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Essays on malpractice in finance

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Publication date

2018

Document Version

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Citation for published version (APA):

Sakalauskaite, I. (2018). *Essays on malpractice in finance*.

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Chapter 1

A Survey on Bank Malpractice

1.1 Introduction

Misconduct is not confined to firms operating in the financial industry. Similarly to banks, non-financial firms can attempt to collude in setting the prices of their goods and services, or misrepresent the quality or suitability of items sold to customers. For example, car manufacturers have been recently found to have manipulated the reported emissions of their diesel engines, the ensuing scandal expected to cost more than 20b US dollars to Volkswagen alone.¹ Corporations operating in other sectors also provide misleading financial reports, or engage in fraud when issuing shares or bonds. Examples of such behaviour are the accounting scandals of Worldcom and Enron in the early 2000's, or the recent medical appliance producer Theranos fraud.

On the other hand, malpractice in financial firms is arguably more widespread and costly. Table 1.1 summarises the major scandals involving financial institutions in the 21st century: while the recent financial crisis has exposed failures in banks' securitisation activities and attempts to manipulate benchmark rates, the turn of the century was marked by misconduct related to conflicts of interest in investment banks, as well as accounting and mutual fund fraud. The prevalence of bank malpractice can be also ascertained from the resulting conduct costs: the fines imposed by US and UK regulators since the crisis alone are expected to reach 400 billion US dollars in 2020, total losses being more than twice as high among the top 50 banks.²

Besides to the direct losses to the affected parties, the role of banks as financial intermediaries implies that misconduct affects the functioning of financial markets. First, because of strong information asymmetries in the services that they provide and assets that they sell, the health of banks depends on public trust, which is negatively

¹ Financial Times, April 2017.

² Quinlan and Associates, 2017, see also estimates by the CCP foundation for conduct costs at regional level.

affected by revelations of past malpractice.³ Meanwhile, the Bank of England has calculated that the 320 billion US dollars paid by major global banks in fines during the last decade could have sustained 5 trillion US dollars in loans (Mark Carney, 2017). As banks engage in investment and trading activities, and provide payment services, market manipulations or unfair pricing can affect large numbers of transactions: for example, the size of markets affected by Forex rate manipulations in 2003-2014 has been estimated to be 4.7 quadrillion US dollars (Connor, 2014).

Malpractice can also have implications for financial stability. Financial penalties increase bank fragility by reducing their capitalisation, and as misconduct is often uncovered when financial firms or markets are under-performing, this implies that banks lose public confidence and capital at times of high risk and uncertainty. The stability implications are further worsened by financial penalties arriving as high-cost idiosyncratic events: for example, when the Deutsche Bank was asked to pay 14b USD for its involvement in mortgage backed securities fraud in 2016 by the US Department of Justice, this amounted to around 30% of its equity capital, leading to an 8% plunge in share prices.⁴ These costs can be further increased through negative externalities when malpractice in individual institutions reduces confidence in the whole industry (as shown by Gianetti and Wang (2016) and Gurun et al. (2018) for corporate fraud). The European Systemic Risk Board (2015) accordingly ascribes misconduct as a source of systemic risk.

However, in spite of its financial stability and growth implications, literature on malpractice in financial firms is limited and dispersed.⁵ Misconduct scandals have resulted in theoretical research on looting, IPO fraud, asset quality misrepresentations, or firm ethics,⁶ but a broad understanding of the incentives for malpractice in financial institutions is lacking. Meanwhile, treating waves of misconduct as specific to particular financial products or technological changes might neglect the role that high leverage, the public safety net, or regulation have in creating incentives to misbehave. Furthermore, although a large body of empirical research studies accounting irregularities and corporate crime in non-financial industries and their relationship with compensation schemes, corporate governance, and external factors such as investor sentiment,⁷ empirical studies on misconduct in banks are rare, rather focusing on measuring its costs

³ For example, the Walker Review on Corporate Governance in the UK (2009) notes that “banks are different from other corporate entities because public confidence is critical to their survival in a way and to an extent that does not arise even in the wake of serious brand damage sustained by a major consumer-oriented non-financial business.”

⁴ Financial Times, September 2017.

⁵ Resti, 2017.

⁶ See papers by Akerlof and Romer (1993) on looting in banks, Povel et al. (2007) on securities fraud, Griffin et al. (2014) and Hartman-Glaser (2017) on securitisation, or Benabou and Tirole (2016) and Morrison and Thanassoulis (2017) on ethical standards.

⁷ See Cumming et al. (2015) for a survey.

or prevalence.

The aim of this paper is therefore to provide a systematic overview of the literature on misconduct in banks, surveying the papers on the incentives and trade-offs faced by financial institutions, also drawing from evidence in other industries. The paper places the factors that can contribute to bank shareholder or manager decisions to misbehave in Becker's economics of crime framework (1968), where malpractice is initiated if the gains from it outweigh the expected costs. The key themes of the paper revolve around the question of whether malpractice is profitable to firm shareholders or is driven by agency conflicts within banks, and the role of remuneration schemes, governance, and bank-specific factors such as leverage and risk-seeking. This allows evaluating the propensity of the recently introduced regulations to improve their behaviour in the future.

The question of whether it is the incentives of shareholders or managers that drive malpractice in banks is relevant in the light of the public debate surrounding the allegedly limited number of individuals facing disciplinary actions following the recent misconduct scandals,⁸ and has policy implications. From a theoretical perspective, misconduct can arise both as a result of shareholder profit-maximisation and when managers act in self-interest. For instance, compensation schemes resulting from competition for talent, or aimed at inducing effort, can incentivise managers to boost own performance at a cost to shareholders. Banks might also face costs in improving governance or culture, resulting in costly anti-social behaviour by their employees.

Overall, the paper finds that in line with the Becker's framework, more malpractice can be expected in periods of high prices, and when supervisory agencies or private parties are not monitoring bank activities actively. Empirical evidence surveyed in this paper also suggests that both agency conflicts and profit-seeking might be related to the prevalence of misconduct in financial firms.

First, although reputational losses that follow revelations of bank misconduct tend to be significant, higher reputational capital, and thus potential shareholder costs, have not been found to discourage investment banks from engaging in securitisation fraud. This could mean that such trade-offs are more complex, or point to the role of agency conflicts. On the other hand, evidence that banks are not willing to impose discipline towards executives following misconduct detection might indicate that shareholders approve such actions. Contrary to accounting fraud, traditional measures of corporate controls also do not reduce the incidence of disciplinary actions imposed by regulators, only board member connections and relationship to executives having a strong deterring effect. Therefore, while better controls might matter in reducing the risk of malpractice,

⁸ See, for instance, articles in the Economist "Justice, interrupted," www.economist.com, or the Financial Times "Deutsche Bank's fine poses another form of moral hazard," www.ft.com

their effects depend on how they are implemented, and the type of misconduct.

The paper's findings with regards to the role of compensation schemes in banks are similarly inconclusive, mainly because of the lack of studies on such effects. Evidence from banks points to a positive relationship between executive bonuses and the risk of facing disciplinary actions, and somewhat constraining effects of their stock holdings. This could suggest that recently imposed restrictions on short-term variable compensation, and requirements for a higher proportion of stock-based pay with long deferral periods, could result in better bank behaviour going forward.

In the light of the importance of bank misconduct to financial stability and economic growth, the survey has exposed several directions for future research. First, the existing papers are by and large mute on how malpractice directed against firm customers relates to firm riskiness and capital structure.⁹ This can be attributed to the limited evidence on misconduct in the financial sector overall, and the lower importance of such considerations in other industries.¹⁰

However, the paper argues that bank leverage and the riskiness of their assets can affect incentives for malpractice both directly by limiting shareholder exposure to losses upon detection, and through regulatory forbearance. Future studies on these effects could provide insights to the causes on bank misconduct, but also the extent to which the newly introduced regulatory requirements aimed at making the financial system more stable can also contribute to their conduct.

The other key limitations in the literature on misconduct relate to the availability of data on bankers' compensation schemes and malpractice. First, the databases used in the papers on corporate fraud allow studying only the incentives generated by top-level executive pay. This assumes that top management can subsequently alter the incentives of other employees, or that misconduct decisions are made by the top executives. Studying the compensation structures of a wider set of bankers, and their effects on malpractice, could provide more evidence on the role of pay in bank behaviour.¹¹

Second, while studies on the causes of accounting fraud use data at the time it is initiated, papers on bank misconduct rely on information on the timing of disciplinary actions.¹² This approach limits the scope to study the factors contributing to the risk

⁹ One can also argue that misconduct in financial firms is a form of risk-taking in itself, as it yields short-term gains at a risk of financial penalties and reputational losses in the long-run (according to the ESRB (2015), financial penalties to banks constitute tail events). On the other hand, except for extremely costly cases in which conduct costs would result in bank closure, the incentives for it are distinct from the ones created by deposit insurance or government bail-outs, as while the latter incentivise excessive risk on bank balance sheets when the downside of such investments is borne by taxpayers, the costs of misconduct mostly affect firm shareholders.

¹⁰ Banks are more leveraged than firms in other industries, while the public safety net provided to banks through deposit insurance or bail-out guarantees affect their risk-taking incentives.

¹¹ These shortcomings have been also noted by the FSB (2018), which sees improving reporting on bank employee compensation as important in misconduct prevention.

¹² For example, to study the causes of fraud, Wang (2011) uses information on the dates at which

of bank conduct failures because of the time that it takes for disciplinary actions to be processed by regulators.

The remainder of the paper is structured as follows: Section 1.2 overviews the types of bank misconduct and recent evidence on their prominence. Section 1.3 analyses the trade-offs faced by firm shareholders who choose to engage in corrupt practices, and introduces the settings in which it might arise because of moral hazard by bank managers. The section also provides evidence on the role of managers' compensation schemes, corporate governance, as well as firm values or peer effects in explaining the incidence of corporate crime. In Section 1.4, regulations on managers' pay, recommendations for improved corporate governance and culture, as well as capital requirements, are evaluated in terms of their propensity to reduce malpractice in financial institutions. Section 1.5 concludes.

securities fraud is initiated, but the timing of disciplinary actions by bank regulators is used by Nguyen et al. (2016).

Table 1.1: Major Misconduct Cases Involving Financial Institutions Discovered in the 21st century

Notes: This table summarises of the major cases involving financial institutions that have resulted in conduct costs since 2000. It provides approximate dates during which misconduct took place, and the main participating institutions. The approximate conduct costs provide the lower bound of resulting financial penalties, as they involve the largest settlements with regulators or private counterparties, and exclude follow-up litigation or regulatory actions. The period of malpractice refers to the dates alleged by regulators and private counterparties.

