**The Influence of Social Networks on Corporate Boards:**

**A Review of the Literature**

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**Acknowledgments:** We wish to thank the Co-Editor-in-Chief of the journal *Accounting, Audit and Control*, Isabelle Martinez, and the two anonymous reviewers for their observations and feedback. We also thank the participants of the EAA 2013 and AFC 2015 congresses.

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**Abstract:** This article reviews the literature on the social networks of board directors and their influence as examined in leading finance and accounting journals. The empirical literature in finance and accounting confirms the existence and significant role of these networks in accounting, governance and performance decisions. After clarifying a number of concepts, we summarize the literature on the influence of board networks. We then suggest opportunities for research in this field based on how network effects are perceived in the fields of finance and accounting and according to methodological developments put forth in certain articles.

**Keywords:** social networks; board of directors; governance; financial reporting quality; corporate policies; performance.

**Introduction**

In the first half of the 20th century, Berle and Means (1932) show that the development of joint-stock companies and the diffusion of ownership between many shareholders creates a separation between ownership and corporate control. Decision-making power shifts from the shareholders to the managers, resulting in agency problems and costs. Each corporate stakeholder (shareholders, executives, creditors, employees, etc.) has his or her own interests, which often diverge from the interests of the other stakeholders. This can lead to executives making decisions whose outcomes (positive or negative) are borne by the shareholders (and not themselves). This means that the board of directors (“board”), which is intended to represent the shareholders, is a critical body because it is empowered to appoint or dismiss the corporation’s management. In addition, major decisions concerning the corporation’s operations are ratified by the board. Given the antagonisms between managers and shareholders, an “effective” board is a prerequisite for the strong performance and therefore survival of organizations with diffuse shareholders (Fama and Jensen 1983).

Among the factors contributing to board effectiveness, Fama and Jensen (1983) emphasize operating methods, the presence of directors who are *outside* or independent from the executives, and the directors’ characteristics. Many studies thus focus on board size, meeting frequency and board make-up (e.g. Beasley 1996, Klein 2002, and Cheng 2008). More recent research examines the association of directors’ individual characteristics such as gender and risk appetite (e.g. Adams and Ferreira 2009, Srinidhi et al. 2011, Kallunki and Pyykkö 2013) with the behavior of corporations.

The results on the association between board independence and corporate performance are probably the least convincing. Most of the literature reviews on this subject underline that relations between independence and performance are not stable over time and across space and are difficult to assess due to the endogeneity between board independence, performance, and the existence of other governance mechanisms (Hermalin and Weisbach 1998). Another difficulty resides in the way director independence is considered. Compliance with independence criteria established by law or regulation does not necessarily imply that the persons concerned are actually independent. Legal and regulatory texts governing director independence often only deal with “apparent” ties such as family relations or financial or economic connections (client-supplier, employer-employee, banker-client, etc.). These texts generally ignore certain ties that are harder to observe - which could be qualified as “social” ties - such as friendship ties, membership in the same club, political organization or federation, and the existence of points in common (place of residence, education, religion, etc.). Yet it is plausible that these ties impact interaction dynamics on a board, and therefore its decisions. The literature on networks provides an interesting angle. Its general approach is to study organizational phenomena by focusing on relations between stakeholders rather than on the stakeholders themselves (Chauvet and Chollet 2010).

The purpose of this article is to examine several dimensions - mainly epistemological, methodological and theoretical - of the high-level empirical research in the field of accounting, management control and auditing (AMCA), and to consider potential directions for developing research. A joint study of the literature in finance and AMCA seems appropriate to achieve this goal. These two fields are close on a number of issues, particularly those related to boards and more generally to governance. This research on board networks, which has appeared only recently in academic “accounting” journals, was published slightly earlier in finance journals. However, the true birth of research on social ties and networks took place in the field of management. The large volume of literature in certain fields of research has helped to clarify concepts and organize the literature (in organizational research, for example, with Borgatti and Foster 2003) in a way that does not currently exist in finance or AMCA. We will thus begin by using management research to lay the groundwork for a conceptual and theoretical approach to social networks. In a second phase, by reviewing the empirical research on board social networks currently published in major finance and AMCA journals, we will structure the research on this subject in AMCA and identify the limits and potential extensions of this line of research.

Our review of the literature covers 39 empirical articles dealing with the existence and consequences of board social ties and networks published in the highest-ranking finance and AMCA journals. The articles were selected by querying the main management science bibliographic databases for the journals chosen using keywords such as *social ties* and *social network* (identified based on the conceptual and theoretical clarifications performed beforehand).

An in-depth analysis of the selected articles shows that research on board social networks is justified by the fact that these networks effectively exist and seem to have a significant impact on manager and corporation behavior. It also allows us to underscore that the empirical research in AMCA focuses on the controlling role granted to the board and infers that the existence of directors’ social networks has solely negative consequences. One of the contributions of this summary is therefore to emphasize that the presence of these networks could have certain beneficial effects based on the conclusions of the research conducted in fields other than AMCA. From this standpoint, our summarizing work could be relevant in providing guidance to lawmakers and regulators involved in these issues. Another contribution of our literature review is to identify the limits, and more importantly interesting unexplored areas, in this line of research.

The rest of the article breaks down into three parts. First, we propose to clarify exactly what social networks - more specifically board social networks (definitions, research, theoretical points) - are. This is required to select the articles for our literature review. We also briefly present the empirical articles on which our work is based. We then propose a structured presentation of the results of these articles, distinguishing between research in the field of AMCA and research in other fields (non-AMCA), in order to identify what the latter can contribute to the former. Lastly, we discuss certain methodological points that lead us to suggest potential research opportunities.

# The social networks... of boards: from key ideas to the state of empirical research in major finance and AMCA journals

The concept of (social) network is not a new one, and though it is intuitively easy to understand, it is often poorly defined. We therefore begin our study by establishing a few relatively general definitions. To do this, we make wide use of the literature on management networks, which is relatively longstanding, has reached a critical mass[[3]](#endnote-1), and has already been the subject of reviews and summaries. We then focus on board networks, first proposing a typology and then examining the influence they may have, in theory, on corporation behavior.

This conceptual clarification is useful in itself, but it also allows us to carefully identify the articles we propose to examine in detail in this literature review. The second part of this section is thus dedicated to an overview of the selected articles.

## A few key ideas

### (Social) networks

In their listing of more than 200 references on the network paradigm in organizational research, Borgatti and Foster (2003) provide several definitions. They define a network as a set of actors or *nodes* which may be of a diverse nature (persons, teams, organizations, concepts, etc.) and are connected by a set of ties. For Borgatti and Foster (2003), it is implicit that networks are social, but we point out that a network may be qualified as social if it corresponds to a set of individuals or entities (composed of individuals) connected by regular social interactions. Few authors specify this point (Chiu et al. (2013) is an exception), but social networks must obviously be distinguished from physical networks connecting physical objects (e.g. computers). As our study is driven by the wish to better understand how the networks of boards - which consist of directors - influence the behaviors of executives and corporations, our focus is indeed on social networks[[4]](#endnote-2).

Ties between network actors can be formed in numerous ways. If we consider a network of individuals, the ties can be family, professional or friendship ties. While the concept of family and professional ties requires no explanation, we feel it is necessary to refer to the homophily principle to explain the creation of other social ties (simple acquaintance, casual friend, close friend, etc.). McPherson et al. (2001) define this principle with the formula “similarity breeds connection”, considering that similarity structures certain aspects of all ties. If we consider a network of organizations, ties may exist because organizations operate in the same industry, use the same auditor, are located in the same geographic area or, as we will see later in greater detail, have common directors.

Borgatti and Foster (2003) stress the idea, which we believe is fundamental, that a set of ties in a given category (e.g. friendship ties) defines a certain network type (e.g. friendship networks are separate from professional networks, though empirically they may be correlated). Several types of ties may exist between actors and it is important to keep in mind (we will refer to this later) that different types of ties function differently, and do not always have the same “value”.

The idea of tie value is connected to the concept of social capital. The social capital of an individual or corporation is connected to his/her/its position in the network, which can be described in terms of centrality. The more an individual or corporation occupies a central position in a network, the greater his/her/its social capital, which more generally corresponds to greater access to the information circulating over the network (Useem 1984). The concept of social capital introduced here is closely connected to the value of the ties or connections and explains how an actor’s ties or position in a network can have significant outcomes in terms of power, performance and creativity. On this subject, the work of Burt (1992 in particular) on *structural holes* is a major theoretical reference. A structural hole is the absence of a relation between two actors, which can allow a third actor to position himself or herself as a broker and derive benefits from the situation. From this angle, social capital can be further defined as the advantage created by the presence of structural holes in a network. It is an actor’s ability to “fill” a structural hole that determines the value of his or her social capital.

It thus becomes apparent that one of the key issues related to networks is information. On this subject, Granovetter’s theory on information distribution in a community - known as “the strength of weak ties” - is central. For Granovetter (1973), a network consists of strong ties with steady and frequent relations, and weak ties characterized by more numerous, looser relations with simple acquaintances. Weak ties offer the advantage or “strength” of enabling penetration of social networks other than those built on strong ties, and therefore of accessing new information.

Granovetter originated another idea that is widely used in network research: *embeddedness*. In its initial formulation, it was defined as the idea that all economic behavior is necessarily influenced by a social context (Granovetter 1985). This idea, as seen in the development of board network research in finance and AMCA journals, is used increasingly to explain the behaviors of executives and corporations. As an illustration, Davis (1991), in his study on the adoption by corporations of a takeover protection mechanism (*poison pill*), stresses the fact that too often studies seeking to explain certain corporate practices ignore the environment in which these corporations operate. He insists on the fact that these practices cannot be explained solely by economic motivations and information asymmetries, but must be analyzed taking account of the fact that companies are *embedded* in a social structure.

The work of Burt and Granovetter, not to mention others, constitutes a solid theoretical corpus that has served as the basis for the development of abundant empirical literature on social networks in management. In this literature, the research on networks formed between firms via directors, called *board interlocks[[5]](#endnote-3),*represents a major line of research that we present in the following section.

