How to Make a Deal?

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The Role of Rankings and Personal Ties
in Creating Trust in the M&A Market

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Abstract

This paper examines the selection of intermediaries in the French mergers and acquisitions (M&A) market, which is an opaque environment. Buyers and sellers cope with uncertainty as to the value of exchanged assets. They thus rely on the help of experts in order to secure deals. But as the valuators might be prone to opportunism, firms need to find a way to trust them. We identify two trust devices: social ties and public rankings. We explore whether these personal and impersonal devices are substitutes, independent or complementary. We study the French M&A market through a mixed-method approach, with both an ethnographic study (76 interviews) and the statistical analysis of 694 M&A deals in France in 2010. We show that both previous contacts and league table rankings of firms contribute to trust and to dealmaking. These trust devices are all the more likely to be used if the deal is risky, especially within the sell side (more at risk). We also find that firms tend to make deals only with other firms at the same level in the league tables: high-status firms tend to make deals together. Finally, we find some evidence of substitution between rankings and personal ties, especially for low-value deals.

Keywords: Financial market, mergers and acquisitions, network, rankings, trust, teams.

Résumé

[Comment conclure une transaction ? Le rôle des classements et des liens personnels dans l'instauration de la confiance sur le marché des fusions-acquisitions] L'article porte sur la façon dont les sociétés sélectionnent leurs intermédiaires sur un marché opaque, celui de la fusion-acquisition. Acheteurs et vendeurs sont confrontés à une forte incertitude quant à la valeur des actifs échangés. Ils recourent à des équipes d'experts pour les accompagner jusqu'à la conclusion de la transaction. Étant donné que ces évaluateurs peuvent eux-mêmes être enclins à faire preuve d'opportunisme, les entreprises doivent trouver des moyens de leur faire confiance à bon escient. Nous identifions deux dispositifs de confiance, l'un personnel, l'autre impersonnel : les réseaux de relations sociales et les classements publiés, et nous cherchons à déterminer s'ils font l'objet d'un choix mutuellement exclusif ou s'ils sont utilisés tous les deux, de manière soit indépendante soit complémentaire. Nous mettons en œuvre pour cette exploration une approche mixte combinant l'ethnographie (76 entretiens) et l'analyse statistique de 694 opérations de fusion-acquisition réalisées en France en 2010. Nous montrons que tant les contacts personnels anciens que les classements proposés par les league tables jouent un rôle dans l'établissement de la confiance et la conclusion de la transaction, et que ces moyens ont d'autant plus de chances d'être sollicités que celle-ci est risquée – surtout du côté du vendeur, plus exposé. Nous constatons aussi que les fusions-acquisitions se font préférentiellement entre entreprises classées au même niveau dans les *league tables* : les sociétés du haut de l'échelle tendent à traiter ensemble. Enfin, certains indices semblent montrer que, pour les transactions de moindre valeur surtout, les deux modes d'établissement de la confiance ne sont pas utilisés conjointement : les sociétés choisissent l'un ou l'autre.

Mots-clés: Marchés financiers; fusion-acquisition; réseau; classement; confiance; équipe.

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1   Introduction

The "rise of the shareholder value conception of the firm" initiated by the dramatic wave of hostile takeovers in the 1980s (Useem 1996; Fligstein 2001; Heilbron/Verheul/Quak 2014; Dobbin/Jung 2016) put the mergers and acquisitions (M&A) financial market at the center of contemporary corporate capitalism. Firms are no longer stable, separate and long-lasting entities, but a bundle of elementary bricks that can be reorganized, sold, bought, restructured and repackaged at any moment in order to maximize the so-called "shareholder value" (Ho 2009; Krippner 2011). Hence, the volume of M&A transactions has risen steadily for the past twenty years (in France, there was a four-fold increase in the 1990s, according to Thomson One Banker). Nevertheless, financial research has repeatedly shown that mergers and acquisitions are not always profitable (Gugler et al. 2003; Cartwright/Schoenberg 2006; Appelbaum/Batt 2014). Nearly half the time, they fail.

Under the new shareholder value regime, firms face ideological pressure to engage in very risky financial operations. In order to make a deal, buyers and sellers must agree on the value of the company being bought. That is no easy task, given that the buy and sell sides have opposing interests, and that competing valorization methods exist (Beunza/Garud 2007; Ortiz 2015). When embarking on such complex, risky and dramatic deals, firms get help from market intermediaries: financial advisors setting up the dealing strategy, accountants in charge of due diligence analyses, bankers financing the deal, lawyers establishing contracts. These intermediaries both reduce uncertainty with regard to the transaction outcome and contribute to displacing it. Firms need to be convinced that intermediaries are really working for them, and not opportunistically for their own agendas. The initial uncertainty over the value of the deal morphs into an uncertainty about the quality and integrity of market intermediaries.

Understanding the setting up of M&A teams is therefore crucial for understanding the role and place of M&A in contemporary capitalism. Moreover, it can substantially contribute to the flourishing literature on market activity in economic sociology (Granovetter 1985; Jacob/Vérin 1995; Smelser/Swedberg 2010). On the one hand, network sociology has shown that economic market activity is embedded in social networks (Granovetter 1985; Baker 1990; Uzzi 1996, 1997, 1999). These networks consist of long-term ties

that institute trust and help to solve the classical problem of opportunism in principal-agent relations (Coase 1937; Granovetter 1985; Williamson 1975, 1985). On the other hand, a new pragmatic sociology (inspired by science and technology studies) insists that market devices help actors coordinate with each other, build long-lasting trust and that they "perform the market," i.e., ensure the sheer existence of the market (Thévenot 1984; Callon 1998; Callon/Lascoumes/Barthe 2001; Callon/Millo/Muniesa 2007). These devices may be the algorithmic implementation of economic theories (Muniesa 2000; MacKenzie 2006), consumer guides advising customers (Karpik 2000) or databases on the prices or the creditworthiness of market actors (Godechot 2006; Poon 2009). Among these market devices, public rankings constitute powerful guides for both defining and recognizing quality (Espeland/Sauder 2007; Sauder/Espeland 2009). Although these two resources (networks and market devices) are simultaneously available, they have barely been jointly analyzed by social scientists at all. Karpik pinpointed the tension between two streams of literature that largely ignored one another. He dubbed those two strategies as relying on two types of judgment: personal judgment devices on the one hand (the network), and impersonal devices (such as guides and rankings) on the other (Karpik 2010). Nevertheless, he says nothing about the combination of these two judgment devices, and we don't know whether the two mechanisms should be thought of as complementary or as substitutes.

Our study tackles this question in the French M&A market, relying on a mixed-method approach. We show how firms combine personal networks and professional rankings to cope with uncertainty. We confirm existing results about the importance of long-run repeated collaboration on the market. We add to the existing literature, which states that this collaboration takes root in past individual collaborations within the same firm. We also confirm that in the case of the M&A market, public rankings create a status hierarchy and enable firms at the top to grab the lion's share. Finally, we investigate whether the two judgment devices are complementary or substitutes. We find a substantial effect of substitution at the firm level.

