

Governance of Financial Services Outsourcing: Managing Misconduct and Third-Party Risks

Law Working Paper N° 417/2018

September 2018

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ECGI Working Paper Series in Law

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Abstract

With financial institutions increasingly outsourcing their activities, they face a record number of fraud and misconduct cases arising from third-party services. We survey financial institutions to better understand which governance mechanisms may improve the monitoring and management of third-party relationships. Overall, our results suggest that there are gaps in traditional governance arrangements. We find that financial institutions rely mainly on internal monitoring to detect fraud and that whistleblowing plays an important role in mitigating misconduct risks. Finally, we report evidence that vendor dependency and product complexity play a pronounced role in delaying termination of agreements.

Keywords: Outsourcing, financial institutions, governance, fraud and misconduct

JEL Classifications: D22, D23, G20, G34

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August 26, 2018

Abstract

With financial institutions increasingly outsourcing their activities, they face a record number of fraud and misconduct cases arising from third-party services. We survey financial institutions to better understand which governance mechanisms may improve the monitoring and management of third-party relationships. Overall, our results suggest that there are gaps in traditional governance arrangements. We find that financial institutions rely mainly on internal monitoring to detect fraud and that whistleblowing plays an important role in mitigating misconduct risks. Finally, we report evidence that vendor dependency and product complexity play a pronounced role in delaying termination of agreements.

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The *views* expressed in this paper are those of the authors and *do not necessarily reflect the views of our employers*.

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1. Introduction

Financial institutions have become highly reliant on outsourcing critical business processes to external service providers. Institutions are increasingly taking advantage of outsourcing to lower costs and acquire higher-quality services to sustain their competitive advantage. The financial services outsourcing market is estimated to be worth \$130 billion and is predicted to grow by an annual rate of 7.46% between 2016 and 2020.¹ Although the growth and expansion of outsourcing in past decades have increased productivity and, thus, benefited institutions, there is also evidence that outsourcing has generated new risks. Some of these risks also stem from the fact that more financial institutions are relying on a small group of vendors. For example, companies outsourcing cybersecurity functions can select from only a small number of third-party suppliers for IT-related tasks.

With the rapid spread of outsourcing in the financial services market, it is essential to establish a governance framework to limit agency problems and manage risk (see, e.g., Williamson (2002) for an overview of the related literature). Prior studies show that the optimal level of reliance on third parties is determined, on the one hand, by the institution's ability to manage the risks associated with outsourced activities and, on the other hand, by cost reduction (Mudambi and Tallman, 2010). However, less is known about the mechanisms used to monitor and detect unobserved violations of contracts and possible misconduct. Indeed, recent IT and data security incidents have revealed the need for additional, more specialized detection methods to supplement the traditional due diligence and governance model (Mitts and Talley, 2018).

¹ Global Back Office Outsourcing Market in Financial Services Sector 2016-2020, May 2016 available at: http://www.researchandmarkets.com/research/x6f9vg/global_bank.

The recent financial crisis exposed the limitations of the internal control and monitoring capabilities of some major financial institutions. Since the crisis, regulators have revised their guidelines for third-party relationships based on a framework that involves service provider selection, contractual terms, ongoing monitoring and termination (OCC, 2013; Federal Reserve, 2013). The premise underlying the revised guidelines is that institutions should strengthen their third-party risk management programs to mitigate the operational and legal risks to the firm. However, prior research raises the question of whether contractual governance alone can successfully manage outsourcing relationships due to contractual complexity (Poppo and Zenger, 2002; Schwartz and Scott, 2003). Of course, contracts contain many control mechanisms that are associated with better outcomes in outsourcing relationships (Choudhury and Sabherwal, 2003). However, there are very few studies on the extent to which financial institutions have implemented measures that have proved sufficient in third-party risk management.

To gain a better understanding of the governance of third-party relationships, we examine the contractual arrangements and governance mechanisms for selecting and managing service providers. For this paper, we canvassed financial institutions themselves on their preferences and beliefs about the potential risks connected with third-party activities and the controls to monitor and manage these risks. By means of a survey, we documented the preferred characteristics of third-party suppliers and analyze the different techniques used to help identify the direct and indirect costs of service providers. In addition, in this paper, we shed light on the broad range of misconduct risks in financial services outsourcing and the methods and processes to maintain an effective fraud risk management program. While the focus here is on the behavior of individual firms, identifying the differences in governance mechanisms and monitoring techniques allows us to provide evidence of the key measures involved in reducing operational risk and protecting against misconduct.

Two views regarding the governance of outsourcing activities are well known. The transaction costs view suggests that firms will always prefer to internalize business activities if the costs of market coordination are higher than the firm's production costs. When facing the decision to outsource, institutions must find a balance between the potential transaction and production costs that arise and the performance level of the outsourced process. One of the assumptions is that firms have the ability to specify and value contingent contracts that specify future contingencies and include ex-ante solutions. The second view leads us to expect that when financial intermediaries use outsourcing to improve the firm's business activities, they are likely to experience agency problems due to asymmetric information issues or misaligned interests. The most well-known methods to stem agency problems include incentivizing vendor performance in line with the institution's interests and monitoring vendor behavior during each phase of the outsourcing process.

To address these two views, we examine the preferences of financial institutions for managing third-party functions. The challenge is to assess the extent to which transaction costs influence management's overall strategy for the projects most likely to be outsourced to a third-party. Yet, due to the complexity of indirect costs, such as training and management of the vendor, we consider the factors that frequently provide the motivation for the outsourcing decision. Specifically, we focus on the cost effectiveness of outsourcing, the extent to which core business processes are outsourced and the specialized capacity of the vendor that is necessary for accomplishing the project.

Our examination of outsourcing can be summarized as follows. Most financial institutions mention IT and data management systems as the most frequently outsourced activities, together with traditional accounting and compliance processes as the next most common outsourced activities. In making the decision to outsource, we find that financial institutions place the most emphasis

on the overall cost and competitive benefits of outsourcing. Moreover, institutions outsource for a variety of other important reasons, including access to specific knowledge, greater focus on core processes, scalability, and increased service-level performance. We show that the outsourced activities that pose the most risk are data management and core business processes. We further examine how and to what extent different types of risk affect the outsourcing relationship. We find that a number of factors, including frequent staff and senior management changes, will contribute to the increased likelihood of fraud.

Next, we study the governance mechanisms of outsourcing and the institution's ability to monitor third parties. We find that firms rely mainly on internal auditing and whistleblowing to uncover fraud in third-party relationships. Firms also use several specific actions to detect fraud: site visits and special investigative team monitoring are examples of techniques that firms employ to monitor fraud risk. Finally, we investigate contractual termination as a response to supplier misconduct. We find that vendor dependency and product complexity play a pronounced role in delaying the termination of the contract. Our results suggest that there are great difficulties associated with replacing a supplier, suggesting that well-designed contingency plans are important.