### Board (social) networks

Among social networks, we are more particularly interested in board social networks. As explained above, networks are not so easy to define and can take multiple forms, so we believe it is necessary to begin this section by describing precisely what we mean by “board networks”.

The director is the key element of any network. The board network in question is characterized and differentiated by the position of the director in the network, the type of network *nodes*, and the ties connecting them. It seems important to first determine whether the board network primarily connects individuals or firms. Naturally, the ties formed by a network are embodied by people, but we believe it is necessary to identify, for each research article, whether the object analyzed is the network created between firms (e.g. corporation A is connected to corporation B because they share a director) or the network created between individuals (e.g. director X and the CEO of corporation A are connected because they graduated from the same college).

When a network connects individuals, it is interesting to study the type of connection: are they professional ties (e.g. shared professional experience), friendship ties (e.g. members of the same club), or less clearly identified ties that are assumed because of similarities between individuals (e.g. persons from the same graduating class)?

The way the ties are formed matters because it determines the effects they may have, as we will see later. Carroll and Teo (1996) and Gibbons (2004) differentiate between *advice networks* and *friendship networks*. Advice networks consist of specialists or experts who are consulted for their expertise and skills on work-related issues. These networks often consist of interpersonal ties with members of other corporations or members who share similar views or expertise stemming from their studies (Caroll and Teo 1996). According to Gibbons (2004), this kind of network serves firstly as a tool for controlling the information flow at system level.

Friendship networks consist of connected persons, or friends, who are members of the same club or charity (Caroll and Teo 1996). The information discussed in this type of network can be more controversial, given the level of intimacy between its members.

Professional (or advice) and friendship ties are based on a personal relationship between two (or more) actors. There is a third type of tie: those we will qualify as assumed or brokered ties. In other words, there is no pre-existing direct relationship between two individuals, but they are connected by a common social purpose. For example, two graduates of the same school may not know each other but share a number of references and ideas, and can enter into contact easily through their *alma mater[[6]](#endnote-4)* (e.g. via their alumni network). The same can be true of two people sharing the same geographic, cultural or religious origin, providing it represents a part of their identity.

We point out that the different types of ties - professional, friendship, brokered - are not mutually exclusive (two former students of a same school can become friends *and* share a professional experience).

Lastly, we consider that board networks[[7]](#endnote-5)can take four forms, which we illustrate in figure 1.

Insérer la figure 1.

Most of the empirical research focuses on the first type of network. We see three reasons for this. First, these networks are widespread: the ties between companies created by “shared” directors, or BI, form a dense network that interconnects virtually all large corporations in a single social structure (Davis 1991). Second, BIs have generated controversy since the Pujo Committee[[8]](#endnote-6) at the beginning of the 20th century (Mizruchi 1996). BIs are a subject of concern mainly because it is difficult to determine whether the effects of these ties are positive or negative. Lastly, the development of a line of research on BIs in the early 1970’s is mainly due to the fact that these ties are relatively easy to identify using publicly available information.

The initial goal of this line of research was mainly to identify the reasons for which this type of tie is established. According to Mizruchi (1996), the five main reasons are collusion, co-optation, legitimacy, career advancement, and social cohesion. To a lesser degree, it was to predict similarities in organizational behavior. More recently, the information perspective has gained ground in this line of research. BIs are considered a means through which organizations reduce uncertainties and share information on acceptable and effective practices.

It is noteworthy that in his detailed presentation of BIs, Mizruchi (1996) stresses that *inside directors* and *outside directors* do not play the same role in the forming of BIs. Most directors that establish ties between corporations are outside directors (since they automatically create a tie between the corporation and the organization they come from, which is what makes them “outside” directors).

The questions raised by management research on BIs make it easy to connect the growing body of research on social networks published in finance and AMCA journals to a well-established line of research on governance. A significant portion of research on governance seeks to connect certain corporate practices (e.g. earnings management, adoption of accounting practices or takeover protection mechanisms) to certain board properties. Much like size, meeting frequency, or proportion of independent or female directors, board networks can be considered a characteristic worthy of interest.

### Board networks: profitable or harmful?

The theoretical framework of many articles on board networks is based on a tension between two opposing visions of social ties. The first vision is mainly based on agency theory (Jensen and Meckling 1976). According to this theory, a firm is a node of contracts between more or less well informed actors. Behaviors are mainly dictated by personal economic interests and the board is mainly a tool for *controlling* the executives. In this outlook, the role of the board is to monitor the actions of the executives to prevent them from making opportunistic decisions, i.e. decisions that would maximize their well-being at the expense of the shareholders. In most corporations, operational decisions are generally delegated to the corporation’s internal agents (internal auditor, management controller, general management, etc.). The board only has control over key decisions such as the appointment, dismissal or compensation of the Chairman of the Board and the top executives.

In this vision, director independence from those they are intended to control represents a key factor for good governance. A director is considered independent if he or she “does not have any ties with his or her company, group or management liable to affect his or her unbiased judgment” (Bouton 2002). If a director meets this definition, he or she should be able to perform his or her duties correctly and monitor the executives. The existence of social ties between directors or between a director and an executive jeopardizes the board’s independence and therefore its capacity to play its oversight role. In this outlook, the existence of board social networks is liable to encourage opportunistic behavior by executives and, for example, to compromise financial reporting quality, facilitate the implementation of operations that destroy value, or result in excessive compensation for executives.

A second vision, based mainly based on the literature developed in sociology and management, hinges on the idea that networks enable better distribution of information. The existence of similarities between people - which explains, as stated above, the forming of networks - promotes interaction, exchanges, and the building of trust between these people (Mills and Clark 1982; Silver 1990). For example, Uzzi (1996) shows that social ties facilitate cooperation and “voluntary, non-obligating exchange of assets and services between actors” (p. 678). Ingram and Roberts (2000) show a significant increase in hotel occupancy rates (revenue per room) when hotel managers share a social tie. This increase is not due to collusion, but rather to collaboration and the exchange of information. These facilitated exchanges can also reduce information asymmetry between the agents and the principal. According to this approach, the existence of social ties on a board should facilitate executive oversight because it generates more fluid information exchanges and less information asymmetry between directors and executives, resulting in quality financial reporting, value-creating decisions, and fairer executive compensation.

The effect of social ties therefore seems unclear. Board networks are expected to have a relatively negative influence according to the “loss of independence” view supported by agency theory, while a relatively positive influence is expected according to the “information sharing” approach widely developed in sociology. Can the two visions be reconciled? The answer is certainly not obvious, except perhaps in situations where the information propagated is generally recognized as have unwanted outcomes (mainly the dissemination of “bad” practices such as tax aggressiveness or earnings management).

The influence of board networks is also ambivalent if both roles are considered, i.e. control and advice. Agency theory almost completely ignores the advisory role, so from this standpoint it is obvious that social networks can only be viewed negatively. Adams and Ferreira (2007) enrich this analytical framework. They underline that boards have two roles: a *monitor role* and an *advisor role*. Executives face a trade-off when communicating with their board. If they reveal information, they will receive better advice, but will also make it easier for the board to monitor their actions. Since a board made up mostly of independent directors is expected to exercise stricter control, executives could be reluctant to share information with this type of board. For this reason, a board that includes socially tied directors, i.e. a *management-friendly board*, could be the best solution.

We believe that the dual role of board networks predicted by Adams and Ferreira (2007) and their ambivalent influence, from a theoretical standpoint, calls for a more detailed study of the effects of these networks on practices, especially practices in AMCA.

## Empirical study of board networks in finance and AMCA journals

Despite the importance of the issue of board network influence for regulators and for the academic community outside the field of AMCA, it has seldom been examined in AMCA. The relatively small number of existing network studies in AMCA opens up a range of research opportunities as the potential impacts of networks on various aspects of accounting, management control and auditing would seem to be numerous. They must be identified relative to the existing research in order to ensure real contributions. We therefore propose an overview of the empirical research on the existence and influence of board networks published in finance and AMCA journals. We start by presenting the procedure followed to identify the relevant articles. We then highlight a few significant characteristics of our sample.

### Identification of reference articles

Based on the clarification of basic concepts we provide in the previous section, we determined the criteria or key-words for selecting those articles that are most likely relevant for our analysis. However, before presenting the criteria we used for our bibliographic database searches, it is necessary to list the scientific journals that we believe should be reasonably included in the scope of our study.

We chose finance and AMCA journals given that the two fields are very close on a number of issues, namely those tied to boards and governance. The fact that academic journals such as the *Journal of Business Finance & Accounting* appear in both the ACC and FIN categories of the FNEGE ranking clearly illustrates this closeness.

Given that the scientific journals that define or guide future research topics are logically those with the greatest impact on the academic community, we only chose finance (FIN) and AMCA (ACC) journals that are ranked 1 or 2 in the FNEGE ranking, which is widely used by French business and management schools to assess research. This represents a total of 18 finance journals (6 rank-1 journals and 12 rank-2 journals) and 14 AMCA journals (6 rank-1 journals and 8 rank-2 journals)

In these journals, we identified articles that focus on social networks by querying - without setting date ranges and without selecting a field in the search tool - the main management science bibliographic databases, namely *Business Source Complete* and *Science Direct[[9]](#endnote-7)*, using a list of carefully selected words and phrases based on the concept clarifications presented above. These words or phrases - and their French equivalent, when relevant - are the following: *social network*, *ties*, *interlocks*, *social capital*, *social connections*, *connectedness*, *embeddedness* and *affiliated*.

We then applied a number of filters, which could indeed be considered arbitrary, but that allow us to focus on a relatively coherent body of research. In this manner, we began by eliminating articles that do not specifically examine board networks but that focus on other stakeholder networks. In particular, we did not retain articles that focus on *CEO* ties, though in some of the articles, the ties studied were between a CEO and a board member. We then excluded articles dealing with *political connections*, i.e. special ties between board members and members of parliament or the government. We also excluded articles dealing with network-related issues but not focusing on the networks themselves. For example, Sharma and Iselin (2012) examine the association between the fact that members of the audit committee serve on other boards (*audit committee multiple-directorships*) and inaccuracies in financial statements, focusing on the idea that being a member of several boards makes directors less available, and not on the idea that it makes directors “socially” connected. We also eliminated articles in which social ties are not considered to pre-exist. More specifically, several articles consider that the length of a director’s *tenure* can breed familiarity - in other words the development of social ties - between the executive and the director. In these articles, social ties are not considered to exist before the director becomes a board member. This exclusion is justified by the fact that it therefore becomes impossible to distinguish between tenure effect and network effect on board decisions. Lastly, we only retained empirical articles (analytical articles, comments and editorials were not included in our main analysis).