The paper is organized as follows: in the first section, we review previous literature on the sociology of markets more extensively in order to describe the possible theoretical mechanisms at play. In the second section, we draw on detailed fieldwork to corroborate and more adequately specify these mechanisms. In the third section we detail the data, the variables and the statistical methodology in order to test these theoretical mechanisms. The fourth section describes the results. In the last section, we discuss the limits and the scope of those results.

2   Trusting intermediaries in opaque business-to-business markets

Coping with uncertainty

All market activity has to cope with uncertainty. Max Weber (François 2008; Weber 1978) stated that uncertainty is related to two dimensions: exchange opportunities and prices. On markets where complex products are being sold, like the M&A market, both the "exchange value" (hence the price) and the "use value" are uncertain. Beyond the price of exchange, what is the "real" underlying value of the product for the buyer or the seller? In business-to-business markets, a buyer (or a seller) can't rely only on his own subjective appreciation. There is a need for metrics that can convince stakeholders that the exchanged good adds value in some way. Although there are some markets that converge on one "best" technique of evaluation, others don't. This is especially true in the case of the M&A market, where there are many models for determining a company's value (Boussard 2013; Chiapello/Gilbert 2013). As the companies are often private, people can't always rely on public prices. The most popular method, *discounted cash flows* (DCF), for instance, requires predicting all future cash flows on an infinite time horizon that necessarily relies on reductive hypotheses. Its verdict might differ from the *quota method,* which consists of determining the value of the firm through a comparison with another firm with similar attributes whose value is known.

Therefore, business-to-business markets like M&A face a valuation uncertainty. There is no one best way to evaluate the object of a transaction, and the best methods available leave room for negotiation. In order to overcome that uncertainty, acquirers and sellers resort to market intermediaries, which may be viewed as prescribers of value (Bessy/Chauvin 2013; Hatchuel 1995) – such as, in the case of M&A, financial analysts, bankers or auditing firms (Haunschild 1994). These intermediaries use their expertise to determine the value of the goods being exchanged.

Hiring market experts, however, does not completely eliminate market uncertainty. It displaces the uncertainty from the quality of the good exchanged to that of the market intermediaries, and to the trust one has in their judgment and expertise. Hence, external advisors can be of uncertain quality, and may indulge in opportunistic behaviors, defined as "self-interest seeking behaviors with guile" (Williamson 1979). Market intermediaries are better informed than their clients, given that their clients have no other hint at the value of the good that is being traded. They may exploit this informational advantage in the very same way that real estate agents would (Levitt/Syverson 2008). An estate agent who sells a house has an incentive to make a faster transaction, and thus to lower the price, at the expense of the seller. Levitt and Syverson used a comparison between cases where real estate agents trade for themselves with cases where they work for other clients to demonstrate that they have a tendency to underestimate (or, respectively, to overestimate) the price of a house when selling (or, respectively, buying) for a client rather than for themselves. Other examples of opportunism can be found among

market makers (Abolafia 1996). They also tend to "sell the market" and increase the number of transactions at the expense of their own clients. Moreover they frequently speculate on the predictable impact of their clients' orders ("front running").

Hence, carrying out both the valuation and the trading of a given good gives actors an informational advantage that can pave the way for opportunism. There may be a divergence of interests between market intermediaries, who want to make more numerous and quicker transactions, and acquirers or sellers, who want to make a transaction in their best interest. The remuneration of market intermediaries – which depend on the total volume of transactions – may divert them from their clients' best interests (Dobbin/Jung 2016).

Relying on Karpik's argument that actors in opaque markets resort to trust devices in order to overcome uncertainty, we investigate the use of such trust devices by the firms that contract with market intermediaries.

Signs of quality as impersonal judgment devices

Markets do not exist by themselves. They also need socio-technological devices to frame them through the definition and delimitation of categories and qualities (Callon 1998; Callon/Lascoumes/Barthe 2001; Callon/Millo/Muniesa 2007; Thévenot 1984). Among these, we find the impersonal judgment devices coined by Karpik (2000): they are objects such as culinary guides that signal quality. Quality labels, dedicated guides or certifications, for instance, contribute to singling out products for their supposedly outstanding quality. In the case of M&A, rankings published by dedicated reviews, called "league tables," play that role.

The rankings of intermediaries therefore help mitigate part of the uncertainty and establish trust in the valuators. In opaque business-to-business markets, we can expect that intermediaries who are ranked the best will get an important share of the market, and that their share will be all the more important if the deal is risky. These hypotheses may come across as trivial, but they are not. According to the economics of quality (Chamberlin 1953), high quality and high market shares are often antithetical. High-quality products usually receive a small portion of total demand. Sports cars, for instance, account for a much smaller amount of total demand than popular cars. Quality generates demand, but competition in quality ushers in equilibrium where exchange for high-quality goods is scarce.

Opaque business-to-business markets disobey the model of economics of quality described by Chamberlain for the following reasons:

First, acquirers may value a small difference in quality all the more when the quality is high. That distinctive shape of the preference for quality leads to a "superstar" market (Rosen 1981). In that case, the biggest chunk of the demand goes to a few "superstars", whose quality is at least slightly higher than their competitors'. The convexity of the preference for quality, coupled with characteristics of the technology, leads to a "winner-takes-all market" (Frank/Cook 1996).

Second, the recruitment of a market intermediary by an acquirer follows a two-stage approach. Contracting with an M&A consulting firm would be comparable to recruiting an academic (Musselin 1996, 2005) – first choosing quality and discussing the price at a later stage. There is also a two-stage approach in investment banking, where bankers first choose to grant a loan, and only then discuss the interest rate (Uzzi 1999). That would explain why acquirers would tend to turn to high quality market intermediaries in the first place, leading demand to concentrate on the firms that appear in the rankings.

Third, Eccles and Crane (1988) argue that the ranked firms performing a high volume of transactions are "in the deal stream": they conduct large numbers of transactions, and by so doing, gain knowledge about more profitable opportunities. They create numerous market ties with various actors on the market, recruit more people, maintain a high level of activity and gain more experience. Rankings therefore initiate and confirm a self-enforcing dynamic of monopolization of market activity (Merton 1968).

Finally, rankings also have a performative effect (Beckert/Musselin 2013): firms appear in the rankings because they are supposed to be outstandingly productive; but the fact that they appear in the rankings may also have an impact on their performance. The rankings thus contribute to stabilizing beliefs about reputations. The performative dimension of rankings is generally known to market actors. They therefore try to act strategically on their position in the rankings in order to improve it (Espeland/Sauder 2007; Sauder/Espeland 2009). One way to improve or stabilize positions within the rankings is to prioritize transactions with ranked trading partners over those with non-ranked ones (Podolny 2010). This phenomenon leads to a bigger share of the most prestigious firms, to a stratification of the market by ranking, and finally, to status similarity among trading partners (ibid.).