This paper contributes to the literature on the risks arising from financial services outsourcing. A stream of literature finds that the link between the outsourcing level and risk is well established. Gonzalez et al. (2004) conclude, for example, that excessive dependence on the service provider is a major outsourcing risk. Other studies emphasize the major risks involved in outsourcing complex products or services (E&Y, 2015). We share with these papers that vendor dependency and product complexity can lead to excessive risk in third-party relationships. Our paper also adds to the literature on fraud and misconduct in financial services outsourcing. Coram et al. (2008) find that firms with an internal audit function are more likely to detect fraud than are those without

such a function. Our findings suggest not only that internal monitoring is the most preferred detection mechanism, but also that whistleblowing plays an important role in this context.

The remainder of the paper is structured as follows. Section 2 discusses the theory on outsourcing and explains the theoretical governance mechanisms in outsourcing relationships. In Section 3, we introduce our survey data and look at the role of screening, contract clauses, monitoring and termination in outsourced service contracts. Section 4 examines the ability of financial institutions to monitor third-party vendors by focusing on fraud and misconduct risk and documents the strategies that can detect third parties engaged in such conduct or that can prevent them from doing so. Section 5 concludes.

2. The four components in outsourcing

In this section, we provide a brief review of the theories motivating our analysis of the outsourcing process. We also discuss the main components of the governance of the outsourcing relationship between client and vendor.

2.1 Efficient outsourcing

The concept of outsourcing has been thoroughly studied in the literature. Economists studying the theory of the firm explain that, under the stringent assumption of zero transaction costs, there is no economic rationale for undertaking a business process within the firm versus outsourcing it to a third-party service provider. One of the early insights is that, since transaction costs matter in most practical decisions, the choice to externalize the process depends on the expected costs of outsourcing. From the perspective of rational agents, we would expect that institutions would not only attach costs to the actual outsourcing but would also include indirect costs in the anticipated

risks through a cost-benefit analysis (Coase, 1937). To derive an efficient outcome for the firm, contractual complexity (i.e., contract detail) is a key feature (Williamson, 1985; 1991). On the other hand, the complexity in financial services outsourcing implies that not every possible outcome and all associated risks can be anticipated in outsourcing agreements. Hence, the economic rationale for outsourcing can be understood as an equilibrium between the complexity and the associated costs to outsource a business process.

To align the incentives between financial institutions and service providers, traditional contractual mechanisms are widely adopted to mitigate opportunism (Lacity and Hirschheim, 1993). Firms tend to include a variety of contractual provisions to align the interests of the service provider with those of the financial institution and to reduce the threat of opportunistic behavior. Moreover, contracts can limit the dependence on service providers and discourage information asymmetries (Anderson, 1985). Still, contracts may be incomplete in the sense that not all contingencies can be specified in the contract or verified by third parties. MacLeod (2000) suggests that parties can achieve their goals by drafting provisions that take into account the changing environment. Others suggest that relational governance and networked relationships may be a solution to the problems of complexity and contractual incompleteness (Poppo and Zenger, 2002; Gulati, 1995; Dyer, 1997). An environment of trust, of course, is also central to the design of contracts that mediate the agency problems and create a successful long-term relationship between parties (Logan, 2000; Babin et al., 2017). Nevertheless, these findings raise the question of whether both parties will benefit from relational governance. In a more recent study, Gopal and Koka (2009) show that the benefits exist only if the transferred risks are sufficiently large.

A critical factor is the concept of asset specificity, which influences the complexity of the relationship between the financial institutions and the service providers (Dyer, 1997). The concentration of skills and knowledge offered by a few vendors may leave institutions dependent

on the supplier's expertise, which is often difficult to assess. The prior research shows that firms need to contractually specify these risks in order to achieve an efficient combination of insourcing and outsourcing. The advantage of this approach is that it reduces both the asymmetric information between the service provider and the financial institutions and the associated transaction costs. Such an approach has been shown to be particularly beneficial for long-term contracts with vendors.

Although our emphasis has been on how contractual arrangements may facilitate the performance of third-party suppliers, there is evidence that financial institutions focus mostly on the direct costs to acquire outsourcing activity and are less likely to take indirect costs into consideration (Ang and Straub, 1998). Early studies document that most institutions consider the direct cost advantages more valuable than the level of perceived risks (Barthelemy, 2001; Gewalt, Wullenweber and Weitzel, 2006). From the perspective of cost-effectiveness, it is efficient for an institution to take the certain risks instead of mitigating or eliminating such risks altogether (Stulz, 2015). On the other hand, some studies focus on contract provisions aimed at mitigating risk in order to protect the firms against supplier opportunism (Currie et al., 2008).

At the same time, regulators have investigated the contracts between financial institutions and service providers to shed light on the role of indirect costs. While regulators learn about indirect costs, it is difficult for institutions to specify these costs due to estimation problems. Furthermore, the discovery of indirect costs can be costly. One example is the misalignment of mortgage servicing by banks, which is done by a service provider. As service providers have no stake in the actual performance of the loans, a principle-agent conflict is introduced between the financial institution and the service provider (Levitin and Twomey, 2011). Similarly, financial outsourcing introduces risk in mutual funds. Chen et al. (2013) show that financial institutions that outsource their asset management activities to advisory firms frequently underperform. Other related studies

(e.g., Cumming et al., 2015), however, find no performance differences associated with outsourcing. Debaere and Evans (2014) also establish that, after controlling for selection bias, the performance of outsourced mutual funds show no performance effects. In contrast, the literature on hedge fund outsourcing indicates that problem funds exhibit significant operational risk that is associated with external and internal conflicts of interest (Cumming et al., 2013).

As discussed above, regulators updated their guidelines after the financial collapse of 2007-2009 to ensure that parties have adequate control over the selection of third parties and a comprehensive set of monitoring mechanisms to manage operational risk and ensure business continuity (OCC 2013; Federal Reserve 2013). The following section discusses the four-factor model of third-party risk governance.

2.2. The four-factor governance model

The specific governance structure of financial services outsourcing comprises four factors:² screening; contracting; monitoring and control; and termination. Since agency costs are inherent to the outsourcing relationship, an adequate governance framework is needed to enhance the relationship between the parties. This framework can help attain the goals of the outsourcing project through increased revenue or reduced costs and strengthening the soundness and compliance management system.

² In 2005, the Basel Committee on Banking Supervision released a publication in which the Joint Forum's working group derived a set of principles for financial outsourcing. Similarly, the Federal Reserve Bank of New York released a report in 1999 on how to mitigate outsourcing risk with equivalent principles. On October 30, 2013, the Office of the Comptroller of the Currency provided updated guidance to US financial institutions, introducing a life-cycle approach to third-party risk management and requiring financial institutions to ensure that their risk management processes are commensurate with the level of risk and the complexity of their service provider relationships.

2.2.1 Screening

In this section, we examine the evidence on the selection of third-party vendors. High levels of asymmetric information tend to prevent fair contracting between financial institutions and vendors. In this context, the industry trend is for service providers to offer more knowledge process outsourcing (Currie et al., 2008). The integration of knowledge processes will, in turn, increase the asset specificity. This may not only heighten the risk of outsourcing the activity, but also raise costs due to asymmetric information. To avoid adverse-selection problems, institutions engage in extensive pre-contractual screening to identify higher-quality vendors.

