

WHAT DO WE KNOW ABOUT JOINT AUDIT?

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FOREWORD

The global banking crisis brought to the fore questions surrounding the scope and quality of the external audit, market concentration and auditor independence. Although not formally proposed in the draft legislation or regulation, one of the issues currently being considered by the European Commission and European Parliament is the role of joint audit. ICAS believes that policy decisions should be based on independent evidence and therefore commissioned this literature review on joint audit to serve as a sound platform for policy making and future research.

The aim of this review is to identify, consider and evaluate the existing evidence on joint audit to inform future policy making, highlight any deficiencies in the existing literature, identify opportunities for further research and make recommendations for policy makers.

The review was undertaken by a team of independent international academics with an objective of covering research from the major international markets and jurisdictions with experience of joint audit. Issues considered include the impact, if any, of joint audit on: audit quality, independence, audit costs and audit market concentration. The study also includes a summary of the experiences of countries who have adopted a policy of joint audit and the practical challenges of joint audit.

This study finds that there is only limited evidence that joint audit leads to increased audit quality, whilst there is some evidence that joint audit leads to additional costs. Of further interest is the finding that whilst joint audits can potentially enhance competition and thus reduce market concentration, there is no empirical evidence to demonstrate clearly that this improves audit quality. The inconclusive evidence demonstrates that the full impact of joint audit is still not known and that further research is required prior to implementing any policy on joint audit. The research also highlights the practical challenges that need to be overcome if a policy of joint audit is to be introduced.

The report outlines the deficiencies in the existing literature, in terms of scarcity of research, the use of surrogates to measure audit quality and audit costs and the limitations of cross country studies. As a result, the limitations and practical challenges of joint audit identified throughout this report yield several interesting opportunities for future research, in particular qualitative research.

This project was funded by the Scottish Accountancy Trust for Education and Research (SATER – see page 49). The Research Committee of ICAS has also been happy to support this project. The Committee recognises that the views expressed do not necessarily represent those of ICAS itself, but hopes that the report will contribute to the current policy debate on the advantages and disadvantages of joint audit.

Allister Wilson
Convener of ICAS Research Committee
December 2012

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EXECUTIVE SUMMARY

The global financial crisis has raised many questions about the quality of external audits. A significant regulatory concern remains that, after the Enron scandal in the early part of this century and the subsequent demise of Arthur Andersen, the audit market is held in the hands of only four large international audit networks (the Big 4). This high market concentration creates a potential systemic risk on the audit market, related to the 'possibility that one of the Big 4 might withdraw, leaving a Big 3' auditor market dominance (HoL, 2011, § 27). While the role of banks, investors and rating agencies has been both challenged and analysed in depth in the aftermath of the global financial crisis, limited attention has been given to the question of whether the role of the auditor can be improved to reinforce financial stability.

The European Commission (EC) has taken the lead on this debate and as a consequence issued the Green Paper 'Audit Policy: Lessons from the Crisis' (EC, 2010), hereinafter referred to as the Green Paper, that suggested various institutional mechanisms, among them the joint audit. This latter proposal was motivated by the understanding that the Big 4 audit firms dominate the European listed market, with the noticeable exception of France, which imposes mandatory joint audits (Huber, 2011). The EC joint audit proposal raised a lively debate about the costs of conducting joint audits and the potential benefits in terms of audit quality and enhancement of audit market competition. After an open consultation process, the Green Paper culminated in a regulatory proposal, which was issued in November 2011. Very recently, in September 2012, the Committee on Legal Affairs (JURI) of the European Parliament published a draft report on this regulatory proposal (European Parliament, 2012).

The objective of this literature review is to identify, consider and evaluate the existing evidence about the implementation of joint audits. Using both published and grey literature (working papers and PhD dissertations) on joint audit, this literature review focuses on joint audit efficiency, which includes the impact of joint audit on audit quality and audit costs, as well as audit market concentration.

The key findings of this literature review are as follows:

- There is limited empirical support for the frequently stated argument of joint audit supporters that joint audits lead to increased audit quality.
- There is some empirical support for the frequently stated argument of joint audit opponents that joint audits lead to additional costs.

- The joint audit should be seen as a mechanism that is embedded in a broader institutional context and should not therefore be considered in isolation from other factors that might impact the audit market. The results reported by this literature review clearly indicate that various country-level characteristics are simultaneously at play. Joint audits can potentially enhance the competition in the audit market by allowing smaller audit firms to maintain larger market shares. However, the impact of this lower market concentration on the quality of the audit has not been clearly demonstrated.

This review indicates that further evidence is needed prior to implementing mandatory joint audit in the European Union. The research indicates that policy makers should examine audit quality and audit market structure enhancement together, as a complex whole. Prior to implementing a policy on joint audit, the relevant regulatory bodies would need to address the following practical challenges:

- First, the question of the optimal sharing of the audit work and the desirability of a balanced joint audit, which also raises the issue of the auditor pair choice;
- Second, the need to consider the duration of the audit engagement and possible auditor rotation issues in conjunction with a joint audit regulation;
- Third, the unexpected effects arising from the need to select two auditors. This applies in particular to industries where the number of industry specialist auditors to choose from is low.

This literature review underlines that the full impact of joint audit is still not known and proposes numerous avenues for future research.

1. INTRODUCTION

The global financial crisis prompted questions about the scope and quality of the external audit. A major regulatory concern was the potential systemic risk on the audit market for large companies created by high audit market concentration, following the Enron scandal at the turn of the century and the associated collapse of Arthur Andersen:

All witnesses fear the real possibility that one of the Big 4 might withdraw leaving a Big 3 [...]. Loss of one of the Big 4 would restrict competition and choice to an unacceptable extent. (HoL, 2011, § 27)

Among the various proposed institutional mechanisms of the Green Paper (EC, 2010), joint audit was one of the most debated suggestions. This proposal is motivated by the understanding that the Big 4 audit firms dominate the European listed market, with the noticeable exception of France, where mandatory joint audit has been implemented since 1966 (Huber, 2011).

The EC joint audit proposal raised a lively debate. As a consequence, in November 2011, a regulatory proposal was issued which encouraged the practice of joint audit on a voluntary, non-mandatory basis. In this context, the proposal recommended that mandatory audit firm rotation be extended from six years to nine years if joint audits are performed (EC, 2011a, article 31, para. 1, sentence 4). In September 2012, the Committee on Legal Affairs (JURI) of the European Parliament issued a draft report on this regulatory proposal. The draft report has not supported the EC propositions encouraging joint audits and has suggested an extended rotation period. The draft report recommends a mandatory audit firm rotation after 25 years (European Parliament, 2012, p. 85), which is much longer than the six-year rotation period initially proposed by the EC. Given that the draft report is not legally binding, no definitive decision has been made as of yet. Hence, it remains to be seen whether the European Union will make joint audits mandatory, encourage them or simply cease to consider them any longer, be it on a mandatory or voluntary basis.

The objective of this literature review is to identify, consider and evaluate the existing evidence on the use of joint audit, in particular its impact on audit quality (i.e. primarily the quality of the financial statements), audit costs (i.e. costs-audit fees and non-audit fees that are borne by the companies) and audit market concentration.

This report contributes to the joint audit literature in two ways. First, it attempts to provide a comprehensive overview of the current academic knowledge about joint audit by presenting and discussing the evidence and the main caveats. Second, it emphasises the lack of prior evidence in various areas and proposes important avenues for future research so as to allow for a more thorough understanding of joint audit and its impacts.

The literature review is structured as follows: chapter two defines joint audit and explains the methodology used to conceptualise this literature review. Chapter three describes the joint audit regulatory environments and also reviews practical challenges. Chapter four provides evidence of the impact of joint audit on audit quality, audit costs and audit market concentration. Chapter five presents the results of prior research about other characteristics of joint audits, including the determinants and consequences of auditor pair choices. Chapter six critically discusses the limitations of academic studies on joint audit. Finally, chapter seven provides avenues for future research, followed by concluding remarks and recommendations for policy makers in chapter eight.

2. TERMINOLOGY AND METHODOLOGY

Definition of joint audit

'Joint audit' can be defined as an audit in which financial statements are audited by two independent auditors with:

- shared audit effort;
- one single auditor's report signed by both auditors; and
- joint liability for both auditors.

These characteristics may differ across countries.