These arguments converge in showing that rankings do reduce uncertainty about the quality of an intermediary. We can predict that ranked intermediaries will conduct more deals and be hired for the riskier ones. The strategy of rank seeking also leads to match-making by level of ranking and ranking similarity in transactions.

Networks as personal judgment devices

Personal judgment devices, as well impersonal market devices such as rankings, help to establish trust in market intermediaries (Karpik 2010). The impact of social networks in the making of deals has received great attention in the last decades. It is now well established that social networks between firms convey information (Burt 1992; Godechot/Mariot 2004; Granovetter 1973; Jacob/Vérin 1995). Social networks and embeddedness also appear as a factor in supporting trust (Coleman 1988; Granovetter 1985). Burt (2005) argues that "closure" – i.e., a close system of intertwined connections in a given social world, stabilizes reputations and builds trust. Trust may also arise from direct non-commercial ties. DiMaggio and Louch (1998) provide a strong empirical argument to establish that consumers rely on social relationships to help them with shopping. Brian Uzzi (1996, 1997, 1999) assesses the impact of social ties both between firms and their banks and between firms and their contractors in the garment industry. He shows that social ties, due to their informational dimension, increase the chance of getting a loan and affect its price. In the case of deals with subcontractors, strong ties *(embedded ties)* add something more to the simple information flow: they help problem-solving among transaction partners and, moreover, limit opportunism and favor some form of altruism. They are therefore more efficient than *arm's length ties* alone, although the combination of close and distant relationships on the market finally proves to be the most efficient. Baker (1990) provides a similar analysis of how firms do and should distribute their market ties across a set of investment banks. The more often a firm makes deals with a given investment bank, the more trust emerges between them, and the less competitive their relationship becomes, which subsequently leads to higher costs. Firms thus strike a balance between trust and efficiency through the use of *hybrid models* of market ties. Mizruchi and Stearns (2001) also investigate the impact of social networks within a big bank on reducing uncertainty regarding their corporate clients. They argue that in cases of high uncertainty, actors resort to a small network of close and trustworthy colleagues, thus losing the informational diversity of their broader, scarcer network.

What is the nature of ties that foster trust? Where do they come from? Baker (1990) and Uzzi (1996, 1997) consider that some commercial ties become "embedded" when repeated (Zuckerman 2004) and therefore foster trust, while others remain at "arm's length" by selecting their partners on the basis of an invitation to tender. Consequently, their results raise the question of which ties are thus more likely to be repeated. Similarity – especially similarity of social, cultural and educational background – probably plays an important role (McPherson/Smith-Lovin/Cook 2001). But behind ties one also frequently finds other ties – either indirect ties of the same nature, such as a recommendation from a direct contact, or previous ties of a different nature. A fruitful approach is probably to focus on past shared experience, especially "dormant ties" (Levin/Walter/Murnighan 2011) such as co-working relationships that can be reawakened. Although the impact of the latter on output such as recruitment or contracts has

received little attention so far, some recent studies suggest that in finance, past co-working relationships do indeed matter, either for dealmaking or for recruiting (Rider 2012; Godechot 2014).

There is solid theoretical evidence that embedded ties create trust in opaque environments. We thus expect that actors in the M&A market pick their business partners along the lines of personal ties, even more so when deals are more risky.

Combining personal and impersonal judgment devices

In an opaque business-to-business market, agents resort to both personal and impersonal judgment devices in order to choose trustworthy market intermediaries. Although there is a rich literature about the two types of judgment devices discussed above, there is almost none about their combination. Lucien Karpik, who shaped the distinction between personal and impersonal judgment devices, did not intend describe their overlap (Karpik 2010). Personal judgment devices, for instance, are useful for finding a lawyer, while impersonal judgment devices such as rankings count toward finding a good wine or a good restaurant. Therefore, in the case studies he dwells on, the two kinds of judgment devices seem to be substitutes. However, Karpik gave no theoretical insights as to how the two types of trust devices are chosen and articulated.

The two devices may first be thought of as functional substitutes, given that they both aim at providing a remedy against uncertainty. If a firm is singled out in the rankings, it makes personal ties less necessary in order to trust its competence. It also works the other way around: if one knows a professional personally and is assured of their competence and loyalty, the fact that the firm has been singled out in the league tables would only bring a small amount of extra trust. Substitution will be all the more likely if both of the trust mechanisms are costly. Indeed, choosing ranked intermediaries is costly at first sight, because they charge higher fees; whereas personal ties do not have a clear direct monetary price. Nevertheless, if we follow Uzzi (1996), the concentration of trade on some embedded ties is profitable up to a certain threshold, at which point it sterilizes the renewal of ideas. As both forms of trust can incur costs, this should lead actors to favor one trust device over the other.

Nevertheless, substitution may be mitigated by several conflicting mechanisms. First, actors who are more embedded in social networks may refrain from embarking on such tight arbitrage since overly opportunistic, calculative behavior contradicts social solidarity (Lawler/Yoon 1996; Latour/Callon 1997). Second, when the value at risk is very high, one trust device alone may not be sufficient to foster trust. Finally, the status theory developed by Joel Podolny (2010) suggests that the judgment devices should be complementary, at least at the top of the status hierarchy. Status homophily implies path dependence of career tracks: high-status firms recruit people coming from elite

universities, who are thus likely to be connected to one another in their past work-related network (Useem 1984; Useem/Karabel 1986). Subsequently, it would be all the more likely that the professionals working for two ranked firms involved in the same deal are connected, if only because professionals who work for elite firms belong to a small world of status distinction.

Both hypotheses – complementarity or substitutability – thus seem plausible, with the latter being slightly more likely. We shall now turn to empirical fieldwork and statistical analysis to tell them apart.

3   Ethnographic fieldwork

How to make a deal

A corporate transaction involves the sale of a firm by its owner (seller) to a buyer. Sellers and buyers are usually firms (especially corporate firms or investment funds). Dealers employ various intermediary firms to carry out the various functions necessary to the making of a deal. First, financial advisors (often investment banks) make recommendations on the value of the target company and negotiate the transaction price for their client. Second, accountants (usually auditing firms) produce financial data to use in the valuation process. Third, bankers fund the transaction. Finally, lawyers help to set up contracts. Both the buyer and the seller may have to resort to such market intermediaries. Every transaction can be seen as a confrontation between the buy-side and sell-side "teams." The transaction occurs when one of the buyers agrees on a bid made by the seller. Most transactions are then publicly declared to the dedicated press, and the names of market intermediary firms are quoted, as well as the financial characteristics of the deal.