In contrast to the literature on financial contracts, there is little empirical research on vendor selection in financial services outsourcing. Prior work focuses on the costs of outsourcing and the costs associated with screening a supplier. For example, Ang and Straub (1998) find that the information systems (IS) outsourcing decisions of 243 U.S. banks were driven mainly by production costs. While the trend in outsourcing lends support to the view that institutions need to reduce their costs to meet consumer demand for innovative products and better-quality service delivery, the complexity of outsourced processes may induce higher transactional costs (Williamson, 1991). For example, innovations by vendors are typically harder to account for in the screening process. Moreover, the Basel Committee on Banking Supervision (2004) observed that financial institutions justify their outsourcing programs in terms of cost reduction and control of operating costs. With the renewed guidance on third-party risk management, regulators have increased the emphasis on the importance of screening for the integrity and reliance of external suppliers (OCC, 2013).

Financial institutions can also limit information asymmetries by performing rigorous due diligence to evaluate the quality of the supplier's products and the prevalence of internal control

weaknesses (see, e.g., Evans, 2005; Cox and Pilbourne, 2018). Previous work has emphasized the importance of the investment in due diligence in terms of performance payoffs (Brown et al., 2008). The challenge of due diligence involves investing in the scrutiny of the target firm's characteristics and the potential operational, legal and financial risks. Such an evaluation, which may be performed internally or externally, includes benchmarking vendor activities against services delivered within the firm or by alternative service providers. Cumming and Zambelli (2016) show that the time spent and the role played by a particular agent performing the due diligence (i.e., internally, by fund managers) will have a significant effect on the performance of the target firm.

2.2.2 Contracting

Our discussion so far has focused on due diligence and screening of service providers. We now examine the contractual arrangements with suppliers. In theory, contracts are structured to mitigate agency problems that arise in the outsourcing of products and services. Indeed, a long-term relationship with a service provider is considered a highly effective structure for mitigating risks when large, specific investments are made. Supplier performance measures can contribute to reducing uncertainty about supplier behavior (Lacity and Hirschheim, 1993). In addition, contingent contracts with multiple providers of services can mitigate some of the monitoring issues and guard against the risks associated with unknown external contingencies (Basel Committee on Banking Supervision, 2004).

Outsourcing contracts are typically divided into two components. On the one hand, the formal contract is of the plain vanilla form used in most outsourcing relations. On the other hand, the service-level agreement (SLA) serves to benchmark the output from the service provider (Geis, 2009). Larger financial institutions are expected to benefit since they have lower costs for setting

up in-house facilities to manage an outsourcing relationship and can better address the inherent risks in outsourced activities. That said, the SLA is the key mechanism for allocating the risks and incentives and providing coordination between the firm and the service provide. Overall, experience suggests that a well-designed SLA can alleviate some of the risks arising from cost overruns, variable supplier output and opportunism (Klein, 1992).

Additionally, service providers have incentives to standardize their outsourced tasks in order to benefit from economies of scale and lower costs (Ang and Staub, 1997). The inclusion of innovation and incentive clauses can also help deter vendors from engaging in untrustworthy behavior (Jap and Anderson, 2003). The role of these measures is a crucial factor in managing third-party risk. However, until recently, there has been only limited evidence of their usage as best practice in outsourcing contracts.

While the focus on a variety of contractual methods is important for managing outsourcing relationships, the evidence shows that there are other arrangements, besides contractual mechanisms, that are relevant to managing vendor opportunism (Bahli and Rivard, 2003). For example, Schlosser and Wagner (2011) find evidence that the governance of the outsourcing relationship is unrelated to contractual mechanisms. Experience shows that the service provider's performance is affected mainly by the quality of the outsourcing relation. In particular, Bapna et al. (2010) find—from a sample of 700 large IT outsourcing contracts during the period 1989-2009—that the likelihood of failure is higher in the presence of intermediaries who both help define the scope of the contract and search for the appropriate service provider. Overall, the specific characteristics of the outsourcing relationship may call for a variety and range of relationship management and governance structures to create an effective and reliable transactional relationship with third-party suppliers.

2.2.3 Monitoring

As we've seen, a singular focus on complex contracts may play too limited a role to eliminate agency conflicts connected with outsourcing. Previous work has long recognized the uses of governance mechanisms to manage and expose third-party risks. Monitoring relates to the actual capacity of financial institutions to benchmark their outsourced activities. Given the increasing complexity and risk of third-party relationships, senior management's monitoring of third-party operations is considered of major importance for large banks (Gewald et al., 2006). However, the authority and accountability of institutions to monitor these risks depends on the incentives and actual capacity of firms to perform these functions. Empirical evidence confirms that the quantification of risk assessment can substantially improve matters.

To be sure, recent research finds that some financial institutions might be less able to manage, let alone exert influence over, the delivery of complex outsourced services (Krivin et al., 2013). There are several possible explanations for the difficulties of managing third-party suppliers. First, this seems to be more likely in cases where there are multiple tasks and objectives in an outsourcing agreement. For example, Fitoussi and Gurbaxani (2012), explicitly testing outsourcing contracts with multiple objectives and varying measurement costs, find that as the number of performance measures increases, the more likely it is that satisfaction with the outcome will decrease. Second, financial institutions may be less able to improve their monitoring to the extent that there are many performance measurements that are difficult to benchmark. Third, the costs associated with the monitoring of complex SLAs can deter institutions from engaging in detailed monitoring. This presumably helps to explain why many contracts are structured to rely solely on cost-related metrics to achieve their main outsourcing goals.

2.2.4 Termination

Termination is an important mechanism to limit potential hold-up problems. As we noted above, the outsourcing relationship may, due to asset specificity, lead a hold-up situation between the financial institution and service provider. The literature offers two perspectives on how to mitigate this risk. First, the hold-up problem can be addressed by ex-ante contracting, so that extensive contracting serves to curb potential threats and align interests. The alternative view, expressed by incomplete contract theory, attempts to mitigate the hold-up problem by assigning the rights of the outsourcing relationship ex post to exclude opportunistic behavior (Grossman and Hart, 1986; Segal, 1999; Susarla et al., 2009). Susarla et al. (2009) propose that a hold-up problem may arise due to the complexity of the outsourcing relationship and contractual incompleteness. Other studies have offered different insights into the source of the hold-up problem. For example, Whitten, Chakrabarty and Wakefield (2010) find that high switching costs of service providers decrease the willingness of the financial institution to acquire a new service provider and, therefore, play a crucial role in resolving hold-up problems. High switching costs will put serious pressure on firms to continue the outsourcing relationship rather than to terminate it in favor of other alternatives.

A crucial consideration influencing switching costs is the duration of the outsourcing contract. On the one hand, Jiang et al. (2008) argue that shortening the duration of the contract leads to better supplier monitoring and, hence, minimizes the likelihood of a hold-up problem. With short-term contracts, institutions can incentivize suppliers by contract renewal since suppliers may rely on renewal due to their initial investment costs. Kern et al. (2002) also explain that hold-up problems are less likely to occur in competitive markets. Service providers often enter into contracts below their profit margin, and, consequently, performance may suffer due to the provider's incapacity to innovate his services. As a result, both parties have incentives to terminate, which effectively solves the hold-up problem. As noted, competitive markets also promote contracts with multiple

service providers, reducing potential hold-up problems. While such agreements could discourage vendor participation, the feasibility of such contracts is influenced mainly by the threat of termination and the superior bargaining power of financial institutions (Costello, 2013).

