the research density on the board of directors, only a few studies on AC diversity exist (Qi and Tian 2012; Gul et al. 2013). Moreover, current studies have included the impact of board diversity on financial reporting quality, and only considered the impact on financial reporting quality and audit quality to a lesser degree (Post and Byron 2015). This research gap should also be reduced in the coming years, given that many states have already implemented a fixed gender quota, and national legislators regularly assume a positive effect on monitoring quality.

With respect to dominant considerations of AC financial expertise and independence in the included studies, the attempts to achieve more precise variable measurements must be appreciated. In addition to the assessment of specific accounting and/or auditing expertise, a targeted analysis of industry expertise in the AC should be conducted in a non-US setting, as this is an important quality characteristic (Cohen et al. 2014). This is also why AC industry expertise has been made a mandatory requirement in all member states with the commencement of the EU audit regulation 2014. Increased sector specialisation can, therefore, be observed in the AC. This development took place decades ago for external auditors, and its positive impact on external audit quality has already been

subject to numerous studies (Balsam et al. 2003). While AC meeting frequency and size continue to be included in empirical studies as control variables, the findings should only be given limited attention, as these variables are not robust indicators of AC monitoring quality. Studies measuring the impact of tenure, multiple directorships, overlapping memberships and social ties to other CEOs or auditors on financial reporting and audit quality are far more promising. Existing heterogeneous findings highlight that it enhances AC members' expertise and experience, while also increasing the risk of conflicts of interest in the AC which could compromise independence. Due to the special position, future studies must examine the influence of the AC chair on the corporate governance quality in-depth (Bédard and Compennolle 2014, 260).

It comes as a surprise that comparatively few empirical studies on the economic effect of AC stock (option) compensation and ownership exist when this is a dominant line of research for management compensation from an international perspective. While principal-agent theory rejects a parallel compensation system for the management and the AC, the return to cash compensation for the AC that can be observed since the financial crisis - especially in the EU member states - fails to provide an incentive. It should also be noted that in some states, statutory provisions limit stock-based compensation (e.g. in Germany, prohibition of stock option plans for the supervisory board and for the AC). Especially in the context of increasing regulation of shareholders' say on pay voting with respect to management compensation, the question arises, whether an adequate compensation system for the AC could be linked to positive market reactions.

Finally, only isolated studies have been conducted across several countries to examine the impact of various corporate governance systems, socio-economic framework conditions and cultural influences. Future research activities should also use this starting point, to gain a deeper insight into the impact of AC on the monitoring process.

5. CONCLUSION

Audit committees (AC) are a key tool for ensuring adequate corporate governance in public interest entities (PIEs). Since the US legislator has significantly increased the significance of AC with the Sarbanes-Oxley Act (SOX) 2002, many other regimes have also specified AC composition and resources (e.g. in the EU member states through the audit reform 2014 in reaction to the financial crisis 2008/09). In addition to this regulatory attention, the AC has been at the heart of empirical corporate governance research for many years, whereby research primarily focuses on the US capital market due to the high data availability and the massive international impact of the SOX on regulatory developments.

This structured literature review evaluates the empirical research findings on the impact of AC on corporate governance quality dated after the SOX 2002. After deriving a normative, theoretical and empirical AC framework, the structure was further organised into financial reporting quality, internal and external audit and firm performance. Financial reporting quality was then divided into earnings quality, earnings misstatements and disclosure

quality. For the measurement of internal audit quality, the interaction between AC and internal audit, internal audit resources and disclosure of internal control weaknesses were evaluated separately. With regard to external audit quality, auditor independence (primarily based on audit and non-audit fees) and auditor-client negotiation through the AC were examined more closely. Input variables focused on AC composition and resources to varying degrees, whereby traditional variables, such as financial expertise, independence, meeting frequency and size were complemented with "modern" factors of influence. These include diversity, tenure, multiple directorships, overlapping memberships, social ties and stock compensation and ownership.

Out of the 117 included empirical studies, the impact on financial reporting quality was the most frequently measured general size, and impact on earnings quality the most popular specific value. Given the comparatively easy data generation (e.g. with the accruals models), this frequency is not surprising. Numerous studies have shown a positive impact of the AC's financial expertise on earnings quality. In this context, AC financial expertise has recently been increasingly specified, wherefore positive impacts of accounting, legal or industry expertise were measured either separately or in combination. However, positive correlations between AC independence and earnings quality were also found. Both the number of studies conducted and the observed significances are significantly lower for the other components of the monitoring process (internal and external audit quality) and the firm performance. The economic effect of AC activities on corporate governance quality and firm performance can, therefore, be characterised by diverse interdependencies. Heterogeneous interdependencies currently exist mainly for stock compensation and ownership, multiple directorships, overlapping memberships and social ties. The impact on corporate governance quality and firm performance is equally unsubstantiated. This heterogeneous nature is also reflected in some of the impacts of the AC on internal and external audit quality. This is due to the different perspectives in the literature, whereby the relationship between the AC and the internal and external auditor can be complementary or substitutive. If the AC is subordinate and complementary to the auditor, it would demand an expansion of the internal and external audit activities. If the relationship is substitutive, lean auditing suggests that the AC disburden the internal and external auditor, resulting in a reduction in audit resources.

Based on tendencies and limitations identified in existing studies, recommendations for future research activities were made. Due to the dominant US orientation of the studies, an increased research interest exists for studies in other regimes, e.g. the EU member states, especially in the context of the commencement of the audit regulation 2014. While the statements on the US one-tier system cannot be transferred to economic assessments of other countries and corporate governance systems, the existing studies offer valuable guidance for the search for suitable empirical input and output variables for AC effectiveness in current corporate governance research.

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