The making of a deal follows a formal process. The seller's financial advisor first issues a teaser – a commercial document that includes general financial information about the target company – and sends it to potential buyers. Potential buyers may go further into the deal process by signing a confidentiality agreement that grants them access to a more detailed document – namely, an "information memorandum." Potential buyers who are still interested at that stage may finally require the very complete financial report called a "vendor due diligence" report, and be granted access to the target company's data room in order to challenge the vendor due diligence report. The negotiation takes place after this approach step. The seller's financial advisors (investment banks) set up *question and answer* sessions, where both teams confront each other's arguments about financial data and the value of the target company so as to determine the price of the transaction. These sessions usually follow e-mail exchanges and management presentations made by the managers of the target company to the buyer. The process gives rise to particularly careful stages of confrontation: each team is on one side of a

long table, and discussions are led by two team officials, placed one in front of the other. The two teams present their visions of the company, the seller seeking to embellish, the buyer seeking to uncover weaknesses in order to better negotiate the price.

Fieldwork Methodology

Data includes interviews, ethnographic observations and documents issued by M&A professionals.

Interviews
The 76 semi-structured interviews that were conducted focused on three issues: the interviewees' biographical and professional trajectories, their professional activity, and the mapping of the professional field. The sample is evenly balanced between the age groups (under 30, between 30 and 40, and over 40), and the hierarchy (junior, team management, senior positions/ shareholders). The 76 interviewees work in 48 different firms that cover a representative spectrum of business situations (French and foreign firms of various sizes, seniority, specialization and type of customers). Each interviewee was asked to provide contact information about a few colleagues so that the sample could be designed gradually. 57 percent of the respondents graduated from a business school and 4 percent from a prestigious engineering school; 71 percent are men and 29 percent women. The sample structure equates to that of the transaction database (see below), except for an overrepresentation of business school graduates, which results from the absence of people working outside of Paris or London in the sample.

At the time of the interviews, the interviewees held either seller/buyer positions (25) or market intermediary positions (51). The interviews covered past stages of the interviewees' careers, and thus include descriptions of a greater number of professional positions than the number of interviewees. The total number of career stages amounts to 153, among which 85 are stages as intermediaries, 37 as sellers/buyers and 31 as other financial professionals.

Ethnographic observation
The observation includes three distinct phases of fieldwork. First, we observed the activity and organization of an auditing firm specialized in M&A over a period of 10 days (including some evenings and nights). We observed the drafting of reports and team and client meetings. Second, we observed training sessions designed to equip finance professionals with valuation skills. Third, we participated in meetings and business events (forums, lounges, awards ceremonies).

Document analysis
This research also includes an analysis of documents produced and sent to the M&A professionals: financial management textbooks and sales brochures.

> If you sell, your job is to tell a great story about the company on Power Point. Conversely, when you buy, you must dissect the documents presented by the other firm in order to know more about possible gains. (CFO, male, 37 years, ex-financial advisor)

Analysts from both sides issue financial indicators such as sales, margin, EBITDA (earnings before interest, taxes, depreciation and amortization), working capital, cash flow, free cash flow, debt, capex (capital expenditure), etc. These financials are used to determine the value of the target company. There is no one best way to calculate the value of a firm, but there are various different methods, such as quotas, capital asset pricing and discounted cash flows. The plurality of methods and the use of forecasts grant analysts

room for maneuver. Hence, an investment banker claims "not to find the value (of the company), but to optimize it." In other words, the valuation methods are not used as if they were revealing the value of a company.

> They need to be reassured. They want to believe in our forecasts, even though they may seem fanciful. We play, we manipulate. In these expert businesses, the problem is that you're supposed to be an expert … it's like when you take a big decision in life: you talk to friends, loved ones. Well here, the manager, he spoke to experts, to reassure themselves. We are here to sell!
> (A financial advisor)

The transaction process aims at ensuring that the buying and the selling sides agree on a certain idea of the value of the target firm, and subsequently on a transaction price. What is at stake in these transactions is the production of a legitimate – not objective – judgment on the value of companies. Intermediaries merely need the actors around the table to believe in the calculation they make, so their arguments about the fair price of the transaction have an impact.

> We build (financial) modeling and make a parameter move, to see how it reports to credit. One may choose to believe it or not.   (A financial advisor)

Hence a "financial advisor," a partner of a reputed international firm, explains that his job is "to produce the objective value according to [firm's name]." That oxymoron is at the heart of the valuation operation: it is about making people believe, by various methods, that the resulting value is unquestionable. The belief in the value is all the more important because, as we shall see in the next subsection, the calculation of the value can lead to conflicts of interest between clients and market intermediaries.

Opportunism in the making of a deal, and trust in valuators

As many market intermediaries are paid with market fees proportional to the value of the transaction, the main risk of opportunism with financial intermediaries is that they might indulge in overselling. Market intermediaries may aim at closing the deal because of some financial profit or gain in reputation, sometimes at the expense of the client, who could either be paying an excessive price for the target company or selling it at a discount price.

More subtle forms of opportunism lie in the divergence of interests between the buyer or the seller and their market intermediaries in terms of the financial rules they apply. Buyers or sellers may expect their intermediaries' loyalty to go beyond deontology and to break professional rules so as to match clients' interests. Intermediaries are therefore always striking a balance between serving their present clients' interests and managing

their long-term reputations. This is made clear by the following discussion between members of an auditing firm working on the drafting of a due diligence report while on a conference call with the client ("CFO"):

> CFO: "In paragraph x, I would prefer to remove the 'more than,' because there is no visibility on this product." The partner put her hands on her head and said: "Do not tell me you want us to replace the June figures with those of August?" Then, later on, the CFO continued: "One of our shareholders was not comfortable: if we write that we are 'cautious' in the current environment, the bankers will believe that we have a problem. She just said that we should remove the reasons: 'let's give no track that would scare the banker off!'" [The partner] notes and says "OK," while visibly not comfortable.

This tuning of professional expert judgment and serving clients' interests is all the more difficult due to the fact that it involves the whole team. If the financial advisors want to be flexible in the application of financial rules in order to serve their client's interest, they also need both auditing firms in charge of due diligence (at risk with their reputations) and lenders (at risk with their capital) to be in line with the same policy.

In this exercise, auditing firms are particularly at risk, as the two following examples show:

> Normally we are supposed to remain completely neutral. We are not supposed to give a figure in order to please our customer. … If we want to keep our customer, we try to go in their direction. … The client may say: "I find this a little high, or that a little low …" Maybe we can find something [to change the figure]. (Auditor)

> Audit firms get their legs twisted in order to attenuate risk zones. (A lender)

Financial advisors must convince their customers (either buyers or sellers) that the value they have calculated is genuine on the basis of the data produced by accountants. Similarly, bankers who finance the acquisition must find values (and associated risks) appropriate to the company for which they grant funding. As a lender explains, they have "to take Excel and to believe that the company would grow and to believe in its valuation." Yet, they have to believe in the value displayed in the reports, even though they know about all the inherent weaknesses of valuation:

> On the buyers' side, due diligence reports are also reviewed by funds. For instance, "highly pessimistic" is transformed into "slightly pessimistic." That's wording! (A lender)

Therefore, the uncertainty about the value is displaced to uncertainty about the valuator. The issue for buyers or sellers is whether or not they have to trust the intermediaries they are paying for assessing the target company. This trust not only implies confidence in the data and figures delivered, but also confidence in the way the intermediaries will interpret them and defend their points of view, giving credence to the valuation. These

two sources of uncertainty are connected: the more trustworthy the market intermediaries, the more legitimate their judgment on the value appears to be, and the stronger the belief in the company's value.