A joint audit needs to be distinguished from a 'double audit' or a 'dual audit'. In a joint audit setting, the audit planning and audit work are coordinated and the audit procedures are allocated between the two auditors. It implies cross reviews, mutual quality controls and the issuance of a single audit opinion. It differs significantly from a 'double audit'¹, where the audit work is fully performed twice, because in a joint audit the tasks are not purely duplicated. It also differs significantly from a 'dual audit'², where each auditor audits distinct sets of financial information and issues two distinct audit opinions. It also differs from the case where two partners of the same audit firm sign the audit report (Karjalainen, 2011).

However, it is important to emphasise that the Green Paper called for comments about the potential adoption of 'audit firm consortium'. This choice of terminology gave way to many comments and interpretations. For instance, in their comment letters, KPMG (2010) and the FEE (Federation of European Accountants) (2010) questioned whether audit firm consortiums are the same as joint audits. KPMG (2010) presumed that 'audit firm consortium' means 'going beyond purely joint audits to require the involvement of more than two firms, possibly at a divisional or subsidiary level'. The assumption is made that the EC referred to joint audits when they used the term 'audit firm consortium'. In the French joint audit environment, it is notable that the use of a minimum of two audit firms is mandatory, and that companies may voluntarily choose more than two. For example, in 2011, BNP Paribas used three auditors: Deloitte, PricewaterhouseCoopers and Mazars. Hence, joint audit simply implies 'more than one' auditor.

Methodology to conceptualise the literature review

This literature review includes both published work and grey literature, such as working papers and PhD monographs, in order to provide a complete picture of the existing research evidence. The considered prior work includes empirical studies, differentiated

between mandatory and voluntary joint audit settings, and analytical studies (which include only theoretical modelling), the latter are rather rare.

This review focuses primarily on the effect of joint audit on audit quality and audit costs, economic efficiency being the main driver for institutional dynamics (North, 1990). Efficiency criteria have also dominated the joint audit debate and the responses to the Green Paper (EC, 2011b). This review also elaborates on the impact of joint audit on market concentration, and on the impact of audit firm pair choice on audit costs and audit quality in joint audit settings.

3. CONTEXT AND SETTING OF JOINT AUDITS

This chapter presents the various international settings where joint audit has been implemented, either on a mandatory or voluntary basis. Some of the practical challenges that may be faced by the various stakeholders in joint audits are also presented and discussed.

Joint audits in Denmark and France

Denmark

In Denmark, listed and state-owned companies were required to be audited by two mutually independent auditors from 1930 through 2004. While the auditors had joint liability in the audit, Danish law did not specify how the audit work or audit fees were to be shared between the two auditors. The resulting scenario was that often one audit firm would bill more than 80 per cent of the audit fees (Thinggaard and Kiertzner, 2008). In 2001, the Danish parliament adopted the new Financial Statements Act (Lov nr 448 af 07/06/2001), this called for an end to the mandatory joint audit, which had been in place for nearly 75 years, by 2005. This legislative change was motivated by 'unnecessary high audit costs' (Danish Financial Statement Act, 2001, The Proposal of the Act, §135) and an assumption that a single auditor can provide a more holistic approach (Holm and Warming-Rasmussen, 2008).

France

Audit regulation in France has its roots in a long tradition of the voluntary use of multiple controllers for large companies (Bennebib, 2004; Audoussert-Coulier, 2008). An obligation to appoint at least two auditors did not begin until 1966 (Loi du 24 juillet 1966, article 223-3). The 1966 Act initially focused on listed firms and on non-listed firms with a share capital value exceeding a certain threshold (Audoussert-Coulier, 2008). However, subsequent to a modification of the scope of application in 1984, joint audit is now mandatory for all companies preparing consolidated financial statements (article L 823-2, Code de commerce). In the 1970s, the accounting profession and financial market authorities increasingly criticised the joint audit system for its inability to ensure collegiality, a drawback attributed to difficulties with allocating the audit tasks, agreeing on common audit programmes and applying consistent methodologies (Marmousez, 2008). Professional practice standards (NEP-100, 2011) now require a balanced audit work allocation between both auditors 'to ensure an efficient dual control mechanism' (Gonthier-Besacier and Schatt, 2007, p. 141).

Each of the joint auditors signs the audit report and is hence jointly liable for any undiscovered or unreported material misstatement. They are also obliged to disclose, in

the audit report, any differences of opinion. For example, in the 2007 audit report of the Belvedere Group (Belvedere, 2007, p. 56), one joint auditor (KPMG) expressed a reservation (modified opinion) that was not shared by the other auditor (Cabinet Jean-Louis Durand). In addition, in France each auditor is appointed for an audit term of six years.

Other examples of joint audit requirements

This section provides detailed examples of other countries where joint audit has been used or is currently being considered. It describes the main characteristics of these contexts.

Algeria

Pursuant to Article 100 of the *Ordonnance relative à la monnaie et au crédit* (Algeria, 2003), banks and financial institutions in Algeria have been required to be audited by two independent auditors since August 2003. For any other industry, joint audit is voluntary (Algeria, 2012, de Commerce Algeria, Livre 5ème: Les sociétés commerciales, Article 715 bis 4).

Canada

Subsequent to the failure of the Home Bank in Canada, the 1923 revision of the Bank Act introduced the two-auditor requirement for banks, with a two-year rotation period (Richardson, 2001). In practice, the two-year rotation of auditor pairs was handled in two ways. Some banks appointed three auditors, with one senior permanent auditor and two junior auditors who rotated every two years. Other banks appointed a panel of three auditors and rotated the joint auditor pairs among the three firms every two years (GAO, 2003). The objective of the 1923 reform was to facilitate an independent review of the loan portfolio. The joint audit requirement provided small local audit firms with the opportunity to gain experience from their joint work with large international audit firms.

However, the Act also introduced a new regulation to prevent audit firms from offering non-audit services. Small Canadian audit firms appear to have suffered from this regulation, with some, such as Clarkson, even withdrawing from the bank audit market altogether (Little, 1964). This contributed to the concentration of the Canadian bank audit market in the hands of large multinational audit firms. The concentration issue was furthermore precipitated by the geographical dispersion of the banking industry, as only a few Canadian audit firms were able to expand their own office network in step with the growing retail network of their bank clients. As a result, by the mid-twentieth century, the number of smaller Canadian audit firms conducting bank audits was significantly in decline. A notable exception to the dominance of the large international

audit firms was the Bank of Montreal, Canada's largest bank at the time, which continued to be co-audited by two Canadian audit firms (McDonald Currie and Riddell) (Richardson, 2001).

The joint auditor requirement with firm rotation, in place for more than 60 years, was considered a key safeguard in the Canadian bank governance system (GAO, 2003). However, in 1985, the joint audit system did not prevent the failure of the Canadian Commercial Bank (Lew and Richardson, 1992). In 1991, complying with the cost of the legislation was thought to outweigh the associated benefits, and therefore the requirement was abolished. The 1991 Bank Act now permits the appointment of only one audit firm (Ogilvie, 1983) with no specific rotation requirements.

Congo

Congo is a member country of OHADA (Organisation pour l'Harmonisation en Afrique du Droit des Affaires), the aim of which is to harmonise African commercial law. One requirement of OHADA, in place since 1997, is that publicly listed companies have to be audited by at least two independent auditors (OHADA, 1997, Article 702). Furthermore, since 1992, banks in Central African States have to be audited by two independent auditors (Etats de l'Afrique Centrale, 1992).

India

In India, joint audit is often mandated for state-owned enterprises by the regulator or the Office of the Comptroller and Auditor General of India (World Bank, 2004). The Indian Standards on Auditing include a standard that specifies the basis for the division of work, mutual coordination and reporting responsibilities of the joint auditors (India, 1996). In accordance with this standard, the joint auditors usually divide the audit work among themselves 'in terms of identifiable units or specific areas'. If one of the joint auditors comes across matters which are in the responsibility of the other joint auditor(s) and deserve the other auditor's attention, he or she must communicate this to them in writing. The joint auditors issue a single audit report and the joint auditors must issue separate reports only if they disagree with regard to any matters to be covered by the audit report.

Ivory Coast

Like Congo, the Ivory Coast is an OHADA member country and is also subject to regulations imposed as part of the effort to harmonise the banking sector within Central Africa. Hence, the Congo joint audit requirements apply to the Ivory Coast.

Kuwait

In Kuwait, joint audit has been mandatory since 1994 for companies that are listed on the Kuwait Stock Exchange (KSE) (Kuwait, 1994, article 161).

