HOW DO PRUDENTIAL REGULATORS DISCUSS AND MITIGATE SHORT-TERMISM?

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Abstract

The Global Financial Crisis (GFC) of 2007-09 has been correlated with excessive risk-taking and disaster myopia in financial firms. Responses to those forms of short-termism include remuneration principles, attention to culture in firms, and upgraded corporate governance requirements. This thesis provides a cohesive analysis of regulatory responses to short-termism focused on the voice of prudential regulators. The method is structured, focused comparison of prudential regulators public messaging across four jurisdictions – Australia, Canada, Ireland and the United Kingdom - from 2008 to 2018. The thesis confirms and expands elements from Dallas's (2012) framework of information problems, structural problems and individual incentives as causes of short-termism. The thesis finds regulators discussing the components as forming a cohesive whole rather than as discrete elements, consistent with prior research that characterises financial markets as a complex adaptive system. Regulators usually justify the components by referring to international peers, and this thesis recommends they could broaden their sources of knowledge to consider lessons from other complex adaptive systems.

Table of Contents

List of Figures

List of Tables

List of Abbreviations

APRA	Australian Prudential Regulation Authority
BCBS	Basel Committee on Banking Supervision
CBI	Central Bank of Ireland
CEO	Chief Executive Officers
EU	European Union
FSA	Financial Services Authority (UK)
FSB	Financial Stability Board
GFC	Global Financial Crisis
OECD	Organisation for Economic Co-operation and Development
OSFI	Office of the Superintendent of Financial Institutions
PRA	Prudential Regulation Authority (UK)
VAR	Value-at-Risk

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: ____________________________

Date: ____________________________

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Chapter 1: Introduction

The main purpose of this chapter is to introduce the problem of short-termism in business and its manifestation in the Global Financial Crisis of 2007-09. The chapter outlines the background (section 1.1) and context (section 1.2) of the research, and its purposes (section 1.3). Finally, section 1.4 includes an outline of the remaining chapters of the thesis.

1.1 BACKGROUND

The *Oxford English Dictionary* defines short-termism as ‘concentration on short-term projects or objectives for immediate profit at the expense of long-term security’. This kind of definition does not capture the full complexity of business short-termism, which manifests in at least three ways, illustrated in Figure 1.

The first is shareholder short-termism, or managing the firm to ‘make the numbers’ for the quarterly financial reports. The subordination of everything essential for survival to the short-term stock price was lamented in a 1986 editorial as a crisis of capitalism (Drucker, 1986; Martin, 2015).

The second, relevant specifically to financial firms, is excessive risk-taking; taking short-term payoffs from risks that will ultimately lead to ruin, proverbially put as picking up pennies in front of a steamroller[1] (Popik, 2011). In most cases, the consequences of excessive risk-taking are left for others (Dallas, 2012). An unknown investment banker once put it, probably flippantly, as ‘We’re investment bankers, we don’t care what happens in five years’ (Global Capital, 2004).[2] Kay (2015) characterises this as a mentality of ‘I’ll be gone, you’ll be gone’.

The third is disaster myopia, arising from the difficulty of planning and from underestimating or ignoring the impact of low-frequency adverse events (Dallas, 2012).

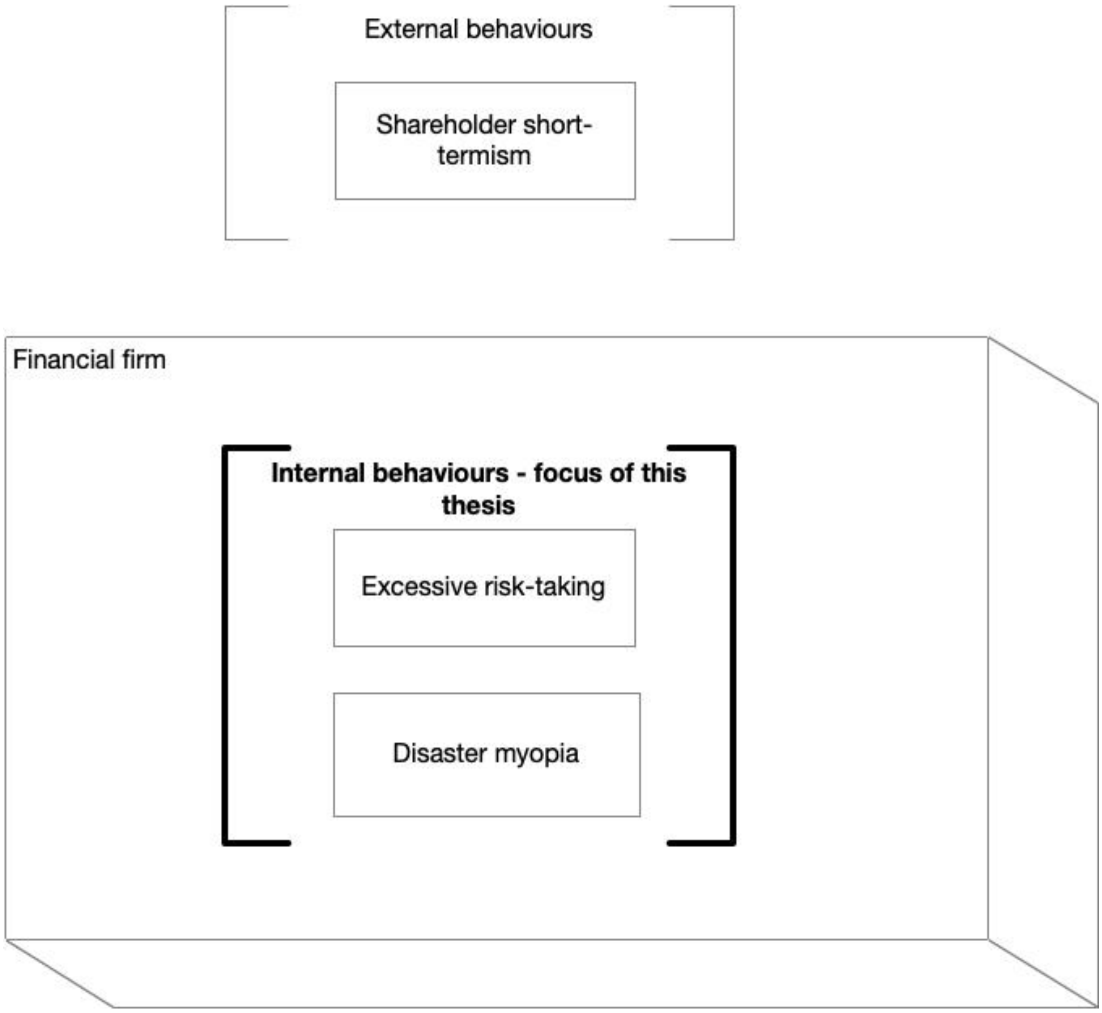

Figure 1. Forms of short-termism and the focus of this project.

For financial firms, the chronic problems of excessive risk-taking and disaster myopia preceded the acute problem of the Global Financial Crisis (GFC), the largest financial crash since the Great Depression (Dallas, 2012). The GFC followed a period known as 'The Great Moderation' (Hakkio, 2013). In advanced economies, inflation was under control and economic growth was stable. Shocks happened – the Asian financial crisis of 1997, the rescue of Long Term Capital Management in 1998, the dotcom boom and bust of 1999/2000 – but had no long-lasting effects. The relatively long period of stability encouraged exuberance (Kohn, 2018). In the USA, house prices increased, as did household debt. Lending to subprime borrowers, ineligible for standard mortgages, increased to record levels (Dallas, 2012). Securitisation of those mortgages – aggregation in special-purpose vehicles for sale to investors, including banks – meant that subprime lenders had little interest in borrowers' ability to repay.

The bubble burst when US house prices stopped increasing. Subprime borrowers that depended on ever-increasing house prices to refinance could no longer repay their debt, and losses mounted (Dallas, 2012). The first of many failures of subprime lenders may have taken place in 2006, when Merit Financial Inc. filed for bankruptcy (Holden, 2013). The GFC proper dates either to 10 July 2007, when Standard & Poor's put US$7.8 billion of subprime debt on negative credit watch (Tempkin & Boston, 2017), or to a month later when BNP Paribas closed three funds invested in US securitised mortgages (Jack, 2017).

