

**Essays on rogue traders and collusive rogue trading: Implications  
of control balance, organizational misbehaviour, and  
behavioural patterns of group dynamics**

Doctoral Dissertation

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## Summary

When analysing great financial disasters of our time, rogue trading and related protagonists come into play immediately. Recent history reveals a series of rogue traders, jeopardizing their employers' assets and reputation. Rogue trading is a reoccurring phenomenon, gaining immense public attention due to the perceived mismatch between large-scale organizations on the one hand and individual employees bringing these organizations into enormous trouble on the other. It furthermore links to the understanding of fraudsters like rogue traders, embedded in (un)ethical organizational corporate corpuses.

Throughout this doctoral dissertation, I use three sources of information for the rogue trading case examination: publicly available investigation reports – prepared and issued by regulatory authorities/supervisors as well as authorized delegates like accounting or law firms engaged by the involved banks – published academic research, and news/media information about fines/regulatory sanctions imposed on affected banks and the prosecution status of individuals involved in the events. I apply a case analysis methodology to all rogue traders, extracting and comparing *modus operandi*, risk management failures and control weaknesses, as well as early warning signals, before I examine the events from a criminological, organizational, and psychological/behavioural sciences perspective.

Chapter 1 focusses on Kweku Adoboli at UBS and how he cloned the biggest trading fraud in the history of banking: Jérôme Kerviel's USD 6.9bn unauthorized trading loss at Société Générale. I conduct a read across, comparing Adoboli and Kerviel with the 'godfather' of all rogue traders, Nicholas ('Nick') Leeson and his ruin of Barings Bank.

Chapter 2 and 3 employ Charles Tittle's control balance theory (CBT) to explain rogue trading as a special form/subset of white-collar and corporate crime from a criminological perspective. I use CBT to analyse the anatomy of the Leeson, Kerviel, and Adoboli case, totalling in an accumulated trading loss of USD 10.5bn. I draw conclusions regarding the explanatory power of CBT for rogue trading activities.

Chapter 4 analyses instances of unauthorized acting in concert between traders, their supervisors, and/or firm's decision makers and executives, resulting in collusive rogue trading (CRT). I explore organizational misbehaviour (OMB) theory and explain three major CRT events at National Australia Bank (NAB), JPMorgan with its London Whale, and the interest reference rate manipulation/LIBOR scandal through a descriptive model of organizational/structural, individual, and group forces. The model draws conclusions on how banks

can set up behavioural risk management and internal control frameworks to mitigate potential CRT.

In the concluding chapter 5, I explain one additional major CRT event, the foreign exchange rate manipulation/forex scandal, through an extended descriptive OMB model, in which organizational/structural, individual, and group forces are influenced by behavioural patterns of conscious and unconscious group dynamics: groupthink and defence mechanisms minimizing moral dissonance, i.e. wilful blindness and ethical/moral blindness, morale silence/muteness, and moral neutralization. The model draws conclusions on adverse settings of organizational culture and how banks can prevent collective unethical behaviour.

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## Contents

<b>1</b>	<b>Kweku Adoboli: How to clone the biggest trading fraud in the history of banking</b>	10
1.1	Introduction	10
1.2	Modus operandi of Adoboli's trading fraud at UBS	14
1.3	UBS's control weaknesses and risk management failures	15
1.4	Read across: Personal factors, modus operandi, control weaknesses, and early warning signals	16
1.5	Conclusion	18
<b>2</b>	<b>Behavioural patterns in rogue trading: Analysing the cases of Nick Leeson, Jérôme Kerviel, and Kweku Adoboli</b>	22
2.1	Introduction	22
2.2	Control balance theory (CBT)	23
2.2.1	Control ratio, predisposition towards deviant motivation, and provocation	23
2.2.2	Opportunity	25
2.2.3	Constraint	25
2.2.4	Self-control	25
2.3	Rogues' gallery: An anatomy and comparison of major banking rogue trading losses	27
2.3.1	Nick Leeson at Barings Bank	27
2.3.2	Jérôme Kerviel at Société Générale	31
2.3.3	Kweku Adoboli at UBS	36
2.4	Conclusion	40
<b>3</b>	<b>Applying control balance theory to the rogue traders Nick Leeson, Jérôme Kerviel, and Kweku Adoboli</b>	41
3.1	Introduction	41
3.2	Applying control balance theory (CBT)	41
3.2.1	Predisposition towards deviant motivation, provocation, and motivation	44
3.2.2	Control ratio	45
3.2.3	Opportunity	46
3.2.4	Constraint	48
3.2.5	Self-control	49
3.3	Conclusion	50

## Contents (continued)

<b>4</b>	<b>Whale watching on the trading floor: Unravelling collusive rogue trading in banks</b>	<b>52</b>
4.1	Introduction	52
4.2	Organizational misbehaviour (OMB)	54
4.2.1	Researching the dark side of organizations	54
4.2.2	Norms	56
4.2.3	Culture	57
4.3	Descriptive OMB model	58
4.3.1	Organizational/structural forces	61
4.3.2	Individual forces	61
4.3.3	Group forces	62
4.4	Unravelling collusive rogue trading (CRT)	63
4.4.1	National Australia Bank (NAB)	66
4.4.2	JPMorgan's London Whale	71
4.4.3	The interest reference rate manipulation/LIBOR scandal	79
4.5	Conclusion	92
<b>5</b>	<b>Organizational culture and patterns of group dynamics: Implications for collective unethical behaviour</b>	<b>96</b>
5.1	Introduction	96
5.2	Drivers contributing to organizational misbehaviour (OMB)	96
5.2.1	Organizational/structural forces	98
5.2.2	Individual forces	99
5.2.3	Group forces	100
5.2.4	Patterns of group dynamics	101
5.3	The foreign exchange (FX) rate manipulation/forex scandal	115
5.3.1	Introduction and background	115
5.3.2	OMB model application	121
5.4	Conclusion	126
	<b>References</b>	<b>128</b>

## List of Tables

Table 1: Unauthorized trading losses caused by rogue traders in banks	12
Table 2: UBS's control weaknesses and risk management failures	16
Table 3: Personal factors, modus operandi, control weaknesses, and early warning signals	17
Table 4: Nick Leeson's rogue trading at Barings Bank: Modus operandi, risk management failures and control weaknesses, and early warning signals	30
Table 5: Jérôme Kerviel's rogue trading at Société Générale: Modus operandi, risk management failures and control weaknesses, and early warning signals	34
Table 6: Kweku Adoboli's rogue trading at UBS: Modus operandi, risk management failures and control weaknesses, and early warning signals	38
Table 7: Unauthorized trading losses caused by rogue traders in banks including collusive rogue trading (CRT) events	64
Table 8: Modus operandi, risk management failures and control weaknesses, and early warning signals of National Australia Bank's collusive rogue trading (CRT) event	67
Table 9: Trading volume and market share by traded product of JPMorgan's Chief Investment Office beginning of 2012	72
Table 10: Modus operandi, risk management failures and control weaknesses, and early warning signals of JPMorgan's London Whale event	74
Table 11: Modus operandi, risk management failures and control weaknesses, and early warning signals of the interest reference rate manipulation from an UBS perspective	82
Table 12: Interest reference rate manipulation/LIBOR scandal: Overview of affected banks and fines by regulatory authority	85
Table 13: LIBOR scandal: Trader overview	87
Table 14: Symptoms of groupthink	105
Table 15: Symptoms of defective decision-making caused by groupthink	106
Table 16: Anti-groupthink procedures/administrative changes	110
Table 17: Modus operandi, risk management failures and control weaknesses, and early warning signals of the foreign exchange (FX) rate manipulation/forex scandal	117

**List of Tables** (continued)

Table 18: The foreign exchange (FX) rate manipulation/forex scandal: Overview of affected banks and fines by regulatory authority	120
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## List of Figures

Figure 1: Illustration of control balancing process of the rogue traders Nick Leeson, Jérôme Kerviel, and Kweku Adoboli	43
Figure 2: Organizational/structural, individual, and group forces contributing to organizational misbehaviour (OMB)	60
Figure 3: Daily and year-to-date losses of JPMorgan's Synthetic Credit Portfolio (SCP) the first half 2012	73
Figure 4: Interest reference rate manipulation/LIBOR scandal: Schematic interaction model and collusion process from an UBS perspective	81
Figure 5: Drivers contributing to organizational misbehaviour (OMB)	97
Figure 6: Expected relationships between group cohesiveness, deliberate conformity, and concurrence-seeking/groupthink tendencies	103
Figure 7: Theoretical analysis of groupthink	107

# 1 Kweku Adoboli: How to clone the biggest trading fraud in the history of banking<sup>1</sup>

## 1.1 Introduction

Exactly 1,330 days after Société Générale had to announce the biggest trading fraud in the history of banking on January 24, 2008 with a total financial loss of EUR 4.9bn, caused by Jérôme Kerviel (Rafeld and Fritz-Morgenthal 2010), the investment banking arm of UBS reported on a material loss of USD 2.3bn due to unauthorised trading activities at the bank's Delta One Desk on September 15, 2011.

*'This was the UK's biggest fraud, committed by one of the most sophisticated fraudsters the City of London Police has ever come across,'* commented London police (Simpson 2012). The rogue trader's name was Kweku Adoboli, who was aged 31 when his activities became public. Who was this fraudster?

Adoboli was born on May 21, 1980 in Ghana as son of a senior United Nations official from the West African country. He grew up in Israel, Syria, and Iraq, before he was sent to the United Kingdom (West Yorkshire, Ackworth School) in 1991. In July 2003, Adoboli graduated from the University of Nottingham with an honours degree in computer science and management (Wikipedia 2018).

At UBS, Adoboli started as graduate trainee in 2003. From 2006 to 2011, he worked as trade support analyst, followed by a senior trader role – with a corporate title of director – at the Exchange Traded Fund (ETF) Desk of the Global Synthetic Equities (GSE) business in UBS's City of London office. The desk's responsibility was to net delta limits, which was the maximum level of risk the desk could enter into at any given time unless authorised separately.

On September 16, 2011, one day after UBS's announcement of the rogue trading, Adoboli was arrested and later charged with fraud dating back to 2008. Adoboli was found guilty on charges of fraud by abuse of position (but not guilty on charges of false accounting) by London's Southwark Crown Court on November 20, 2012. He was jailed for seven years, but released after serving half his sentence. There was no additional financial fine for him (Unknown Author 2012b). At the time of writing, Adoboli is facing extradition to Ghana.

While Kerviel and Adoboli seem to be rare instances, Table 1 shows that trading fraud is a serious risk. It frequently happens, and when it happens, it creates serious damage. The

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<sup>1</sup> This chapter is based on Rafeld and Fritz-Morgenthal (2019).

reoccurring typology/profile is: the average rogue trader is male, in its mid-thirties, undetected for more than two and a half years, creates a financial damage of more than USD 1.5bn, and is sentenced to jail for about five years.

Table 1: Unauthorized trading losses caused by rogue traders in banks (sorted by year of detection)

Year	Name	Country	Financial Institution			Trader			
			Time to detect [years]	Loss [USD bn]	Fine [USD bn]	Name	Age when detected	Imprisonment (Suspension) [years]	Fine [USD k]
2011	UBS	U.K.	~3	2.3	0.05	Kweku Adoboli	31	7 (3.5)	
2008	Groupe Caisse d'Épargne	France	0.6	0.98		Boris Picano-Nacci	34	2 (2)	463,050
2008	Société Générale	France	2.5	6.9	0.01	Jérôme Kerviel	31	5(2)	
2006	Amaranth Advisors	U.S.	1	6.6		Brian Hunter	31		30,000
2005	China Aviation Oil	Singapore	1.2	0.55		Chen Jiulin	44	4.25	335
2002	Allied Irish Banks	U.S.	3.6	0.69		John Ruskak	37	7.5	1,000 + 691,000 (restitution)
1996	Sumitomo Corporation	Japan	10	2.6		Yasuo Hamanaka	46	8	
1996	Morgan Grenfell	U.S.	1.25	0.34		Peter Young	38	~ <sup>a</sup>	
1995	Barrings Bank	U.K.	2.5	1.3		Nick Leeson	28	6.6	
1995	Daiwa Bank's	Japan / U.S.	12	1.1		Toshidhie Iguchi	44	4	
1994	Codelco	Chile	0.5	0.28		Juan Pablo Davilla	34	8	
1994	Kidder Peabody	U.S.	3.2	0.08		Joe Jett	36		8,400
1987	Merrill Lynch	U.S.	1/12	0.38		Howard Rubin	36		20.4
1982	Drysdale Government Securities Corporation	U.S.	0.25	0.27		David Heuwetter	40	3 + 4 probation	~ <sup>b</sup>

<sup>a</sup> Found mentally unfit to trial.

<sup>b</sup> Sentence comprised 400h community service.

Source: Author's representation, based on Hornuf and Haas (2014), Skyrn (2014a), and Wexler (2010: 6), enriched with own research. Losses and fines in currencies other than USD are converted to USD using an average exchange rate for the respective year of detection for comparison.

Similar to the initial reactions from Société Générale to Kerviel's rogue trading, in which the former CEO Daniel Bouton described Kerviel as computer whiz-kid and as such could not be stopped by anyone, Oswald Gruebel (the then CEO of UBS) dismissed calls for his resignation and commented on Adoboli, *'If someone acts with criminal intent, you can't do anything (...) That will always exist in our job. If you ask me whether I feel guilty, then I say no.'* (Mulier 2011). Five days after his statement, Gruebel stepped down, and Sergio Ermotti followed as the new CEO. Francois Gouws and Yassine Bouhara (both Co-Heads of UBS's Global Equities franchise) also left UBS after Gruebel's resignation. Carsten Kengeter, the then Global Head of UBS's Capital Market function, was subsequently moved into the internal restructuring unit. On February 12, 2013, Kengeter's replacement by Jim Molinaro (former CFO of Bear Stearns) and departure from UBS was announced in an internal memo (Enrich *et al.* 2013). However, Kengeter returned in June 2015, becoming CEO of Deutsche Börse Group<sup>2</sup>, similar to the former Head of Capital Markets at Société Générale, Jean-Paul Mustier, who was announced CEO of Unicredit in 2015.

Against these personal consequences, and far more severe for UBS, the Swiss Financial Market Supervisory Authority (FINMA) imposed on February 2, 2012 a range of strict preventive supervisory measures, limiting UBS's operational risk exposure until evidence had been given that the operational control environment was effectively working (Swiss Financial Market Supervisory Authority 2012b: 13–4): (i) any new business initiative in the investment bank, which was likely to materially increase the operational complexity of UBS, would need FINMA's prior consent, (ii) the investment bank's overall risk weighted assets (RWAs) were capped at specific and declining values for the years ending 2012 to 2015 in accordance with the bank's strategic plan, (iii) the investment bank's RWAs for its London branch were also capped with the cap declining over time, and (iv) UBS was forbidden to undertake any acquisitions through its investment bank division.

These measures implied a remarkable external trigger to change UBS's business model. The Adoboli fraud needs to be interpreted as a coffin nail for the prosperous growth and profit ambitions of UBS's Capital Markets franchise – turning the platform (existing until the Adoboli trading fraud happened) into a low risk, low capital-consuming, and consequently into a less profitable business for the group. Following that, UBS decided in Q4 2011 to cut 1,575 jobs in the investment bank globally (which represented 9% of 17,265 total employees

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<sup>2</sup> On October 26, 2017, Kengeter announced the retirement from the CEO position at Deutsche Börse Group end of 2017.

in UBS's investment bank at the end of 2011). Further restructurings and associated job cuts have been announced since then.

An additional regulatory reaction came from the United Kingdom at the end of November 2012, when the Financial Services Authority (FSA)<sup>3</sup> fined UBS with USD 48m for significant system and control failings that allowed Adoboli to conduct the multi-billion USD loss through unauthorised trading.

It is astonishing that Adoboli's rogue trading at UBS occurred only three and a half years after Société Générale's trauma caused by Kerviel. Having that in mind, the author would like to answer two main questions: (i) which serious failings in the risk management and control environment at Barings Bank (who employed Nick Leeson, the 'godfather' of all rogue traders – he caused the collapse/bankruptcy of Barings in 1995 due to his fraudulent trading activities), Société Générale, and UBS contributed to the banks' inability to detect and prevent the loss-causing trading activities over an extended period of time and (ii) what mandatory measures are required in banks to detect rogue traders early and to stop them.

But first, what are the mechanics and specific characteristics of the Adoboli fraud?

## **1.2 Modus operandi of Adoboli's trading fraud at UBS**

Irrespective of Adoboli's illegal trades, all rogue trading activities can be reduced to one common characteristic: rogue traders create undetected fictitious trades or intentionally mismark positions, which in turn cover/conceal undetected unauthorised open positions.

Adoboli's loss was incurred on large unhedged Exchange Traded Fund (ETF) index futures positions. Approximately USD 2.1bn from the total loss was originated by long EURO STOXX 50 and S&P 500 futures positions that peaked at USD 12.1bn on August 8 and that were sold out on August 11, 2011. The remaining loss incurred on short S&P 500 and DAX futures, entered after August 11, 2011 (i.e. after the long exposure closure). Adoboli's short exposure peaked at USD 8.5bn on September 15, 2011, the day when UBS discovered his unauthorised positions and unwound them.

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<sup>3</sup> The Financial Services Authority (FSA) closed on March 31, 2013. Two regulatory successors were set up on April 1, 2013: the Financial Conduct Authority (FCA) and the Prudential Regulatory Authority (PRA).

These are the main findings regarding the concealment techniques<sup>4</sup> used by Adoboli to generate fictitious profit and loss (P&L) and risk exposure that concealed the desk's true P&L and risk (Swiss Financial Market Supervisory Authority 2012b): booking of one-sided internal futures trades<sup>5</sup>, late booking of genuine external futures trades into the front office risk system<sup>6</sup>, booking of fictitious ETF trades with deferred settlement dates<sup>7</sup>, and booking of zero-notional bullet cash trades<sup>8</sup>.

Adoboli also developed a profit smoothing mechanism, the so-called 'umbrella' (reserve/wash account), which was against the existing UBS policy to report P&L when earned. With the umbrella, Adoboli combined several concealment techniques from above. It is remarkable that other desk traders were aware of the umbrella, but none of them saw the need to escalate the vehicle to senior management.

When Adoboli and his unauthorised trading activities were discovered by a back office accountant, Adoboli sent the accountant an explanatory email of his trading scheme (see email text on p. 21).

### **1.3 UBS's control weaknesses and risk management failures**

In their summary, the Swiss regulator attested widespread deficiencies across UBS's control environment. Front office managers had limited interest in supervising the activities of the traders, while breaches of policies, management instructions, and limits were tolerated and not penalised. In addition, control and infrastructure functions were required to reduce personnel, and requests for new headcount were denied.

In the following, several additional findings related to UBS's control weaknesses and risk management failures are highlighted in more detail (Swiss Financial Market Supervisory Authority 2012b).

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<sup>4</sup> All techniques were in use since 2008 and created a total fictitious risk exposure of USD 296m (plus fictitious P&L in excess of USD 40m) until end of 2010, whereby the extent of Adoboli's unauthorised activities increased drastically in 2011.

<sup>5</sup> These trades were not matched against an internal counterparty, did not require confirmation, and were subject to less stringent control processes.

<sup>6</sup> The effect of delaying the booking of these trades was to misreport the desk's risk exposure and P&L.

<sup>7</sup> These trades were cancelled before reaching settlement.

<sup>8</sup> These were fictitious trades with a quantity and price of zero and an added cash flow (usually used to book cash-settled events such as dividends). The cash flows were used to clear reconciliation breaks generated by the use of other concealment mechanisms.

*Table 2: UBS's control weaknesses and risk management failures*

Mismanaged transfer of the ETF Desk into global synthetic equities business in 2011	<ul style="list-style-type: none"> <li>• The new desk supervisor was based in New York and therefore unable to effectively supervise the London desk on a day-to-day basis,</li> <li>• No concrete, well-planned, and transparent handover of responsibilities between old and new supervisor took place, resulting in undefined (and hence incomprehensible) responsibilities as well as reporting lines, and</li> <li>• No alignment of control and infrastructure functions in accordance to the desk transfer.</li> </ul>
Poor supervision	<ul style="list-style-type: none"> <li>• Too much trust and not enough discipline and control between supervisors and traders,</li> <li>• The desk's trading mandate and risk limits were not formally documented but were communicated verbally only to the traders [intraday net delta limit was USD 50m (overnight net delta limit of USD 25m) – limit increase in 2011 to USD 100m respectively USD 50m], and</li> <li>• The desk's net delta limits were breached on at least four occasions between June and July 2011; on one occasion, Adoboli made a profit of USD 6m by taking intraday positions in excess of USD 200m – Adoboli's supervisor initially congratulated him on his performance, before he emphasised the need of abiding the existing risk limits going forward.</li> </ul>
Ineffective control systems	<ul style="list-style-type: none"> <li>• The monitoring of alerts from cancelled or amended futures trades and late bookings were not operational until late August 2011; the so-called T+14 Report – to be maintained by an outsourced provider in India – was non-operational from November 2010 to September 2011, without being noticed by management,</li> <li>• Information from the supervisory control portal (SCP) provided only limited trend analysis; the identification of suspicious trading patterns needed to be performed manually, and</li> <li>• Alerts on futures trades were sent to the traders rather to their supervisors.</li> </ul>
Insufficient understanding and challenge by Operations	<ul style="list-style-type: none"> <li>• The explanations given by Adoboli for large reconciliation breaks were not adequately questioned by Operations staff and</li> <li>• Tendency of Operations staff to view their role as supporter/facilitator for trading activities by front office versus controlling and supervising the same.</li> </ul>
Inappropriate analysis and challenge by product control (PC)	<ul style="list-style-type: none"> <li>• PC accepted the desk's explanation for the significant increase in proprietary trading revenues without further investigation,</li> <li>• PC did not have proper infrastructure to review the desk's P&amp;L at trade level, and</li> <li>• No satisfactory controls were in place to identify trades at off-market prices.</li> </ul>
Ineffective operational risk framework	<ul style="list-style-type: none"> <li>• Reliance on self-assessments by front office as well as control and infrastructure functions and</li> <li>• In 2008, the operational risk management function of UBS reviewed the Société Générale rogue trading event as reported by the bank (Société Générale 2008) and its auditor (PricewaterhouseCoopers 2008) and potential weaknesses at its own institution; the review identified a number of issues (missing proper control and infrastructure support – caused by significant staff turnover; weaknesses in the cancelled, amended, and late booked trade monitoring), but failed to ensure remediation of the identified control deficiencies); a follow-up review in late 2010 reported that identified issues had largely been addressed, but apparently failed to ensure that identified control deficiencies were in fact sustainably remediated.</li> </ul>
Reward and recognition systems	<ul style="list-style-type: none"> <li>• The financial and non-financial recognition provided implicit incentives for risk-seeking behaviour.</li> </ul>

#### **1.4 Read across: Personal factors, modus operandi, control weaknesses, and early warning signals**

Interestingly, there are many obvious similarities between the rogue traders from Barings Bank, Société Générale, and UBS (inspired by Gibson 2008).



Table 3: Personal factors, modus operandi, control weaknesses, and early warning signals

	<b>Nick Leeson at Barings Bank</b>	<b>Jérôme Kerviel at Société Générale</b>	<b>Kweku Adoboli at UBS</b>	<b>Early Warning Signals/Key Risk Indicators (KRIs)</b>
<b>Personal Factors</b>	High school diploma, followed by joining Coutts & Co, Morgan Stanley, and finally Barings Securities	Decent degree at secondary university; straight to Société Générale after university	Decent degree at secondary university; straight to UBS after university	<ul style="list-style-type: none"> <li>• Lifestyle (gambling and debt)</li> <li>• Personal account dealing</li> <li>• Tracking of mandatory time away/adherence to holiday policy</li> <li>• Tracking of unusual office hours</li> <li>• Chat protocols/emails/Bloomberg Messenger/social media</li> <li>• Password misuse</li> <li>• Unauthorised use/access of profiles</li> <li>• Code of conduct breaches</li> </ul>
	Former trade support/control; knowledge of back office processes and controls key to fraud	Former trade support/control; knowledge of back office processes and controls key to fraud	Former trade support; knowledge of back office processes and controls key to fraud	
	No possibility of personal gain except bonus	No possibility of personal gain except bonus	No possibility of personal gain except bonus	
	Aged 28 when arrested	Aged 31 when arrested	Aged 31 when arrested	
<b>Modus Operandi</b>	Mainly trading Nikkei index futures for clients from Barings to exploit price gaps between Singapore International Monetary Exchange (SIMEX) and Osaka Securities Exchange (OSE)	Mainly trading index-based derivatives: DAX, EuroStoxx, CAC and FTSA index futures, and single stocks	Trading index-based derivatives: DAX, S&P 500, and EuroStoxx index futures	<ul style="list-style-type: none"> <li>• Limit breaches (VaR, P&amp;L)</li> <li>• Independent price verification (IPV)</li> <li>• Trade confirmations/outstanding confirmations</li> <li>• Reconciliation breaks</li> <li>• Collateral/margin/funding monitoring</li> <li>• Trading balance sheet monitoring</li> <li>• Broker commission monitoring</li> <li>• Monitoring of relationships between traders and counterparties/out-sourcing controls</li> <li>• Cancellations, corrections, and amendments (CCA)</li> </ul>
	Took unhedged directional positions	Took unhedged directional positions	Took unhedged directional positions	
	Usage of an ‘error’ account (88888): Almost 5,000 hidden contracts per end of Jan. 1995 – increase to 61,000 end of Feb. 1995	Created phantom offsetting trades (fictitious hedges based on OTC index futures and ETFs)	Created phantom offsetting trades (fictitious hedges based on OTC ETFs)	
	Trade price manipulation (excessive option selling)	Forward trade and settlement dates to help hide	Extended forward settlement dates to help hide	
	Unauthorised use of clients’ margin accounts	Booked fictitious trades against internal counterparties	Booked fictitious trades against internal counterparties	
	Illicit trading started small and became much larger (initial unrealised loss of GBP 20k)	Illicit trading started small and became much larger	Illicit trading started small and became much larger	
<b>Control Weaknesses</b>	Lack of supervision and no segregation of duties	Widespread failure of risk and control structure and supervision	Widespread failure of risk and control structure and supervision	
	Barings’ financial reporting systems (‘First Futures’ in London and	Activity dated back three years from discovery	Activity dated back three years from discovery	

	'CONTACT' in Singapore)			
	Insufficient understanding/challenge by back office; controls failed to keep pace with business growth of Barings in Singapore	Concerns about trader were raised three months before discovery	Trader was questioned two months before discovery	
	Doubling down strategy by Leeson after Kobe earthquake	Société Générale discovered Kerviel through checking an alleged counterparty	Adoboli admitted unauthorized trading to management following questioning	

## 1.5 Conclusion

UBS had not learned any lessons from the rogue trading at Société Générale. This is even more surprising when taking into account the level of detailed internal information about control weaknesses that Société Générale needed to make public three and a half years before Adoboli was detected internally, i.e. Société Générale's Internal Audit report (Société Générale 2008) as well as an external special investigation report (PricewaterhouseCoopers 2008).

A weak control environment and a poor risk management framework will result in fatal consequences, from the actual material trading loss itself, significantly increased reputational risk, client dissatisfaction/loss of investor confidence, to finally a tremendously changed investment banking business model upon regulatory request.

Largely, every fraudulent activity (such as rogue trading) can be deemed as a function of two parameters: the person itself and the situation (e.g. workplace environment). Regarding the latter, the situation, Table 2 and 3 provide numerous examples of control weaknesses, risk management failures, and suitable targets for criminal offences.

While not everybody who breaches the code of conduct is the next fraudster, it is helpful to be aware of and understand individual behavioural patterns to derive early warning signals. Without any doubt, the mechanisms of human behaviour that prevent someone exploiting a favourable opportunity are complex. Nevertheless, criminological research provides touching points for explanations – also parameters for prediction – of personal risk factors that may trigger deviant behaviour. One of these criminological theories is the control balance theory (CBT) from Charles Tittle (Tittle 1995 and 2004). According to Tittle, the amount of control to which an individual is subjected to relative to the amount of control that an individual can exercise determines the probability of deviance occurring as well as the type of deviance that

is likely to occur. Imbalances in the control ratio can result in either a control deficit (more control is experienced than exercised) or a control surplus (more control is exercised than experienced). Both require the need for corrective action(s) to rebalance control. Tittle interprets deviant behaviour as a device or manoeuvre helping the individual to escape from deficits and extending surpluses of control. In summary, motivation triggered by provocation in intersection and favourable alliance with the variables control ratio (in an unbalanced status), opportunity, constraint, and self-control may lead to deviance.

The trigger for Leeson was an initial small loss of GBP 20k, caused by one of his team members with a so-called fat finger error (buying a position instead of selling or vice versa), which Leeson wanted to hide. For Kerviel in turn, it was the desire to become an accepted member of Société Générale's trading department, linked to his non-elite background. Adoboli was a gambler type and motivated by risk taking. Since the three fraudsters had superior knowledge of back office control processes – Leeson and Kerviel even still had access to those systems – all three rogue traders were in a control surplus stage. Opportunity was given by the competitive environment, combined with a lot of gaps and loopholes in the banks' control systems (reference to Table 2 and 3). Hence, constraints were limited. All three fraudsters showed a low level of self-control – as entry enabler – when starting their fraudulent activities that increased to a higher level during their fraud scheme for more than two and a half years (Leeson and Kerviel) and close to three years (Adoboli) (Rafeld *et al.* 2017a and b).

In my view, the implementation of reliable robust controls to reduce the existence of suitable targets is mission critical for banks. From the shown risk management failures, mandatory detective measures – such as Key Risk Indicators (KRIs), highlighted in Table 3 – need to be designed, implemented, and regularly validated. Banks are required to implement effective behaviour risk management and control. Related systems monitor real time trade(r) behaviour, trade patterns, performance outliers (positive and negative), and provide early warning signals for trigger/turning points on individual trader and on trader group/desk level.

However, an effective behaviour risk management and control framework that works does not only rely on effective KRIs. The KRIs have to fit into the organizational set-up and need to be embedded in business and control processes of the institution. When focussing on the independent price verification (IPV) as an example, this KRI is only effective if (a) it is part of an escalation process, i.e. if a trader and his associated controller/supervisor cannot agree on the correct price for daily P&L, the decision has to be escalated to the next level of authority and (b) if the IPV is coupled with a limit authority system so that the respective con-

troller/supervisor – while above a pre-defined threshold – can only approve deviations up to a certain amount, before approval from the next level of the chain of command would be required.

As concluding remark, lessons learned from rogue traders such as Nick Leeson, Jérôme Kerviel, and Kweku Adoboli and are: first, human character cannot be changed, but human behaviour can be controlled and influenced to mitigate potential negative consequences. Second, KRIs are helpful instruments for fraud prevention and mitigation, but only if they are integrated in the organizational structure and operating model of an institution. Third, KRIs and associated control processes need continuous review of their effectiveness.

**Appendix** (Reference to the end of section 1.2 on p. 15)

This is the transcript of the email headlined ‘*An explanation of my trades*’ that Kweku Adoboli sent on September 14, 2012 to William Steward, a back office accountant, who had challenged Adoboli as to why his trades did not balance (Unknown Author 2012a).

‘*Dear Will*

*It is with great stress that I write this mail. First of all the ETF [exchange traded funds] trades that you see on the ledger are not trades that I have done with a counterparty as I have previously described.*

*I used the bookings as a way to suppress the PnL losses that I accrued through off book trades that I made. Those trades were previously profit making, became loss making as the market sold off aggressively through the aggressive sell-off days of July and early August. Initially, I had been short futures through June and those lost money when the first Greek confidence vote went through in mid-June.*

*In order to try and make the money back I flipped the trade long through the rally. Although I had a couple of opportunities to unwind the long trade for negligible loss, I did not move quickly enough for the market weakness on the back of the first back macro data and then an escalation Eurozone crisis cost me the losses you will see when the ETF bookings are cancelled. The aim had been to try and make the money back before the September expiry date came through but I clearly failed.*

*These are still live trades on the book that will need to be unwound. Namely a short position in DAX futures [which had been rolled to December expiry] and a short position in S&P500 futures that are due to expire on Friday. I have now left the office for the sake of discretion. I will need to come back in to discuss the positions and explain face to face, but for reasons that are obvious, I did not think it wise to stay on the desk this afternoon.*

*I will expect that questions will be asked as to why nobody was aware of these trades. The reality is that I have maintained that these were EFP [exchange for physical] trades to the member of my team, BUC [the accounts department], trade support and John Di Bacco.*

*I take responsibility for my actions and the shit storm that will now ensue. I am deeply sorry to have left this mess for everyone and to have put my bank and my colleagues at risk.*

*Thanks, Kweku’*

## 2 Behavioural patterns in rogue trading: Analysing the cases of Nick Leeson, Jérôme Kerviel, and Kweku Adoboli<sup>9</sup>

### 2.1 Introduction

A financial loss of accumulated USD 10.5bn has been caused by the unauthorised trading activities of three banking employees, Nicholas (‘Nick’) Leeson (detected in 1995), Jérôme Kerviel (detected in 2008), and Kweku Adoboli (detected in 2011). It is astonishing that these three individuals, all around the age of 30 when detected, were able to either ruin (Barings Bank by Leeson) or significantly damage their employing organizations (Société Générale by Kerviel and UBS by Adoboli) with enormous financial losses, including trading losses, regulatory fines, litigation costs, loss of market capitalization, and significant reputational consequences.

Unauthorised trading activities in banking are typically described in both academic research and the press as rogue trading and the involved individuals as rogue traders. The origin links etymologically to the French term ‘rogue’ (voyou), which was used in the context of colonial circumstances under Charles X in Algeria in 1830, holding a pejorative and accusatory meaning, pointing to persons who are not part of the community and its social order, and who have lost their way. The act of labelling someone as rogue designates the subject outside a system or community, factually realigning social and organizational borders (Derrida 2005: 63–70; Land *et al.* 2014: 245–6).

This chapter applies Tittle (1995 and 2004)’s control balance theory, hereafter CBT, and its capabilities to explain rogue trading as a special form/subset of white-collar and corporate crime from a criminological perspective. In the following section, I introduce CBT. The section thereafter analyses the anatomy of the rogue trading cases perpetrated by Leeson, Kerviel, and Adoboli, highlighting modus operandi, risk management failures and control weaknesses, and early warning signals. The linked third chapter covers the contextualization of the theoretical basis of CBT with the unauthorised trading activities, draws conclusions from the theory application, and outlines areas of future research.

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<sup>9</sup> This chapter is based on Rafeld *et al.* (2017a). One version of the chapter was presented at the Conference on Behavioural Risk Management at the Center for Financial Studies (CFS)/Goethe University Frankfurt/M. on March 14, 2017.

## **2.2 Control balance theory (CBT)**

International criminology differentiates between numerous schools of crime. In this chapter, I focus on CBT from Tittle (1995 and 2004), an integrated criminological theory, drawing elements from learning, anomie, conflict, social control, labelling, utilitarian, and routine activity theories. Equipped with interdisciplinary components, CBT is designed to explain and account for all types of deviant behaviour, but also for conforming behaviour (Piquero 2010: 957).

According to Tittle, the amount of control to which an individual is subjected to relative to the amount of control that an individual can exercise determines the probability of deviance occurring as well as the type of deviance that is likely to occur (Tittle 1995: 135). Tittle defines control as the total ability to limit behavioural options of others and at the same time to resist limitations on own behavioural options (Tittle 1995: 170; Tittle 2004: 397). Tittle interprets deviant behaviour as a device or manoeuvre helping the individual to escape from control deficits and extending surpluses of control. Motivation triggered by provocation in intersection and favourable alliance with the variables control ratio (in an unbalanced status), opportunity, constraint, and self-control may lead to deviance (Tittle 1995: 142–70; Tittle 2004: 410–7).

### **2.2.1 Control ratio, predisposition towards deviant motivation, and provocation**

Tittle contends, the desire for autonomy – trying to escape from control over oneself as well as exercising more control (e.g. over other people, circumstances, and environment) than one is experiencing – is almost universal for human beings and shows only slight variations from individual to individual.

Fundamental for Tittle and linked to the desire for autonomy is the control ratio in relation to the individual's social structure (reflected in roles, statuses, organizational contacts, and interpersonal interactions and experiences) and physical characteristics of the individual's ability to exercise control relative to the level of experienced control. Any imbalance in the control ratio predisposes an individual towards deviant behaviour, whereas a balanced control ratio results in conformity, i.e. non-deviant behaviour. Imbalances in the control ratio can

result in either a control deficit (more control is experienced than exercised) or a control surplus (more control is exercised than experienced). Both require the need for corrective action(s) to rebalance control.

The deviant act is deemed by the acting individual as most effective for altering control imbalances. The control ratio varies episodically and contextually from situation to situation, influenced by individual elements (i.e. group linked (such as role, status, and reputation) and personally rooted (intelligence, interpersonal skills, self-confidence, and physical appearance)), and organizational elements (i.e. family, interpersonal relations, formal organizations, and subculture-related organizations<sup>10</sup>) – of which some are constant, dynamic, or both. Tittle also highlights basic (bodily or psychic) needs, which mark a contribution to an individual's predisposition towards deviant motivation in addition to an imbalanced control ratio.

Nevertheless, predisposition is not solely causal for deviant motivation that may result in deviant behaviour. The presence or also the absence of certain situational stimuli – called provocation(s) – is necessary to trigger motivation for deviant acts. As a prerequisite, acting individuals must be conscious of their control ratios on the one hand and the potential to change their ratios advantageously (even only temporarily) – with the help of deviant behaviour – on the other. The provoking parameters with immediate context out of external events and structural realities are wide-ranging, from for example verbal insults, challenges, or display of weaknesses. Tittle also highlights the occurrence of control impingements, sensual stimuli and emotions, expression of subordination, or (organizational) changes with consequences for the acting individual, which lead to provocations. These impingements draw attention to the control imbalance, which is increasing the individual's motivation towards deviant behaviour.

Nearly everyone encounters situational stimuli that have potential to change one's control balance via deviant behaviour. However, individualised cognitive and psychological factors need to be taken into consideration to discount the provocational impact, as situational stimuli significantly vary from individual to individual.