How rankings are used as impersonal trust devices

When asked about how they choose the market intermediaries they work with, some interviewees often refer to their reputation and prestige. Intermediaries are aware that customers are sensitive to their references ("credentials"), defined as the list of previous transactions and their characteristics ("volume," "prestige").

> It's having a big turnover and many customers: making large transactions. A beautiful merger with a recognized customer. The "credentials": see advertisement about it.
> (A financial advisor)

The higher the uncertainty, the more market actors will seek these signs of prestige. They do not necessarily believe in the quality they claim to guarantee, but they believe other actors give credence to it.

> We take an investment bank when it is a big operation, where you need a guarantee: we pay for their name.   (Financial director, head of M&A in a CAC 40 firm)

Hence, rankings are useful for newcomers entering the market, since they can serve as shortcuts for identifying who counts and which actors have the legitimacy for establishing value. But they are not less important for insiders willing to use them as a status confirmation device. Therefore, it is no surprise that interviewees insist on the role of rankings, both for intermediary firms (banks, auditing firms, etc.) and for individuals (managers, partners).

One of the most-used rankings on the French M&A market, the *league tables,* are defined by *Capital Investissement,* which produces them, as "arithmetic rankings made according to the value or number of transactions on which they intervened." Although they first seem to indicate a high market share, they are also used as an indicator of high quality. The league tables single out and rank a small number of firms (approximately 10 percent in most cases) in each industry (investment banking, auditing, strategy consulting, financial advice, etc.) and in each market segment (small, mid-sized, large capitalization).

> Investment banks are proud of these rankings, so they send them to you. This is the league tables system. There are subcategories: if a bank is in two categories, this is no coincidence. They really have to be good. … There are moguls: they are first in all the rankings, and they think they can call the boss [to propose an acquisition], and sometimes it works.
> (Financial director, head of M&A in a CAC40 firm)

These rankings also provide the opportunity for awards ceremonies that grant firms and individuals outstanding visibility. The trophies earned represent a high-status reputation and are exhibited in the offices or waiting rooms. The performative dimension of these rankings is acknowledged by the actors themselves:

> About this event: it is organized by a magazine *[Décideurs]* that nobody reads because it is bad. This is a much-criticized medium because it is very marketing-oriented; they sell contacts and publish ads. But they manage to gather 600 persons to the awarding ceremonies, thanks to those phony rankings they make. The best positions are held by the biggest advertisers in the magazine. Some firm had a prize one year, as it had withdrawn its advertising budgets on the previous year. When we got the prize we had it on our website and acquired new customers thanks to that. Wholesale, rankings, nobody believes them, but they have an effect, so we continue.
> (Partner of an auditing firm: Observation of Leaders League trophies ceremony)

Consequently, rankings, and the status they give, seem to have an influence on market intermediaries' pairings:

> What's great [after this award] is that we are doing great operations: people want to work with us, we have become one of the three strongest teams in Paris, along with BNP [and] Calyon, which was rebuilt at the same time as us.   (A financial advisor)

Hence, the fieldwork on the French M&A market suggests that rankings contribute to creating confidence, both in valuators and in valuation. They thus lay the foundation for the negotiation process. Ranked firms have more chance to engage in deals and are more likely to match with one another.

Ties in practice

But rankings do not seem to be the only way to solve the issue of trust in the market for intermediaries, as pointed out by this client, an investment fund manager in private equity:

> And the main source, it is the bankers. They talk and talk. … They say what subject will come on the market. We have lunch with them. They know the managers who want to avoid running around like headless chickens and there are also lawyers, financial auditors. … And there are affinities that arise. Some firms are better than others. Either one knows them because they have worked with them – it's easier and more efficient. Or maybe it's because of the industry, because we know where to go for.

The links made on the occasion of a past work experience are frequently cited as a source of confidence, and take two forms. The first form consists of past co-working relationships (Levin/Walter/Murnighan 2011; Rider 2012; Godechot 2014): people

worked together as colleagues in the service of the same employer. They had the opportunity to work together on an operation, often in subordinate positions. Respondents value these bonds.

> This is a superb address book: all those with whom I have worked, I see them again because we all have wrestled with that so much that we are very close. This is a great school. I advise everyone even if it seems a bit masochistic.   (Former junior financial advisor)

> For me, it's more the alumni network of Arthur Andersen than those of my engineering school. … My engineering school? Nobody called me … and I don't use it much. … My supervisor is from Arthur Andersen: it makes things easier. We are formatted in the same manner. … "Formatting?" It is the rigor … which does not prevent us from being innovative. It is extremely important. (A financial auditor)

The second form consists of repeated business ties, thereby turning them into "embedded ties" (Baker 1990; Uzzi 1996). The actors can thus choose to work with someone they knew on the occasion of another transaction. For example, in a previous transaction, a financial advisor may have encountered a team of accountants whose work he valued highly, even perhaps on the adverse side. He can decide to call them in a subsequent transaction. "People you've seen on other transactions, that you saw in action, it is a trusted network that is created."

The importance of seeing people at work, especially in the workplace, seems linked to the high labor intensity demanded in this industry. Transactions are conducted at a steady pace, including work on nights and weekends, with acute phases during the final negotiations. Being able to rely on the availability of people and their acceptance of working conditions is frequently cited as crucial.

> They are extremely demanding. They loved me because I reassured them by being always available for them. They liked me because I was sending e-mails at 4 a.m. In this business obedience brings recognition. You have to accept doing super boring tasks in extreme conditions. (A financial advisor)

Ties are generally used to foster trust within teams on the same side of the deal (buy side or sell side). But on some occasions, they may help to establish trust between the two sides and conclude deals.

> A buyer working for a private equity fund gave us the following example. He noticed that the firm that was being sold was run by a Jewish CEO who was keen on working with partners from the same community. In order to ease the transaction, the buyer, who was Catholic, found also a Jewish financial advisor. He concluded that this choice helped him to close this precise deal.

Therefore, the fieldwork suggests that professional connections matter for choosing teams of intermediaries.

Combining rankings and personal ties

Our ethnographic data does not shed much light on the articulation of the two trust devices to which market actors resort. For instance, asked whether networks and rankings are complementary or substitutes in the choice of an intermediary, a private equity investor had a hard time answering. After a long hesitation, he said they were substitutes, but ended up saying it depended on a variety of factors. In fact, in his firm they consider that rankings are more like window dressing, and they do not attach much importance to them. Contrary to other firms, which are used to setting up competition between multiple *arm's-length ties* (Baker 1990; Uzzi 1996), his firm would rather work with long-term *embedded ties* they can trust. His firm would hire ranked firms mainly for big deals in order to prove their status. They would then hire them as credit enhancers, along with their usual embedded advisors, who would still do most of the job.