Morocco

Moroccan law has been requiring joint audit for listed companies since 1996 (Morocco, 1995, article 159) and for banks since 1993 (Morocco, 1993, article 35).

Tunisia

Pursuant to the Tunisian commercial code amended in 2005 (Tunisia, 2005, article 13), joint audits are required for: listed banks; insurance companies; those companies required to prepare consolidated accounts; and companies whose liabilities exceed a certain threshold. Many aspects of joint audit regulation in Tunisia seem to have been adapted from the French regulations. However, unlike in France, Tunisia has no legislation that regulates the allocation of work between both auditors.

Saudi Arabia

In Saudi Arabia, auditing by two independent auditors is mandatory for banks since 1966 (Saudi Arabia, 1966, article 14) and for reinsurance companies since 2003 (Saudi Arabia, 2003, article 10).

South Africa

South Africa has had regulations on joint audit since 1973, albeit these have become less demanding over time. The initial provision in the 1973 Companies Act (South Africa, 1973) stated that for large firms meeting certain conditions 'The Minister may at any time [...] appoint [...] an auditor to act jointly with any other auditor of the company', this no longer exists in a new Companies Act adopted in 2008 (enforced as of 2011). In the banking industry, from 1990, joint audit was mandatory for large banks with total assets greater than 10 billion rand (approx. €972 million). However, following the amendment of the Bank Act in 2003, this requirement no longer exists (South Africa, 2003).

Nowadays, South Africa is a voluntary joint audit setting with auditor rotation. Pursuant to the Companies Act 2008 (South Africa, 2008, section 92), if a company appoints two or more auditors, it must ensure auditor rotation once every five years and ensure that not all joint auditors relinquish office in the same year. Thus, the country's legislation emphasises continuity by prohibiting the simultaneous switching of both joint auditors.

Sweden

In Sweden, joint audit used to be mandatory for banks until 2006. Since then, the Swedish Financial Supervisory Authority (*Finansinspektionen*, hereafter 'SFSA') is no longer obliged but still has the right to appoint a second (or further) auditor(s) for the audit of insurance companies and banks (Sweden, 2004; 2010, section 14). However, the SFSA rarely executes its right to appoint a second auditor, which is only exercised when deemed necessary (Finansinspektionen, 2006). In its 2011 annual report, for example, Swedbank states that the SFSA 'is entitled to appoint an auditor of the bank, but has not exercised this right in several years and did not do so in 2011' (Swedbank, 2012).

As can be seen from the above, a number of countries have enforced joint audit regulations, mostly in the banking and insurance industries. However, it has proven difficult to observe and study these joint audit environments, as their regulations have been either abolished or else adopted too recently to allow for an assessment. Therefore, for most of these countries there is no well-developed stream of academic research on the impact of joint audit. Furthermore, while joint audits are generally allowed on a voluntary basis in the European Union (EC, 2001, p. 34), only those countries where a significant number of companies have opted for joint audits are of value for empirical examination. For instance, in 2005 only four listed non-financial companies used a voluntary joint audit in Germany, and only five in Greece (Maggina, 2012). Thus the available evidence in these voluntary joint audit settings is extremely limited. For all these reasons, this literature review focuses largely on the two most well-known joint audit contexts for which some academic research exists: Denmark and France.

Practical challenges of undertaking joint audit

The execution of joint audit has many practical challenges, such as the allocation of audit tasks, the coordination process and the resolution of differences in audit opinion.

The balanced joint audit challenge

Do joint audit regulations always lead to 'real' joint audits? In the initial years of application in France, situations where the two joint auditors were not independent from each other were not uncommon. The Le Portz report in 1993 pointed to situations (representing 20 per cent of the 100 largest French firms) where the two joint auditors were affiliated with the same audit network. These 'fictitious joint audit' situations were then banned in the 1993 revised code of professional conduct. As a consequence of this new regulation, a redistribution of audit appointments took place in favour of smaller audit firms. For the 1996-1998 period, Piot (2003) shows that auditor switch decisions were essentially a way to discontinue the 'fictitious' joint audit situations.

Furthermore, a balanced share of the audit effort seems desirable in a joint audit setting, because unbalanced situations with a 'dominant' auditor are perceived as non-effective joint audits (Bennechib, 2004; Le Maux, 2004; Thinggaard and Kiertzner, 2008). In France, the auditors' code of professional conduct has recently been modified to require that the audit work be shared in a balanced way (qualitatively and quantitatively). Furthermore, the French Autorité des Marchés Financiers (AMF) issues reports every year about the audit fees disclosed by large companies listed in France. Recently the AMF (AMF, 2011) underlined several cases, among them Michelin (91 per cent for PwC and 9 per cent for Corevise in 2009), where joint audits still show a significant imbalance of fees between the audit firms involved.

To decrease audit market concentration, the EC proposed in its Green Paper to encourage the adoption of joint audits and promote the idea of constraining the choice of joint auditors, namely by appointing at least one non-systemic (non-Big 4) audit firm paired with a larger audit firm. The constrained choice of a small audit firm paired with a larger one can potentially lead to non-optimal situations, in particular in the case of large, diversified and geographically dispersed companies. For these complex and internationalised clients, a smaller audit firm will not have the necessary resources to conduct a significant part of the audit work, thus leaving the playing field to the larger (Big 4) audit firms. Such a context will reduce the likelihood of achieving the benefits of the 'four eyes principle' (i.e. the cross-reviewing of each auditor's work by the other one) and the expected enhancement of audit quality through the joint audit. Therefore, constraining the choice to include a smaller audit firm among the joint auditor pair does not contribute to balancing the share of the audit work, although it does meet the objective of enhancing market competition. It is notable to mention that even though discussed in the Green Paper, the EC regulatory proposal does not, ultimately, require a pairing of a Big 4 audit firm with a non-Big 4 audit firm.

The audit term duration and audit rotation issues

The South African regulation (South Africa, 2008) argues that the renewal of the two joint auditors during the same year compromises audit knowledge continuity. To a certain extent this echoes the experience of Canada, where some banks were choosing and rotating their two joint auditors from a selected group of three auditors in order to maintain continuity.

In France, joint audit regulation is coupled with a fixed minimum auditor appointment duration of six years. In practice, there is no consensus in France about a preferred pattern of auditor renewal, with some companies opting for coinciding auditor renewal/switch dates for the two joint auditors and other companies opting for different dates (Audoussert-Coulier 2012). The EC regulatory proposal recommends a minimum

duration of two years for the audit appointment and the rotation of auditors after six years with the possibility to keep auditors for a longer period of nine years when 'more than one auditor' is used. However, the interrelation between a joint audit system, fixed-term engagement duration for a period longer than one year and auditor rotation requirements after a certain maximum tenure remains an important yet unresolved issue. Further research is thus required to assess the respective merits of competing scenarios (joint versus single audit, short versus long appointment terms, coinciding versus distinct renewal dates and various rotation requirements).

The effect on the audit market dynamic

One potential adverse effect of joint audit is that the audit market becomes 'sticky' and that the number of audit firms to choose from becomes reduced. In practice, large companies have been known to regularly avoid choosing the same audit firm(s) as their main competitors. In a joint audit context, this can create even more severe restrictions on the choice of auditors. For example, if company A is looking to appoint two Big 4 audit firms as joint auditors, and its main direct competitor is already using Deloitte and Ernst and Young, then company A will very likely appoint KPMG and PwC. Furthermore, if local regulation prevents companies from hiring their incumbent auditors for non-audit services, then company A may well choose to have only one Big 4 (i.e. KPMG or PwC) paired with one non-Big 4 auditor in order to be able to hire the other Big 4 firm for non-audit services. For this reason, the joint audit system creates potentially unexpected restrictions on auditor choice, particularly in industries where the number of industry-specialist auditors is small (Piot, 2008). This begs the question: are the constraints created by the joint audit system desirable in terms of auditor choice? As yet unanswered, this question calls for future research on the audit market dynamics in France and on the perceptions of the users and various stakeholders.

Stakeholders' perspectives on joint audit

The views held by companies, auditors and other stakeholders on joint audit may differ. Some companies may prefer joint audit in order to signal a higher level of audit quality to the market. Indeed, many company statements, such as the following, reflect this assumption.