Rippling losses highlighted the dependence of banks on trust and confidence (Hopt, 2012). Interbank lending markets froze in the uncertainty, which sent the crisis global (Shin, 2009). Northern Rock, a British bank dependent on short-term borrowing, sought help from the Bank of England and, in September 2007, experienced the first UK bank run since 1866. Market uncertainty continued through 2007 and 2008; Bear Stearns, a US investment bank, was rescued, and European banks announced large subprime losses (Guillen, 2009; Holden, 2013). Conniptions peaked in September 2008 when Lehman Brothers filed for bankruptcy and Bank of America rescued Merrill Lynch (Holden, 2013). The following week, Russia closed its markets for three days; three Icelandic banks failed soon after. Governments took drastic actions; the US government announced a US$700 billion rescue fund; the Irish government guaranteed the deposits of its banks; the British government nationalised three banks and later announced its own £500 billion bank rescue fund (Guillen, 2009); two major European banks were nationalised (Holden, 2013). Market stability slowly returned; the last 'rescue' of the GFC was the March 2009 purchase of IndyMac by OneWest Bank from the US Federal Deposit Insurance Corporation (Holden, 2013).

The systemic consequences of the GFC have perhaps not yet ended. Portugal, Greece and Ireland all experienced debt downgrades between 2008 and 2011, all following market repercussions of the US subprime crisis (Holden, 2013). Greece required several debt bail-outs, the last of which it exited in August 2018 (Council on Foreign Relations, 2018).

1.2 CONTEXT

Although the GFC originated in subprime mortgage lenders and securities firms outside of the prudentially regulated sector (Baldwin et al., 2010; Holden, 2013), it is not disputed that prudential regulation failed (Clayton, 2015; Fenger & Quaglia, 2015). Regulators have made extensive reforms in response; large financial firms have been categorised as systemically important and bank resolution tools developed to avoid taxpayer-funded bail-outs (Claessens, DellAriccia, Igan & Laeven, 2010); capital and liquidity requirements have increased (Kobrak & Troege, 2015); and regulators have recognised the need to target the underlying behaviour that causes crises (Kobrak & Troege, 2015), that is, short-termism (Dallas, 2012). Prudential regulators targeting short-termism have strengthened corporate governance requirements, introduced principles regulating remuneration and increased attention to culture in firms.

The regulatory responses to the GFC highlight two issues. First is that the reforms have come from the regulators, which is supportive of Birkland and Warnement's (2017) finding that regulatory reform after a 'focusing event' such as the GFC comes from regulators rather than elected officials. Second is that regulator's justifications for those responses is largely unheard in research to date. Analysing the voice of the regulator addresses that gap.

1.3 PURPOSES

This study analyses regulatory responses to short-termism following the GFC, and the justifications given for those regulatory responses provided by regulators themselves. It does so firstly by asking how regulators define short-termism, the instruments they propose as mitigations, and how regulators justify and explain their responses.

This thesis compares regulators' discussion of short-termism, mitigation and justifications across four jurisdictions – Australia, Canada, Ireland and the UK – from publications dated between 2008 and 2018.

The regulatory domain studied is prudential regulation, or safety and soundness regulation of banks, also described as financial firms throughout this thesis.

The thesis provides a theoretical contribution in expanding Dallas's (2012) framework of high-level causes of short-termism, specific problems and regulatory responses. The expansion comes from both recent research on corporate governance, remuneration and culture and through analysing regulators' discussion of the instruments.

The thesis provides a practical contribution in recommending that prudential regulators could learn lessons from other complex adaptive systems, such as transportation and infectious diseases, where systemic crises are both inevitable and unpredictable.

1.4 THESIS OUTLINE

The thesis is structured as follows. Chapter 2: provides background to the short-termism in firms causally linked to the GFC and provides background to the turn in prudential regulation to target short-termism rather than technical requirements alone. Chapter 2 also introduces Dallas's (2012) framework of causes of short-termism and regulatory responses. Chapter 3: reviews recent research on the regulatory responses to short-termism in prudential regulation, focused on corporate governance, remuneration and culture. Chapter 4: provides the research design and method, which is a structured, focused comparison of regulators public messaging from four jurisdictions: Australia, Canada, Ireland and the UK. Chapter 5 provides the findings: how regulators define short-termism, the regulatory mitigations they propose, and their justifications for those mitigations. Chapter 6 provides analysis of the findings with an expanded framework of causes of, and regulatory responses to, short-termism. Chapter 7 concludes the thesis with theoretical and practical implications, limitations and recommendations for further research.

Chapter 2: Background

The main purpose of this chapter is to introduce the Dallas (2012) framework that underpins this thesis. Before introducing that framework, Section 2.1 of this chapter provides a recap of the causes of short-termism particular to financial firms that prior research has correlated with the GFC.

Section 2.2 explains the reasons for prudential regulation, the limitations of the technical model for regulation highlighted by the GFC, and the post-GFC ‘turn’ to give greater regulatory attention to incentives and short-termism rather than technical requirements alone. From that background, the Dallas (2012) framework of regulatory responses to short-termism in financial firms is introduced and explained.

2.1 BACKGROUND – SHORT-TERMISM AND THE GLOBAL FINANCIAL CRISIS

Short-termism starts from the difficulty firms have in balancing short- and long-term results. In the face of this difficulty, firms may use financial reporting to ‘make the numbers’; short-term results are necessary for the firm to reassure investors and continue as a going concern and deliver long-term value (Marginson & McAulay, 2008). Pressure for short-term results from shareholders is defined as shareholder short-termism.

Managers or risk-takers in firms might also prefer short-term results regardless of long-term consequences. For a financial firm this results in excessive risk-taking (Dallas, 2012); the proverbial picking up pennies in front of a steam-roller (Popik, 2011), or not caring what happens in five years because ‘I’ll be gone, you’ll be gone’ (Kay, 2015).

Excessive risk-taking of the ‘I’ll be gone, you’ll be gone’ variety is causally linked to remuneration and culture. Dallas (2012) attributes both the failure of Enron in 2001 and the GFC of 2007–09 to a ‘trading culture’ that puts end results above process, competition above cooperation within the firm, and self-interest above the firm’s interest. Dallas attributes this culture to employee perceptions of a transactional relationship with the firm crowding out perceptions of a covenantal relationship, where each party has a commitment to the long-term welfare of the other. Dallas (2012) singles out remuneration as a major cause: both the increase in size of executive remuneration, and a skewing to short-term incentives. Dallas regards this skewing as encouraging employees to believe that only self-interest should motivate them. Earlier research is supportive; Laverty (1996) found managers put short-term results ahead of long-term value when they perceive their relationship with the firm as temporary.

Another form of short-termism for financial firms is 'disaster myopia'. Unlike the 'I'll be gone, you'll be gone' problem, disaster myopia is not necessarily caused by misaligned incentives or values. The problem is that managers cannot foresee long-term consequences (Marginson & McAulay, 2008), so individuals naturally apply mental shortcuts, heuristics or 'rules of thumb' (Irving, 2009), meaning decisions may be suboptimal. One rule of thumb, the availability heuristic, leads to underestimation of the likelihood of low-frequency events such as a severe economic shock (Dallas, 2012). Related to that is the threshold heuristic, which leads to risks falling below a threshold likelihood being entirely ignored. An infamous quote from the GFC illustrates:

> *Almost no one expected what was coming. It's not fair to blame us for not predicting the unthinkable.* (Daniel H. Mudd, former chief executive of Fannie Mae, cited in Duhigg, 2008)

The following section describes the Dallas (2012) framework of regulatory responses to excessive risk-taking and disaster myopia. It begins by giving a more detailed background to prudential regulation, the domain in which regulatory responses to short-termism are being introduced.

2.2 BACKGROUND – SHORT-TERMISM AND FINANCIAL REGULATION

Prudential regulation is one of two forms of financial regulation applied to financial firms. Prudential regulation targets the safety and soundness of financial firms that have systemic importance, which in most jurisdictions means banks and insurance companies (Quaglia, 2015; Schooner & Taylor, 2010). The other form of financial regulation, conduct regulation, targets the way financial firms conduct their business, including their dealings with consumers of financial products. Both forms of regulation are relevant to short-termism; financial firms may become unsafe through excessive risk-taking or from ignoring the potential for market shocks, and misconduct in financial firms is attributed to unsustainable sales practices (Blair, 2016; O'Brien, Gilligan & Miller, 2015). This thesis limits its scope to prudential regulation.