2.3 Misconduct in outsourcing and the ability of financial institutions to monitor

Regulators have always needed to focus on the role of misconduct in financial markets. For example, a number of large banks, such as Wells Fargo and J.P. Morgan, have been involved in high-profile misconduct cases for credit card and consumer loan fraud and money laundering. A central theme motivating regulators is that financial institutions are particularly prone to abuse that often results in uncertainty, losses to customers and investors, as well as potential shocks to the market (FCA, 2013). One inherent challenge for regulators is the difficulty of determining the precise level of misconduct in financial markets (Carletti, 2017). Addressing this challenge, Dyck et al. (2014) estimate that, each year, about 15% of companies are engaged in fraud.

What about penalties to deter misconduct? Prior research shows that between 2009 and 2016, the cost of fines and settlements by banks in the US amounted to about \$180 billion, while in Europe, regulators collected \$20 billion in fines (European Parliament, 2017). In terms of the impact, an assessment of conduct risk losses for 51 EU-wide banks carried out in 2016 reveals that the impact of the fines for misconduct would be amount to €71B over a three-year period (ESRB, 2017). This research shows that, although the penalties for fraud are substantial, they are unlikely to reduce the occurrence of fraud.

Theories on the role of regulation have focused on the deterrent effect of fines and the reputational damage from an investigation (Karpoff et al., 2008; Murphy et al, 2014; Armour et al., 2017). Besides the associated fines for misconduct, criminal penalties target individuals who have acted

dishonestly toward investors (Coffee, 2007; Jackson and Roe, 2009). Following the financial crisis, regulators have shifted their emphasis to deal with misconduct issues that may result, for example, from misaligned incentives (IOSCO, 2017).

Market misconduct is widely considered one of the underlying factors responsible for the recent financial crisis of 2007-2009. Post-crisis reforms have focused on three main areas (Carletti, 2017). First, on the conduct side, guidelines for effective management processes were designed to provide a corrective mechanism to limit the opportunities for misconduct (FSB, 2018). Second, regulators have sought to address enforcement deficiencies by imposing a variety of sanctioning devices, enforcement techniques, and penalties (Götz and Tröger, 2017). Third, because of the misconduct resulting from the outsourcing of payment and settlement systems, cyber-security, and customer data management, there have been ongoing efforts to step up coordination between different regulators and supervisors, making it easier to manage information-processing and monitoring for the detection of fraud and misconduct (BIS, 2018).

Note that substantial benefits arise from the implementation of better monitoring and enforcement practices to deter fraud and misconduct (Kedia and Rajgopal, 2011). Indeed, there is evidence that high-level monitoring can lead to a 27% lower probability of banks committing misconduct and a 35% higher probability of detection, compared to institutions in which boards have little or no power to prevent misconduct (Nguyen et al., 2016).

3. The interaction between contracting and monitoring

To date, little is known about the governance of outsourcing activities within financial institutions. In the absence of data on governance mechanisms at the institutional level, we use a survey to understand the variety of practices that financial institutions use to monitor sub-contractors'

performance. In this section, we introduce the summary statistics of the dataset. To more accurately assess the fraud risk management framework of institutions, we analyze the most common services outsourced, types of fraud risk, fraud prevention measures and range of proactive fraud detection mechanisms.

3.1 Characterization of financial institutions

The dataset used in this paper was obtained from a survey of financial institutions taken in 2017. Our target group of respondents was a selection of employees at financial institutions and financial services firms. The survey focused on addressing the governance mechanism in three sections: financial outsourcing, monitoring, and misconduct in outsourcing. The survey questions were designed to test our hypotheses. The phrasing used in the survey was structured to avoid financial jargon, except if the questions addressed specific outsourcing issues or misconduct-related questions.

Table 1 reports the characteristics of our sample with the variables firm size and type.

Table 1: Sample characteristics

This table provides information about firm size and type in our survey of 20 respondents. Smaller institutions make up around 50% of the sample; the remaining 50% is made up of medium-sized to large financial institutions.

Firm size	Total
Less than €100M	9
Between €100M and €500M	4
Between €500M and €1B	6
Over €1B	1
Firm Type	Total
Asset managers, Banks, Insurance institutions	11
Financial service firm	9

Our sample contains two important types of financial institutions: financial services firms and financial management institutions such as asset managers, insurance and banks. The financial services and investment management firms both acquire and deliver financial outsourcing services. This setup allows us to view the outsourcing relationship from two perspectives.

To verify the degree of outsourcing, we asked respondents about the level of outsourcing in specific activities. Table 2 shows that most firms in our sample have outsourced both core and non-core business activities. Important core activities that are likely to be outsourced include: IT-services, back office related tasks, and accounting. Some of these core processes are associated with the risk management efforts of financial institutions. Other core business processes, such as research, data management, and payment processes, are less likely to be sourced from external suppliers. Table 2 shows that respondents report that they use a broad range of vendors for their day-to-day operations. Likewise, facilities management is generally outsourced, reflecting an increasing trend over the last few years.

Table 2: Outsourced financial activities

This table reports the percentage of activities that are outsourced among the financial institutions in our sample and the average score of the response. The second part of the table includes respondents' views on future outsourcing activities.

Activity	No outsourcing at all	Few minor activities	Most activities, except crucial components	All components are outsourced	Average score
Research	31%	46%	23%	0%	1.92
Data Management	29%	41%	18%	12%	2.12
IT systems	5%	21%	68%	5%	2.74
Recruitment	33%	44%	22%	0%	1.89
Compliance & Legal	32%	42%	21%	5%	2.00
Accounting	15%	50%	30%	5%	2.25
Payment processes	44%	33%	11%	11%	1.89
Facility management	27%	33%	13%	27%	2.40
Client Screening	40%	27%	20%	13%	2.07
Back office	35%	29%	29%	6%	2.06

	Outsourcing needed	Less outsourcing needed	Optimal level achieved	More outsourcing needed	Average Score
For Core Business processes	10%	20%	45%	25%	2.85
For Non-Core Business processes	0%	6%	12%	82%	3.76

Table 2 shows each type of outsourced activity, the percentage that were not outsourced, and the percentage outsourced that involved all components or most activities, except for crucial components. Our results show that financial institutions are willing to further outsource core business activities. As can be seen, non-core business activities receive a higher average score than the core business score, and both average scores are higher than the average for the current level of outsourcing.

Our survey extends an earlier study by the European Central Bank (2004), which showed that banks rarely outsourced their core business processes. However, given the time elapsed since the ECB study, we expect that banks would be willing to outsource more of their core activities because of cash-flow pressures. This is contrary to the KPMG 2015/2016 survey of banking systems, which reports that usage of in-house built core banking systems remains high. In terms of outsourcing a specific activity, a majority of institutions (78%) indicate that they would prefer to hire a supplier than to create a bespoke application in-house.