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<sup>10</sup> Tittle highlights three types: peer subcultures (e.g. racial or ethnic minorities, professional or occupational practitioners), institutional subcultures (e.g. in prisons, schools, and universities), and specialised subcultures (e.g. white-collar crime) (Tittle 1995: 157–61).



### **2.2.2 Opportunity**

Situational circumstances and physical realities, leading to opportunities to conduct deviant behaviour, are another main variable of CBT, setting the dimension of what can happen. Examples range from the existence of a potential victim (in the example of street crime) to suitable targets in public and/or corporate environments. Both, opportunity frequency and magnitude, play an important role towards deviant behaviour.

### **2.2.3 Constraint**

CBT assumes that almost every acting individual is aware of and sensitive to the potential consequences from deviant behaviour. Constraint is a variable of seriousness, as the potential magnitude of restraining responses or controlling reactions by others (e.g. counter control or (social) sanctions) as well as situational risk, as the received risk of being discovered/getting caught (detection risk) and punished (condemnation risk).

Constraint expects the acting individual to rationally weight the potential control gain from the deviant act with the control loss it may provoke.

### **2.2.4 Self-control**

CBT proceeds on the basis that acting individuals are self-regulated and non-impulsive. Hence, they are able to restrain the desire to act deviantly in order to fulfil emotional desires, such as unpleasant or bad feelings. Transferred into real life, of course not every acting individual behaves rationally and in a controlled manner, which has consequences for the provocation element triggering motivation, as situational stimuli ultimately create the desire for immediate action for the acting individual – prevented or not by self-control.

Those with low(er) self-control (i.e. individuals who are lacking the rational control balancing process) tend to be provoked for a control imbalance that triggers deviant motivation more easily versus individuals with high(er) self-control, for which the control balancing processing will unfold with a higher probability.

I conclude, a reasonable level of self-control is the basis for successfully applying CBT to an acting individual. In absence of self-control, impulsive/situation driven deviant behaviour does not (or only very vaguely) seem to be systematically assessable. Hence, it is difficult

to predict. Tittle also self-identifies contingencies such as moral commitments, personal taste, habits, or experiences, which need to be taken into account when trying to assess the probability of occurrence of deviant behaviour (Tittle 1995: 201ff).

Putting the variables motivation, control ratio, opportunity, constraint, and self-control into a dynamic interconnection, Tittle (2004) introduces the concept of control balance desirability of deviance as a composite measure of the effectiveness of altering the control imbalance by deviant behaviour.

Attracting (critical) attention, several researchers have challenged CBT (Braithwaite 1997; Jensen 1999; Savelsberg 1996 and 1999; Curry and Piquero 2003), uncovering for example a flaw in the argument as well as conceptual inconsistencies: control imbalances (irrespective of whether they are surpluses or deficits) may predict all forms of deviant behaviour regardless of the originally formulated distinction by Tittle into repressive forms of deviance, e.g. submission, defiance, or predation, caused by control deficits (Tittle 1995: 188–90), and autonomous forms of deviance, e.g. exploitation, plunder, or decadence, caused by control surpluses (Tittle 1995: 190–2). Tittle replied to the criticism (Tittle 1997 and 1999) and provided a major revision of his theory (Tittle 2004).

Given the fact that CBT is designed to explain and account for all types of deviant behaviour, it has been subjected to empirical testing (primarily analysing the relationship between control ratios and deviance as well as the contingent relationships between the two variables) and applied in different domains since its original formulation in 1995. For example, CBT studies have been conducted on incarcerated sex offenders (Wood and Dunaway 1997–8), job autonomy (Dunaway *et al.* 1999), predation and defiance of university undergraduates (Piquero and Hickman 1999), affective states and sex offending (Wood 1999), gender differences and deviant behaviour (Hickman and Piquero 2001), police deviance (Hickman *et al.* 2001), Rasch modelling application to the validity of a control balance scale (Piquero *et al.* 2001), National Youth Survey (NYS) in the USA (DeLisi and Hochstetler 2002), rational choice implications of control balance (Piquero and Hickman 2002), additive and conditional effects with constraints and impulsivity (Curry and Piquero 2003), extending CBT to account for victimisation (Piquero and Hickman 2003), control balance and exploitation (Higgins and Lauterbach 2004), control balance and violence (Higgins *et al.* 2005), motivating and constraining forces in deviance causation (Curry 2005), working adults ordering entry-level workers to inflate sales statistics (Piquero and Piquero 2006), street youth crime (Baron and Forde 2007), computer crime and deviance (Williams 2008), street youths' soft

and hard drug use (Baron 2010), stalking behaviour (Nobles and Fox 2013), and incarcerated men and women (Fox *et al.* 2016).

Tittle (2004) proposes that academic researchers should systematically estimate the control balance desirability of deviance or certain deviant acts to draw conclusions regarding the assessment of the occurrence of these acts that bear the same or at least a similar control balance desirability level. At the same time, Tittle highlights challenges concerning the exact measurement of the control balance desirability because of changing variables from individual to individual, life circumstances, and from situation to situation (Tittle 1995: 200; Tittle 2004: 407–9, 421–2).

Going beyond already analysed domains, I apply CBT to white-collar and corporate crime, comparing two major rogue trading cases from recent history, Jérôme Kerviel at Société Générale and Kweku Adoboli at UBS, with probably the most known case of a rogue trader, Nick Leeson and his ruin of Barings Bank, to test and assess the explanation power of CBT for white-collar and corporate crime (supportive Bock 2008: 133; Friedrichs 2010: 482). I focus on analysing *modus operandi*, risk management failures and control weaknesses, as well as early warning signals, before I contextualize the rogue trading activities within the outlined CBT framework.

## **2.3 Rogues' gallery: An anatomy and comparison of major banking rogue trading losses**

### **2.3.1 Nick Leeson at Barings Bank**

The British Barings Bank, hereafter Barings, had a long history. Founded in 1762, under the name Barings Brothers, it has been the oldest merchant bank in Great Britain and financial advisor to Queen Elizabeth II (Krawiec 2009: 159). It got close to bankruptcy in 1890, mainly due to speculative investments in Buenos Aires, for which the bank was bailed out by a consortium arranged by the Bank of England. Barings' influence declined during the 20<sup>th</sup> century, as it had been left behind by other banks in a deregulated global financial market. In the 1980s, Barings decided to expand its securities business, founding a new investment organization, Barings Securities (Greener 2006: 425).

Nicholas ('Nick') Leeson was born in 1967 in Watford near London. After graduating from high school in 1985, he was employed as junior clerk at Coutts & Co., one of the oldest financial institutions in the City of London. Leeson joined Morgan Stanley as settlement clerk

in 1987, where he could choose to either work on foreign exchange or on futures and options settlements. Leeson decided for the second, working in the back office, processing trades, and confirming contracts. He was able to build a strong reputation, reflecting his diligent and extreme detail-oriented working attitude. Following his role at Morgan Stanley, Leeson joined Barings Securities in London as bookkeeper in July 1989. He continuously proved to be reliable and bright, cleaning up trades and confirmations with his knowledge how to account for derivatives. He was sent to Barings' Indonesian office in Jakarta at the end of 1989, sorting out stock trades, which did not reconcile due to the growing trading volume on the Indonesian Stock Exchange, matching them up with client accounts (Skyrm 2014a: 115ff).

Leeson, however, wanted more than being a back office clerk; he sought to be on the trading floor – becoming a trader (Leeson 1996: 28–9, 33ff; Skyrm 2014a: 116). When Barings decided to open a new trading office in Singapore, Leeson seemed to be the ideal candidate to manage the Barings' subsidiary. It is not only an interesting side note, but early warning signal that when applying for a trader license in London, Leeson's application was rejected because of his unpaid debts and county court judgements (Greener 2006: 427). In March 1992, Leeson was appointed chief trader (despite not having any trading experience), floor manager, and head of trade settlements of Barings in Singapore – being responsible, in personal union, for front and back office activities at the same time.

In his head trader role, Leeson started arbitrage trading ('switching') activities for Nikkei index futures between the Singapore International Monetary Exchange (SIMEX) and Osaka's Securities Exchange (OSE), a routine activity with low rates of return and little market risk.

On July 17, 1992, Leeson's fiasco started: a junior bank clerk of his team sold 20 Nikkei futures instead of buying them, resulting in a loss of GBP 20k (Skyrm 2014a: 121). Leeson realised two things: first, he could easily (and temporarily) hide losses with the help of an 'error' account (he used 88888) – he had used a similar account already in Jakarta. Loss hiding was enabled by reconciliation errors, because Leeson could successfully uncouple the error account from the daily submission process between London and Singapore (the account balance for 88888 had been sent to London but was not reconciled, as no reference to the error account was listed in the master file of Barings in London) (Drummond 2003: 96ff). Second, Leeson recognised how poorly that particular account had been monitored by supervisors (Markham 1995: 136; Canac and Dykman 2011: 16).

Despite the initial small loss, Leeson quickly became a rising star in the Singapore banking world, both inside Barings but also from an outside perspective, which was primarily caused by a client (Philippe Bonnefoy), whose identity was only known to Leeson and who traded via Leeson up to 4,000 Nikkei futures and options on a daily basis (considering an average trading volume at both SIMEX and OSE of approximately 2,900 trades per day (Martens and Steenbeck 2001: 545)). With Bonnefoy as key client – only known as ‘mystery client’ or ‘client x’ by other Barings traders – Leeson was able to process sizeable orders, resulting in high commission fees. The increased trading volume led to a higher probability of execution errors, which needed to be concealed by Leeson via his secret error account (Skrym 2014a: 126–7).

Over time, Leeson moved away from pure arbitrage trading to unauthorised directional/unhedged trading – increasing both the riskiness and size of the trades – trying to overcome increasing losses. He built up significant long futures positions on the Nikkei and short positions on Japanese Government Bonds (JGB). The lack of trading experience put Leeson into trouble, as the markets were not in his favour and the intended direction of his trades. During the summer of 1994, markets continuously moved against Leeson’s positions, who then became an outright speculator, sitting on hidden losses of GBP 208m at the end of 1994 (in relation to Barings Bank Group’s globally reported GBP 37m operating profit before tax for 1994), all concealed via his secret error account. To make matters worse, a severe earthquake in Kobe/Japan on January 17, 1995 led to a drop of the Nikkei of 1,575 points during a single day. Considering the fact that Leeson built up long Nikkei futures positions accounting for 50% of the entire market (total contract volume of GBP 11bn) and short positions of nearly 85% of all JGB that were traded on SIMEX at the beginning of 1995 – as ‘doubling down’ on his already losing trading strategy, increasing bets after each loss (Wexler 2010: 5; in full analytical detail Brown and Steenbeck 2001) – the related losses significantly grew in January and February 1995 (Canac and Dykman 2011: 16–7).

On his last day with Barings on February 24, 1995, Leeson lost another GBP 143m (17% of his total loss). The then 28-year-old trader had built up a total loss of GBP 827m, bringing the history of Barings to an end after 233 years. Barings was the first bank that had been bankrupted by a rogue trader (Gapper 2011: 7).

Barings, as a conservative bank, was not ready for a speculative trader like Leeson, which the following overview – especially the risk management failures and control weaknesses – reveals.

*Table 4: Nick Leeson's rogue trading at Barings Bank: Modus operandi, risk management failures and control weaknesses, and early warning signals*

<b>Modus Operandi</b>	<b>Risk Management Failures and Control Weaknesses</b>	<b>Early Warning Signals</b>
<p>Switching trading strategy</p> <ul style="list-style-type: none"> <li>• Leeson took buy and sell orders from Barings' clients for Nikkei index futures, using them to exploit price gaps between Singapore's International Monetary Exchange (SIMEX) and Osaka's Securities Exchange (OSE), a strategy that was not entirely fake; nevertheless, it could not be as profitable as Leeson claimed it to be to Barings' management.</li> <li>• Leeson took significant unhedged positions on both OSE and SIMX as part of his 'doubling down' trading strategy.</li> </ul> <p>Usage of an 'error' account (88888)</p> <ul style="list-style-type: none"> <li>• The related cash reserve account was created by Leeson on July 3, 1992 to initially hold any minor trading/execution errors, sending back only margin call requests to London; the account was later used to cover Leeson's unauthorised trading on his own account.</li> <li>• Almost 5,000 hidden contracts were in this account by January 20, 1995, increasing to over 16,000 by January 26, 1995, amounting to 61,000 on February 24, 1995.</li> </ul> <p>Trade price manipulation</p> <ul style="list-style-type: none"> <li>• Leeson intentionally adjusted pricing levels of his trades to maintain profitability.</li> </ul> <p>Unauthorised use of client's margin accounts and excessive option selling</p> <ul style="list-style-type: none"> <li>• In order to cover shortfalls/funding problems in his 88888 account, Leeson (i) used clients' excess funds as short-term loans and (ii) excessively sold options (both puts and calls in anticipation of a stable market, 'short straddles') to generate liquidity.</li> </ul>	<p>Lack of supervision and no segregation of duties</p> <ul style="list-style-type: none"> <li>• Leeson's position in the chain of command at Barings was unclear.</li> <li>• Effectively leaving him without any line manager, Leeson acted with a dual role as front office trader and back office (bookkeeping) manager.</li> </ul> <p>Investment performance and risk measures</p> <ul style="list-style-type: none"> <li>• Misleading (i.e. too low) Value at Risk (VaR) as well as deceptive (i.e. too high) Sharpe ratio, calculating the excess return above a standard market benchmark.</li> </ul> <p>Barings' financial reporting systems ('First Futures' in London and 'CONTACT' in Singapore)</p> <ul style="list-style-type: none"> <li>• Software solutions were not able to cope with the complexity concerning payment and margin calculations for derivatives traded on SIMEX and were prone for freezing.</li> <li>• Because of reconciliation errors with London, Leeson uncoupled the error account in the daily submission process between London and Singapore (the account balance for 88888 account had been sent to London, but was not reconciled, as no reference to the error account was listed in the master file of Barings in London).</li> </ul> <p>Insufficient understanding and challenge by back office</p> <ul style="list-style-type: none"> <li>• Back office personnel lacked appropriate skills to fully understand Leeson's trading strategy and the explanations given.</li> </ul> <p>Ineffective control systems</p> <ul style="list-style-type: none"> <li>• Internal controls failed to keep pace with the rapid business growth of Barings in Singapore.</li> </ul>	<p>Disregarding external warning signals</p> <ul style="list-style-type: none"> <li>• Other banks and investors told Barings that Leeson was trading massive volumes.</li> <li>• SIMEX sent four official letters to Barings, the first thereof dated September 7, 1993, questioning discrepancies in Leeson's trading books, even directly referencing to Leeson's 'error' account (88888).</li> </ul> <p>Inadequate follow up on Internal Audit recommendations</p> <ul style="list-style-type: none"> <li>• Internal Audit highlighted severe concerns about missing segregation of duties in October 1994; no remediation and follow-up was initiated.</li> </ul> <p>Leeson's financial misdeemeanours</p> <ul style="list-style-type: none"> <li>• Trader licence application for London was rejected because of Leeson's unpaid debts and county court judgements.</li> </ul> <p>Trading strategy and arbitrage profits</p> <ul style="list-style-type: none"> <li>• Leeson generated unusual high arbitrage profits, which should have led to further inquiries, revealing his unauthorised trading activities.</li> </ul> <p>'Star trader' status and disclosed profitability</p> <ul style="list-style-type: none"> <li>• Until a very few weeks before finally being detected, Leeson was very rarely questioned or challenged in any depth about his unusual trading activities.</li> <li>• Barings Bank Group globally reported an operating profit before tax of GBP 37m for 1994, of which Leeson's switching activities contributed officially to at least GBP 28.5m (77%); no sustained attempt had been made by Barings' management concerning Leeson's high level of profitability in the low risk arbitrage business.</li> </ul>

When recognising Barings' collapse – caused by himself – Leeson tried to escape from Singapore, flying to London (via Brunei, Bangkok, and Abu Dhabi) to be protected from a more severe conviction in the Asian country. When landing for a stopover in Frankfurt on March 2, 1995, Leeson was caught by the local police. He was held in Germany for several months, while he tried to appeal against extradition back to Singapore without success. He was brought back to Singapore on November 23, 1995.

Soon after the discovery of the unauthorised trading loss, Leeson became famous. He published an autobiography (Leeson 1996), and a documentary film titled '25 Million Pound' about his activities has been produced – Leeson became a 'popular cultural celebrat[y]' (Land *et al.* 2014: 246; Krawiec 2000: 306–7). He brought to public attention the first modern example of a rogue trader, losing GBP 827m (USD 1.3bn) of the bank's capital, resulting in Barings' default and the fact that Barings was rescued in a fire sale for the nominal sum of GBP 1 by the Dutch ING Group. Leeson was accused of his fraudulent trading activities and sentenced to prison in Singapore for six and a half years. In 1999, he was released after receiving a diagnosis of cancer.

### **2.3.2 Jérôme Kerviel at Société Générale**

On January 24, 2008, Société Générale, hereafter SocGen, one of the oldest banks in France, founded on May 4, 1864, announced that it had suffered a severe loss of approximately EUR 4.9bn caused by exceptional fraudulent trading activities of one trader, reducing the bank's net income from EUR 5.9bn to EUR 1bn for the financial year 2007. SocGen lost EUR 12.2bn market capitalization during January 2008, to a significant extent as a result of the huge reputational impact caused by the discovered trading fraud.

The bank published an explanatory note about the fraud on January 27, 2008, initiated a dedicated committee composed of independent directors, and hired an external auditor, PricewaterhouseCoopers, on January 30, 2008 to support the fraud examination (PricewaterhouseCoopers 2008). The French Financial Markets Authority opened an inquiry into the trading patterns of SocGen shares since December 31, 2006 in February 2008. Due to the magnitude of the incident, the Minister of Finance (Christine Lagarde) presented a report on the fraud to the French Prime Minister (Nicolas Sarkozy).

Soon after the discovery of the fraud, SocGen described Jérôme Kerviel as a rogue trader and computer whizz-kid and claimed that Kerviel executed his trades without SocGen's authorisation. Nonetheless, it is hard to believe from an outside perspective that not a single person, part of SocGen's global internal control system, had any suspicion concerning Kerviel's unauthorised trading activities (supportive Gilligan 2011: 357–8; Land *et al.* 2014: 240). Kerviel argued, his trading practices were widespread in SocGen's investment banking organization. His supervisors turned a blind eye on him and his unauthorised activities as long as he has made profit.

In January 2008, Kerviel was aged 31 and suspected to be responsible for perpetrating the biggest trading fraud in the history of banking, totalling in almost EUR 5bn. Kerviel was hunted by journalists and bloggers for any information on him. Within a few days, a Wikipedia article described his professional career in detail. A photo was first published in a blog post from the Financial Times, and his curriculum vitae<sup>11</sup> had been published on several news pages.

Kerviel joined SocGen in August 2000. Similar to Leeson, Kerviel obtained 'valuable' experience in various back office units at SocGen. Consequently, he had a very good understanding of SocGen's processing and control procedures (and measures) of market operations. Kerviel joined the so-called 'DELTA ONE Team' as a junior trader in SocGen's corporate and investment banking department (SG CIB) in 2005. Together with his colleagues, he was responsible for arbitrage trading to flatten the delta risk for SocGen arising from European stock markets. Against this trader mandate, the perpetrated rogue trading based on taking massive unauthorised directional positions on equities, over the counter (OTC) options, futures, forwards, and forward rate agreements traded on regulated markets that were hidden by Kerviel as well as their underlying risks and earnings.

In order to hide his unauthorised open positions that peaked at EUR 49bn mid-January 2008 (which was more than SocGen's entire market capitalization at that point in time), Kerviel used various fictitious transactions with deferred start dates as well as pending (internal group) counterparties concealing the residual market risk of his portfolio.

What were the modus operandi and principal characteristics of how Kerviel acted while undertaking his trading activities, allegedly orchestrating a series of bogus transactions that spiralled out of control amid turbulent markets during the financial crisis of 2007 and early

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<sup>11</sup> For a detailed summary of Kerviel's personal background, including his father's death in 2006, a failed marriage one year later, as well as the break up with his new partner, see Canac and Dykman (2011: 17, 26).



2008, which risk and control failures facilitated his activities, and which warning signals were apparent?

*Table 5: Jérôme Kerviel's rogue trading at Société Générale: Modus operandi, risk management failures and control weaknesses, and early warning signals*

<b>Modus Operandi</b> (Société Générale 2008: 24–9)	<b>Risk Management Failures and Control Weaknesses</b>	<b>Early Warning Signals</b>
<p>Recording fictitious trades</p> <ul style="list-style-type: none"> <li>• Kerviel entered one or several false transactions into the system so that they would be taken into account in risk and valuation calculations; he defined the parameters of these transactions so that they covered the fraudulent positions taken elsewhere.</li> <li>• All transactions combined two characteristics: first, a significant offset (i.e. a value date considerably later than the transaction date, which – in accordance with market practice – are not confirmed until a few days before the transaction date) and a cancellation before the value date; second, the use of internal counterparties within Société Générale or small scale external counterparties with cancellation before the value date in all cases.</li> <li>• Control(s) bypassed: (1) no settlement or delivery due to the cancellation of the transactions; (2) no confirmation until 5 days before the value date for transactions with a deferred value date; (3) no confirmation for internal transactions as these are reviewed in the context of intra-group transactions; (4) no margin calls with small counterparties that do not have any collateralisation agreements (only limits or ‘independent amount’)</li> <li>• Volume: 947 transactions of this type were detected by the General Inspection Department.</li> </ul>	<p>Ineffective control systems</p> <ul style="list-style-type: none"> <li>• Lack of controls liable to identify the fraudulent mechanisms such as the control of the positions’ nominal value or of the transactions used by Kerviel to conceal his positions.</li> <li>• Fragmentation of controls between several units, with an insufficient division of tasks, lack of systematic centralisation of reports, and lack of feedback to the appropriate hierarchical levels.</li> <li>• Heavy reliance on manual processing as well as an increased workload of operating staff, resulting in the fact that certain controls in place were not operating effectively.</li> </ul> <p>Control and support function weaknesses</p> <ul style="list-style-type: none"> <li>• Difference between the growth available to control and support functions (including information systems) and the strong growth in transaction volumes within SocGen’s equities division.</li> <li>• Priority given to the correct execution of trades, which appeared to be the primary concern of back and middle offices, in the absence of adequate degree of sensitivity to fraud risks.</li> </ul> <p>Control weaknesses identified by Internal Audit</p> <ul style="list-style-type: none"> <li>• Insufficient level of responsiveness to the implementation of corrective actions identified as necessary by Internal Audit.</li> </ul>	<p>Level of earnings</p> <ul style="list-style-type: none"> <li>• Strong growth and high nominal value amount of Kerviel’s declared official earnings of EUR 43m in 2007 versus EUR 7m in 2006 (increase by 600%), thereof EUR 2 m (versus zero in 2006) from proprietary trading (22% of the total DELTA ONE global earnings of EUR 114m in 2007) and EUR 18m (versus EUR 7m in 2006) from client trading (40% of the total DELTA ONE global earnings of EUR 45m in 2007).</li> <li>• Kerviel’s official earnings of EUR 43m in 2007 represent 59% of DELTA ONE’s desk listed product earnings of EUR 73m, taking into account eight traders (including Kerviel and his direct supervisor) working on the respective desk.</li> </ul> <p>EUREX questioning</p> <ul style="list-style-type: none"> <li>• In November and December 2007, EUREX was in contact twice with SocGen inquiring Kerviel’s trading activities via official letters (the first inquiry covered 6,000 DAX futures traded within two hours, at a value of EUR 1.2bn; the second letter, dated December 10, 2007, failed answering EUREX’s queries in a complete manner by SocGen, suggesting setting up a conference call – a proposal to which EUREX did not respond).</li> </ul>
<p>Recording pairs of fictitious transactions</p> <ul style="list-style-type: none"> <li>• Kerviel entered pairs of fictitious reverse transactions (purchase and sale) concerning equal quantities of the same underlying asset for different ‘off-market’ prices to conceal the realised earnings without creating a directional position (the balance being zero), executed with the same two characteristics mentioned above.</li> <li>• Control(s) bypassed: all aforementioned bypassed controls and in addition (5) no control over prices for transactions carried out with external counterparties (Kerviel conducted several forward rate agreements with an external counterparty at an off-market price).</li> </ul>	<p>Staff risk</p> <ul style="list-style-type: none"> <li>• Inexperience of Kerviel’s line management and direct supervisor, who had structured transaction background and no specific knowledge of trading activities.</li> <li>• Lack of seniority diminishing the effectiveness of the back and middle office teams.</li> </ul>	<p>Cash flow monitoring</p> <ul style="list-style-type: none"> <li>• An excess of cash flows of EUR 1.3bn between December 28, 2007 and January 1, 2008 was not detected due to the lack of detailed analysis.</li> </ul> <p>Accounting irregularities</p> <ul style="list-style-type: none"> <li>• The DELTA ONE management was contacted on two occasions (in April and May 2007) by middle office about anomalies uncovered in relation to Kerviel’s handling and subsequent explanation of accounting discrepancies.</li> </ul>

- Volume: 115 transactions of this type were detected by the General Inspection Department.

Recording of intra-month provision flows ('flux pro')

- Kerviel used the option – in principle reserved for trading assistants (but without any technical protection preventing access by traders) – to correct modelling bias and to enter positive or negative provisions modifying the value calculated by the front office systems.
- Control(s) bypassed: (6) because of his back office experience (gained from 2000 to 2005), Kerviel was aware of the fact that the provisions were only monitored at the end of the month and, therefore, cancelled them before the underlying controls took place.
- Volume: Nine transactions of this type were detected by the General Inspection Department (the biggest, entered on January 10, 2008, amounting up to EUR 1.486bn, which nearly matches the level of total earnings of approximately EUR 1.5bn on December 31, 2007).

Brokerage commissions

- In 2007, Kerviel generated high brokerage commissions, in total EUR 6.2m (i.e. 28% of the associated annual earnings), generated by his unauthorised trading activities.

Breach of limits

- Kerviel's desk market risk limit of EUR 125m was breached on one occasion by the trader with an amount of EUR 10m because of overnight directional equity positions.

Vacation taking

- Kerviel showed a high degree of reluctance to take any vacation; to take vacation has been raised formally on four occasions by his line manager, without any reaction by Kerviel.

After completion of the internal investigation, Kerviel's supervisors were fired. Ex-CEO and (from February 2008) Chairman of the Supervisory Board, Daniel Bouton, retired on April 30, 2009 and SocGen's Head of Capital Markets, Jean-Pierre Mustier was transferred into asset management and finally left the bank in 2009.

On October 5, 2010, Kerviel was found guilty and sentenced to prison for five years (two years suspended) and full restitution of the EUR 4.9bn that was lost. In March 2014 however, a French high court rejected the restitution decision. At the time of writing, there is a lawsuit ongoing about a compensation for Kerviel from SocGen of EUR 455k because of unlawful firing; a decision is expected for December 19, 2018 (Wüpper 2018).

### **2.3.3 Kweku Adoboli at UBS**

After SocGen had to announce the biggest trading fraud in the history of banking on January 24, 2008, the investment banking arm of UBS reported a significant loss of USD 2.3bn due to unauthorised trading activities at the bank's Exchange Traded Funds (ETF) Desk on September 15, 2011. *'This was the UK's biggest fraud, committed by one of the most sophisticated fraudsters the City of London Police has ever come across,'* stated London's Police Department (Simpson 2012). The rogue trader's name was Kweku Adoboli, who was aged 31 years old when his rogue trading became public.

Adoboli was born on May 21, 1980 in Ghana as son of a senior United Nations official from Ghana. He grew up in Israel, Syria, and Iraq, before he was sent to the United Kingdom (Ackworth School, West Yorkshire) in 1991. In July 2003, Adoboli graduated from the University of Nottingham with an honours degree in computer science and management. At UBS, Adoboli started as graduate trainee in 2003. From 2006 to 2011 he worked as trade support analyst, followed by a senior trader role – with corporate title of director – at the Exchange-Traded Fund (ETF) Desk of the Global Synthetic Equities (GES) business in UBS's City of London office. The desk's responsibility was to net delta limits, which was the maximum level of risk the desk could enter into at any given time unless authorised separately.

Similar to the initial reactions by SocGen to Kerviel's rogue trading, in which the former CEO Daniel Bouton described Kerviel as computer whizz-kid and as such could not be stopped by anyone, Oswald Gruebel (the then CEO from UBS) dismissed calls for his resignation and commented on Adoboli, *'If someone acts with criminal intent, you can't do anything (...) That will always exist in our job. If you ask me whether I feel guilty, then I say*

*no.*' (Mulier 2011). Five days after his statement Gruebel stepped down and Sergio Ermotti followed as the new CEO. Francois Gouws and Yassine Bouhara (both Co-Heads of UBS's global equities franchise) also left UBS after Gruebel's resignation. UBS also announced that Carsten Kengeter, the then Global Head of UBS's Capital Market function, left the bank mid-2013, becoming CEO of Deutsche Börse Group on June 1, 2015.<sup>12</sup>

Against these personal consequences, and far more severe for UBS, the FINMA (Swiss Financial Market Supervisory Authority) imposed a range of strict preventive supervisory measures, limiting UBS's operational risk exposure until evidence had been given that the operational control environment was working effectively (Swiss Financial Market Supervisory Authority 2012b: 13–4): (i) any new business initiative in the investment bank, which is likely to materially increase the operational complexity of UBS, would need FINMA's prior consent, (ii) the investment bank's overall risk weighted assets (RWAs) are capped at specific and declining values for the years ending 2012 to 2015 in accordance with the bank's strategic plan, (iii) the investment bank's RWAs for its London branch are also capped with the cap declining over time, and (iv) UBS was forbidden to undertake any acquisitions through its investment bank division.

These measures implied a remarkable external trigger to change UBS's business model. I interpret the Adoboli fraud as nail in the coffin for the prosperous growth and profit ambitions of UBS's capital markets franchise – turning the platform (existing until the Adoboli fraud happened) into a low risk, low capital-consuming, and consequently into a less profitable business. Linked to that, UBS decided in Q4 2011 to cut 1,575 jobs in the investment bank globally (which represents 9% of 17,265 total employees in UBS's investment bank at the end of 2011). Further restructurings and associated job cuts have been announced since then.

An additional regulatory reaction came from the United Kingdom at the end of November 2012, when the then Financial Services Authority (FSA)<sup>13</sup> fined UBS with GBP 29.7m for significant system and control failings that allowed Adoboli to conduct the multi-billion USD loss through unauthorised trading. The following overview summarises Adoboli's rogue trading (Swiss Financial Market Supervisory Authority 2012b).

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<sup>12</sup> See footnote 2.

<sup>13</sup> See footnote 3.

*Table 6: Kweku Adoboli's rogue trading at UBS: Modus operandi, risk management failures and control weaknesses, and early warning signals*

Modus Operandi	Risk Management Failures and Control Weaknesses	Early Warning Signals
<p>Booking of fictitious one-sided internal futures trades</p> <ul style="list-style-type: none"> <li>• Trades were not matched against an internal counterparty, did not require confirmation, and were subject to less stringent control processes.</li> </ul> <p>Booking of fictitious exchange traded funds (ETF) trades with deferred settlement dates</p> <ul style="list-style-type: none"> <li>• Trades, which were cancelled before reaching settlement, generated fictitious risk exposure and P&amp;L.</li> <li>• The following variants of these trades were used: (i) fictitious ETF trades at off-market prices (the off-market pricing of these trades generated significant immediate ('day 1') P&amp;L) and (ii) amendments to the prices of fictitious ETF trades (the pricing amendments had the effect of further misreporting the desk's P&amp;L).</li> </ul>	<p>Mismanaged transfer of the ETF desk</p> <ul style="list-style-type: none"> <li>• The new desk supervisor was based in New York and therefore unable to supervise the London desk effectively on a day-to-day basis.</li> <li>• No concrete, well-planned, and transparent handover of responsibilities between old and new supervisor took place, resulting in undefined (and hence incomprehensible) responsibilities as well as reporting lines.</li> <li>• No alignment of control and infrastructure functions in accordance to the desk transfer.</li> </ul> <p>Inadequate trader mandates and risk limits</p> <ul style="list-style-type: none"> <li>• The desk's trading mandate and risk limits were not formally documented and only verbally communicated to the traders.</li> </ul> <p>Ineffective control systems</p> <ul style="list-style-type: none"> <li>• The monitoring of alerts from cancelled or amended futures trades and late bookings were not operational until late August 2011.</li> <li>• Information from the supervisory control portal (SCP) provided only limited trend analysis; the identification of suspicious trading patterns needed to be performed manually.</li> <li>• Alerts on futures trades were sent to the traders rather than to their supervisors.</li> </ul> <p>Insufficient understanding and challenge by middle office</p> <ul style="list-style-type: none"> <li>• The explanations given by Adoboli for large reconciliation breaks were not adequately questioned by operations staff.</li> <li>• Tendency of operations staff to view their role as supporter and facilitator for front office trading activities versus controlling and supervising it.</li> </ul> <p>Ineffective operational risk framework</p> <ul style="list-style-type: none"> <li>• Reliance on self-assessments by front office as well as control and infrastructure functions.</li> <li>• In 2008, the operational risk management function of UBS reviewed the SocGen rogue trading case and potential weaknesses at their own institution; the review identified a num-</li> </ul>	<p>Trading mandate and risk limit breaches</p> <ul style="list-style-type: none"> <li>• In December 2010, Adoboli has been disciplined (verbal warning) by the desk's supervisor as he failed to follow an instruction to flatten the desk's risk exposure; no further escalation beyond the desk's immediate supervisor took place.</li> <li>• The desk's net delta limits were breached on at least four occasions between June and July 2011; on one occasion, Adoboli made a profit of USD 6m by taking intraday positions in excess of USD 200m – Adoboli's supervisor initially congratulated him on his performance, before he emphasised the need of abiding the existing risk limits going forward.</li> </ul> <p>Increase in proprietary trading revenues</p> <ul style="list-style-type: none"> <li>• Sharp increase from USD 11.7m for full year 2010 to USD 15.9m for Q1 2011 to USD 47.8m in Q2 2011.</li> </ul> <p>Cancel, amended, and late booked trades ('C/A/L')</p> <ul style="list-style-type: none"> <li>• UBS lacked a clear policy outlining the supervisor's responsibility concerning C/A/L alerts.</li> <li>• C/A/L alerts for fictitious ETF trades with deferred settlement, each generating material P&amp;L in excess of USD 0.5bn, were signed off in August 2011 without further investigation.</li> </ul> <p>Unauthorised P&amp;L adjustments and reconciliation breaks</p> <ul style="list-style-type: none"> <li>• As per Adoboli's requests, several material adjustments have been made by product control to the desk's P&amp;L – one in August 2011 accounted for approximately EUR 1bn (off-setting a EUR 1bn loss that particular day); this was at the time when product control faced material reconciliation breaks, such as of CHF 209m on August 2, 2011, created due to late or mis-booked trades.</li> </ul>
<p>Late booking of genuine external futures trades into front office risk systems</p> <ul style="list-style-type: none"> <li>• The intention of delaying the booking of these trades was to misreport the desk's risk exposure and P&amp;L.</li> </ul> <p>Profit smoothing</p> <ul style="list-style-type: none"> <li>• Adoboli developed a profit smoothing mechanism, the so-called 'umbrella' (reserve/wash account), that was against the existing UBS policy to report P&amp;L when earned.</li> <li>• With the umbrella, Adoboli combined several concealment techniques from the four methods above.</li> </ul>	<p>Ineffective control systems</p> <ul style="list-style-type: none"> <li>• The monitoring of alerts from cancelled or amended futures trades and late bookings were not operational until late August 2011.</li> <li>• Information from the supervisory control portal (SCP) provided only limited trend analysis; the identification of suspicious trading patterns needed to be performed manually.</li> <li>• Alerts on futures trades were sent to the traders rather than to their supervisors.</li> </ul> <p>Insufficient understanding and challenge by middle office</p> <ul style="list-style-type: none"> <li>• The explanations given by Adoboli for large reconciliation breaks were not adequately questioned by operations staff.</li> <li>• Tendency of operations staff to view their role as supporter and facilitator for front office trading activities versus controlling and supervising it.</li> </ul> <p>Ineffective operational risk framework</p> <ul style="list-style-type: none"> <li>• Reliance on self-assessments by front office as well as control and infrastructure functions.</li> <li>• In 2008, the operational risk management function of UBS reviewed the SocGen rogue trading case and potential weaknesses at their own institution; the review identified a num-</li> </ul>	<p>Unauthorised P&amp;L adjustments and reconciliation breaks</p> <ul style="list-style-type: none"> <li>• As per Adoboli's requests, several material adjustments have been made by product control to the desk's P&amp;L – one in August 2011 accounted for approximately EUR 1bn (off-setting a EUR 1bn loss that particular day); this was at the time when product control faced material reconciliation breaks, such as of CHF 209m on August 2, 2011, created due to late or mis-booked trades.</li> </ul>

ber of issues (missing proper control and infrastructure support – caused by significant staff turnover – weaknesses in the cancelled, amended, and late booked trade monitoring), but failed to ensure remediation of identified control deficiencies.

On September 16, 2011, one day after UBS's announcement of the rogue trading, Adoboli was arrested and later charged with fraud dating back to 2008. Adoboli was found guilty on charges of fraud by abuse of position (but not guilty on charges of false accounting) by London's Southwark Crown Court on November 20, 2012. His sentence was seven years in prison with no additional financial fine for him (Unknown Author 2012b). He was released from prison in June 2015, after serving half of his sentence. At the time of writing, Adoboli is facing extradition to Ghana.

## **2.4 Conclusion**

In order to explore the capabilities of Tittle's control balance theory (CBT) to explain rogue trading as a special form/subset of white-collar and corporate crime from a criminological perspective, I have introduced the main theory framework. In addition, the anatomy of the rogue trading cases perpetrated by Leeson, Kerviel, and Adoboli has been analysed, highlighting modus operandi, risk management failures and control weaknesses, and early warning signals. The next chapter covers the contextualization of CBT with the unauthorised trading activities, draws conclusions from the theory application, and outlines areas of future research.