The 'traditional' way of prudential regulators meeting their safety and soundness aim has been through technical requirements such as capital and liquidity, and a focus on credit risk (Kobrak & Troege, 2015). International banking regulation dates from the banking failures of the 1970s, through to the Basel I (1988), II (2004) and III (2010) accords. Each of the respective Basel accords has been deficient in some way: the Basel I accord focused on capital adequacy and credit risk, a form of 'command and control' regulation narrower than the focus of previous regulation in practice (Kobrak & Troege, 2015). The Basel II framework increased regulators' reliance on firms' internal models for risk management, which measured risk to 99% accuracy in normal conditions but not in crises; this accuracy was perfectly adequate for individual firms, but not for regulators concerned with the system overall (Goodhart, 2011). While Basel III increased capital requirements following the GFC, analysis shows the increased requirements as too low to have prevented any of the bank failures that occurred during the GFC (Kobrak & Troege, 2015). The general approach of prudential regulation, then, is one of continually revisiting technical requirements following crises (Goodhart, 2011).

White (2014) considers that developing ever more complex regulation in response to crises is unlikely to be a desirable solution. White recommends an alternative of viewing the financial sector as a complex adaptive system. In a complex adaptive system, a single cause cannot be connected to a single outcome; it is more likely that multiple causes are connected to multiple outcomes (Martin, 2015, p. 6). Thus, 'relying more on regulatory principles, focusing on the "spirit of the law", rather than on still more detailed regulation, would seem to have much to recommend it' (White, 2014, p. 30). It is this turn to principles that has broadened prudential regulation into the territory of short-termism and individual incentives, the focus of this thesis.

To be clear, prudential regulators rarely or never define their primary aim as mitigating short-termism. Rather, prudential regulators are turning attention to causes of short-termism to meet the aim of safety and soundness of firms in the interests of system stability. As White puts it, the aim of prudential regulation is to prevent financial instability and correct the market failures of ‘the failure of people operating in the system to appreciate the externalities associated with their behavior; excessive short termism and ignoring of risks; the influence of safety nets and moral hazard’ (White, 2014, p. 6).

Prudential regulators’ range of instruments, and particularly those that are forward-looking, has expanded since the GFC. Kellermann (2015) provides a framework of post-GFC forward-looking tools in prudential regulation, covering both financial and non-financial risks, including Macro-Prudential analysis, Board effectiveness, Conduct and Culture, Fit and Proper Testing, Benchmarking, Business Planning, Thematic Investigations, and Stress Testing.

Dallas’s (2012) framework of post-GFC regulatory responses, including from domains other than prudential regulation, provides three high-level causes, specific problems arising from those causes, and both actual and possible regulatory responses. Dallas categorises the causes as information problems, such as the focus of financial reporting on short-term results; structural problems, such as the impact of short-term traders; and individual incentives in culture, remuneration and governance. While both frameworks are comprehensive, Dallas explains the instruments and how they relate to short-termism in sufficient detail to guide further research. Dallas (2012) is therefore chosen as a framework for this thesis.

Dallas (2012) says her framework is only an introduction, and each response is worthy of its own specialist paper. This thesis focuses on the high-level cause of individual incentives, which includes the specific problems of poor corporate governance, ‘trading’ culture and remuneration incentives. The Dallas framework, showing the focus of this paper, is summarised in **Table 1**.

Table 1 Causes of short-termism and regulatory responses. Source: adapted from Dallas (2012)

High-level cause	Specific problem	Regulatory response
Information problems	Financial reporting focused on short-term results	Attempts to shift focus to long-term value of firms
	Inaccurate assessments by Credit Ratings agencies	Regulation of Credit Rating agencies
	Complex, opaque derivatives	Tighter regulation of derivatives
Structural problems	Non-standard derivatives and other financial products	Standard derivatives
	Short-term traders versus long-term investors	Empowering long-term shareholders
Individual incentives – focus of this paper	**Unethical, 'trading' cultures in firms**	**Focus on culture in regulated firms**
	Poor corporate governance	**Stronger corporate governance requirements**
	Compensation of managers	**Regulation of remuneration**

Dallas (2012) called for further exploration of causes of short-termism and encouraged further research on regulatory responses, observing that each area was worthy of its own specialised paper, taking into account prior literature and further reforms. This thesis responds to that call, analysing regulatory responses in corporate governance, remuneration and culture in prudential regulation. The following chapter assesses the extent to which Dallas's call for further specialised analysis has been answered in prudential regulation research.

Chapter 3: Literature Review

The main purpose of this chapter is to assess the extent to which Dallas's (2012) call for further specialist analyses of the regulatory components of corporate governance, remuneration and culture has been answered with research in prudential regulation and what gaps remain for further research. The main gap identified in this literature review is that the voice of the prudential regulators is unheard in the prior research. In this sense, the voice of regulator refers to their public messaging explaining and justifying regulations – speeches, discussion papers, information papers, letters to industry and newsletters (Byres, 2018, p. 235) – rather than the regulations themselves. The chapter finds that prior research has answered Dallas's call only indirectly; the research reviewed does not focus on short-termism. Part of this thesis's contribution is in connecting the various research in corporate governance, remuneration and culture to excessive risk-taking or disaster myopia.

Researching public messaging fills an important gap. While the classically assumed source of policy change is government, it is primarily regulators that respond to crises (Birkland & Warnement, 2017). The gap is also important given research is inconclusive on the effects of regulation of corporate governance, remuneration and culture from the Dallas framework. With no conclusive evidence of the effectiveness of these instruments, it is important to hear how prudential regulators perceive short-termism, the regulatory instruments they cite as mitigations and how they justify those regulatory instruments. While each of the regulatory components in the framework of individual incentives is worthy of a review paper that limits scope to the specific domain of prudential regulation, such review was found only in the comparatively older research domain of prudential regulation itself (Jakovljević, Degryse & Ongena, 2015; Kobrak & Troege, 2015). A corporate governance review paper focuses on effectiveness of particular characteristics in financial firms rather than specifically evaluating prudential regulation requirements (de Haan & Vlahu, 2015). For remuneration, this chapter includes papers that test the introduction of remuneration principles in prudential regulation, starting from the Financial Stability Board in 2011

(Cerasi et al., 2017; Ahmed & Ndayisaba, 2017; Díaz Díaz, García-Ramos & García Olalla, 2017). On culture in financial firms, research papers limited solely to prudential regulation are rare. Papers on culture in this review cover the broader context of financial regulation, which includes conduct regulation (O'Brien, Gilligan, & Miller, 2015; G. Wilson & Wilson, 2016; Blair, 2016).

Figure 1 in Chapter 1 of this paper illustrated excessive risk-taking and disaster myopia as the forms of short-termism internal to financial firms, and that are the focus of this project. Figure 2 extends Figure 1 to show how regulatory components may mitigate excessive risk-taking and disaster myopia. This section summarises how the literature makes the connections between those regulatory components and the forms of short-termism.