In order to ensure a high degree of assurance for the independence and high quality of auditing, the Company and the Group's annual report are audited by two of each other independent state authorised public accountants. (A.P. Moeller Marsk, Annual Report 2006, p. 38)

Big 4 and second-tier audit firms may also have divergent views. Lesage *et al.* (2012) analysed the comments made by both groups on the Green Paper and identified two

different positions: Big 4 audit firms are largely against joint audit, mainly for cost reasons; and second-tier audit firms are favourable to joint audit, mainly for quality reasons. In that debate, each group of stakeholders thus appears to seek to protect their private interests (Lesage *et al.*, 2012).

Other stakeholders have somewhat mixed positions on joint audit. In their responses to the Green Paper, many investors and associations representing companies and financial statement preparers were not supportive of joint audit mainly because they feared the related increase in the cost of audits, the lack of clear lines of responsibility between the joint auditors and a general lack of benefits (EC, 2011b).

4. IMPACT OF JOINT AUDITS

This chapter focuses on the consequences of joint audits on audit quality, audit costs and market concentration. Studies on both voluntary and mandatory joint audit settings are reported. The results are also summarised in Table 1 at the end of this chapter.

Audit quality

Several studies have analysed the effect joint audit regulations might have on audit quality. Holm and Thinggaard (2011) examine whether joint audit impacts audit quality in the Danish setting. Their sample comprises non-financial companies listed on the Copenhagen Stock Exchange (CSE) at the time of joint audit abolishment. Their final sample for the audit quality tests includes 117 companies for the 2003-2007 period. They find insignificant coefficients on their audit quality measures (abnormal accruals), suggesting that joint audits are not better able to constrain earnings management than single audits. Lesage *et al.* (2012) also examine whether joint audit impacts audit quality in the Danish setting. Their sample includes listed non-financial companies and encompasses the 2002-2010 period. Focusing on this period allows separate analyses on:

- (1) the period during which Danish firms had the choice of choosing between single or joint audit, which was the 2005-2010 period (432 observations); and
- (2) the entire period during which the relevant data is available, which was the 2002-2010 period (582 observations).

Lesage *et al.*'s (2012) findings show insignificant coefficients on the abnormal accrual measures for either period. Hence, their findings confirm that joint audits do not have an impact on audit quality, as measured by the level of abnormal accruals, in Denmark.

In another study, Lesage and Ratzinger-Sakel (2012) consider a matched French-German sample and attempt to disentangle the effect of mandatory joint audit in France. As Germany is a country where voluntary joint audits are carried out, the German sample is restricted to companies with a single audit to adequately test the impact of mandatory joint audit in France. The authors test whether joint audit is associated with an increase in audit quality, measured by several abnormal accrual measures. Their findings show no impact of joint audit on the abnormal accrual measures, which means that the level of earnings management in France is not significantly different from that in Germany. This suggests that joint audits have no impact on audit quality, as measured by the level of abnormal accruals. However, the authors acknowledge that this finding

is to be interpreted with caution given the difficulty of disentangling the effect of the mandatory joint audit from other differences between France and Germany.

Zerni *et al.* (2012) examine the impact of the voluntary joint audit on audit quality in the Swedish setting for the 2001–2007 period. The authors consider a sample of listed non-financial Swedish companies (1,257 observations) and a sample of privately held Swedish companies (between 848 and 1,160 observations depending on the test). The findings suggest that companies opting voluntarily for joint audits have a higher degree of earnings conservatism, lower abnormal accruals (both are proxy measures for audit quality), better credit ratings and lower risk forecasts of becoming insolvent within the next year than other firms (both are proxy measures for perceived audit quality). These findings are consistent with the view that joint audits improve both audit quality and perceived audit quality. The authors acknowledge that opting for voluntary joint audit is not a random choice, as Swedish minority shareholder protection legislation stipulates that minority shareholders who have, in total, at least 10 per cent of a firm's shares have the right to require the appointment of a minority auditor. Hence the joint audit decision might be driven by minority shareholders who prefer a higher degree of conservatism in the firm's accounting decisions.

Also in the Swedish context, Zerni *et al.* (2010) examine whether corporate governance devices including joint audit can effectively mitigate 'entrenchment discounts.' Zerni *et al.* (2010) define the entrenchment problem as

...the possibility that large shareholders opt to use their power to expropriate minority shareholders by taking actions and investment decisions serving their own interests, leading to suboptimal outcome for minority shareholders.

Consequently, entrenchment discounts arise when the non-controlling shareholders expect to face a potential expropriation by the controlling shareholders and discount the share price accordingly. Based on a sample of 1,171 listed non-financial Swedish firms for the 2000–2006 period, the authors find significant entrenchment discounts in single audit contexts for clients of non-Big 4 auditors (the largest discount) and of Big 4 auditors (the second largest discount). However, they do not find significant entrenchment discounts in joint audit contexts, regardless of the type of auditor pair selected. Their results also suggest that joint audit leads to the highest perceived audit quality due to more rigorous monitoring. Thus, the ordering of perceived audit quality appears to be more complex in a voluntary joint audit setting than in a single audit setting. Yet, the researchers acknowledge that they cannot exclude the possibility that the association between strength of monitoring and firm valuation can be driven by reverse causality.

In an analytical paper, Deng *et al.* (2012) examine the consequences of joint audit on two aspects of audit quality: audit independence (based on the company-auditor negotiation on the fees and the content of the audit report); and audit evidence precision (based on the amount of work done by the auditor). They develop an analytical model to compare three scenarios: single audits by a Big 4 audit firm; joint audits by two Big 4 audit firms; and joint audits by one Big 4 audit firm paired with a smaller auditor. They identify three key findings. First, their analysis suggests that joint audits may compromise auditor independence as it gives clients the opportunity for ‘opinion shopping’. In that context, they also argue that the competition between the two auditors creates incentives to ‘please’ the client. Second, when a technologically less efficient audit firm (a small firm) is chosen, audit quality may be impaired since a free-rider problem (i.e. one auditor relies on the other auditor’s work) would prevail and result in lower total audit evidence precision. Third, they also analyse the cost consequences of joint audits and argue that audit fees under joint audits should be lower than under single audits when the technological difference between the two audit firms is small and/or when the big firm bears a large proportion of the audit costs.

Audit costs

Several studies have attempted to evaluate the potential additional cost of a joint audit system. Holm and Thinggaard (2011) examine the impact of joint audit on audit costs measured by audit fees in Denmark. Their findings suggest that companies opting for a single auditor can benefit from fee discounts. However, fee discounts can only be observed in the first year after the switch from a joint to a single audit. Their results also suggest that the fee reduction is driven by (single) audit firms that previously benefitted from a significant stake in the former joint audit. The authors thus conclude that the reduction in audit fees after switching from joint to single audit is a consequence of initial fee discounts due to competition. Lesage *et al.* (2012) also examine the impact of joint audit on audit fees in Denmark. Their findings confirm for either period (the entire 2002-2010 period and the restricted 2005-2010 period) that joint audits are associated with higher audit fees. However, they find no significant association with total fees, comprised of audit and non-audit service fees, which can be interpreted as a shift between the disclosed fee categories (with a decrease in audit fees compensated by an increase in non-audit fees).

André *et al.* (2012) examine the impact of joint audit in France on audit costs and compare the audit fees for large listed non-financial companies in three countries for the 2007-2009 period: 177 French companies; 102 Italian companies; and 210 British companies. They demonstrate the existence of a fee premium in France. More specifically, French companies pay higher audit fees than Italian companies, with an economically significant difference ranging from 40 to 50 per cent. Moreover, the fee

premium paid by French companies is 25 to 35 per cent higher than the one paid by UK firms. These results are robust to the use of alternative model specifications (use of total fees and use of a matched-sample approach). André *et al.* (2012) conclude that higher audit fees are associated with joint audit in France due to higher coordination costs. However, the authors acknowledge that other country-specific differences may also interfere. Similarly, the Lesage and Ratzinger-Sakel (2012) study finds that listed firms pay higher fees (audit fees and total fees) in France compared to Germany. This result could also be attributed to the joint audit requirement. However, the authors outline the limited validity of this conclusion given the impossibility to disentangle the effect of joint audit from other country-specific differences.