Case	Approx. period	Description	Major institutions involved	Approx. Conduct costs	Changes in regulation
Accounting fraud (Enron case)	1997-2001	Major financial institutions assisted Enron management in hiding their true financial situation from investors.	Royal Bank of Scotland, Deutsche Bank, Citigroup, JP Morgan Chase.	7.2 b USD in litigation with Enron investors	Together with other accounting scandals (for example, Worldcom, Adelphia Comm.), encouraged the adoption of the Sarbanes-Oxley act in 2002. Also inspired the protection of whistleblowers in the 2010 Dodd-Frank act.
Conflicts of interest in investment banks	1999-2001	Conflicts of interest between investment banking and analysis divisions: research was influenced by the interests of investment bankers.	10 largest investment banks: Bear Stearns and Co, Credit Suisse First Boston, Deutsche Bank, Goldman Sachs, JP Morgan Chase & Co, Lehman Brothers, Merrill Lynch and Co, Morgan Stanley, Solomon Smith Barney, UBS Warburg.	1.435b USD	Separating research and investment banking departments, restrictions on research analyst activities, lengthened IPO quiet period.
Mutual fund trading scandal	1995-2003 ("as early as 1995")	Market timing where traders' orders for fund shares placed after trading time were executed at closing prices, and market timing where traders' activity favoured some clients over the others.	Major bank-related mutual fund families involved were Bank One-Group, Banc of America-Nations, Columbia-Fleet-Liberty, Deutsche-Schudder-Kemper, Wachovia Evergreen.	Estimated penalties and mandated fee reductions were 3.6 b USD for the 20 major funds.	Resulted in reforms in fund governance: public company audit committee listing rules apply to mutual funds, requirement of 75% of independent directors, board chair independent, mutual funds disclose information about managers and their incentives.
Benchmark interest rate fixing	Arguably starting in 1991, fines for the period as early as 2005	Submitting misleading borrowing costs in order to profit from outstanding positions, or lowering reported borrowing costs during the crisis.	Major financial institutions participating in the rate-setting (member banks), including Societe Generale, Royal Bank of Scotland, JP Morgan, Citigroup, UBS, Barclays, Deutsche Bank, Rabobank.	2.3 b USD imposed by the European commission, and more than 5b USD imposed by US and UK authorities.	Libor overseen by the UK's FCA, Changes in LIBOR reporting. LIBOR expected to be replaced by SONIA in 2021, which is based on actual bank borrowing costs, stronger accountability for misleading setting of benchmark rates, some rates terminated.
Foreign exchange benchmark rate manipulations	As early as 2007	Currency traders colluded to manipulate exchange rates during the one-minute window during which the benchmark is set in order to profit from their positions.	Citigroup, HSBC, JP Morgan Chase, Lloyds, Royal Bank of Scotland, Standard Chartered, UBS, Barclays, Deutsche Bank.	3.1 b US imposed by UK and US authorities in 2014, 5.7 b by US Department of Justice in 2015, total costs exceeding 10b USD.	Global Foreign Exchange Committee established a voluntary code of conduct in 2016.

Case	Approx. period	Description	Major institutions involved	Approx. Conduct costs	Changes in regulation
Foreclosures	2008-2010	Unsuitable foreclosure practices by US lenders during the mortgage crisis	Ally/GMAC, Bank of America, Citi, HSBC, JPMorgan Chase, SunTrust, Wells Fargo, Bank of America, Morgan Stanley, Goldman Sachs, Aurora Bank, PNC Financial, MetLife Bank, US Bancorp.	2012 National Mortgage Settlement asked five major lenders to provide a relief to borrowers and states of 25 b USD; followed by other settlements.	Obama Administration's Home Affordable Modification Program (HAMP) in 2009 to avoid foreclosures, state-level mortgage modification programs.
RMBS Mis-selling	As early as 2005	Over-stating the quality of mortgage-backed securities issued to buyers and insurers.	Barclays, Royal Bank of Scotland, Deutsche Bank, Credit Suisse, Goldman Sachs, Bank of America, Citibank, HSBC, JP Morgan, Morgan Stanley.	60+ b USD to US regulators alone, and additional private lawsuits.	Regulations on the activities of Credit Rating Agencies, enhanced disclosure requirements for securitisation in the EU.
Payment Protection Insurance (PPI) mis-selling	As early as 1998	PPI sales to customers without their knowledge, or where it was not needed.	UK banks: HSBC, Barclays, Lloyds banking group, Royal Bank of Scotland.	46b USD	New requirements for PPI sales introduced by the FSA in 2011, asking banks to provide borrowers with more information about the terms, and past history on the firm's PPI claims.
Auction Rate Security sales	2007-2008	Misrepresenting to customers that ARS were safe, liquid, and supporting the failing market in late 2007-early 2008.	Bank of America, Royal Bank of Canada, Deutsche Bank, UBS, Citigroup, Merrill Lynch, Wachovia, Raymond James	Nearly 50b USD in liquidity provided by the involved banks.	The ARS market has been by and large frozen since.

1.2 Forms of Bank Malpractice and their Pervasiveness

Misconduct can be defined as intentional disregard of laws, ethics and governance, and refers to failures in how institutions and their employees conduct themselves and treat their stakeholders (ESRB, 2015). From Table 1.1, examples of conduct failures in banks encompass both misconduct in their investment banking divisions such as attempts to manipulate financial markets or fraudulent asset sales, and malpractice in retail banking that involves predatory lending, sales of unsuitable services, or charging retail clients excessive fees. Table 1.2 summarises the recent studies documenting the prevalence of these various types of bank misconduct.

An important factor contributing to the pervasiveness of bank malpractice is the complexity and opacity of financial assets and services (Chen et al., 2013). For example, financial advice is a credence good as customers cannot judge its quality and fit even after consumption, providing opportunities for bank employees to sell unsuitable financial products in order to improve own performance and remuneration (Brown and Minor, 2017). A study by Egan et al. (2016) indeed finds that 7% of advisors in the US have records for misconduct, which involves failures in financial advice, customer account mismanagement, and other instances of wrongdoing. Since the dot-com crash which revealed the conflicts of interest in bank underwriting and research businesses, major cases involving unsuitable financial advice have included the sales of interest rate hedging products to unsophisticated SME's in UK banks, or force-placed payment protection insurance.¹³ Indeed, 11% of financial advice provided to retail clients by UK's HSBS, Lloyds and Santander branches has been found to have been inappropriate in 2012.¹⁴

Similarly, asymmetric information about the quality of financial assets and their opacity can create incentives for financial fraud in bank underwriting or securitization activities. Such malpractice is prevalent: from Table 1.1, a significant proportion of conduct costs arise from banks selling assets to wholesale or retail buyers, including both the misrepresentation of the mortgage backed securities sold to wholesale investors, but also the marketing of Auction Rate Securities as safe liquid investments. Existing studies on the pervasiveness of securitisation fraud during the mortgage boom also illustrate that such practices are widespread: Piskorski et al. (2015) find that at least 7% of RMBS issued before the recent crisis had the number of liens on the property underlying the mortgages misrepresented. The estimate on untruthful reporting

¹³See FCA summary on the cases at <https://www.fca.org.uk>.

¹⁴The FCA subsequently imposed fines of 10.5m, 28m, and 12.4m GBP on the three banks, respectively.

in RMBS sales by Griffin and Maturana (2016) is even higher, suggesting that around 50% of such securities had the quality of underlying loans overstated.¹⁵

Turning to traditional banking activities, a significant proportion of bank business is related to mortgage loans, creating opportunities for lending-related malpractice such as the issuance of predatory loans as well as harmful foreclosure practices. According to Bond et al. (2009), banks can find such activities profitable as they increase short-term interest payments for loans that the borrowers cannot afford. The prominence of predatory lending has been examined by Agarwal et al. (2014), who demonstrate that the introduction of restrictions on predatory lending in Chicago in 2006 resulted in lending activity halving as subprime loan issuers left the market, and fewer loans being issued to risky borrowers.

Some of the costliest cases of misconduct that major institutions have been involved in during the last couple of decades are antitrust violations. Connor (2014) examines the prevalence of cartels in major global banks and finds that during the period 1990 to 2013, they were involved in 63 distinct cases of attempts to manipulate markets, affecting markets worth approximately 1432 trillion US dollars. While the majority of cases (81% of 63 instances) in his sample concern traditional collusion in price setting, benchmark price fixing or price manipulations are also prevalent (10% and 5% of all cases, respectively). The latter type of collusive activities has also received heightened attention following the revelations of Libor manipulations, empirical studies by and large supporting the view that banks under-reported their borrowing costs during the crisis (Abrantes-Metz et al., 2011; Fouquau and Spieser, 2015), and that their Libor-related positions affected the quotes submitted (Gandhi et al., 2017).

Similar to other industries, misconduct in banks can be also classified according to the injured parties, separating malpractice directed against bank stakeholders such as retail and wholesale clients, investors, suppliers or employees, from the cases harming third parties that do not have direct business relationships with the banks. Numerous studies have shown that firms suffer higher costs following revelations of fraud against their stakeholders, as it destroys consumer trust or business relations (see, for example, Alexander, 1999).

¹⁵ Furthermore, securitisation has been shown to have led to a deterioration in bank screening quality for the underlying loans by Keys, Seru and Vig (2010) and Purnanandam (2011).

Table 1.2: Recent Studies on the Prevalence of Misconduct in the Financial Industry.

Authors	Misconduct	Sample	Findings	Costs of misconduct	Data source
Griffin and Maturana (2016)	RMBS quality misrepresentations	Non-agency RMBS loans 2002-2007	Nearly 50% of loans underlying RMBS exhibited misrepresentation in the number of liens, whether the house is owner-occupied, and whether house values are overstated. 13.4%, 7.7% and 44.9% were misreported on each aspect, respectively.	For each type of misrepresentation, loans were 97%, 8% and 34% more likely to become delinquent, respectively.	Lewtan's ABSNet Loan and HomeVal data sets on mortgages loans merged with DataQuick's data on house features and transactions.
Piskorski, Seru and Witkin (2015)	RMBS quality misrepresentations	Non-agency RMBS loans reported as having no other lien and issued during 2005-2007.	At least 7% of loans reported as having no second lien did have it, resulting in overstatement in the loan to value ratio by around 20 percentage points.	Such loans had a 10 percentage point higher probability of default.	BlackBox data at the loan level as presented to investors merged with loan data from Equifax consumer credit files.
Connor (2014)	Banking cartels	Cartels during the sample period of 1990-2013 in a sample of 50 largest banks by market capitalisation in 2013.	There have been 63 distinct cases of attempts to manipulate markets, 29 of the 50 major banks have been involved in such behaviour. The majority of instances (81%) are conventional cartels in which banks collude to fix prices, followed by attempts to manipulate benchmarks (10%), commodity prices (5%) and bid-rigging (3%).	Estimated preliminary market size affected by attempted manipulations is 1432 trillion USD. Total customer cost in 17 overcharge cases is estimated to be around 347 billion USD. Banks had paid 265 USD in fines by the end of 2013.	The Private International Cartels dataset assembled by J. Connor.
Egan, Matvos and Seru (2017)	Financial adviser misconduct: regulatory, criminal offences and customer disputes	Universe of financial advisers registered in the US in 2005-2015	7% of advisers have records of misconduct, 1/3 of those being repeat offenders.	Mean settlement amount is 550,000 US dollars, and all cases in the sample annually cost nearly half a billion US dollars.	FINRA BrokerCheck database that provides adviser disclosure statements on all brokers and a majority of financial advisers.
Dyck, Morse and Zingales (2014)	Misconduct that shareholder lawsuits, including financial misreporting and other types of corporate fraud.	Misconduct initiated before 2002 and detected during 2001-2003 in a sample of publicly traded US companies with assets exceeding 750 m US dollars.	The paper uses the demise of Arthur Andersen which prompted firms to change auditors to estimate the scale of undetected fraud. They show that 1/3 of misconduct is undetected. Using different datasets for misconduct, they find that 13% of large corporations participate in corporate fraud. Also show that misconduct, especially financial misreporting, is procyclical.	During 1996-2004, the annual value of misconduct in large US firms was at least 180 billion US dollars.	Stanford Securities Class Action Clearinghouse database, Restatement data from Audit Analytics, SFC data on misstatements.