It is probably worth mentioning that the relatively strong constraints that we have set in the procedure for delimiting our literature review (which logically results in a number of analyzed articles that could be considered relatively small) are consistent with the fact that our objective is not to conduct a structured literature review, as described by Massaro et al. (2016), but rather a more traditional literature review, as presented by Denyer and Tanfield (2006). Our goal is not to analyze a large volume of literature as a structured literature review would allow, but rather to perform an in-depth analysis of various dimensions (epistemological, theoretical, methodological, empirical, practical) of the articles analyzed. Nor is our goal to review all the articles dealing with the fact that a board is connected. As we stressed earlier based on Mizruchi (1996), as long as independent directors sit on a board (which is now unavoidable), the board is connected. However, until now the articles dealt with the fact that these independent directors were more liable to control the executives because they were - in theory - not tied to him or her.

The selection process described earlier results in a total of 39 articles[[10]](#endnote-8): 20 from AMCA journals (9 different journals from among the 14 initially identified) and 19 finance journals (6 journals from among the 18 initially identified). The distribution per journal is shown in table 1.

Insérer le tableau 1.

Figure 2 shows the trend in social ties research over time. It highlights the fact that this line of research in general has grown considerably the past few years, and that empirical research on board networks published in finance and AMCA journals is limited and very recent, since it was rare before the end of the 2000’s. Our selection procedure allowed us to identify two AMCA articles published in the early 2000’s, though these articles do not truly use the terminology associated with networks and do not explicitly place board networks at the center of their analysis. Whereas Menon and Williams (2004) follow a line of research that is relatively well delineated in auditing with a focus on the practice of *revolving doors[[11]](#endnote-9)*, Thiery-Dubuisson (2002) stands in contrast by proposing to go beyond the theoretical frameworks that she qualifies as “asocial” in order to explain the creation of audit committees. The author refers to Granovetter (1985, 1994) to formulate - out of a total of ten hypotheses - two hypotheses on the influence of board networks.

Insérer la figure 2.

Figure 2 illustrates quite clearly that the number of academic publications on board social networks has been quickly expanding since the end of the 1990’s and that, while there are still few, the literature on this topic in finance and AMCA journals is following the same trend. This is probably due to three factors. First, empirical research in finance and AMCA has probably covered all the “macro” factors or those tied to the characteristics of the corporations to explain their behavior. Second, the development of empirical research that takes account of the social context in which corporations operate - and therefore of the individual characteristics of corporate stakeholders - was made possible by the increasingly easy access to certain data (e.g. biographical data). Lastly, researchers in finance and AMCA probably began to show an interest in discussions that had long been the preserve of sociology and the management sciences, and they recently started to work on issues of tension or uncertainty regarding the effects - positive or negative - of social ties.

### Overview of selected articles

Before providing a structured and detailed presentation of our analysis, we wish to make a few general comments on the articles selected. First, the compilation of research topics clearly shows that publications in finance and AMCA journals focus on the outcomes or effects of board networks. The variables intended to capture the social ties or networks are - in every article analyzed - independent variables.

A global study of the selected articles also allows us to highlight elements that corroborate the existence of social networks involving the board and gives an idea of their intensity or scale. More generally, the studies converge regarding the existence of strong social ties between boards and other stakeholders. The percentages may vary according to the methodology used, but overall these ties exist and are liable to exert an influence.

Second, concerning the variables used to measure the social ties or networks, it is important to emphasize that these are mainly binary variables, whereas certain characteristics of the ties (e.g. strong or weak, professional or friendship) imply different effects. In this perspective, Bruynseels and Cardinaels (2014) state that it is important to distinguish between several types of ties, and that it is not always appropriate to use aggregate measures of social ties (Hwang and Kim 2009, for example) or to only focus on professional ties (Hoitash 2011).

Obviously, all the authors do not use the same definition or approach to social networks or ties. There appears to be at least two reasons for these differences. On the one hand, the type of network the authors study is heavily dependent on the data to which they have access. On the other hand, it seems that the lack of in-depth analysis on the nature of the ties studied and/or the terminology used, often considered incidental in empirical work, may be the cause of the differences - at least the apparent ones - in the subjects of study.

Lastly, rare are those authors that, in their analysis of board networks, take account of (i.e. check for) the existence of other networks which, as we indicated in the first section, may include belonging to the same sector, geographic proximity, or use of the same audit firm (the article by Chiu et al. (2013) stands out as an exception).

# The influence of board networks: what the empirical AMCA and non-AMCA research says

The purpose of this section is to list and classify the consequences of the existence of board networks examined by the literature published in finance and AMCA journals, distinguishing between the works that fall into the field of AMCA[[12]](#endnote-10) and the others (non-AMCA, or closer to the field of finance). We propose to start with the research in AMCA, without consideration for whether the journals belong to one discipline or the other (FIN or ACC), in order to be able to identify - probably more relevantly - what the non-AMCA research - which tends to recognize a board’s dual role of advice and monitoring - can contribute to the development of board social network research in AMCA.

## Board network research in AMCA

Based on the issues they deal with, we identified 20 articles (which do not correspond to the 20 articles published in AMCA journals, as shown in table 1) which we feel can be considered to belong to the field of AMCA. Ten articles cover issues generally related to accounting, six to management control, and four to auditing.

### Accounting

#### The propagation of accounting and tax practices

We have identified five articles concerned with the propagation of accounting and tax practices via board networks. They are presented synoptically in table 2.

Insérer le tableau 2.

We wish to underline the fact that the articles listed here are relatively uniform. All the articles focus on BIs, clearly fall into the line of research on the propagation of practices via board networks, probably initiated by Davis (1991), and show that board networks play a role in the propagation of accounting and tax practices.

The articles also share the fact that they examine practices that are widely viewed as questionable, probably revealing certain assumptions of the authors with regard to the effects of networks. The fact that Kang and Tan (2008) examine in parallel the ties created by common directors with a firm that opted for the practice studied, and the ties created by common directors with an institutional investor holding an interest in the capital of a firm accused of fraud, seems to be fairly indicative of how the authors view the influence of board networks. Only Chiu et al. (2013) also consider a contagion effect for best practices in financial reporting.

#### Earnings quality

Five articles directly or indirectly examine the effects of board connections on earnings quality - actual or perceived[[13]](#endnote-11). Unlike the articles in the previous category, these articles investigate a much wider range of ties. This may perhaps partially explain why the results are more mixed. The effects of board networks do not necessarily come across as negative.

Insérer le tableau 3.

Viewed overall, the results of the research presented above all tend to point toward a globally negative outcome of board networks on auditing and financial reporting quality. These articles offer a new perspective compared to earlier studies, which seek an association between behavior/phenomenon (e.g. earnings management) and the specific characteristics of firms (e.g. governance mechanisms). Indeed, network studies seek to explain behavior by focusing on ties between firms, and therefore their organizational and institutional environment.

### Management control

Berland et al. (2016) show that publications in management control cover a wide range of topics including performance, value creation and governance. We note here that the scope of management control as an academic field may vary between countries (Löning 1995). We have chosen here to list research relative to firm performance and value, as well as governance (and to consider research focusing on compensation as outside the scope of AMCA).

#### Firm performance and value

Four articles, presented synoptically in table 4, deal with the impact of board networks on the performance (Kuhnen 2009; Larcker et al. 2013; Lai 2016) and value (Fracassi and Tate 2012) of the firm.

Insérer le tableau 4.

Interestingly, this research tends to confirm the idea that advisory and information sharing role facilitated by social ties offsets the risks created by loss of independence, which can induce ineffective favoritism. Along these same lines, Larcker et al. (2013), who use a wide range of measurements to determine a board’s *well-connectedness*, find that firms with the best-connected boards on average earn substantially higher future excess returns compared to firms with less connected boards.

However, not all the articles validate this “informative” vision of board networks. For example, Fracassi and Tate (2012) study the social ties between the directors and executives of S&P 1500 index firms. The most influential executives tend to appoint directors with whom they are connected. Following changes in the board resulting from the retirement or death of executives, the authors find that the existence of connections between directors and executives reduces the firm’s value, especially if the other governance mechanisms are weak or non-existent. Furthermore, firms with strong ties between directors and executives tend to engage more frequently in value-destruction operations. The conclusions of this article are consistent with agency theory predictions.

#### Governance mechanisms

Thiery-Dubuisson (*AAC* 2002) and Bouwman (*RFS* 2011) take an approach in which they connect the existence of governance mechanisms with board networks. Thiery-Dubuisson (2002) focuses on the determinants that govern the creation of audit committees and shows that the propagation of this mechanism is mainly due to the central position of the corporation within the network formed by the common directors.

Taking a somewhat broader approach, Bouwman (2011) studies whether network effects promote propagation of governance practices between firms or, more specifically, if the governance practices of a given firm change after the arrival of a new director. The author shows that firms not only tend to select directors from firms with similar governance practices (even if this pairing is imperfect, as factors other than governance may determine the choice of a new director), but that in addition, governance practices evolve following the arrival of a new director, suggesting a BI-related propagation effect.

### Auditing

Among the articles selected, four examine more specifically the presence of former auditors on the board (establishing a tie between a corporation and an audit firm, where the latter may perform financial auditing for the corporation) and logically cover recurring issues in the audit literature, i.e. the *revolving door* and the purchase of non-audit services. As we will see, this research produces very mixed results.