To further dissect the hypothesis of why institutions would require more outsourcing, we asked respondents about their reasons for outsourcing. Table 3 shows that cost remains one of the most important reasons for a firm to outsource an activity. Not surprisingly, most respondents indicated that outsourcing can also enhance growth in terms of both knowledge acquisition and an increased focus on the core business. These results show support for the literature on information

system outsourcing, which views outsourcing as an opportunity to improve current levels of operations (Gonzalez et al., 2010).

Table 3: Reasons for outsourcing

In Table 3, we look at the reasons that financial institutions outsource. To get an overall ranking, we asked respondents to identify their top four reasons for outsourcing.

Rank	Reason
1.	Cost effectiveness of outsourcing
2.	Requirement of specific knowledge
3.	Focus on core business
4.	Scalability
5.	Improves service level
6.	Access to intellectual capital
7.	Internationalization
8.	Innovation

As noted, the underlying premise of outsourcing is that it is a cost-cutting mechanism. At this point, one might, of course, ask: does this include both the direct and indirect costs (latest technology, best talent and ability to refocus) associated with outsourcing the activity? (Kremic et al., 2006) To be sure, while we were not able to disentangle direct from indirect costs, there is some evidence that firms, in general, are less able to fully capture indirect costs (Ang and Straub, 1998). Our results also show that firms rank the requirement of specific knowledge and the focus on core business highly. From an efficiency perspective, these results are unsurprising since the acquisition of specific knowledge may be costly to insource or to develop and, hence, may cause a divergence in their business activities. Alternatively, this result raises a number of questions from a monitoring perspective. If the level of the services outsourced depends on the institution's ability to monitor, it is reasonable to assume that the service provider may be more likely to engage in misconduct.

Finally, what other factors are likely to influence the outsourcing decision? Scalability and improved service levels also appear to be important drivers. As expected, access to intellectual capital, internationalization, and innovation have little impact on the outsourcing decisions of

financial institutions. Overall, these results portray a landscape in which institutions require specific knowledge of service providers, with a focus on the cost-efficient integration of the activities in their business model.

3.3 Risks in outsourcing services

We have established so far that institutions are likely to increase their outsourcing activity. To assess the specific risks in the outsourcing relationship, we asked respondents to identify the risk of outsourcing specific functions. The questionnaire asked respondents about the outsourcing risk in their sector generally and not necessarily at their own institution. Table 4 reports on the four categories of risk for each area.

Table 4: Areas of potential risks in financial institutions

This table reports the respondents' assessment of outsourcing risk within their financial sector.

Areas	No risk at all	Some risk; not to crucial components	Moderate risk; also crucial components	Risky; critical components	Average Score
Core business processes	6%	33%	11%	50%	3.06
Data management	0%	16%	32%	53%	3.37
Cloud services	0%	28%	44%	28%	3.00
Compliance and legal	0%	26%	53%	21%	2.95
Research & strategic planning	5%	55%	30%	10%	2.45

Core business processes receive the most attention, as managers believe that misconduct in any of these crucial components is more likely to damage the institution's reputation and profitability. Another key area is data management. As we show above, data management is one of the leading areas outsourced, and managers consider it slightly more risky than core business processes. Surprisingly, the table shows that Cloud services, which are closely related to data management, are perceived as less risky. This result may be due simply to the slow adoption of Cloud services by financial institutions. We also find that areas more closely related to long-term

profitability, such as research and strategic planning, are considered less risky for financial institutions to outsource.

Our interpretation of the results raises a question about managers' salient beliefs about financial services outsourcing. There is evidence that the perceived benefits have greater impact than the perceived risks on the decision to outsource. For example, Gewald and Dibbern (2009) surveyed the 200 largest German banks and found that the benefit of outsourcing is that it allows banks to refocus on their core competences. However, this is not the only possible explanation. Historical factors matter, as they have an impact on future outsourcing decisions of business processes, which we indeed find in some of our responses.

We next study the types of risks in outsourcing relationships. Table 5 shows the risks identified at the service provider and the consequences for institutions. As can be seen, multiple factors can cause risk at the service provider. Frequent staff changes and senior or middle management turnover are more likely to be important sources of fraud and misconduct. We also find support for earlier studies showing that product complexity of core services and processes is a major risk in business processes outsourcing (E&Y, 2015).

Table 5: Risks in the outsourcing relationship

This table reports the respondents' views on the risk associated with the service providers.

	Not at all	Not so likely	Likely	Strongly agree	Average Score
<u>Risk at service provider</u>					
Frequent changes in staff at vendor	0%	41%	47%	12%	2.71
Senior or middle management at vendor	6%	19%	56%	19%	2.88
Complexity of product	12%	35%	41%	12%	2.53
<u>Risk at institutions</u>					
Increased dependency on vendor	0%	29%	47%	24%	2.94
Monitoring ability of the service level agreement	6%	29%	29%	35%	2.94

The results in the lower section of Table 5 show that increased dependency on an external service provider can lead to additional risk. However, the reliance on third parties, such as IT vendors, may not have a negative impact on all institutions. As noted above, there are good business reasons that some financial institutions seek to strengthen third-party relationships—such as keeping up with technology and other competitive innovations. For example, traditional financial institutions are continuing to outsource their credit scoring, risk management and customer services to financial service providers to increase their technical capabilities and innovative client services (BIS, 2018).

Conversely, the increasing reliance on suppliers for their innovative capacities raises possible strategic threats that could damage the financial institution’s reputation and profitability. As noted, financial institutions with inadequate monitoring systems are considered more prone to fraud and misconduct risks. Equally, close monitoring of the service-level agreement lowers the ability of service providers to engage in fraud or misconduct. In addition, prior work shows that a comprehensive risk management program—which holds the institution’s board and senior management ultimately responsible for managing the conduct of service providers—is likely to have a measurable impact on the ability of the firm to effectively deter and detect misconduct. Thus, if we want to mitigate risk, we should focus on those mechanisms that are likely to detect fraud in these relationships.

4. Governance mechanisms to detect misconduct in financial outsourcing

As discussed in the previous section, theory suggests that institutions implement certain governance mechanisms to reduce the likelihood of misconduct. To empirically determine the extent to which governance mechanisms are created, we focus on the techniques used in third-party risk management.

4.1 Screening and detection

We start by exploring the types of fraud that arise in the financial sector to understand the impact of vendor fraud relative to other types of fraud. Table 6 reports the responses on the types of fraud that emerge in the financial industry.

Table 6: Type of frauds that occurred in the financial sector

This table reports respondents' awareness of fraud and misconduct in their financial sector.

	Aware	Not Aware
Physical assets	35%	65%
Vendor, supplier or procurement fraud	63%	38%
Information theft	53%	47%
Management conflict of interest	67%	33%
Regulatory or compliance breach	73%	27%
Corruption and bribery	47%	53%
Internal financial fraud	50%	50%
Misappropriation of company funds	40%	60%
Intellectual Property theft	36%	64%
Market collusion	33%	67%

Our survey indicates that vendor, supplier and procurement fraud are the leading types in the financial services industry. Prior evidence shows that managers are aware of the type of fraud involving the theft of personal, security and credit card information, as in the 2006 case of unauthorized transfers from customer accounts by HSBC Electronic Data Processing India and the bank fraud committed by employees of Mphasis Ltd., involving the theft of Citibank customer accounts (Ramasastry, 2006).