Authors	Misconduct	Sample	Findings	Costs of misconduct	Data source
Bollen and Pool (2009)	Hedge fund return misreporting	Hedge fund returns in the United States during 1994-2005.	A discontinuity in hedge fund returns suggests that they avoid reporting small losses, approximately 10% of returns being misstated.	If funds inflate returns reported, new investors overpay to enter, the total overpayment during the sample period being at least 1b US dollars.	CISDM hedge fund database.
Agarwal, Amromin, Ben-David, Chomsisengphet and Evanoff (2014)	Predatory lending	Loans issued in Chicago during 2005-2007. The paper measures the effect of a program that constrained predatory lending in an area of Chicago in 2006.	Following the program, loan issuance fell by 61% in the affected areas, as well as the number of lenders. The program increased the average creditworthiness of originated loans, reducing default risk among subprime borrowers.	Predatory lending raised mortgage default rates by subprime borrowers by nearly 30% (the program reduced the default rate from unconditional 27% to 21%), around 50% of mortgages in the affected areas might have had terms that were harmful to borrowers.	HMDA data on loans.
Zitzewitz (2006)	Mutual fund late trading	US and international technology and communication equity funds in 1998-2003.	The correlation between flows to equity funds during the time period between 4pm and 6pm and price movements after market closing at 4p.m. is positive	During 1998-2003, long-term investors lost around 3.8 and 0.9 basis points on domestic and international funds annually, and late trading was detected in 39 of 66 mutual fund families.	TrimTabs and Lipper data on mutual fund size, returns and distributions.

Table 1.3 summarises malpractice cases that are not covered in Table 1.1, but have resulted in financial penalties exceeding 500m US dollars being imposed against major global financial firms individually.¹⁶ It shows that contrary to Table 1.1 where the majority of conduct costs are related to malpractice aimed at bank stakeholders, a significant proportion of large individual sanctions result from misconduct aimed at third parties. Such cases involve breaches of sanctions in bank dealings with entities related to terrorism, money laundering, as well as assisting other firms in financial fraud. Although they do not constitute a significant proportion of bank conduct costs overall (CCP foundation, 2017), misconduct against third parties results in financially significant individual penalties. This pattern is in line with calls for stricter enforcement from regulators in cases where market discipline might be weak (Karpoff and Lott, 1993), and therefore fines are the only tool to discourage misbehaviour.

Table 1.3: Major Misconduct Cases Resulting in Large Conduct Costs to Individual Firms.

Notes: this table presents a summary of individual financial settlements with major financial institutions exceeding 500m USD since 2000. It does not include cases related to malpractice reported in Table 1.1, and instances resulting in compliance costs exceeding 500m USD in which multiple regulators or private lawsuits were involved over an extended period of time.

Bank	Date	Costs	Conduct failure	Regulator(s)
BNP Paribas	Jun-14	8.9b USD	Sanctions breaches: processing transactions for Sudanese, Iranian, and Cuban entities under US economic sanctions.	US DoJ, FRB
Credit Suisse	May-14	2.8b USD	Assisting US tax payers in filing false tax returns.	US DoJ, FRB, NY State Department of Financial Services
JP Morgan	Jan-14	2.6b USD	Failing to prevent B. Madoff from using the bank to launder his gains and present them as profits.	US DoJ, OCC, US Department of the Treasury
Wells Fargo	Dec-10	2.7b USD	Deceptively marketing mortgage loans.	Nationwide settlement
HSBC	Oct-12	1.9b USD	Money laundering and providing services to entities in Cuba, Iran, Libya, Sudan and Burma under US economic sanctions.	OCC, OFAC, US DoJ
Commerzbank	Mar-15	1.5b USD	Providing services to Iranian and Sudanese entities under US economic sanctions and bank secrecy violations that allowed the operation of a securities fraud scheme.	US DoJ, OFAC, Board of Governors of the Federal Reserve System
JP Morgan	Jan-16	1.4b USD	Siphoned funds before the collapse of Lehman Brothers.	Private lawsuit
Wells Fargo	Apr-18	1.2b USD	Mis-selling car insurance and charging improper mortgage fees.	CFPB, OCC

¹⁶It has to be noted that Table 1.3 includes only a sub-sample of conduct costs, as they do not account for large parts of follow-up private lawsuits in major cases against bank groups, and disregard the majority of individual instances as bank conduct costs are on average lower than 500 m USD. For example, the Wells Fargo case of overwriting more than a million of fake accounts, which led to a senate hearing, resignation and pay claw back from the CEO, has resulted in a fine of 185m US dollars.

Bank	Date	Costs	Conduct failure	Regulator(s)
JP Morgan	Sep-13	0.9b USD	London Whale case: lack of controls that allowed a trader to perform rogue trades, and hiding the losses.	OCC, SEC, FCA
Credit Agricole	Oct-15	0.8b USD	Providing services to entities under US sanctions.	US DoJ, OFAC, FRB
UBS	Feb-09	0.8b USD	Helping US taxpayers to avoid tax obligations.	US DoJ, IRS
HSBC	May-07	0.8b USD	Misleading financial advice.	Private arbitration
Bank of America	Apr-14	0.8b USD	Mis-sold credit card protection products.	OCC and CFPB
Citibank	Jul-15	0.8b USD	Mis-sold credit card protection products.	OCC and CFPB
JP Morgan	Nov-09	0.7b USD in fines and debt relief	Made undisclosed payments to win business in Jefferson county, Alabama.	SEC
BNY Mellon	Mar-15	0.7b USD	Overcharged customers for foreign exchange services.	U.S. Department of Labor, SEC and class action litigation
BNP Paribas	Aug-13	0.6b USD	Conducting unlicensed brokerage services.	Korean authorities
ING	Jun-12	0.6b USD	Moving funds of Cuban in Iranian entities under US economic sanctions through the US financial system.	US DoJ, OFAC
State Street	Jul-16	0.6b USD	Overcharged clients by adding secret mark-ups to foreign exchange trades.	US DoJ, SEC, US Department of Labour
Deutsche Bank	Dec-10	0.6b USD	Enabling U.S. citizens to avoid \$5.9 billion in tax payments through its tax shelter activity.	US DoJ
US Bancorp	Feb-18	0.6b USD	Violations of bank secrecy act, failing to detect and report suspicious transactions.	FRB, OCC, US DoJ
Deutsche Bank	Jan-17	0.6b USD	Failing to prevent Russian money laundering	FCA, New York department of financial services.
Credit Suisse	Dec-09	0.5b USD	Intentionally violating the International Emergency Economic Powers Act, helping entities under US economic sanctions to move their funds through the US financial system.	OFAC, FRB, US DoJ

1.3 Causes of Misconduct in the Financial Sector

According to the Becker's (1968) framework, firms or individuals choose to engage in unlawful practices when their gains from such behaviour outweigh the expected cost of being detected. Therefore, various factors that affect the benefits and costs of misbehaviour to firm shareholders or managers can determine whether misconduct is initiated.

In this section, I review the theoretical literature as well as empirical evidence on such determinants of misconduct, first outlining the conditions under which bank

shareholders find misconduct profitable, and then the situations in which malpractice arises because of agency conflicts within banks.¹⁷

1.3.1 Shareholder Trade-offs

As outlined in the previous section, misconduct in banks arises because of asymmetric information, as financial institutions are often better informed about the quality of the assets that they sell, or the suitability of services that they provide, than their customers. The conventional view considers the risk of reputation loss to be one of the key trade-offs faced by institutions in their decision to make use of these information asymmetries: while being truthful allows building good reputation and earning rents in the long-run, lying results in higher short-term profits, but the risk of lower reputational rents in the future. In theoretical studies, such trade-offs have been used to model the decisions by banks to be truthful about the quality of securities underwritten (Hartman-Glaser, 2017), monitor equities sold or the loans underlying the securities issued (Chemmanur and Fulghieri, 1994, Winton and Yerramilli, 2015), as well as the incentives of rating agencies to rate their quality accurately (Mathis et al., 2009).

In line with theory, the existing evidence indeed suggests that banks suffer reputational losses following revelations of misconduct (Table 1.4). Armour et al (2017) estimate that for UK banks, similar to other industries, the loss in stock market value following announcements of enforcement actions by supervisory authorities exceeds conduct costs imposed almost nine-fold when the counterparties are bank stakeholders. International evidence on the effects of fine announcements on globally systemically important banks over the last 13 years also points to consecutive significant losses in shareholder wealth (Tilley et al., 2017). On the other hand, more recent evidence in Köster and Pelster (2017) suggests such effects have been limited during the more recent period of 2007-2014, which might be consistent with reputation losses being realised at the announcement of investigations rather than financial penalties or settlements, or higher investor optimism in the propensity of banks to improve their governance.

Do Higher Reputational Costs Prevent Malpractice?

If bank owners trade off their reputation for instant gains in misconduct decisions, increasing detection risk which raises the likelihood that reputational losses will be

¹⁷The cost/benefit trade-off is not the only framework that can be used to classify the causes of malpractice in banks. For example, the FCA (2013) identifies three groups of factors that are related to bank misconduct: inherent factors such as asymmetric information and asset complexity; structures and behaviours referring to moral hazard in firms, governance and culture; and environmental factors. The approach of this survey is different, focusing on how various factors, including the three groups identified by the FCA, affect the costs and benefits to the initiating parties.

incurred, as well as higher reputational capital that can be lost, should prevent banks from misbehaving.

Some evidence indeed exists on the effects that bank reputational capital has on their conduct (See Table 1.5 for a summary of papers documenting the relationship between this and other factors and firm misconduct). However, it is inconclusive: on the one hand, some studies find that financial institutions build and maintain their reputations for loan screening and monitoring. For example, more reputable investment banks are stricter in underwriting junk bonds and obtain higher proceeds to the firms underwritten (Fang, 2005), and loans by dominant banks are perceived as a good signal for opaque borrowers (Ross, 2010). Similarly, Keys et al. (2009) find that during 2001-2006, US banks with more deposits and liquidity underwrote better securities, suggesting that higher reputational capital and business models might play a role in bank decisions.

On the other hand, high reputation does not necessarily prevent banks from misstating the quality of securities issued. To the contrary, Griffin et al. (2014) provide evidence that in the period leading to the crisis, investment banks with higher reputation underwrote lower quality mortgage backed securities. They suggest that if firms can issue complex assets which fail only in bad states of the economy, this creates incentives for higher reputation firms to engage in such practices. Hartman-Glaser (2017) also show in a model that the relationship between reputation and misrepresentation can break down if firms are allowed to retain a proportion of assets sold so as to signal their value.

While the above papers use modifications to the repeated-games setting to explain the apparent lack of a relationship between a firm's reputational capital and behaviour, it might also suggest that other factors can be at play in such decisions. For instance, if malpractice is indeed initiated by bank managers, the size of resulting losses to their employers might not play an important role.

Moving to the role of detection risk, data from non-financial industries suggests that higher probability of being caught reduces the risk of (financial) malpractice. For example, accounting misstatements or price manipulations are less likely to occur and are more likely to be detected when enforcement agencies have higher budgets (Comerton-Forde and Putnins, 2013), or are in closer geographic proximity (Kedia and Rajgopal, 2011). Differences in enforcement have been also shown to explain varying levels of misconduct across countries (see Gandhi et al. (2017) for Libor manipulations, Cumming et al. (2017) for corporate fraud). Private monitoring can reduce the attractiveness of malpractice, too: the intensity of scrutiny by investors and underwriters, analyst coverage (Wang et al. 2011) and participation by short-sellers (Karpoff and Lou, 2010) have been found to be associated with lower incidence of financial fraud.

It can be expected that these findings carry to the banking sector: ensuring misconduct detection would make it highly costly both from shareholder and employee perspective. In that respect, however, evidence on the effects of lobbying reducing the risk of banks facing disciplinary actions when their riskiness increases (Lambert, 2018) or the time it takes for securities fraud to be detected in non-financial corporations (Yu and Yu, 2011) might imply that banks more involved in such activities could find malpractice relatively more attractive.