### **3 Applying control balance theory to the rogue traders Nick Leeson, Jérôme Kerviel, and Kweku Adoboli<sup>14</sup>**

#### **3.1 Introduction**

This chapter applies Tittle's control balance theory, hereafter CBT, and its capabilities to explain rogue trading as a special form/subset of white-collar and corporate crime from a criminological perspective. In chapter 2, I introduced CBT and analysed the anatomy of the rouge trading cases perpetrated by Leeson, Kerviel, and Adoboli, highlighting modus operandi, risk management failures and control weaknesses, and early warning signals. This chapter covers the contextualization of the theoretical basis of CBT with the unauthorised trading activities. I draw conclusions from the application of CBT and outline areas of future research at the end of this chapter.

#### **3.2 Applying control balance theory (CBT)**

Through the lens of CBT, Piquero and Piquero (2006) analyse corporate managers ordering recently hired entry-level staff to inflate sales statistics, i.e. committing sales fraud. They conclude, control surpluses, rather control deficits, relate to exploitative acts in the context of corporate crime. Tittle (1995) puts control surpluses in relation to autonomous forms of deviance, whereas repressive forms of deviance are put in relation to control deficits. Tittle also points to linkages of autonomous forms to white-collar and corporate crime, confirming Piquero and Piquero (2006)'s research. For example, Tittle highlights product under-pricing by corporate executives to drive one or more competitors out of business (Tittle 1995: 190–1; Tittle 2004: 406).

After receiving critical attention (Braithwaite 1997; Jensen 1999; Savelsberg 1996 and 1999; Curry and Piquero 2003), Tittle rejects the concept of the distinction between autonomous and repressive forms of deviance, as it is problematic to differentiate which forms of

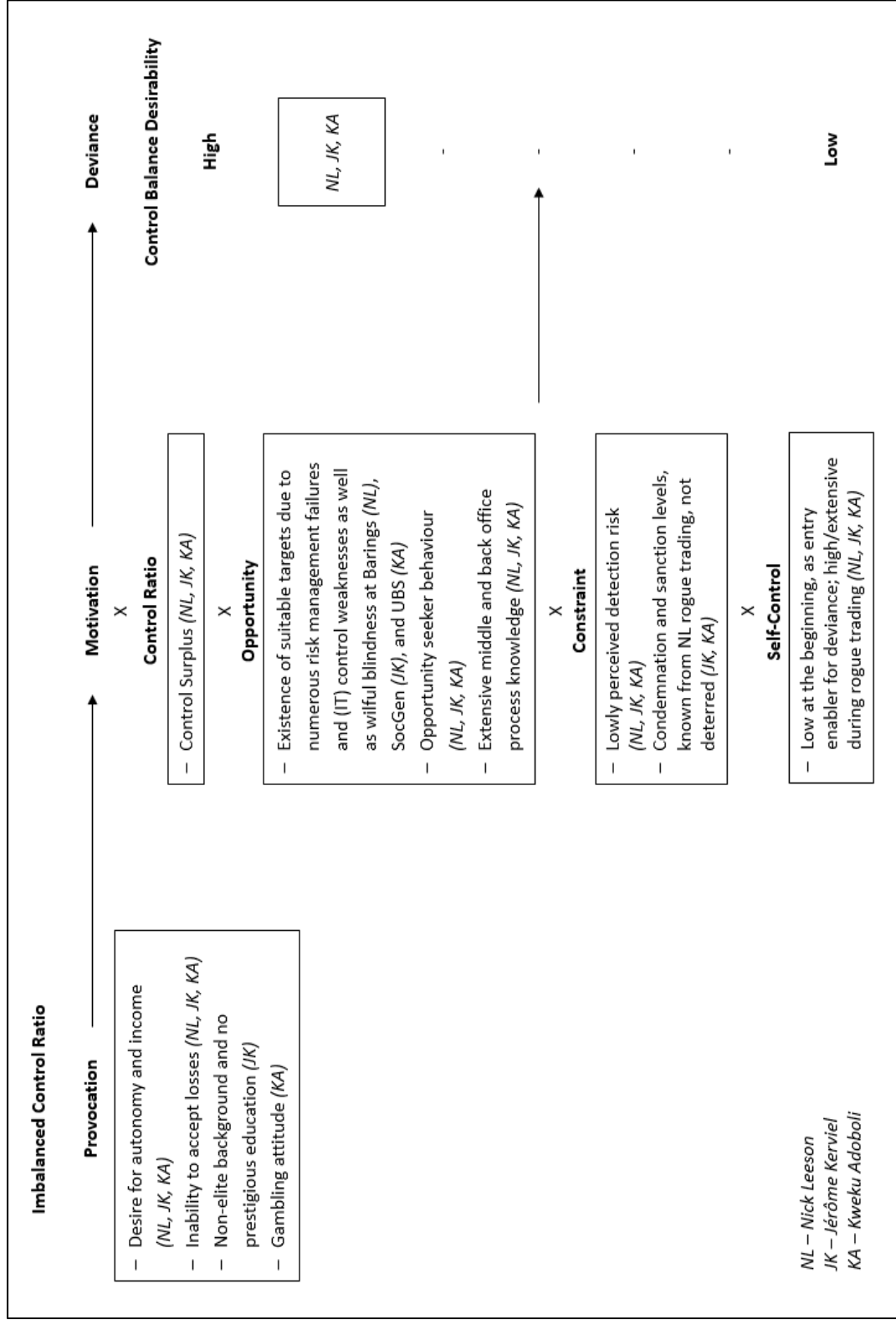
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<sup>14</sup> This chapter is based on Rafeld *et al.* (2017b). One version of this chapter was presented at the Conference on Behavioural Risk Management at the Center for Financial Studies (CFS)/Goethe University Frankfurt/M. on March 14, 2017.

deviance will finally fall into which category. There is no automatism that all individuals exposed to a control surplus will routinely choose primarily autonomous forms of deviance or repressive forms when exposed to a control deficit (Tittle 2004: 399–400).

I apply the CBT framework to the three outlined rogue trading cases alongside the theory variables in the following schematic overview and explain the variable application below.

Figure 1: Illustration of control balancing process of the rogue traders Nick Leeson, Jérôme Kerviel, and Kweku Adoboli



Source: Author's representation, based on Tittle (2004: 419).

### 3.2.1 Predisposition towards deviant motivation, provocation, and motivation

The spirit of investment banking, built and maintained by culture, values, and beliefs, can be characterised as entrepreneurial. Investment banks in particular are, by definition, established to take high(er) ratios of risk, enabling enormous upside potential for profit, but also significant loss opportunities. Working for investment banks bears a strong competitive character (Fenton-O’Creevy *et al.* 2003: 57), apparent in related institutions as well as markets, requiring and fostering entrepreneurial skills.

Traders often show a heightened sense of materialism, risk taking, and greed. Greed does not need to be interpreted completely negatively, as greed within limits can be positive (supportive Krawiec 2000: 313; Lo 2016: 17). Traders are known to be highly individualistic, opportunistic, uncooperative, and self-reliant, thereby maximizing their trading accounts. Coupled with the independence principle, it is obvious that for traders the desire for autonomy seems to be decisive to be followed (supportive Krawiec 2009: 155–6).

The relative autonomy of a successful trader, considering the by nature high capital that he or she is able to handle on behalf of their employers, requires acting within risk limits set by the organization on the one hand, but also exploring and testing boundaries of the same on the other, all in line with the entrepreneurial mind set. Perfect control is impossible to achieve in this context, because organizations rely on their employees as agents for executing their directives – a dependency that confers flexibility and autonomy. The fundamental drive towards autonomy can result in an amplifying escalation pattern, taking everything to the extreme in an aggressive, competitive, and tournament-like environment. Breaking the rules, extending what is allowed, and pushing the limits seems to be common in the investment banking industry, all under the ultimate objective of maximizing profitability (Drummond 2003: 93ff).

Banks and the financial sector as a whole have been underpinned by sociologies of trust, which are intrinsically vulnerable to abuse, confounding social control in such manner that wrong doers could be allowed to elude investigators and to escape state justice systems. These sociologies of trust are being extended in the late-modern society across time, space, and information systems and anonymous commercial networks, widening the zones of risk (Gilligan 2011: 357).

All three rogue trading cases offer insights that there was more than one stimulus as element of provocation. Systemic remuneration practices and arrangements, as extrinsic reward schemes in the banking industry, need to be seen as a core causal element, prioritizing short-term personal gains against the long-term health of the organization. The desire for income, more than job title and promotion, is most influential for traders (Krawiec 2009: 157). For example, remuneration as a quasi-immanent provocation played an important role for Leeson. As per the investigation report, Leeson was granted a bonus of GBP 36k in 1992, GBP 130k in 1993 (3.6 times higher), and GBP 450k in 1994 (another increase by a factor of 3.5), which was never paid out to him in the end (Bank of England 1995: 37).

Leeson's inability to accept losses – linked to the creation and use of his 'error' account to hide a loss of GBP 20k, caused by one of his team members – needs to be seen as one of the main (situational) provocations for him, starting his unauthorised trading activities. Leeson has been explicitly characterised as control freak, falsifying records, fabricating letters, and inventing elaborate stories (Canac and Dykman 2011: 16).

Kerviel can be characterised as an outsider. He has been described as rather shy and quiet, reserved and introverted, not showing off but being well dressed and always hard working (Canac and Dykman 2011: 17). He did not graduate from a prestigious French university, which would have been a quasi-automatism for a well-paid job in the financial industry. He did not necessarily belong to the elite traders at SocGen when he joined the French bank, causing him to strive to be as good as the others, and show that he deserved it and was worthy of working in a large and well-known organization (Kantšukov and Medvedskaja 2013: 157) – an early provocation for Kerviel.

Adoboli's case and circumstances are different in several ways. In contrast to Leeson and Kerviel, Adoboli grew up as the privileged son of a United Nations official in Ghana, coming to the United Kingdom to graduate in finance (Gapper 2011: 36). He has been characterised as a gambler, thinking life itself was a gamble where one could win or lose. After being caught and in the trial, Adoboli has been described as risk seeker (Abdel-Khalik 2014: 68).

### **3.2.2 Control ratio**

Behaviour, triggered by the desire for autonomy, is either trying to escape from control or exercising more control over others than one is experiencing. Rogue traders tend to be

clearly in a control surplus state, which is in line with the research highlighted above that a control surplus primarily relates to exploitative acts in the corporate context (Piquero and Piquero 2006). Exercising a control surplus needs to be advantageous for the traders regarding altering their control ratio, generating shifts of control. Traders in a control surplus state are highly motivated to extend their control surplus as far as possible, which is often combined with reckless behaviour. Tittle confirms in the same lines, the freer individuals are from control, the less appreciation they have for the condition(s) of others (Tittle 1995: 181, 191). In banking, specialised subcultures provide a fertile ground for opportunities for collectively exercising (or escaping from) control, generating significant risks.

### 3.2.3 Opportunity

Without opportunity, no deviant act can happen. There would not be any suitable target. Some opportunity, however, is always present for some kind of deviance. The more frequently an acting individual will be exposed to favourable circumstances, the more often he or she will deviate.

A comparison of risk management failures and control weaknesses (see Tables 2 to 6) highlights astonishingly similar and severe shortcomings in the control frameworks of the affected banks Barings, SocGen, and UBS, allowing and even facilitating the unauthorised trading activities to occur and failing to enable an earlier detection of the same. It took Barings and SocGen two and a half years to finally detect Leeson's (July 1992 to February 1995) as well as Kerviel's unauthorised activities (July 2005 to January 2008). In Adoboli's case, it had been close to three years (October 2008 to September 2011) until his activities were brought to internal and finally public attention, which is even more surprising because UBS reviewed in 2008 – as a result of the Kerviel case – the risk of being defrauded by a rogue trader.

Early warning signals are vital with regard to the early detection of any unwanted opportunities for deviant behaviour. Bringing forward the example of Kerviel, there were in total 74 alerts detected ex-post, of which 39 had a direct link to the fraud and another 25 that had an indirect link. All were ignored by the French bank and its management (Société Générale 2008: 56ff).

When analysing suitable situational circumstances for deviant behaviour, criminology introduces two types of actors: the opportunity taker (Weisburd *et al.* 2001: 64ff) and the

opportunity seeker (Weisburd *et al.* 2001: 77ff). In the context of CBT, both fit into the theory. The opportunity seeker might be triggered more excessively by control imbalances concerning the potential to alter the same via deviant behaviour versus the opportunity taker who is less (pro)active in searching for suitable targets, but takes (more or less immediately) advantage of these once they occur – without further weighting of additional factors and/or consequences, most likely in the absence of or low self-control.

Opportunity is primarily, but not solely, related to situational circumstances. Leeson, Kerviel, and Adoboli had extensive knowledge about specific back office processes, owing to their prior back office roles and activities, allowing them to use their experience when being promoted to traders on the trading floor. These structural circumstances also need to be interpreted as a favourable opportunity from an organizational perspective.

In light of Adoboli's unauthorised trading activities, I highlight the fact that several other colleagues of Adoboli's trading desk knew about his profit smoothing mechanism, the 'umbrella', a reserve/wash account – a fatal (collusive) social–structure alliance, creating a dangerous opportunity enabling Adoboli to continuously execute his unauthorised trading scheme (Swiss Financial Market Supervisory Authority 2012b: 5–6). Related research outlines wilful blindness or Nelsonian knowledge<sup>15</sup> by supervisors and/or bank's senior management, turning a blind eye to the trader's suspicious activities and related early warning signals as long as the trader appears to generate profit.

The summarizing overviews about control weaknesses (see Tables 2 to 6) offer another repetitive pattern that information technology (IT) in particular plays an integral role when contextualizing opportunity and deviant behaviour in the domain of white-collar and corporate crime. It took Leeson only a few keyboard strokes to set the stage for Barings' ruin (Drummond 2003: 93–4).

Several typologies of opportunity – situational and (social) structure related – created a favourable environment for Leeson, Kerviel, and Adoboli, representing an important driver concerning their control balance desirability of deviance.

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<sup>15</sup> Relating to the British Admiral Horatio Nelson, who disobeyed a warning signal for unfriendly battleships raised by the ship of his commander during the Battle of Cape St Vincent in 1797. Related folklore reveals that Nelson placed a telescope to his blind right eye, commenting, '*I see no ships*' to justify his wilful order of disobedience (Gilligan 2011: 358).

### 3.2.4 Constraint

Tittle postulates that acting individuals are aware of and sensitive to the potential consequences of their deviance. Constraint has been defined as a variable of seriousness (the potential magnitude of restraining responses or controlling reactions by others, e.g. counter control or (social) sanctions) and situational risk (comprising two sub-variables: detection risk and condemnation risk).

Leeson, Kerviel, and Adoboli were well aware of the existing but tremendously lacking control mechanisms, given their middle and back office experience, which led to a lowly perceived detection risk. The element of rationalizing deviant behaviour ex post would also come into play. Kerviel, for example, continuously tried to defend himself in court, arguing that he had not done anything wrong. His activities were 'industry standard', known to his management and even tolerated by them, which should not have resulted in any counter control (hence low condemnation risk) following Kerviel's thinking.

Scientific research offers further insights into the situational risk dimension of CBT, as it has been concluded that the probability of detection has a greater effect on the offence(s) than the severity of punishment (Becker 1968), which is interesting from two aspects: first, punishment, condemnation, and linked severity levels (e.g. amount of fines to be paid and/or imprisonment/length of sentence) need to be considered far more thoroughly. Second, much more emphasis needs to be placed on the element of detection.

With regard to the first aspect, Leeson was imprisoned for six and a half years, and no fine against the trader was set. Kerviel was sentenced to prison for five years, of which two years were suspended. He was ruled for full restitution of the financial damage of SocGen of EUR 4.9bn, an astonishing decision by the French court, which has been rejected in 2014. SocGen needed to pay a fine of EUR 4m for failures of the bank's internal control procedures in July 2008. Adoboli was sentenced to seven years in prison, of which he served half of the time before being released.<sup>16</sup> No fine was set against him, but UBS had to pay USD 48m, imposed by the Financial Conduct Authority (FCA).

The widely known condemnation and sanctioning levels were not a deterrent, especially for Kerviel and Adoboli, following the 'godfather' of all rogue traders, Nick Leeson – hence, they are a not strong enough swords from a regulatory perspective. I propose long-term (up to life-long) bans from working in the (investment) banking and financial industry, which should

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<sup>16</sup> At the time of writing, Adoboli is facing extradition to Ghana.



act as a greater deterrent for potential rogue traders. In addition, criminal charges (imprisonment) for managers when failing to adhere to their control and supervisory duties – such as those imposed by the Sarbanes-Oxley Act of 2002 for executives (CEO and CFO) from United States listed corporations – seem to be more powerful.

The element of detection requires further effort from (investment) banks concerning the design, implementation, and enforcement of trade(r) behaviour control systems, raising the bar and cost for rogue traders to an unacceptable level.

### **3.2.5 Self-control**

The last variable to assess the level of control balance desirability of deviance is self-control, comprising behavioural attributes such as self-regulation and non-impulsiveness. Very recent research articulates that self-control might function like a muscle, it may become (temporarily) depleted when it is continually exerted by, for example, stress, noise, and over-tiredness (Soltes 2016: 56). I assume for the three rogue traders an initially low level of self-control as entry enabler for their deviant behaviour, as a normal respectively a high(er) level of self-control would have prevented the traders from starting their unauthorised activities.

In order to maintain rogue trading activities for a long period – months if not years – it is required to execute daily routines and processes with an extensive amount of self-control to successfully mask and conceal unauthorised activities. I remind the reader of the fact that the three rogue traders remained undetected for two and a half years (Leeson and Kerviel) and close to three years (Adoboli), despite the fact that they were surrounded by line managers and supervisors, plus a large number of middle and back office personnel, day in, day out. The ability to withstand (extreme) strain, execute coercion skills and predominance, as well as being immune to stress are only some elements required to maintain the traders' tremendous deception towards their employers. Hence, in the course of action, the low level of self-control at the very beginning is being raised and kept at a high/extensive level during the rogue trading activities.

Typical examples of rogue traders show that they are equipped with excessive self-confidence and overconfidence as behavioural anomalies (Krawiec 2000: 319ff) influencing self-control. Self-confidence and overconfidence are supported by the perception bias that rogue traders, before going rogue, have been recognised (and recognise themselves) as stars – see Krawiec (2000: 321ff)'s, Gillian (2011: 355, 360)'s, and Kantšukov and Medvedskaja (2013:

159)'s elaborations regarding superstar traders – which holds true especially for Leeson, given that he was only rarely questioned about the details of his financial success for Barings. I propose real time positive and negative performance (outlier) monitoring on individual trader and on trader group/desk level to detect false stars as early as possible.

Some individuals/traders suffer from maladaptive illusions of control, safeguarding their overconfidence. There is academic support for the linkage between illusions of control on the one hand and poor risk management and analysis on the other (Fenton-O'Creedy *et al.* 2003). Recent research reveals furthermore a linkage between overconfidence and toxic behaviour (Housman and Minor 2015).

### **3.3 Conclusion**

I draw four conclusions out of the three cases presented. First, CBT is suitable to be applied to rogue trading activities, as a special form/subset of white-collar and corporate crime. I explore and explain rogue trading behaviour within the CBT framework. Against one of the most widely cited explanation models for white-collar and corporate crime, the fraud triangle from Cressey (1953), comprising motive, opportunity, and rationalisation – which has been further developed in the past decade to the fraud diamond by adding the element of capability (Wolfe and Hermanson 2004) – CBT has with the control ratio a new construct to better understand corporate workplace dynamics in the context of deviance (supportive Piquero and Piquero 2006: 421) as well as motivations for deviant behaviour. Despite the fact that the control balancing process is a complex interplay of multiple variables, CBT provides a dynamic causal model, centred around the desire for control, with additional explanatory emphasis on predisposition towards deviant motivation, provocation triggering motivation, constraint, and self-control. I assume an increased degree of explanation power for CBT in the field of corporate elite deviance concerning top management/executive fraud (presumably in the control surplus domain) and employee/workforce fraud (primarily in the control deficit domain), which is to be confirmed by future research.

Second, the level of control balance desirability of deviance needs to be set on the higher scale, evidencing a clear control surplus for all three rogue traders, confirming similar results that control surplus primarily relate to exploitative acts in the corporate context (Piquero and Piquero 2006). A precise prediction of deviant behaviour, however, like rogue trading, needs to be further evaluated. It was not possible to assign and grade scores for the theory variables,

which highlights a challenge with CBT that lies in the accurate measurement of the control balance desirability of deviance. This challenge is caused by the need for primary data, which future research needs to overcome (supportive Piquero and Piquero 2006: 398, 407; more general and relating to rogue trading Krawiec 2000: 304; Kantšukov and Medvedskaja 2013: 162; Land *et al.* 2014: 249). Possible ways to circumvent this gap would lie in forms of qualitative interviews (for example Abolafia 1996, interviewing traders; Soltes 2016: 165–308, interviewing corporate executives, who committed fraud) to better assess the statistical level of the control balance desirability of deviance, quantifying control-experienced as well as control-exercised measures.

Third, there are limitations of CBT, especially concerning changing variables that differ between individuals or groups, the course of life circumstances, and from situation to situation. Situational and personal circumstances are often similar, but not identical. Several contingencies have been highlighted, such as moral commitments, personal taste, habits, or experience, which need to be further explored. CBT might fail when it is being applied to a crisis responder (specification and characterization in Weisburd *et al.* 2001: 59ff), who acts impulsively, without any rationality, and has a very low/zero level of self-control. Control ratios can also shift between underlying contexts (for example corporate versus private circumstances) of the acting individual(s) that need to be explored in more detail. Attention should also be granted to the fact that deviance itself may trigger (permanent) control ratio changes.

Fourth, each control surplus on the individual side of a rogue trader needs to be interpreted as coexistent with a control deficit of the employing organization, which has been shown for Barings, SocGen, and UBS. Banks and their supervising authorities want to know an optimal control balance, i.e. an optimal level of control, which is to be further explored and assessed. Total control cannot be the ultimate goal, as it is linked to extreme cost, heavily limiting banks to operate in an efficient and profitable manner.

## 4 Whale watching on the trading floor: Unravelling collusive rogue trading in banks<sup>17</sup>

### 4.1 Introduction

Rogue behaviour of employees has gained media attention in the years following the financial and sovereign debt crisis, while the academic literature has yet to analyse the commonalities of such threats to a company's assets and reputation.

For the purpose of this chapter, I follow Wexler (2010: 3–4) and distinguish rogue traders from professional speculative traders. The latter are self-reliant opportunists – valuing their independence (Land *et al.* 2014: 234) and seeking, whenever possible, to increase monetary earnings – who act as mercenary risk takers. The species of speculative traders in banks is at risk of extinction due to regulatory recommendations to ban proprietary trading activities at trading floors of investment or universal banks, such as the Volcker Rule or the recommendations of the Liikanen Group.<sup>18</sup> In contrast, rogue traders (a subset of speculative traders) are engaged in excessive, unauthorized, and often concealed market transactions.

Rogue trading activities follow in principle one common mechanism: unauthorised open positions are (supposedly) offset by fake positions and/or other concealment techniques such as mismarking. Rogue traders predominantly exceed the financial institution's trading limits and, in the case of creating trading loss positions, exceed the financial institution's loss limits (Financial Industry Regulatory Authority 2008).

The typical rogue trader is male, in his mid-thirties, undetected for more than two and a half years, creates a financial damage of more than USD 1.5bn, and is sentenced to jail for about five years, see section 4.4 and Table 7 for details.

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<sup>17</sup> This chapter is based on Rafeld *et al.* (2019). One version of this chapter was presented at the European Business Ethics Network (EBEN) Research Conference 'Beyond Corruption – Fraudulent Behavior in and of Corporations' in Vienna on September 7, 2018.

<sup>18</sup> The Volcker Rule, as part of the Dodd-Frank Act, banning proprietary trading for commercial banks became effective on July 21, 2012 with the Federal Reserve (FED) extending the conformance period until July 21, 2017. On February 3, 2017, U.S. President Donald Trump signed an order to review the Volcker Rule and other regulations growing out of the 2010 Dodd-Frank financial reform law. Regulators began working on a potential revision in July 2017. End of May 2018, the U.S. Congress approved a regulatory rollback of the Dodd-Frank Act, leaving a fewer than ten big banks in the U.S. subject to stricter federal oversight, but freeing banks with less than USD 250bn in assets (Rappeport and Flitter 2018).

The Liikanen Group is an expert group of the European Commission for structural banking reforms, founded by Erkki Liikanen, governor of the Bank of Finland and European Central Bank (ECB) council member. The group is recommending the separation of proprietary trading and other high-risk trading activities (Liikanen 2012).

In banks, no trader is purely acting on his or her own, since trading activities and their underlying processes are segregated into front, middle, and back office functions. Unauthorized acting in concert between traders, their supervisors, internal control functions, and/or firm's decision makers and executives results in the existence of 'rogue desk[s]' (Skym 2014a: 20). I expand the same by introducing the typology collusive rogue trading (CRT).

The interest reference rate manipulation/LIBOR scandal by several traders from Barclays Bank, Citigroup, Deutsche Bank, JPMorgan, Lloyds Bank, Royal Bank of Scotland, UBS, and others, shows that CRT is not necessarily contained within individual corporations but can even happen across them.

Building on Leaver and Reader (2017), analysing trading misconduct investigations through the lens of safety culture theory, I focus on organizational misbehaviour (OMB) theory and the dark side of organizations.

At first, I offer an introduction to the status of OMB theory research to recognize and understand theory paradigms, of which I build a descriptive model of organizational/structural, individual, and group forces. With my approach, I follow De Cremer and Vandekerckhove (2017) who emphasize the importance of a descriptive approach, which is grounded in the behavioural sciences – referred to as behavioural business ethics – versus a prescriptive approach. Subsequently, I examine three major CRT events at National Australia Bank (NAB), JPMorgan with its London Whale, and the interest reference rate manipulation/LIBOR scandal via an evidence-based evaluation of the outlined OMB theory propositions to ascertain whether my model offers a valuable framework for understanding the cases.

I use three sources of information for the case examination: publicly available investigation reports – prepared and issued by regulatory authorities/supervisors as well as authorized delegates like accounting or law firms engaged by the involved banks – published academic research, and news/media information about fines/regulatory sanctions imposed on affected banks and the prosecution status of individuals involved in the CRT events.

I apply a case analysis methodology, extracting modus operandi, risk management failures and control weaknesses, as well as early warning signals from the information analysed, before I examine the CRT events alongside the organizational/structural, individual, and group forces of my model. I draw conclusions regarding behavioural risk management and internal control frameworks to prevent potential CRT at the end of this chapter.

## **4.2 Organizational misbehaviour (OMB)**

In the following, I summarize the status of research of the dark side of organizations and inform about norms and culture, before I explain my descriptive model of organizational/structural, individual, and group forces.

### **4.2.1 Researching the dark side of organizations**

Merton (1936) highlights, any system of action inevitably generates secondary consequences, which run counter to its objectives with unexpected optimal or suboptimal (e.g. dark) outcomes. The dark is metaphorically used as a synonym for the bad, undesirable, and unwanted. Linstead *et al.* (2014: 173) characterise the dark side as indelible feature of capitalism, its ultimate destination.

Researching the ‘dark side’ of organizations as a phenomenon has been initially a discipline of sociology and organizational psychology. Closely linked is the analysis of organizational behaviour (OB), which has been increasingly confronted with ethical, moral, and ideological concerns – flanked by the existence and medial presentation of corporate accounting scandals in the United States in the late 1990s and early years of the twenty-first century, e.g. Enron, WorldCom, and Tyco International – as matters of a negative (dark) side of OB, i.e. organizational misbehaviour, hereafter OMB.

Vardi and Weitz (2016: 14) highlight three distinct phases in the evolution of OMB theory research: the early phase (the mid-1950s to the late 1970s; a period of sporadic and non-systematic research), the formative phase (the early 1980s to the mid-1990s; a period of wide scholarly calls for systematic research, the evolvement of major areas of interest, and an emergence of case-based and practitioner-oriented literature), and the current phase (mid-1990s to date; a period aiming towards a full integration of the emerging sub-field of OMB into mainstream OB).

Research in work organizations provides ample evidence for the large variety of OMB – including interrelated and overlapping sub-interests like employee deviance, workplace aggression, and political behaviour – mirrored in current phase research focussing on incivility (Lim *et al.* 2008; Cortina and Magley 2009; Reich and Hershcovis 2015), lying and deceiving (Shulman 2007; Grover 2010), whistle-blowing (Miceli *et al.* 2008; Mayer *et al.* 2013), sexual

harassment (Willness *et al.* 2007; Popovich and Warren 2010; McDonald 2012), and bullying (Glambek *et al.* 2014) – see Vardi and Weitz (2016: 261–3) for a comprehensive review.

Sutherland (1940)'s introduction of the white-collar crime (WCC) concept, grounded in criminological theory, marks an important contribution also to OMB in the early phase of its research. Currently, interest in OMB is emerging from sociological white-collar crime (WCC) research. Although WCC research offers important insights into the dark side of organizations, it fails to develop a systematic theory of OMB (Vardi and Weitz 2016: 4, 16).

Given the serious impact and consequences – in the dimensions personal, social, and financial – cases of misconduct especially in the financial industry can have and in order to contribute to the theoretical and empirical body of knowledge, I expand OMB theory into an unexplored domain, CRT in banks.

A simplistic approach to define OMB is ‘anything you do at work you are not supposed to do’ (Ackroyd and Thompson 1999: 2). Initial OMB research focusses on workplace violence and aggression as abnormal or deviant forms of behaviour (Griffin and O’Leary-Kelly 2004: 1ff) that is expanded into insidious workplace behaviour, theorizing a typology of intentional harmful workplace behaviour (which is subtle, low level rather than severe, repeated over time, and directed at individuals or organizations) (Greenberg 2010: 16).

Vardi and Wiener (1996: 153) describe OMB as intentional action by members of organizations, which defies and violates shared organizational norms and expectations and/or core societal values, mores, and standards of proper conduct. The focus on the intention allows the distinction to accidental or unintentional behaviour caused by errors, mistakes, or unconscious negligence.

An important aspect of OMB is the linkage to and its interpretation in light of routine nonconformity. Related research explores routine nonconformity as a predictable and reoccurring product of all socially organized systems. The adverse outcome of it – generated by the interconnection between environment, organization, cognition, and choice – materializes in three forms: mistake, misconduct, or disaster. All forms are linked to extensive social cost for the public and are socially defined and attributed in retrospect when outcomes are known. Environmental uncertainty and because rules of the institutionalized environment are often unspecific and inappropriate to situations – formalization will never cover all conditions (Feldmann 1989) – are root causes for routine nonconformity (Vaughan 1999).

Dark side behaviour varies according to the specific situation, i.e. may be negative from an organizational perspective, but may appear normal, rational, and even purposeful from an

individual point of view (Linstead *et al.* 2014: 168). Luhmann (1999: 304ff) contextualizes OMB by acting individuals with useful illegality, as being in breach with existing organizational rules by the explicit purpose and benefit of doing it, which offers a distinct view of most of the corporate misconduct/wrongdoing, including CRT.

Corporate and non-corporate acting takes place in the wider context of culture, flanked by values and beliefs of the involved individuals. I do not offer a comprehensive view on culture (if that is possible at all – supportive Geertz (1973), for whom cultural analysis is necessarily incomplete), but I built a descriptive model, helping to explain practical implications of the relevancy of norms and culture in light of CRT in banks.

#### **4.2.2 Norms**

Adams (1997: 340) defines norms as informal social regularities, of which individuals feel obligated to follow because of an internalized sense of duty, because of a fear of external non-legal sanctions, or both. There is an intensive discussion around the scope of the norm definition in general, as some researchers consider legal rules as norms, whereas others exclude not only legal rules but also formal organizational rules from norms. What is clear though is to draw a line of distinction between formalized organizational rules and norms, which are by the definition above informal.

The formal structure of an organization mirrored in its formal rules is in contrast to its day-to-day activities. The institutionalized environment is often unspecific, ambiguous, and even conflicting. Meyer and Rowan (1977: 341, 344) find that many formal structure elements are highly institutionalized and function as myths, as institutionalized norms are able to undermine formal/written rules of the organization (Krawiec 2000). Snook (2000) identifies the practical drift as a process of uncoupling practice from procedure to overcome the conflict of following ceremonial rules on the one hand and trying to achieve efficiency on the other. Snook (2000)'s terminology does not immediately separate between unintended and intended norm drifts. Following the intentional orientation of OMB in this chapter, I focus on the intentional side of norm drifts.

Norms cannot arise without consent and cooperation (Huang and Wu 1994; Tannenbaum (1961), who describes a permission leadership style), a general aura of confidence (which is, according to Hofmann (1967), maintained by avoidance, discretion, and overlooking), and good faith of management (Meyer and Rowan 1977: 357ff).



### 4.2.3 Culture

Organizational culture is regarded as a construct denoting the extent to which members share core organizational values (Wiener 1988). Social literature defines value as an enduring belief in a specific mode of conduct or end-state of existence, which is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence (Rokeach 1973: 5). Wiener (1982) understands values as internalized normative beliefs, which once established act as built-in-normative guide for (mis)behaviour.

With regard to the theoretical application of culture in organizational and social contexts, researchers have shown the power of culture as a tool used by dominant groups (e.g. top management) to purposely influence and/or shape other members' behaviour, resulting in culture as a mechanism of control (Kunda 2006: 7–8).

It remains a central theoretical and empirical dilemma exactly how culture travels from the institutional level to manifest in the people's heads (DiMaggio 1997: 272). The transmission process of values through three biologically inspired drivers (Lo 2016: 18ff), i.e. authority and leadership (analogous to a primary infection source), composition (analogous to a population at risk), and environment (shaping cultural response), is an attempt to bring light into the dark. Authority and leadership are important as a corporate culture is directed to employees through authority (e.g. tone from the top) with the help of (social) sanctions and incentives. Culture is also composed bottom up. Composition is achieved by hiring, selection practices, or population changes, searching for specific values, beliefs, and/or individual traits. Environmental factors, as the third driver, also affect culture. Values reflect how a culture manages risk as a change in the environment, from risk identification and assessment to prioritization and finally the response to risk. Concerning the risk assessment process, overconfidence (Kahneman 2011) in corporate cultures plays an important role (Lo 2016: 30), linked to cultural blindness to contra-indicators (Linstead *et al.* 2014: 174) and an increased tendency for the tolerability of risk (Goh *et al.* 2010: 69). Culture is a product of the environment; when the latter is changing, so does the culture.

Culture exploring theories explain how (unconscious) cultural knowledge is able to contribute to unanticipated negative outcomes, driven by individuals who violate normative standards by a process in which their own conduct may be seen as conforming even if the actual behaviour in question is objectively deviant. Attribution processes of culturally acceptable terms and/or acceptable social expectations support such a contribution to negative outcomes (Vaughan 1999: 280–1). Vaughan (1990, 1996, 1997, and 2004) develops the concept

of normalization of deviance, in which actions that appear deviant to outsiders are normal and acceptable within a culture, leading to problematic perceptions of acceptable deviance, i.e. to the production of deceptive cultural beliefs in risk acceptability. Bandura (1999) describes the concept of moral disengagement, in which psychological processes bias moral awareness concerns. De Cremer and Vandekerckhove (2017: 442) see moral disengagement as a buffer, allowing individuals to free themselves up from feeling guilty.

Organizations allowing or even expecting members to violate values of the larger society within which they operate will most likely not be successful in the long run (Vardi and Wiener 1996: 155). Organizations under attack in competitive environments in turn try to establish themselves almost central to cultural traditions of their societies in order to obtain protection (Meyer and Rowan 1977: 348).

Turner and Pidgeon (1997) highlight that cultural collapses or man-made disasters mainly occur due to inaccuracy or inadequacy of accepted norms, values, and beliefs. Most often, there is an incubation period, in which (chains of) discrepant events – typified by rule violations and flanked by overconfidence about hazard, preventing intervention – develop and accumulate over time more or less unnoticed.