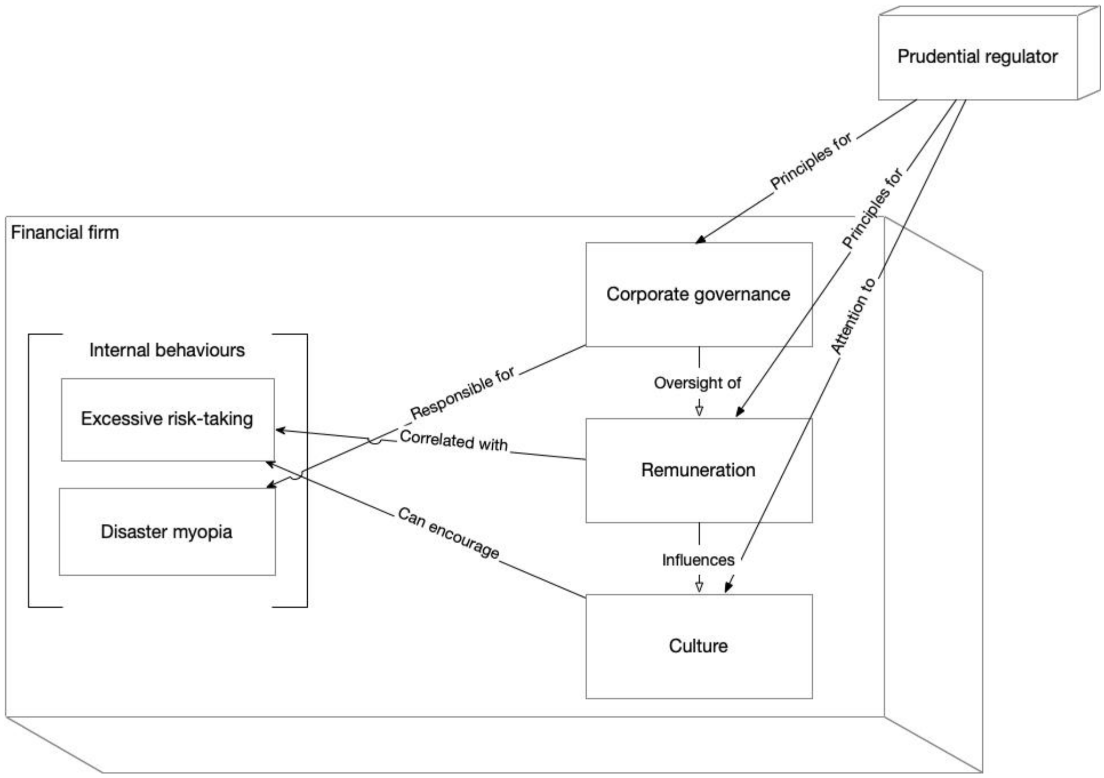

Figure 2. Short-termism and regulatory components from the literature

As represented in Figure 2, prior research correlates remuneration incentives with excessive risk-taking, and also associates governance with those remuneration incentives (Hopt, 2012; Cerasi et al., 2017). Post-GFC reviews of the failures of financial firms attributed excessive risk-taking to remuneration practices (Kirkpatrick, 2009). Post-GFC reviews made a second connection between corporate governance and remuneration, in that boards of financial firms permitted remuneration practices that encouraged excessive risk-taking (Battaglia & Carboni, 2018). Dallas (2012) makes a further connection of culture to remuneration in describing how high levels of remuneration can encourage a ‘trading culture’ that encourages excessive risk-taking for short-term profit.

Prior research describes how culture can lead to excessive risk-taking through imbalance between logics in a firm (Palermo, Power & Ashby, 2016). In this research, ‘risk culture’ arises from the competing logics of opportunity, which encourages risk-taking, and precaution, which encourages control. Where the logics become unbalanced, excessive risk-taking can be the result.

Finally, Figure 2 presents a connection between disaster myopia and corporate governance. Among other things, post-GFC reviews found boards had under-estimated or neglected risks (Hopt, 2012).

The rest of this chapter is structured as follows. Section 3.1 provides an overview of prudential regulation research, drawing on Jakovljević et al.’s (2015) review paper. Section 3.2 summarises corporate governance in prudential regulation, relying on de Haan & Vlahu's (2015) review paper. Section 3.3 reviews research on remuneration principles in prudential regulation, and section 3.4 reviews research on culture relevant to the broader field of financial regulation. Section 3.5 summarises the literature, highlights the research gaps and provides the research questions of the study.

3.1 PRUDENTIAL REGULATION RESEARCH

Research in prudential regulation has focused on technical aspects, such as capital or liquidity, and on the impact on financial firms or economies (Jakovljević et al., 2015). While World Bank survey data (Barth, Caprio & Levine, 2013) is built from regulators’ responses, it does not include public messaging. The voice of the regulator is not heard in the prior research.

Jakovljević et al.’s (2015) review shows prior research on prudential regulation focuses on impact on financial firms or economies. They categorise the prior research first as exploring how capital and other regulatory requirements affect the performance of banks and economies; second, examining the costs and benefits of regulatory policies that promote financial and economic stability; third, analysing macro-prudential regulation, which targets system stability rather than safety of the individual firm;

fourth, evaluating how tightening or loosening of regulation affects banks and the economy; and, finally, determining whether regulation is effective in averting and mitigating financial crises.

Jakovljević et al. (2015) find prior research is mostly inconclusive. The first reason they provide is that the effects of particular regulatory requirements depend on individual characteristics of the firm. The second reason provided is that results vary depending on the country studied, since the form of bank supervision varies by jurisdiction. They note that while the Basel accords are a harmonising influence on banking regulation, frameworks differ between countries.

The regulators' voice is unheard in the prior research. Research that evaluates the impact of regulation takes requirements as a given, overlooking regulators' explanation for and justification of requirements. Similarly, the World Bank survey of international forms of regulation does not capture regulators' explanations and justifications of regulatory instruments.

3.2 CORPORATE GOVERNANCE

The two major streams of post-GFC literature on corporate governance in financial firms are, first, a descriptive stream and, second, an evaluative stream. The descriptive stream explains corporate governance, describes the post-GFC regulatory reforms, and notes the difference in governance for financial firms as opposed to other firms (Hopt, 2012). The evaluative stream analyses how different corporate governance arrangements affect the performance of financial firms, focused on the GFC. Section 3.2.1 below provides an overview of literature from the first stream, illustrating the special case made for corporate governance requirements of financial firms being stronger than for non-financial firms (Hopt, 2012). Section 3.2.2 introduces a selection of empirical research that analyses how corporate governance arrangements affect the performance of financial firms. While the focus of the streams in the research varies and there are ongoing debates, sources agree that corporate governance in financial firms received insufficient attention before the GFC (Adams & Mehran, 2012; Aebi, Sabato & Schmid, 2012; de Haan & Vlahu, 2015; Kirkpatrick, 2009). Another area of wide agreement is that regulation influences effectiveness of corporate governance in financial firms (Aebi et al., 2012; Battaglia & Carboni, 2018; Grove, Patelli, Victoravich & Xu, 2011).

While a common observation in the prior research is that regulation has an influence, there is a gap in that perspectives of regulators are unheard. The evaluative stream of research usually adopts regulation as an independent variable. This means that the views of regulators on how corporate governance operates, and their justifications for regulation of corporate governance, are unheard in the prior research.

3.2.1 Post-GFC descriptions of corporate governance in financial firms

Corporate governance is a term that describes relationships between a firm, its management, its board of directors, its shareholders and its other stakeholders (Battaglia & Carboni, 2018; Hopt, 2012). Corporate governance can be viewed three ways: as having a shareholder orientation, limiting the focus to the interests of members of the company (Hopt, 2012); a stakeholder orientation, which includes the interests of creditors (for a financial firm, creditors includes depositors), the public and the environment (Hopt, 2012); or more narrowly as internal governance, focused on management, the board, risk management and internal control (Battaglia & Carboni, 2018).

Regulatory practice recognised financial firms as a 'special case' for higher corporate governance standards before the GFC (Hopt, 2012). One reason is that banks raise debt short-term and lend long-term, a maturity transformation that relies on maintaining trust and confidence (Hopt, 2012). Another is that, unlike non-financial firms, financial firms have a high number of low-value creditors, usually depositors, who cannot co-ordinate to monitor the firm (de Haan & Vlahu, 2015). The inability to co-ordinate means that depositors cannot reprice debt if the financial firm takes excessive risk, encouraging financial firms to prefer debt to equity. Yet another reason is that failure of a financial firm has negative systemic consequences not internalised by shareholders of a financial firm, and even less internalised by management (de Haan & Vlahu, 2015).

The need for even higher standards of corporate governance for financial firms has gathered momentum post-GFC (Adams & Mehran, 2012; de Haan & Vlahu, 2015) and has placed more emphasis on risk (Hopt, 2012). Among the corporate governance failings highlighted by the GFC were company boards' neglect of major risks, or 'disaster myopia' (Hopt, 2012). Boards also permitted remuneration practices that favoured short-term profit through excessive risk-taking (Battaglia & Carboni, 2018;

Kirkpatrick, 2009). The Basel Committee on Banking Supervision (BCBS) published new corporate governance principles in 2010, expanding the number of principles from eight to 14, and introduced substantially more emphasis on risk management, board qualifications and independence of directors (Hopt, 2012). These requirements turn the orientation of financial firms' corporate governance to an internal control focus (Battaglia & Carboni, 2018).

3.2.2 Empirical research of corporate governance in financial firms

The empirical research stream evaluates the effectiveness of particular corporate governance characteristics of financial firms, rather than effects of regulation. Features of corporate governance commonly studied include board size, composition, expertise and independence (De Haan & Vlahu, 2015). Some disagreement about the extent of prior research is found; Adams and Hamid (2012) contend that there is little, since most empirical studies specifically exclude financial firms because of their special case. De Haan and Vlahu (2015) disagree, finding that there is a wide body of research, but that its publication is scattered and that results are mixed.

The mixed results in prior empirical research are attributed to differences in what should be considered effectiveness of corporate governance for financial firms as opposed to non-financial firms (de Haan & Vlahu, 2015). An example is measuring effectiveness from a shareholder orientation, by adopting return on equity or profitability as an independent variable (Erkens, Hung & Matos, 2012). Studies adopting profitability as a measure have found that independent directors do not increase effectiveness of corporate governance (de Haan & Vlahu, 2015).