We next examine whether a particular governance mechanism has the potential to uncover misconduct. Table 7 shows that institutions rely on various methods to discover misconduct in outsourcing relationships.

Table 7: Methods to uncover misconduct

This table reports the respondents' views on their firms' method to uncover misconduct.

	Not at all	Not so likely	Likely	Strongly agree	Don't know	Average score
<u>General method</u>						
Whistleblower	0%	20%	40%	30%	10%	3.11
External audit	0%	20%	45%	25%	10%	3.06
Internal audit	0%	25%	40%	30%	5%	3.05
Internal monitoring	5%	0%	60%	30%	5%	3.21
<u>Specific actions</u>						
Onsite visits	0%	35%	53%	12%	0%	2.76
Special dedicated team monitoring SLA	0%	18%	47%	35%	0%	3.18
Issues in the outsourcing relation lead to reevaluation of the entire service level of the vendor	0%	13%	73%	13%	0%	3.00

Despite the differences in views on detection mechanisms, respondents rated internal monitoring as the single most effective mechanism to uncover misconduct. This is followed by whistleblowing, which is perceived as an effective fraud mitigation strategy. We can compare these findings to the study of Ernst and Young (2017), which found that 56% of employees surveyed indicated that they were uncomfortable reporting their concerns of possible violations or suspected wrongdoing. To date, little data are available on employees' incentives to use whistleblowing hotlines to identify fraud (Lee and Xiao, 2018). Nonetheless, we show that the respondents are concerned about potential reputational consequences and social pressures that weaken their incentives to engage in whistleblowing (Dyck et al., 2010). We interpret our finding as evidence of the reluctance of employees to expose misconduct and of the need for firms to have an effective procedure to increase incentives and support for whistleblowing. Interestingly, there are significant differences across industries in how informed employees are about their firm's whistleblowing hotline. In non-financial firms, the level is very low, with only 21% aware of the internal communication channel in the firm.

Next, we find that external audit scores are similar to those of internal audit for revealing misconduct in the outsourcing agreement. This result is counter to what is typically seen in the

accounting literature (Corum et al., 2008), in which firms that have an internal audit function are more likely to detect fraud than firms who outsource this function. Moreover, it is well known that external auditors pay attention only to financial reporting fraud (Dezoort and Harrison, 2007). This suggests that an internal audit department, supported by other governance measures, is likely to be more effective in responding to fraud in outsourcing relationships. While regulations such as the Sarbanes-Oxley Act have also prohibited outsourcing certain internal audits to third-party service providers, it is not clear whether these restrictions have helped lower the risk of fraud (Prawitt et al., 2009). On the other hand, if the outsourced service or product is complex, this negatively effects the probability of detection overall.

To shed light on specific actions of institutions to reduce misconduct in outsourcing, we also found that onsite visits and special dedicated teams are effective methods for uncovering misconduct. This confirms our earlier analysis in Table 5, which showed a link between risk and the level of monitoring. Yet onsite visits receive less attention from institutions than do special dedicated teams. Significantly, our respondents expect that their institutions will fully evaluate, in light of the firm's contractual objectives, the conduct of the service provider in case of potential issues. Consistent with the previous literature, we find evidence that management will take action against the service provider when the special dedicated team detects misconduct.

So far, we have looked at the measures that financial institutions employ to detect fraud. Next, we address the issue of termination in the case of vendor misconduct. Having established a relationship with a service provider to develop or acquire complex services, financial firms face significant challenges in arranging a contract with a new vendor. To limit this risk, firms are required to have a contingency plan to mitigate the risk in case of vendor termination and to ensure the transition to a new supplier (OCC, 2013).

Table 8 shows that a large number of respondents are willing to terminate and replace a high-risk service provider. However, the dispersion regarding the variable of the reevaluation of the service provider in the case of misconduct is much larger than in Table 7.

Table 8: Termination in case of misconduct

This table reports the actions that firms are willing to undertake when there is misconduct.

	Not at all	Not so likely	Likely	Strongly agree	Average Score
<u>Actions</u>					
Replace vendor with a competitor	0%	12%	35%	53%	3.41
<u>Complicating factors in termination</u>					
Complex outsourcing agreements	6%	29%	53%	12%	2.71
Complexity of product	0%	33%	60%	7%	2.73
Dependency on the outsourcing vendor	0%	27%	53%	20%	2.93

Table 8 indicates that multiple factors tend to dissuade the firm from opting for termination. A major factor is supplier dependency. For example, this may occur in cases in which a supplier provides an essential function or a network of services that can lead to supplier dependency. A second factor is the effect of product complexity, which may result in vendors taking advantage of the inconvenience of the firm moving to another supplier. Third, leaving one supplier and switching to a new service provider also involve both high monetary and non-monetary costs, which play a large role in the firm reconsidering its termination options. This is why firms more often seek a partial termination or renegotiate contract terms and personnel (Kimball, 2010).

5. Conclusion

In this paper, we examine the governance mechanisms of third-party relationships in financial institutions. Using survey data on institutions' outsourcing preferences, we study the key phases of outsourcing in both the governance framework and the externalities of the outsourcing relationship, such as misconduct and fraud. In line with the literature, we find that financial institutions outsource a substantial number of processes to third-party vendors. We find that cost

is the key factor influencing the decision to outsource. There is also evidence that the requirement of specific knowledge and the focus on core business processes provide incentives for the firm to outsource. While this constitutes a higher level of risk for the institutions, our survey confirms that institutions indeed attach higher risk to outsourcing core business processes and data management activities.

To investigate the ability to monitor the financial institution's outsourcing relationships, our empirical investigation also looks at the types of fraud and misconduct risk in the financial services sector. We find that procurement vendor and supplier fraud is one of the most common forms of misconduct within financial institutions. Our evidence suggests that third-party risk is related to frequent staff and senior management changes at the service provider. However, financial institutions also employ various governance mechanisms to detect fraud and misconduct. Our evidence is consistent with firms employing a variety of governance mechanisms, some more promising than others, to maximize the chance of detecting misconduct. In terms of general methods, institutions reveal that external auditing is as likely to detect misconduct as internal audits. In addition, we also find that whistleblowing is a relevant measure to control misconduct. Overall, we find that the weakness in monitoring third parties is associated with contractual complexity that prevents firms from detecting non-compliance and misconduct by the service provider.

In sum, our analysis sheds light on the importance of third-party relationships regarding the risk of misconduct and fraud. This paper contributes to the growing literature on the role played by corporate governance mechanisms in addressing operational risks in financial institutions. Our insights suggest that, as the outsourced activities have become more complex and sophisticated, conventional formal measures may prove ineffective in mitigating major risks, and traditional measures of monitoring and control are unlikely to deter and detect misconduct. Our research

further suggests that monitoring of third-party relationships will remain crucial for financial institutions. The establishment of a strong corporate governance model is likely the most effective way to monitor to third-party performance and hinder misconduct.