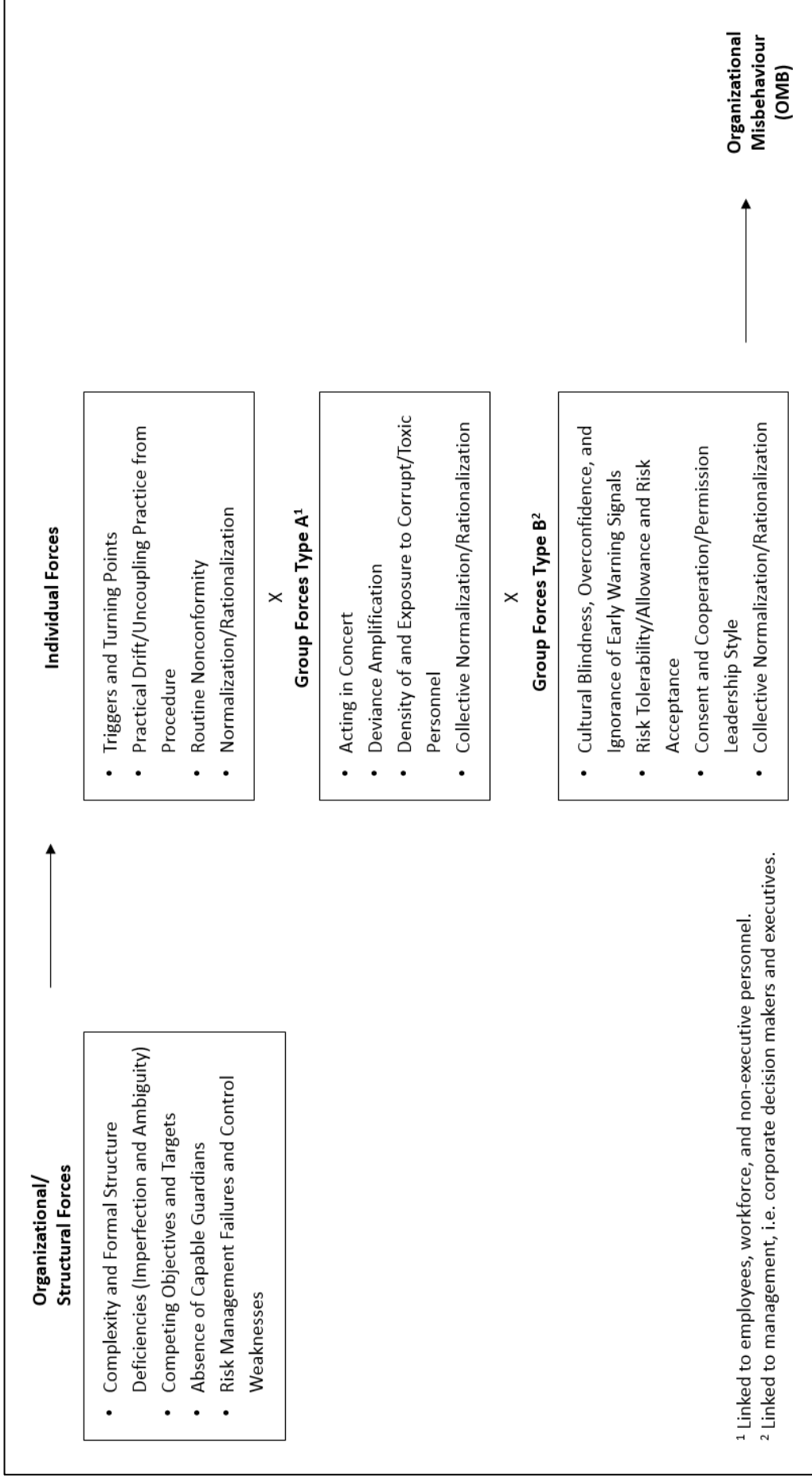
### **4.3 Descriptive OMB model**

Treviño (1986) develops a model for unethical managerial decisions that suggests, individuals' and groups' standards of right and wrong are not the sole determinants of their decisions. Instead, these beliefs interact with situational forces. These two factors shape individual and group decisions and behaviour (Sims 1992 and 2017). Wikström (2004) and Wikström and Treiber (2009) argue similarly in their situational action theory, describing the interaction between individual decision-making characteristics, e.g. individual's morality and ability to exercise self-control, and situational characteristics, e.g. temptations, provocations, and moral context.

From a holistic point of view, OB research and its emerging sub-field of OMB explore three different levels: the macro-level, analysing organizational form, design, and action, the meso-level, studying interpersonal work, workgroups, and teams, and the micro-level, examining the individual and dealing with his or her attitudes and behaviour (Vardi and Weitz 2016).

My hypothesis of this chapter is that the joint occurrence of three forces contributes to the existence of OMB: organizational/structural (causational for situational circumstances), individual, as well as group forces. I apply aforementioned OMB theory paradigms in the following descriptive model to the three forces.

Figure 2: Organizational/structural, individual, and group forces contributing to organizational misbehaviour (OMB)



<sup>1</sup> Linked to employees, workforce, and non-executive personnel.  
<sup>2</sup> Linked to management, i.e. corporate decision makers and executives.

The forces on macro, meso, and micro level and their underlying elements are interrelated and influence each other in a dynamic interplay. Organizational/structural forces mark for the organization the basis in which individual acting takes place and in which individual behaviour is influenced by situational circumstances. Collective/group forces – also influenced by organizational forces – further affect individual and group behaviour, which may lead into OMB.

#### **4.3.1 Organizational/structural forces**

Internal organizational and structural elements (both of formal and informal nature) are the fundament of organizations and externally influenced by, for example, market conditions, business environment, and regulation.

Formalization and structural effort will never cover all organizational conditions (Feldmann 1989), which is due to environmental uncertainty and because imperfection and ambiguity – resulting in, for example, competing objectives and targets – are built in components of complex institutional environments. Sjoberg (1960: 210) confirms along the same lines, no logical consistent formal apparatus is existent to fulfil all requirements a system must meet. Therefore, analogous to Merton (1936), secondary consequences, which generate unexpected (e.g. negative/dark) outcomes, are inevitably to emerge to keep a system operating.

Additional situational contributors supporting the occurrence of OMB are the absence of capable guardians and the existence of control weaknesses, both creating favourable opportunities/suitable targets for acting individuals and groups.

#### **4.3.2 Individual forces**

It holds true what Cressey (1953) formulates: the skills necessary for misconduct are the skills that are required to do the job in the first place. Hence, there need to be triggers and turning points for acting individuals for (mis)using their skills counter to their originally intended objective(s).

Additional individual elements are the aforementioned uncoupling of practice from procedure (practical drift) and – in an extreme form – routine nonconformity, thereby intentionally ignoring or circumventing organizational rules.

Neutralization and rationalization routines/techniques allow individuals to reduce or even overcome moral dissonance – hence, dispute consequences of OMB.

### **4.3.3 Group forces**

The meso-level of O(M)B research examines interpersonal behaviour, i.e. behavioural habits, traits, and dynamics of individuals working in groups. This covers principle-agent relations alongside the organizational hierarchy/chain of command.

Considering complex/multi-layered organizational hierarchy levels makes it necessary to distinguish between typologies of groups alongside existing principle-agent relations. Acknowledging very recent OMB research (Den Nieuwenboer *et al.* 2017; Grodecki 2018), there is increased interest in the role of middle management in modern corporate fraud, in particular agent liability fraud. Large-scale corporate wrongdoing – including the coordination and control of the same – seems to require buy in and support from middle management, whereby middle management may be coerced into deceitful practices to fulfil performance or conceal poor results. Corporate decision makers and executives may execute pressure on agents underneath them to produce results without inquiry in the agent’s methods. Legal/regulatory requirements stipulate that executives are monitored and held accountable for corporate actions, leading to a middle management that is isolated from legal accountability/liability (Nelson 2016: 930).

I therefor distinguish between group forces type A, linked to employees, workforce, and non-executive personnel, and type B, linked to management, i.e. corporate decision makers and executives.

#### **4.3.3.1 Type A**

Working in groups requires coordination and collaboration between individuals. Setting the focus on OMB, I deem unauthorised acting in concert as one major group force type A for CRT.

Beyond that, related criminological research theorizes deviance amplification effects as important for OMB (Weick 1979; De Cremer and Vandekerckhove 2017: 443–4, who refer

to escalation effects), supported by organizational studies that suggest, exposure to corrupt/toxic personnel, showing unethical behaviour, is positively correlated with an individual's unethical behaviour (Housman and Minor 2015), and the influence is positively moderated by group network density, group network closeness centrality, and group size (Wang *et al.* 2017).

Similar to neutralization and rationalization routines on individual level, these are also existing on group level, as initially described and explored by Janis (1972)' groupthink theorem, disputing negative/unwanted results of misbehaviour.

#### **4.3.3.2 Type B**

Corporate decision makers and executives who act in an overconfident manner, thereby consciously or unconsciously ignoring early warning indicators for unethical behaviour, create and foster a culture for OMB. This kind of behaviour periodically or constantly accepts negative behaviour/misconduct to occur and persist.

As highlighted before, any changes also of negative norms cannot arise without consent and cooperation – hence, require a permission leadership style of corporate executives and decision makers. Similarly to the importance of normalization/rationalization routines on individual and group force type A level, these techniques – when in use by top management – are able to contribute to OMB.

In the following, I apply the descriptive model to three CRT events at National Australia Bank (NAB), JPMorgan, and the interest reference rate manipulation/LIBOR scandal.

#### **4.4 Unravelling collusive rogue trading (CRT)**

Recent history reveals a series of rogue traders, damaging their employers' assets and reputation. There is an increasing trend of serious cases with substantial financial impact, especially since the beginning of the century, cf. Rafeld *et al.* (2017a and b), who analyse three major rogue trading cases. Table 7 gives an overview about high-profile rogue trading events in various markets and jurisdictions including a re-occurring typology/profile of the acting rogue traders and instances of collusion.

Table 7: Unauthorized trading losses caused by rogue traders in banks including collusive rogue trading (CRT) events (sorted by year of detection)

Year	Name	Country	Financial Institution			Trader			
			Time to detect [years]	Loss [USD bn]	Fine [USD bn]	Name	Age when detected	Imprisonment (Suspension) [years]	Fine [USD k]
<b>Collusive rogue trading (CRT)</b>									
2012	UBS <sup>c</sup>	U.K.	~6	N/A <sup>d</sup>	1.47 <sup>e</sup>	Thomas Hayes <sup>f</sup>	32	14 (3)	1,394
	Barclays Bank <sup>e</sup>	U.K.			0.54	Jay Merchant <sup>f</sup>	42	5.5 (1)	472
						Alex Pabon <sup>f</sup>	37	2.75 (1.8)	3.64
						Jonathan Mathew <sup>f</sup>	30	4	54.96
						Peter Johnson <sup>f</sup>	57	4	228.89
						Philippe Moryousseff <sup>f</sup>	44	8	
	Deutsche Bank <sup>e</sup>	U.K.			3.75	Christian Bittar <sup>f</sup>	40	5.3	4,448
	Rabobank <sup>e</sup>	U.S.			1.01	Paul Thompson <sup>f</sup>	46	0.25	
2012	JPMorgan Chase & Co.	U.K.	0.25	6.2	1.02	Achilles Macris	50		1,256
						Javier Martin-Artajo	48		
						Bruno Iksil	N/A		
						Julien Grout	34		
2004	National Australia Bank	Australia	2.25	0.33		David Bullen	32	3.6	
						Luke Duffy	34	2.5	
						Vince Ficarra	25	2.3	
						Gianni Gray	34	1.3	
<b>Other</b>									
2011	UBS	U.K.	~3	2.3	0.05	Kweku Adoboli	31	7 (3.5)	
2008	Groupe Caisse d'Epargne	France	0.6	0.98		Boris Picano-Nacci	34	2 (2)	463,050
2008	Société Générale	France	2.5	6.9	0.01	Jérôme Kerviel	31	5 (2)	
2006	Amaranth Advisors	U.S.	1	6.6		Brian Hunter	31		30,000
2005	China Aviation Oil	Singapore	1.2	0.55		Chen Julin	44	4.25	335
2002	Allied Irish Banks	U.S.	3.6	0.69		John Rusnak	37	7.5	1,000 + 691,000 (restitution)
1996	Sumitomo Corporation	Japan	10	2.6		Yasuo Hamanaka	46	8	
1996	Morgan Grenfell	U.S.	1.25	0.34		Peter Young	38	- <sup>g</sup>	
1995	Barings Bank	U.K.	2.5	1.3		Nick Leeson	28	6.6	
1995	Daiwa Bank's	Japan / U.S.	12	1.1		Toshidhie Iguchi	44	4	
1994	Codelco	Chile	0.5	0.28		Juan Pablo Davilla	34	8	
1994	Kidder Peabody	U.S.	3.2	0.08		Joe Jeff	36		8,400



1987	Merrill Lynch	U.S.	1/12	0.38	Howard Rubin	36	20.4
1982	Drysdale Government Securities Corporation	U.S.	0.25	0.27	David Heuwetter	40	3 + 4 probation <sup>h</sup>

<sup>c</sup> At the time of writing, in total thirteen financial institutions (including two brokers) have been fined by regulatory authorities in light of the interest reference rate manipulation/LIBOR scandal; see for a complete overview (including fines paid) Table 12.

<sup>d</sup> An estimated USD 300tn of contracts are based on LIBOR. An exact quantification of the financial loss caused by the LIBOR scandal is not possible.

<sup>e</sup> UBS avoided another regulatory fine of USD 2.83bn (EUR 2.5bn) from the European Commission because of its expert witness role during the interest reference rate manipulation investigation.

<sup>f</sup> For simplicity, I only show imprisoned traders involved in the LIBOR scandal; see for a complete overview including acquitted traders Table 13.

<sup>g</sup> Found mentally unfit to trial.

<sup>h</sup> Sentence comprised 400h community service.

Source: Author's representation, based on Hornuf and Haas (2014), Skyrn (2014a), and Wexler (2010: 6), enriched with own research. Losses and fines in currencies other than USD are converted to USD using an average exchange rate for the respective year of detection for comparison.

I now apply the OMB framework to three major CRT events at National Australia Bank (NAB), JPMorgan with its London Whale, and the interest reference rate manipulation/LIBOR scandal, discussing each of the cases separately and then drawing conclusions.

#### **4.4.1 National Australia Bank (NAB)**

In January 2004, National Australia Bank (NAB), one of the four largest banks in Australia and amongst the top fifty financial institutions worldwide measured by total assets as at end of 2017, announced a loss of Australian Dollar (AUD) 360m (USD 326m) in its foreign exchange (FX) business. The loss was a result of unauthorized trading activities, i.e. behaviour contrary to NAB's trading strategy.

Four traders, David Bullen, Luke Duffy, Vince Ficarra, and Gianni Gray ('the traders'), were responsible for the losses. Bullen, Ficarra, and Gray were reporting into Duffy, who in turn reported into Gary Dillon (NAB's Joint Head of FX). The traders' unauthorized activities started in 2001 with an artificially overstated currency option portfolio of AUD 4m at September 30, AUD 8m at September 30, 2002, and AUD 42m at September 30, 2003. During Q4 2003, the traders' unauthorized trading activities significantly increased NAB's risk exposure and corresponding trading losses they needed to mask. The traders acted in the expectation that the USD decline occurred mid of 2002 would reverse and volatility would stabilize, while USD actually dropped 10% against AUD in the last quarter of 2003. The overstated value of the portfolio amounted to AUD 92m at the end of December 2003. In the morning of Friday, January 9, 2004, a junior member of the currency option desk blew the whistle and raised concerns with another desk employee about potential substantial losses in the FX portfolio. NAB's senior management was informed on January 12, 2004. The bank suspended the four traders on January 13, 2004 (see Thurnbull 2008: 85–6 for a chronological overview). Once the unauthorized open positions were detected, NAB estimated a total loss of AUD 180m. The final amount, after adjusting for a revaluation of the portfolio, was set at AUD 360m.

The following table summarizes modus operandi, risk management failures and control weaknesses, as well as early warning signals of NAB's CRT event.

*Table 8: Modus operandi, risk management failures and control weaknesses, and early warning signals of National Australia Bank's collusive rogue trading (CRT) event*

Modus Operandi of David Bullen, Luke Duffy, Vince Ficarra, and Gianni Gray ('the traders')	Risk Management Failures and Control Weaknesses	Early Warning Signals
<p>Trading activities contrary to NAB's strategy</p> <ul style="list-style-type: none"> <li>• In 2003, the traders' excessive risk-taking propriety trading activities significantly grew up, including a high level of interbank counterparty transactions with high nominal trade values, which was against NAB's intended trading strategy to focus on corporate customer business.</li> <li>• Dealing decisions in Q4 2003<sup>1</sup> resulted in large long USD positions, affected by major decline (10% drop) of the USD versus AUD end of 2003.</li> </ul>	<p>Lack of adequate supervision, coupled with overconfidence</p> <ul style="list-style-type: none"> <li>• Against their trader mandate, the traders took large, complex, and risky positions.</li> <li>• Supervision was limited to headline profit and loss monitoring; less attention was devoted to size, nature, and inherent risks of transactions.</li> <li>• NAB's management had a tendency to 'pass on' rather than assume responsibility and 'push the boundary' on risk versus revenues ('profit is king').</li> </ul>	<p>External warning</p> <ul style="list-style-type: none"> <li>• In March 2002, another Australian bank (not named in both investigation reports) raised concerns about the size and risk profile of NAB's transactions; concerns were passed off by NAB, as the bank did not understand NAB's trading strategy and pricing model.</li> <li>• A report from the then acting Head of Internal Audit of NAB's Corporate and Institutional Bank (CIB) from May 2002 on lessons learned from foreign exchange option losses of USD 691m – due to unauthorized trading by John Rusnak – suffered by Allied Irish Bank (AIB) as well as a market risk review letter from the Australian Prudential Regulation Authority, received by NAB in January 2003, highlighted a series of existing control breakdowns relating to NAB's VaR calculation and limit breaches (NAB's then chairman Charles Allen has not shared the Australian Prudential Regulation Authority's full report with the Board).</li> <li>• KPMG, NAB's external auditor, issued a number of findings (in three reports) related to foreign exchange trading processes from audits conducted 2001 until 2003; one draft management letter to NAB from December 2003 highlights 'systemic issues' concerning the breach frequency of limits.</li> </ul>
<p>Collusive misstatement of losses (in some cases profits) with the help of false/fictitious transactions, masking true exposure/concealing actual losses</p> <p>(i) Usage of deliberate incorrect dealing rates for genuine transactions, allowing the traders to shift losses from one day (or period) to another ('smoothing'); activity included trading system (Horizon) password sharing amongst the traders.</p> <p>(ii) Processing of false one-sided spot foreign exchange transactions with subsequent cancellation/surrendering; transaction rates were off market, resulting in immediate profit from end-of-day revaluation process (467 transactions detected during 2003).</p> <p>(iii) Entering of undetected one-sided internal currency option transactions with subsequent cancellation/surrendering; transaction rates were off market, resulting in immediate profit from end-of-day revaluation process (78 transactions detected during Q4 2003).</p> <p>(iv) Revaluation of the currency option portfolio using incorrect rates (for period from July 1998 onwards); at least two of the NAB traders prepared schedules containing false revaluation rates, which were emailed to two external market data suppliers/brokers officially used by NAB (until end of 2002; from then, only one broker remained) – false rates were 'officially' emailed back to NAB without any amendments by one particular person at the remaining broker (indication for collusion).</p>	<p>Failed and lax risk management</p> <ul style="list-style-type: none"> <li>• Flaws in the design, implementation, and execution of risk management as well as failure to fulfil effective policing role.</li> <li>• Market Risk and Prudential Control (MR&amp;PC) knew about and reported but finally failed to escalate persistent risk limit breaches one or more levels above the respective Global Head, i.e. the traders' supervisor (Dillon).</li> </ul> <p>Lack of confidence in VaR<sup>1</sup></p> <ul style="list-style-type: none"> <li>• Questions over the ability of NAB's disparate risk systems and quality of data used in the VaR calculation.</li> <li>• No sense of urgency resolving VaR calculation issues which were apparent for three years.</li> <li>• NAB's managements' confidence was undermined to the point in which VaR limit breaches were effectively ignored for a period of two years.</li> </ul>	<p>Internal warning</p> <ul style="list-style-type: none"> <li>• Internal Audit reported significant currency option issues in five reports, issued between May 1999 and January 2003, but failed to follow up and ensure appropriate controls and procedure changes were implemented.</li> </ul> <p>Risk limit breaches</p> <ul style="list-style-type: none"> <li>• Daily VaR limit of the currency option desk (AUD 3.25m) was breached three times during September 2003.</li> <li>• Limit breaches amounted to 866 during October 2003.</li> <li>• NAB's global VaR reached a level of AUD 100m<sup>1</sup>, of which the currency option desk's VaR amounted to AUD 40m (more than twelve times the limit itself, i.e. AUD 3.25m) end of December 2003.</li> </ul>
<p>Absence of financial controls</p> <ul style="list-style-type: none"> <li>• Insufficient procedures to identify, investigate, and explain unusual or suspicious transactions.</li> <li>• Profit review was completed on desk and not on product or deal basis; no P&amp;L explain process in place; materiality thresholds set were ineffective (too high).</li> <li>• No independent price verification (IPV) process in place.</li> <li>• Month-end processes lacked adequate cut-off procedures and did not restate results to adjust for cancelled, corrected, or amended (surrendered) transactions (C/C/A).</li> </ul>	<p>Absence of financial controls</p> <ul style="list-style-type: none"> <li>• Insufficient procedures to identify, investigate, and explain unusual or suspicious transactions.</li> <li>• Profit review was completed on desk and not on product or deal basis; no P&amp;L explain process in place; materiality thresholds set were ineffective (too high).</li> <li>• No independent price verification (IPV) process in place.</li> <li>• Month-end processes lacked adequate cut-off procedures and did not restate results to adjust for cancelled, corrected, or amended (surrendered) transactions (C/C/A).</li> </ul>	<p>Internal warning</p> <ul style="list-style-type: none"> <li>• Internal Audit reported significant currency option issues in five reports, issued between May 1999 and January 2003, but failed to follow up and ensure appropriate controls and procedure changes were implemented.</li> </ul> <p>Risk limit breaches</p> <ul style="list-style-type: none"> <li>• Daily VaR limit of the currency option desk (AUD 3.25m) was breached three times during September 2003.</li> <li>• Limit breaches amounted to 866 during October 2003.</li> <li>• NAB's global VaR reached a level of AUD 100m<sup>1</sup>, of which the currency option desk's VaR amounted to AUD 40m (more than twelve times the limit itself, i.e. AUD 3.25m) end of December 2003.</li> </ul>

<p>Related to (i), (ii), and (iii) from above, misuse of end-of-day closure procedure ('one-hour window')</p> <ul style="list-style-type: none"> <li>Traders entered false transactions into Horizon right before end-of-day closure (at approx. 0800 hrs am the next morning), which was the basis for profit and loss (P&amp;L) capturing in NAB's general ledger (Kapiti reconciliation).</li> <li>Operations started checking the transactions at about 0900 hrs am – within the arising one hour time frame, the traders were able to amend incorrect deal rates and to reverse false transactions, bypassing deal checking processes carried out by Operations.</li> <li>Process had to be redone each day, losses were rolled forward; the traders discovered the 'one-hour window' by accident in 2000.</li> </ul> <p>Exceeding risk limits</p> <ul style="list-style-type: none"> <li>Continuous breaches of risk limits (incl. VaR) and the five 'greek' risk measures, i.e. delta, gamma, rho, vega, and theta) throughout 2003; significant increase during Q4 2003<sup>i</sup> and in January 2004.</li> <li>Subsequent approval on a routine/daily basis by the traders/the desk's supervisor (Dillon, responsible for seven individuals including the four traders) without rigorous investigation by him.</li> </ul> <p>Cover the tracks</p> <ul style="list-style-type: none"> <li>Forensic analysis revealed that one of the traders attempted to delete over 14,000 emails (on January 13, 2014 at 0630 hrs am).</li> <li>All emails were successfully recovered and reviewed during the investigations by PricewaterhouseCoopers and the Australian Prudential Regulation Authority (APRA).</li> </ul>	<p>Gaps in back office procedures</p> <ul style="list-style-type: none"> <li>Failure to detect false transactions and/or loopholes in the processes such as the 'one-hour window'.</li> <li>From October 10, 2003 onwards, back office – equipped with in total 138 employees, of which 4 (3%) were responsible for NAB's currency option desk – stopped checking internal option transactions under the (wrong) assumption these were automatically matched/no checking for offsetting internal (equal or opposite) deals was necessary – related to false/fictitious transaction type (iii).</li> </ul> <p>Weakness internal governance procedures</p> <ul style="list-style-type: none"> <li>NAB's Principle Board not was sufficiently proactive on risk issues; the Board paid insufficient attention to risk issues until the establishment of a separate Risk Committee.</li> <li>Executive Risk Committees were particularly ineffective, missing or dismissing risk information pertinent to the problems, which emerged (acceptance of continuous limit breaches, ignoring VaR due to lack of confidence, and no checking for trader mandate breaches) and failed to escalate warnings.</li> <li>Minutes from the Board meeting mid of December 2003 state, '<i>The Board noted that traders work within tight limit structures</i>' – an entirely inaccurate and misleading presentation.</li> </ul>	<p>Large and unusual activity</p> <ul style="list-style-type: none"> <li>The traders entered into a number of large and unusual transactions, i.e. deep-in-the-money options (bearing a delta close to 1)<sup>k</sup>; NAB's currency option desk sold two of these options for a total premium of USD 322m on October 9 and 10, 2003.</li> <li>Concerns from Market Risk and Prudential Control (MR&amp;PC) about unusual high premium earnings were passed off by NAB's management without proper investigation.</li> </ul> <p>Breaches of new product approval (NPA) process<sup>l</sup></p> <ul style="list-style-type: none"> <li>Although MR&amp;PC did escalate NPA breaches (unapproved products), NAB's trading business still entered into numerous new transactions with relative impunity.</li> <li>New products were retrospectively signed off (i.e. after their first trading date), often for the purpose of formalizing existing breaches.</li> </ul>
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<sup>i</sup> NAB has a financial reporting year, which ends at September 30. The vast majority of false/fictitious transactions was captured by the traders from October 1 until end of December 2003.

<sup>j</sup> NAB's global VaR limit was set at AUD 80m; this was reduced to AUD 50m on January 26, 2004 in response to the trading losses.

<sup>k</sup> The deeper an option is in-the-money, the closer the delta will be to 1 and the more the option will behave like the underlying asset. It is unusual for corporate clients to purchase this kind of options due to the high(er) premium cost.

<sup>l</sup> In NAB's terminology, Product Usage Authority (PUA) breaches.

Source: Author's representation, based on Australian Prudential Regulation Authority (2004) and PricewaterhouseCoopers (2004).

Bullen, Duffy, Ficarra, and Gray pleaded guilty in June 2006 and were sent to jail with imprisonment ranging from 16 to 44 months (Dellaportas *et al.* 2007: 14; see also Table 7). NAB was required to shut down the currency option desk for 15 months. The then acting CEO of NAB, Frank Cicutto, was replaced by John Steward.

#### **4.4.1.1 Organizational/structural forces**

Bullen, Duffy, Ficarra, and Gray were executing their own trading strategy, focussing on excessive proprietary risk-taking trading activities including a high level of interbank counterparty transactions, which was against the formalized trading strategy of the Australian bank to focus on corporate customer business. Despite the traders' unauthorized trading activities, masking their unauthorized open positions, it reflects though an inherent dilemma: risk taking is an integral part of banking and its objective to generate/maximise profit. The spirit of investment banking in particular can be characterised as entrepreneurial, as investment banks are established to take on high(er) ratios of risk, which carry upside/profit opportunities but also significant damage/loss potential. The relative autonomy of traders, taking into account the by nature high capital they are authorized to handle as agents executing directives on behalf of their employers, requires them to act within risk limits set by the banks on the one hand but also exploring and testing boundaries of the same on the other. Extending the allowed and pushing the limits seems to be common in banking, all under the ultimate objective of maximizing profitability (Drummond 2003: 93f). Insofar, the act of balancing risk and reward is connected to competing objectives. At NAB in particular, profit was king – according to Cooke (1991) and Treviño and Nelson (1999) a phrase denoting dedication to short-term revenues against long-term considerations, which creates a climate of unethical behaviour – pushing the boundaries on risk in pursuit of revenue targets (PricewaterhouseCoopers 2004: 23, 26). Segregation of duties were insufficiently implemented, role definitions for risk managers were ambiguous<sup>19</sup>, acting as 'business partners', assisting business units to develop new business versus fulfilling an active and independent policing role and risk management function (Australian Prudential Regulation Authority 2004: 6). NAB's internal control and risk systems were lax, equipped without financial controls, and failed at every level to detect and shut down the irregular currency option trading activities.

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<sup>19</sup> Angeletti (2017) investigates the first LIBOR trial involving Thomas Hayes. Angeletti provides a sociological framework to analyse and assess justifications for financial wrongdoing. Angeletti highlights that in most situations (e.g. in court) the multiplicity of rules (i.e. ambiguity) is used by elites as users of the rules (versus rule makers and rule interpreters) to their own benefit.

#### 4.4.1.2 Individual forces

There were two triggers for the four traders: first, their discovery (by accident) of the one-hour-window in 2000 (more than two and a half years before they went rogue), which enabled them to ‘correct’ their incorrect deal rates and reverse false transactions. Second, the 10% drop of USD against AUD in the last quarter of 2003, coupled with the large long USD positions of the traders, which generated accumulating losses in a short period. Both triggers led to the fact that Bullen, Duffy, Ficarra, and Gray were not following NAB’s trading strategy (uncoupling practice from procedure), resulting in 545 unauthorized trades and 866 risk limit breaches (routine nonconformity; Dellaportas *et al.* (2007: 13) highlight how using the one-hour-window eventually became ‘routine morning behaviour’) during Q4 2003. The traders’ behaviour confirms Rafeld *et al.* (2017b)’s ‘inability to accept losses paradigm’ for rogue traders. NAB’s ‘profit is king’ culture – as organizational/structural force – also influenced the traders’ individual behaviour. The bank’s management appeared to create an environment for fraudulent behaviour to flourish (Dellaportas *et al.* 2007: 17; PricewaterhouseCoopers 2004: 4, 32). I deem NAB’s culture as main and quasi-immanent normalization element for the traders, rationalizing their unauthorized trading activities.

#### 4.4.1.3 Group forces type A

Dillon (NAB’s Joint Head of FX) was hiring two ex-colleagues from Commonwealth Bank (Duffy and Gray) by circumventing NAB’s formal recruiting process – no external reference checks were conducted when hiring his former colleagues (Australian Prudential Regulation Authority 2004: 76). Working with colleagues he knew and he could rely on was important when acting unauthorized in concert, supporting the argument of a negative influence for individuals because of the exposure to corrupt/toxic personnel. As the market turned against the four traders and rather closing their loss making positions (inability to accept losses), intensified trading activities took place. In retrospect, I interpret such trading behaviour as ‘doubling down’ on an already losing trading strategy, increasing bets after each loss (amplification/escalation effects), which is typical for rogue traders like Nick Leeson at Barings Banks (in full analytical detail Brown and Steenbeck 2001). NAB’s profit culture, with risk management being embedded in the business, which was more a matter of form than one of substance (Australian Prudential Regulation Authority 2004: 72–3), facilitated the traders’ collusive behaviour and provided collective normalization opportunities for them.

#### **4.4.1.4 Group forces type B**

Many early warning signals existed for NAB's CRT event, i.e. external warnings but also internal signals (see Table 8), to detect and close down the irregular currency option trades. However, there was no reaction by the Australian bank, reflecting NAB's overconfidence but also the bank's risk tolerability for excessive risk taking behaviour. Some of the fictitious trades were on NAB's desk systems for extended periods and could have been detected earlier, echoing cultural blindness and the permission leadership style at NAB. In the context of normalizing behaviour, management's supervision was limited to headline profit and on pushing the boundaries on risk versus revenues ('profit is king').

#### **4.4.2 JPMorgan's London Whale**

JPMorgan Chase & Co., JPM hereafter, is globally the largest participant in the credit derivatives market. In November 2006, a New Business Initiative (NBI) was approved by JPM to trade in synthetic credit derivatives. In early 2007, JPM's Chief Investment Office (CIO) launched its Synthetic Credit Portfolio (SCP), bundling all credit trading activities/the trading of credit default swaps (CDS). Primary interest of the SCP creation was to protect the firm from adverse credit scenarios such as widened credit spreads and/or corporate defaults, as JPM, like other lenders, is structurally long credit, requiring default hedging.

The SCP and the related traders on the desk were managed by Javier Martin-Artajo. One other trader was Bruno Iksil. During his time with JPM, Iksil earned his nickname 'London Whale'. Iksil worked closely with a junior trader, Julien Grout. Martin-Artajo was reporting into Achilles Macris (Head of CIO London), who reported into Ina Drew (Global Head of CIO). Drew had a reporting line into JPM's CEO, James Dimon.

Similar to NAB's CRT event and a substantially worsened situation in Q4 2003, JPM's trading activities at the SCP desk spiralled out of control also during one quarter, Q1 2012. Mid of January 2012, the SCP suffered a loss of USD 50m because of the bankruptcy of Eastman Kodak defaulting on its debt (JPMorgan Chase & Co. 2013: 30; Kregel 2013: 7). As a result, CIO management requested the SCP traders to have appropriate jump to default protection (risk coverage for sudden credit defaults) in place. Iksil and Grout bought sizeable CDS positions/credit protection on high yield indices.

End of January 2012, CIO announced a changed trading strategy that contained several conflicting objectives and at the end incompatible goals mandated by different levels of management (Kregel 2013: 5, 7 and supportive McConnell 2014b: 78). With no clear instruction in which direction to trade and rather than unwinding positions to reduce portfolio size, Risk Weighted Assets (RWA), and incurring losses, Iksil and Grout substantially expanded SCP's overall notional size and its long positions during February and March 2012. Their trades resulted in an accumulated position volume of USD 157bn at the end of March 2012 (versus USD 51bn end of December 2011).

Table 9 illustrates the significant market share in Q1 of 2012, which enabled the traders to move the market price closer to SCP's marks (Financial Conduct Authority 2013b: 2, 23–6).

*Table 9: Trading volume and market share by traded product of JPMorgan's Chief Investment Office beginning of 2012*

Credit Default Swap (CDS) Index Tranche <sup>m</sup>	Maturity	Chief Investment Office (CIO): CDS Index Tranche notional traded (USD m) and share (% market)				
		Jan	Feb	March	April	Total
iTraxx Europe Series 9	7 Y	993 16%	4,752 49%	775 9%	487.5 10%	7,007 23%
	10Y	11,769 44%	7,245 48%	6,601 48%	338.8 6%	25,954 42%
iTraxx Europe Series 16	5 Y	26,440 13%	36,360 17%	26,075 13%	25 0.2%	88,900 14%
CDX.NA.IG.9	7 Y	7,092 13%	8,387 17%	2,017 5%	256 1%	17,752 10%
	10 Y	28,528 34%	20,032 42%	9,820 14%	667 2%	59,057 25%

<sup>m</sup> Each tranche references a different segment of the loss distribution of the underlying index. The equity tranche (lowest) absorbs the first losses on the index due to defaults up to a maximum of 3% of the total index, receiving the highest coupon. The following tranches are Mezzanine (absorbing 3–7%), senior, and super-senior tranches, which have the smallest coupon.

Source: Author's representation, based on United States Senate 2013b: 1504–5.

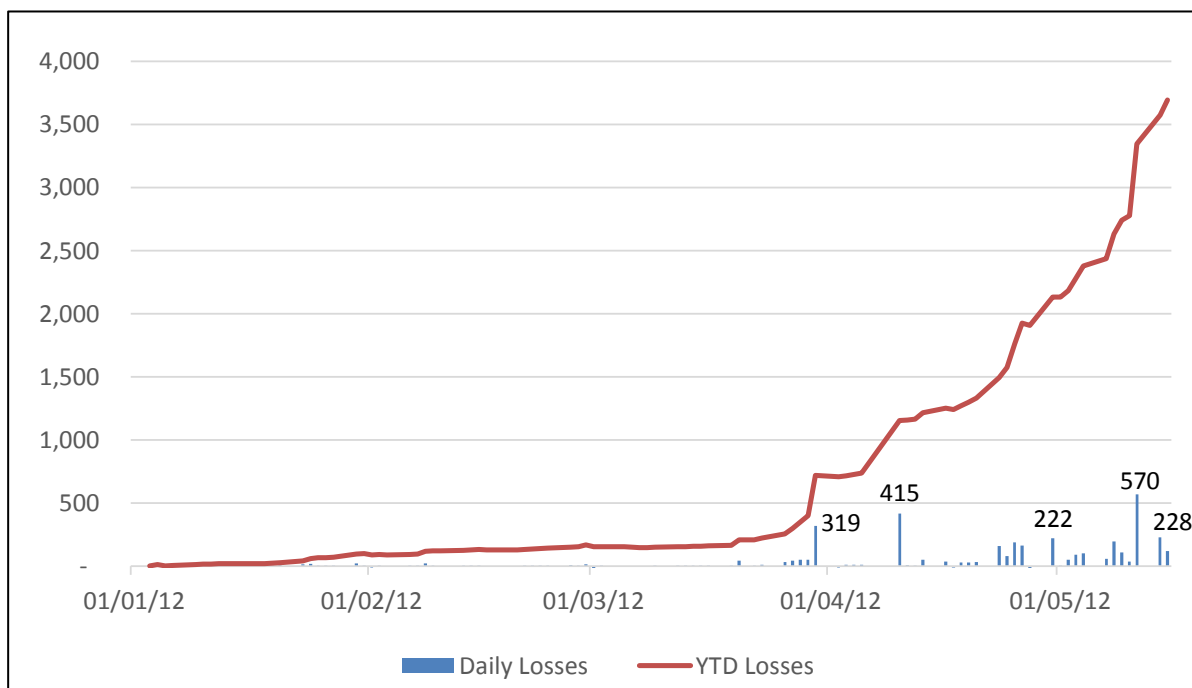
A group of hedge funds became aware of the size of positions held by the SCP and decided to trade against JPM (Skyrm 2014b: 19).<sup>20</sup>

Figure 3 shows the actual mark-to-market losses of the SCP over the first 18 weeks in 2012.

<sup>20</sup> A former JPM trader, Toby Maitland Hudson, responsible for proprietary trading of derivatives tied to commercial-mortgage bonds at JPM, was hired by Saba Capital Management, L.P., a hedge fund founded in 2009, which supposedly profited from Maitland Hudson's knowledge of SCP's positions.



Figure 3: Daily and year-to-date losses of JPMorgan's Synthetic Credit Portfolio (SCP) the first half 2012 (in USD m)



Source: Author's representation, based on United States Senate 2013a: 281.

Iksil and Grout were hiding accumulating losses by deliberately mismarking their positions (Financial Conduct Authority 2013b: 3). Table 10 summarizes modus operandi, risk management failures and control weaknesses, as well as early warning signals of JPM's CRT event.