The Ittonen and Peni (2012) study sheds light on the impact of the voluntary joint audit on audit fees. Based on a sample of 715 non-financial companies listed in the NASDAQ OMX exchanges in Denmark, Finland and Sweden in 2007, the authors find that joint audit is associated with lower audit fees. Conversely, Zerni *et al.* (2012), who also examine the impact of joint audit on audit fees in Sweden for the 2000-2006 period, show that opting for joint audit generates additional costs. More specifically, clients with two auditors pay significantly higher audit fees than clients audited by a single auditor. The authors attribute the observed fee premium for joint audits to the 'client's willingness to pay more for a higher actual and perceived audit quality' (Zerni *et al.*, 2012, p. 27). These two studies exhibit inconsistent findings about the cost of joint audit in a voluntary setting. Their respective results may have been influenced by certain intrinsic characteristics of joint audit settings, or by the fact that the joint auditor pair is not selected 'at random'. Therefore, the joint audit 'premium' (if any) might be driven by the potential existence of a Big 4 premium in a joint audit setting if one (or two) Big 4 auditor(s) is chosen. The effect of joint auditor pair choices on audit fees is presented in chapter five.

Audit market concentration

The concentration of the audit market in the hands of very few large suppliers is a concern that has focused the attention of both regulators and researchers (for example, Simunic, 1980; Wolk *et al.*, 2001, in the US; Beattie *et al.*, 2003, in the UK). An increased market concentration and therefore perceived lower level of market competition restrains the choice of suppliers to choose from and creates the possibility of abnormally high prices due to monopoly rents and suboptimal audit quality due to an absence of effort and investments. In the Green Paper, the EC indicates that the current level of audit market concentration creates a systemic risk because the collapse of another big international audit network would significantly disrupt the audit market dynamics and suggests that joint audits could be used to reduce the concentration of the audit market (Quick, 2012).

The lower concentration of the audit market in France, as compared to other European countries, is often cited as a direct and desirable consequence of joint audit regulation.

This is confirmed by several empirical findings. According to Ballas and Fafaliou (2008), France ranks at the bottom of their classification of 15 European countries in terms of audit market concentration for the 1998-2001 and 2002-2004 periods (rank 14 and 15 respectively). They also find that France and Denmark are the only two countries where audit market concentration significantly decreased after the demise of Arthur Andersen. This means that some non-Big 4 audit firms assumed some ex-Arthur Andersen clients in these joint audit countries (for example, Mazars in France has taken on some ex-Arthur Andersen clients), whereas the Big 4 audit firms took over these clients in other European countries (Piot and Schatt, 2010). Piot (2007) examines the audit market concentration in France in the years 1997 and 2003 based on a sample of 817 and 887 listed companies. The author argues that due to the joint audit requirement, the French audit market is less concentrated than elsewhere and that the 'audit market has remained relatively open and competitive'. However, he underlines an increase in concentration between years 1997 and 2003. This is consistent with the overall increase in audit market concentration observed in other European countries during the same period in the Ballas and Fafaliou (2008) study. The joint audit system in France seems to allow medium and small audit firms to maintain relatively large market shares in terms of number of clients. However, in terms of audit fees, Big 4 auditors earn a large share of the total audit revenues (Broye, 2007) even in France. With 2005 data, Broye (2007) shows that Big 4 audit firms dominate the market of large listed companies in France but that market concentration decreases significantly for medium and small-sized listed firms. Furthermore, Piot (2008) shows that concentration is higher in certain regulated industries (construction, energy and commodities, and financial institutions).

Table 1 Main empirical studies - Impact of joint audit

Panel A: Audit quality and audit cost					
Authors	Sample	Mandatory/voluntary	Research question	Main findings related to joint audit	Publication outlet
André <i>et al.</i> (2012)	Listed companies, years 2007–2009: 177 French, 102 Italian, and 210 UK companies	Mandatory	<u>Audit cost</u> Do mandatory joint audits lead to higher audit fees than those for single audits?	Mandatory joint audits lead to higher audit fees.	Working paper
Holm and Thinggaard (2011)	117 listed non-financial Danish companies, years 2003–2007	Mandatory/voluntary	<u>Audit quality and audit cost</u> Does the switch from joint to single audit impact audit costs or audit quality?	Joint audits are not better able to constrain earnings management than single audits. Companies that switch from joint audit to single audit receive a reduction in audit fees on the first year after the switch.	Working paper
Iitonen and Peni (TLJAUD 2012)	715 non-financial companies listed in Denmark, Finland and Sweden, year 2007	Voluntary	<u>Audit cost</u> Main research question: Does auditor's gender affect audit fees? As a side research question, the effect of voluntary joint audit on audit fees is also addressed.	Voluntary joint audit is associated with lower audit fees than fees for single audits.	Published paper
Lesage, Ratzinger-Sakel and Kettunen (2012)	432 (582) listed Danish companies, years 2005–2010 (2002–2010)	Mandatory/voluntary	<u>Audit quality and audit cost</u> Does the switch from mandatory/voluntary joint audit to single audit have influence on audit fees or financial statement quality?	Joint audits are associated with higher audit fees. However, no significant association with total fees, which can be interpreted as a shift between disclosed fee categories. Joint audits do not have an impact on audit quality.	Working paper
Lesage and Ratzinger-Sakel (2012)	386 French and 386 German listed non-financial companies (matched sample), years 2005–2010	Mandatory	<u>Audit quality and audit cost</u> Are mandatory joint audits associated with higher fees (audit and total fees)? Are mandatory joint audits associated with higher audit quality?	Mandatory joint audits are not associated with higher audit quality. Mandatory joint audit appears to be associated with higher audit and higher total fees, although the result should be interpreted with caution.	Working paper

Table 1 Main empirical studies - Impact of joint audit (Cont.)

Panel A: Audit quality and audit cost (Cont.)					
Authors	Sample	Mandatory/voluntary	Research question	Main findings related to joint audit	Publication outlet
Zerni <i>et al.</i> (EAR 2012)	Different samples of Swedish companies: a) a sample of listed companies: 1,257 firm-year observations and b) samples of privately held companies (between 848 and 1,160 observations depending on the test), years 2001–2007	Voluntary	<u>Audit quality and audit cost</u> Do voluntary joint audits improve audit quality? Does voluntary joint audit increase audit fees?	Voluntary joint audits improve perceived and actual audit quality. Voluntary joint audits lead to higher audit fees.	Published paper
Zerni <i>et al.</i> (CAR 2010)	Sweden, 1,171 listed non-financial companies, years 2000–2006	Voluntary	<u>Audit quality</u> Can corporate governance devices including joint audit effectively mitigate the entrenchment problem and the associated entrenchment discount?	Joint audit mitigates entrenchment discounts. <i>This paper also incorporates a joint audit / single audit choice aspect which is discussed in table 2.</i>	Published paper

Panel B: Market concentration					
Authors	Sample	Mandatory/voluntary	Research question	Main findings related to joint audit	Publication outlet
Ballas and Fafaliou (IAER 2008)	Sample of 2,862 firms from 15 European countries, years 1998–2001 and 2002–2004	Mandatory	<u>Audit market concentration</u> How has the concentration of the audit market in Europe evolved after the demise of Arthur Andersen?	The audit market concentration has increased overall during the period. However, the concentration has decreased in France and Denmark after the dissolution of Arthur Andersen.	Published paper
Broye (RFC 2007)	428 French listed firms in 2005	Mandatory	<u>Audit market concentration</u> What is the level of concentration of the French audit market after the merger of two major local audit firms (Salustro and BDO) with Big 4 audit firms?	Big 4 firms are in charge of about half of the 852 possible audit mandates but earn 86% of the audit fees. The concentration is higher in the large client segment and lower in the medium-and-small client segment. By comparison, UK Big 4 firms earn 99% of the audit fees on the 350 largest clients.	Published paper (in French)

Table 1 Main empirical studies - Impact of joint audit (Cont.)

Panel B: Market concentration (Cont.)					
Authors	Sample	Mandatory/ voluntary	Research question	Main findings related to joint audit	Publication outlet
Piot (MAJ 2007)	817 listed French companies in the year 1997, and 887 listed French companies in the year 2003	Mandatory	<u>Audit market concentration</u> How has the audit market concentration evolved in a mandatory joint-audit environment between 1997 and 2003?	The French audit market is less concentrated than audit markets elsewhere in Europe, although audit market concentration did increase during this time frame in France.	Published paper
Piot (FCS 2008)	French listed firms, observed in year 1997 and year 2003	Mandatory	<u>Audit market concentration</u> Is the French audit market still competitive after the Big 6 to Big 4 mergers?	The concentration has increased over the period and concentration ratios characterise a closed oligopoly. However, Herfindahl indices suggest that the market is still price competitive in 2003.	Published paper (in French)

5. OTHER STUDIES ON JOINT AUDIT

Aside from the studies that examine the impact of joint audit on audit quality, audit costs and audit market concentration, other types of studies have been conducted in joint audit contexts. Most of these do not aim to compare joint audits to single audits, and therefore do not provide direct evidence about the benefits or drawbacks of joint versus single audits. However, they do provide interesting evidence about the specifics of joint audit. This evidence can be grouped into the following four categories: determinants of the choice to opt for joint audits in voluntary settings; determinants of the joint auditor pair choice; consequences of the joint auditor pair choice on audit fees; and, consequences of the joint auditor pair choice on audit quality. The results of the corresponding empirical studies are discussed below and summarised in Table 2 at the end of this chapter.