External Factors Increasing the Gains from Misconduct

While higher risk and cost of malpractice detection reduces its attractiveness, firm propensity to engage in misconduct also varies with the gains from such activities.

The revenues that cheating firms can obtain from fraud often depend on the business cycle, or prevailing asset prices. Therefore, more financial market misconduct in financial and other sectors takes place during economic booms: high asset prices and investor sentiment have been shown to be associated with a higher risk of securities fraud (Wang et al., 2010) or asset quality misrepresentations (Hartman-Glaser, 2017). This evidence is also consistent with the observation by Zingales et al. (2014) that financial fraud is pro-cyclical, having increased in the dot-com boom period.

Meanwhile, similar to bank risk-taking (Boyd and de Nicolo, 2005; Perotti and Suarez, 2007, Martinez-Miera and Repullo, 2010), the relationship between industry structure and the willingness of banks to engage in malpractice is not determinate. For example, increasing competition reduces prevailing prices and therefore the potential gains from being untruthful, but also decreases their long-term profitability and so the rents from sustained reputation (Bar-Isaac, 2005). Furthermore, intense competition also diminishes firm incentives to build reputation over time (Kranton, 2003), potentially resulting in more malpractice.

The Role of Bank Capital Structures and Failure Risk

The relationship between the fragility of bank capital structures and shareholder risk-taking incentives is well-researched. As their funding costs do not reflect the risks taken fully because of deposit insurance, and higher leverage makes investments with large upside potential and downside risks relatively more attractive, banks might choose to engage in risk-taking that is excessive from the societal point of view.

The same concerns might also affect the trade-offs involved in bank misconduct decisions. First, high leverage in banks might imply that it is more likely that the benefits of large-scale malpractice outweigh the potential losses to shareholders, as they are limited to the firm's equity capital. Empirical evidence shows that higher

leverage is indeed associated with a higher risk of banks facing disciplinary actions (Nguyen et al., 2016) and more earnings management and account misstatements in non-financial industries: Armstrong et al., (2013) and Burns and Kedia (2006) find leverage to be significant in explaining financial fraud (but not Bereskin et al. (2016) or Chidambaran (2010)).

The fragility arising because of high leverage can also lead to more malpractice through regulatory forbearance. Although empirical evidence on such effects does not exist, the explanation for the lack of criminal prosecution of banks and individuals after the rate-rigging scandals being the “fear by the US authorities of a banking version of Arthur Andersen at a time of financial fragility”¹⁸ might point to the existence of such considerations.

Bankruptcy risk can also affect the trade-offs faced by firm shareholders in deciding on whether to abuse their customers or other counterparts. While higher bankruptcy risk has been shown to increase the reputational losses in firms engaging in antitrust litigation (Bizjak and Coles, 1995), it can also make such actions more attractive by reducing their cost from the ex-ante perspective if failure is possible before misconduct is detected, or inducing gambling for resurrection. For example, financial misreporting might be more relevant when a firm is facing financial difficulties, or is in high need of external funds. Evidence on accounting fraud indeed suggests that firms facing lower returns, or higher need for financing, are more likely to misstate their earnings (for example, Wang, 2013).

Overall, therefore, we might expect to observe more malpractice in banks when they face higher prices in the securities issued or products sold. While more reputable banks might not be less willing to forgo their reputation for instant gains, increasing detection risk could have such effects. Finally, bank riskiness and capital structures can affect such trade-offs through multiple channels, as well.

¹⁸Quote by Robert Jenkins who had served on the Bank of England’s Financial Policy Committee, reported in The Guardian, “Why putting bank bosses behind bars is still nigh on impossible,” www.theguardian.com.

Table 1.4. Recent Literature on Firm Costs Following Misconduct Detection.

Cost	Paper	Misconduct	Evidence	Sample
Financial Firms				
Shareholder wealth	Tilley, Byrne and Coughlan (2017)	Bank misconduct	Stock price reactions to announcements of investigations against banks are negative in related party cases, and higher in investment-banking related cases.	Sample of fines imposed by US and UK regulators on SIFIs during 2002-2015, and information on investigation announcements from the Wall Street Journal.
Shareholder wealth	Armour, Mayer and Polo (2017)	Violations of financial regulations and listing rules	Announcements of enforcement actions result in stock price drops that exceed financial penalties nine-fold, the effects concentrated in related-party crime against investors and clients.	Public announcements of enforcement actions by UK regulators (the FSA and London Stock Exchange) in 2001-2011.
Capital inflows, performance	Chapman-Davies, Parwada and Tan (2014)	Misconduct by mutual fund managers	Following misconduct by fund managers, inflows to affected mutual funds decrease. Such funds also underperform in the following year, especially in cases of high financial sanctions or involvement by the SEC or multiple regulators.	SEC data on financial investment advisers in 2006-2009 merged with mutual fund data.
Capital inflows	Choi and Kahan (2007)	Misconduct in mutual funds	Funds involved in scandals suffer money outflows, extending to the fund family level. Effects are concentrated in related-party cases.	Instances where fund management was subject to investigation by regulators. Data collected from the Wall street journal for 1994-2004.
Shareholder wealth, firm profitability	Koster and Pelster (2017)	Bank misconduct	Following announcements of financial penalties or settlements, banks experience positive abnormal and buy-and-hold returns. Financial penalties reduce pre-tax bank profitability. In the US, post-tax profitability is not affected.	Dataset on conduct costs resulting from regulatory actions and private lawsuits in 68 international banks during 2007-2014
Other Industries				
Shareholder wealth, business relationships	Alexander(1999)	Federal crimes by corporations	Related-party crime has significantly higher effects on shareholder wealth than third-party crime. Reputational costs can be explained by bank business loss.	Alexander and Cohen (1999) dataset on criminal offences by 78 US public corporations that were penalised in 1984-1990.
Shareholder wealth	Karpoff and Lott (1993)	Criminal fraud	Shareholder losses exceed financial penalties through losses in reputation.	Corporate fraud against related parties during 1978-1987 collected from the Wall Street Journal Index.

Cost	Paper	Misconduct	Evidence	Sample
Shareholder wealth	Bhagat, Bizjak and Coles (1998)	Corporate lawsuits	Firms lose around 1% of value following suits irrespectively of whether the other party is government entities, other corporations, or individual plaintiffs. Wealth losses highest in government suits. Environmental or security lawsuits costlier than antitrust or contract breach lawsuits.	Sample of lawsuits announced about public US corporations in the Wall Street Journal during 1981-1983.
Shareholder wealth	Bizjak and Coles (1995)	Antitrust litigation between firms	Shareholders of defendants suffer considerably higher losses than the gains of plaintiffs following lawsuit filings. Shareholder losses depend on firm financial situation, risk of follow-up lawsuits, and prohibition of business practices.	Sample of lawsuits announced about public US corporations in the Wall Street Journal during 1981-1983.
Shareholder wealth	Ewelt-Knauer, Knauer and Lachmann (2015)	Corporate fraud	Average loss of shareholder wealth is nearly 81m USD, accounting fraud being the costliest. Losses higher in cases when top management is involved, but lower if accountable employees are fired and firms cooperate with authorities.	Fraud cases in German firms during 1998-2014 found in major German newspapers.
Shareholder wealth, firm profitability	Murphy, Shrieves and Tibbs (2009)	Corporate misconduct	Following accusations of misconduct, firms face falls in share price, reduction in earnings, and higher risk. The effects decrease with firm size, and are strongest for related party misconduct.	Allegations of corporate malpractice announced in the Wall Street Journal in 1982-1996.
Shareholder wealth	Tibbs, Harrell, and Shrieves (2011)	Corporate misconduct	Third-party misconduct is beneficial to firm shareholders, as positive abnormal stock returns before fraud discovery outweigh subsequent costs.	Corporate misconduct announced in the Wall Street Journal Index during 1982-1996.
Borrowing costs	Chava, Cheng, Huang and Lobo (2010)	Financial fraud	Announcements on class action lawsuits following revelations of corporate fraud result in higher cost of equity capital.	Class action lawsuits in Stanford Securities Class Action Clearinghouse and the Class Action Alert Service during 1995-2005.
Shareholder wealth	Feroz, Park and Pastena (1991)	Financial misreporting	Disclosures of overstating financial situation led to 13% negative abnormal returns in the next two days following announcement, negative returns also follow investigation announcements.	SEC Accounting and Auditing Enforcement Releases issued during 1982-1989 for public US firms.
Shareholder wealth	Fich and Shivdasani (2007)	Financial misreporting	Sued firms have negative returns of around -6% in the days following the announcement. Firms that share outside directors also experience price drops.	Shareholder class action lawsuits for financial misreporting during 1998-2002 from PricewaterhouseCoopers and Stanford Securities Class Action databases.

Cost	Paper	Misconduct	Evidence	Sample
Shareholder wealth	Griffin, Grundfest and Perino (2004)	Financial misreporting	Class action filings and account restatements have negative effects on stock price, and more information disclosure has positive effects.	Federal securities class action lawsuits during 1990-2002 from the Institutional Shareholder Services database.
Business relationships	Johnson, Xie and Yi (2014)	Financial misreporting	Revelations of financial misreporting result in lower sales or termination of business relationships with large customers, worsening firm performance.	Stanford Securities Class Action database for the period 1996-2009.
Shareholder wealth	Karpoff, Lee and Martin (2008a)	Financial misreporting	Following announcements of enforcement by regulators, shareholder wealth losses exceed financial penalties seven-fold, and firms lose on average 38% of their market value. The costs exceed estimated gains from fraud more than three times.	SEC and DOJ enforcement actions for financial misreporting during 1978-2006.

Table 1.5. Summary of the Recent Literature on the Factors Affecting the Costs and Benefits of Misconduct.

Factor	Effect	Paper	Measure	Type of misconduct	Evidence	Sample
Financial Firms						
Detection Risk	↑ cost	Comerton-Forde and Janis Putnins (2013)	Government regulatory budget	Closing price manipulation of stock	Increasing regulatory budget reduces manipulation and increases the risk of detection.	Hand-collected sample of detected closing day manipulations in US and Canadian stock exchanges: NYSE, AMEX, TSX, TSX-V, 1997-2009.
Detection Risk	↑ cost	Gandhi, Golez, Jackwerth, Plazzi (2017)	Enforcement, and attention by regulators to firm misconduct	Benchmark rate manipulation	The paper shows that enforcement has negative effects of misconduct: first, bank manipulations disappeared together with regulator investigations in 2010, and was lower in the US, which can be related to stronger overall enforcement there.	Banks participating in Libor manipulation in 1992-2012.
Reputation	↑ cost	Griffin, Lowery and Saretto (2014)	Underwriter reputation, measured as their prominence in underwritten IPO prospectuses	Asset quality misrepresentations	More reputable RMBS underwriters did not issue better-performing securities (lower default risk) before the crisis (they actually under-performed).	Bloomberg data on collateral underlying nonagency securities issued during 2000-2010, matched with data on underwriters' rankings and involvement in underwriting activities.
Reputation	↑ cost	Fang (2005)	Reputation measured as bank's market share	Quality of securities underwritten	High reputation banks receive higher fees, but are stricter in underwriting junk bonds, and raise more funding to the firms underwritten.	Data on corporate bonds issued between 1991 and 2000 from the SDC database.
Lobbying	↓ cost	Lambert (2018)	Bank lobbying expenses	Risk of disciplinary actions	Lobbying banks run a lower risk of receiving disciplinary actions when their safety and soundness deteriorate, or risk increases.	Data on OCC, FDIC and Fed disciplinary actions for US banks and lobbying data from Centre of Responsive Politics during 2008-2012.
Other Industries						
Detection Risk and Cost	↑ cost	Cumming, Groh and Johan (2017)	Enforcement, number of regulators, co-operation between legal and supervisory authorities	Securities/financial fraud	Higher enforcement intensity, cooperation between regulators and legal authorities, longer prison terms reduce market abuse. Number of supervisors increases detection.	ESMA enforcement data, at country-year level during 2008-2010.