The qualitative material backs our theoretical insights that market actors rely heavily on both personal and impersonal judgment devices. However, neither fieldwork nor market actors themselves provided sufficient evidence to prove or disprove the hypothesis that the two forms of judgment devices are substitutes. We thus turn to a statistical analysis of the M&A market to settle that question.

4   Statistical data and method

Data and variables

Our data consists of 664 deals collected during the year 2010 in a French professional outlet called *Capital Finance*, devoted to investment and mergers and acquisitions. Among those deals, 1,280 different firms and 3,286 individuals were involved. Since we focused mainly on finance professionals rather than on lawyers, whose careers, reputations and networks obey a very different rationale, we only investigated the career tracks and personal ties of the former. We collected the résumés of the accountants, bankers, financial advisers and buyers involved in these deals on LinkedIn. Sellers are never described in *Capital Finance*. We found 839 CVs out of a pool of 1,990 persons (excluding the lawyers), among which 730 were complete enough for statistical exploitation (37 percent). We therefore restricted our study to the 389 firms for which we knew the CV of at least one participant (46 percent of the firms – law firms excluded). Due to our restriction of the population, we finally studied 399 deals (60 percent).

Our main variables of interest are rankings on the one hand, and personal ties on the other. We used league tables rankings of firms in 2010 provided by www.leadersleague. com. Firms are ranked in five categories (practice of quality, renowned quality, strong reputation, excellent, essential). Most firms are not ranked. We turned this ordinal scale

Table 1   Probability of firms conducting deals together

	P (dealing together)		P (dealing together on the same side)		P (dealing together on opposite sides)	
	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
1. Activity: cumulative number of past deals of firm *i* in *t-1*	−0.237*** (0.024)	−0.297*** (0.026)	−0.290*** (0.031)	−0.355*** (0.033)	−0.153*** (0.038)	−0.195*** (0.040)
2. Size: total number of workers in the fim *i* involved in deals	0.494*** (0.019)	0.522*** (0.019)	0.531*** (0.023)	0.559*** (0.024)	0.429*** (0.030)	0.451*** (0.030)
3. Best ranking of firm *i*	0.172*** (0.025)	0.172*** (0.025)	0.153*** (0.033)	0.157*** (0.033)	0.208*** (0.040)	0.206*** (0.039)
4. Firm *i* ranked in the sector of the deal	0.427** (0.165)	0.422* (0.165)	0.008 (0.258)	0.012 (0.258)	0.807*** (0.217)	0.798*** (0.218)
5. Transitivity: having a least a common contact in *t-1*		0.067*** (0.020)		0.052* (0.026)		0.086** (0.032)
6. Deal ties: cumulative number of previous deals between *i* and *j*		0.119*** (0.010)				
7. Deal ties: cumulative number of previous deals between *i* and *j* (different side)				0.007 (0.022)		0.055*** (0.016)
8. Deal ties: cumulative number of previous deals between *i* and *j* (same side)				0.124*** (0.011)		0.049* (0.024)
9. Work ties: total number of years workers from the two firms worked in common	0.036*** (0.006)	0.020** (0.007)	0.048*** (0.007)	0.023** (0.008)	−0.205* (0.080)	−0.149* (0.074)
10. Educational similarity	−0.025 (0.019)	−0.058** (0.019)	−0.048* (0.025)	−0.079** (0.027)	0.049 (0.031)	0.015 (0.032)
11. Alumni network: number of workers in the firm *i* and *j* coming from the same university	0.054* (0.022)	0.053* (0.021)	0.056* (0.028)	0.068** (0.026)	0.055 (0.034)	0.046 (0.034)
12. Best ranking similarity	0.287* (0.132)	0.282* (0.132)	0.696*** (0.171)	0.639*** (0.171)	−0.444* (0.210)	−0.404* (0.210)
Number of observations	303,416	303,416	303,416	303,416	302,452	302,452

Note: All regressions are estimated with a conditional logistic model with a deal fixed effect. All continuous variables are standardized. Standard errors in parentheses.
***$p<0.001$; **$p<0.01$; *$p<0.1$.

into a numeric one by computing the average rank of firms on the ordinal scale. We also computed a dichotomous variable for the factor of being ranked in the precise area of the deal. In order to capture collaboration ties between firms (Rider 2012; Godechot 2014), we used two indicators. First, we looked at past collaborations in previous deals, either on the same side or on different sides (buy versus sell) of the deal.[1] Second,

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1   As shown by the fieldwork previously, working on different sides is an occasion for learning about the quality of a potential business partner. This information can be recycled for future collaboration. Additional regressions (not published in the paper) show that being on different sides of the same previous deal also favors dealmaking.

we created a proxy for co-working ties using the career tracks of all the professionals we found on LinkedIn. We surmise that two professionals are likely to be connected if they worked together in the same firm in the past. We also assume that two professionals are all the more likely to be personally connected if they have been working in the same firm for a long time. We thus create a variable T_{ij} that is equal to the number of years that two actors i and j have spent working in the same firm. To have a grasp of the personal ties between two firms, we created another variable T_{ab} that is equal to the sum of the T_{ij} for all employees i in the firm a, and for all employees j in the firm b.

The information we collected on LinkedIn also provided us with useful features such as experience and academic degree, which we can use as control variables. The status theory prompted us to also use degree similarity as a control variable for dealmaking. Thanks to our deal database, for each actor in the deal, we know the person's side (buy or sell), their roles (financial advisor, accountants, banker, and buyer), and the amount of the transaction.

Estimation

We model the making of a deal using panel logistic regressions. The panel dimension of our data mitigates the endogeneity induced by the network effects. Contrary to cross-sectional analysis, we can introduce the lagged structure of the network as a predictor of dealmaking between two actors at time t. This feature avoids the problem of explaining the network structure by itself. Therefore, logistic regressions, already used similarly in previous studies (Gulati/Gargiulo 1999; de Nooy 2011; Rider 2012), offer a great deal of flexibility and enable us to study many effects.