*Table 10: Modus operandi, risk management failures and control weaknesses, and early warning signals of JPMorgan's London Whale event*

<b>Modus Operandi of Javier Martin-Artajo, Bruno Iksil, and Julien Grout</b>	<b>Risk Management Failures and Control Weaknesses</b>	<b>Early Warning Signals</b>
<p>Mismarking of positions</p> <ul style="list-style-type: none"> <li>• Subversion of month-end valuation control processes.</li> <li>• Migration of SCP's marks from mid-point spread to more aggressive end of the bid-ask spread<sup>11</sup>.</li> <li>• Providing of estimates of what the SCP traders thought the positions were worth after receiving instructions to mis-mark the portfolio to conceal losses.</li> </ul>	<p>Flawed trading strategy</p> <ul style="list-style-type: none"> <li>• Trading strategy contained several conflicting objectives and incompatible goals mandated by different levels of management.</li> <li>• Trading strategy was not properly monitored, leading to failed appreciation of magnitude and significance of the changes made to the SCP.</li> </ul>	<p>Internal Audit reports on CIO's credit control structure</p> <ul style="list-style-type: none"> <li>• CIO did not measure the portfolio's sensitivity to applicable risk measures.</li> <li>• CIO Valuation Control Group's (VCG) thresholds were not formally documented or consistently applied.</li> </ul>
<p>Market misconduct</p> <ul style="list-style-type: none"> <li>• SCP's traders traded significant quantities of protection (see Table 9).</li> <li>• Size and timing of SCP's trading affected market movements and pricing levels.</li> </ul>	<p>Valuation control flaws</p> <ul style="list-style-type: none"> <li>• CIO Valuation Control Group (VCG)'s processes were flawed and could be easily subverted; no robust reporting protocols and no daily trading activity reports were existent.</li> <li>• VCG was under-resourced, including absence of adequate supervision; its written policies were not consistently implemented.</li> <li>• VCG did not have any documentation for the price testing of thresholds; no formal training (&amp; documentation) was provided to the traders how to mark the SCP.</li> </ul>	<p>Disregarding external warning signals</p> <ul style="list-style-type: none"> <li>• Wall Street Journal (WSJ) publication, raising indications about excessive position volumes close to reality; publication and unmasking of Iksil's name in connection to the vast Credit Default Swap (CDS) positions in the market.</li> <li>• Adverse actions by JPM's competitors (hedge funds).</li> </ul>
	<p>Revision of Value at Risk (VaR) model<sup>12</sup></p> <ul style="list-style-type: none"> <li>• VaR calculation was dependent on manual processes and contained significant errors.</li> <li>• Newly implemented VaR model reduced SCP's VaR by 40% to USD 66m, understating the existing risks; VaR model change did not trigger any reduction of VaR limits.</li> </ul>	<p>Limit breaches</p> <ul style="list-style-type: none"> <li>• Mid of January 2012, CIO exceeded its own VaR Limit and contributed to a breach of the firm wide VaR limit for 3 days.</li> <li>• Including VaR, there were 330 limit breaches from Q4 2011 until April 2012.</li> </ul>
	<p>Limit setting and monitoring</p> <ul style="list-style-type: none"> <li>• Insufficient review of the appropriateness of CIO's risk limits; CIO's risk limits were not reviewed between 2009 and 2011.</li> <li>• Risk limits were not sufficiently granular, i.e. were applied to CIO as a whole only; there were no limits by size, asset type, or risk factor specific to the SCP.</li> </ul>	<p>Questionable VaR model validity<sup>13</sup></p> <ul style="list-style-type: none"> <li>• Overall output of the new VaR model was nearly halved.</li> <li>• Delta between old and new model was greater than the VaR limit itself.</li> </ul>
	<p>Control function weaknesses and missing involvement/escalation</p> <ul style="list-style-type: none"> <li>• CIO Risk: IT infrastructure and personnel shortcomings (understaffing and lack of requisite skills); Risk Committee</li> </ul>	<p>Taped line monitoring</p> <ul style="list-style-type: none"> <li>• Compliance London listened to a suspicious call between SCP's traders and SCP management, offering early indications about market misconduct and mismarking of positions; no remediation actions were taken.</li> </ul>

met infrequently, i.e. three times during 2011 – no personnel outside of CIO attended the Risk Committee.

- Finance: failed to have asked more questions and to have sought for additional information about the evolution of the portfolio.
- JPM senior management did not inform Compliance London until May 10, 2012 about irregularities in the SCP; JPM's Audit Committee were not timely informed.

- <sup>n</sup> PricewaterhouseCoopers LLP, JPM's outside/external auditor, concluded in its review, SCP's position marks as at March 31, 2012 complied with the United States Generally Accepted Accounting Principles (U.S. GAAP) (JPMorgan Chase & Co. 2013: 6).
- At peak time, JPM's VaR of SCP's position volume was estimated at around USD 500m, whereas the progressive liquidation of the portfolio created losses of USD 6.2bn (Cont and Wagalath 2015: 5). In order to better anticipate effects from unusual liquidation processes, e.g. fire sales after the detection of unauthorized open positions created by (collusive) rogue traders, Cont and Wagalath (2015) propose a portfolio risk model, which integrates market risk with liquidation cost, i.e. the creation of liquidation-adjusted risk measures such as liquidation-adjusted VaR.

Source: Author's representation, based on Financial Conduct Authority (2013b), JPMorgan Chase & Co. (2013), and United States Senate (2013a, b, and c).

For not having the internal CDS speculation under control, deliberately mischaracterizing SCP's problems, and misinforming investors, regulators<sup>21</sup>, and the public, two penalties – one of GBP 137.6m from the Financial Conduct Authority (2013b: 58) and one of USD 920m from the United States Securities and Exchange Commission (2013)<sup>22</sup> – were raised against JPM. The firm suffered a total loss from unwinding SCP's positions of USD 6.2bn. Two rating agencies downgraded JPM because of the London Whale event (Standard & Poor's revised its outlook on the firm from stable to negative and Fitch Ratings downgraded it from AA- to A+). Lastly, JPM suffered a loss in market capitalization of 25% in the weeks following the loss disclosure in JPM's May 10-Q filing, mirroring a substantial reduction of trust and investor confidence.

After being dismissed by JPM, the SEC agreed not to pursue Iksil for his cooperation as witness (United States Securities and Exchange Commission 2013; Abdel-Khalik 2014: 65). Beginning of February 2016, the Financial Conduct Authority (FCA) fined Macris (Head of CIO London) with GBP 793k for failing to inform about concerns and not disclosing mounting losses from the London Whale trades to regulatory authorities. Martin-Artajo and Grout were accused of fraudulently overvaluing investments in order to hide accumulating losses in the portfolio they managed. End of July 2017, the U.S. Department of Justice (DoJ) announced it was dropping the prosecution of Martin-Artajo and Grout because Iksil was no longer a reliable witness (Martin-Artajo's and Grout's home countries, Spain and France, were also not agreeing on the extradition of both former SCP traders to the U.S.). Iksil created a website ([londonwhalemarionet.monsite-orange.fr](http://londonwhalemarienet.monsite-orange.fr)) explaining his view of the course of events, which is different to testimonies he gave to the U.S. authorities (Henning 2017).

#### **4.4.2.1 Organizational/structural forces**

JPM's New Business Initiative (NBI) represented the initiation of a formal structure with the design, review, and approval of a new product, endorsing product, market(ing), client,

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<sup>21</sup> For almost six years, JPM failed to disclose any information about the SCP to its primary regulator, the Office of the Comptroller of the Currency (OCC). Only from January 2012 onwards, when the SCP began breaching JPM's VaR limit and losses occurred, JPM reported the SCP to the OCC. OCC's repeated information requests were often ignored and not adequately enforced by JPM, resulting in incomplete, inaccurate, and misleading information (United States Senate 2013c: 250).

<sup>22</sup> JPM needed to pay a civil penalty to the United States Securities and Exchange Commission (SEC). The firm did not admit liability or even any mistakes (Bealing and Pitingolo 2015: 7). Linked research reveals, it is cheaper for financial institutions to settle with the SEC in order to avoid further opprobrium versus trying to attempt to convince the court of the appropriateness of remediation actions taken (Patton 2014: 1719, 1738).

and trading specifications. Overarching from a risk management perspective, the formal structure was enriched by another formal layer, the set risk appetite for JPM's CIO, ratifying the application of rigorous controls over cash and security movements and focussing attention on ensuring compliance with regulatory requirements including the Volcker Rule (United States Senate 2013b: 1875). SCP's revised trading strategy from January 2012 – one of SCP's main formal structure elements, which should have reflected SCP's actual hedging/risk protection mandate – mirrored conflicting objectives and incompatible goals. Further, massive risk management failures of managerial direction and control indicate the absence of capable guardians (supportive Kregel 2013: 4–5; see also Table 10).

#### **4.4.2.2 Individual forces**

The conflicting mandate, due to the revised trading strategy, and rapid accumulation of losses early 2012 need to be seen as turning points for the traders' behaviour at JPM, the starting point for nonconformity and finally misconduct throughout the first quarter of 2012. SCP's nominal size increased tenfold to USD 51bn at the end of 2011. As a consequence, Dimon instructed Drew to reduce CIO's Risk Weighted Assets (RWA), for which the traders proposed to reduce RWA by in part manipulating JPM's Value at Risk (VaR) model to artificially lowered SCP's risk results, leading to an overnight CIO VaR reduction of 44% to USD 66m (United States Senate 2013b: 519).<sup>23</sup> This reduction did not result in a corresponding decrease of CIO's VaR limit (McConnell 2014b: 82–3); hence, the traders could take on greater risk without being in breach of their limits (Financial Conduct Authority 2013b: 17). Iksil's and Grout's behaviour was far more than a practical drift but rather in an intentional routine nonconformity mode. Several rationalization attempts were made by SCP's traders regarding their incurring losses.

#### **4.4.2.3 Group forces type A**

As losses from the CDS positions began to grow – driven by the USD 50m loss due to the Eastman Kodak's bankruptcy – Iksil, supported by Grout, started to deliberately mismark SCP's values to minimize disclosed losses by instruction from senior management, in line

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<sup>23</sup> The VaR measures the expected loss of a trading book, while the Risk Weighted Assets (RWA) are a regulatory measure of a bank's risk exposure.

with a tripled SCP notional size of USD 157bn (Financial Conduct Authority 2013b: 3, 22). The SCP's traders' dealing in substantial quantities of protection (see Table 9) affected credit market movements and pricing levels worldwide, resulting in collective market manipulation/acting in concert in favour of the SCP. SCP's trading completely spiralled out of control, as during two weeks mid of March 2012, SCP's traders acquired additional USD 40bn long credit derivative positions (deviance amplification/escalation). The acceptance of the traders' activities by SCP and CIO management provided a fertile ground and at the same time a collective rationalization for the traders' CRT.

#### **4.4.2.4 Group forces type B**

JPM's continuous ignorance of early warning signals echoes JPM's cultural blindness and overconfidence. The same mounted further in rationalization attempts, with the public denial of loss by JPM's CEO, James Dimon, during an earnings call on April 13, 2012, '*It's a complete tempest in a teapot. Every bank has a major portfolio. In those portfolios, you make investments that you think are wise that offset your exposures. Obviously, it's a big portfolio (...) It's sophisticated, well, obviously, a complex thing.*' (United States Senate 2013c: 258). Dimon's statement supports the normalization of deviance argument (Vaughan 1990, 1996, 1997, and 2004). Dimon has been continuously criticised for the statement – a severe mischaracterization of the actual situation – also grossly underestimating the public reaction. One year later, Dimon showed repentance and acknowledged the seriousness of the London Whale event (Sale 2014). The outlined course of actions offers insights into the tolerability/allowance and acceptance mechanisms of risk at JPM. Towards end of January 2012, Iksil and Grout were already losing money in a nearly uncontrollable way (United States Senate 2013c: 177). Both estimated and communicated end of January 2012 a year-to-date portfolio loss of close to USD 100m and were expecting another increase by USD 300m as possible scenario. No immediate corrective actions by SCP's or CIO's management took place at that point in time until Drew finally requested Iksil and Grout to stop trading eight weeks later on March 23, 2012. Not only the amounting losses were known (despite only vaguely estimated by SCP's traders) to management. The loss concealing and mismarking activities were accepted and tolerated by management, supporting the described consent and cooperation principle and a permission leadership style by JPM.

#### 4.4.3 The interest reference rate manipulation/LIBOR scandal

The London Interbank Offered Rate (LIBOR) is regarded as the most important and most frequently used interest reference rate for a number of currencies. A large proportion of money market products, consumer-lending products, and other financial instruments rely on LIBOR. Despite the LIBOR scandal, financial contracts continue to be referenced to LIBOR rates.<sup>24</sup>

With its first publication in January 1986 and until end of January 2014, LIBOR was administered by the British Bankers' Association (BBA)<sup>25</sup>, applying the following definition (since 1998), *'The rate at which an individual contributor panel bank could borrow funds, were it to do so by asking for and then accepting interbank offers in reasonable market size, just prior to 11:00 London time'*<sup>26</sup>. At the time of the scandal, LIBOR rates were published for 10 currencies and 15 maturities, ranging from overnight to 12 months, by reference to the assessment of the interbank market by a number of panel banks (8 to 16, depending on the currency in question) selected by the BBA based on market volume, reputation, and assumed knowledge of the currency concerned. Every business day, each panel bank submitted its rates to Thomson Reuters, a data vendor licensed by the BBA. Thomson Reuters excluded the top and bottom quartile of the rates submitted, calculated the average of the remaining rates for each currency and tenor (trimmed mean methodology), and published the final rates daily at 11:30 London time.

First indications about possible irregularities in the interest reference rate submission occurred in April and May 2008, when Wall Street Journal (WSJ) published two articles suggesting some LIBOR panel banks might have contributed with too low submissions compared to their CDS prices to mislead the market about their financial positions and creditworthiness (Mollenkamp 2008; Mollenkamp and Whitehouse 2008). Snider and Youle (2010) highlight

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<sup>24</sup> In addition to LIBOR, there are other reference rates, such as EURIBOR and Euroyen TIBOR. EURIBOR (Euro Interbank Offered Rate) is defined by the European Banking Federation (EBF) as the rate at which Euro interbank term deposits are offered by one prime bank to another within the Economic and Monetary Unit of the European Union (EU) at 11:00 London time. Euroyen TIBOR (Tokyo Interbank Offered Rate), as per the Japanese Bankers Association (JBA)'s instructions, is the reference rate of which the panel banks believe a prime bank would transact in the Japanese offshore market at 11:00 Tokyo time. For both reference rates, the trimmed mean methodology applies. For the purpose of this chapter, the terminology LIBOR is used to cover all similar benchmarks, including EURIBOR and TIBOR.

<sup>25</sup> The BBA is a U.K. non-profit trade organization funded by subscriptions from its more than 200 voluntary members for which it lobbies (Konchar 2014). The BBA merged with Payments U.K., the Council of Mortgage Lenders, the U.K. Cards Association, and the Asset Based Finance Association into U.K. Finance on July 1, 2017.

<sup>26</sup> See <https://web.archive.org/web/20101013074550/http://www.bbalibor.com/bbalibor-explained/the-basics> (last access on November 2, 2018).

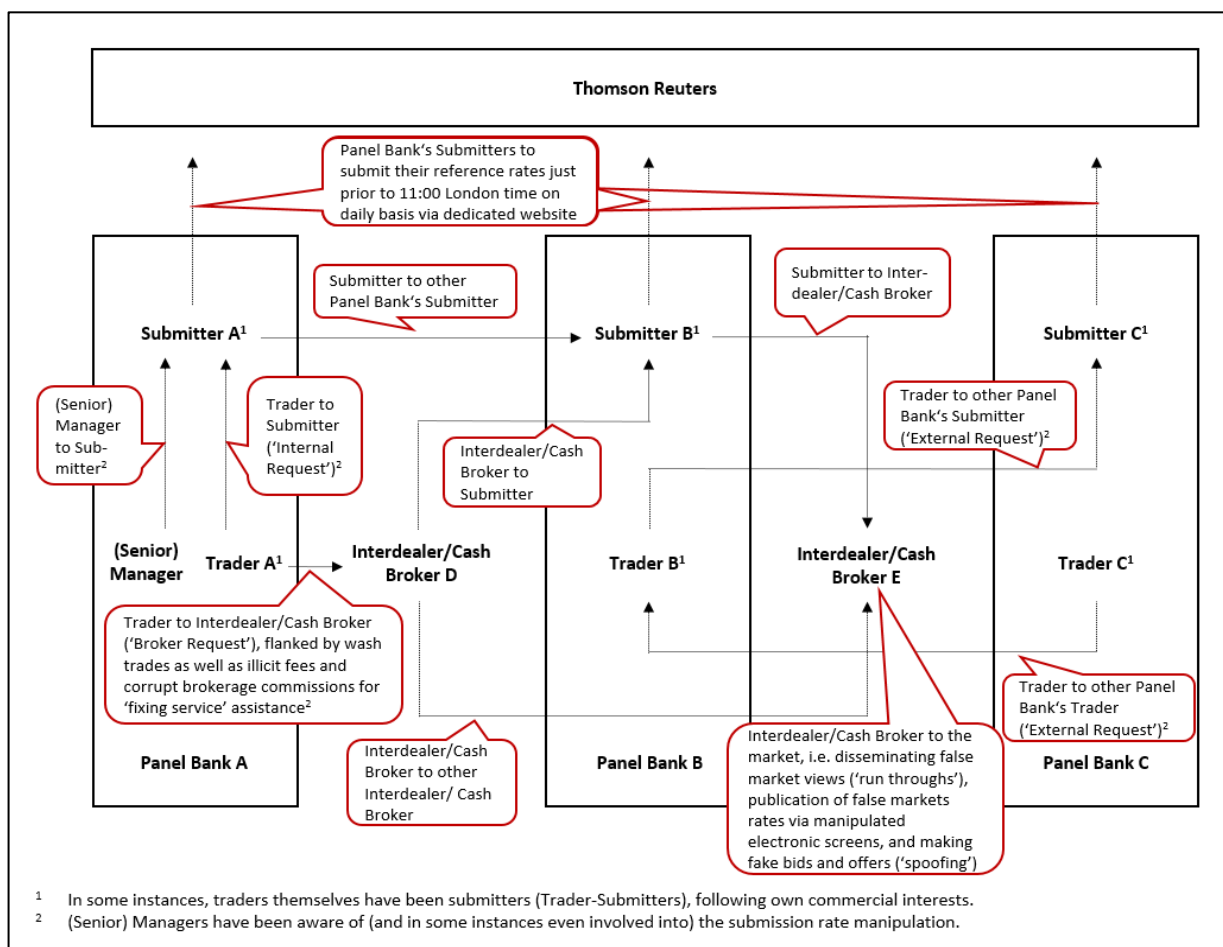
a different reason for low submissions, banks sought to make substantial profits on their portfolios linked to LIBOR. Abrantes-Metz *et al.* (2012) find anomalous individual quotes but no evidence for material manipulation of the USD 1-month LIBOR rate. Monticini and Thornton (2013) provide evidence for periods in which LIBOR and EURIBOR rates diverged from equivalent-term marketable certificates of deposits, followed by Fouquau and Spieser (2015), who identify threshold dates in the time series of LIBOR rate proposals.

In the course of more than thirty investigations by regulatory authorities, severe misconduct, i.e. strategic manipulation of the interest reference rate submission, was identified at several financial institutions. A former Japanese yen trader, Thomas Hayes, working at Royal Bank of Scotland, Royal Bank of Canada, UBS, and finally Citigroup, was identified as the global ringleader of the interest reference rate manipulation. Hayes built up and maintained an extensive network (analogous to Enrich (2017)'s recent anecdotal illustrations on the case, i.e. Hayes' 'spider network'), through which he orchestrated reference rate submitters – primarily related to JPY LIBOR and European TIBOR – at his employers UBS and Citigroup, other panel banks' traders and submitters, as well as third party providers (interdealer/cash brokers; for a detailed analysis of the misbehaviour by brokers in the LIBOR scandal see McConnell 2014a) in order to favourably influence his own open trading positions.

Using Hayes as ringleader and publicly available investigation reports about UBS's role in the interest reference rate manipulation, the following schematic interaction model illustrates involved parties and the interpersonal mechanics of the collusion process.



Figure 4: Interest reference rate manipulation/LIBOR scandal: Schematic interaction model and collusion process from an UBS perspective



Source: Author's representation, based on Commodities Futures Trading Commission (2012b), Financial Services Authority (2012), Swiss Financial Market Supervisory Authority (2012a), and United States District Court of Connecticut (2015b).

The following table summarizes modus operandi, risk management failures and control weaknesses, as well as early warning signals of the interest reference rate manipulation from an UBS perspective.

*Table 11: Modus operandi, risk management failures and control weaknesses, and early warning signals of the interest reference rate manipulation from an UBS perspective*

Modus Operandi	Risk Management Failures and Control Weaknesses	Early Warning Signals
<p>Submission of material false, misleading, or knowingly inaccurate statements for the calculation of interest reference rates</p> <ul style="list-style-type: none"> <li>Numerous requests from UBS's traders – most prominent from a single Yen trader, i.e. Thomas Hayes, based in Tokyo – asking (i) UBS's interest reference submitters to adjust UBS's submissions to benefit own proprietary trading positions (<i>1<sup>st</sup> purpose</i>).</li> <li>UBS's traders also made co-ordinated requests/colluded with (ii) external employees (incl. submitters) of other panel banks as well as (iii) external interdealer brokers to influence LIBOR and EURIBOR submissions, including promises for additional business for the involved brokers with the help of wash trades (fictitious risk free trades, which cancelled each other out and which have no legitimate commercial rationale/motivation) or also threatening to move/cut off considerable volume of business to other brokers – both types of external requests were co-ordinated with internal submission requests (see i); the interdealer brokers utilized various methods to influence submissions of other banks:               <ol style="list-style-type: none"> <li>disseminating false 'run-throughs' to many, if not all, of the panel banks,</li> <li>directly contacting other panel bank submitters,</li> <li>publishing false market rates over certain dedicated manipulated electronic screens available to clients, and</li> <li>'spoofing', i.e. making fake bids and offers for cash trades to further disseminate false pricing information to the market, all tailored to drive the submissions of other panel banks to the rates of UBS's derivative positions.</li> </ol> </li> <li>UBS's senior employees/managers gave inappropriate guidance to submitters on a number of occasions during financial crisis (2007–2009), trying to influence the perception/media speculation of UBS's franchise/creditworthiness (<i>2<sup>nd</sup> purpose</i>).</li> </ul>	<p>Substantial failures of management control and inadequate/lax supervision</p> <ul style="list-style-type: none"> <li>Management control of submission process was inadequate and contained serious systemic weaknesses, i.e. submissions were not appropriately reviewed by management from January 1, 2005 until August 7, 2008.</li> <li>Improper trader change requests were not detected, ignored, and/or tolerated by responsible management (2–3 levels below UBS's Group Executive Board), camouflaging them as 'market colour'.</li> <li>Undue influence was never escalated into Compliance and/or Legal.</li> <li>From August 2008 onwards, a weekly exception reporting regime, evaluating the actual interest reference rate submissions against UBS's daily average cost of funds, was implemented; the regime was supervised by managers who were aware of the manipulations and who also raised own submission requests.</li> </ul>	<p>External warning</p> <ul style="list-style-type: none"> <li>In February 2005, a UBS client complained in an email to a UBS submitter (for Swiss Franc LIBOR) that UBS's submissions were contributing to the benefit of the bank's positions; in a response email back to the complainant (a UBS senior manager was copied), the submitter did not deny this practise and rather justified such conduct as widespread standard banking practise.</li> <li>Bloomberg published an article focussing on a surge in the USD LIBOR submissions for the overnight tenor on August 9, 2007 by a number of contributing banks; the article commented on UBS's submission, which was 65 basis points higher versus the previous day (later, UBS's borrowing cost would have significantly increased; UBS announced, the submission was made in error).</li> <li>Two articles in the Wall Street Journal (WSJ), published on April 16 and May 29, 2008, highlighted possible irregularities in the process of fixing LIBOR, i.e. contributing banks might submitting too low rates.</li> <li>British Bankers' Association (BBA) and other financial regulators triggered the initiation of a review of the LIBOR submission process after publication of the two WSJ articles.</li> </ul>
<p>Managing conflicts of interest</p> <ul style="list-style-type: none"> <li>UBS, as other banks, combined the roles of determining LIBOR and EURIBOR submissions on the one hand and proprietary trading in derivative products referencing to LIBOR and EURIBOR on the other, i.e. creating dual roles/man-dates with trader-submitters.</li> <li>LIBOR and EURIBOR submitters (if not identical, acting in personal union) had their workplace next to the proprietary traders, who in turn had pronounced interest in the desk's trading positions.</li> <li>Trading and submitting roles were only split in September 2009 (for LIBOR) and October 2009 (for EURIBOR) by moving submission responsibilities into Asset Liability Management (ALM); ALM also did not fully prevent its derivative traders from attempting to manipulate interest reference rates.</li> </ul>		
		Trading performance/revenue
		<ul style="list-style-type: none"> <li>Thomas Hayes' trading performance continuously grew; he was generating profits of approximately USD 40m in 2007, USD 80m in 2008, and USD 116m until late summer in 2009 (i.e. three times of his profit in 2007), before he stopped trading and he left UBS (on September 3, 2009) following a dispute over his compensation, joining Citibank.</li> </ul>

<p>Instant message chat and email usage</p> <ul style="list-style-type: none"> <li>• More than 40 employees of UBS (traders and submitters) from Stamford/Connecticut, London, Zurich, Singapore, Tokyo, and elsewhere were directly involved in the submission change requests; more than 2,000 written internal and external requests were detected in total over a period of nearly six years from at least January 2005 onwards.</li> <li>• Manipulated LIBOR and EURIBOR submission requests were often raised in open instant message chat forums/networks or by email (groups), most often using coded language; additional requests were made orally either in-person conversations or by telephone.</li> </ul> <p>Initiation of corrupt payments (illicit fees/brokerage commissions) to interdealer brokers</p> <ul style="list-style-type: none"> <li>• UBS made commission payments of GBP 170k to one broker and GBP 12k per quarter to another to reward both for their 'fixing service' assistance for a period of at least 18 months.</li> </ul>	<p>Policies and procedures</p> <ul style="list-style-type: none"> <li>• UBS's earliest written procedures concerning the LIBOR and EURIBOR submission process dated from February 2005 and were limited to operational details; very limited practical guidance on how to submit was included; more detailed procedures were published in August 2008 and subsequently revised in December 2009.</li> <li>• Updated procedures from 2008 were never circulated amongst the submitters and no training concerning the procedures was conducted.</li> <li>• None of the then existing policies contained any reference to potential conflicts of interest relating to traders and/or submitters.</li> </ul> <p>Insufficient transaction monitoring systems</p> <ul style="list-style-type: none"> <li>• UBS's systems and controls did not detect any of the wash trades, which were entered for channelling corrupt commissions to brokers.</li> </ul> <p>Infrastructure and control function weaknesses</p> <ul style="list-style-type: none"> <li>• Two reviews conducted by Compliance and three by Internal Audit were not able to notice the misconduct – Internal Audit was aware of the need to ensure conflicts of interest did not arise, but failed to recommend any further steps (or measures) in connection with UBS's LIBOR submission process.</li> <li>• Compliance' report revealed, there is no correlation between the submissions and UBS's trading positions – relying hereby on an analysis performed by a trader-submitter.</li> </ul> <p>Remuneration practises/financial incentive systems</p> <ul style="list-style-type: none"> <li>• On average, the variable remuneration part of the submitters and the traders ranged between 200% and 500% of their base salary; inherent personal incentives existed to benefit from proprietary trading positions, influenced by UBS's manipulative submission behaviour.</li> </ul>
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- In total, approximately 40 employees (thereof 13 managers and 5 senior managers) knew of or even were involved in the routine manipulative misconduct practices at UBS.

Source: Author's representation, based on Commodities Futures Trading Commission (2012b), Financial Services Authority (2012), Swiss Financial Market Supervisory Authority (2012a), and United States District Court of Connecticut (2015b).

In 2012, Barclays Bank became the first bank to settle with U.S. and U.K. regulators for its role in the LIBOR scandal and paid GBP 230m in fines. At the time of writing, supervisory, criminal, and/or anti-trust authorities have fined thirteen banks (including two brokers) for misconduct and inappropriate practices related to the interest reference rate submission.

Table 12: Interest reference rate manipulation/LIBOR scandal: Overview of affected banks and fines by regulatory authority<sup>p</sup>  
(in USD m, alphabetical order)

	Commodity Futures Trading Commission (CFTC)	United States Department of Justice (DoJ)	43 States and the District of Columbia in the U.S.	U.S. District Court Manhattan	Financial Conduct Authority (FCA)	European Commission	Other <sup>q</sup>	Total
Barclays Bank	200	160	100		76.8			536.8
Citigroup	175			130		79.1		384.1
Credit Agricole						129.6		129.6
Deutsche Bank	800	775	220	240	292.6	819.7	600	3,747.3
HSBC						38	35	73
ICAP	65				18.1	17		100.1
JPMorgan Chase		550				540.9		1,090.9
Lloyds Bank	105				135.5			240.5
Rabobank	475	325			135.5		79.1	1,014.6
Royal Bank of Scotland	325	50			112.9	441.9		929.8
RP Martin	1.2				0.8	0.3		2.3
Société Générale	475	27				257.3		759.3
UBS	700	500			206.4	- <sup>r</sup>	59.9	1,466.3
Total	3,321.2	2,387	320	370	978.6	2,323.8	774	10,474.6

<sup>p</sup> This overview does not include settlements with clients out of civil claims/proceedings.

<sup>q</sup> Other including the New York State Department of Financial Services for Deutsche Bank, The Office of the Comptroller of the Currency (OCC) for HSBC, the Dutch Central Bank for Rabobank, and the Swiss Financial Market Supervisory Authority (FINMA) for UBS.

<sup>r</sup> UBS avoided another regulatory fine of USD 2.83bn (EUR 2.5bn) from the European Commission because of its expert witness role during the interest reference rate manipulation investigation.

Source: Author's representation, based on own research. Fines in currencies other than USD are converted to USD using an average exchange rate for full year 2017 for comparison.

Prosecution authorities in the U.K. and the U.S. charged at least 23 individuals in LIBOR investigations, of which eight former traders were finally imprisoned at the time of writing. Hayes became the first individual to be convicted for rigging LIBOR in 2015. He was sentenced to 14 years in prison, which was later reduced to 11 years (Angeletti 2017: 119, 121). Five former traders from Barclays Bank, i.e. Jay Merchant, Alex Pabon, Jonathan Mathew, Philippe Moryoussef, and Peter Johnson, one former trader from Deutsche Bank (Christian Bittar), and one former trader from Rabobank (Paul Thompson) were also jailed for LIBOR manipulation.<sup>27</sup> Eight additional traders are waiting for their proceedings.

Ten trader cases were tossed out, also – analogous to JPM’s London Whale and the release of Martin-Artajo and Grout – because of doubts on the reliability of testimony from principal witnesses<sup>28</sup> as well as the grey areas of LIBOR and the opening it provided for manipulation (Ashton and Christophers 2015: 207; Bryan and Rafferty 2016: 73).

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<sup>27</sup> For two former Deutsche Bank traders, Matthew Connolly and Gavin Black, the imprisonment (and potential fine) have not been set at the time of writing.

<sup>28</sup> Many countries, especially in Europe, require providing testimony by individuals involved in an investigation. In light of cross-border convictions, the U.S. law prevents the use of compelled testimony, which makes it difficult for federal prosecutors to pursue charges for cases reaching cross-markets and individuals who are outside the U.S. (Henning 2017).

Table 13: LIBOR scandal: Trader overview

Jurisdiction	Status	Former Trader	Institution	Imprisonment (initial) [years]	Fine [USD k]	Additional Information	
U.K.	<i>Pleaded guilty; under review/appeal</i>	Thomas Hayes	UBS (last employer)	11 (14)	1,394	Hayes has exhausted available court appeals and referred his case to the Criminal Case Review Commission (CCRM) – CCRM accepted Hayes' case for review.	
		Jay Merchant	Barclays Bank	5.5 (6.5)	472	According to Merchant's lawyer, Hannah Raphael, Merchant is planning to refer his case to the CCRM.	
		Alex Pabon Jonathan Mathew		0.75 (.75) 4	3.64 54.9	Pabon was released from prison in March 2017. Mathew has exhausted available court appeals and referred his case to the CCRM – pending acceptance decision.	
	<i>Not prosecuted but fined</i>	Peter Johnson Philippe Moryoussef Christian Bittar	Deutsche Bank	4 8 5.3	228.9 4,448	Johnson pleaded guilty. Moryoussef pleaded guilty. Bittar pleaded guilty.	
		Neil Danziger	Royal Bank of Scotland	396		The FCA banned Danziger in relation to any regulated financial activity in the City.	
		Paul White		396		The FCA banned White in relation to any regulated financial activity in the City.	
		Guillaume Adolph	Deutsche Bank	278.6		The FCA banned Adolph in relation to any regulated financial activity in the City.	
	U.S.	<i>Acquitted; jury was unable to reach a verdict</i>	Stylianos Contogoulas Darrel Read	Barclays Bank ICAP			
			Danny Wilkinson Colin Goodman Terry Farr James Gilmour Noel Cryan	RP Martin			
			Andreas Hauschild	Deutsche Bank (last employer)			Hauschild has been arrested during his vacation in Italy in August 2018; the Italian authorities ruled that Hauschild should be extradited to the U.K. on October 12, 2018; Hauschild got charged by the Serious Fraud Office (SFO) on October 21, 2018; in addition to Hauschild, two other former Deutsche Bank traders waiting for their proceedings in the U.K.
<i>Pleaded guilty</i>		Paul Thompson	Rabobank	0.25		Thompson faced up to 30 years' jail time after pleading guilty in July 2016; final sentence is three months in an U.S. prison with a medical facility.	
<i>Acquitted</i>		Matthew Connolly Gavin Black	Deutsche Bank	N/A	N/A	Both, Connolly and Black, have been convicted on October 17, 2018 – the sentence date has not been set; during their trial, the former Deutsche Bank traders Michael Curtler and Timothy Parietti served as expert/co-operating witness against Connolly and Black.	
		Anthony Allen Anthony Conti	Rabobank	- (2) - (1)		A New York Appeal Court tossed out convictions for both, Allen and Conti, ruled that their forced testimony to a U.K. financial regulator was	

<i>Waiting for proceedings</i>	Ryan Reich	Barclays Bank
	Colin Bermingham	Barclays Bank
	Carlo Palombo	
	Sisse Bohart <sup>s</sup>	
	Danielle Sindzingre <sup>s</sup> Muriel Bescond <sup>s</sup>	Société Générale

improperly used against them in an U.S. criminal trial by a main government witness (i.e. Paul Robson, who was also working at Rabobank).

<sup>s</sup> Female trader.

Source: Author's representation, based on Bray (2016), Gower and Ring (2016), Matussek (2018), Ring (2017 and 2018), Ring and Hodges (2017), Ring and Wild (2017), Van Voris *et al.* (2017), and Wild (2018).



The low number of individuals imprisoned compared to the list of released/acquitted traders and the level of regulatory fines imposed on their employing institutions (see Table 12) reveals the difficulty faced by prosecution authorities when seeking to hold individuals responsible for misconduct by global financial companies (Eisinger 2017 and Henning 2017), resulting in less personal accountability for corporate wrongdoing (supportive Pontel *et al.* 2014).

#### **4.4.3.1 Organizational/structural forces**

As per BBA's definition, the panel banks' submissions were not averages of their actual transactions or actual interest rates paid/charged. Each LIBOR index was an estimate and represented at the end an array of calculative practices, which was subjective to the core (Ashton and Christophers 2015: 193). According to Bryan and Rafferty (2016: 73), the credibility of LIBOR required the subjectivity of the reference rate determination – as embodied subjective opinions of expert bankers – to be incorporated into an objective measurement via LIBOR's reputation. The submissions required human judgement on which money may be available at what cost/unsecured interbank borrowing. Hence, the panel banks' submissions must have been related to the cost of borrowing unsecured funds in the interbank market and no other factors such as own trading positions (British Bankers' Association 2008: 10) and must have been made without reference to rates contributed by other panel banks (United States District Court of Connecticut 2015b, Exhibit 3: 3). Nevertheless, in case of a sudden and dramatic loss of liquidity, i.e. the absence of actual liquid credit markets, banks became reluctant to borrow each other funds, specifically not on unsecured basis – Ashton and Christophers (2015: 193) make reference to an imagined market; along the same lines argues Vasudevan (2013: 6), LIBOR must be a fiction. Responsible for the interest reference rate submissions of the panel banks were the submitters; more precisely, individuals who knew the currency situation of a specific market. The submitters were very often derivative traders (so called 'trader-submitters', see also illustration of the concerted submission manipulation scheme in Figure 4, footnote 1) – a relationship, which was not allowed by the BBA – owning positions in the currency under consideration. Hence, dual role and conflicting mandate of trader-submitters, bearing competing objectives, created conflicts of interest. Additional inherent structural conflicts of interest existed as the BBA – neither part of the British state, nor regulated, occupying a hybrid place between state and market (Bryan and Rafferty 2016: 78) – installed a Foreign Exchange and Money Market Committee (FX&MMC) to monitor and oversee the reference

rate submission process on a monthly basis. The FX&MMC was selected by LIBOR panel banks and user groups, chaired by members of contributing/panel banks. Hence, the contributing banks were able to oversee themselves in an act of self-regulation<sup>29</sup> (supportive Angeletti 2017: 130–1; Kregel 2012: 5; McConnell 2013: 64, 67–8; McConnell 2017: 42, 47–8), reflecting the absence of an independent capable guardian. The BBA itself wrote and characterised as ‘serious issue’ (British Bankers’ Association 2008: 10) that LIBOR is not perfectly understood by market participants and observers, which required the BBA to correct a number of misunderstandings and misinterpretations (British Bankers’ Association 2008: 4, 12). Hence, (risk) management failures concerning the interest reference rate determination and submission process were widespread in financial institutions. UBS had no systems or controls in place governing the procedures for its LIBOR submissions. In addition, no formal training was provided to submitters about the submission process (Financial Services Authority 2012: 27). The lack of documentation and training was apparent in other banks involved in the LIBOR scandal, exemplified by Barclays Bank (Commodities Futures Trading Commission 2012a: 35–40), Citigroup (Commodities Futures Trading Commission 2016: 29–30, 33–4), and Deutsche Bank (Financial Conduct Authority 2015: 21, 35).