Alternative measures of effectiveness of corporate governance adopt a stakeholder orientation, which includes depositor protection. Efficiency of the firm has been measured, for example, because shareholders 'want value for money' from directors, 'regulators seek fewer failures' and banks want 'arrangements to deliver stronger oversight of management' (Salim et al., 2016: 113). An Australian study found banks were more efficient after the adoption of corporate governance principles in 2003 (Salim et al., 2016). An alternative is to measure effectiveness as control of risk by the firm's board (Aebi et al., 2012), which confirms the corporate governance failings of the GFC; financial firms with better corporate governance and that were 'safer' during the GFC were less profitable than riskier firms before the GFC.

3.3 REMUNERATION

As noted in the corporate governance section above, post-GFC reviews identified incentives favouring excessive risk-taking for short-term profit as a major causal factor in failures of financial firms. The FSB introduced new principles on remuneration in banks in 2011, with the publication of *Principles for Sound Compensation Practices and their Implementation Standards* (Cerasi, Deininger, Gambacorta & Oliviero, 2017). The principles, to be implemented by national regulators, have the broad objective of aligning incentives with risk-taking in financial firms. The principles do this by requiring board oversight of compensation policies and practices, alignment of remuneration to risk, enhanced regulatory oversight and requirements for deferral of variable remuneration or bonuses.

The common theme in the literature is assessment of the impact of the principles on firms or remuneration, rather than the specific question of effectiveness in mitigating excessive risk-taking. The gap in the prior research is that regulators' perspectives on the effectiveness of remuneration regulation are not heard. The majority of studies are quantitative, and research questions, data and methods differ. The common evaluative themes are, first, whether the remuneration principles have affected remuneration of executives, including associated practices (Cerasi et al., 2017); and, second, whether and how financial firms have been affected. A common preliminary observation in these studies is that there is no provable causable correlation from remuneration to the GFC (Ben Shlomo, Eggert & Nguyen, 2013; Díaz, García-Ramos & Olalla, 2017), nor to the short-termism that was arguably the cause. Findings of these studies are mixed, and there is no definitive conclusion that the FSB principles have met their objective (Ahmed & Ndayisaba, 2017; Díaz Díaz, García-Ramos & García Olalla, 2017).

The first evaluative theme in the prior research is how the FSB principles have affected compensation of executives and associated practices, with mixed findings. Cerasi et al. (2017) analyse compensation of bank Chief Executive Officers (CEOs) in jurisdictions adopting the FSB principles, finding variable CEO compensation has declined and that variable compensation is negatively correlated with risk. Results also show the principles had the most effect at investment banks and in banks that did not have a Chief Risk Officer prior to the regulatory changes. Cerasi et al. (2017) conclude that requiring board oversight of remuneration has had the most effect on CEO compensation. Ahmed et al. (2017) analysed CEO long-term incentives in Australian banks from 2004 to 2015, including pre- and post-GFC and pre- and post-FSB principles. Their working hypothesis is that CEO long-term incentives will become more aligned with long-term firm performance following the introduction of remuneration regulations. They find no measurable impact of the regulations on long-term remuneration, although it should be noted that the FSB principles do not have an objective that specific. Gaizo et al. (2018) carried out a limited exploratory study of remuneration in the three major Italian banks for the 2013 and 2015 financial years, the years either side of a new Regulatory Technical Standard on remuneration in the European Union (EU). They find no substantial impact from the new rules, noting the limitations in sample size and lack of events that would trigger some key requirements, such as malus and clawback.

An alternative evaluative theme in prior research is considering impact on financial firms using market reaction as a proxy, finding financial firms negatively affected. The working hypothesis of this research is that if regulation of remuneration reduces excessive risk-taking to make banks safer, the market value of the firm would be positively affected (Diaz et al., 2017). A study of 124 listed banks from across the EU instead finds that regulation of remuneration has had negative or no effect on market value of financial firms. An alternative approach taken with the same dataset was to evaluate market responses over the period in which regulation of remuneration was proposed, through various milestones as rules were announced, consulted upon and finalised (Díaz et al., 2017). This study found a positive market reaction to the first discussions of remuneration regulation and a negative market reaction when the rules were finalised and implemented. The research concludes that markets might be convinced of the effectiveness of remuneration regulation if a proven causal correlation could be made between remuneration and excessive risk-taking.

Ben Shlomo et al.’s (2013b) theoretical evaluation of the design of the FSB principles is an exception to the common research approach of evaluating the impact on firms or remuneration. Ben Shlomo et al. (2013) analyse pre-GFC research on the effect of remuneration on performance to develop a theoretical ‘ideal model’ of remuneration regulation. They conclude that the regulations introduced in 2011 are a good first step, but consider that the principles are open to too much interpretation and possible exploitation, that required deferral periods should be longer and that transparency should be improved. Their recommendation is that regulators monitor results from implementation of the principles and make changes over time to improve effectiveness.

The prior research has not definitively concluded that the FSB principles are effectively mitigating short-termism. The lack of conclusive findings of effectiveness highlights a challenge in evaluating remuneration as a regulatory instrument. The perspectives of regulators are important given this challenge. As with prior research in prudential regulation and corporate governance, the voice of the regulator is largely unheard in the remuneration regulation literature.

3.4 CULTURE

Prior research is clear that prudential regulators are paying increased attention to culture, but there is uncertainty around precisely what form of culture attracts regulatory interest, why regulators are adopting culture as instrument, and how they are doing it. Themes in post-GFC research on culture in financial firms diverge from Dallas's (2012) framework of individual incentives and highlight the ambiguity of the term. Where Dallas (2012) identifies an unethical 'trading culture' as one of the causes of short-termism, other research suggests that an ethical culture would internalise the systemic externalities of excessive risk-taking (Blair, 2016). Ethical culture has separately been correlated to unbalancing the competing logics of opportunity and precaution that create risk culture, which can cause excessive risk-taking (Palermo, Power, & Ashby, 2016a), but is also considered necessary for financial firms to maintain the trust essential for their survival (O'Brien, Gilligan, & Miller, 2015; G. Wilson & Wilson, 2016) and for self-regulation to be effective (Blair, 2016; White, 2014). A common theme in the research is that regulators are paying more attention to culture (Palermo, Power, & Ashby, 2016; Ring, Bryce, McKinney, & Webb, 2018; Sheedy, Griffin, & Barbour, 2015, Wilson & Wilson, 2016), but the various meanings of culture highlight the difficulty of regulating in the face of this ambiguity (Tomasic, 2017).

To show how other research diverges from the Dallas's (2012) framework of individual incentives, it is first necessary to return to the meaning of culture given there. In the framework, Dallas describes an unethical trading culture within financial firms of employees' excessive risk-taking arising from self-interest rather than the firm's long-term interest. This trading culture develops from employees perceiving their relationship with the firm as transactional, where both firm and employee are acting in self-interest, rather than as a covenantal relationship, where each is concerned with the welfare of the other. Dallas considers that a transactional relationship is likely to arise where remuneration is disproportionately large for senior executives, and where power is centralised in the Chief Executive Officer. Dallas therefore proposes regulatory measures that promote a covenantal relationship, such as changes to fiduciary duty of directors and remuneration that is weighted to long-term incentives. While Dallas refers to the existing trading culture as unethical, other research discusses ethical culture and excessive risk-taking differently.

Other research argues that an improved ethical culture in financial firms would internalise the negative externalities of failure of the firm, discouraging excessive risk-taking of the kind that led to the GFC (Blair, 2016). Excessive risk-taking is one of the causes of failure of financial firms (Quaglia, 2015; White, 2014), and each failure of a single firm can have outsized negative externalities (White, 2014). The argument that follows is that individuals that internalise those negative externalities would not take excessive risk. The recommended intervention is for regulators to engage with firms' internal codes of behaviour, while recognising that it is up to the firms to set their own principles for ethical conduct.

A related theme of prior research is regulatory attention to risk culture (Palermo et al., 2016; Wilson & Wilson, 2016). Risk culture is described in multiple ways: as an important aspect of treating customers fairly, an aspect of conduct regulation rather than prudential regulation (Ring et al., 2018); to describe what is otherwise known as 'risk climate', or attitudes in the firm to risk management (Sheedy, Griffin & Barbour, 2015); the behaviours that are accepted in the ordinary conduct of business (Ring et al., 2018); and in a sense that relates to excessive risk-taking, as the object that emerges from the competing institutional logics of opportunity versus precaution (Palermo et al., 2016). It is this last description of risk culture as competing logics of opportunity and precaution that is most relevant to short-termism, although that description is related to ethical culture. That research relates failure of ethical culture to imbalances between the logic of opportunity, which encourages risk-taking, and the logic of precaution, which encourages risk avoidance and control (Palermo et al., 2016). Where the logics become unbalanced through poor ethical climate, excessive risk-taking can become accepted in the firm.