In order to concentrate on the match-making, we use logistic regressions to model the probability that i and j (firms or individuals) will be part of the same deal d conditionally to the fact that j is in the deal. We considered the full population of actors who are involved in at least one deal in our database to be a potential i actor of each deal. We explain this (very small) probability by the attributes of i (A_i) or by attribute similarity between i and j ($A_i \approx A_j$), by previous social ties T_{ijt-1} between i and j, and by past network structure $D_{ij(t-1)}$ such as activity or transitivity. In order to capture unobserved deal characteristics that could bias our estimates, we also introduce a deal fixed effect d. This fixed effect controls for all deal specificities, starting with its size. Therefore the model could be summarized by equation (1) (with f being the logistic function and u the residuals).

$$P(D_{ijd} = 1 \mid j \text{ is in deal } d) = f\left[a_1 A_i + a_2 (A_i \approx A_j) + a_3 T_{ij(t-1)} + a_4 D_{ij(t-1)} + d + u\right] \quad (1)$$

Table 2   Probability of individuals from different firms conducting deals together

	P (dealing together)		P (dealing together on the same side)		P (dealing together on opposite sides)	
	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26
1. Type of degree: French	0.156 (0.101)	0.155 (0.101)	0.190 (0.127)	0.188 (0.127)	0.117 (0.169)	0.122 (0.169)
2. Type of degree: French and foreign	−0.024 (0.116)	−0.026 (0.116)	0.092 (0.147)	0.089 (0.147)	−0.191 (0.188)	−0.186 (0.188)
3. Type of degree: unknown	−0.197* (0.118)	−0.200* (0.118)	−0.231 (0.149)	−0.233 (0.149)	−0.105 (0.196)	−0.106 (0.196)
4. French degree: top business schools	−0.160** (0.055)	−0.162** (0.055)	−0.151* (0.068)	−0.153* (0.068)	−0.168* (0.092)	−0.169* (0.092)
5. Type of degree: top engineering schools	−0.252* (0.110)	−0.250* (0.110)	−0.186 (0.135)	−0.182 (0.135)	−0.360* (0.191)	−0.370* (0.192)
6. Type of degree: other engineering schools	0.241* (0.103)	0.240* (0.103)	0.092 (0.135)	0.093 (0.135)	0.478** (0.159)	0.471** (0.160)
7. Foreign degree: top foreign universities	−0.363** (0.116)	−0.363** (0.116)	−0.607*** (0.155)	−0.607*** (0.155)	−0.016 (0.180)	−0.020 (0.180)
8. Working experience	0.008* (0.003)	0.009* (0.003)	0.013** (0.004)	0.014** (0.004)	−0.001 (0.006)	−0.001 (0.006)
9. Activity: cumulative number of past deals of firm *i* in *t-1*	−1.268*** (0.042)	−1.285*** (0.042)	−1.344*** (0.053)	−1.358*** (0.053)	−1.145*** (0.069)	−1.172*** (0.070)
10. Best ranking of firm *i*	0.393*** (0.015)	0.393*** (0.015)	0.386*** (0.020)	0.385*** (0.020)	0.413*** (0.024)	0.412*** (0.024)
11. Firm *i* ranked in the sector of the deal	0.011 (0.132)	0.002 (0.132)	−0.265 (0.199)	−0.281 (0.199)	0.282 (0.180)	0.283 (0.179)
12. Transitivity: having at least a common contact in *t-1*		0.018 (0.019)		0.027 (0.019)		−0.456 (242.06)
13. Deal ties: cumulative number of previous deals between *i* and *j*		0.072*** (0.008)				
14. Deal ties: cumulative number of previous deals between *i* and *j* (different side)				−0.172 (7.737)		0.069*** (0.007)
15. Deal ties: cumulative number of previous deals between *i* and *j* (same side)				0.058*** (0.009)		−0.381 (233.90)
16. Deal ties: total number of years workers from the two firms worked together	0.058*** (0.011)	0.055*** (0.011)	0.073*** (0.011)	0.070*** (0.011)	−6.070 (390.30)	−5.961 (345.40)
17. Best ranking similarity	0.109 (0.109)	0.111 (0.109)	0.639*** (0.142)	0.638*** (0.143)	−0.713*** (0.173)	−0.711*** (0.172)
18. Alumni of the same university	−0.118 (0.126)	−0.128 (0.126)	−0.051 (0.155)	−0.066 (0.155)	−0.229 (0.214)	−0.230 (0.214)
19. Same status of degree	−0.097* (0.048)	−0.094* (0.048)	−0.218*** (0.061)	−0.216*** (0.061)	0.108 (0.080)	0.106 (0.080)
Number of observations	662,855	662,855	662,111	662,111	661,563	661,563

Note: All regressions are estimated with a conditional logistic model with a deal fixed effect: All continuous variables are standardized. Standard errors in parentheses. For some parameters, in italics, the logistic regression algorithm failed to converge. They should be interpreted carefully.
***$p<0.001$; **$p<0.01$; *$p<0.1$.

Table 3   Probability of two firms conducting deals together within the same side[1]

	P (dealing together)		P (dealing together on the same side)		P (dealing together on opposite sides)	
	Model 31	Model 32	Model 33	Model 34	Model 35	Model 36
1. Best ranking of firm i	0.178*** (0.033)	0.175*** (0.033)	–0.135* (0.074)	–0.118 (0.075)	0.015 (0.258)	0.233*** (0.049)
2. Deal ties: cumulative number of previous deals between i and j (same side)	0.154*** (0.032)		0.149*** (0.021)		0.130*** (0.011)	0.050 (0.031)
3. Work ties: total number of years workers from the two firms worked together	0.243* (0.123)		0.037* (0.016)		0.023** (0.008)	–0.100 (0.181)
4. All ties (sum of deal ties and work ties)		0.109*** (0.019)		0.125*** (0.039)		
5. Best ranking × deal ties	–0.084* (0.048)					
6. Best ranking × work ties	–0.012 (0.010)					
7. Best ranking × all ties		–0.018** (0.007)		–0.016 (0.013)		
8. Value of the deal > 50 M × best ranking			0.453*** (0.082)	0.444*** (0.083)		
9. Value of the deal > 50 M × deal ties			–0.069* (0.029)			
10. Value of the deal > 50 M × work ties			–0.025 (0.022)			
11. Value of the deal > 50 M × all ties				–0.056 (0.049)		
12. Value of the deal > 50 M × best ranking × all ties				0.006 (0.015)		
13. Sell side					–2.517*** (0.368)	
14. Sell side × best ranking					0.410*** (0.087)	
15. Sell side × deal ties					–0.081 (0.053)	
16. Sell side × work ties					–0.011 (0.033)	
17. Same role						0.868*** (0.263)
18. Same role × best ranking						–0.130* (0.071)
19. Same role × deal ties						0.067* (0.034)
20. Same role × work ties						0.118 (0.181)
Number of observations	302,906	302,906	161,484	161,484	302,906	136,150

Note: All regressions are estimated with a conditional logistic model with a deal fixed effect. All continuous variables are standardized. Standard errors in parentheses. Other control variables are similar to Table 1, model 13. They yield similar results.
1   Sell side or buy side.
***$p < 0.001$; **$p < 0.01$; *$p < 0.1$.

We apply Model (1) to two different levels of actors. In Tables 1 and 3, we study links between firms and in Table 2, links between individuals. The link $D_{ijd}=1$ will be considered to represent making a deal together overall, on different sides of the deal or on the same side of the deal. Given that the ranking, one of our key independent variables, is defined at the firm level, we will focus mainly on firm-level regressions (Tables 1 and 3). However, because ties between firms derive from ties between individuals, we will check whether the results for ties at the firm level also hold true at the individual level (Table 2).