#### 4.4.3.2 Individual forces

The number of financial institutions (see Table 12) and individuals involved in the LIBOR scandal (see Tables 13) makes it challenging to extract and examine all individual triggers and turning points. Nevertheless and in a generalized manner, for the first primary purpose of the interest reference rate manipulation – benefitting own trading positions – the trigger was remuneration, i.e. influencing performance based salary components (variable compensation/bonus) (supportive United States District Court of Connecticut 2015b, Exhibit 3: 36). Anecdotal evidence reveals that Hayes was excessively triggered by generating profits for his employers (he generated approximately USD 40m profits in 2007, USD 80m in 2008, and USD 116m during the first nine months of 2009 (United States District Court of Connecticut 2015b, Exhibit 3: 25)) and finally himself (Enrich 2017: 3, 23, 224–7). His gross income during his time at UBS was GBP 41k in 2006 (five months only), GBP 171k in 2007, GBP 500k in 2008, and GBP 410k in 2009 (eight months only). At Citigroup, Hayes’ gross

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<sup>29</sup> The BBA, by highlighting, ‘*Members of the Committee are currently from contributing banks and believe their independent stance and ability to provide detailed scrutiny of the rates would be strengthened by widening the membership of the committee.*’, implicitly confirms concerns around FX&MMC’s independence (British Bankers’ Association 2008: 12).

income was GBP 2m in 2009 (due to an up-front cash signing bonus from Citigroup) and GBP 1.5m in 2010 (nine months only, before being dismissed in September) (Angeletti 2017: 134). For management, the trigger for the second purpose of the LIBOR scandal – misrepresentation of financial viability – was fundamentally the fear of falling and not to survive the financial crisis, which was reaching its peak phase with the bankruptcy of Lehman Brothers on September 15, 2008. Hayes, as ringleader, was orchestrating traders, submitters, and third party providers (interdealer/cash brokers) over years in an unauthorized way, resulting in thousands of reference rate adjustment requests (routine nonconformity). In early 2015 and before Hayes' trial, he was diagnosed with Asperger's syndrome. Hayes appealed against the LIBOR conviction based on his Asperger diagnosis beginning of 2017, an attempt to normalize his behaviour ex-post.

#### **4.4.3.3 Group forces type A**

Figure 4 provides a schematic overview about the acting in concert behaviour in the LIBOR scandal. Manipulative activities took place within banks but also across them, in part supported and facilitated by interdealer/cash brokers. In accordance, Bryan and Rafferty (2016: 72, 75) emphasize that calculative systems and practises (such as the LIBOR rate determination) are constitutive of social relations. Ashton and Christophers (2015: 198, 201) show in their analysis of the LIBOR scandal from a Barclays Bank perspective, often ex-Barclays Bank employees raised manipulative interest reference rate requests to then current Barclays Bank traders, evidencing the high interpersonal nature of the acting in concert practise by toxic individuals ('collusion between friends' as per McConnell 2017: 47). The collusive interaction started small-scaled in or at around 2005, whereas it reached its peak time in September 2008 with the bankruptcy of Lehman Brothers and thousands of manipulated reference rate requests to influence to perception of creditworthiness (deviance amplification and escalation). Trials, which have taken place in the interim, revealed repetitive defeat strategies from the accused traders referring to wide-spread industry practices (collective normalization and rationalization), described by Angeletti (2017: 133) as an act of collectivization of responsibility.

#### **4.4.3.4 Group forces type B**

Evidence suggests, a number of managers knew about and in some cases were actively involved in the LIBOR manipulation at UBS. The Financial Services Authority (2012: 4) counts 40 individuals directly involved, of which 13 were managers and five senior managers, who were aware of the submission manipulation practise. The circumstances around management awareness were similar at other banks, for example Deutsche Bank (Financial Conduct Authority 2015: 34), Rabobank (Financial Conduct Authority 2013c: 4, 9), and Royal Bank of Scotland (Financial Conduct Authority 2013a: 3, 19–20), confirming in line with NAB's and JPM's CRT events the consent and cooperation principle. Management's awareness and even its active involvement in the submission manipulation to mask problems concerning financial viability/liquidity sheds light on risk acceptance/allowance behaviour of involved financial institutions and corporate decision makers. Given the length of the collusive interaction scheme, which started in or at around 2005, it is remarkable how overconfident acting individuals and their management were in terms of the probability of detection. Normalizing processes, including moral disengagement, led to self-deceptive illusions of control/invulnerability (Janis 1972).

#### **4.5 Conclusion**

From the model construction to my evidence-based analysis, I draw four conclusions. First, I provide the first descriptive explanation model for collusive rogue trading (CRT), in which I prove the existence and application of main organizational misbehaviour (OMB) theory paradigms for three major CRT events from recent history. My research suggests, the outlined three forces on organizational/structural, individual, and group level, contribute to CRT. Consequently, OMB theory is suited to be applied to CRT due its ability to explain negative/dark consequences of complex corporate workplace environments on macro, meso, and micro level. This is in contrast to existing explanation approaches from White Collar Crime (WCC) research that miss the macro analysis of organizational features (supportive Reurink 2016: 410) as well as Leaver and Reader (2017)'s very recent research, analysing trading misconduct through the lens of safety culture theory, in which specific forces on micro (individual) and meso (group) level are underrepresented.

Second, there is a tendency in management for erroneous beliefs concerning the tolerability of OMB (as one group force type B), in particular CRT. The fact that big risk takers can

develop into ‘toxic workers’ (Housman and Minor 2015) or speculative traders into rogue traders is not new. Turner and Pidgeon (1997) highlight, cultural collapses and man-made disasters occur due to the inaccuracy or inadequacy of accepted norms, values, and beliefs. According to Turner and Pidgeon, cultural adjustments aim for the completion of lessons learned, issued and directed through authority from the top, to close an incident by adjusting erroneous norms and beliefs, which lead to the event. However, no lessons have been learned from past organizational wrongdoing to adjust norms, values, and beliefs. My policy advice therefor is to constantly (re)calibrate and validate the organizations’ risk allowance and risk tolerability by corporate decision makers. Executives are required to limit overconfidence and cultural blindness towards CRT.

Contrary to the acceptance of OMB and this is third, banks need to implement a proper risk culture, including dedicated behaviour and conduct guidelines how to behave and interact within the organization but also with external stakeholders. Due to the complexity of multinational corporations, distinctions into local levels of culture need to be made (supportive Financial Conduct Authority 2018: 18). Major culture influencing drivers like authority and leadership, through tone from the top and walk the talk, should serve a normative guide for ethical behaviour. In here, the role and power of middle management and its function as transmission layer between corporate decision makers and executives on the one hand and workforce on the other, being able to filter critical/unwanted feedback from channelling through to the top, need to be considered thoroughly. Organizations are required to foster a speak up culture (contrary to a culture of fear), which is heard by those who set the tone from the top, including effective whistle-blower mechanisms (e.g. whistle-blower/integrity hotlines) that ensure potential indications for OMB are directed to the top and the whistle-blower is protected. A strong risk culture is supported by reward and punishment systems, including consequence management frameworks, following up on and sanctioning OMB/conduct breaches. Situations and circumstances reflecting ethical ambiguous situations (grey zones including potential conflicts of interest) and dilemmas need to be contextualized to remind acting individuals and groups of their own moral identity and moral compass. Behaviour and conduct training, education, and orientation should stimulate self-regulation and self-control for moments that matter and turning points into OMB and ensure an active speak-up culture participation. Considerations need to be made, avoiding the selection and hiring of like-minded employees and in turn fostering diversity and heterogeneity throughout all levels of the organizational hierarchy/chain of command, preventing acting in concert (‘buddy networks’ and

‘collusion between friends’), and minimizing density and exposure to corrupt personnel. Regulatory recommendations for the avoidance of the ‘rolling bad apples’ phenomenon – i.e. individuals who engaged in misconduct but are able to obtain subsequent employment elsewhere, without disclosing their earlier misconduct to the new employer, and repeat their misbehaviour – have been very recently announced (Financial Stability Board 2018: 32–44). From a regulatory perspective<sup>30</sup>, supervision is not only about ensuring compliance with the rules but also with the spirit (Financial Stability Board 2014). Behaviour and culture – i.e. the human element in the performance of banks – are essential supervisory topics and should be monitored in line with strategy and business model, strategic organizational business goals, and governance. The incisive supervision of behaviour and culture increases the effectiveness of supervision on the one hand and contributes to the detection of issues and problems before they could lead to misconduct on the other. Where culture reveals itself in behaviour, culture can be observed – especially patterns of misbehaviour. Regulators and supervisors need to identify and assess behaviour and culture, focussing on the banks’ boards and their top leaders. This includes culture inspections of board effectiveness and change effectiveness as well as root cause analysis to identify cultural drivers that might cause risks on behavioural level (De Nederlandsche Bank 2015). Consequently, regulatory frameworks should require the management function to proactively assess and manage culture risk and promote the creation of learning systems – including feedback loops and lessons learned processes – to create a corporate culture that reinforces appropriate norms of responsible ethical behaviour (Filabi 2018).

Fourth, banks need to set up effective behavioural risk management and internal control frameworks to mitigate CRT. Real-time trade(r) behaviour and communication surveillance systems need to be designed and implemented to detect and escalate non-standard trade patterns (e.g. large and unusual trade behaviour), breaches against established trader mandates, positive and negative performance outliers, and suspicious trader communication/interaction. My case analysis methodology offers a range of specific early warning signals on individual trader and on trader group/desk level to detect CRT at an early stage.

Future OMB research should analyse patterns of conscious and unconscious group dynamics – e.g. groupthink, as concurrence seeking tendency of like-minded isolated groups,

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<sup>30</sup> I deem External Audit as being part of the regulatory framework for banks; hence, my policy recommendations for the regulatory role are applicable to External Audit as well. I see the mandate of Internal Audit in the examination of the adherence to operational standards, thereby assessing the control environment (i.e. design effectiveness and control effectiveness) as well as the management awareness (i.e. management’s involvement and pro-activeness in detecting and closing control gaps).

and defence mechanisms minimizing moral dissonance, like wilful blindness or moral neutralization – in order to deepen the understanding of the occurrence and acceptance of dark side behaviour in corporate workplace environments. From a policing viewpoint, principle-agent relations and agent (e.g. middle management) liability in the field of OMB need to be examined more closely, also from the perspective of less personal accountability for corporate wrongdoing.

## **5 Organizational culture and patterns of group dynamics: Implications for collective unethical behaviour<sup>31</sup>**

### **5.1 Introduction**

According to Rafeld *et al.* (2019), three forces contribute to organizational misbehaviour: organizational/structural, individual, and group forces. In order to deepen the understanding of the occurrence and acceptance of dark side/unethical behaviour in corporate workplace environments – i.e. conglomerates of groups – from a psychological/behavioural sciences perspective, I analyse patterns of conscious and unconscious group dynamics.

Research objects of this chapter are groupthink, as concurrence-seeking tendency of like-minded isolated groups, and defence mechanisms minimizing moral dissonance.

I expand Rafeld *et al.* (2019)'s descriptive explanation model for unethical behaviour in organizations, linking organizational/structural, individual, and group forces with behavioural patterns of group dynamics. I apply a case analysis methodology to one major example of collusive rogue trading (CRT) in the banking industry from recent history, the foreign exchange (FX) rate manipulation/forex scandal. Here, I examine *modus operandi*, risk management failures and control weaknesses, as well as early warning signals, before I apply the explanation model to the forex scandal. As sources of information, I use publicly available investigation reports, published academic research, and media/news information. I draw conclusions regarding behavioural risk management and internal control frameworks and outline areas of future research at the end of this chapter.

### **5.2 Drivers contributing to organizational misbehaviour (OMB)**

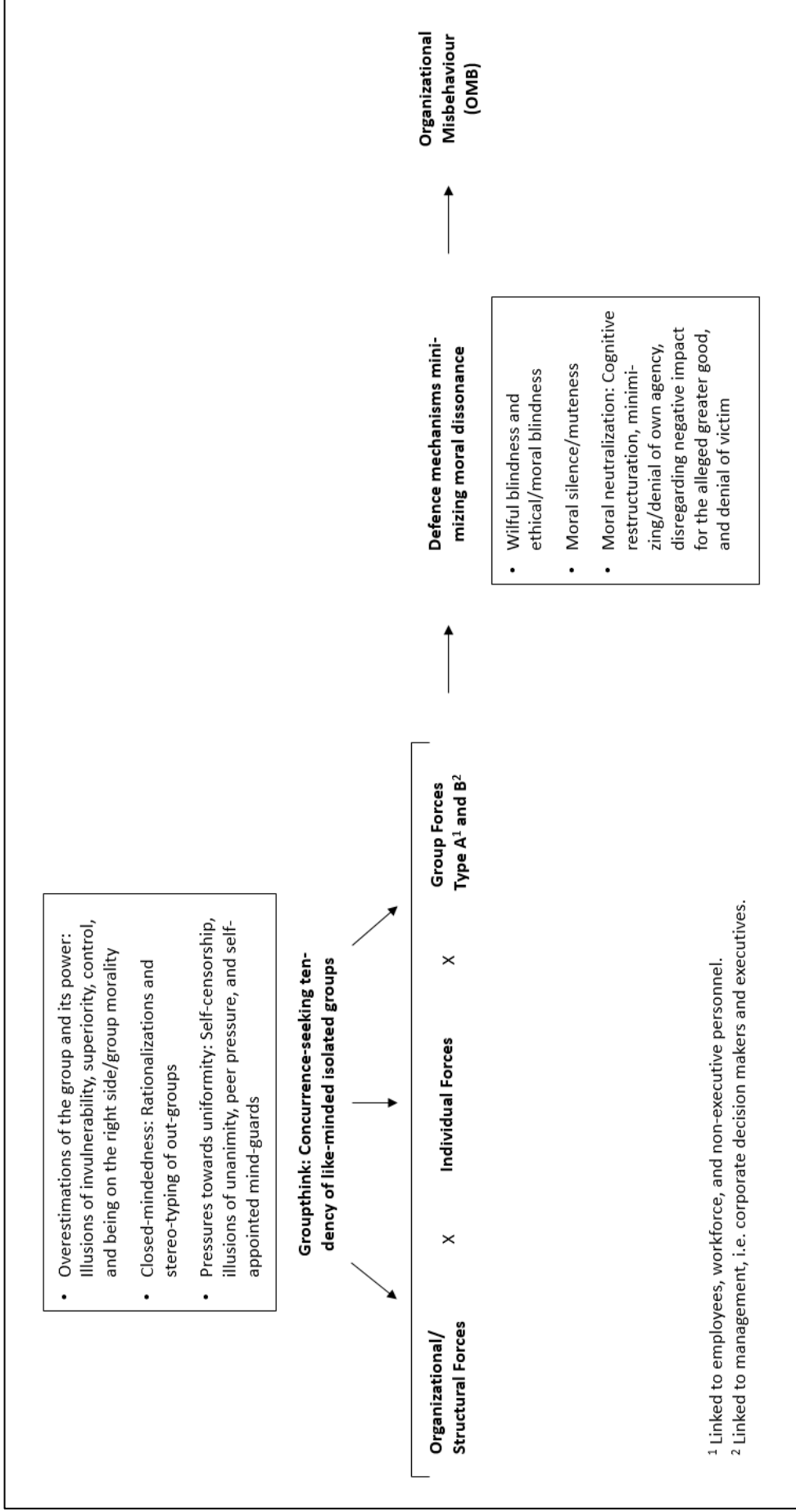
The hypothesis of this chapter is: the joint occurrence of organizational/structural, individual, and group forces in combination with patterns of group dynamics contributes to the existence of OMB/unethical behaviour. In the following, I describe the explanation model and its theory paradigms.

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<sup>31</sup> Extracts of one version of this chapter, including the extended descriptive model (see Figure 5), were presented at the European Business Ethics Network (EBEN) Research Conference 'Beyond Corruption – Fraudulent Behavior in and of Corporations' in Vienna on September 7, 2018.



Figure 5: Drivers contributing to organizational misbehaviour (OMB)



### 5.2.1 Organizational/structural forces

Internal organizational/structural forces, which are causal for situational circumstances, are the fundament of organizations. I distinguish between formal aspects (e.g. purpose, processes, structures/governance, and systems) and informal aspects (e.g. beliefs, norms, and unspoken rules) of organizational/structural forces. Both are influenced by market conditions, business environment, regulation, and potential other external drivers.

According to Lo (2016), organizational culture, as an informal situational aspect, is built up and maintained by a transmission process and in particular three biologically inspired drivers: authority and leadership (analogous to a primary infection source), composition (analogous to a population at risk), and environment (shaping cultural response).

Strategy setting and communication behaviour are main elements concerning authority and leadership, reflecting the leading by example paradigm.

Composition, i.e. employee selection and hiring alongside pre-determined criteria, is also influencing culture. Regulatory recommendations for the avoidance of the ‘rolling bad apples’ phenomenon – i.e. employees who have been dismissed due to misconduct at one firm and then are employed by another where they repeat their misconduct – have been recently announced (Financial Stability Board 2018: 32–44). This problem is exacerbated by an increased employee mobility and limited disclosures about misconduct of former employees due to data privacy and litigation-risk related concerns. Reward and punishment systems influence composition behaviour by setting incentives and sanctioning unwanted behaviour. Organizations need to ask themselves what behaviour is being incentivised/rewarded. Otherwise, as emphasized by Kerr (1975), organizations fall into the trap of rewarding A (e.g. income generation), while hoping for B (e.g. avoidance of mis-selling, adherence to suitability/treat the customer fairly). What is rewarded gets done, but that might not always be what was intended.

The environment is also influencing culture. Organizations demonstrate culture especially around how risk, as a change in environment, is managed (Lo 2016).

Recent research promotes working in an ethical culture and climate in adherence to shared organizational values (Filabi 2018: 37 and Sims 2017: 8). An ethical culture encourages not only compliance with rules and prudent risk management practise but also with the spirit (Financial Stability Board 2014). In turn, a corporate culture oriented towards a bottom line mentality (Wolfe 1988, who refers to one-dimensional thinking for financial success in

multivalent situations) and a win at all cost attitude is a threat to integrity and supports the occurrence of unethical behaviour, as both promote an unrealistic belief that everything boils down to a monetary game. Ethical conduct represents an impediment along the way to financial success (Sims 1992: 657). The widely referred tone from the top is important in shaping the cultural framework/setting of an organization. Nonetheless, the tone from the ones at the top needs to listen to the voice from the middle and the bottom. Corporate decision makers and executives need to accept critical upward feedback by creating an active speak up culture, taking the echo from the middle and the bottom seriously, and treating the escalation of concerns (by for example whistle-blowers) confidential.

The extent to which patterns of individual and group behaviour impact an organization's functioning, by either encouraging or discouraging unethical behaviour/misconduct, can be thought of as an organization's 'cultural capital' (Chaly *et al.* 2017), which can reduce misconduct risk and prevent losses (Stiroh 2018). Adverse hiring practices can lead to an underinvestment in cultural capital and therefore an increased potential for the occurrence of OMB. Renz and Eddy (1996) refer to the design of a 'culture of character' by realigning internal structural, technical, political, and sociocultural systems of the organization. They explore a culture of character infrastructure, which has an organizational systems orientation, sets the primary focus on the entire range of individual and organizational ethical issues and decisions, is responsive to moral and ethical standards of all stakeholders to the organizations, has a long-term time perspective, and involves all organizational levels.

Regulatory emphasis has been also set on problematic subcultures or 'micro-cultures' (Schein 2010), which are a function of the expanding and complex nature of modern corporations. Related research demonstrates, individuals are prone to model their behaviour and conduct more towards peers (members of their micro-culture) versus corporate executives and decision makers (Chaly *et al.* 2017).

### **5.2.2 Individual forces**

Needle (2010) highlights collective values, beliefs, and principles shared among organizational members as representatives of an organizational culture in addition to symbols, language, assumptions, and habits. Organizational culture and its underlying drivers serve as a normative guide for individual action/behaviour.

Tittle (1995 and 2004) emphasizes that the desire for autonomy as a core human need, confirmed by Wolfe (1988: 170), who highlights that individuals want to be in control of the conditions of their existence. Rotter (1966)'s 'locus of control', as the perceived expectancy for internal or external control/reinforcement, may hold promise in explaining unethical behaviour. An internal locus of control makes the acting individual believe outcomes result from his or her own effects, whereas an external locus of control would result in beliefs that events are beyond control; hence, can be attributed to fate, luck, or destiny. Focussing on unethical behaviour, individuals who are of the perception of an internal locus of control would more likely take responsibility for consequences and rely on an internal determination of right or wrong to guide behaviour (Treviño 1986: 610). Prerequisite for such a determination is a certain level of morale development (Kohlberg 1958 and 1984). To act with integrity in a highly pluralistic and multivalent society takes courage (Wolfe 1988: 169), for which moral development is the basis.

Organizational training, awareness, and orientation measures towards proper conduct and ethical behaviour aim for influencing self-regulating mechanisms of individuals (Black 2018: 91) and promoting self-governance by tapping intrinsic motivation (Filabi 2018: 37). Tittle (1995 and 2004) in his control balance theory points to self-control, which comprises behavioural attributes such as self-regulation and non-impulsiveness. Recent research articulates self-control might function like a muscle; it may become (temporarily) depleted when it is continually exerted by, for example, stress, noise, and overtiredness (Soltes 2016: 56). Transferred into real life, of course, not every acting individual behaves rationally and in a controlled manner, which has consequences for provocation elements triggering motivation, as situational stimuli may ultimately create the desire for immediate action for the acting individual – prevented or not by self-control.

### **5.2.3 Group forces**

Corporate workplace environments are conglomerates of groups, which include principle-agent relations alongside the organizational hierarchy/chain of command.

In their model composition, Rafeld *et al.* (2019) take into account complex/multi-layered organizational hierarchy levels and distinguish between typologies of groups. Acknowledging Den Nieuwenboer *et al.* (2017), Grodecki (2018), and Nelson (2016), who highlight an increased interest in the role of middle management in modern corporate fraud, in particular

agent liability fraud, Rafeld *et al.* (2019) distinguish between group forces type A (linked to employees, workforce, and non-executive personnel) and type B (linked to management, i.e. corporate decision makers and executives).

### **5.2.3.1 Type A**

Working in groups requires coordination and collaboration between individuals. Rafeld *et al.* (2019) deem unauthorised acting in concert as one major group force type A. Furthermore, they highlight deviance amplification effects as important for OMB (De Cremer and Vandekerckhove 2017 and Weick 1979) as well as exposure to corrupt/toxic personnel, showing unethical behaviour (Housman and Minor 2015), supported by group network density, group network closeness centrality, and group size (Wang *et al.* 2017).

### **5.2.3.2 Type B**

Corporate decision makers and executives who act in an overconfident manner, thereby consciously or unconsciously ignoring early warning indicators for unethical behaviour, create and foster a culture for OMB. This kind of behaviour periodically or constantly accepts negative behaviour/misconduct to occur and persist.

Any changes of negative norms cannot arise without consent and cooperation – hence, require a permission leadership style of corporate executives and decision makers.

## **5.2.4 Patterns of group dynamics**

This section explains two behavioural patterns of group dynamics: groupthink, as concurrence-seeking tendency of like-minded isolated groups, and defence mechanisms minimizing moral dissonance.

### **5.2.4.1 Groupthink**

Reaching a group decision is more complex than reaching an individual decision. This is because of explicit and consultative decision-making processes within groups, in which the

information held by various individuals of a group may be differently appraised. The individual on the one hand (thinking and deciding in an implicit way and on a personal basis) and the group dynamic (influencing the individual) on the other affect the group's decision-making process as well as the quality of decisions. Group dynamics may be rational or non-rational, with or without thought and consideration given to alternatives or outcomes, but either process produces a decision (Wilcox 2010: 11–2).

Decisions from groups, like decisions from individuals, have shortcomings, which can, for example, result in mindless conformity, collective miscalculations, or misjudgements of (serious) risks. Whyte (1952) first coined the term 'groupthink'. Nevertheless, it was Janis (1972) who pioneered and offered initial empirical research on the groupthink theorem<sup>32</sup>, described as collective pattern of defensive avoidance (Janis and Mann 1977: 129). Janis' observations centre on patterns of concurrence-seeking behaviour in groups, leading to a mode of thinking, which results in (extremely) poor/defective decision-making by groups. Lack of vigilance and excessive risk-taking are symptoms of temporary group derangement to which groups – made up of policy makers (in the public/legislative domain) or executives (in the corporate domain) – are not immune. Groups may tend to develop stereotyped images and collective (mis)judgements arising out of polarized discussions, which result in shifts to either extreme conservatism or towards riskier actions that the members of the group would have taken otherwise. Groupthink, as dysfunctional process, causes a deterioration of mental efficiency, reality testing, and moral judgement, while it arises from in-group pressure towards uniformity/unanimity.

Janis puts group cohesiveness as a central feature of his theory, referring to Lewin (1947 and 1951), who highlights the importance of the cohesiveness criteria for groups, i.e. the members' positive valuation of the group, their motivation to continue to belong to it (social identification), and commonality alongside jointly shared values and beliefs. Janis and Lewin, both assume, in cases of high group cohesiveness, members express solidarity, mutual linking, and positive feelings about, for example, attending meetings and carrying out tasks of the group. Research shows, highly cohesive groups provide a source of psychological security for group members, and this security reduces anxiety and heightens self-esteem (Cartwright 1968). An

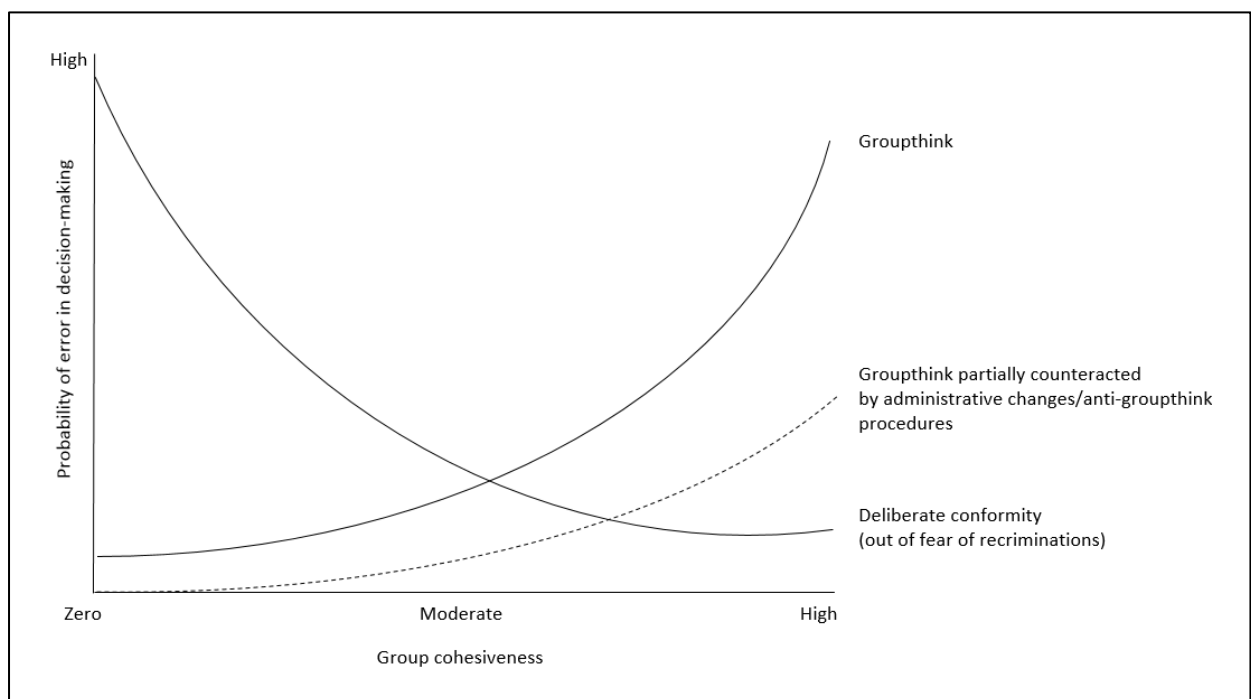
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<sup>32</sup> Janis' theoretical framework bases on the analysis of seven major historical events/decisions of historic importance in the U.S. history: the failure to be prepared for the Pearl Harbor attack, the invasion of North Korea, the Bay of Pigs invasion, the escalation of the Vietnam War, the Watergate cover-up, the Cuban missile crisis, and the development of the Marshall Plan. The first five events are considered as major fiascos, in which members of policy-making groups made incredible gross miscalculations about the practical and moral consequences of their decisions, whereas as the last two are generally considered as success, i.e. the policy-making groups did not suffer the adverse consequences of groupthink.

increased group cohesiveness may also result in dominant group characteristics and tendencies that influence individuals to remain loyal to the group by sticking to decisions the group committed to even when the outcome is against the individual's view or opinion. As an underlying driver, group members consider loyalty to the group the highest form of morality. In order to maintain loyalty to the group, group members show deliberate conformity behaviour, which is caused by the member's fear of recriminations by the group (Dittes and Kelley 1956).

The following figure shows the expected relationships between group cohesiveness, deliberate conformity, and concurrence-seeking/groupthink tendencies.

*Figure 6: Expected relationships between group cohesiveness, deliberate conformity, and concurrence-seeking/groupthink tendencies*



Source: Author's representation, based on Janis (1982: 299).

There is a positive relationship between group cohesiveness and groupthink tendencies. The relationship between group cohesiveness and deliberate conformity is inverse as the fear of recriminations is lowered for a high(er) group cohesiveness because of positively perceived group characteristics, i.e. solidarity and loyalty. Under the condition that there are no anti-groupthink measures in place, the combination of the deliberate conformity and concurrence-seeking/groupthink function results in a U-shaped form with an optimum (low) level of errors in decision-making in the middle range of group cohesiveness. A group must have a high(er)

degree of like-mindedness (hence, must be at least moderately cohesive) about basic values and mutual respect for constructive thinking to take place.

Group cohesiveness is nonetheless not the only important factor for Janis. Two additional antecedent conditions facilitate the occurrence of groupthink: structural faults of the organization and provocative situational context factors. The presence of antecedent conditions determines the probability that symptoms of defective decision-making, caused by concurrence-seeking, will occur.



Janis defines eight main causes/symptoms of groupthink, which can be separated into three categories. To each symptom, several indicators/variables can be identified.

*Table 14: Symptoms of groupthink*

Type	Symptom	Explanation
I. Overestimations of the group, its power, and morality	1. Illusions of invulnerability	Shared by (most or all) group members, creating excessive optimism and encourages taking of extreme risks.
	2. Belief in the group's inherent morality	Inclining members to ignore ethical and moral consequences of their decisions.
II. Closed-mindedness	3. Collective rationalizations	To discount (early) warnings or information, which lead the group members to reconsider their assumptions before they commit themselves to their past policy decisions.
	4. Stereotypes of out-groups	Stereotyped views of enemy leader as too evil to warrant genuine attempts to negotiate or as too weak and stupid to counter whatever risky attempts are made to defeat their purposes.
III. Pressure towards uniformity	5. Self-censorship	Group members hesitate to express arguments against any of the group's stereotypes, illusions, or commitments.
	6. Illusions of unanimity	Misjudgement of a conforming majority view of the group; members falsely assume silence means consent.
	7. Direct pressure on dissenters	Members who express strong arguments against any of the group's stereotypes, illusions, or commitments are put under pressure, making it clear that dissent is contrary to what is expected from loyal group members.
	8. Self-appointed mind guards	Protecting/isolating the group from adverse information, which might shatters their shared complacency about the effectiveness and morality of their decisions.

Source: Author's representation, based on Janis (1982: 174–5, 256–8).

Janis highlights seven consequences of defective decision-making caused by groupthink.

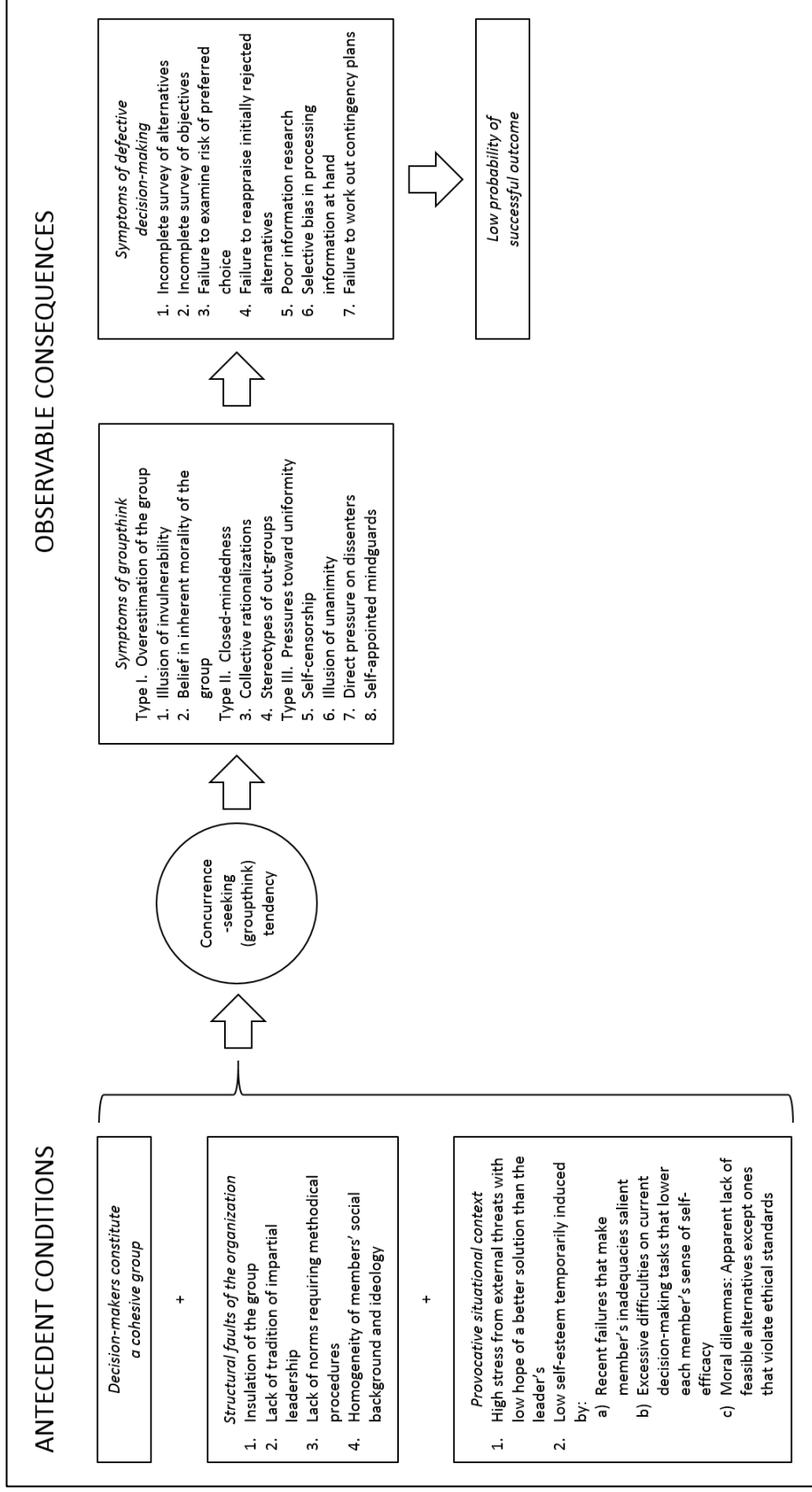
*Table 15: Symptoms of defective decision-making caused by groupthink*

<b>Symptom</b>	<b>Explanation</b>
1. Incomplete survey of alternatives	The group's discussions are limited to a few alternative courses of action without a survey of the full range of alternatives.
2. Incomplete survey of objectives	The group does not survey the objectives to be fulfilled and the values implicated by the choice.
3. Failure to examine risks of the preferred choice	The group fails to re-examine the course of action initially preferred by the majority of members from the standpoint of nonobvious risks and drawbacks, which had not been considered when it was originally evaluated.
4. Failure to reappraise initially rejected alternatives	The group members neglect courses of action initially evaluated as unsatisfactory by the majority of the group; the group spends little or no time discussing whether they have overlooked non-obvious gains or whether there are ways of reducing the seemingly prohibitive cost, which had made the alternatives seem undesirable.
5. Poor information research	The group members make little or no attempt to obtain information from experts who can supply sound estimates of losses and gains to be expected from alternative course of actions.
6. Selective bias in processing information at hand	Selective bias is shown in the way the group reacts to factual information and relevant judgements from experts, the mass media, and outside critics; the members show interest in facts and opinions that support their initially preferred policy and tend to ignore facts and opinions that do not support their initially preferred policy.
7. Failure to work out contingency plans	The group members spend little deliberating about how the chosen policy might be hindered by bureaucratic inertia, sabotaged by political opponents, or temporarily derailed by the common accidents that happen to the best of well-laid plans; consequently, they fail to work out contingency plans to cope with foreseeable setbacks, which could endanger the overall success of the chosen course of action.

Source: Author's representation, based on Janis (1982: 10, 175–6).

The following schematic overview summarizes the components and their interrelation of Janis' groupthink model.

Figure 7: Theoretical analysis of groupthink



Source: Author's representation, based on Janis and Mann (1977: 132).

Against the so far merely negative and critical connotation of groupthink because of the unfavourable effects outlined above, Longley and Pruitt (1980) highlight in their critique of Janis' theory that concurrence-seeking, under special conditions, can have positive effects. In case consensus is reached after careful deliberations, a brief appearance of groupthink symptoms would enable the group to stop discussing the problem it has solved and move on. In other words, groupthink excels favourable effects after a mature consensus – i.e. after intensive survey of alternatives, thorough analysis of information, and detailed examination of the advantages and disadvantages of alternatives – has been reached by the group.

Longley and Pruitt (1980) also suggest, premature consensus, resulting from groupthink, can be helpful for trivial or routine decisions. In accordance to Katz and Kahn (1978), minor types of problems can be approached and solved via readily available frames of reference or an existing general policy. Janis (1982: 298–9), in reacting to the critique, highlights the more trivial the problem is, the more likely it is that groupthink will result in a speedy consensus on an acceptable (or at least harmless) solution. He emphasizes the importance of the applicability of his theory focussing on adverse consequences of concurrence-seeking to major dilemmas, which require a fundamental reformulation of policy and/or innovative solutions. He acknowledges, groups are indeed provided with increased effectiveness when dealing with a variety of other tasks, especially those that do not involve decision-making. He points to the duality of cohesiveness, as, in case of high(er) cohesiveness, the group could gain advantages of, for example, maintaining morale (after a defeat and/or when going through a crisis with lowly perceived chances of success) and free expressions of dissent, which is contrary to the negative effects of groupthink.