#### The revolving door

Studies by Menon and Williams (*AR* 2004) and Naiker and Sharma (*AR* 2009) clearly belong to the line of research that studies the impact of the *revolving door*. However, they focus on cases of former auditors who became, not executives (as studied by Lennox (2005), and Geiger and North (2006), for example), but directors (concerning the second study, more specifically audit committee members). Menon and Williams (2004) do not distinguish, in terms of impact, between former auditors who became executives and those who became directors. They show globally that corporations where former auditors hold positions as executives or directors feature an abnormally high level of *accruals*. Naiker and Sharma (2009) find a negative association between the presence of a former partner affiliated with a former or current audit firm on the audit committee, and the occurrence of internal control deficiencies. The authors emphasize that, “while the hiring of affiliated partners [...] create the appearance of lack of independence and may lead to a deterioration in financial reporting [...], such concerns are unlikely to prevail when AFAPs serve as audit committee members” (p. 571). Ye et al. (2011) deal with a similar issue, without specifically referring to the *revolving door*. Their results indicate that the presence of a former partner from a corporation’s current audit firm has no impact on audit quality (measured by the propensity to issue an unconditional opinion).

#### Purchasing of non-audit services

Whereas Ye et al. (*AJPT* 2011) show that the presence of former auditors on boards is associated positively and significantly with the purchase of non-audit services, Naiker et al. (*AR* 2013) conclude that there is no association between the presence of former auditors on boards and the use of this kind of service. The apparently different results of these two studies can be explained by at least two factors. First, Ye et al. (2011) only deal with alumni, whereas Naiker et al. (2013) study both affiliated and non-affiliated auditors. Second, Ye et al. (2011) do not focus on the audit committee members.

## Research on board networks in non-AMCA fields and research opportunities in AMCA

Nineteen articles identified by our methodological approach cannot be directly attached to the AMCA field as defined by Berland et al. (2016). Research in non-AMCA fields mainly focuses on two aspects of network influence: executive compensation (9 articles) and financial operations (10 articles). We will briefly review this research before exploring how it could be used to outline ideas for research in AMCA.

### Board networks and compensation policY

The first article linking board network effects and compensation policy was written by Hallock (1997). The author shows that there is an association between the presence of board networks, and executive compensation. Other articles subsequently confirm this association by focusing on various aspects of compensation policy, including executive over-compensation (Hwang and Kim 1009), option backdating (Bizjak et al. 2009; Collins et al. 2009) and pay-for-performance sensitivity (Andres et al. 2013; Devos et al. 2009).

All the previous studies tend to confirm the idea that social ties encourage executive over-compensation, regardless of form. However, some research - including research that is outside the scope of our literature review - shows that compensation is the consequence of the size of the executive’s network (Engelberg et al. 2013), especially when these networks enable higher performance (Horton et al. 2012; Chahine and Goergen 2013, 2014). In the same vein, Add et al. (2014) study the voluntary adoption of provisions requiring the reimbursement of overpaid compensation (*clawback provisions*). They find that if a compensation committee member is also a director of a corporation with a *clawback provision*, the probability of adopting such a provision increases by 15 points. This result suggests that social ties also encourage the adoption of compensation best practices. From this standpoint, the research suggests that it is not so much the board network as such that determines the type of network effects, but rather the nature of the connected persons or organizations.

The referenced works are listed and described in table 5.

Insérer le tableau 5.

### Board networks and financial operations

The research classified here deals mainly with the role of social networks in corporate financing through *private equity* operations (Stuart and Yim 2010), indebtedness conditions (Engelberg et al. 2012; Sisli-Ciamarra 2012; Chuluun et al. 2014), mergers and acquisitions (Cai and Sevilir 2012; Ishii and Xuan 2014; Schmidt 2015; Rousseau and Stroup 2015) and initial public offerings (IPO) (Chahine and Goergen 2013; Cooney et al. 2013). Table 6 presents the research topics and the main conclusions of the studies.

Insérer le tableau 6.

Overall, this research shows that financing conditions, mergers & acquisitions, and IPOs are positively influenced by the existence, intensity and type of social ties that may exist on a board or between boards. More specifically, connected boards are more likely to attract private investors, obtain advantageous indebtedness conditions (interest rates, contractual terms), be the target of a merger, or obtain better IPO terms. It is interesting to note that the “benefits” reaped by the company from board networks are not achieved at the expense of other stakeholders (private investors, bankers, co-contracting companies or underwriters) but result from a reduction in information asymmetry. Connected directors play the role of “information courier”, which seems particularly useful and important for the information asymmetry inherent in financial operations.

### contribution of this research to AMCA research

To understand how non-AMCA research can shed light on AMCA research, it is necessary to highlight the difference between the two fields with regard to the general conclusions. While non-AMCA research highlights the potential benefits arising from the existence of board networks, AMCA research emphasizes the drawbacks or costs induced by the presence of these networks. This difference is probably due to the nature of the subject of study. While AMCA research mainly focuses on the monitoring function exercised by the directors, non-AMCA is also interested in the board’s advice and decision-making roles. This finding opens up interesting opportunities for future research.

Table 7 lists the main AMCA research topics identified by Berland et al. (2016) and matches them against the two basic roles of a board: monitoring a corporation’s executives, and advising them in their strategic decisions. For each role/topic pair in AMCA, we provide a quick overview of the volume of publications by indicating in red, orange and green whether none, one or two, or three articles or more were published on the subject, respectively.

Insérer le tableau 7.

On viewing this table, our first observation is that AMCA research on board networks is effectively focused on the board’s monitoring role. There are few publications concerning its advisory role. Yet certain topics could be studied. For instance, in financial accounting, it could be relevant to study whether inter-company networks created by the board (mainly those represented in the first two diagrams in figure 1) foster the propagation of best practices, for example regarding voluntary information disclosure or investor relations management. In auditing, studying the association of these networks and the choice of an auditor or the adoption of certain audit practices could be interesting.

The second observation is that, given the multiple potential areas of research in monitoring, few works connecting management control and board network effects have been published, perhaps due to the fact that virtually no such research exists (we didn’t find any studies in progress on SSRN or Google Scholar on these topics). Yet there is no lack of interesting research topics on both the board’s advisory and monitoring roles. For example, it could make sense to consider whether board networks encourage the propagation of practices in management tools, investment control, and inter-organizational control, and whether they influence the perception of the management controller’s work. It could also be interesting to study the effect of social ties between directors and management control managers/executives on internal control quality.

# Board network points for discussion

In this section, we discuss the results and identify research opportunities, this time essentially from a methodological and epistemological viewpoint. The discussion centers on four areas: the treatment of causality effects (endogeneity), the influence of the institutional contexts and theoretical frameworks used, tie measures (binary or multidimensional variable), and epistemological issues.

## Endogeneity

As of today, the literature on board network determinants is scarce. There is little substance to help answer the question “why appoint a (socially) connected director?” Yet this is an interesting question. We can imagine opportunistic reasons for appointing a director who is “formally” independent but “socially” dependent. In this situation, the executive would be dealing with a board that would probably be less “strict” in terms of monitoring his or her compensation or strategic decisions. But we can also consider that such an appointment would be beneficial to the corporation since the board’s advisory role would probably be strengthened: the executive would be more “trusting” of this director and therefore liable to share more information with the board. Obviously, providing an empirical answer to the question of appointing socially connected directors requires dealing with the issue of endogeneity between the existence and consequences of the connection, which can be complex (are an executive and a director friends because they perform well or is it the friendship tie that enables the performance).

Some researchers develop very clever identification strategies to get around the endogeneity issue. In most cases this is done by ensuring that the social tie existed before the board member is appointed. For example, Rousseau and Stroup (2015) study the influence of interlocked directors on merger and acquisition policy. As the indicator variable for measuring the social tie, they propose a binary variable set to 1 if there are directors on the board of the acquiring entity who served on the board of the target, *except for the two years prior to the merger*. Since it is highly probable that the tie existed before the idea of the merger arose, interpreting the correlation as a causal relationship becomes plausible. Along the same lines, Engelberg et al. (2013) exclude, in some of their analyses, social ties that could be endogenous to the consequence considered. More specifically, in their study on the influence of social ties between executives and directors on executive compensation, these authors examine three types of ties: shared *alma mater* ties, shared “professional history”, and membership in the same club. While the first two types of ties existed before any compensation decisions, the same does not hold true for membership in the same club (earning a high income often facilitates access to certain clubs). To remove this bias, they exclude this type of social tie from certain regressions.

However, the issue of omitted correlated variables may remain. This is the case, for instance, when two people attended the same school. It becomes difficult to identify whether the statistical relationship observed (between a shared *alma mater* and better performance, for example) is due to a social tie (sharing the same *alma mater* fosters information exchanges and best practices) or a quality effect (the alumni of this *alma mater* may be particularly brilliant). To differentiate between these two effects, Shue (2013) developed an ingenious identification strategy. She studies network effects on corporate strategy. She uses the fact that MBA students at Harvard are assigned to study groups randomly. Membership in these groups turns out to be extremely important: the author demonstrates that social interactions are twice as strong between members of the same study group as between two successive graduating classes of MBA students. Since all the people she observes graduated from the same program, there is no quality difference, and assignment to the groups is entirely random. Her data indicates that once they become executives, members of the same study group tend to adopt corporate strategies that are more similar than those adopted by members of a different study group. The phenomena is most striking with regard to compensation policy and acquisition strategies. Additional tests show that this strategic similarity has no impact on performance. This study therefore suggests that homophily - which engenders more frequent interactions - impacts the strategies implemented by corporations, but not necessarily their performance.

The issue of endogeneity is all the more essential in that, to a certain degree, it is inevitable. It is indeed possible to assume that two directors, or a director and an executive (in particular a CEO or CFO) will become socially connected simply through the passing of time. After several years of professional interactions, won’t two people eventually develop affinities? In fact, this point is explicitly recognized in certain governance laws. For instance, the French “Code of corporate governance of listed companies” put forward by AFEP and MEDEF in June 2013 states that a director who satisfies the independence criteria will no longer be considered independent after 12 years. This means that AFEP and MEDEF consider that after 12 years, the professional and social ties developed between the director and the corporation’s management diminish the director’s ability to act independently.