Factor	Effect	Paper	Measure	Type of misconduct	Evidence	Sample
Detection Risk	↑ cost	Kedia and Rajgopal (2011)	Financial misreporting (violations of GAAP)	Higher proximity to, or information about, SEC enforcement	Higher exposure to SEC enforcement (through enforcement on nearby firms or proximity to the SEC) reduces financial misrepresentation.	Sample of public US firms during 1997-2002, GAO data on corporate fraud detected by the SEC in the firm's county in the past, and data on firm distance from SEC offices.
Detection Risk	↑ cost	Karpoff and Lou (2010)	Shortseller coverage	Financial misreporting	Shortsellers anticipate and reduce the time to discovery of accounting fraud.	SEC enforcement actions in public US firms during 1988-2005.
Detection Risk	↑ cost	Wang (2013)	Analyst coverage, volatility-investment decreasing	Securities fraud	Analyst coverage increases detection, and reduces the incidence, of securities fraud. Firms engaging in fraud increase the volatility of their investment as this reduces the risk of detection.	SEC Accounting and Auditing Enforcement Releases and Stanford Securities Class action database filed in 1996-2005.
Profitability	↑ gains	Wang (2013)	Need for external financing	Securities fraud	Need for external financing increases the attractiveness of financial misreporting.	SEC Accounting and Auditing Enforcement Releases and Stanford Securities Class action database filed in 1996-2005.
Investor beliefs about industry profitability	↑ gains	Wang, Winton and Yu (2010)	Analyst forecasts, demand for IPO shares by institutional investors, secondary market prices	IPO fraud	Higher beliefs increase the incidence of securities fraud, except for very high values.	Securities class action lawsuits or SEC enforcement for IPO firms during 1995-2005.
Private and public monitoring	↑ cost	Wang, Winton and Yu (2010)	Monitoring by institutional investors, venture capitalists.	IPO fraud	Changes in private monitoring, led by changes in investor belief, affect IPO fraud.	Securities class action lawsuits or SEC enforcement for IPO firms during 1995-2005.
Public enforcement	↓ cost	Yu and Yu (2011)	Lobbying expenses	Large Corporate fraud	Lobbying firms face a lower risk of being detected for fraud and the detection for their fraud takes longer.	Information on securities fraud and lobbying expenses in public US firms during 1998-2004.

1.3.2 Agency Conflicts in Banks and Misconduct

Alternatively to shareholders trading off the costs and benefits of malpractice, it can also arise because of agency conflicts within financial institutions. From this perspective, misconduct in banks is a conventional moral hazard issue, where managers engage in actions to increase their own benefits at a cost to firm owners. For example, one could take the view that by issuing overvalued securities, providing inappropriate services, or participating in benchmark rate setting cartels, bank employees increase their performance and therefore financial returns or career prospects, whereas the majority of costs from disciplinary actions or private litigation are borne by shareholders.

The implications of divergent incentives between firm managers and owners have been widely studied in the corporate finance literature.¹⁹ According to the conventional view, corporate governance is the mechanism determining agency costs in firms with separated ownership and control, where contract design, ownership structures, or enhanced controls and therefore the ease with which managers can act in self-interest are considered as solutions to such agency issues.²⁰

The remainder of this section therefore reviews the channels through which malpractice can arise as an agency cost in financial institutions, and the trade-offs that shareholders face in reducing it by adjusting remuneration schemes or governance structures.

The Role of Managers' Pay

If misconduct is initiated by bank managers, it can be expected that remuneration schemes are an important factor in their decision-making. Since firm employees also trade-off the costs of benefits from misbehaviour, sufficiently high financial rewards that exceed the cost of participating in misconduct and compensate for the risk of subsequent disciplinary actions could encourage its initiation.

As misconduct or corporate fraud yield short-term gains, and typically run the risk of detection in the long run, remuneration structures that reward managers for performance gains achieved through malpractice, but do not expose them to the downside risk in the long-run, can be expected to be most conducive to such activities. In order to reduce agency costs, managers' contracts would therefore have to be adjusted to make misconduct less profitable in the short run, or to align their incentives with those of bank owners through increasing their exposure to the long-run costs.²¹

¹⁹Bolton and Dewatripont, 2004; Tirole, 2005.

²⁰See Shleifer and Vishny (1997) for an excellent survey on corporate governance, and de Haan and Vlahu (2016) for an overview of governance in the banking industry.

²¹The view is also favoured by bank regulators: in their analysis of the causes of the crisis, the OECD (2009) states that "there appears to have been in many cases a severe mismatch between the incentive system, risk management and internal control systems." Similarly, the FSB (2015)

Although adjusting managers' pay can reduce their incentives to initiate malpractice, the fact that misconduct is observed need not imply that firm shareholders find it profitable: firms might face constraints in setting compensation schemes so as to reduce agency costs. For example, remuneration leading to unsuitable financial advice can result from the need to incentivize advisors to search for new clients (Inderst and Ottaviani, 2009). Similar mechanisms have been argued to have led to risk taking in banks during the lead up to the crisis. Namely, high-powered compensation schemes increase managers' incentives to make excessively risky investments, but are necessary to screen skilled managers or in order to induce their effort (Bannier et al., 2012; Bijlsma et al., 2012; Besley and Ghatak, 2013; Hakenes and Schnabel, 2014).

In terms of pay distribution over time rather than performance sensitivity, bank owners can also resort to short-termist incentives although they lead to costly misconduct. For example, it has been argued that over-investment in harmful short-term assets can result from compensation focused on short-term performance so as to avoid fund diversion (DeMarzo et al., 2014). Thanassoulis (2013) shows how short-term pay leading to value-destroying myopic investment can also result when deferring compensation becomes excessively costly due to competition and managers' time preferences.

From an empirical perspective, as bank shareholders cannot set remuneration structures freely, disentangling the role of shareholder profit-maximisation from moral hazard is not straightforward. The relationship between executive compensation structures and malpractice could arise both because of the role of compensation in achieving other shareholder objectives, and as a result of managers being incentivised to initiate fraud. For example, the latter situation is considered by Morrison and Thanassoulis (2017) who use a setting in which unsuitable sales are profitable to bank shareholders, and bonuses are used to compensate managers for initiating such practices.

Starting with the role of incentives generated by variable pay, empirical evidence on bankers' bonuses shows that short-termist incentives can be linked to more corporate malpractice (recent literature on the effects of executive compensation schemes is summarised in Table 1.6). In a study on bank misconduct, Nguyen et al. (2016) examine the factors that increase the risk of disciplinary actions being imposed by regulators, and show that higher CEO bonuses are associated with a higher probability of misconduct occurring. Meanwhile, findings in studies on accounting fraud in non-financial industries are mixed: Gao and Shrieves (2002) find that larger bonuses are associated with a higher incidence of earnings management, but Peng and Roell (2008) and Burns and Kedia (2006) do not find that they are related to financial misreporting. This implies that higher executive bonuses might create stronger incentives to boost bank

acknowledges that "compensation structures are important not only to provide incentives for sound risk taking but also to disincentivise misconduct cases."

performance through malpractice rather than stock price manipulation.

Contrary to cash bonuses, high performance-pay sensitivity generated through stock-based compensation exposes executives to the costs associated with malpractice detection. On the one hand, therefore, we might expect higher stock holdings by bank managers to be associated with lower incidence of fraud. However, if such incentives are asymmetric, or convex, limiting the downside associated with market or regulatory discipline, high-powered schemes would lead to more malpractice.

Empirical evidence is in line with such predictions. Studies on fraud in non-financial sectors indeed find that malpractice can arise as an agency cost: higher stock holdings by firm executives tend to result in less corporate crime (Alexander and Cohen, 1999) (although unrestricted stockholdings increase the risk of financial fraud (Johnson et al., 2009, O'Connor et al., 2006)).²² Meanwhile, papers on financial fraud show that while executive pay-performance sensitivity has limited effects on the likelihood of financial misreporting once other firm and pay characteristics are controlled for (Erickson et al., 2006, Armstrong et al., 2013), the convexity in the relationship between compensation and firm outcomes generated through options grants has a strong positive effect on the risk of financial misconduct (Burns and Kedia (2006), Cornett et al. (2008), Bergstresser and Philippon (2006), Erickson et al. (2006), Gao and Shrieves (2002)). These findings therefore point to options worsening agency conflicts in firms, as accounting fraud, contrary to malpractice directed against firm clients, hurts investors.

Besides to documenting the relation between pay structures and misconduct, the evidence outlined also suggests that agency conflicts might play a role in malpractice. Evidence that banks that tend to pay higher bonuses run a higher risk of disciplinary actions (the effects on accounting fraud being mixed) can be viewed as supporting the use of bonuses to encourage malpractice, but might also result if managers' gains from misconduct against clients outweigh potential benefits from accounting fraud. Turning to stock-based compensation, it points to the role of agency conflicts, as increasing executive shareholdings might deter malpractice if stock grants are restricted.

The existing empirical literature also entails several shortcomings which prevent the establishment of a clear link between compensation schemes in financial institutions and fraud, and disentangling its drivers. First, as is standard in the literature studying compensation structures, the surveyed papers use data on compensation of top executives, which can have implications if misconduct is initiated at the lower levels of firm hierarchical structures, and their compensation is not related to the earnings of top executives. For example, Acharya et al. (2014) show that non-executive employees are mostly compensated in cash bonuses, whereas top executives are often rewarded

²² However, granting shares to firm managers might also not be feasible in some settings: it can create incentives for diversion of funds to projects that are lower-value, but increase stock price (Benmelech et al., 2010), or manipulation of reported earnings (Goldman and Slezak, 2006, Laux, 2012).

in stocks (for example, see Fahlenbrach and Stulz, 2011). The relevance of incentive schemes faced by non-executive management is also recognised by financial regulators: for example, in 2013, the FCA fined the Lloyds Bank for having compensation schemes that involved pay cuts or demotions if sales staff did not meet their targets.²³ Agarwal and Wang (2009) indeed show that high-powered incentives increase sales, but diminish the quality of loans underwritten by loan officers.

The focus of the surveyed papers on accounting irregularities also means that the findings there cannot be straightforwardly applied to malpractice in banks. As fraud in issuing securities, or account manipulations, hurt firm investors rather than clients, they are more clearly driven by moral hazard. Because of the strict supervision of financial institutions, the scope for them to engage in accounting fraud might be limited, as well. Finally, the trade-offs faced by shareholders in setting compensation can be also different there because of the riskiness and scalability of bank assets. For example, Bennett et al. (2016) find in a sample of 750 largest US firms that although during 2006-2014 the total pay of bank executives was smaller than in comparable non-financial firms, it was more dependent on short-term performance, and was not related to bank risk. The scalability of talent also leads to larger performance-pay sensitivity: C el erier and Vallee (2017) find the talent premium in France to be higher in finance compared to other industries, returns to talent having also increased more rapidly than in other sectors.

Do Banks Discipline their Managers?