The discussion around group dynamics and inherent problems of decision-making processes can be linked to the work from Galton (1907). His thoughts about the wisdom of crowds have been re-issued as popular bestseller by Surowiecki (2004), drawing on the increased connectivity of society and the grown importance of new technological social networks. The main thesis of the collective intelligence phenomenon is that a diverse collection of data (e.g. opinions, estimates, and assessments), provided by independently deciding individuals, is likely to make certain types of decisions and predictions better than individuals or even experts. Drawing parallels to Janis, research has shown social influence (like group dynamics that are able to generate groupthink tendencies) is also expected to undermine the wisdom of crowds (for example Lorenz *et al.* 2011), which in experimental studies – like in Galton's

anecdotal opening around the accurate guess of an ox weight – is primarily applied to estimate/judgement problems of comparably low complex areas of concern (including single correct answers).

How to use favourable effects from group cohesiveness and concurrence-seeking tendencies without suffering adverse consequences, like (severe) losses, from groupthink? Janis proposes several anti-groupthink procedures targeting the elimination of group insulation and overly directive leadership practice.

*Table 16: Anti-groupthink procedures/administrative changes*

<b>Procedure</b>	<b>Explanation</b>
1. Assignment of critical evaluator role	The leader should assign the role of a critical evaluator to each group member and be ready to accept criticism for own judgements, demonstrating the influence by those who disagree.
2. Impartial leaders	Leaders should be impartial, asking for unbiased statements and views, which allows the development of an atmosphere of open inquiry to explore a wide range of policy alternatives.
3. Creation of independent evaluation groups	The organization should set up several independent policy planning and evaluation groups, each carrying out its deliberations under a different leader.
4. Creation of subgroups	The group should from time to time divide into two or more subgroups to meet separately (under a different chair) and to come together examining differences and areas of concern.
5. Consultation of trusted associates	Each group member should discuss periodically the group's deliberations with trusted associates of his or her own.
6. Involvement of outside experts	One or more outside experts or qualified colleagues who are not part of the core group should be invited on staggered basis and encouraged to challenge group views/consensus.
7. Assignment of devil's advocate role	In order to evaluate alternatives, one group member shall be assigned the devil's advocate role challenging accepted norms and providing alternative positions.
8. Initiation of role play	(In case of issues with rival nations or organizations) all warning signals from the rival should be analysed, and scenarios of the rival's intentions should be constructed and critically evaluated.
9. Set up of second chance meetings	After reaching preliminary consensus about the best alternative, the group should hold a 'second chance' meeting at which the members shall express their residual doubts to rethink the decision before making a final one.

Source: Author's representation, based on Janis (1982: 260–73).

In my explanation model (see Figure 5), I assume that groupthink affects group forces (both, type A and B) and individual forces with the highlighted consequences.

Groupthink is able to influence the organizational dimension as well, i.e. organizational/structural forces – especially the informal side (e.g. beliefs, norms, and unspoken rules) – in case groupthink reaches an organization-wide stage of dispersion and collective adoption.

On the organizational level, groupthink can be fostered by composition, i.e. employee selection and hiring alongside narrow/similar criteria, set and enforced by like-minded corporate decision makers and workforce/non-executive personnel, acting as corporate agents.

#### **5.2.4.2 Defence mechanisms minimizing moral dissonance**

Beyond groupthink, there are additional patterns of group dynamics, which contribute to unethical behaviour. Reasons for their existence lie in the fact that individuals often justify unethical behaviour – committed by themselves or members of their community/group – by applying (cognitive) rationalizing defence mechanisms. In case unethical practises are judged (normalized) to be harmless, there are on individual subjective basis limited or no more moral/ethical concerns associated with unethical behaviour. Individuals who morally disengage consciously ignore, minimize to a moral neutral level, or dispute the consequence(s) of unethical behaviour (Sims 2017), thereby showing a conventional level of moral development (Kohlberg 1958 and 1984) because of the recognition of the existence of a moral issue.

The psychological driver for this behaviour is to overcome internally experienced moral dissonance, which is the incongruence between internalized norms and beliefs on the one hand and unethical behaviour on the other – in other words a situation of discomfort holding conflicting cognitions. Moral dissonance is likely to occur under circumstances, which reflect the absence of a reflective equilibrium between the moral judgement about a particular issue with what the individual deems generally morally right or wrong. Individuals seek for coherence and a principle of equality in order to achieve an internal balance (Kvalnes 2016 and Rawls 1971), as imbalances cause moral dissonance. Groupthink symptoms themselves are able to contribute to overcome moral conflicts because of, for example, overestimations in the morality of individual or group behaviour.

The existence of an unethical organizational climate – as quasi-immanent neutralizing force – may help to explain as to why organizations develop dangerous/toxic cultures of generally rule-abiding individuals or groups who knowingly commit unethical acts (or ignore them). The prevailing organizational culture may, on the adverse side, diffuse responsibility for the consequences of unethical behaviour across members of a group (Vaughan 1996) or may displace responsibility to authority figures who may have tacitly condoned or explicitly directed behaviour (Kelman and Hamilton 1989; Milgram 1974<sup>33</sup>; Sykes and Matza 1957),

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<sup>33</sup> Milgram is referring to an ‘agentic shift’, becoming an agent acting on someone else’s behalf.

making unethical behaviour more likely. On the non-adverse side, organizational culture may promote an assumption of responsibility for actions taken, which increases the probability that both, individual and groups, behave in an ethical manner (Sims 1992).

In the following, three defence mechanisms are explained: wilful blindness and ethical/moral blindness, moral silence/muteness, and moral neutralization.

### **Wilful blindness and ethical/moral blindness**

*'Let's close our eyes to this problem,'* described as wilful blindness, is one way to handle moral conflicts in a conscious attempt to disguise an unethical reality. Related research describes this phenomenon with Nelsonian knowledge<sup>34</sup> or ostrich behaviour (Garret 2014). Steiner (1985) characterises wilful blindness as societal cover up/ignoring of the truth – despite access to knowledge and information – for a purpose to do so, i.e. minimizing or overcoming moral dissonance. Heffernan (2011) defines wilful blindness behaviour as shutting down any dissenting view linked to the creation of hierarchy, which makes it hard to express moral concerns to those with power.

When focussing on the unconscious side, Palazzo *et al.* (2012) refer to ethical blindness as decision makers' temporary inability to see the ethical dimension of a decision at stake – people might behave unethically without being aware of it, supported by Bird (1996)'s description of moral blindness as a failure to see or recognize more concerns and expectations that bear upon activities and involvements of individuals.

Moral blindness is common for individuals and groups with a fragile self-image, which threatens their very being in case they would admit unethical behaviour to themselves or others, and it includes the inability to have any fixed moral focus in organizational actions (Sims 2017). Reasons for moral blindness can be rooted to the complexity of situations, the demands put on acting individuals and groups, and to the results of economic and other incentives (Kvalnes 2016).

Nonetheless as to whether blindness is conscious or unconscious in nature, by turning a blind eye on unethical behaviour, the organizational system condones, encourages, and colludes with unethical behaviour (Menon 2018).

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<sup>34</sup> See footnote 15.



## **Moral silence/muteness**

Notifying hints, concerns, or complaints about potential unethical behaviour and misconduct – hence, preventing unethical behaviour through openness and transparency – is of heightened interest for regulatory authorities, evidenced by recent regulatory publications that emphasise the importance of corporate cultures and individual responsibility and accountability regarding the creation of a safe environment for a candid dialogue and escalation process of ethical issues. This includes the aforementioned tone from the top and walk the talk, risk culture development, enhanced whistle-blower mechanisms, and other escalation procedures (Financial Conduct Authority 2018 and Financial Stability Board 2018), all connected to the second defence mechanism moral silence/muteness.

Bird and Waters (1989) describe moral muteness when individuals do not voice moral sentiments or when they communicate in such a way that would obscure their moral beliefs and commitments. They offer three causes for the moral muteness phenomenon: threat to harmony, threat to efficiency, and threat to the image of power and effectiveness. Organizational silence is seen as the result of personal and shared risk assessments of the dangers of speaking up about workplace wrongdoing (De Maria 2006). In Morrison and Milliken (2000)'s organizational silence model, individuals form shared beliefs about the danger and/or futility of speaking up through information sharing, social contagion, and collective sense making.

A prerequisite for proactive notification and speak up behaviour (Kenny *et al.* 2018) is a culture of psychological safety (versus a culture of fear or a culture suppressing dissent/potential whistle-blowers) to freely express and point to misconduct without fear of negative consequences, i.e. an environment where it is safe to take risks, learn from mistakes, and ask for help (Grodecki 2018).

## **Moral neutralization**

Sykes and Matza (1957) pioneered the criminological research on neutralization, which is centred on cognitive rationalization. Matza (1964) describes neutralization as a process by which people are freed from the moral bind of law. Neutralization comprises behavioural methods that temporarily/episodically offset values and beliefs of moral constraint, which would normally prevent individuals and groups from committing illegitimate acts.

Neutralization removes the ethicality associated with unethical behaviour. Transferred to the corporate context, unethical acts become business decisions and not ethical dilemmas in case ethical implications of decision-making are removed (Sims 2017).

Neutralization behaviour allows drifting back and forth between ethical and unethical behaviour, which is made possible by the temporary liquidation of the bind between actor and legal order, thereby proceeding along the lines of negation of responsibility (Matza 1964).

One important theory component for neutralization is moral disengagement, i.e. processes that assist to self-justify acts that are in conflict with a person's moral beliefs and self-concept. Badura *et al.* (1996) first introduced moral disengagement within the framework of social learning theory, stressing that moral disengagement mechanisms precede immoral acts.

Ribeaud and Eisner (2010) take into account research from Sykes and Matza (1957) on neutralization techniques, Bandura *et al.* (1996) on moral disengagement, and Barriga and Gibbs (1996) on secondary self-serving cognitive distortions, developing an overarching model of moral neutralization. They highlight four overlapping mechanisms: cognitive restructuring (e.g. appeal to higher loyalties, euphemistic language/mislabelling), minimizing/denial of own agency (e.g. denial, displacement, or diffusion of responsibility – externalizing the aforementioned locus of control), disregarding negative impact (e.g. denial of injury, disregarding/distorting consequences), and denial of victim (e.g. dehumanization, attribution of blame).

In my explanation model (see Figure 5), I assume the outlined defence mechanisms are in existence and in effect as rationalizing and neutralizing element in a stage before OMB/unethical behaviour occurs.

As per Sims (2017: 50, 68–9)'s elaboration, groupthink is able to influence defence mechanisms minimizing moral dissonance and vice versa; hence, both patterns of group dynamics are able to influence each other in a dynamic interplay.

### 5.3 The foreign exchange (FX) rate manipulation/forex scandal

In this section, I examine the FX rate manipulation/forex scandal, applying a case analysis methodology, and explain the model application.

#### 5.3.1 Introduction and background

The global FX market is one of the largest and most liquid markets in the world. It includes banks, commercial companies, central banks, investment management firms, hedge funds, and – to a lesser extent – retail investors. The majority of currencies traded in the FX market in terms of turnover and widespread use are G10 currencies, which contribute to almost 75% of all global FX trading (average daily turnover of USD 4tn). Leading currencies by daily volume are US dollar, Euro, Japanese yen, and British pound, with largest turnover currency pairs in EUR/USD, USD/JPY, and GBP/USD (Financial Conduct Authority 2014b: 6–7).

In the FX market, transactions are executed involving the exchange of currency pairs between two parties at an agreed rate for settlement on a spot date ('spot FX'), which is usually two business days from the trade/transaction date. Spot FX transactions can be done directly between two parties, via electronic broking platforms (automated order matching or other electronic trading systems)<sup>35</sup>, or through broker/dealers in their function as market makers.

In banks, traders can also take 'fix orders' from FX investors to trade at a subsequently determined fix rate, i.e. at a frozen exchange rate. The European Central Bank (ECB) offers a fix rate ('ECB fix'), which occurs every day at 2:15 PM Central European Time (CET). Reuters also publishes a series of currency pairs at different times in the day, including at 4:00 PM Greenwich Mean Time (GMT) in particular (the so-called World Market Reuters fix, the 'WM/R fix'), which became the de facto standard for closing spot rates. The WM/R fix has been initially calculated by reference to the median price of actual trading activity/currency deals during a one minute window ('fix period'), 30 seconds before and after 4:00 PM GMT.<sup>36</sup> In the fixing process, all orders and transactions were equally weighted, regardless of their notional size (Commodities Futures Trading Commission 2014: 2). Both,

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<sup>35</sup> In daily business, much of the FX spot trading takes place on electronic platforms such as Reuters.

<sup>36</sup> The vulnerability of the fix was recognized after the scandal and led to a change in methodology on February 15, 2015: the fix period was lengthened from one to five minutes for all currency pairs (Financial Stability Board 2015).

the ECB and the WM/R fix, are widely used timed benchmarks for the valuation and performance management of investment portfolios. The rates calculated at the fix are also used as reference rates for financial derivatives (Financial Conduct Authority 2014a: 7, 27). The widespread adoption of the WM/R rates, as reflective of the FX market, made the rates themselves an attractive target for manipulation (Fletcher 2017: 1955 and McConnell 2016).

A trader, when accepting a fix order (which implies a future obligation) bears the unwanted risk for any change in the currency's price that may occur before the fix. Hence, the trader will typically buy or sell currency to manage this risk by either trading in the market or netting off available net client orders. In case of net client orders to buy currency at the fix, profit will be generated for the trader if the average currency rate at which currency is bought is lower than the fix and vice versa. Such trading – because of the trader's legitimate interest in managing any residual risk associated with client orders at the fix – can influence the fix rate itself and give rise to potential conflicts of interest between the trader and its clients (Financial Conduct Authority 2014b: 29–30).

Mid of June 2013, after Bloomberg reported traders were conspiring to fix benchmark currency rates (Vaughan *et al.* 2013), evidence came to light revealing the deliberate manipulation of FX rates by traders at several large banks to gain substantial financial earnings to the detriment of their clients, who were not aware of the collusion (Attreya 2015: 34–5). The involved traders submitted a series of orders in the 60-second window to influence the rate and benefit from the generated pricing shifts. Collusion between traders across different banks took place, in which the involved traders illegally shared non-public information regarding identity and trading activity of clients (e.g. size and trading direction) with third parties (other banks or market participants).

The following table summarizes *modus operandi*, risk management failures and control weaknesses, as well as early warning signals of the FX rate manipulation/forex scandal.

*Table 17: Modus operandi, risk management failures and control weaknesses, and early warning signals of the foreign exchange (FX) rate manipulation/forex scandal*

<b>Modus Operandi</b>	<b>Risk Management Failures and Control Weaknesses</b>	<b>Early Warning Signals</b>
<p>Collusive elimination of competition in the purchase and sale of currency pairs by circumventing best execution and fair treatment principles</p> <ul style="list-style-type: none"> <li>• Conspiracy in fixing, stabilizing, maintaining, increasing or decreasing the price of, and rigging bids and offers for currency pairs exchanged in the foreign currency exchange spot market ('FX Spot Market').</li> <li>• Coordinated trading of currency pairs related to the European Central Bank (ECB) rate ('ECB fix') and the World Market/Reuters Closing Spot Rates ('W/M/R fix'), which occurred at 2:15 PM Central European Time (CET) respectively 4:00 PM Greenwich Mean Time (GMT).</li> <li>• Withholding bids and offers when one conspirator held an open position so that the price of the currency traded would not move in a direction adverse to the conspirator.</li> <li>• Engagement in communications, including nearly daily conversations, some of which were in informal and sometimes derogatory code words in electronic chat rooms<sup>1</sup>—referred to as, for example, 'The Cartel', 'The Mafia', 'A-team', or 'The Players'—and messaging services.</li> </ul>	<p>Inadequate supervision, transaction monitoring, and day-to-day FX trading oversight</p> <ul style="list-style-type: none"> <li>• Front office functions adequately failed to discharge FX trading responsibilities with regard to obvious risks associated with confidentiality, potential or actual conflicts of interest, and inappropriate trading conduct.</li> <li>• Serious and systematic weaknesses in the banks' procedures, systems, and controls; none of the systems and controls were adequate to detect and prevent the collusive FX pricing and trading behaviour.</li> </ul> <p>Weak internal control environment</p> <ul style="list-style-type: none"> <li>• No appropriate control, monitoring, and surveillance of electronic communication channels (multi-bank chat rooms) and other messaging platforms/services to prevent inappropriate inter-bank or internal communication by FX trading desks/traders.</li> <li>• Certain of those responsible for managing front office matters were aware of and/or at times involved in the misconduct.</li> </ul>	<p>Misconduct in the interest reference rate manipulation/LLIBOR scandal</p> <ul style="list-style-type: none"> <li>• Extensive remediation programs have been set up; the affected banks did not adequately address similar root causes of the forex scandal—banks should have been alerted to the obvious comparable risks and control weaknesses in their FX trading.</li> </ul> <p>Whistle-blowing</p> <ul style="list-style-type: none"> <li>• Several banks received whistle-blower information highlighting indications for misconduct by FX traders.</li> </ul> <p>Indication about data confidentiality breaches</p> <ul style="list-style-type: none"> <li>• Risks around data confidentiality were highlighted by Compliance in some banks.</li> <li>• Instances of inappropriate internal disclosures of confidential client information by FX sales and trading staff were identified.</li> </ul>
<p>Unlawful limit order handling</p> <ul style="list-style-type: none"> <li>• Accepting limit orders from clients, intentionally working the orders one or more levels (percentage in point, i.e. 'pip') away from the price confirmed with the client to earn a spread or mark-up with the order execution, as well as not and/or mis-informing clients about the actual order processing             <ol style="list-style-type: none"> <li>Limit orders would be filled at a time later than when the bank(s) would have obtained currency in the market at the limit order prices and/or</li> <li>Limit orders would be only in part or not filled at all, even though the bank(s) had or could have obtained currency in the market at the limit order prices.</li> </ol> </li> </ul>	<p>Insufficient guidance and absence of adequate training</p> <ul style="list-style-type: none"> <li>• Some banks had policies in place related to FX trading and electronic communication; nonetheless, policies were high-level in nature/not sufficiently specific (contained only a few practical examples) applied across a number of business divisions, and did not distinguish and inform about permissible and impermissible conduct.</li> <li>• No guidance regarding the amount of mark-up, commission, or other service charges applied to client orders were available.</li> </ul>	<p>Internal Audit findings</p> <ul style="list-style-type: none"> <li>• Several Internal Audit reports identified significant weaknesses and gaps in trading monitoring systems and controls around market conduct.</li> </ul> <p>External warning</p> <ul style="list-style-type: none"> <li>• In 2012, some market participants complained of possible manipulation of the W/M/R rate to U.K. financial authorities.</li> <li>• Bloomberg published an article in June 2013 focussing on a potential conspiracy to fix benchmark currency rates.</li> </ul> <p>Netting practise raised to the Bank of England (BoE)</p> <ul style="list-style-type: none"> <li>• The BoE, through its former chief FX trader, was made aware of banks using electronic messaging services to discuss their net orders ahead of the fix and the practice of netting off between them.<sup>2</sup></li> </ul>

Inappropriate sharing of confidential information

- Disclosure of non-public information regarding identity and trading activity of clients (e.g. size and trading direction) to third parties (banks/competitors or other market participants).

Unauthorized mark-up setting

- On open telephone lines, sales staff used live hand signs indicating to trading staff to add mark-up to the price being quoted to the client, avoiding informing the client about the mark-up amount.

Deficient oversight by control and support functions

- The second line of defence (Compliance, Risk, and Legal) and third line (Internal Audit) failed to effectively challenge the first line regarding the manipulative FX trading behaviour.

<sup>t</sup> A 'persistent' chat room enabled traders to have ongoing discussions with traders from other banks and in different time zones for extended timeframes (multiple days, weeks, or months). At the time of the scandal, there were options to have multiple traders in a particular persistent chat. Being a member of certain chat rooms was sometimes exclusive and by invitation only. Once invited, a trader was able to view continuous records of the entire discussion thread and participate from then on (Financial Conduct Authority 2014b: 32).

<sup>u</sup> The Financial Conduct Authority (FCA) did not consider the netting of client orders ahead of the fix as inappropriate in all circumstances. The FCA concluded, discussing the netting of client orders does not affect the liability of the involved banks, as each was responsible for ensuring that it had appropriate systems and controls in place to manage the risks associated with these practices (Financial Conduct Authority 2014b: 8).

Source: Author's representation, based on Commodities Futures Trading Commission (2014), Federal Reserve System (2015), Financial Conduct Authority (2014a and b), United States District Court of Connecticut (2015a), and Vaughan *et al.* (2013).

Several similarities are apparent when comparing the LIBOR scandal and the forex scandal like the engagement in communication (including daily conversations) in electronic chat rooms and messaging/email services as well as the inappropriate sharing of confidential (insider) information regarding identity and trading activity of involved banks (LIBOR) and clients (FX) to third parties. On the control weaknesses side, inappropriate management of conflicts of interest is apparent as well as inadequate/lax supervision and day-to-day transaction oversight for both cases. Several internal and external warnings by clients/complaints (LIBOR), news/media (LIBOR and FX), employees/whistle-blowers (FX), and market participants (FX) have been ignored.

At the time of writing, supervisory, criminal, and/or anti-trust authorities have fined nine banks for misconduct related to the forex scandal.

Table 18: The foreign exchange (FX) rate manipulation/forex scandal: Overview of affected banks and fines by regulatory authority<sup>v</sup> (in USD m, alphabetical order)

	Commodity Futures Trading Commission (CFTC)	United States Department of Justice (DoJ)	The Office of the Comptroller of the Currency (OCC)	Federal Reserve (Fed)	Securities and Exchange Commission (SEC)	New York State Department of Financial Services (DFS)	Financial Conduct Authority (FCA)	Swiss Financial Market Supervisory Authority (FINMA)	Total
Bank of America			250	205					455
Barclays Bank	400	650		342		485	441		2,318
Citigroup	310	925	350	342			358 <sup>w</sup>		2,288
Deutsche Bank						205			205
HSBC	275						343 <sup>w</sup>		618
JPMorgan Chase	310	550	350	342			352 <sup>w</sup>		1,904
Royal Bank of Scotland	290	395		274			344 <sup>w</sup>		1,303
State Street		155			167.4				322.4
UBS	290			342			371 <sup>w</sup>	138	1,141
Total	1,875	2,675	950	1,847	167.4	690	2,209	138	10,554.4

<sup>v</sup> This overview does not include settlements with clients out of civil claims/proceedings.

<sup>w</sup> Qualified for a 30% discount under FCA's settlement disclosure scheme, as the affected banks agreed to settle with the FCA at an early stage.

Source: Author's representation, based on own research.



Concerning consequences on a personal level, Mark Johnson, HSBC's former Global Head of FX trading, has been sentenced to jail for two years in April 2018. End of June 2018, Johnson was released on bail. At the same time, the United States court allowed Johnson to return to the United Kingdom while he awaits the result of an appeal of his conviction (Hurtado 2018). For one direct report of Johnson at HSBC, Stuart Scott, the involved court in the United Kingdom ruled against Scott's extradition to the United States end of July 2018 (Hodges 2018). For three additional traders, Richard Usher (formerly JPMorgan), Rohan Ramchandani (formerly Citigroup), and Christopher Ashton (formerly Barclays) – who all were members of 'The Cartel' chat room – their trial started in October 2018 (Martin *et al.* 2018).

### **5.3.2 OMB model application**

#### **5.3.2.1 Organizational/structural forces**

In its concluding remarks, the Financial Conduct Authority (FCA) emphasises that the right values and culture were not sufficiently embedded in the investigated banks. Severe control failings led to a poor culture in the front office, resulting in an ineffective first line of defence (Financial Conduct Authority 2014a: 12, 14 and 2014b: 14). Similar deficiencies already allowed the trader misconduct in the interest reference rate manipulation/LIBOR scandal to occur and remain undetected for nearly six years (Fletcher 2017: 1932).

The majority of banks involved in the forex scandal was also involved in the LIBOR scandal, whose mechanics reflects similarities in the modus operandi, risk management failures and control weakness (e.g. absence of capable guardians), as well as early warning signals.

One major organizational driver behind both scandals was the inappropriate management of and response to conflicts of interest, which can be rooted to competing objectives and targets, i.e. trader/senior manager submission adjustment requests to generate revenues and to ensure creditworthiness versus the reference rate submitter role (LIBOR) and client versus bank profitability (FX). Furthermore, both scandals were facilitated from a structural perspec-

tive by inadequate/lax supervision, day-to-day transaction oversight, and an overall weak control environment with insufficient control, monitoring, and surveillance of electronic communication channels.

### **5.3.2.2 Individual forces**

Similar to the LIBOR scandal and considering the number of banks affected (see Table 18) and traders involved in the forex scandal makes it challenging to extract and examine all individual forces.

Acknowledging Hurtado (2018)'s comments on the conviction of HSBC's Mark Johnson – who was found guilty of nine counts of wire fraud and conspiracy for front-running an USD 3.5bn FX client order in December 2011 – Hurtado indicates profit seeking as main individual/personal driver. Together with another HSBC trader, Stuart Scott, Johnson generated a profit of USD 8m from the particular trade (Hodges 2018).

Similarly, the FCA highlights the individual (and the firm's) benefit from the manipulated FX spot rates over several years (routine nonconformity) to the detriment of HSBC's clients as an extremely serious breach with very serious and adverse effects on markets (Financial Conduct Authority 2014a: 9, 34–5, 37). McConnell (2015), in a similar vein, points to dishonest traders, who deliberately and systematically manipulated currency rates to gain personal advantage.

### **5.3.2.3 Group forces type A and B**

As per the summarizing view of the modus operandi (see Table 17), the involved traders (type A employees) colluded to manipulate benchmark currency rates and profits at clients' expense. From a regulatory perspective, it was common practise to engage in collusive activities/acting in concert to eliminate competition in the purchase and sale of currency pairs by circumventing best execution and fair treatment principles. The conspiracy was expanded by withholding bids and offers to favourably influence the trades/positions of other conspirators and the unlawful handling of clients' limit orders, representing deviance amplification and escalation effects.

Like the LIBOR scandal, the forex scandal illustrates the problem, despite an enormous market size, a smaller number of traders worldwide – i.e. hundreds (probably less than 500) – dominated their markets, indulging in (extreme) misbehaviour, which was accepted as business as usual and copied (amplified) by others in the group (McConnell 2015 and 2017: 39, 43).

The traders formed close tight-knit groups or one-to-one relationships based on mutual benefits, often with a focus on particular currency pairs (Financial Conduct Authority 2104b: 16). The traders knew each other well professionally, due to daily interactions by telephone, email, and chat and because FX traders regularly move between banks, maintaining contacts with their former colleagues, creating valuable networks for the future (‘trading communities’ as per Fenton-O’Creevy *et al.* 2005). The traders knew each other well also socially (McConnell 2017: 52) because of professional relationships, which developed into friendship over time. Both dimensions support that an exposure to corrupt/toxic personnel positively affects the likelihood for the occurrence of OMB/unethical behaviour.

Despite the fact that certain of those responsible for managing front office matters (senior managers, corporate decision makers, and executives – type B employees) were aware of and/or at times even involved in the behaviour, they did not take steps to stop the misbehaviour (Financial Conduct Authority 2014b: 39–40). Hence, the management of banks accepted the misconduct to occur and persist, thereby exhibiting a consent and cooperation attitude.

#### **5.3.2.4 Patterns of group dynamics**

##### **Groupthink**

With the initial external notification and warning of the forex scandal by a Bloomberg article in June 2013, the scandal gained immense media and public attention one year after the LIBOR scandal and its first penalty against Barclays. Extensive remediation programs have been set up in reaction to the LIBOR scandal. Nonetheless, the affected banks did not adequately address similar root causes of the forex scandal.

Banks should have been alerted to the obvious comparable risks and control weaknesses – including the management of conflicts of interest – in their FX trading. For example, UBS got fined with GBP 8m already beginning of August 2009 because of losses incurred by clients

as a result of unauthorized foreign exchange and precious metals trading activities (Financial Conduct Authority 2014b: 23, 36). The senior management of several major banks around the globe was too overconfident, which resulted in illusions of invulnerability and control against the concerted multi-year manipulation of fundamentally important FX benchmarks and intra-day currency rates.

Overconfidence in decision-making also occurred on the supervisory side. The Bank of England (BoE), through its former chief FX dealer Martin Mallett, was made aware of the netting practise by banks, using electronic messaging services to discuss their net orders ahead of the fix, from at least May 16, 2008 (Grabiner 2014), but Mallett failed to escalate this fact and his concerns within the BoE.<sup>37</sup> Hence, the BoE neither reacted to nor addressed the potential manipulation of the WM/R fix.

Pressure towards uniformity, another groupthink-caused consequence, exhibits in the forex scandal in the fact that being a chat room member was sometimes exclusive and by invitation only. When inviting a new member, traders in a chat room tried to ensure that a new member agreed to put the interest of the group first, resulting in in-group pressure towards uniformity/unanimity (increasing group cohesiveness). Hence, newcomers must adopt and learn norms and values of the group, following the collective spirit and at the end a normative code of misconduct, confirming Chaly *et al.* (2017)'s observation that individuals are prone to model their behaviour towards their peers (members of their micro-culture) and not towards corporate executives and decision makers. Typical for such kind of behaviour is one chat, in which a Citibank FX trader discussed with traders from Banks Z and Y whether to invite a new trader from Bank W into the chat room (Commodities Futures Trading Commission 2014: 5–6):

Bank Z trader:	7:49:55	<i>'are we ok with keeping this as is'</i>
	7:50:27	<i>'ie the info lvls &amp; risk sharing?'</i>
Citibank trader:	7:50:27	<i>'well..'</i>
Bank Z trader:	7:50:30	<i>'that is the qu[estion]'</i>
Citibank trader:	7:50:32	<i>'you know him best obv...'</i>
	7:50:39	<i>'if you think we need to adjust it'</i>
	7:50:43	<i>'then he shouldn't be[] in chat'</i>

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<sup>37</sup> The investigation report highlights, Martin Mallet has been made aware on at least May 16, 2008 that FX traders were sharing aggregated information about their client orders for the purpose of a practice known as 'matching' and had concerns that regulators would take an interest in it. From at least November 28, 2012, Mallet had concerns the practice could involve collusive behaviour and could lead to market participants being disadvantaged. Mallet has not escalated these facts and his concerns to an appropriate person – relying on the fact that the Bank of England (BoE) had no formal escalation policy in place (until August 1, 2012). The investigation report highlights, James O'Connor (Mallet's deputy) was also aware that banks were having open discussions about their fix positions with a view matching them off (Grabiner 2014: 1–2, 37–9).

Bank Y trader:	7:50:54	<i>'yeah that is key'</i>
	7:51:00	<i>'simple question [Bank Z trader]'</i>
	7:51:08	<i>'I trust you implicitly [Bank Z trader]'</i>
	7:51:13	<i>'and your judgement'</i>
	7:51:16	<i>'you know him'</i>
	7:51:21	<i>'will he tell rest of desk stuff'</i>
Citibank trader:	7:51:26	<i>'or god forin his nyk...'</i>
	7:51:46	<i>'yes'</i>
	7:51:51	<i>'that's really imp[ortant] q[uestion]'</i>
	7:52:01	<i>'dont want other numpty's in mkt to know'</i>
	7:52:17	<i>'but not only that'</i>
	7:52:21	<i>'is he gonna protect us'</i>
Bank Z trader:	7:52:33	<i>'like we protect each other against our own branches'</i>
	7:52:46	<i>'ie if you guys are rhs... and my nyk is lhs..ill say my nyk lhs in few'</i>
	7:53:53	<i>'what concerns me is that I know he'll never tell us when at risk...'</i>

The value of the information exchange between the FX traders as well as the importance of keeping it confidential between recipients was a norm and clear to the participants. In another example, a HSBC trader complained about another trader not disclosing his net orders in advance of a fix in a chat, *'u are uselees [useless] ... how can I make free money with no fcking heads up'* (Financial Conduct Authority 2014a: 15), reflecting other groupthink-caused consequences and deliberate conformity behaviour such as peer pressure, stereo-typing of outsiders/out-groups, and mind-guard behaviour to protect the group and its shared illegal purpose.

### **Defence mechanisms minimizing moral dissonance**

UBS received four whistle-blowing reports (in November 2010 as well as in February/March, October, and December 2012) highlighting indications for misconduct by FX traders, who engaged in improper trading in collaboration with third parties, who disclosed confidential client information, and who traded on that information. Published reports by UBS's Internal Audit department in 2011 and 2012 identified significant weaknesses and gaps in UBS's systems and controls around market conduct issues. UBS failed to adequately investigate these issues and to consider the risks of misconduct within the FX trading business (Financial Conduct Authority 2014b: 3, 15).

Barclays did not begin a full investigation of the FX trading misconduct until the publication of the Bloomberg article on June 12, 2013. Before that date, the bank failed to take

notice of warning signals in its control systems with respect to the FX business, including sharing of confidential client trading information with external parties and open questions from traders to Compliance and Legal on proper communication behaviour in multi-bank chat rooms (New York State Department of Financial Services 2015: 16–8). Both examples represent behaviour to be characterised with wilful blindness and – despite access to profound knowledge and reliable information – ignoring the truth/organizational reality.

On the regulatory side, market participants complained in 2012 about a possible manipulation of the WM/R rates to the financial authorities in the United Kingdom without any reaction (Fletcher 2017: 1953), confirming that regulators turned a blind eye to the illicit practices in light of the LIBOR and FX benchmark manipulation over years (Kennan 2012 and McConnell 2017: 56).

Staying in the regulatory domain, BoE's Martin Mallett's behaviour can be interpreted as moral silence, as he did not voice any moral sentiments (until end of November 2012; hence, more than four years after he initially got informed) about the netting practices of banks. Similar behaviour occurred, as highlighted before, amongst type B employees, who were aware of and in part were even involved in the misconduct, but who remained silent/did not speak up and who did not oppose the concerted manipulative behaviour.

Moral neutralization and rationalizing behaviour, on individual level and group (type A and B) level, occurred with the collectively applied business as usual attitude (McConnell 2017: 34).

## **5.4 Conclusion**

A series of collusive rogue trading (CRT) events – i.e. severe misbehaviour on multiple hierarchical levels (by traders, supervisors, and/or firm's decision makers and executives) – across multiple banks and different jurisdictions took place recently. At the time of writing, the total volume of regulatory fines imposed on banks involved in the interest reference rate manipulation/LIBOR scandal and the foreign exchange (FX) rate manipulation/forex scandal accumulates to USD 21bn, signalling the importance and the duty for the exploration of (systemic) misconduct by banks as well as regulators and supervisory authorities.

I have shown in this chapter that adverse settings of organizational culture and patterns of group dynamics have implications for collective unethical behaviour. The evidence-based analysis of the forex scandal has revealed that the joint occurrence of organizational/structural,

individual, and group forces in combination with patterns of conscious and unconscious group dynamics contributes to the existence of organizational misbehaviour (OMB). Corporate decision makers and executives who act in an overconfident manner and who consciously or unconsciously ignore early warning indicators for unethical behaviour create and foster a culture for OMB. This kind of behaviour periodically or constantly accepts negative behaviour/misconduct to occur and persist, and it bears the risk of organization-wide dispersion and collective adoption of unethical behaviour.

When culture reveals in (mis)behaviour, it can be observed. Corporate decision makers and executives in particular are required to continuously monitor and assess organizational (mis)behaviour, health, and culture, embedded in behavioural risk management frameworks. As hiring effects influence culture, selection practices are of heightened importance for a proper culture building. Heterogeneity and diversity on all hierarchical levels and alongside the chain of command are important anti-groupthink measures, contributing to the avoidance of concurrence-seeking behaviour of like-minded isolated groups.

I recommend future research to focus on the application of the outlined explanation model to additional examples of unethical behaviour also outside of the financial industry. Especially the Volkswagen diesel emission scandal seems to be a candidate for investigation and theory application. In addition and on the theory side, the mutual effects and interconnection between groupthink behaviour and defence mechanisms minimizing moral dissonance are worth to be further explored, supporting the successful prevention of OMB.

## References

- Abdel-Khalik, R. (2014). Prospect theory predictions in the field: Risk seekers in setting of weak accounting controls. *Journal of Accounting Literature*, 33(1–2): 58–84.
- Abolafia, M. (1996). *Making markets: Opportunism and restraint on Wall Street*. Cambridge, MA: Harvard University Press.
- Abrantes-Metz, R., Kraten, M., Metz, A., and Seow, G. (2012). Libor manipulation? *Journal of Banking & Finance*, 36(1): 136–50.
- Ackroyd, S., and Thompson, P. (1999). *Organizational misbehaviour*. London, England: Routledge.
- Adams, R. (1997). The origin, development, and regulation of norms. *Michigan Law Review*, 96(2): 338–433.
- Angeletti, T. (2017). Finance on trial: Rules and justifications in the Libor case. *European Journal of Sociology*, 58(1): 113–41.
- Ashton, P., and Christophers, B. (2015). On arbitration, arbitrage and arbitrariness in financial markets and their governance: Unpacking LIBOR and the LIBOR scandal. *Economy and Society*, 44(2): 188–217.
- Attreya, R. (2015). Forex scandal: Top banks face antitrust fines. *Review of Banking & Financial Law*, 35(1): 34–46.
- Australian Prudential Regulation Authority (2004). *Report into irregular currency options trading at the National Australia Bank*, March 23.
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3(3): 193–209.
- Bandura, A., Barbaranelli, C., Vittori, G., and Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology*, 71(2): 364–74.
- Bank of England (1995). *Report of the Board of Banking Supervision inquiry into the circumstances of the collapse of Barings*. London, England: HMSO, July 18.
- Baron, S. (2010). Street youth' control imbalance and soft and hard drug use. *Journal of Criminal Justice*, 38(5): 903–12.
- Baron, S., and Forde, D. (2007). Street youth crime: A test of control balance theory. *Justice Quarterly*, 24(2): 335–55.
- Barriga, A., and Gibbs, J. (1996). Measuring cognitive distortion in antisocial youth: Development and preliminary validation of the 'How I Think' questionnaire. *Aggressive Behaviour*, 22(5): 333–43.