## Institutional context and theoretical reference framework

Board networks have mainly been studied in the United States. Maati (2008) points out that directors in Europe, much as in the United States, belong to a “small world” in the sense of Watts (1999): the directors of the largest European corporations are certainly relatively numerous, but they can come into account with each other relatively easily. However, beyond this similarity with the United States, Guieu and Meschi (2008) state that the nature and size of the networks vary by country. For example, director networks are particularly developed in France and Germany, whereas BIs are relatively rare in the United Kingdom. However, the authors underline that in the United Kingdom, business relations can be woven through other spaces or channels, such as clubs, or similar positions of nobility. This diversity in types of networks and in the contexts into which they fit tends to qualify the two strong conclusions of the literature review, namely that networks (1) diminish the controlling power of directors over executives and (2) promote exchanges and information flows.

Thus, using a sample of Chinese corporations, Guan et al. (2016) analyze whether the existence of ties between auditors and audited entities fosters earnings management. They show that the existence of connections (through common studies) between auditors and their clients has a negative impact on auditor independence. With another sample of Chinese corporations, He et al. (2014) find similar results that are consistent with the analytical framework of Adams and Ferreira (2009). However, Kwon et al. (2012) reach different conclusions with a sample of South Korean firms. In this country, the authors show that social connections between executives and auditors are associated with higher audit fees (with no increase in the number of audit hours), but also that audit quality (measured by the level of earnings management) improves when the social ties between management and the auditors is strong, implying that the existence of a network can be associated with positive impacts on executive control.

This result calls forth a somewhat broader view of network effects. Agency theory (Jensen and Meckling 1976) naturally sheds light on the negative effects of networks on director independence and their ability to effectively control executives. However, an alternative scenario could be considered: that network members seek to protect the reputation, and therefore the value, of their network. From this viewpoint, opportunistic behavior is limited by the social control that network members exercise on each other. In this respect, the notion of social group (*Stand* in German) developed by Weber (1971) is interesting. A social group brings together individuals with the same social prestige, the same “social honor”. For Weber, status is “a quality of social honor or lack of it, and is in the main conditioned as well as expressed through a specific style of life” (Weber 2003, p. 123). This status depends on the level of prestige associated with the occupation and/or type of education and/or birth. Status groups are actual groups that can be more or less closed (castes in India, “Blacks and Whites” in the United States in Weber’s era, etc.), may be by fact or by law, and may imply certain behavioral rules (such as marriage rules). To a certain extent, belonging to a social group promotes the expression of social ties and the observance of these behavioral rules.

Whereas agency theory makes the implicit assumption that members of a social group are prepared to be opportunistic, a Weberian analysis suggests that social group members may interact to maintain their reputation. Some authors stress the importance of expanding the vision proposed by agency theory. Afuah (2013), for example, highlights the fact that networks can develop reputation effects and that the larger the network (in number of participants), the stronger the effect. This supports the idea that all networks should not be considered identical. This idea can be found with Charreaux (2003), who states that the nature of network effects (beneficial or detrimental) is contingent on the type of network and the reason it was created. In the case of France, it could be interesting to study the effects of alumni networks from the “Grandes Ecoles”. These networks clearly foster exchanges between their members (with potentially negative effects on the ability of their members to self-control themselves). They also have the mission of protecting the reputation of their *alma mater*. Given the economic importance of these networks, it is possible that they generate social self-control, which in the end is beneficial for the corporation.

Furthermore, depending on the context, the idea that claims that networks promote exchanges and information flows may also be qualified. Taking a cognitive or strategic view of boards, “the role of directors takes on other dimensions [than executive control], in particular that of helping an executive build his or her vision - by confronting it with the mental models of the directors - or identify or build growth opportunities” (Charreaux 2002, p. 49). A large number of weak links on a board promotes cognitive diversity through non-redundant information exchanges, deviant interpretations and strategic proposals, and innovative decisions. The generally large size of boards (Guieu and Meschi 2008) is consistent with this quest for diversity. However, this cognitive dimension hinges on the weak nature of the ties. The existence of excessively strong ties between directors could be a factor of cognitive rigidity. Nohara (1999) and Yoshimori (1998) argue that the ongoing economic crisis in Japan could be explained, at least in part, by a degree of rigidity and lesser adaptability tied to the existence of strong networks that are typical of Japanese *relational* capitalism (Albert 1991). Along these same lines, Florida et al. (2002) show that the least innovative regions in the United States are those where social ties are the strongest. Del Vecchio (2010) analyzes the effect of board network openness on the adoption of corporate governance practices. She finds that corporations with boards consisting of a closed and densely interconnected network are less likely to adopt “virtuous” corporate governance practices than those with open boards whose members are connected by weak ties. Globally, these works support the idea developed by Charreaux (2003) that the effects of networks are contingent on the reasons for which they were created.

## Measuring ties

A reading of the articles that fall within the scope of our literature review reveals the lack of conceptual and empirical research on the very nature of the empirically studied networks. Despite the diversity of terms and theoretical frameworks, measuring social ties is largely based on binary variables set to 1 if a social tie is observed, and otherwise to 0. The internal validity of this measurement is debatable. In effect, the existence of a *BI* can be interpreted as either a measurement of a social tie or a measurement of a director’s *busyness* (see Sharma 2011, for example). Taking the nature and strength of social ties into account more broadly can only enrich the understanding of board network effects.

The research studied highlights a typology of social ties of which two dimensions are studied: the destination of the tie (internal or external) and its strength (strong or weak). Concerning the destination of the tie, we can distinguish between two types of ties: intra-corporation ties formed between a director and another person inside the corporation (in particular an executive), and inter-corporation ties formed by a director with another person outside the corporation, or by a director serving on the boards of two or more corporations. The second dimension concerns the strength of the tie. Granovetter’s theory (1973) posits that weak ties are particularly beneficial because they offer an actor access to new information, whereas strong ties generally expose an actor to redundant information. However, this depends on the type of shared knowledge. Strong ties play a particularly important role when the knowledge transferred across the social network is tacit and complex (Hansen 1999). This usefulness of ties - both strong and weak - implies that the nature of the ties matters in determining the value of a network (Afuah 2013).

Table 8 presents an analysis of the type of tie (intra- or inter-corporation) and the strength of the tie considered by its nature (professional, friendship or *alma mater*). An examination of this table reveals at least two potential areas of research. First, intra-corporation ties seem to be much less studied than inter-corporation ties. This is probably due to the strong focus on BIs in the literature. Yet it is possible that a past experience (e.g. in an investment bank) common to a manager and directors promotes, for example, mergers and acquisitions or a refocusing strategy. Furthermore, friendship ties (which are generally weak) are seldom studied. This is probably due to the difficulty in measuring these ties (clubs and associations rarely make the list of their members public). Nonetheless, their role is probably significant given the efforts made by some to become members of these clubs or to join these associations.

Insérer le tableau 8.

In reference to figure 1, the research published in AMCA mainly focuses on the first type of network. Only the audit research truly focuses on the second type of network. The other ties (inter-corporation and type 4, i.e. intra-corporation) are rarely dealt with in the published research.

In their analysis of European boards, Guieu and Meschi (2008) identify a relative diversity in the types of networks and the ties established therein. They distinguish between four types of networks: circular and closed (small networks with strongly connected actors), centric and open (e.g. industry-finance integration in Germany), polycentric (e.g. networks spanning several countries), and meta-networks (each network is a weakly connected assembly of several sub-networks built around a main network). Each of these network types is liable to develop specific outcomes in terms of executive monitoring or information exchanges (cognitive dimension).

The diversity of the networks and their potential effects are an incitement to take fuller advantage of the research in management and sociology to measure networks. In this respect, two empirical measures come across as particularly relevant, mostly because they take the structure of the analyzed networks into consideration. The first is the centrality or *closeness* measure, which assesses the executive’s or director’s position in the network. With this measure, researchers seek to determine how easy it is for a person to communicate with other network members, either directly or via a broker network. The second measure is based on the work of Burt (1992, 2005) on *structural holes* and the concept of network constraint, which depends on its structure. In *constraining* networks (overly small, dense networks, i.e. formed by people who are all strongly interconnected, and/or hierarchic networks), by definition, there can be no structural holes, and therefore no possibility for a third party to act as a *broker* between two isolated people or sub-groups and to propagate or, on the contrary, to block information between two sub-groups. In other words, the more the network is constrained - which is quantifiable using the dyadic constraint measure proposed by Burt (1992) - the weaker the *brokerage* position. In the final analysis, this measure quantifies the degree to which a member can allow other network members to benefit from his or her own networks. Some recent articles (e.g. Horton et al. 2012; Andres et al. 2013) tend to use this finer type of social network measure. The development of these approaches is data-intensive. They require a full set of data on every member of the aspect studied (e.g. all directors), and on the relations between members, in order to measure centrality and the structural holes. Creating this kind of database is costly, thus hindering the development of research on networks.

## Epistemology

Incidentally, this work also represents an opportunity to think about the dynamic of knowledge creation. It is remarkable to see that many ideas contained in articles recently published in American and British finance and AMCA journals had already been explored in works published in French at the end of the 1990’s, in particular spurred by the works of Charreaux (2003, 2005, 2011).

Pigé (1998) studies executive entrenchment. His model puts forth that executive entrenchment depends on the entrenchment level of relational networks - both internal and external - and the efforts made by the executive (past performance of corporation). The estimate of the model parameters shows that belonging to an external relational network is not an entrenchment factor. However, the absence of an external network and of certain college degrees are indirect entrenchment factors for an executive (these executives tend to develop entrenchment strategies because they probably have fewer job opportunities).

Froehlicher (1999) studies the inter-corporation cooperation process. In the article, the author examines the ties between executives who choose to enter into a cooperation agreement. An empirical study conducted on 94 executives identifies the determinants of their relational behavior and highlights the relational spaces in which they deploy it. In particular, four executive groups (*archipelagos*) are observed.