As altering managers' compensation to reduce the benefits from malpractice can involve the trade-offs discussed above, firm shareholders could also prevent misconduct by increasing the cost of detection, or making its initiation costlier through better governance. Therefore, if misconduct is costly to shareholders, we might expect strict market discipline following revelations of such behaviour, whereas limited effects on manager employment could mean that at least for some types of malpractice, shareholders tolerate it. For example, studies on career outcomes of directors and executives following accusations of financial misreporting, which is most often directed against firm investors, or owners, indicate higher turnover risk and worse career prospects for the individuals involved (Feroz et al. (1991), Humphery-Jenner (2011), Karpoff et al. (2008b), Hennes et al. (2008), Fich and Shivdasani (2007), but Helland (2006) finds weak evidence).

Evidence from financial institutions provides mixed results on the job market outcomes of financial advisers or executives (Table 1.7). Overall, it appears that while

²³ Press release "FCA fines Lloyds Banking Group firms a total of 28,038,800 for serious sales incentive failings," www.fca.org.uk.

non-executive employees such as financial advisers run a higher risk of being laid off following revelations of malpractice (Egan et al. 2017),²⁴ market discipline towards high-ranking executives is weaker or non-existent. For example, in a study of market discipline towards bankers involved in the issuance of fraudulent mortgage backed securities, Griffin et al. (2017) find no evidence that such individuals face a higher risk of dismissal or worse career paths subsequently. Similarly, Nguyen et al. (2016) do not find evidence of a higher likelihood of bank executives losing their positions following disciplinary actions by regulators.

These findings could be interpreted as supporting the view that misconduct is tolerated by bank shareholders, unlike accounting fraud that hurts them directly. Furthermore, they might not be unique to banks: while Alexander (1999) finds evidence on increased manager turnover when companies are accused of fraud against related parties, Agrawal et al. (1999) show that top management do not run a higher risk of replacement following accusations of corporate fraud, once other firm characteristics are controlled for.

Corporate Controls

To the extent that misconduct is a form in which managers divert funds, or increase their own private benefits at a cost to shareholders, improvements in controls could be expected to be related to lower levels of malpractice. The recent German court decision to reinstate the Libor traders who had been sacked following the revelations of rate rigging in the Deutsche bank, citing the lack of firm-wide controls that made such behaviour possible, reflect the perceived importance of governance mechanisms.²⁵ On the other hand, the role of poor governance in explaining the pervasiveness of misconduct in financial institutions depends on whether such controls are effective in reducing the gains from, or increasing the cost of, misconduct to firm managers, and how easily they can be altered.

The conventional view sees the ability of firm boards to monitor and advise firm executives as important determinants of governance quality. In banks, it appears that traditional governance measures such as CEO duality or board member independence are not related to a lower risk of facing disciplinary actions, only the share of directors introduced before the CEO tenure, and the networks of directors, being effective in reducing the likelihood of misconduct and increasing detection risk (Nguyen et al.,

²⁴In a study of the universe of financial advisers in the US, Egan et al. (2017) show that nearly 50% (compared to 20% otherwise) of them lose jobs in the year following misconduct records, which could imply that some institutions tend to discipline malpractice by their employees. Furthermore, the paper provides evidence of “rolling bad apples,” a proportion of such advisers being repeat offenders, and finding employment in other financial institutions subsequently.

²⁵Reported in the Financial Times article “Deutsche Bank traders wrongfully dismissed, court rules,” www.ft.com.

2016). These measures also appear to lead to more market discipline towards the executives involved, similar to the effects being observed in cases of accounting fraud in other industries (Khanna et al., 2015).

Meanwhile, empirical evidence on the relationship between various measures of board monitoring or qualifications and accounting fraud in other industries demonstrate their link to the incidence of corporate misconduct. For accounting fraud, more board independence and financial education of director boards and audit committee members reduce the risk of financial manipulation (Beasley, 1996, Dechow et al., 1996, Khanna et al., 2015), CEO tenure or being the founder of the firm also increasing such risk (Dechow et al., 1996, Agrawal and Chada, 2005).

Such differences in the effects of corporate controls are consistent with the potentially different role of governance in banks (de Haan and Vlahu, 2016), or the lower perception of malpractice being a cost to bank shareholders.

If better controls can reduce agency costs through deterring misconduct, why is it still observed? First, firms might find implementing governance changes excessively costly, generating trade-offs similar to the ones involved in setting managers' compensation. For example, it might distract resources from other manager activities (Benabou and Tirole, 2016), or be too expensive financially (Acharya et al., 2016). Coordination failures arising from competition in goods and labour markets can also lead to insufficient levels of corporate control across industries. For example, firm shareholders might decide to keep governance at low levels if competition reduces their advantage over less-well governed firms in products markets (Shleifer, 2004). Similarly, firms with weaker governance impose negative externalities through increasing rents available to managers, therefore reducing the gains from better controls in competing firms (Acharya and Volpin, 2009), or encouraging managers to misbehave if their performance is matched to employees in the less-well-governed institutions (Cheng, 2011).

1.3.3 Firm Culture and Peer Effects

Differences in culture, defined as the existence of various firm-level values and behaviours (FSB, 2014; FCA, 2018), have been increasingly studied in order to understand bank risk-taking (see de Haan and Jansen, 2011; Thakor, 2016 for overviews). Attributing firm-level outcomes to the existence of diverse cultural norms need not imply that they are out of shareholders' or managers' control if hard to measure and change: for example, Song and Thakor (forthcoming) view it as a costly investment made by shareholders, where higher cultural capital can help banks sort employees with similar attitudes, and decrease the risk-taking incentives generated through competition.

Bank culture can be also evaluated in the context of malpractice. For example, disregarding the clients' needs, or acceptance of fraud as a normal business practice, can define a culture prone to misbehaviour. Evidence from non-financial industries show that such effects do exist: in a recent study, Biggerstaff (2015) finds that firms that engage in CEO options backdating are also more likely to participate in accounting fraud, pointing to firm-wide acceptance of malpractice. Pro-social firm values, or culture, as measured by charitable giving are related to a lower risk of corporate lawsuits, more whistleblowing, and stricter discipline against misbehaving managers (Bereskin et al., 2016).

Similar to the case of corporate governance, insufficient cultural capital can arise because of the costs involved, competitive externalities among firms not allowing them to grasp the resulting benefits fully, or reducing competitive advantage in the short-run (Chaly et al., 2017). In fact, as reported by Graham et al. (2017), out of 1348 North American executives surveyed, the majority see culture as an important determinant of firm value, one of the channels running through its effects on firm ethics and conduct.

Besides to the existence of cultural factors, the differences across firms in their propensity to engage in malpractice can also be ascribed to peer effects. These can arise if being exposed to misconduct can induce learning about such behaviour, lead to herding if utility is derived from acting similar to co-workers, or encourage individual misbehaviour due to competition (Dimmock et al, 2018). Using data on misconduct by US financial advisers, the authors provide support to the former view, getting co-workers with malpractice records increasing the risk of misconduct among the existing firm employees, but good behaviour not having symmetric effects. Similar peer effects appear to operate across firms, as well: they have been also shown to spread accounting misstatements through board members' social networks (Chiu et al., 2013), public announcements on misbehaviour by similar or proximate firms (Kedia et al., 2015), or misconduct by neighbouring firms and politicians, especially if their size or CEO age are similar (Parsons et al., 2018).

To conclude, bank culture, or waves of malpractice in the industry or geographic proximity, can also affect the trade-offs faced by bank shareholders and employees. Bank culture conducive to misconduct reduces the costs of engaging in fraudulent activities, and potentially reduces detection risk, while peer effects can make it more attractive by making it more salient, or through competition effects.

Table 1.6. Recent Evidence on the Relationship Between Compensation and (financial) Fraud.

Remuneration	Paper	Measure used	Misconduct	Evidence	Sample
Share ownership	Alexander and Cohen (1999)	Shares owned by firm management	Corporate crime	Higher ownership stake of management reduces the likelihood of corporate fraud.	Public corporations convicted for corporate crime in 1984-1990, matched with non-criminal firms. source: Wall Street Journal Index, LEXIS NEXIS, and Corporate Crime Reporter.
CEO and director stock holdings	O'Connor, Priem, Coombs, Gilley (2006)	Average value of annual stock options granted	Financial misreporting	Overall provide mixed results, but evidence that higher share ownership by CEO and board of directors increase misreporting risk.	Firms engaged in financial misreporting during 2000-2004 identified from the ProQuest newspaper database, matched with US public firms.
CEO stock option compensation	Cornett, Marcus and Tehranian (2008)	The share of stock options in total CEO compensation	Earnings (accrual) management	Performance pay increases accrual management.	Sample of S&P100 firms during 1994-2003.
CEO Equity-based compensation	Johnson, Ryan and Tian (2009)	CEO restricted and unrestricted stock holdings, vested and unvested options	Financial misreporting	Firms with more unrestricted CEO shareholdings have a higher incidence of financial misreporting.	SEC AAER releases on public US firms for misreporting that occurred during 1992-2005.
CEO bonuses	Nguyen, Hagedorff, Eshraghi (2016)	CEO bonus/salary ratio	Bank Misconduct	Higher bonuses are related to a higher incidence of disciplinary actions.	Data on enforcement actions on US banks by the FRB, FDIC and OCC during 2000-2013.
CEO option grants and bonuses	Harris and Bromiley (2007)	The ratio of CEO option grants and bonus to total pay	Financial misreporting	CEO option holdings increase misreporting. Firm's performance last year and competitor performance increase misreporting.	US Government Accountability Office data on firms with financial restatements arising from reporting irregularities in 1997-2002 and a matched sample.
Management bonuses, Stock and option portfolio sensitivity to firm performance	Peng and Roell (2008)	The sensitivity of options and shares held by top 5 firm executives, their bonus to total pay ratio	Shareholder litigation	Stock option sensitivity increases the risk of shareholder lawsuits, but not share ownership or bonus to total cash compensation ratio.	Stanford Securities Class Action Clearinghouse data for 1996-2002 in US public firms.

Remuneration	Paper	Measure used	Misconduct	Evidence	Sample
CEO compensation components and sensitivity to performance	Gao and Shrieves (2002)	The size of CEO bonuses, option compensation, and the sensitivity of CEO option holdings to firm performance (Incentive-Intensity of Stock Option Awards) restricted stock	Earnings (accrual) management	The risk of accruals management decreases with total CEO compensation, but increases with bonus option grants, and option portfolio-performance sensitivity.	Compustat and ExecuComp data during the sample period of 1992-2000.
Management pay-performance and risk sensitivity	Armstrong, Larcker, Ormazabal and Taylor (2013)	The delta and vega of portfolios held by top five firm managers	Financial misreporting	Regressing misconduct on both CEO vega and delta, the effect of delta disappears, and performance-risk sensitivity increases the risk of misreporting.	SEC and Audit Analytics misreporting data during 1992-2009.
CEO pay-performance sensitivity	Bergstresser and Philippon (2006)	The delta and vega of stock and option portfolios held by firm CEO	The use of discretionary accruals (financial misreporting)	The performance-pay sensitivity and management of discretionary accruals to improve firm financial appearance are positively related, and periods of manipulation related to managers exercising options and selling shares.	Compustat and Execucomp data for 1994-2000.
CEO pay-performance sensitivity	Burns and Kedia (2006)	Sensitivity of CEO option and stock holdings, long-term incentive plans, total compensation, and bonuses to firm performance	Financial misreporting	CEO Option portfolio sensitivity affects misreporting.	Sample of GAAP reporting failures resulting in restatements in a sample of S&P1500 firms during 1995-2002.
Management pay-performance and risk sensitivity	Erickson, Hanlon, Maydew (2006)	Sensitivity of top-five management stock and option portfolio to firm performance	Financial misreporting	No consistent relationship between management pay sensitivity and misreporting once corporate governance and firm financials are controlled for.	SEC accusations of accounting fraud in 1996-2003 (Accounting and Auditing Enforcement Releases) using a matched sample.
Tournament incentives	Hass, Muller and Vergauwe (2015)	The difference between CEO and other top-five management compensation	Corporate fraud	Higher tournament incentives, or pay gap between CEO and other top executives, increases the risk of corporate fraud.	The dataset on Corporate Fraud using Dyck, Morse and Zingales (2010) database on fraud from the Stanford Securities Class Action Clearinghouse data in 1994-2004.
Potential manager losses	Bhattacharya and Marshall (2012)	Manager wealth	Illegal insider trading	Poorer managers less likely to engage in insider trading.	Information on managers engaged in insider trading in the US in 1989-2002 from SEC litigation releases in 1995-2004, merged with remuneration data from ExecuComp.