- Bealing, W., and Pitingolo, E. (2015). Same song, same dance: Evidence of patterns in securities and exchange commission funding. *Review of Business & Finance Studies*, 6(2): 1–10.
- Becker, G. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76(2): 169–217.
- Bird, F. (1996). *The muted conscience: Moral silence and the practice of ethics in business*. Santa Barbara, CA: Greenwood Publishing Group.
- Bird, F., and Waters, J. (1989). The moral muteness of managers. *California Management Review*, 32(1): 73–88.
- Black, O. (2018). Behavioural science reveals the route to culture change. In: Financial Conduct Authority. editor. *Transforming culture in financial services*. Discussion Paper. DP18/2. March: 90–2.
- Bock, M. (2008). Kriminologische Theorien und Forschungseinrichtungen. Personenbezogene Theorien und Ansätze. In: Göppinger, H., editor. *Kriminologie*. Munich, Germany: C. H. Beck: 123–40.
- Braithwaite, J. (1997). Charles Tittle’s control balance and criminological theory. *Theoretical Criminology*, 1(1): 77–97.
- Bray, C. (2016). 5 Ex-brokers cleared in London Libor trial. In: *The New York Times*, January 27.
- British Bankers’ Association (2008). *Understanding the construction and operation of BBA LIBOR – strengthening for the future*, June 10.
- Brown, S., and Steenbeck, O. (2001). Doubling: Nick Leeson’s trading strategy. *Pacific-Basin Finance Journal*, 9(2): 83–99.
- Bryan, D., and Rafferty, M. (2016). The unaccountable risks of LIBOR. *The British Journal of Sociology*, 67(1): 71–96.
- Canac, P., and Dykman, C. (2011). The tale of two banks: Société Générale and Barings. *Journal of International Academy for Case Studies*, 17(7): 11–32.
- Cartwright, D. (1968). The nature of group cohesiveness. In: Cartwright, D., and Zander, A., editors. *Group dynamics: Research and theory*, (3<sup>rd</sup> ed.). New York, NY: Harper & Row: 4–21.
- Chaly, S., Hennessy, J., Menand, L., Stiroh, K., and Tracy, J. (2017). *Misconduct risk, culture and supervision*. Federal Reserve Bank of New York (available at <https://www.newyorkfed.org/medialibrary/media/governance-and-culture-reform/2017-whitepaper.pdf> – last access on October 25, 2018).

- Commodities Futures Trading Commission (2012a). *Order instituting proceedings pursuant to sections 6(c) and 6(d) of the commodity exchange act making findings and imposing remedial sanctions. In the matter of Barclays PLC, Barclays Bank PLC and Barclays Capital Inc.* CFTC Docket No. 12-25, June 7.
- Commodities Futures Trading Commission (2012b). *Order instituting proceedings pursuant to sections 6(c) and 6(d) of the commodity exchange act making findings and imposing remedial sanctions. In the matter of UBS AB und UBS Securities Japan Co., LTD.* CFTC Docket No. 13-09, December 19.
- Commodities Futures Trading Commission (2014). *Order instituting proceedings pursuant to sections 6(c), 4(A), and 6(d) of the commodity exchange act making findings and imposing remedial sanctions. In the matter of Citibank, N.A.* CFTC Docket No. 15-03, November 11.
- Commodities Futures Trading Commission (2016). *Order instituting proceedings pursuant to sections 6(c) and 6(d) of the commodity exchange act making findings and imposing remedial sanctions. In the matter of Citibank, N.A.; Citibank Japan Ltd.; and Citigroup Global Markets Japan Inc.* CFTC Docket No. 16-17, May 25.
- Cont, R., and Wagalath, L. (2015). *Risk management for whales*. Working paper.
- Cooke, R. (1991). Danger signs of unethical behaviour: How to determine if your firm is at ethical risk. *Journal of Business Ethics*, 10(4): 249–53.
- Cortina, L., and Magley, V. (2009). Patterns and profiles of response to incivility in the workplace. *Journal of Occupational Health Psychology*, 8(4): 247–65.
- Cressey, D. (1953). *Other people's money*. Glencoe, IL: Free Press.
- Curry, T. (2005). Integrating motivating and constraining forces in deviance causation: A test of causal chain hypothesis in control balance theory. *Deviant Behavior*, 26(6): 571–99.
- Curry, T., and Piquero, A. (2003). Control ratios and defiant acts of deviance: Assessing additive and conditional effects with constraints and impulsivity. *Sociological Perspectives*, 46(3): 397–415.
- De Cremer, D., and Vandekerckhove, W. (2017). Managing unethical behavior in organizations: The need for a behavioral business ethics approach. *Journal of Management & Organization*, 23(3): 437–55.
- De Maria, W. (2006). Brother secret, sister silence. *Journal of Business Ethics*, 65(3): 219–34.
- De Nederlandsche Bank (2015). *Supervision of behaviour and culture. Foundations, practice & future developments*, November.
- DeLisi, M., and Hochstetler, A. (2002). An exploratory assessment of Tittle's control balance theory: Results from the National Youth Survey. *The Justice Professional*, 15(3): 261–72.

- Dellaportas, S., Cooper, B., and Braica, P. (2007). Leadership, culture and employee deceit: The case of the National Australia Bank. *Corporate Governance: An International Review*, 15(6): 1442–52.
- Den Nieuwenboer, N., Vieira da Cunha, J., and Treviño, L. (2017). Middle managers and corruptive routine translation. The social production of deceptive performance. *Organization Science*, 28(5): 781–803.
- Derrida, J. (2005). *Rogues - Two essays on reason*. Stanford, CA: Stanford University Press.
- DiMaggio, P. (1997). Culture and cognition. *Annual Review of Sociology*, 23: 263–87.
- Dittes, J., and Kelley, H. (1956). Effects of different conditions of acceptance upon conformity to group norms. *Journal of Abnormal and Social Psychology*, 53: 100–7.
- Drummond, H. (2003). Did Nick Leeson have an accomplice? The role of information technology in the collapse of Barings Bank. *Journal of Information Technology*, 18(2): 93–101.
- Dunaway, G., Cullen, F., Piquero, A., Wood, P., Burton, V., and Evans, D. (1999). *Job autonomy and workplace crime: A test of control balance theory*. Paper presented at the Annual Meeting of the American Society of Criminology, Toronto, Canada, November.
- Eisinger, J. (2017). *The chickenshit club: Why the Justice Department fails to prosecute executives*. New York, NY: Simon & Schuster.
- Enrich, D. (2017). *The spider network. The wild story of a maths genius, a gang of backstabbing bankers, and one of the greatest scams in the financial history*. London, England: WH Allen.
- Enrich, D., Cimilluca, D., and Das, A. (2013). Senior UBS Banker to Exit. In: *The Wallstreet Journal Online*, February 12.
- Federal Reserve System (2015). *Order to cease and desist and order of assessment of a civil money penalty issues upon consent pursuant to the federal deposit insurance act, as amended. In the matter of JP Morgan Chase & Co, New York*. Docket No. 15-009-B-HC/15-009-CMP-HC, May 20.
- Feldmann, M. (1989). *Order without design: Information processing and policy making*. Stanford, CA: Stanford University Press.
- Fenton-O’Creevy, M., Nicholson, N., Soane, E., and Willman, P. (2003). Trading on illusions: Unrealistic perceptions of control and trading performance. *Journal of Occupational and Organizational Psychology*, 76(1): 53–68.
- Fenton-O’Creevy, M., Nicholson, N., Soane, E., and Willman, P. (2005). *Traders: Risks, decisions and management in financial markets*. New York, NY: Oxford University Press.

- Filabi, A. (2018). Carrot or stick? Culture as a regulatory approach. In: Financial Conduct Authority. editor. *Transforming culture in financial services*. Discussion Paper. DP18/2. March: 37–41.
- Financial Conduct Authority (2013a). *Final notice 2013: The Royal Bank of Scotland plc*, February 6.
- Financial Conduct Authority (2013b). *Final notice 2013: JPMorgan Chase bank*, September 18.
- Financial Conduct Authority (2013c). *Final notice 2013: Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A. ('Rabobank')*, October 29.
- Financial Conduct Authority (2014a). *Final Notice: HSBC Bank plc*, November 11.
- Financial Conduct Authority (2014b). *Final Notice: UBS AG*, November 11.
- Financial Conduct Authority (2015). *Final notice 2015: Deutsche Bank AG*, April 23.
- Financial Conduct Authority (2018). *Transforming culture in financial services*. Discussion Paper. DP18/2. March.
- Financial Industry Regulatory Authority (2008). *Unauthorized proprietary trading: Sound practices for preventing and detecting unauthorized proprietary trading*. Regulatory Notice 08-18, April.
- Financial Services Authority (2012). *Final notice: UBS AG*, December 19.
- Financial Stability Board (2014). *Increasing the intensity and effectiveness of supervision. Consultative Document: Guidance on supervisory interaction with financial institutions on risk culture*, April 7.
- Financial Stability Board (2015). *Foreign exchange benchmarks: Report on progress in implementing the September 2014 recommendations*, October 1.
- Financial Stability Board (2018). *Strengthening governance frameworks to mitigate misconduct risk: A toolkit for firms and supervisors*, April 20.
- Fletcher, G.-G. (2017). Benchmark regulation. *Iowa Law Review*, 102: 1929–82.
- Fouquau, J., and Spieser, P. (2015). Statistical evidence about LIBOR manipulation: A 'Sherlock Holmes' investigation. *Journal of Banking & Finance*, 50(1): 632–43.
- Fox, K., Nobles, M., and Lane, J. (2016). Control Balance Behind Bars: Testing the Generality of Tittle's Theory Among Incarcerated Men and Women. *Crime & Delinquency*, 62(7): 925–53.
- Friedrichs, D. (2010). Integrated theories of white-collar crime. In: Cullen, F., and Wilcox, P., editors. *Encyclopaedia of Criminological Theory*. Beverly Hills, CA: SAGE Publications: 479–86.

- Galton, F. (1907). Vox populi. *Nature*, 75(1949): 450–1.
- Gapper, J. (2011). *How to be a rogue trader*. London, England: Penguin Books Ltd.
- Garrett, B. (2014). *Too big to jail: How prosecutors compromise with corporations*. Cambridge, MA: Harvard University Press.
- Geertz, C. (1973). *The interpretation of cultures*. New York, NY: Basic Books.
- Gibson, N. (2008). *Will your bank be the next? How to deter your own rogue traders*. ChaseCooper Metric (available at <https://www.slideshare.net/chasecooper/metric-special-edition-rogue-trading-9426265> – last access on October 25, 2018).
- Gilligan, G. (2011). Jérôme Kerviel the ‘Rogue Trader’ of Société Générale: Bad luck, bad apple, bad tree of bad orchard? *The Company Lawyer*, 32(12): 355–62.
- Glabek, M., Matthiesen, S., Hetland, J., and Einarsen, S. (2014). Workplace bullying as an antecedent to job insecurity and intention to leave: A six-month prospective study. *Human Resource Management Journal*, 24(3): 255–68.
- Goh, Y., Love, P., Brown, H., and Spickett, J. (2010). Organizational accidents: A systemic model of production versus protection. *Journal of Management Studies*, 49(1): 52–76.
- Gover, P., and Ring, S. (2016). FCA bans ex-RBS banker who moved LIBOR submission 'up a pip'. In: *Bloomberg Business News*, April 12.
- Grabiner, A. (2014). *Bank of England Foreign Exchange Market Investigation*, November 12.
- Greenberg, J. (2010). *Insidious workplace behaviour*. New York, NY: Routledge.
- Greener, I. (2006). Nick Leeson and the collapse of Barings Bank: Socio-technical networks and the ‘Rogue Trader’. *Organization*, 13(3): 421–41.
- Griffin, R., and O'Leary-Kelly, A. (2004). *The dark side of organizational behaviour*. San Francisco, CA: Jossey-Bass.
- Grodecki, A. (2018). The permafrost problem: From bad apples to excellent sheep. Creating an environment where we can truly think. In: Financial Conduct Authority. editor. *Transforming culture in financial services*. Discussion Paper. DP18/2. March: 71–4.
- Grover, S. (2010). Lying to bosses, subordinates, peers, and the outside world: Motivations and consequences. In: Greenberg, J., editor. *Insidious workplace behaviour*. New York, NY: Routledge: 207–35.
- Heffernan, M. (2011). *Wilful blindness: Why we ignore the obvious at our peril*. London, England: Simon & Schuster.
- Henning, P. (2017). LIBOR and London Whale cases show hurdles with foreign defendants. In: *The New York Times*, July 24.

- Hickman, M., and Piquero, A. (2001). Exploring the relationships between gender, control ratios, and deviance. *Deviant Behavior*, 22(4): 323–51.
- Hickman, M., Piquero, A., Lawton, B., and Greene, J. (2001). Applying Tittle's control balance theory to police deviance. *Policing*, 24(4): 497–519.
- Higgins, G., and Lauterbach, C. (2004). Control balance theory and exploitation: An examination of contingencies. *Criminal Justice Studies*, 17(3): 291–310.
- Higgins, G., Lauterbach, C., and Tewksbury, R. (2005). Control balance theory and violence: An examination of contingencies. *Sociological Focus*, 38(4): 241–60.
- Hodges, J. (2018). Ex-HSBC FX trader wins rare U.K. order blocking extradition, In: *Bloomberg Business News*, July 31.
- Hofmann, E. (1967). *Interaction ritual: Essays on face-to-face behaviour*. Chicago, IL: Aldine Transaction.
- Hornuf, L., and Haas, G. (2014). Regulating fraud in financial markets: Can behavioural designs prevent future criminal offences? *Journal of Risk Management in Financial Institutions*, 7(2): 192–201.
- Housman, M., and Minor, D. (2015). *Toxic workers*. Harvard Business School Working Paper, No. 16-057, November.
- Huang, P., and Wu, H.-M. (1994). More order without more law: A theory of social norms and organizational cultures. *Journal of Law, Economics and Organization*, 10(2): 390–406.
- Hurtado, P. (2018). Ex-HSBC's Mark Johnson to be freed from jail pending appeal, In: *Bloomberg Business News*, June 20.
- Janis, I. (1972). *Victims of groupthink. A psychological study of foreign-policy decisions and fiascos*. Boston, MA: Houghton Mifflin.
- Janis, I. (1982). *Groupthink: Psychological studies of policy decisions and fiascos*, (rev. ed.). Boston, MA: Houghton Mifflin.
- Janis, I., and Mann, L. (1977). *Decision making: A psychological analysis of conflict, choice, and commitment*. New York, NY: Free Press.
- Jensen, G. (1999). A critique of control balance theory: Digging into details. *Theoretical Criminology*, 3(3): 339–43.
- JPMorgan Chase & Co. (2013). *Report of JPMorgan Chase & Co. Management Task Force Regarding 2012 CIO Losses*, January 16.
- Kahneman, D. (2011). *Thinking fast and slow*. New York, NY: Farrar, Straus and Giroux.

- Kantšukov, M., and Medvedskaja, D. (2013). From dishonesty to disaster: The reasons and consequences of rogue traders' fraudulent behavior. In: Vissak, T., and Maaja, M., editors. *(Dis)Honesty in management: Manifestations and consequences*. Bingley, UK: Emerald Group Publishing Limited: 147–65.
- Katz, D., and Kahn, R. (1978). *The social psychology of organizations*, (2<sup>nd</sup> ed.). New York, NY: Wiley.
- Kelman, H., and Hamilton, V. (1989). *Crimes of obedience*. New Haven, CT: Yale University Press.
- Kennan, D. (2012). *My thwarted attempt to tell of LIBOR shenanigans*. In: Financial Times, July 27.
- Kenny, K., Fotaki, M., and Vandekerckhove, W. (2018). Creating a culture of learning through speak-up arrangements: Insights from recent research. In: Financial Conduct Authority. editor. *Transforming culture in financial services*. Discussion Paper. DP18/2. March: 75–8.
- Kerr, S. (1975). On the folly of rewarding A, while hoping for B. *Academy of Management Journal*, 18(4): 769–83.
- Kohlberg, L. (1958). *The development of modes of thinking and choices in years 10 to 16*. Ph.D. Dissertation, University of Chicago, IL.
- Kohlberg, L. (1984). *The psychology of moral development: The nature and validity of moral stages*. San Francisco, CA: Harper & Row.
- Konchar, S. (2014). The 2012 LIBOR scandal: An analysis of the lack of institutional oversight and incentives to deter manipulation of the 'world's most important number'. *Transnational Law & Contemporary Problems*, 23(1): 173–97.
- Krawiec, K. (2000). Accounting for greed: Unraveling the rogue trader mystery. *Oregon Law Review*, 79(2): 301–38.
- Krawiec, K. (2009). The return of the rogue. *Arizona Law Review*, 51(1): 127–74.
- Kregel, J. (2012). The LIBOR scandal: The fix is in – The Bank of England did it! *Public Policy Brief, Levy Economics Institute of Bard College*, 9/2012.
- Kregel, J. (2013). More swimming lessons from the London Whale. *Public Policy Brief, Levy Economics Institute of Bard College*, No. 129.
- Kunda, G. (2006). *Engineering culture: Control and commitment in a high-tech corporation*, (rev. ed.). Philadelphia, PA: Temple University Press.
- Kvalnes, Ø. (2016). *Moral reasoning at work: Rethinking ethics in organizations*. New York, NY: Palgrave Macmillan.
- Land, C., Loren, S., and Metelmann, J. (2014). Rogue logics: Organization in the grey zone. *Organization Studies*, 35(2): 233–53.

- Leaver, M., and Reader, T. (2017). Safety culture in financial trading: An analysis of trading misconduct investigations. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-017-3463-0>.
- Leeson, N. (1996). *Rogue trader - How I brought down Barings Bank and shook the financial world*. London, England: Little Brown and Company.
- Lewin, K. (1947). Group decision and social change. *Readings in social psychology*, 3(1): 197–211.
- Lewin, K. (1951). *Field theory in social science*. London, England: Tavistock Publications.
- Liikanen, E. (2012). *High-level expert group on reforming the structure of the EU banking sector*, October 2.
- Lim, S., Cortina, L., and Magley, V. (2008). Personal and workgroup incivility: Impact on work and health outcomes. *Journal of Applied Psychology*, 93(1): 95–107.
- Linstead, S., Marèchal, G., and Griffin, R. (2014). Theorizing and researching the dark side of organization. *Organization Studies*, 35(2): 165–88.
- Lo, A. (2016). The Gordon Gekko effect: the role of culture in the financial industry. *Economic Policy Review*. Federal Reserve Bank of New York, August: 17–42.
- Longley, J., and Pruitt, D. (1980). Groupthink: A critique of Janis's theory. *Review of personality and social psychology*, 1: 74–93.
- Lorenz, J., Rauhut, H., Schweitzer, F., and Helbing, D. (2011). How social influence can undermine the wisdom of crowd effect. *Proceedings of the National Academy of Sciences*, 108(22): 9020–5.
- Luhmann, N. (1999). *Funktionen und Folgen formaler Organisation*, (5<sup>th</sup> ed.). Berlin, Germany: Duncker & Humblot.
- Markham, J. (1995). Guarding the kraal – On the trail of the rogue trader. *The Journal of Corporation Law*, 131(1): 131–53.
- Martens, M., and Steenbeck, O. (2001). Intraday trading halts in the Nikkei futures market. *Pacific-Basin Finance Journal*, 9(5): 535–61.
- Martin, K., Binham, C., and Shubber, K. (2018). Forex scandal comes down to case against the ‘Cartel’, In: *Financial Times*, October 7.
- Matussek, K. (2018). Four ex-Deutsche Bank traders evade U.K. Euribor case. In: *Bloomberg Business News*, February 23.
- Matza, D. (1964). *Delinquency and drift*. New Brunswick, NJ: Transaction.
- Mayer, D., Nurmohamed, S., Treviño, L., Shapiro, D., and Schminke, M. (2013). Encouraging employees to report unethical conduct internally: It takes a village. *Organizational Behavior and Human Decision Making Processes*, 121(1): 89–103.



- McConnell, P. (2013). Systemic operational risk: The LIBOR manipulation scandal. *Journal of Operational Risk*, 8(3): 59–99.
- McConnell, P. (2014a). LIBOR manipulation: Operational risks resulting from brokers' misbehavior. *Journal of Operational Risk*, 9(1): 77–102.
- McConnell, P. (2014b). Dissecting the JPMorgan whale: A post-mortem. *Journal of Operational Risk*, 9(2): 59–100.
- McConnell, P. (2015). *Systemic operational risk*. London, England: Risk Books.
- McConnell, P. (2016). *Strategic risk management*. London, England: Risk Books.
- McConnell, P. (2017). Behavioral risks at the systemic level. *Journal of Operational Risk*, 12(3): 31–63.
- McDonald, P. (2012). Workplace sexual harassment 30 years on: A review of the literature. *International Journal of Management Reviews*, 14(1): 1–17.
- Menon, A. (2018). The denial of reality: An exploration of some of the unconscious forces at work in financial services. In: Financial Conduct Authority. editor. *Transforming culture in financial services*. Discussion Paper. DP18/2. March: 92–5.
- Merton, R. (1936). The unanticipated consequences of purposive social action. *American Sociological Review*, 1(16): 894–904.
- Meyer, J., and Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340–63.
- Miceli, M., Near, J., and Dworkin, T. (2008). *Whistle-blowing in organizations*. New York, NY: Routledge.
- Milgram, S. (1974). *Obedience to authority: An experimental view*. New York, NY: Harper & Row.
- Mollenkamp, C. (2008). Libor Fog: Bankers Cast Doubt on Key Rate amid Crisis. In: *The Wall Street Journal*, April 16.
- Mollenkamp, C., and Whitehouse, M. (2008). Study Casts Doubt on Key Rate. In: *The Wall Street Journal*, May 29.
- Monticini, A., and Thornton, D. (2013). The effect of underreporting on LIBOR rates. *Journal of Macroeconomics*, 37(C): 345–8.
- Morrison, E., and Milliken, F. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management Review*, 25(4): 706–31.
- Mulier, T. (2011). UBS Chief Gruebel dismisses calls to quit after unauthorized trading loss. In: *Bloomberg Business News*, September 18.

- Needle, D. (2010). *Business in context: An introduction to business and its environment*, (5<sup>th</sup> ed.). London, England: Cengage Learning EMEA.
- Nelson, J. (2016). Paper dragon thieves. *The Georgetown Law Journal*, 105: 871–941.
- New York State Department of Financial Services (2015). *In the matter of Barclays Bank PLC. Consent order under New York Banking Law §§ 44 and 44-a*, May 19.
- Nobles, M., and Fox, K. (2013). Assessing Stalking Behaviors in a Control Balance Theory Framework. *Criminal Justice and Behavior*, 40(7): 737–62.
- Palazzo, P., Krings, F., and Hoffrage, U. (2012). Ethical blindness. *Journal of Business Ethics*, 109(3): 323–38.
- Patton, S. (2014). Archangel problems: The SEC and corporate liability. *Texas Law Review*, 92(6): 1717–56.
- Piquero, A., and Hickman, M. (1999). An empirical test of Tittle’s control balance theory. *Criminology*, 37(2): 319–42.
- Piquero, A., and Hickman, M. (2002). The rational choice implications of control balance theory. In: Piquero, A., and Tibbetts, G., editors. *Rational choice and criminal behavior: Recent changes and future challenges*. New York; NY: Routledge: 85–107.
- Piquero, A., and Hickman, M. (2003). Extending Tittle’s control balance theory to account for victimization. *Criminal Justice and Behavior*, 30(3): 282–301.
- Piquero, A., MacIntosh, R., and Hickman, M. (2001). Applying Rasch modeling to the validity of a control balance scale. *Journal of Criminal Justice*, 29(4): 493–505.
- Piquero, N. (2010). Tittle, Charles R.: Control Balance Theory. In: Cullen, F., Wilcox, P., editors. *Encyclopaedia of Criminological Theory*. Beverly Hills, CA: SAGE Publications: 957–60.
- Piquero, N., and Piquero, A. (2006). Control balance and exploitative corporate crime. *Criminology*, 44(2): 397–430.
- Pontel, H., Black, W., and Geis, G. (2014). Too big to fail, too powerful to jail? On the absence of criminal prosecutions after the 2008 financial meltdown. *Crime, Law and Social Change*, 61(1): 1–13.
- Popovich, P., and Warren, M. (2010). The role of power in sexual harassment as a counter-productive behaviour in organizations. *Human Resource Management Review*, 20(1): 45–53.
- PricewaterhouseCoopers (2004). *Investigation into foreign exchange losses at the National Australia Bank*, March 12.
- PricewaterhouseCoopers (2008). *Société Générale – Summary of PwC diagnostic review and analysis of the action plan*, May 23.

- Rafeld, H., and Fritz-Morgenthal, S. (2010). Breaking down the biggest trading fraud in the history of banking. *Risk Professional*, June: 47–51.
- Rafeld, H., and Fritz-Morgenthal, S. (2019). Kweku Adoboli: How to clone the biggest trading fraud in the history of banking. In: Evlyn-Buhton, M. editor. *To catch a thief: The evolution of the chief control officer*. London, England: Armstrong Wolfe.
- Rafeld, H., Fritz-Morgenthal, S., and Posch, P. (2017a). Behavioural patterns in rogue trading: Analysing the cases of Nick Leeson, Jérôme Kerviel, and Kweku Adoboli. *Journal of Financial Compliance*, 1(2): 156–71.
- Rafeld, H., Fritz-Morgenthal, S., and Posch, P. (2017b). Applying control balance theory to the rogue traders Nick Leeson, Jérôme Kerviel, and Kweku Adoboli. *Journal of Financial Compliance*, 1(3): 276–84.
- Rafeld, H., Fritz-Morgenthal, S., and Posch, P. (2019). Whale watching on the trading floor: Unravelling collusive rogue trading in banks. *Journal of Business Ethics*. <http://dx.doi.org/10.1007/s10551-018-4096-7>.
- Rappeport, A., and Flitter, E. (2018). Congress approves first big Dodd-Frank rollback. In: *The New York Times*, May 22.
- Rawls, J. (1971). *Theory of justice*. Oxford, England: Oxford University Press.
- Reich, T., and Hershcovis, M. (2015). Observing workplace incivility. *Journal of Applied Psychology*, 100(1): 203–15.
- Renz, D., and Eddy, W. (1996). Organizations, ethics, and health care: Building an ethics infrastructure for a new era. *Bioethics Forum*, 12(2): 29–39.
- Reurink, A. (2016). ‘White-Collar-Crime’: The concept and its potential for the analysis of financial crime. *European Journal of Sociology*, 57(3): 385–415.
- Ribeaud, D., and Eisner, M. (2010). Are moral disengagement, neutralization techniques, and self-serving cognitive distortions the same? Developing a unified scale of moral neutralization of aggression. *International Journal of Conflict and Violence*, 4(2): 298–315.
- Ring, S. (2017). Jailed Barclays trader must pay \$400,000 from Libor profits. In: *Bloomberg Business News*, December 19.
- Ring, S. (2018). Ex-RBS Trader Danziger banned, fined \$338,000 over Libor. In: *Bloomberg Business News*, January 8.
- Ring, S., and Hodges, J. (2017). Two ex-Barclays Libor traders cleared of rigging charges. In: *Bloomberg Business News*, April 6.
- Ring, S., and Wild, F. (2017). Barclays trader jailed in Libor scandal fights U.K. conviction. In: *Bloomberg Business News*, November 24.
- Rokeach, M. (1973). *The nature of human values*. New York, NY: Free Press.

- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(609): 1–28.
- Sale, H. (2014). J.P. Morgan: An anatomy of corporate publicness. *Brooklyn Law Review*, 79(4): 1629–55.
- Savelsberg, J. (1996). Book review: Control balance: Toward a general theory of deviance. *American Journal of Sociology*, 102(2): 620–2.
- Savelsberg, J. (1999). Human nature and social control in complex society: A critique of Charles Tittle's control balance. *Theoretical Criminology*, 3(3): 331–8.
- Schein, E. (2010). *Organizational culture and leadership*, (4<sup>th</sup> ed.). San Francisco, CA: John Wiley & Sons, Inc.
- Shulman, D. (2007). *From hire to liar: The role of deception in the workplace*. Ithaca, NY: Cornell University Press.
- Simpson, E. (2012). Kweku Adoboli jailed for fraud over GBP 1.4bn UBS loss. In: *BBC News*, November 20.
- Sims, R. (1992). Linking groupthink to unethical behaviour in organizations. *Journal of Business Ethics*, 11(9): 651–62.
- Sims, R. (2017). *When a new leaders takes over: Toward ethical turnarounds*. Charlotte, NC: Information Age Publishing.
- Sjoberg, G. (1960). *The preindustrial city, past and present*. New York, NY: Free Press.
- Skyrm, S. (2014a). *Rogue traders*. New York, NY: Brick Tower Press, April.
- Skyrm, S. (2014b). The London Whale: Rogue risk management. *Futures: News, Analysis & Strategies for Futures, Options & Derivatives Traders*, 43(7): 18–21.
- Snider, C., and Youle, T. (2010). *Does the LIBOR reflect bank's borrowing costs?* Working Paper, April 2.
- Snook, S. (2000). *Friendly fire: The accidental shutdown of U.S. Black Hawks over Northern Iraq*. Princeton, NJ: Princeton University Press.
- Société Générale (2008). *General Inspection Department: Mission Green – Summary Report*, May 20.
- Soltes, E. (2016). *Why they do it: Inside the mind of the white-collar criminal*. New York, NY: PublicAffairs.
- Steiner, J. (1985). Turning a blind eye: The cover up for Oedipus. *International Review of Psycho-Analysis*, 12(2): 161–72.

- Stiroh, K. (2018). Misconduct risk, culture and supervision. In: Financial Conduct Authority. editor. *Transforming culture in financial services*. Discussion Paper. DP18/2. March: 51–2.
- Surowiecki, J. (2004). *The wisdom of crowds: Why the many are smarter than the few and how collective wisdom shapes business, economies, societies and nations*. New York, NY: Anchor Books.
- Sutherland, E. (1940). White-collar criminality. *American Sociological Review*, 5(1): 1–12.
- Swiss Financial Market Supervisory Authority (2012a). *FINMA investigation into the submission of interest rates for the calculation of interest reference rates such as LIBOR by UBS AG*.
- Swiss Financial Market Supervisory Authority (2012b). *Summary report – FINMA investigation into the events surrounding trading losses of USD 2.3 billion incurred by the investment division of UBS AG in London*.
- Sykes, G., and Matza, D. (1957). Techniques of neutralization: A theory of delinquency. *American Sociological Review*, 22(6): 664–70.
- Tannenbaum, A. (1961). Control and effectiveness in a voluntary organization. *American Journal of Sociology*, 67(1): 33–46.
- Tittle, C. (1995). *Control Balance: Toward a General Theory of Deviance*. Boulder, CO: Westview Press.
- Tittle, C. (1997). Thoughts stimulated by Braithwaite’s analysis of control balance theory. *Theoretical Criminology*, 1(1): 99–110.
- Tittle, C. (1999). Continuing the discussion of Control balance. *Theoretical Criminology*, 3(3): 344–52.
- Tittle, C. (2004). Refining control balance theory. *Theoretical Criminology*, 8(4): 395–428.
- Treviño, L. (1986). Ethical decision making in organizations: A person-situation interactionist model. *Academy of Management Review*, 11(3): 601–17.
- Treviño, L., and Nelson, K. (1999). *Managing business ethics: Straight talk about to do it right*, (2<sup>nd</sup> ed.). New York, NY: John Wiley & Sons Inc.
- Turnbull, S. (2008). Men behaving badly in banking: Revealing the irrelevance of best practices in corporate governance. *Governance, Risk, and Compliance Handbook: Technology, Finance, Environmental, and International Guidance and Best Practices*, 9(3): 82–95.
- Turner, B., and Pidgeon, N. (1997). *Man-made disasters*, (2<sup>nd</sup> ed.). London, England: Butterworth-Heinemann.
- United States District Court of Connecticut (2015a). *United States of America vs. Barclays PLC. Plea Agreement*. May 19.

- United States District Court of Connecticut (2015b). *United States of America vs. UBS AG*, Crim. No. Violations 18 U.S.C. §§ 1343 & 2, May 20.
- United States Securities and Exchange Commission (2013). *Litigation Release No. 22779, Accounting and Auditing Enforcement Release No. 3476. Securities and Exchange Commission v. Javier Martin-Artajo and Julien G. Grout*, Civil Action No. 13-CV-5677, August 14.
- United States Senate (2013a). *JPMorgan Chase Whale Trades: A Case History Of Derivatives Risks And Abuses*. Hearing Before The Permanent Subcommittee On Investigations, Committee on Homeland Security and Government Affairs, First Session, Volume 1 of 2, March 15.
- United States Senate (2013b). *JPMorgan Chase Whale Trades: A Case History Of Derivatives Risks And Abuses*. Hearing Before The Permanent Subcommittee On Investigations, Committee on Homeland Security and Government Affairs, First Session, Volume 2 of 2, March 15.
- United States Senate (2013c). *JPMorgan Chase Whale Trades: A Case History Of Derivatives Risks And Abuses – Majority and Minority Staff Report*. Permanent Subcommittee on Investigations, Committee on Homeland Security and Government Affairs, March 15.
- Unknown Author (2012a). Transcript of UBS trader’s ‘bombshell email’. In: *BBC News*, November 20.
- Unknown Author (2012b). UBS’s rogue-trader trial: The education of Kweku Adoboli. In: *The Economist*, November 24.
- Van Voris, B., Schoenberg, T., and Ring, S. (2017). Libor traders’ appeal win could chill U.S. cross-border cases. In: *Bloomberg Business News*, July 19.
- Vardi, Y. and Weitz, E. (2016). *Misbehaviour in organizations: A dynamic approach*, (2<sup>nd</sup> ed.). New York, NY: Routledge.
- Vardi, Y., and Wiener, Y. (1996). Misbehaviour in organizations: A motivational framework. *Organization Science*, 7(2): 151–65.
- Vasudevan, R. (2013). ‘Libor’ing under the market illusion. *Monthly Review*, 64(8): 1–12.
- Vaughan, D. (1990). Autonomy, interdependence and social control: NASA and the Space Shuttle Challenger. *Administrative Science Quarterly*, 35(2): 225–57.
- Vaughan, D. (1996). *The Challenger launch decision: Risky technology, culture and deviance at NASA*. Chicago, IL: The University of Chicago Press.
- Vaughan, D. (1997). The trickle-down effect: Policy decisions, risky work, and the Challenger tragedy. *California Management Review*, 32(2): 80–102.
- Vaughan, D. (1999). The dark side of organizations: Mistake, misconduct, and disaster. *Annual Review of Sociology*, 25: 271–305.

- Vaughan, D. (2004). Theorizing disaster: Analogy, historical ethnography, and the Challenger accident. *Ethnography*, 5(3): 315–47.
- Vaughan, L., Finch, G., and Choudhury, A. (2013). Traders said to rig currency rates to profit off clients, In: *Bloomberg Business News*, June 12.
- Wang, D., Pi, X., and Pan, Y. (2017). The interpersonal diffusion mechanism of unethical behavior in groups: A social network perspective. *Computational and Mathematical Organization Theory*, 23(2): 271–92.
- Weick, K. (1979). *The social psychology of organizing*. Reading, MA: Addison-Wesley.
- Weisburd, D., Chayet, E., and Waring, E. (2001). *White-collar crime and criminal careers*. Cambridge, MA: Cambridge University Press.
- Wexler, M. (2010). Financial edgework and the persistence of rogue traders. *Business and Society Review*, 115(1): 1–25.
- Whyte, W. (1952). Groupthink, (Fortune 1952), *Fortune*, July 22, 2012 (available at <http://fortune.com/2012/07/22/groupthink-fortune-1952/> – last access on October 25, 2018).
- Wiener, Y. (1982). Commitment in organizations: A normative view. *Academy of Management Review*, 7(3): 418–28.
- Wiener, Y. (1988). Forms of value systems: A focus on organizational effectiveness and cultural change and maintenance. *Academy of Management Review*, 13(4): 534–45.
- Wilcox, C. (2010). *Groupthink. An impediment to success*. Bloomington, IN: Xlibris.
- Wikipedia (2018). *Kweku Adoboli* (available at [http://en.wikipedia.org/wiki/Kweku\\_Adoboli](http://en.wikipedia.org/wiki/Kweku_Adoboli) – last access on October 25, 2018).
- Wikström, P. (2004). Crime as alternative: Towards a cross-level situational action theory of crime causation. In: McCord, J. editor. *Beyond empiricism: Institutions and intentions in the study of crime. Advances in criminological theory*. New Brunswick, NY: Transaction: 1–37.
- Wikström, P., and Treiber, K. (2009). Violence as situational action. *International Journal of Conflict and Violence*, 3(1): 75–96.
- Wild, F. (2018). Ex-Deutsche Bank trader called Gollum by Tom Hayes fined. In: *Bloomberg Business News*, March 5.
- Williams, K. (2008). Using Tittle’s control balance theory to understand computer crime and deviance. *International Review of Law, Computers & Technology*, 22(1–2): 145–55.
- Willness, C., Steel, P., and Lee, K. (2007). A meta-analysis of antecedents and consequences of workplace sexual harassment. *Personnel Psychology*, 60(1): 127–62.

- Wolfe, D. (1988). Is there integrity in the bottom line: Managing obstacles to executive integrity. In: Srivastva, S. editor. *Executive Integrity: The Search for High Human Values in Organizational Life*. San Francisco, CA: Jossey-Bass: 140–71.
- Wolfe, D., and Hermanson, D. (2004). The fraud diamond: Considering four elements of fraud. *The CPA Journal*, 74(12): 38–42.
- Wood, P. (1999). *Affective states and sex offending: A test of control balance theory*. Paper presented at the Annual Meeting of the American Society of Criminology, Toronto, Canada, November.
- Wood, P., and Dunaway, R. (1997–8). An application of control balance theory to incarcerated sex offenders. *Journal of Oklahoma Criminal Justice Research Consortium*, 4: 1–12.
- Wüpper, G. (2018). Kerviel muss um Entschädigung bangen. In: *Börsen-Zeitung*, November 1.