References

- Anderson E. (1985), "The Salesperson as Outside Agent or Employee: A Transaction Cost Perspective," *Management Science* 4, 234-254.
- Ang, S. and Straub, D. W. (1998), "Production and transaction economies and IS outsourcing: A study of the US banking industry," *MIS Quarterly* 22(4), 53-55.
- Armour, J., Mayer, C. and Polo, A. (2017), "Regulatory Sanctions and Reputational Damage in Financial Markets," *Journal of Financial and Quantitative Analysis* 52(2), 1429-1448.
- Babin, R., Bates, K. and Sohal, S. (2017), "The Role of Trust in Outsourcing: More Important Than the Contract," *Journal of Strategic Contract and Negotiation* (3)1, 38-46.
- Bahli, B. and S. Rivard (2003), "The Information Technology Outsourcing Risk: a Transaction Cost and Agency theory-based Perspective," *Journal of Information Technology* 18(3), 211-221.
- Bapna, R., Gupta, A., Ray, G. and Singh, S. (2010), "Analyzing IT Outsourcing Contract Outcomes: The Role of Intermediaries," In *11th International Conference on Web Information System Engineering*.
- Barthelemy, J. (2001), "The Hidden Costs of IT Outsourcing," *MIT Sloan Management Review* 42(3), 60-69.
- Basel Committee on Banking Supervision (2004), "The Joint Forum: Outsourcing in Financial Services."
- Basel Committee on Banking Supervision (2018), "Sound Practices: Implications of FinTech Development for Banks and Bank Supervisors."
- Board of Governors of the Federal Reserve System (2013), Guidance on Managing Outsourcing Risk.
- Brown, S., Goetzmann, W., Liang, B. and Schwarz, C. (2008), "Mandatory Disclosure and Operational Risk: Evidence from Hedge Fund Registration," *Journal of Finance* 63(3), 2785-2815.
- Carletti, E. (2017), "Fines for misconduct in the banking sector: what is the situation in the EU?", "In-depth Analysis for the European Parliament", PE 587.402.
- Chen, J., Hong, H., Jiang, W. And Kubik, J. D. (2013), "Outsourcing Mutual Fund Management: Firm Boundaries, Incentives, and Performance," *Journal of Finance* 68(2), 523-558.

- Choudhury, V. and Sabherwal, S. (2003), "Portfolios of Control in Outsourced Software Development Projects," *Information Systems Research* 14(3), 291-314.
- Coase, R. H. (1937), "The Nature of the Firm," *Economia* 4(16), 386-405.
- Coffee, J.C., Jr. (2007), "Law and the Market: The Impact of Enforcement," *University of Pennsylvania Law Review* 156(2), 230-311.
- Corum, P., Ferguson, C. and Moroney, R. (2008), "Internal Audit, Alternative Internal Audit Structures and Level of Misappropriation of Assets Fraud," *Accounting and Finance* 48(4), 543-59.
- Costello, A.M. (2013), "Mitigating Incentive Conflicts in Inter-Firm Relationships: Evidence from Long-Term Supply Contracts," *Journal of Accounting and Economics* 56(1), 19-39.
- Cox, N. and Pilbourne, J. (2018), "Outsourcing Critical Financial Systems Operations," *Journal of Business Continuity and Energy Planning* 11(3), 202-210
- Cumming, D., N. Dai, and S.A. Johan (2013), *Hedge Fund Structure, Regulation, and Performance around the World*, Oxford University Press, New York.
- Cumming, D.J. and Zambelli, S. (2016), "Due Diligence and Investee Performance," *European Finance Management* 23(2), 211-253.
- Cumming, D.J., Schweinbacher and Zhan, F. (2015), "The Scope of International Mutual Fund Outsourcing: Fees, Performance and Risks," *Journal of International Financial Markets, Institutions and Money* 38, 185-199.
- Currie W., Michell, V. and Abanish, A. (2008), "Knowledge Process Outsourcing in Financial Services: The Vendor Perspective," *European Management Journal* 26(2), 94-104.
- Debaere, P. M. and Evans, R. B. (2014), "Outsourcing vs. Integration in the Mutual Fund Industry: An Incomplete Contracting Perspective", Working Paper.
- DeZoort, T., and Harrision, P. (2007), "The Effects of Fraud Type and Accountability Pressure on Auditors Fraud Detection Responsibility and Brainstorming Performance," Working Paper.
- Dyck, A., Morse, A. and Zingales, L. (2010), "Who Blows the Whistle on Corporate Fraud?," *Journal of Finance* 65(6), 2213-2253.
- Dyck, A., Morse, A. and Zingales, L. (2014), "How Pervasive is Corporate Fraud?," *Working Paper*.
- Dyer, J. H. (1997), "Effective Interim Collaboration: How Firms Minimize Transaction Costs and Maximise Transaction Value," *Strategic Management Journal* 18(7), 535–556.

Ernst and Young (2015), *Outsourcing in Europe: An in-depth Review of Drivers, Risks and Trends in the European Outsourcing Market*, New York: Ernst and Young.

EUROPEAN CENTRAL BANK (2004), "Report On EU Banking Structures."

EUROPEAN SYSTEMIC RISK BOARD (2015), "Report on Misconduct Risk in the Banking Sector."

European Parliament (2017), "Briefing: Fines for Misconduct in the Banking Sector—What is the Situation in the EU?"

Evans, R. (2005), "Outsourcing: the Regulatory Challenge for Financial Institutions," *Journal of International Compliance* 6(3), 52-57.

Federal Deposit Insurance Corporation (2017), Compliance Examination Manual: Third Party Risks.

Federal Reserve Bank of New York (1999), Outsourcing Financial Services Activities: Industry Practices to Mitigate Risks.

Financial Conduct Authority (2013), FCA Risk Outlook 2013.

Financial Stability Board (2018), Strengthening Governance Frameworks to Mitigate Misconduct Risk.

Fitoussi, D. and Gurbaxani, V. (2012), "Outsourcing Contracts and Performance Measurement," *Information Systems Research* 23(1), 129-143.

Geis, G. S. (2009), "The Space Between Markets and Hierarchies," *Virginia Law Review* 95, 99–153.

Gewald, H. and Dibbern, J. (2009), "Risks and benefits of business process outsourcing: A study of transaction services in the German banking industry," *Information & Management* 46(4), 249-257.

Gewald, H. and Hinz, D. (2004), "A Framework for Classifying the Operational Risks of Outsourcing - Integrating Risks from Systems, Processes, People and External Events within the Banking Industry," In PACIS 2004 Proceedings.

Gewald, H., Wüllenweber, K. and Weitzel, T. (2006) "The Influence of Perceived Risks on Banking Managers' Intention to Outsource Business Processes - A Study of the German Banking and finance Industry," *Journal of Electronic Commerce Research* 7(2), 78-96.

Gonzalez, R., Gasco, J., and Llopis, J. (2010), "Information systems outsourcing reasons and risks: a new assessment," *Industrial Management & Data Systems* 110(2), 284-303.