Determinants of the choice to opt for joint audits in voluntary settings

Considering the determinants for opting for joint audit in the Swedish voluntary joint audit context, Zerni *et al.* (2010) report that board members' equity ownership and the presence of a strong minority ownership increase the likelihood that a firm employs joint auditors. However, it should be noted that their study is based on a Swedish dataset and that Swedish law provides minority shareholders with the right to appoint a second auditor. Pursuant to the Swedish Companies Act (2005:551), a company's minority shareholders are entitled to recommend that a second auditor (co-auditor) be appointed. The co-auditor is then appointed by the *Länsstyrelsen* (County Administrative Board) if at least 10 per cent of the shareholders (or 1/3 of the shares represented at a general meeting) support the appointment.

Determinants of joint auditor pair choice

Francis *et al.* (2009) examine the determinants of joint auditor pair choice with an emphasis on the characteristics of the ownership structure for 467 French-listed companies in the year 2003. They find that companies with less concentrated ownership structures and lower rates of family ownership are more likely to appoint at least one Big 4 audit firm. This finding is consistent with the agency theory, as greater information asymmetry leads to the use of at least one Big 4 audit firm. Marmousez (2012) provides additional details on the determinants of auditor pair choice in the French context. She analyses how corporate governance mechanisms influence the decision to choose zero Big 4, one Big 4 (paired with a non-Big 4) or two Big 4 auditors. Her results regarding the reasons for choosing two Big 4 auditors are particularly interesting. She finds that smaller client companies have no incentive to hire two Big 4 auditors. For medium-sized companies, the existence of an audit committee is positively associated with the choice of two Big 4 auditors. Larger clients, for their part, were all found to select at least one Big 4

auditor, as their large size and international scope generally prompt them to choose two Big 4 audit firms.

Holm and Thinggaard (2012) examine whether agency problems may explain the choice of auditors in the context of transitioning from a mandatory to a voluntary joint audit system in Denmark. They find that joint auditor pair choices seem to be used as an agency mechanism to mitigate threats to auditor independence, as they find lower non-audit services' fees when joint audits are undertaken.

Consequences of the joint auditor pair choice and of the joint audit balance on audit fees

Audoussert-Coulier (2012) examines the effect of joint auditor pair choice on the Big 4 premium paid by French companies. Based on a sample of 254 observations for French-listed companies observed during the years 2002 and 2003, her study demonstrates that choosing two Big 4 auditors does not lead to the payment of a 'double' Big 4 premium. The magnitude of the Big 4 premium was not found to differ significantly between client companies choosing one Big 4 paired with a non-Big 4 auditor and those choosing two Big 4 auditors. This finding was controlled for the propensity of companies to choose zero, one or two Big 4 firms as their joint auditors. This indicates that when two Big 4 auditors are selected by a client company, the Big 4 premium is shared between the two Big 4 auditors. The author concludes that selecting two Big 4 audit firms is a 'sound economic choice' for the largest, globalised companies, as this corresponds to their specific needs (Audoussert-Coulier, 2012, p. 7). In the Kuwait context, however, a study by Shammari *et al.* (2008) examines audit fee determinants for 91 non-financial companies with joint auditors listed on the Kuwait Stock Exchange in 2006, and does not find evidence of a Big 4 premium. The authors find that the audit firm pair choices have no impact on audit fees in Kuwait, and that neither companies audited by two Big 4 audit firms nor those audited by one Big 4 and one local audit firm pay a fee premium.

Thinggaard and Kiertzner (2008) examine audit costs measured by total fees in the Danish setting for the year 2002 on a sample of 126 non-financial companies listed at the Copenhagen Stock Exchange. They demonstrate a negative association between the 'de facto' joint audit and audit fees. In this context, 'de facto' joint audit means a balanced audit fee allocation between both auditors. They find that audit fees tend to be lower when both auditors receive a significant share of the audit fees (i.e. each joint auditor receives at least 20 per cent), in contrast to joint audits where the non-dominant auditor receives less than 20 per cent of the fees (the thresholds of 30 and 40 per cent gave similar results). They attribute their results to the more intense competition between auditors in the large-client segment of the audit market. However, this result is driven by the client size effect and holds only for the sub-sample of large companies. Gonthier-Besacier and Schatt (2007) examine audit costs measured by scaled audit fees (i.e. audit fees divided by client company size) for a sample of 127 listed non-financial French companies for the year 2002. In contrast to the findings from the Danish setting discussed above, their results demonstrate

that balanced allocation between the auditors does not affect audit fees in France. They also show that companies audited by two Big 4 audit firms have a lower audit fee-size ratio compared with firms audited by other types of auditor pairs, concluding that this may be attributed to a more balanced share of expertise and risks between the two Big 4 audit firms.

Consequences of joint auditor pair choice on audit quality

Since the seminal work of DeAngelo (1981) and Palmrose (1986), the empirical audit literature has developed a prolific stream of research that discusses and demonstrates that Big 4 audit firms have incentives to provide higher quality audits and also charge Big 4 fee premium. Regarding audit quality in a joint audit context, the findings of Francis *et al.* (2009) show that companies audited by two Big 4 audit firms have smaller abnormal income-increasing accruals (used as a proxy for audit quality) than companies audited by one Big 4 and one non-Big 4 audit firm. The authors conclude that companies with higher agency costs, which include costs for negotiating information asymmetries, are more likely to be audited by higher-quality audit pairs (two Big 4 firms). Big 4–Big 4 pairs thus provide the highest quality audits, followed by auditor pairs of one Big 4 and one non-Big 4. They also conclude that companies with higher agency costs are more likely to be audited by those auditor pairs, and to have higher-quality earnings. Furthermore, based on a sample of 85 French companies, observed over the 2002–2008 period, Bennouri *et al.* (2012) evidence that the choice of two Big 4 audit firms is associated with a decrease in the number of actual related party transactions. Their result is obtained after controlling for the selection bias related to the choice of joint auditor pairs.

The development of analytical models can also be useful in capturing the complexity of the joint audit setting. The consequences of auditor pair choice in a joint audit regime have been modelled by Paugam and Casta (2012) with regard to impairment-testing disclosures in France, which captures financial statement transparency and hence financial statement quality. The results suggest that companies with one Big 4 and one non-Big 4 auditor provide more disclosures about their impairment tests than companies employing other types of auditor pairs. With reference to game theory, the authors argue that a Big 4–Big 4 auditor pair leads to a ‘prisoner’s dilemma’, namely because neither auditor has an incentive to take corrective action and to push for more impairment-testing disclosures, given that both Big 4 auditors share the reputational cost. On the contrary, in Big 4–non-Big 4 pairs the reputational costs would be borne mainly by the Big 4 auditors, which results in the situation where the Big 4 auditor requests more impairment-testing disclosures (Paugam and Casta, 2012).

Taken together, the findings on the impact of auditor pair choice on earnings quality point in opposite directions. Two Big 4 auditors appear to constrain earnings management and limit the number of related party transactions; however, they fail to improve impairment-testing disclosures.