Table 1.7. Recent Studies Documenting Market Discipline Towards Individuals Involved in Misconduct.

Cost	Employees	Paper	Misconduct	Evidence	Sample
Financial Firms					
Turnover, compensation, further employment	Financial advisers	Egan, Matvos and Seru (2016)	Financial adviser misconduct	Half of advisers lose employment in the year following the record compared to 20% chance for non-offenders. They face longer unemployment following dismissal, and face reductions in compensation.	FINRA's Broker Check database on the universe of US financial advisers registered in the US in 2005-2015.
Turnover, further employment	Senior bankers	Griffin, Kruger and Maturana (2017)	Securitisations fraud	Bankers involved in underwriting of fraudulent RMBS securities did not face higher dismissal and lower promotion probabilities, nor worse career prospects in outside firms.	Data on job market outcomes during 2007-2016 for 715 bankers that participated in underwriting of fraudulent RMBS securities during 2004-2006, matched with data on bankers that did not participate in fraud.
Other Industries					
Turnover	Top managers and inside/outside directors	Agrawal, Jaffe and Karpoff (1999)	Corporate fraud	Fraud detection does not significantly increase the risk of manager turnover once firm characteristics are controlled for.	Publicly listed firms accused of fraud during 1981-1992. Source: the Wall Street Journal index, crime and fraud listings, compared with matched/all public firms.
Turnover	Firm CEO, management, and employees	Alexander(1999)	Federal crimes by corporations	Announcements of fraud are associated with management and employee turnover.	Alexander and Cohen (1999) dataset on criminal offences by 78 US public corporations that were penalised in 1984-1990.
Turnover and compensation	Firm executives and directors	Arahooy, Liu and Yawson (2015)	Environmental, antitrust, intellectual property or contractual lawsuits	Contract lawsuits result in higher likelihood of CEO and inside director departures, and environmental or intellectual property ones result in external director turnover. CEO compensation also falls following contract lawsuits. Higher turnover if lawsuits result in high stock losses and boards are independent.	Sample of lawsuits filed in US Federal Courts against S&P 1500 companies during 2000-2007.
Turnover	Executives	Feroz, Park and Pastena (1991)	Financial misreporting	In 70% of cases, management left the firm, and 80% were subsequently sued by firm shareholders.	SEC Accounting and Auditing Enforcement Releases issued during 1982-1989 for public US firms.
Turnover, further employment	Outside directors	Fich and Shivdasani (2007)	Financial misreporting	Outside directors do not have a higher likelihood of being relieved in the firm engaged in fraud, but have a lower number of assignments in other firms afterwards.	Shareholder class action lawsuits for financial misreporting during 1998-2002 from PricewaterhouseCoopers and Stanford University databases.

Cost	Employees	Paper	Misconduct	Evidence	Sample
Turnover	Board members	Holland (2006)	Financial misreporting	No evidence that in firms involved in securities class action lawsuits, board members suffer a decrease in outside directorships except for the most expensive cases, and cases pursued by the SEC.	Securities class action lawsuits from Securities Class Action Alert database during 1994-2002.
Turnover	CEO, CFO	Hennes, Leone and Miller (2008)	Financial misreporting	In the year surrounding restatements, in 92% of the cases, at least one of CEO and COO leave the firm.	Data from public firm 8-K filings mentioning words "fraud" or "irregularity" during 2002-2005.
Turnover, further employment, compensation	CEO, CFO	Humphery-Jenner (2011)	Financial misreporting	Class action litigations result in higher turnover, lower pay, and worse future career outcomes.	Stanford Securities Class Action Database on Securities Class Actions filed in 1996-2007.
Turnover, further employment, sanctions	Individuals identified as responsible for financial fraud	Karpoff, Lee and Martin (2008b)	Financial misreporting	93% of individuals named as responsible for accounting are terminated before the end of the investigation, and face worse career outcomes. Identified employees also face financial penalties, the minority facing criminal charges. The effects increase with the severity of misconduct, board independence and outside monitoring.	SEC and DOJ enforcement actions for financial misreporting during 1978-2006.

Table 1.8. Recent Studies Documenting the Role of Corporate Governance in Misconduct.

Governance feature	Paper	Misconduct	Measures used	Evidence	Sample
Board monitoring and advice	Nguyen, Hagedorff, Eshraghi (2016)	Bank misconduct, discipline towards executives	Share of directors appointed before the tenure of the current CEO, CEO duality, number of other boards that firm directors serve.	Board independence reduces misconduct and increases detections, and higher quality advise reduces technical misconduct. More independence also strengthens CEO compensation declines following disciplinary actions.	Data on enforcement actions on US banks by the FRB, FDIC and OCC during 2000-2013.
Board and outsider monitoring	Alexander and Cohen (1999)	Corporate crime	Proportion of outside directors on the board, CEO tenure, ownership by large shareholders or institutional investors.	Boards with the majority of outside directors face higher risk of malpractice, which also increases with CEO tenure.	Public corporations convicted for corporate crime in 1984-1990, matched with non-criminal firms. source: Wall Street Journal Index, LEXIS NEXIS, and Corporate Crime Reporter.
Board and outsider monitoring	Bebchuk, Grinstein, Peyer (2010)	Option award timing	Proportion of outside directors, CEO tenure, outside blockholders.	Board independence decreases the timing of CEO options if directors do not receive options, as well. Outside blockholders have a constraining effect.	Data on at-the-money, unscheduled option grants given to the CEOs and independent directors in public US companies during 1996-2005.
Board and outsider monitoring, advice	Agrawal and Chada (2005)	Financial misreporting	Share of outside directors, CEO duality, CEO belongs to the founding family, director qualifications and past experience, outside auditors also providing other services, presence of large outside investors	Only financial expertise of firm directors and auditors significantly reduce the risk of financial misstatements, while having a founding-family CEO increases such risk.	Lexis/Nexis news library, Newspaper Source, and Proquest Newspapers used to identify 159 public companies that restated their earnings in 2000/2001.
Board monitoring	Beasley (1996)	Financial misreporting	Proportion of outside directors, presence of an audit committee, insider and director share ownership, CEO duality, director tenure and presence of large outside investors	Board independence, outside director ownership and tenure decrease the risk of misreporting. Outside directors more effective if they have fewer other outside directorships.	Data on firms with financial restatements during 1980-1991 from SEC Accounting and Auditing Enforcement Releases (AAERs) and the Wall Street Journal.
Board monitoring	Chidambaram, Kedia and Prabhala (2010)	Financial misreporting	History of CEO personal or professional relationships with board directors	Non-professional or educational relationships between CEO and directors increase the risk of misreporting, while past professional encounters reduce such risk.	SEC Enforcement action database by Karpoff, Lee, and Martin (2008) for the period 2000-2006.

Governance feature	Paper	Misconduct	Measures used	Evidence	Sample
Board and outsider monitoring	Dechow, Sloan and Sweeney (1996)	Financial misreporting	Share of outside directors, CEO duality, CEO founder of the firm, presence of an audit committee, large outside investors, insider shareholdings.	Outside directors, audit committees and outside blockholders reduce the risk of earnings management, while CEO duality or having founded the firm increase misreporting.	Enforcement actions by the SEC for violations of GAAP in 1982-1992.
Board monitoring	Khauna, Kim and Lu (2015)	Financial misreporting, discipline towards executives	Share of board directors or top executives assigned during the tenure of the current CEO	CEO connections with the board or other executives increase the risk of misconduct and diminish detection risk, as well as the risk of CEO turnover.	Securities fraud data from Federal Securities Regulation database, complemented by SEC litigation releases and Stanford Securities Class Action dataset for the period 1996-2006.
Board and outsider monitoring	Johnson, Ryan and Tian (2009)	Financial misreporting	Board size, share of outside directors, number of meetings held, CEO duality, presence of outside blockholders, size and composition of the audit committee.	Audit committee independence and the frequency of their meetings reduce the risk of financial misreporting.	SEC AAER releases on public US firms for misreporting that occurred during 1992-2005.
Board and outsider monitoring	Cornett, Marcus and Tehranian (2008)	Earnings (accrual) management	Institutional ownership, share of independent outside directors on the board, CEO duality and tenure.	Institutional investors, board independence and size reduce earnings management, while CEO duality and tenure increase it.	Sample of S&P100 firms during 1994-2003.

1.4 Regulation

In this part of the paper, I review the regulations and recommendations that have been introduced recently to curtail bank risk-taking and misconduct in the light of the theoretical considerations and evidence presented in the preceding sections. I focus on how constraints on bankers' remuneration, calls for improved corporate controls and culture, as well as restrictions on bank balance sheets can affect incentives for malpractice in financial institutions.

1.4.1 Regulation of Bankers' Pay

One of the early attempts to co-ordinate regulation of bankers' pay was introduced by the Financial Stability Board in its Principles for Sound Compensation Practices (Principles) in 2009, which became effective in 2011 in the countries under its jurisdiction. The Principles outline three directions for changes in bank remuneration: improving governance in the way that firms set executive compensation, constraining its structure, and ensuring its disclosure and supervision. The Principles require financial institutions to design the compensation structures of material risk takers so that they reflect their contribution to firm risk, and make managers' returns symmetric to bank risk outcomes.

Stock-based Compensation

In line with the FSB principles requiring that "the mix of cash, equity and other forms of compensation must be consistent with risk alignment," and to ensure the symmetry in bankers' and bank outcomes, several countries have imposed restrictions on the composition of senior bankers' variable pay in terms of balancing cash and equity compensation. For example, in line with such principles, the European Capital Requirements Directive IV (CRDIV) requires that at least 50% of managers' bonuses in EU banks take the form of stock-based financial instruments, which should hold both for short-term and deferred variable compensation. Similar recommendations have been also included in the Guidance for Sound Incentive Compensation Policies issued by US financial regulators in 2010.

Empirical evidence presented in Section 1.3 provides evidence that the stock holdings of top bank management is related to lower levels of financial misconduct and corporate fraud, potentially through exposing firm management to the downside risk of detection. However, the convexity of the relationship between managers' wealth and firm performance generated by option-based compensation can also un-do the disciplining effects of managers' stockholdings. Such effects are supported by the previously reported evidence on financial misreporting, but also risk-taking: in banks, higher

CEO wealth sensitivity leads to riskier acquisitions (Hagendorff and Vallascas, 2011), or riskier investments during bank deregulation in the 1990's (DeYoung et al., 2013), and is associated with more firm risk in other industries (Coles et al., 2006; Savaser and Sisli-Ciamarra, 2016).

Overall, therefore, the requirement for stock and stock-based compensation can be expected to have differing effects on the propensity of bank managers to initiate misconduct depending on the sensitivity to performance generated by such schemes, and the extent to which malpractice is attractive to firm shareholders.