Pichard-Stamford (2000) explores the reasons for which executives seek a highly centralized board. He finds that information circulates across a network of inter-board connections that tend to stabilize the corporation’s organizational field and facilitate the justification of the corporation’s decisions. These inter-board relations thereby “legitimize” the executive by furthering his or her entrenchment with no negative outcomes on corporation performance. Based on a sample of 189 listed French firms over the 1988-1993 period, the author finds that executives use board ties to amass new director mandates and thus access information pools that allow them to specialize in the firm’s management and strengthen their specific capital. This behavior seems less pronounced in family-run businesses and corporations controlled by the executive.

It is interesting to consider why these initial works were not quoted more often, especially since French researchers had an influence on the analysis of social capital (e.g. Bourdieu), and France represents a terrain of choice for analyzing networks, given the “Grandes Ecoles” system and the importance of major government institutions - two networks that are relatively easy to observe. The low visibility of French-language academic research in an English-language environment, and the small sample size (compared to the standards in English-speaking countries), are probably factors.

**Conclusion**

The literature sees boards as central to “good” governance and, *in fine*, to the performance of corporations (Fama and Jensen 1981). This role is definitely influenced by board social networks to the extent that, as observed by Larcker et al. (2013), “social and economic networks are a central feature of virtually all economic activities” (p.225). The ties between individuals in these networks are the channels by which information is communicated, resources are exchanged, new relationships are formed, and existing relationships are leveraged. But a director’s social ties are also liable to jeopardize their independence and therefore the board’s ability to play a monitoring role. From a theoretical standpoint, social networks involving one or more board members have an impact on the board’s ability to monitor and influence a corporation’s strategic decisions (Adams and Ferreira 2009).

This work has highlighted various aspects of the role of these networks in the field of AMCA (financial reporting quality, audit and governance practices) and non-AMCA (executive compensation and financial operations). The AMCA articles analyzed suggest that a board that is socially connected promotes opportunistic behavior on the part of the directors (because associated, for example, with a stronger tendency to manage earnings). The non-AMCA articles also support the idea that connected directors have less ability to control or monitor executives, while emphasizing that networks also promote exchanges and access to information, which can be beneficial to the corporation (e.g. for mergers and acquisitions), or detrimental (propagation of bad practices, e.g. option backdating). Overall, the conclusions of the empirical research are slightly more ambivalent than the works of Adams and Ferreira (2009) may have suggested, and open up interesting research opportunities in AMCA.

Several factors may explain this apparent diversity of results. First, there is a research design issue relative to the identification strategy and direction of causality used (does performance create the network, or is it the network that generates performance?) Second, given that network effects are not uniform or univocal, the institutional contexts in which networks emerge and develop merit an examination (taking sample nationality into account). It appears that the studies conducted in non-American environments - there are currently few - tend to qualify the results obtained until now. Lastly, more work is needed on network effect measures in order to better understand the existence of the networks, and more importantly the subtlety of their effects (weak or strong ties, etc.). All these factors should be considered in future research.

This article can also serve as a source of ideas for law-makers and regulators working on the issue of limiting board networks. Given the diversity of network effects that we have highlighted, it would probably be reasonable to not regulate - too quickly or too strictly - the social ties of directors.

This literature review has several limitations. First, we limited ourselves to articles published in rank 1 and 2 journals according to the FNEGE ranking. We also applied a number of filters that we described in the presentation of the selection procedure followed. This implies a relative homogeneity in the methodology and epistemological positioning of the articles studied. Obviously, these methodological biases entail drawbacks in terms of the size of the body of research and the lessons that can be learned from this study. Given the institutional processes involved in rankings (Ballas et al. 2003; Özbilgin, 2009) and their impacts on researcher activity (Mingers and Willmott 2013), journal rankings generate selection biases. In this regard, this literature review focuses on the board networks debate by taking a *mainstream* approach to AMCA and finance research, i.e. a broadly quantitative approach, suggesting research opportunities in the analysis of the qualitative or “critical” literature on these network effects.

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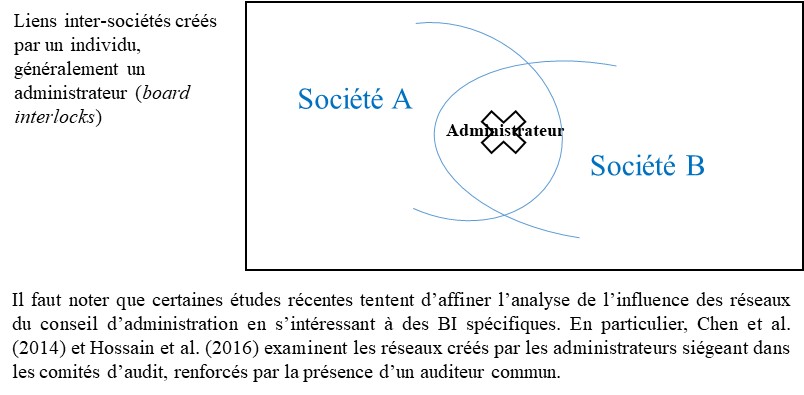
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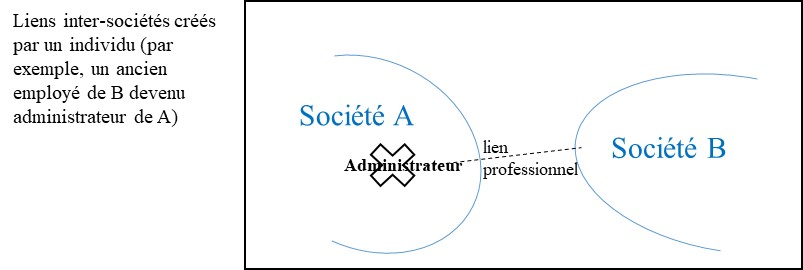
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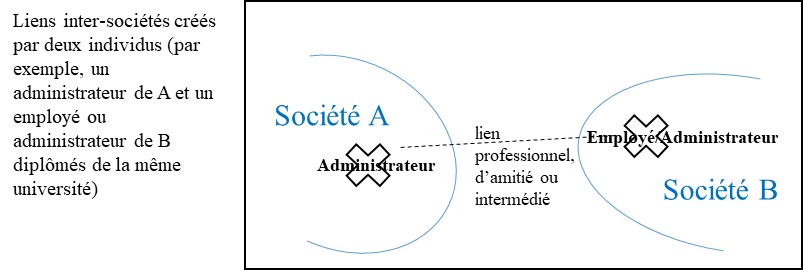
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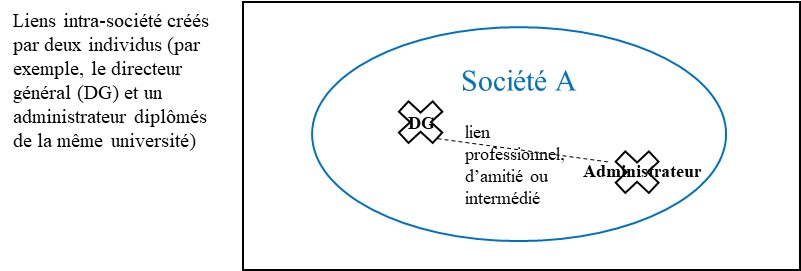
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**Figure 1 - Illustration of several types of board networks**

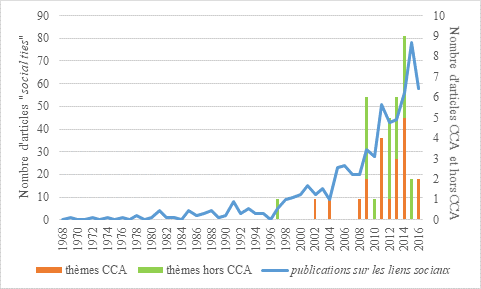








**Figure 2 - Global count of publications on social ties and articles on board social networks published in finance and AMCA journals**



**Table 1 - Count of articles on board social networks by journal**

|  |  |  |  |
| --- | --- | --- | --- |
| **Journal (acronym, rank)** | **Number of articles on**  **board social networks** | **AMCA topics** | **Non-AMCA topics** |
| *The Accounting Review* (*AR*, 1) | 8 | 8 | 0 |
| *Auditing: A Journal of Practice & Theory* (*AJPT*, 2) | 3 | 3 | 0 |
| *Journal of Business Finance & Accounting* (*JBFA*, 2) | 3 | 1 | 2 |
| *Accounting, Audit and Control* (*AAC*, 2) | 1 | 1 | 0 |
| *Contemporary Accounting Research* (*CAR*, 1) | 1 | 0 | 1 |
| *Journal of Accounting and Economics* (*JAE*, 1) | 1 | 1 | 0 |
| *Review of Accounting Studies* (*RAS*, 1) | 1 | 1 | 0 |
| *Accounting Horizons* (*AH*, 2) | 1 | 1 | 0 |
| *Journal of Accounting and Public Policy* (*JAPP*, 2) | 1 | 0 | 1 |
| **AMCA journals subtotal** | **20** | **16** | **4** |
| *Journal of Financial Economics* (*JFE*, 1) | 6 | 0 | 6 |
| *Financial Management* (*FM*, 2) | 4 | 1 | 3 |
| *Journal of Corporate Finance* (*JCF*, 2) | 3 | 0 | 3 |
| *Journal of Finance* (*JoF*, 1) | 2 | 2 | 0 |
| *Journal of Financial and Quantitative Analysis* (*JFQA*, 1) | 2 | 0 | 2 |
| *Review of Financial Studies* (*RFS*, 1) | 2 | 1 | 1 |
| **Finance journals subtotal** | **19** | **4** | **15** |
| **Total** | **39** | **20** | **19** |