Table 2 Main empirical studies - other studies on joint audit

Authors	Sample	Mandatory/voluntary	Research question	Main findings related to joint audit	Publication outlet
Audoussert-Coulier (2012)	254 listed French companies, years 2002 and 2003	Mandatory	<u>Effect of auditor choice on audit cost</u> What is the consequence of appointing two Big 4 auditors on audit pricing?	The choices of one Big 4 paired with a non-Big 4 and of the choice of two Big 4 both lead to the payment of Big 4 premiums of comparable magnitudes.	Working paper
Bennouri, Nekhili and Touron (2012)	85 listed French companies, years 2002-2008	Mandatory	<u>Effect of auditor choice on audit quality</u> Does auditors' reputation discourage related party transactions?	Companies with two Big 4 auditors have a lower number of related party transactions.	Working paper
Francis <i>et al.</i> (AJPT 2009)	467 listed French companies, year 2003	Mandatory	<u>Determinants of joint auditor pair choice and effect of auditor choice on audit quality</u> What are the determinants of joint auditor pair choice in the context of mandatory joint audit? Does having two Big 4 audit firms improve the auditees' financial statement quality as compared to other auditor pairs?	Companies with less concentrated ownership structures and lower rates of family ownership are more likely to appoint at least one Big 4 audit firm. Companies audited by two Big 4 audit firms have smaller abnormal income-increasing accruals.	Published paper
Gonthier-Besacier and Schatt (MAJ 2007)	127 listed non-financial French companies, year 2002	Mandatory	<u>Effect of auditor choice and fee balance on audit cost</u> What are the determinants of scaled audit fees (i.e. audit fees/client firm size) for French listed companies? The fee balance effect is also discussed.	The audit fee/client size ratio is lower for client companies audited by two Big 4 firms. The balanced allocation of audit fees between the joint auditors does not affect audit fees.	Published paper
Holm and Thinggaard (2012)	116 listed non-financial Danish companies, years after 2005	Voluntary	<u>Determinants of auditor pair choice</u> What are the determinants of auditor choice in the context of the transition from a mandatory to a voluntary joint audit setting?	Voluntary joint audits are associated with lower non-audit service fees and seem to mitigate threats to auditors independence.	Working paper

Table 2 Main empirical studies - other studies on joint audit (Cont.)

Authors	Sample	Mandatory/ voluntary	Research question	Main findings related to joint audit	Publication outlet
Marmousez (CCA 2012)	175 French listed companies, year 2003	Mandatory	<u>Determinants of auditor pair choice</u> What are the determinants of auditor pair choice in the French context?	Small clients have no incentive to hire two Big 4. Clients with audit committees are more likely to hire two Big 4. Larger and international clients tend to hire two Big 4.	Published paper (in French)
Shammari <i>et al.</i> (JABE 2008)	91 firms listed on the Kuwait stock exchange, year 2006	Mandatory	<u>Effect of auditor choice on audit cost</u> What are the determinants of audit fees in Kuwait?	The choice of one Big 4 or two Big 4 among joint auditors does not lead to the payment of a Big 4 premium.	Published paper
Thinggaard and Kiertzner (TJAUD 2008)	126 non-financial listed Danish companies, year 2002	Mandatory	<u>Effect of auditor choice and fee balance on audit cost</u> What are the determinants of audit fees and does the fee allocation between joint auditors have an effect on the audit fees?	'De facto' joint audits (i.e. a balanced allocation of the audit fees between joint auditors) decrease audit fees in Denmark.	Published paper
Zerni <i>et al.</i> (CAR 2010)	Sweden, 1,171 listed non-financial companies, years 2000–2006	Voluntary	<u>Reasons for opting for joint audits in a voluntary setting.</u> <i>(This is a side research question in the paper. The main research question deals with audit quality and is summarised in Table 1, Panel A)</i>	Board members' equity ownership and a strong minority ownership increase the likelihood that a firm employs joint auditors. <i>The audit quality aspect is discussed in Table 1, Panel A.</i>	Published paper

6. DISCUSSION

In this chapter, we address certain shortcomings of the current academic works: scarcity of published research; use of surrogates; cross-country comparisons; and selection bias.

Scarcity of current research

The first critical issue, from a general perspective, is the scarcity of joint audit literature as a whole. The limited evidence could be explained by:

- As discussed above, mandatory joint regimes are very limited. The non-European countries that require joint audits are either emerging markets (for example, India) or countries with unstable political conditions (for example, Congo). Hence, significant data access restrictions exist. The only European country that still has mandatory joint audits is France. Denmark abolished the joint audit regime after 75 years in 2005. However, an empirical investigation of the French experience is problematic. In France, every company that prepares consolidated financial statements is required to appoint at least two independent auditors. With that said, the French setting alone is not adequate for conducting empirical research on the impact of joint audit.
- Empirical research on voluntary joint audit regimes assumes that the number of voluntary joint audits is sufficient to work with the data. However, as illustrated by Germany or Greece, the number of joint audits is often very limited in these countries.

Given the limited prior evidence, all existing research is considered in this literature review, regardless of whether the research is published in an academic journal, is a PhD monograph or is still at the working paper stage.

The use of surrogates to operationalise audit quality and audit costs

As audit quality is not directly observable, the audit literature developed surrogates to model and measure audit quality. These proxies are criticised by those in practice. However, academics acknowledge the difficulty in capturing and measuring the complex concept of audit quality. For instance, Carcello *et al.* (1992) surveyed the differences in perceptions about audit quality attributes across the various stakeholders involved in the preparation and the users of financial statements. These attributes are unfortunately not measurable based on disclosed financial statement information. Regarding measurable surrogates for audit quality, Francis (2004) identifies two audit outcomes that can be used to test for audit quality: audited financial statements and auditors' reports.

The level of earnings management is a commonly used indicator for financial statement quality. However, this indicator has shortcomings because managing earnings is neither under the auditor's control nor directly observable. Thus, earnings management itself needs to be modelled. The models used (for example, Jones, 1991; DeFond and Park, 2001) follow the rationale that accounting accruals are composed of a 'normal' part (not subject to manipulation) and an 'abnormal' part (subject to manipulation). To link earnings quality attributes to audit characteristics, researchers test whether there are 'systematic differences in audit outcomes (earnings quality) conditional on certain audit characteristics' (Francis, 2011). Abnormal accruals are criticised due to their limited predictive accuracy and power to detect earnings management. However, they continue to be used for the identification of differences in audit quality (Francis and Wang, 2008; Francis *et al.*, 2009).

Compared to discretionary accruals, using the auditor's report to proxy for audit quality has the advantage that the auditor's report directly reflects the auditor's decision (DeFond *et al.*, 2002; DeFond and Francis, 2005; Robinson, 2008). The client's management tends to have a negative view of a going-concern-modified audit opinion (Kida, 1980; Mutchler, 1984). Hence, if auditor independence is compromised, the auditor will be more likely to concede to the wishes of client management and to abstain from reporting going-concern problems in the auditor's report (Craswell, 1999). However, none of the joint audit studies used this proxy for audit quality, namely because they are conducted in relatively small markets where modified audit opinions are rare and hence where the variance of this variable would be too low.

Regarding audit costs, audit fees are not a direct measure of audit effort. For example, in some cases auditors do not charge their clients for additional work (Schelleman and Knechel, 2010), thereby audit fees fail to accurately reflect the audit effort and cost. As audit fees are the only publicly available data in this regards, they tend to be used by researchers as a proxy for audit cost. In studies examining the real cost of audits, access to proprietary data provided by audit firms (audit files and logs of audit hours spent on client files) can provide invaluable material to researchers (Niemi, 2002). However, hours spent on an audit does not necessarily equate to audit quality.

Cross-country studies

The general problem inherent in cross-country studies is that all potential differences between countries are captured by the 'country dummy variable'. For instance, in joint audit studies, the French country dummy variable captures the impact of the joint audit and also the impact of any other differences between France and the other countries being considered. Regarding the French case, other essential differences include the ban of joint provision of audit and non-audit services and the six-year fixed term for French auditors. For that reason, the fee premium in France documented by André *et al.* (2012) and Lesage

and Ratzinger-Sakel (2012) cannot be unambiguously disentangled from the remaining specific French context. Subsequently, conclusions about Danish or French joint audit cases in cross-country studies are to be handled with caution.

Selection bias

As shown in previous research, joint auditors are not selected at random. This calls for models sophisticated enough to take into account the propensity of companies to select zero, one or two Big 4 audit firms as joint auditors according to their specific needs. For example, large client companies with international activities may have characteristics that will drive them to select two Big 4 auditors, while simultaneously impacting their earnings or the level of their audit fees, thereby creating a potential selection bias. In order to control for the propensity to choose diverse configurations of auditor pairs, and in an attempt to rule out this selection bias, several researchers have developed and applied two-stage models (Heckman, 1979) that are adapted to the specific joint auditor selection (Audoussert-Coulier, 2012; Bennouri, 2012). In addition, high-quality auditors may well select low-risk clients in order to mitigate the overall risk within their client portfolio. This, in turn, introduces a risk of reverse causality, which can influence the results in empirical models.

7. OPPORTUNITIES FOR FUTURE RESEARCH

The limitations and practical challenges of joint audit indicated throughout the report yield opportunities for future research, in particular qualitative research.