The various meanings and roles for culture given above illustrate the difficulties of adapting such an ambiguous concept as a regulatory instrument. Apart from the fuzziness of the concept, the difficulties include that culture changes over time and no legal standard for required culture can be prescribed (Tomasic, 2017). Regulators may nevertheless seek to require standards of culture, and seek evidence of that culture being implemented, which might lead to means–ends decoupling whereby culture becomes an end in itself and compliance becomes a symbolic rather than substantive exercise (Palermo et al., 2016). Regulators are navigating a field where ‘culture cannot simply be regulated into existence’ (O’Brien et al., 2015, p. 117), and efforts to change culture have been largely unsuccessful (Tomasic, 2017). Despite the acknowledged difficulty in adopting culture as a regulatory instrument, it is argued that regulators have little choice but to do so (O’Brien et al., 2015).

The prior research separates culture into trading culture, ethical culture and risk culture, with interaction between these objects, but not a clear regulatory view of which is important and how. While these forms of culture are associated with excessive risk-taking, prior research also argues that regulatory attention to culture is a matter of trust and confidence in financial firms. Whatever the reasons, prior research agrees that adopting culture as a regulatory instrument is a substantial challenge. As with the other elements of regulation discussed above, the voice of regulators is unheard as prior research has not explored public messaging from prudential regulators in relation to culture.

3.5 SUMMARY AND RESEARCH QUESTIONS

The main purpose of this literature review was to assess the extent of research that answers Dallas’s (2012) call for further specialist analyses of regulatory responses to short-termism. The scope of the review was the instruments of corporate governance, remuneration and culture. Research of those instruments in prudential regulation falls into three broad categories.

First is literature that measures a proxy for the effects of implementation of the regulatory responses (e.g., Cerasi et al., 2017; Díaz et al., 2017). The empirical research on those regulatory components is, at best, inconclusive. For research into prudential regulation as a whole, results are inconclusive because of variation between financial firms, jurisdictions and types of regulation applied (Jakovljević et al., 2015).

Studies of corporate governance are evaluating the effects of its characteristics, rather than the effects of regulation on its characteristics (De Haan & Vlahu, 2015). Analyses of remuneration regulation measure its effects on various factors, such as share price and executive pay, with no clear consensus on impact to date. Importantly, studies in these areas have often focused on a single regulatory instrument rather than on the entirety of the regulatory regime (Jakovljević et al., 2015).

Second is literature that describes the regulatory responses (e.g., Dallas, 2012; O'Brien et al., 2015). At the level of prudential regulation as a whole, the literature finds a shift in attention from regulators to the root cause of financial crises as how incentives encourage risk-taking, rather than in the technical characteristics of the system (Kobrak & Troege, 2015). On regulation of corporate governance in financial firms, the literature provides particulars of the reforms, such as increased requirements for independent directors, requirements for directors to have higher skills and experience in risk management, and requiring more board attention to risk (Hopt, 2012). On remuneration, the prior research describes the FSB principles, including the requirement for a board remuneration committee, alignment of remuneration to risk-taking, and required deferral periods.

Third is literature – largely on the topic of culture as a regulatory solution – that identifies where regulators could increase attention. Prior research in this stream advocates increased regulatory attention to ethical culture, and attention to attitudes to risk management or risk culture. This research provides some indication of how regulators could give that attention, although to date there is little if any research that examines whether regulators are following the suggestions made.

The voice of the regulator as public messaging is absent in all three streams of the prior research. The regulators' view of the intended impact of regulatory reforms in corporate governance and remuneration is highly relevant, but unexplored. The views of regulators as to the efficacy of individual and collective regulatory responses is also highly relevant, but also unexplored. Finally, and particularly on culture, the regulators' views as to the importance of their attention, and their ability to influence culture, are unexplored.

The lack of research attention to the views of prudential regulators is an important gap to fill given Birkland and Warnement's (2017) challenge to the 'classic assumption' of policy change following a focusing event. 'Focusing events' are high-consequence crises or disasters that 'structure the evolution of regulatory policy over a generational time span' (Birkland & Warnement, 2017, p. 107). The classic assumption is that after a focusing event such as the GFC, legislators make policy change after increasing their attention to the problem. Birkland and Warnement's (2017) finding is that frontline regulators feel focusing events most acutely, and they respond with policy change. Having shown their challenge holds in a study of aviation regulation, Birkland and Warnement (2017) consider it 'should guide future research on the influence of focusing events' (p. 125). Taking up the challenge suggests a study of regulators, focused on their views, rather than the rule-making or enforcement studies that have dominated regulatory scholarship (Balleisen, 2016; Tomic, 2016).

In order to address this gap and explore the voice of the regulator, this study asks how prudential regulators justify and explain instruments proposed as mitigation of short-termism. It also asks two preceding questions, firstly how do prudential regulators' define of short-termism, and secondly, what instruments do prudential regulators propose to mitigate short-termism?

Research question 1 – how do prudential regulators define short-termism? – is important because (as introduced in Chapter 1) while prior research defines the forms of short-termism particular to financial firms as excessive risk-taking and disaster myopia, it is not clear that these are the definitions prudential regulators would give. Analysing a framework of regulatory responses to short-termism developed from prior research is invalid if prudential regulators do not adopt the same definitions.

Research question 2 – what instruments do prudential regulators propose to mitigate short-termism? – is important because prior research on the regulatory responses of corporate governance, remuneration and culture is inconclusive, and not specifically directed at how those responses mitigate excessive risk-taking and disaster myopia. Dallas (2012) noted that her introduction of the regulatory responses is not exhaustive and encouraged further research. As the voice of prudential regulators is unheard in the literature, it is not clear how the regulatory components are intended to mitigate short-termism. It is also not clear whether there are other regulatory instruments of equal or greater importance than those cited in the prior research.

Research question 3 – how do prudential regulators justify and explain those instruments? – is important because prior research provides possible justifications regulators would give for the regulatory components of corporate governance and remuneration. In 2010 the BCBS published upgraded corporate governance principles for prudential regulators to adopt (Hopt, 2012). In Figure 2 this is illustrated as international regulation justifying corporate governance regulation. A similar justification is illustrated for remuneration, as the prior research notes the introduction of remuneration principles by the FSB in 2011 (Cerasi et al., 2017) and remuneration directives by the EU in 2015 (Gaizo et al., 2018).

Chapter 4: Research Design

This chapter describes the research design adopted to answer the questions stated in section 3.5. Section 4.1 discusses the method used in the study; section 4.2 details the jurisdictions in the study; section 4.3 describes the data collection; and section 4.4 describes the coding of the data.

4.1 METHOD AND RESEARCH DESIGN

4.1.1 Method

This is a qualitative study of regulators from four jurisdictions using the method of structured, focused comparison (George & Bennett, 2005). A qualitative method is adopted given the lack of prior research attention to the voice of the regulator. While interviews were the preferred method for the study, access could not be arranged in sufficient time to enable completion of the thesis within deadlines. The alternative method adopted is exploration of the regulators' public messaging, providing flexibility to find definitions of short-termism, regulatory instruments, and their justifications not uncovered in prior research.

The purpose of studying multiple jurisdictions is to reduce limitations from studying single cases. For a study of financial regulation, there is a known harmonising influence from the Basel accords, but also a known difference in implementation in different jurisdictions. This supports studying multiple jurisdictions to uncover consistencies in regulatory instruments directed at short-termism. Studying multiple jurisdictions with structured, focused comparison addresses limitations of accumulating knowledge from multiple cases.

4.1.2 Structured focused comparison

Structured, focused comparison originated in studies of diplomacy and deterrence, focused on specific aspects of multiple cases to extract explanatory variables, avoiding tendencies to follow idiosyncrasies in the data without clear objectives that enable cumulative knowledge (Mahoney, 2011). The purpose is to provide analytic explanations that may be generalisable from a small number of cases, leaving descriptive explanations to historians.

The ‘structure’ comes from preparing a set of general questions, inferring answers by analysing the cases chosen for comparison (George & Bennett, 2005). General questions standardise the analysis to accumulate findings. This provides a basis for generalisations not otherwise available for a small-N study. In this thesis, the research questions are used as the general questions.

The ‘focus’ is in examining a specific aspect of the selected cases, because a single study cannot explore everything interesting about those cases (George & Bennett, 2005). The research objectives drive the analysis, rather than the analysis following the data. In this study, the focus is regulators’ discussion of short-termism and its mitigation.