**Table 2: Articles on accounting and tax practice propagation**

|  |  |  |  |
| --- | --- | --- | --- |
| **Article** | **Practice studied** | **Network measure** | **Network influence** |
| **Kang and Tan (*JBFA* 2008)** | Voluntary expensing of stock option grants (option allowed by SFAS 123) | Ties created by interlocked directors (inside or outside), with a firm that opted for expensing of stock options or with an institutional investor with an interest in a firm accused of fraud. | Yes, if the ties are created by inside directors (executives). |
| **Brown (*AR* 2011)** | Aggressive tax reporting (corporate-owned life insurance shelter) | Board ties (BI) between firms | Yes. Compared to the control sample, the proportion of firms considered tax-aggressive tied to other firms of the same type is significantly higher (48.78 vs 17.07%). |
| **Chiu et al. (*AR* 2013)** | Earnings management | Links created by *interlocked directors*, in particular with a “contagious” firm during the contagious period | Yes. Contagion is stronger (a) when the interlocked director has a leadership role or a position granting him or her a special role in accounting issues in the exposed firm and (b) when the interlocked director is the contagious firm's CEO or Chairman of the Board. |
| **Brown and Drake (*AR* 2014)** | Tax avoidance strategies | Board ties (BI) between firms | Yes, especially if the ties are with similar firms, established by executives, and strengthened by a shared auditor. |
| **Cai et al. (*RAS* 2014)** | Information disclosure practice (decision to stop publishing quarterly revenue forecasts) | Board ties (BI) between firms, with a firm that stopped providing quarterly revenue forecasts during the previous two years | More than 25% of the companies (52/191) that stopped providing quarterly revenue forecasts are tied by shared directors to companies that had previously stopped providing this type of forecast. |

**Table 3: Articles on earnings quality**

|  |  |  |  |
| --- | --- | --- | --- |
| **Article** | **Earnings quality measure** | **Network measure** | **Network influence** |
| **Krishnan et al. (*AJPT* 2011)** | Earnings management (measured by binary variables set to 1 if forecast error or earnings level or variation are nil are very low) | Social ties (non-family, informal, created by a job, training or other shared activities) between the CEO and/or CFO and the board | Yes. |
| **Bruynseels and Cardinaels (*AR* 2014)** | Oversight quality of audit processes and reporting quality (measured by purchase of audit services and earnings management) | Social ties between executive and “independent” directors of audit committee | Yes, these ties are liable to diminish the quality of audit committee oversight. This negative impact is especially evident in the case of friendship ties. |
| **Erkens et al. (*AR* 2014)** | Conservatism (measured using Basu’s model (1997), plus fixed effects (Ball et al. 2013)) | Ties between non-financial companies and commercial banks created by the presence of a lender’s representative on the board of the borrower | Yes, companies with an “affiliated banker” on their board have lower conservative accounting. |
| **Chen et al. (*AJPT* 2014)** | *Perception* of financial information quality | Networks created by directors sitting on audit committees, strengthened by the presence of a shared auditor | Networks tend to positively influence the perception of earnings quality. |
| **Hossain et al. (*AJPT* 2016)** | Audit quality (measured by the probability of issuing a modified audit opinion for the first time and the absolute value of discretionary *accruals* of the client firm) | Networks created by directors sitting on audit committees, strengthened because they share the same audit partner. The existence of these networks implies fee dependency. | These networks have a negative impact on audit quality. |

**Table 4: Articles on firm performance and value**

|  |  |  |  |
| --- | --- | --- | --- |
| **Article** | **Practice studied** | **Network measure** | **Network influence** |
| **Kuhnen (*JoF* 2009)** | Fund performance | Number of ties between two people, standardized by the number of total ties (in order to measure tie strength). The ties considered here are the funds managed jointly by the two people. | The fund directors and advisory firms hire each other based on the intensity of their past interactions.  The results do not provide evidence that stronger board-advisor ties correspond to better or worse outcomes for fund shareholders. This suggests that the two effects of social networks - improved monitoring and increased potential for collusion - balance out. |
| **Fracassi and Tate (*JoF* 2012)** | Selection of directors and future firm performance | Social ties between executives and directors created by working or having worked for the same firm, graduating from the same university, or belonging to the same associations | The most influential executives tend to appoint directors with whom they are connected.  The existence of connections between directors and executives reduces the value of the firm, especially if other governance mechanisms are weak or non-existent. Furthermore, firms with strong ties between directors and executives tend to engage more frequently in value-destruction operations. |
| **Larcker et al. (*JAE* 2013)** | Firm’s future performance | Board networks consisting of directors serving on several boards  Four “basic” aspects of *well-connectedness*, central to the literature on social networks (degree centrality, closeness centrality, betweenness centrality and centrality) and a composite score for each board | Firms with the best-connected boards earn substantially higher future excess returns on average compared to firms with less connected boards. |
| **Lai (*FM* 2016)** | Fund performance | Directors sitting on the boards of several funds of a same family - creating a network between these funds | The results suggest that directors serving on the boards of several funds of a same family - creating a fund network - do not practice favoritism by “transferring” performance from one fund to another, but they do promote distribution of information between funds. |

**Table 5: Articles on compensation policy**

|  |  |  |  |
| --- | --- | --- | --- |
| **Article** | **Practice studied** | **Network measure** | **Network influence** |
| **Hallock (*JFQA* 1997)** | Executive compensation | *Interlocked directors* | Executives of companies with interlocked directors receive abnormally high compensation. This over-compensation tends to decrease when the directors come from interlocked industries and is less significant in the 1990’s than in the 1970’s. |
| **Bizjak et al. (*RFS* 2009)** | Option backdating | Shared directors | Of the companies studied, 80% have at least one connection with another company via one of their directors.  The probability that a firm backdates its stock options increases by one third if there are BIs. |
| Binary variable (set to 1 if two firms have a shared director) and continuous variable (number of shared directors relative to all possible pairs) |
|  |
| **Collins et al. (*CAR* 2009)** | Option backdating | Ties between firms formed by *interlocking boards*, considered one characteristic of the board (among others) | In the sample of firm-years for which at least one backdated stock option was awarded, the average of the variable capturing the ties between the firms via the boards is significantly greater than that obtained in the control sample (0.361 vs 0.339). |
| Binary variable (equal to 1 if the firm has at least one director sitting on the board of another firm liable to have practiced backdating that same year). |
|  |
| **Devos et al. (*FM* 2009)** | Executive pay-for-performance and turnover-performance sensitivity | Interlocked directors  Binary variable (set to 1 if a non-independent director (independent mgr.) of the board is also an independent director (non-independent mgr.) on another board). | Executive pay-for-performance sensitivity is lower if “dependent” directors sit on the board. The probability of *CEO turnover* when performance is poor is also lower. |
| **Hwang and Kim (*JFE* 2009)** | Effectiveness of executive oversight by directors | Characteristics which, if common to the executive and the director, may foster the development of social ties (by virtue of homophily principle):   1. *alma mater* (similar age); 2. experience in armed forces; 3. geographic origin; 4. training or professional experience in a given sector; 5. tie with a shared third party.   Binary variable (set to 1 if the board is “socially dependent” because most of the directors are “socially dependent”, i.e. if they have *at least* two points in common with the executive) | While 87% of boards are *conventionally* independent, only 62% are conventionally *and* socially independent.  Corporations whose boards are conventionally and socially independent award a significantly lower level of compensation, exhibit stronger pay-performance sensitivity, and exhibit stronger turnover-performance sensitivity than firms whose boards are only conventionally independent. |
| **Horton et al. (*JBFA* 2012)** | Firm compensation and performance | Two measures from the literature on social networks (centrality and *brokerage*) | The best-connected executives and directors are also the best paid. Firms with the best-connected executives and directors have a future performance that is higher than other firms (in terms of ROA, MTB and dividend yield). These results suggest that executives are paid for their network and that the network therefore benefits both individuals (executives or directors) and firms. |
| **Andres et al. (*JBFA* 2013)** | Executive compensation | Four measures from the literature on social networks (two centrality measures and two network density measures) | The executives of the largest corporations are the best connected. There is relative stability of network effects over time. The performance of corporations with the most connected boards is lower than that of other corporations. Executive compensation is higher. |
| **Addy et al. (*JAPP* 2014)** | Voluntary adoption of a *clawback provision* (provision requiring reimbursement by the executive of overpaid compensation) | Binary variable (set to 1 if a member of the compensation committee is also a director in a company with a *clawback provision*) | 68% of companies that voluntarily adopted a *clawback provision* have an interlocked director. The presence of such a director increases the probability of a *clawback provision* by 15 points. |
| **Chahine and Goergen (*JCF* 2014)** | Executive pay-performance sensitivity and initial public offering (IPO) performance | Study of four social ties (nationality, education, common employer and club membership) and family ties.  Percentage of members in top management teams with social or family ties. | The most socially connected executives tend to more frequently adopt practices implementing higher pay-performance sensitivity. |