- Gopal, A. and Koka, B. R. (2009), "When Do Vendors Benefit from Relational Governance? Contracts, Relational Governance and Vendor Profitability in Software Development Outsourcing," In *ICIS 2009 Proceedings*.
- Götz, M.R. and Tröger, T.H. (2017), "Fines for Misconduct in the Banking Sector—What is the Situation in the EU?," In-Depth Analysis for the European Parliament, PE 587.401.
- Grossman S.J. and Hart, O.D. (1986), "The Costs and Benefits of Ownership: a Theory of Vertical Integration", *Journal of Political Economy* 94(4), 691-719.
- Gulati, R. (1995), "Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choice in Alliances," *Academy of Management Journal* 38(1), 85-112.
- Hall, J. A. and Liedtka S.L. (2007), "The Sarbanes-Oxley Act: implications for large-scale IT outsourcing," *Communications of The Academy* 50(3), 95-100.
- Hart, O. D. and Holmström, B. (1987), "The Theory of Contracts," in *Advances in Economic Theory: Fifth World Congress*," T.R.Bewley (ed.), Cambridge University Press, Cambridge.
- IOSCO (2017), IOSCO Task Force Report on Wholesale Market Misconduct.
- Jackson, H. and Roe, M. (2009), "Public and Private Enforcement of Securities Law: Resource-Based Evidence," *Journal of Financial Economics* 93(2), 207-238.
- Jap, S.D., and Anderson, E. (2003), "Safeguarding Interorganizational Performance and Continuity Under Ex Post Opportunism," *Management Science* 49(12), 1684-1701.
- Jensen, M. C. and Meckling, W.H. (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics* 3(4), 305–360.
- Jiang, B., T. Yao, and B. Feng (2008), "Valuate Outsourcing Contracts from Vendors' Perspective: A Real Options Approach", *Decision Sciences* 39(3), 383-405.
- Karpoff, J. M., Lee, D.S., and Martin, G.S. (2008), "The Consequences to Managers for Financial Misrepresentation," *Journal of Financial Economics* 88(2), 193-215.
- Kedia, S. and Rajgopal, S. (2011), "Does the SEC's Enforcement Preferences Affect Corporate Misconduct," *Journal of Accounting and Finance* 51(3), 259-278.
- Kern, T. and Blois, K. (2002), "Norm Development in Outsourcing Relationships," *Journal of Information Technology* 17(1), 33-42.

- Kern, T., Willcocks, L.P. and van Heck, E. (2002), "The Winner's Curse in IT Outsourcing: Strategies for Avoiding Relational Trauma," *California Management Review* 44(2), 47-69.
- Kimball, G. (2010), *Outsourcing Agreement, A Practical Guide*, Oxford University Press, Oxford.
- Klein, B. (1992), "Contracts and Incentives," in L. Werin and H. Wijkander (eds.), *Contract Economics*, Basil Blackwell, Oxford.
- KPMG (2016), *Banking Systems Survey 2015/2016: Technology challenges for Dutch banks in the digital era*, KPMG, London.
- Kremic, T., Romic, W.O. and Tukul, O. (2006), "Outsourcing Decision Support: A Survey of Benefits, Risks, and Decision Factors," *Supply Chain Management* 11(2) 467-482.
- Lacity, M.C. and Hirschheim, R.A. (1993), *Information Systems Outsourcing; Myths, Metaphors, and Realities*, John Wiley & Sons, Inc. New York, NY, USA
- Lee, G. and Xiao, X. (2018), "Whistleblowing on Accounting-Related Misconduct: A Synthesis of the Literature", *Journal of Accounting Literature* 41, 22-46.
- Levitin, A. J. and Twomey, T. (2011), "Mortgage Servicing", *Yale Journal on Regulation* 28(1), 1-90.
- Logan, M. S. (2000), "Using Agency Theory to Design Successful Outsourcing Relationships," *International Journal of Logistics Management* 11(2), 21–32.
- MacLeod, W. B. (2000), "Complexity and Contract," Working Paper.
- Kravin, D., Samandari, H., Walsh, J. and Yueh, E. (2013), "Managing third-party risk in a changing regulatory environment", *McKinsey Working Papers on Risk, Number 46*.
- Mitts, J. and Talley, E. (2018), "Informed Trading and Cybersecurity Breaches", Working Paper.
- Mudambi, S.M. and Tallman, S. (2010), "Make, Buy or Ally? Theoretical Perspectives on Knowledge Process Outsourcing through Alliances," *Journal of Management Studies* 47(8) 1434-1456.
- Murphy, D.L, Shrieves, R.E. and Tibbs, S.L. (2009), "Understanding the Penalties Associated with Corporate Misconduct: An Empirical Examination of Earnings and Risk," *Journal of Financial and Quantitative Analysis* 44(1), 55-83.
- Nguyen, D.D., Hagendorff, J. and Eshraghi, A. (2016), "Can Bank Boards Prevent Misconduct?," *Review of Finance* 20(1), 1-36.
- Office of the Comptroller of the Currency (OCC) (2013), *Third-Party Relationships: Risk Management Guidance Bulletin 2013-29*.

OECD (2014), Risk Management and Corporate Governance, Corporate Governance, OECD Publishing, Paris.

Poppo, L. and Zenger, T. (2002), "Do Formal Contracts and Relational Governance Function as Substitutes or Complements?", *Strategic Management Journal* 23(8), 707–725.

Prawitt, D. F. and Sharp, N. Y. and Wood, D. A. (2012), "Internal Audit Outsourcing and the Risk of Misleading or Fraudulent Financial Reporting: Did Sarbanes-Oxley Get It Wrong?," *Contemporary Accounting Research* 29(4), 1109-1136.

Ramasastri, A. (2006), "Risk Business? How Multinationals Outsourcing Involving Consumer Data Can Lead to Identity Theft," Retrieved from <http://supreme.findlaw.com/legal-commentary/risky-business-how-multinationals-outsourcing-involving-customer-data-can-lead-to-identity-theft-and-other-fraud.html>.

Schlosser, F. and Wagner, H. (2011) "Applying Importance-Performance Analysis to IT Outsourcing: A Survey among Financial Institutions", In *Proceedings of the 15th Pacific Asia Conference on Information Systems (PACIS)*.

Schwartz, A. and Scott, R.E. (2003), "Contract Theory and the Limits of Contract Law," *Yale Law Journal* 113, 541-619.

Segal, I. (1999), "Complexity and Renegotiation: A Foundation for Incomplete Contracts," *Review of Economic Studies* 66(1), 57-82.

Stulz, R. (2015), "Risk-Taking and Risk-Management by Banks," *Journal of Applied Corporate Finance* 27(1), 8-18.

Susarla, A., Subramanyan, R. and Karhade, P. (2009), "Contractual Provisions to Mitigate Holdup: Evidence from Information Technology Outsourcing," *Information Systems Research* 21(1), 1-19.

Whitten, D., Chakrabarty, S. and Wakefield, R. (2010), "The strategic choice to continue outsourcing, switch vendors or backsource: Do switching costs matter?," *Information & Management* 47(3), 167-175.

Williamson, O. E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications*, Free Press, New York.

Williamson O.E. (1985), *The Economic Institutions of Capitalism*, Free Press, New York.

Williamson, O. E. (1991), "Comparative Economic Organization: The Analysis of Discrete Structural Alternatives," *Administrative Science Quarterly* 36(2), 269-296.

Williamson, O., E. (2002), "The Theory of the Firm as Governance Structure: From Choice to Contract." *Journal of Economic Perspectives* 16(3), 171-195.

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