Prior research in regulation that has used structured, focused comparison includes analysis of whistleblowing practices in France and the UK (Etienne, 2014), analysis of how domestic factors constrain implementation of EU directives in different jurisdictions (Dörrenbächer & Mastenbroek, 2017), and how operational implementation of the ‘soft law’ of international banking regulation falls short of strict compliance (Quaglia, 2018). These are studies intended to identify common causal factors, whereas the research aim in this study is to identify commonalities in justifications and explanations of regulatory tools.

4.2 JURISDICTIONS ANALYSED

The countries analysed are the United Kingdom, Ireland, Canada and Australia. Each country is an advanced, open economy that is a member of the Organisation for Economic Co-operation and Development (OECD). The UK, Canada and Australia are members of the Group of Twenty (G20), which includes Ireland through the European Union. Each country has a common-law legal system (University of Ottawa, n.d.).

Selecting these jurisdictions provides a balance between comparability and differences. The focus is regulatory responses to short-termism shared between all four jurisdictions, avoiding generalisation from idiosyncratic features of regional regulation, or from variation in crisis response.

The regulators in the study are the Australian Prudential Regulation Authority

(APRA), the Office of the Superintendent of Financial Institutions (OSFI) from Canada, the Financial Services Authority (FSA) – and its successor, the Prudential Regulation Authority (PRA) – from the United Kingdom, and the Central Bank of Ireland (CBI).

The focusing event of the study is the GFC of 2007–09, experienced differently in each jurisdiction. The UK had the first bank run of the GFC (Shin, 2009) and Ireland was the first country to guarantee the liabilities of its banks to restore financial stability (Claessens et al., 2010). Canada and Australia had a relatively 'good' financial crisis (Clark, 2011), with no bank failures or recession, although bank asset quality declined in each jurisdiction (Allen, Boffey & Powell, 2011). The difference in GFC experiences may suggest a trite comparison of failure in regulation in some jurisdictions to success in the others. However, analysis of the better GFC experience of Australia and Canada has not eliminated the pre-crisis resources boom, and luck, as factors (Hill, 2012; White, 2014).

Variations in effect of the GFC raise the possibility of different regulatory responses in the jurisdictions, although there is a harmonising effect from international banking regulation (Jakovljević et al., 2015). The harmonisation of banking regulation can be argued a number of ways. One is that harmonisation makes comparison redundant, because standards of regulation are the same across jurisdictions. A counterargument is that harmonisation extends only so far, as it leaves implementation to local discretion. The position this thesis takes is that underlying regulatory approaches are similar enough to make comparison valid, and different enough to make comparison worthwhile (White, 2014).

4.3 DATA COLLECTION

The data source for the study is publications from regulators in the jurisdictions selected. Generally, the public messaging of the regulator is heard in speeches, information publications, newsletters, discussion papers, letters to firms, consultation papers and news releases. The Australian regulator, APRA, also releases its submissions to parliamentary and public inquiries. The data collection process involved extracting the jurisdictional equivalent of these broad categories.

The web extraction tools Outwit Docs and Outwit Hub were used to download publications from regulator websites for the period from 1 January 2008 to

31 December 2018. Outwit Docs is an extraction tool that automates downloading of documents from a given URL, within parameters set by the user. Outwit Hub has the same document download function, adding the ability to save a page link in native html format. This tool was used where regulator publications were not made available as a separate pdf file, for example. Downloaded publications were saved into DevonThink Office Pro, a document database program, and manually grouped into category folders. Publications were categorised by jurisdiction and type, and irrelevant material was eliminated. More details of this process are in the following sections. The publications extracted are shown in Table 2.

Table 2 Publications extracted – dataset

Publication type	Number of publications				
	Canada	Australia	UK – PRA	UK – FSA	Ireland
Speeches	114	83	129	91	289
Information publications	10	22	151	0	41
Newsletters	21	10	0	105	0
Discussion papers	3	14	0	134	8
Letters to firms/industry	48	15	7	44	0
Consultation paper	0	0	32	74	106
Submissions	0	35	0	0	0

Following this process, standard keyword groups were developed to narrow the analysis to publications that referenced short-termism. The keywords, derived from short-termism as excessive risk-taking or disaster myopia, are:

short-termism OR excessive AND risk* OR myopia

Tables 3, 4, 5, 6 and 7 showing the number of documents falling into or outside of keyword groups are included in the following sections, which also give more detail of data collection by jurisdiction.

4.3.1 Canada

The Office of the Superintendent of Financial Institutions (OSFI) has been the regulator of Canadian banks and insurers since 1987 (Office of the Superintendent of Financial Institutions, n.d.). Publications were extracted from the English language OSFI website using Outwit Docs. An initial set of 901 publications was downloaded and reduced through analysis of date and publication type. The first analysis eliminated 16 publications from before 2008, 112 financial sector statistical reports, 92 consumer warning notices and 123 special instructions to firms about returns to the regulator. A further elimination identified 141 publications from the Office of the Chief Actuary, a department within OSFI responsible for pension regulation and the Canada Pension Scheme, not relevant to this study. OSFI corporate information – annual reports, budgets and accountability information – totalling 69 publications was eliminated. The final analysis set is detailed in Table 3.

Table 3 Canada (OSFI) publications

Publication type	Number of documents	Short-termism group	%
Discussion papers	3	1	33
Information publications	10	1	10
Letters to firms	48	5	10
News release	11	0	0
Newsletters	21	3	14
Speeches	114	23	20

4.3.2 UK

From 2001 to April 2013, the Financial Services Authority (FSA) was responsible for conduct, market and prudential regulation in the United Kingdom (FSA, n.d.). In 2013 the FSA was disbanded and prudential regulation became the responsibility of the Prudential Regulation Authority (PRA), a new division of the Bank of England (Bank of England, n.d.).

Financial Services Authority

Outwit Hub was used to extract prudential regulation publications in two main categories for the period from 2008 to 2013. The first category extracted was 'Communication' publications from www.fsa.gov.uk/library/communication, in the categories 'Press releases', 'Statements', 'Speeches', 'Newsletters' and 'Dear CEO letters', excluding 'Enforcement notices and application refusals' and 'Forms' from extraction. The second category extracted was 'Policy' publications in the categories 'Consultation papers', 'Discussion papers', 'Policy statements', 'Guidance consultations', 'Finalised guidance', and 'Guidance notes', excluding 'Handbook material’, ‘Pre-FSA regulatory material’ and ‘Historic Listing Rule’ from extraction.

A total of 2010 publications were extracted from the FSA website and categorised. Excluded from the analysis set were 28 annual reports, 87 regulatory decisions, 212 guidance and handbook documents, 61 international relations publications 34 occasional papers, 32 business plans, 356 miscellaneous other publications and 73 speeches related to conduct or market regulation. The final analysis set is detailed in Table 4.

Table 4 UK (FSA) Publications

Publication type	Number of documents	Short-termism group	%
Consultation paper	88	16	18
Discussion paper	61	7	11
Newsletters	105	4	4
Policy release	77	15	19
Press releases	660	22	3
Speeches	91	24	26
CEO letters	44	3	7

Prudential Regulation Authority

Outwit Hub was used to extract 769 publications from the Bank of England website for the period from 2013 to 2018 in the categories Prudential Regulation publications, News and minutes, and Speeches. Excluded were 28 Corporate Information documents, 20 Financial Stability documents, 18 Payments documents, 35 other Central Bank, 13 Quarterly bulletins, 66 Reporting guidance documents and 129 Statistics publications. Also excluded were118 speeches given by Bank of England officials with responsibility for Banknotes, Markets, Financial stability, Monetary Policy, Research, Gold, Payment and settlement infrastructure, and financial statistics. As the Governor has responsibility across the range of functions, his speeches were included. The final analysis set is detailed in Table 5.

Table 5 UK (PRA) Publications

Publication type	Number of documents	Short-termism group	%
Consultation paper	32	7	22
News release	17	1	6
Other prudential regulation	43	0	0
Prudential regulation approach documents	12	0	0
Prudential regulation letters	7	0	0
Speeches	129	28	22
Statement of policy	51	12	24
Supervisory statement	45	5	11

4.3.3 Ireland

The Central Bank of Ireland (CBI) has been directly responsible for prudential regulation since 2010. Before 2010, prudential regulation was carried out by the Irish Financial Services Regulatory Authority, known as the Financial Regulator (Citizens Information, 2018). As the last publication on the Financial Regulator's website was dated 30 October 2007, none of its publications were extracted for analysis.