Audit quality

To address the quality aspect, companies in a voluntary joint audit regime could be examined as to the motivations behind their decisions to employ two independent auditors and the basis for the selection of joint auditor pairs. Auditors in both voluntary and mandatory joint audit regimes could also be surveyed or interviewed to obtain information about risk assessment, audit planning and work distribution in joint audits. This could then provide some indication of whether an increase in audit quality can be expected in joint audit contexts. The views of other stakeholders could also be investigated.

For deeper insight into the collaboration process between both audit teams, the following areas of future research are interesting:

- Quality of the audit process – First, the free-rider problem, mainly known from economic literature (Hardin, 1968; Olson, 1968; Oliver and Walker, 1984), applies to the joint audit context in that it can be seen as an attempt of one of the two audit firms to evade its responsibility by relying on the other audit firm's effort (Lesage *et al.*, 2012; Zerni *et al.*, 2012). Future research such as lab-experiment designs could investigate whether free-rider concerns are actually occurring in joint audit contexts. Second, the communication and information exchange between the two competing audit firms could be studied to examine whether joint audit actually results in suboptimal collaboration. Third, qualitative research could focus on how significant differences in audit opinions are resolved. Finally, qualitative research about joint audit would benefit greatly from an access to proprietary data from audit firms (for example, audit files), as this would allow researchers to conduct case studies and to analyse in detail how the audit effort is shared, how competencies are combined and how professional judgement is exercised in a joint audit setting.
- Quality controls – Another avenue for future research is to study how the joint audit system influences the structure and effectiveness of the quality controls and reviews enforced by the accounting profession and the oversight boards. One of the advantages of joint audit is that it constitutes a systematic peer-review system. Qualitative research would be useful to examine the extent to which the joint audit system successfully enhances fraud detection. In France, the Vivendi Universal scandal in the early 2000s revealed that the joint liability of joint auditors creates a strong incentive to reveal fraudulent behaviour and accounting irregularities. Whereas Arthur Andersen remained

silent about the accounting treatment of the BSkyB acquisition, the non-Big 4 auditor Salustro Reydel disclosed the accounting irregularity with the support of the financial market authorities (Piot and Schatt, 2010, p. 7).

- Quality perception – Large-scale surveys could be beneficial in order to identify the perceptions of different types of stakeholders, and lab-experiment studies could be conducted to provide additional insight into the perception of audit quality when single audits or joint audits are used, depending on the types of auditors chosen.

Audit cost

To address the cost aspect, audit firms in a voluntary joint audit regime could be surveyed to inquire about the additional effort associated with joint audits and about coordination costs and perceived risks. Such surveys could also serve to assess whether higher costs, if any, are passed on to the client, resulting in higher audit fees. Analytical modelling could also provide additional insights.

Audit market concentration

Finally, the lively debate on joint audit in Europe was primarily driven by the EC's concern about the high level of concentration in the audit market and its related systemic risk. In its Green Paper, the EC questioned whether the mandatory implementation of joint audit

...with the inclusion of at least one smaller, non-systemic audit firm could act as a catalyst for dynamising the audit market and allowing small and medium-sized firms to participate more substantially in the segment of larger audits. (EC, 2010, p. 17)

However, although there are quite a few studies on the consequences of audit market concentration on the quality of audited financial statements (for example, Boone *et al.*, 2012; Francis *et al.*, 2012), and several studies providing descriptive insights about the French audit market (Broye, 2007; Piot, 2007; Piot 2008), none empirically examined the link between joint audit, audit market concentration and the consequences of market concentration in terms of audit cost and audit quality.

8. RECOMMENDATIONS AND CONCLUSIONS

The aim of this literature review was to identify, consider and evaluate existing evidence on joint audit. The main conclusions are as follows:

- There is limited empirical support for the argument of joint audit proponents that joint audit leads to increased audit quality. The evidence which is available is contradictory. On the one hand, no link has been established between audit quality and joint audit in a mandatory joint audit setting (Holm and Thinggaard, 2011; Lesage *et al.*, 2012). On the other hand, some empirical evidence suggests that joint audit leads to higher actual and perceived audit quality in voluntary joint audit settings (Zerni *et al.*, 2012).
- There is some empirical evidence supporting the argument of joint audit opponents that joint audit leads to additional costs. Some papers conclude that audit costs are higher (Holm and Thinggaard, 2011; André *et al.*, 2012; Lesage *et al.*, 2012). In voluntary settings, the results are mixed: both higher audit fees for joint audits (Zerni *et al.*, 2012) and lower audit fees for joint audits (Ittonen and Peni, 2012) can be observed.
- There is some empirical evidence that the concentration of the audit market is lower in joint audit settings (France and Denmark) than in other countries (Ballas and Fafaliou, 2008). In France, the audit market concentration is relatively low for the medium and small-sized listed clients segment; nevertheless, Big 4 audit firms still dominate the market of large listed clients (Broye, 2007).
- The joint audit should be seen as a mechanism that is embedded in a broader institutional context and should not therefore be considered in isolation from other factors which might impact the audit market, because the impact of joint audit is difficult to isolate and broader than a simple question of audit costs or audit quality. At least for some research questions, the mixed evidence reported by this literature review indicates that various country-level characteristics are simultaneously at play. This echoes the concerns raised by the FEE:

...that audit consortia could have an impact on helping to change the concentration in the audit market, although its impact on audit quality is unclear. (FEE, 2011)

The EC supports the implicit, and unproven, assumption that enhanced audit market structure, potentially an outcome of a joint audit setting, will lead to better audit quality (Humphrey *et al.*, 2011).

This literature review shows that many consequences of joint audit are still not known in detail, partly for methodological reasons but also due to limited data access. The literature

review strongly suggests that arguments raised by the main stakeholders should not be evaluated only on joint audit efficiency. The initial concerns raised by regulators and policy makers about the potential risks in case of a failure involving one of the remaining Big 4 audit firms should be more directly addressed by researchers and policy makers. The focus here should be on the impact of joint audit on audit market concentration and on the measurement of the effect of market concentration on audit quality. In addition to the above-mentioned avenues for future research, further development and support of ambitious qualitative research programmes is needed to help policy makers meet the multi-faceted challenges faced in the effort to enhance audit quality and audit market structure in Europe and elsewhere.

Further evidence is therefore needed to support a policy position on joint audit at the European level.

ENDNOTES

- 1 To the best of the authors' knowledge, there is no case of 'double audit' regulation. This is therefore a theoretical configuration.
- 2 In China, companies issuing B-shares or H-shares (to foreign investors) on top of their regular A-shares (available to local investors only) are required to issue two distinct sets of financial statements: one under local GAAP for local investors, subject to a 'statutory audit' and one under international standards (IFRS), subject to a 'supplementary audit' (in practice usually performed by 'Internationally recognised CPA firms'). The dual audit in China consists of the audit of two distinct sets of financial statements and does not always involve the use of two auditors, as firms can decide to hire the same audit firm to audit both sets of financial statements (Chen et al., 2007).

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ABOUT SATER

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SATER's objective is to promote research into, and education of, accountancy, finance and management together with all subjects in any way related. In fulfilling its charitable objectives, it also seeks to provide public benefit by making grants for research projects which result in reliable evidence for use in the development of policy – by professional bodies, standard setters, regulators or governments.

SATER is happy to receive grant applications for research projects from within and outwith the University sector, so long as these utilise sufficiently robust research methodology and the results from the project are likely to provide public benefit.

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Further details about SATER and the ICAS research programme can be found from the SATER and ICAS websites: scottishaccountancytrust.org.uk/research.html and icas.org.uk/research.

David Spence
Chairman of SATER
December 2012

The global banking crisis brought to the fore questions surrounding the scope and quality of the external audit, market concentration and auditor independence. Although not formally proposed in the draft legislation or regulation, one of the issues currently being considered by the European Commission and European Parliament is the role of joint audit. ICAS believes that policy decisions should be based on independent evidence and therefore commissioned this literature review on joint audit to serve as a sound platform for policy making and future research.

The aim of this review is to identify, consider and evaluate the existing evidence on joint audit to inform future policy making, highlight any deficiencies in the existing literature, identify opportunities for further research and make recommendations for policy makers.

The review covers research from the major international markets and jurisdictions with experience of joint audit. Issues considered include the impact, if any, of joint audit on: audit quality, independence, audit costs and audit market concentration. The study also includes a summary of the experiences of countries who have adopted a policy of joint audit and the practical challenges of joint audit.

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