5   Results

Rankings

First, *league table* rankings appear to be a strong predictor of dealmaking in all tables. We use two variables in order to capture that element: first, the best ranking achieved by a firm in all the rankings from the league tables (Table 1, line 3), and second, the fact of being ranked precisely in the industry (IT, electricity, etc.) to which the deal belongs (Table 1, line 4). The first variable (best ranking) encapsulates the prestige dimension of the ranking; the second (ranking in industry) denotes a specific expertise and know-how.

Both types of rankings are significant. The former, however, has a greater impact. In a context of strong uncertainty about the quality of services provided, public rankings signal trustworthiness (especially to sellers and buyers). Ranked actors might be better at making deals, or their clients might believe they are – or their clients might think that others (such as the other side or the markets) believe they are, and they want to signal that they are setting up a high-quality team.

Through the use of interactions, our regressions also show that rankings count more on the sell side than on the buy side (Model 35, line 14). Securing the deal for the sell side is paramount to the seller, since the quality of the sell side directly impacts the short-term profits (or losses). The buy side may also be impacted when the price of the transaction rises above a certain threshold. However, except for very important deals monitored by the markets, this does not translate into short-term profits as directly as it does for the sell side. At the individual level, we also show that the rankings are more impactful when it comes to connecting two professionals who have different roles (e.g., financial advisor vs. accountant, or banker vs. seller; Model 36, line 18). Uncertainty is higher between different professions than among the same professions. In other terms, one needs to resort to ranking when picking partners in other professions more than when picking partners in one's own profession. Rankings have more import when the

value of the deal is higher than 50 million euros (Models 33 and 34, line 8), showing that reducing uncertainty through the choice of ranked partners is all the more important because the value of the deal is important.

We also investigated other forms of status, such as the size of the firm or the academic degrees of its employees. The size of the firm (measured as the number of employees of that firm involved in all deals) is a strong predictor of dealmaking in all firm models. Nevertheless, it can hardly be considered a pure indicator of status. In contrast, the hierarchy of degrees, although very strong in France (Bourdieu 1989), does not seem to count much, and not in the classical direction (Table 2, lines 1–7). There is a first-order correlation between diploma hierarchy and rankings and between degree hierarchy and the value of the deal. But once we control for rankings, there is no clear impact of the most prestigious schools on the probability of making a deal.

We then investigated whether status similarity counts for setting up deals. For this purpose, our main variable is the similarity of the best rankings achieved between actors i and j (calculated as $-|B_i-B_j|$), while controlling for degree similarity. Ranking similarity clearly favors connection at the firm level (Models 11 to 14, line 12). Ranking similarity is more important within the same side than between sides at the firm level (Models 13 and 14 versus 15 and 16, line 12). As we have shown that rankings count more for constituting the sell side than for the buy side, this leads to some discrepancies between rankings in the sell side and in the buy side.

Ties

We don't know exactly in what order actors in a deal are chosen, or by whom they are chosen. Although sellers (or buyers) formally decide on the constitution of the sell side team (or, respectively, the buy side team), they are advised by financial advisors (or, respectively, by bankers, accountants or lawyers) on whom to choose in order to constitute the team. The actors will therefore advise people they trust because they share a common work or deal experience. In our regressions, connections are another strong predictor of dealmaking. Our two types of ties – work ties (having worked previously together in the same firm) and past deal ties (having worked previously on the same deal together) – contribute significantly and strongly to deal connection both at the firm level (Model 12, lines 6 and 9) and the individual level (Model 22, lines 13 and 16). The effects of both types of ties go in the same direction in the basis model. Through interactions or variation in the definition of the sample, we investigate the conditions that favor the use of personal ties for dealmaking. Hence, work ties favor more dealmaking within the same side of the deal (Model 13, line 9; Model 23, line 16) than between different sides of the deal (Models 15 and 25), and among the same roles on the same side for deal ties at the firm level (Model 35, line 19). These results confirm that work ties and deal ties are a way of establishing trust. First, within the same side of the deal,

you need to cooperate with people you trust, and choosing among former colleagues is a clear way to enforce a high level of trust. Second, repeated collaboration is more likely to foster trust within the same professional arena.

Combining rankings and ties

Rankings and ties (especially work ties) follow the same logic overall. They favor deal-making, especially among different roles on the sell side. But there are some small variations: rankings are used more for high-value trades, while work ties have no link with the value of the trade (and deal ties have a negative link).

Our results confirm the substitution hypothesis. Models 31 and 32 show that while ranking and ties increase the probability of making deals, their combination decreases it (lines 5 and 7). Nevertheless, we cannot confirm through our data that the substitution effect decreases for deals of high value. In Model 34 (line 12), the signs of the parameter do suggest that there is less substitution between trust devices for deals of high value, but unfortunately this is far from being significant. Testing on a bigger sample could help to confirm this phenomenon.

6   Conclusion

Through a mixed-method analysis of the setting of deals in the French M&A sector, our paper sheds light on dealmaking in opaque business-to-business markets. Our paper contributes to existing literature in economic sociology by showing how, in practice, actors combine both socio-technical devices' performing quality and bonding network ties, two phenomena that have generally been disconnected by previous literature. It proves that M&A professionals resort to both personal and impersonal trust devices in order to control risks of opportunism and to make deals. For French M&A, it confirms that rankings contribute to the establishment of a status hierarchy and to its stratification by status levels (Podolny 2010). It shows that the embedded market ties (through long term repetition) shown by Uzzi (1996) and Baker (1990) are frequently past co-working ties (Rider 2012). Moreover, our paper also studies the combination of these two trust devices. The statistical analysis shows some evidence of substitution between ranking and personal ties.

However suggestive these results may be, they suffer from limitations that further research needs to overcome. First, the substitutability of the two trust devices is only weakly confirmed by the data, and we can't prove that this substitution diminishes as perceived risk increases. Second, the results may be due to some unobserved confounding

variables, and a natural experiment would be welcomed in order to more thoroughly establish the true causal impact of the two devices. Third, the precise micro-mechanisms at play in the use of these devices require further elucidation both at a qualitative and a quantitative level. Fourth, this case study, which was limited to French M&A, would greatly benefit from comparison with other case studies of opaque business-to-business markets in different institutional settings.

Nevertheless this study, despite its limitations, allows us to reinterpret the Baker-Uzzi arbitrage (Baker 1990; Baker/Faulkner/Fisher 1998; Uzzi 1996, 1997) of trust versus competitiveness. Firms can avoid the arbitrage between repeating market ties so as to gain trust, and diversify them in order to put some pressure on prices and usual market partners: impersonal trust devices such as rankings enable diversification not to be overly detrimental to service quality. But these last trust devices will come at an extra price and will give ranked firms an important power on the market.

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