Deferred Pay, Malus, and Clawbacks

The provision of the Principles to ensure that bankers' wealth is exposed to the long-term effects of their actions has been implemented through deferred pay requirements. In the EU, the CRDIV requires that at least 40% of material risk takers' variable pay is deferred for at least 3-5 years. In the United Kingdom, in line with the Turner report (2009) which recommended that "the predominant share (two thirds or more) of bonuses which exceed a significant level, should be paid in a deferred form (deferred cash or shares) with a deferral period which is appropriate to the nature of the business and its risks," the deferral period is 7 years for senior managers and 5 years for other material risk takers, the portion of deferred compensation also being 60% rather than 40% for top executives. Similar restrictions are being considered by Australian regulators, where top bank executives earning more than 500,000AUD will have 50% of their variable compensation deferred for at least 4 years.

In 2009, European countries also introduced regulations which allow firms to claw back vested portions of executive bonuses following revelations of inappropriate conduct (and malus provisions which concern unvested variable pay). For example, UK regulations allow for clawbacks of up until 7 years, and 10 years for senior management. US regulators, although not having imposed restrictions on the structure of bankers' pay, are also putting emphasis on these instruments. In practice, institutions have adopted such practices: in 2017, the Wells Fargo bank clawed back 75m USD from its top executives following the revelation of the bank's practice to create accounts to individuals without their consent, group-wide claw backs also having been applied to individuals involved in UBS rogue trading, or sales of PPI at the Lloyds Banking Group.²⁶

From the risk-taking perspective, these constraints reflect concerns that while bank executives suffered significant losses in their stock portfolios, their preceding trading activity and cash bonuses received before the bust generated through risky positions make such behaviour profitable. For example, Bhagat and Bolton (2014) demonstrate

²⁶Reporting in Financial Times "Banks ready to claw back more bonuses," www.ft.com.

that the executives in banks that received TARP assistance during the crisis had gained higher returns on their equity-based compensation compared to the banks that did not receive support, also benefiting more from their trades in stock than long-term shareholders. Bebhuk et al. (2010) find that executives in Lehman Brothers and Bear Stearns received more in short-term compensation than their subsequent losses from shareholdings when the two banks failed, importantly also realising gains from trade in their stock holdings before the crisis. However, from a theoretical perspective, deferring pay also involves trade-offs: for example, Hoffman Inderst and Opp (2016) show such requirements might lead to worse projects being implemented if costly because of managers' liquidity needs.

Similarly, these regulations can be expected to change bank executive incentives to engage in malpractice, as they tackle the distribution of misconduct gains and losses over time. First, allowing claw-backs in bankers' contracts reduces the gains from misconduct directly, as in cases of detection, involved managers face the risk of having to return their variable pay (they also do not carry the costs associated with pay deferral (Remesal, 2018)). Meanwhile, compensation deferral increases employee exposure to long-term losses through longer stock holding periods, but also when malus provisions allow banks to withhold unvested pay. Finally, deferred pay diminishes the attractiveness of engaging in myopic activities as a proportion of gains is realised in the long-run.

Bonus Caps

Recent regulatory efforts to reduce bank risk-taking have also addressed the size of bankers' variable pay. One of the policies that has received public attention recently has been the EU-wide adoption of bonus caps in 2014, as part of the CRDIV. The bonus cap requires that the ratio of bonus to fixed salary does not exceed 100% to material risk-takers, where this ratio can increase to 200% upon shareholder approval. The stringency of such requirements also varies across countries: for example, in the Netherlands, the cap is fixed at 20% rather than 100% of fixed pay. Following the crisis, similar restrictions were introduced in the US, where an outright bonus ban was implemented on banks receiving TARP assistance after revelations of excessive compensation paid in banks under financial distress and relying on public support, as well as in France and Germany for the banks receiving government assistance in 2009. Besides to caps, countries have also increased the costs of granting bonuses, the UK imposing a tax of 50% in 2009, also followed by France.

While they have been mostly designed to change the short-termist risk-taking incentives of bank managers, and prevent them from exploiting the public safety net, can bonus caps change executive incentives to initiate malpractice? On the one hand, evi-

dence presented in Section 1.3 suggests a possible relationship between bank executive bonuses and the risk of disciplinary actions, and it can be expected that by reducing the potential gains that managers can realise, bonus caps reduce the attractiveness of misconduct. Evidence on the changes in bank behaviour following the imposition of pay restrictions also suggest that they might change bankers' incentives: Kleymenova and Tuna (2017) find that UK bank risk diminished following the imposition of bonus caps, while Cerasi et al. (2017) find that the 2011 FSB principles on bankers' pay have resulted in the CEO's of riskier banks receiving lower compensation, pay also being less sensitive to bank short-term performance.

1.4.2 Corporate Governance

The financial crisis has also led to reviews and recommendations by regulators on corporate governance and culture in financial institutions (see, for example, the OECD Corporate Governance Principles (2015), BIS Guidelines for Corporate Governance Principles (2015), the Walker report of 2009, or OCC Heightened Standards (2014)). Aimed primarily at risk-taking, such involvement by regulators is motivated by the role of depositors and tax payers in bank stakeholder structures, as well as the importance of governance changes in restoring public trust, and therefore the functioning, of the financial industry. The key directions of changes proposed by international organisations and local supervisors focus on repairing risk governance in financial institutions by calling for more qualified, involved, informed, and diverse boards, a clearer role for remuneration and risk committees and communication between them, and enhanced personal responsibility.

The evidence presented in Section 1.3 does not allow to conclude that these changes will affect bank conduct directly through better board monitoring, as traditional measures have been shown to have a weak relationship with malpractice. However, they could change managers' incentives to initiate malpractice by reducing the compensation required to prevent managers from expropriating firm resources, or its sensitivity to performance. According to this narrative, better controls limit the propensity of top management to divert resources for own purposes, which, in the absence of controls, would require a higher share of firm returns to be promised to managers. Furthermore, executive remuneration structures can also arise as a form of managerial rent extraction (see Bebchuk and Fried (2003) for an introduction to this view and a literature survey, but also contrasting evidence in Guthrie, Sokolowsky and Wan (2012), and Fahlenbrach (2008)). If better governance reduces managers' compensation and its sensitivity to firm performance, it could in turn result in weaker incentives for managers to initiate fraudulent activities, complementing the effects of pay regulation.

Moreover, the focus on risk through the establishment of risk committees, enhanced

CRO role, and board member qualifications could be expected to result in effort to reduce the incidence of misconduct if it is viewed as an important risk to bank stability. For example, the Basel Committee for Banking Supervision (2015) states that the role of corporate governance is to ensure that banks operate in a sound and safe manner, where “among their other responsibilities, board members and senior management are expected to define conduct risk based on the context of the bank’s business.” Therefore, improved risk governance could lead to better controls, detection and market discipline aimed at reducing the risks of reputational and financial losses that follow revelations of malpractice.

Finally, recent regulatory initiatives also involve measures aimed directly at bank malpractice (see, for example, FSB (2018)). There, responsibility mapping, as well as improving market discipline towards bankers with misconduct records, are expected to resolve manager-level incentives. For example, responsibility mapping which defines the business areas that senior managers are responsible for and enhanced personal responsibility have been recently introduced in banks operating in the UK through the Senior Managers and Certification Regime. Such direct measures can be expected to affect bankers’ incentives both by increasing the probability of sanctions when misconduct is detected for senior managers, and strengthening their effort in monitoring other employees.

1.4.3 Culture

The evidence presented in Section 1.3 lends some support to the view that firm values affect their propensity to engage in fraud. Therefore, regulations and supervision aimed at changing firm culture can be expected to result in lower levels of malpractice.

In line with such beliefs, several supervisory authorities have created mechanisms that focus on and evaluate bank culture (the Dutch Central Bank, ASIC and Prudential Supervision Authority in Australia, Hong Kong and Canadian authorities). Meanwhile, the UK authorities have set minimum requirements for behaviour through the introduction of 5 Conduct Rules, and the G7 ministers have agreed to work on establishing the bankers’ code of conduct. Besides to supervisory effort, banks themselves have taken steps in changing their culture through enhanced communication from the top executives, better hiring decisions, and training, and establishing self-regulating bodies, such as the Banking Standards Board in the UK.

Similar to corporate governance, stricter measurement or supervision of cultural factors might help to overcome coordination failures and short-termist incentives in banks (Chaly et al., 2017), also weakening negative peer effects among individuals or firms. Finally, proposals to make bankers’ pay more dependent on pro-social behaviour and providing clear guidelines, could encourage whistle-blowing, and increase the cost

of acting unethically.

1.4.4 Bank Risk-taking Incentives and Financial Stability

Numerous regulations aimed at improving the soundness of the financial industry post-crisis have been introduced in the recent decade. Minimal capital requirements have been complemented by countercyclical and conservation capital buffers, restrictions on bank leverage and liquidity, and further controls on the composition of assets and liabilities in systemically important institutions.

However, they can also be expected to reduce misconduct in financial firms. First, the imposition of higher capital requirements increases the potential costs that firm owners can suffer from reputational losses, as well as the scope for regulators to impose high financial penalties without risking financial stability. This could make malpractice less profitable from bank shareholder perspective, but also encourage changes in corporate governance and culture if it arises as an agency cost.

Reduced bank riskiness and risk-taking incentives can also translate to changes in compensation schemes. As evidence in Philippon and Reshef (2012) as well as DeYoung et al. (2013) suggests that banks tend to adjust the sensitivity of executives' pay to risk-taking opportunities, lower risk appetite can be expected to lead to less aggressive compensation schemes, in turn reducing their incentives to boost returns through misconduct.

1.5 Conclusion

This paper has aimed to provide an overview of the literature on the prevalence and causes of malpractice in banks as well as other industries. The motivation for such a study is both the cost and pervasiveness of conduct failures in banks observed in the recent decades, and the lack of a coherent literature on such incentives in financial institutions. Meanwhile, the changing regulatory landscape, while bringing anticipation of better bank conduct in the future, can be best evaluated if the drivers behind misconduct are well-understood.

The key findings of the paper are that from a theoretical perspective, numerous channels can lead to malpractice in banks. The empirical evidence overviewed suggests that misconduct risk need not be lower in more reputable banks, and might increase with asset prices, decreasing detection risk, and misbehaviour among peers. As the findings on the role of remuneration structures, governance quality, and other factors are limited, the relative strength of these channels is difficult to ascertain. However, it is clear that banks do not appear to impose strict discipline on their employees involved

in such practices, potentially pointing to approval of unethical behaviour. At the same time, as some governance measures are related to better conduct, increasing the quality of board monitoring and independence seem to constrain misbehaviour.

Moving to regulation, the paper argues that by increasing managers' exposure to the costs of detection through share compensation, deferred pay, and claw back provisions can be expected to change bankers' incentives. Improvements in bank controls and firm culture might also lead to lower malpractice risk in the future. Finally, as some evidence exists on the link between firm leverage and the risk of misconduct, and regulators can be expected to be more lenient towards fragile institutions, enhanced financial stability could lead to improved bank incentives over time, as well.

This survey also points out the gaps in the state of knowledge on misconduct in banks, which provides venues for future research, but also limits the implications that can be drawn from the existing literature. First, evidence on fraud in banks is limited because of data constraints. While the literature on corporate crime in other industries, and evidence on accounting fraud, have been referred to in order to provide a broader picture on the potential causes of misconduct, the applicability of such papers to the banking sector might be limited.

Furthermore, the role of fragile funding structures and riskiness that are unique to the banking industry has not been extensively studied. Examining the importance of such factors can have implications for regulation and financial stability, especially if misconduct revelations are more likely to happen at times of high risk.