**Table 6: Articles on financial operations**

|  |  |  |  |
| --- | --- | --- | --- |
| **Article** | **Practice studied** | **Network measure** | **Network influence** |
| **Stuart and Yim (*JFE* 2010)** | Some strategic practices (in particular takeovers by *private equity* (PE) funds | BIsin corporations that were targeted for takeover by PE funds, measured by a binary variable set to 1 if the company has at least one director that served on the board of a company already taken over by a PE fund. | On average, in 25% of cases, companies targeted for takeover by a PE fund have at least one director serving on the board of a company that was already targeted by a PE fund, compared to only 15% in the case of non-targeted companies. |
| **Cai and Sevilir (*JFE* 2012)** | Mergers & acquisitions | The social tie is measured by the existence of common directors, using two binary variables:   1. set to 1 if the targeted and acquiring corporations share at least one director on the date the operation is announced (*first-degree connection*) and 2. also set to 1 if the directors of the two companies (targeted and acquiring) both serve on the board of a third company (*second-degree connection*) | Approximately 10% of mergers and acquisitions occur in situations where there are first-degree or second-degree connections (20% in value). |
| **Engelberg et al. (*JFE* 2012)** | Loan operations | Study of two social tie creation mechanisms (before loan operation):   1. the fact of having gone to the same school at the same time (*alma mater*) 2. the fact of having worked in the past for the same corporation (common employer).   The social tie is measured by a binary variable (equal to 1 if directors or executives of borrower and directors or executives of lender have at least one common point). | On average, for each syndicated loan, the directors or executives of the borrower have 0.26 connections tied to education and 1.28 connections tied to past professional experience. |
| **Sisli-Ciamarra (*FM* 2012)** | Financing activities (amount of debt issued and collateral pledged to bankers) | Binary variable (set to 1 if the corporation’s board has at least one director who is an employee of a commercial bank) | 25% of boards have at least one banker, between 9% and 12% of boards have at least one affiliated banker |
| **Chahine and Goergen (*JCF* 2013)** | IPO performance at time of IPO and post-IPO | A measure derived from Atkin’s theory (1974) | 49.6% (mgmt. 5%) of top management members have social (family) ties with directors. |
| **Cooney et al. (*JCF* 2013)** | Process for choosing *underwriter* | Binary variable (set to 1 if two people share (1) a common professional experience, (2) a degree from the same academic institution over the same two-year period) | On average, the existence of a social tie between the corporation’s board and an underwriter increases the probability that the underwriter will manage the IPO by 42%. |
| **Chuluun et al. (*FM* 2014)** | Interest rates of financing operations | Three measures from social network analysis (*Degree*, *Eigenvector*, and *Betweenness*) | 78% of firms are interconnected via their board. On average, each firm is connected with 3.1 other firms. The more connected the firm, the more it obtains advantageous borrowing terms. |
| **Ishii and Xuan (*JFE* 2014)** | Mergers & acquisitions | Social ties between directors. Partitioned sample (below or above median): mergers and acquisitions for which directors are socially highly connected vs. those in which they are socially weakly connected.  Two directors are considered connected if they share at least one common point (college, or professional experience in same company). | On average, for each operation, 11% of directors of target or acquiring firm are socially connected. |
| **Rousseau and Stroup (*JFQA* 2015)** | Mergers & acquisitions | Common directors or shared “histories”. Binary variable (set to 1 if there are directors considered to be *historical interlocks*, i.e. directors who served on the board of the target (but not during the two years preceding the merger) | 77.4% of directors served on more than one board during the period studied (1996-2006), whereas 81% of directors only serve on one board at a time. |
| **Schmidt (*JFE* 2015)** | Prevalence of *monitoring* or *advice* role in a merger/acquisition | Social ties between the executive of the acquiring firm and the directors of the target firm, assumed if (a) they attended the same university at the same time, (b) if they are members of the same club, fraternity, have a similar career path or are active in the same charity.  Binary variable (set to 1 if the level of connection between the executive and the directors is higher than expected, evaluated using a model proposed by the authors) | On average, 24.5% of executives are connected to the outside directors of the target firms. |

**Table 7: Current state of published AMCA research on board roles, and ideas for research**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Viewpoint** | | **Research ideas** |
|  |  | **Management control** | **Advice** |
| **Financial accounting** | |  |  |  |
| Accounting policies/practices | |  |  | Do board networks encourage the dissemination of *best* practices in voluntary information disclosure? In financial reporting quality? In communication with the analysts? In investor relations? |
| Accounting standardization | | N/A | |
| Accounting information disclosure and financial markets | |  |  |
| Accounting, training and educational professions | | N/A | |
| Others aspects of accounting information disclosure | | N/A | |
| **Management control** | |  |  |  |
| Budget | |  |  | Do board networks encourage the dissemination of practices in management tools? In investment control? Do they promote inter-organizational control? Do they influence the perception of the management controller’s work. Inversely, do strong networks between directors and management control managers/executives imply internal control weaknesses? |
| Conceptual framework | | N/A | |
| Behavior | |  |  |
| Management accounting | |  |  |
| Control and networks (mainly client-supplier) | |  |  |
| Operational control | |  |  |
| Organizational control | |  |  |
| Management controller | |  |  |
| Investment | |  |  |
| Methodology | | N/A | |
| Performance  Dashboards | |  |  |
|  |  |
| **Auditing** |  |  |  |  |
| Audit service production | |  |  |  |
| Institutions, audit and company | | N/A | |
| Audit and governance | |  |  |
| Audit quality  Audit request/Choice of auditor | |  |  |

**Table 8: Analysis of ties studied in selected articles**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field** | | **Intra-/inter-firm ties** | | **Type of tie (professional, friendship or *alma mater*)** | | |
| **Inter** | **Intra** | **Professional** | **Friendship** | ***Alma mater*** |
| **Accounting** | **Accounting and tax practices** | Kang and Tan (2008)  Brown (2011)  Chiu et al. (2013)  Brown and Drake (2014)  Cai et al. (2014) |  | Kang and Tan (2008)  Brown (2011)  Chiu et al. (2013)  Brown and Drake (2014)  Cai et al. (2014) |  |  |
| **Earnings quality** | Erkens et al. (2014)  Chen et al. (2014)  Hossain et al. (2016) | Krishnan et al. (2011)  Bruynseels and Cardinaels (2014) | Krishnan et al. (2011)  Bruynseels and Cardinaels (2014)  Erkens et al. (2014)  Chen et al. (2014)  Hossain et al. (2016) | Bruynseels and Cardinaels (2014) | Bruynseels and Cardinaels (2014) |
| **Management control** | **Corporation’s performance** | Larcker et al. (2013)  Lai (2016) | Kuhnen (2009)  Fracassi and Tate (2012) | Kuhnen (2009)  Fracassi and Tate (2012)  Larcker et al. (2013)  Lai (2016) | Fracassi and Tate (2012) | Kuhnen (2009)  Fracassi and Tate (2012) |
| **Governance** | Thiery-Dubuisson (2002)  Bowman (2011) |  | Thiery-Dubuisson (2002)  Bouwman (2011) |  |  |
| **Auditing** | | Menon and Williams (2004)  Naiker and Sharma (2009)  Ye et al. (2011)  Naiker et al. (2013) |  | Menon and Williams (2004)  Naiker and Sharma (2009)  Ye et al. (2011)  Naiker et al. (2013) |  |  |
| **Compensation** | | Hallock (1997)  Bizjak et al. (2009)  Devos et al. (2009)  Andres et al. (2013)  Horton et al. (2012)  Addy et al. (2014) | Hwang and Kim (2009)  Collins et al. (2009) | Hallock (1997)  Bizjak et al. (2009)  Collins et al. (2009)  Devos et al. (2009)  Hwang and Kim (2009)  Horton et al. (2012)  Andres et al. (2013)  Addy et al. (2014) |  | Hwang and Kim (2009) |
| **Financial operations** | | Cai and Sevilir (2012)  Engelberg et al. (2012)  Sisli-Ciamarra (2012)  Cooney et al. (2013), Chuluun et al. (2014)  Ishii and Xuan (2014)  Rousseau and Stroup (2015)  Schmidt (2015) | Stuart and Yim (2010)  Chahine and Goergen (2013, 2014) | Stuart and Yim (2010)  Cai and Sevilir (2012)  Engelberg et al. (2012)  Sisli-Ciamarra (2012), Chahine and Goergen (2013, 2014)  Cooney et al. (2013)  Chuluun et al. (2014)  Ishii and Xuan (2014)  Rousseau and Stroup (2015)  Schmidt (2015) | Schmidt (2015) | Engelberg et al. (2012)  Ishii and Xuan (2014)  Schmidt (2015) |

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3. As Borgatti and Foster (2003) point out, the boom in network research is part of a general shift, beginning in the second half of the 20th century, away from individualist, essentialist and atomistic explanations toward more relational, contextual and systemic understandings. The authors show, by querying the *Sociological Abstracts* bibliographic database on the *social network* criterion in the abstract or title, that the number of management articles with a focus on networks grew exponentially beginning in the early 1970’s.

   To support the ideas of Borgatti and Foster (2003), we used a short test to assess the volume of literature on social networks published annually in academic management journals. We consulted the SocIndex (EBSCO) bibliographic database for 2016 using the *social network* criterion in the abstract (title). The result was 524 (131) articles published. [↑](#endnote-ref-1)
4. Obviously, we do not limit the term “social networks” to its most recent meaning, i.e. networks of individuals connected by virtual means. We also point out that; in the rest of this article, we use the terms “social tie” and “social network” interchangeably to qualify the subject of our study. [↑](#endnote-ref-2)
5. A *board interlock*  (BI) refers to a situation in which a director sits on several boards, creating a tie between companies via their boards. BIs can probably be considered a specific form of *interlocking directorates*. BIs are ties created by two organizations via a director sitting on the boards of both organizations, while *interlocking directorates* are more broadly ties created between two organizations through a person who is a member of one organization (not necessarily on the board) who sits on the board of the other organization. [↑](#endnote-ref-3)
6. In this article, the term “*alma mater*” only refers to the school where a person studied, and not - as is sometimes the case in audit literature - a firm where a former auditor worked and toward which he or she may show loyalty (illustration provided in the third diagram in figure 1). [↑](#endnote-ref-4)
7. We could differentiate between BIs, shown in the first diagram in figure 1, and other types of board networks, shown in the three other diagrams. However, to keep things simple, in this article we group both types of networks under the term “board networks”. [↑](#endnote-ref-5)
8. The Pujo Committee was a United States congressional subcommittee which, from May 1912 to January 1913, investigated the so-called “money trust”, a community of influential figures in the world of finance that exerted powerful control over the nation's economy. The report published by the committee showed that the heads of J. P. Morgan & Co. sat on the boards of 112 companies with a market capitalization of roughly 22.5 billion dollars (a market capitalization of approximately 26.5 billion dollars on the *New York Stock Exchange* at the time). [↑](#endnote-ref-6)
9. Use of the two databases allowed us to cover all the journals in our selection. We therefore considered that there was no need to use others. [↑](#endnote-ref-7)
10. To ensure that we have identified all the articles, we reviewed the bibliographies of all the selected articles. [↑](#endnote-ref-8)
11. A notre connaissance, il n’existe pas de traduction en français communément admise pour l’expression « *revolving door* ». Nous conservons donc l’expression en anglais dans la suite du texte. A *revolving door* is a situation where a company hires an employee from its external auditing firm to join its management team (Clikeman 1998). [↑](#endnote-ref-9)
12. Naturally, AMCA is not a uniform field. “Accounting” journals each have distinct aspects and different positionings (e.g. critical, general purpose or *mainstream*). However, we find that there is often a fine line between AMCA articles and non-AMCA articles; some “accounting” research is published in non-AMCA journals, and vice-versa. [↑](#endnote-ref-10)
13. We include here the articles dealing with audit quality. [↑](#endnote-ref-11)