Outwit Hub was used to extract Consultation Papers and Discussion Papers from the Publications section, relevant publications from the Regulation section, and speeches from the News and Media section of the CBI website. To the extent possible, functions and sectors not relevant to prudential regulation – Irish Financial System and Monetary Policy, Consumer Protection in financial products, Anti-Money Laundering – were excluded in the initial extraction. Using Outwit Hub, 1162 publications were extracted and then categorised to determine the analysis set. From the extraction, 54 Corporate publications, 24 Decisions, 42 Economic letters, 28 Financial Stability, 11 Monetary Policy, 119 other regulation, 260 research papers and 31 statistics publications were eliminated. Speeches where the topic was not prudential regulation were excluded, eliminating 106 publications. The final analysis set is detailed in Table 6.

Table 6 Ireland (CBI) Publications

Publication type	Number of documents	Short-termism group	%
Consultation papers	111	36	32
Discussion papers	8	1	13
How we regulate guides	15	2	13
Information papers	8	2	25
Regulation guidance	18	3	17
Speeches	289	77	27

4.3.4 Australia

Prudential regulation in Australia has been carried out by the Australian Prudential Regulation Authority (APRA) since 1998 (Australian Prudential Regulation Authority, n.d.). Relevant publications extracted from the APRA website were Discussion papers, Information papers, Letters to industry, Newsletters, Policy consultations, Speeches and Submissions. Publications for the period from 2009 to 2018 were extracted using Outwit Hub. Documents relevant for 2008 but no longer available from the APRA website were manually downloaded from the National Archives website. The final analysis set is detailed in Table 7.

Table 7 Australia (APRA) Publications

Publication type	Number of documents	Short-termism group	%
Discussion papers	11	5	45
Information papers	28	2	7
Letters to industry	15	0	0
Newsletters	10	5	50
Speeches	83	31	37
Submissions	21	10	48

4.4 CODING

Publications were analysed and coded in NVivo. The first coding stage was a keyword search for ‘excessive risk-taking’, ‘myopia’, or ‘short-term’. The purpose of this was to assess whether the publication was relevant for this study. Where the keyword or phrase had been used as a form of short-termism, further analysis and coding proceeded.

Codes were developed at a high level from the literature reviewed and the research question, following the principle of identifying a problem, identifying a relevant forward-looking regulatory tool, and supporting that tool with a justification. A set of more granular problem types, tools and justifications was then developed through a pilot analysis of the Discussion Papers in the dataset. From this process, the coding set was finalised, as shown in Table 8. Codes developed from the literature and question are marked with a single star. Codes developed from the pilot analysis are marked with two stars.

Table 8 Coding of Publications

Problem Form of short-termism	**Regulatory Response** Forward-Looking tool	**Justification**
Excessive risk-taking* Disaster myopia* Shareholder short-termism** Long-term financial soundness**	Culture* Governance* Remuneration* Risk management** Market Discipline** Stress Testing** Supervision**	Research and Analysis* International regulation* Lessons learned* Industry acceptance** Government policy** Gaps in regulation* Market failure**

Coding proceeded by jurisdiction, in the order Australia, UK, Canada and Ireland. Table 9 sets out the number of publications coded.

Table 9 Publications coded – Analysis set

Publication type	Number of publications coded				
	Canada	Australia	UK – PRA	UK – FSA	Ireland
Speeches	42	48	58	43	127
Information publications	1	6			9
Newsletters	4	8		5	
Discussion papers	1	6		9	6
Letters to firms/industry	5	0		0	
Consultation paper			8	33	8
Submissions		15			

Following coding, material was analysed to infer answers to the general questions. Coded material fit to the general questions broadly as shown in Table 10. However, there was substantial overlap between codes and the general questions.

Table 10 General questions and coding

Question	Relevant codes
How do prudential regulators define short-termism?	Form of short-termism • Excessive risk-taking • Failure to promote long-term financial soundness • Disaster Myopia • Shareholder short-termism
What instruments do prudential regulators propose to mitigate short-termism?	Forward Looking Tools • Financial Capacity • Market discipline • Risk management • Stress Testing • Culture • Governance • Remuneration • Supervision
How do prudential regulators justify and explain those instruments?	Justifications • Market failure • Lessons learned • Gaps in regulation • International regulation • Government policy • Research and analysis • Industry acceptance

The next chapter provides the findings from the four jurisdictions researched for this thesis.

Chapter 5: Findings

This chapter provides the findings of the study, presented as answers to the research questions given in Chapter 3:. To answer research question 1, section 5.1 sets out regulators' definitions of short-termism. The main finding is that regulators discuss excessive risk-taking without providing a clear definition of it. To answer research question 2, section 5.2 outlines what strategies regulators propose to mitigate short-termism. The main finding is that regulators connect the components into a cohesive whole, rather than regarding each as a separate instrument. Regulators are also found discussing regulatory components as mitigation of several of the forms of short-termism they discuss. To answer research question 3, section 5.3 outlines how regulators justify their strategies. The major finding of that section is that regulators mostly look to peer regulators or lessons learned as justification for new forms of regulation. The findings are broadly consistent between jurisdictions except where specifically noted.

5.1 HOW REGULATORS DEFINE SHORT-TERMISM

The purpose of this section is to provide findings to research question 1: *how do prudential regulators define short-termism*?

Prudential regulators discussed some form of short-termism in just over one-quarter of the publications analysed. Of the discussions of short-termism, the two most common were excessive risk-taking and failure to promote long-term financial soundness. Disaster myopia and shareholder short-termism were the third and fourth most commonly discussed respectively. **Figure 3** represents the proportion in which these forms of short-termism were found. The major novel finding, and one that requires further interpretation (provided in Chapter 6), is that regulators discuss failure to promote long-term financial soundness as a form of short-termism. Interpretation of regulators' discussions is also necessary to find regulators' definition of excessive risk-taking, because they often discuss the problem but rarely if ever define it. Another novel finding is regulators defining shareholder short-termism, unexpected in a study focused on interventions within the firm rather than on external behaviours.

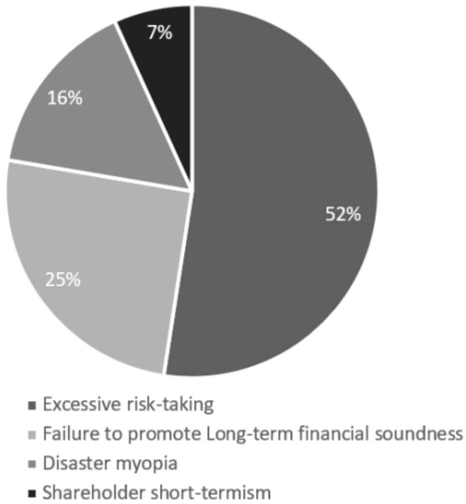

Figure 3. Forms of short-termism given by prudential regulators

5.1.1 Excessive risk-taking

Regulators often discuss excessive risk-taking, but do not define this concept. The quote below from a consultation paper from the UK regulator is an example of a regulator discussing excessive risk-taking without a definition.

> *Excessive risk-taking in the banking industry has led to the failure of firms and to systemic problems in both the UK and globally. The causes of this excessive risk taking are numerous and complex.*[3]

In prior research, excessive risk-taking is defined as a tendency for firms or individuals to make decisions that prioritise short-term profit over the long-term financial health of the firm (Dallas, 2012). Prudential regulators are found discussing short-term profit or gain with excessive risk-taking, as the quote below from a speech by a UK regulator illustrates.

> *The current European banking directive, CRD III, is designed to incentivise effective risk management. However, I believe there is more that can be done to incentivise the right long-term behaviour and culture. Too often reward structures continue to encourage short-term gain and excessive risk-taking.*[4]

Regulators are not found discussing an explicit definition of excessive risk-taking, although their discussion of the term together with short-term gain implies acceptance of a definition similar to that provided in prior research.

5.1.2 Failure to promote long-term financial soundness

As with excessive risk-taking, prudential regulators often discuss failures to promote long-term financial soundness, without providing a definition. The quote below from a speech by an Irish regulator is an example discussion of failure of financial firms to put sufficient focus on long-term financial soundness, without a clear definition of the term.

> *Leading up to the onset of the crisis, the prevailing culture in the banking system resulted in a collective groupthink failure, an excessive build-up of heavily correlated risks, and a disregard for customers. While I do not want to tar all with the same brush, in too many banks today, I see an overly legalistic approach, that focuses too much on whether something is legal or not and not sufficiently on the outcomes – either for the long-term safety and soundness of the bank or the interests of the customer.*[5]

The definition of excessive risk-taking from the prior research (Dallas, 2012) describes how this behaviour harmed the firm's long-term financial soundness. In that sense, failure to promote long-term financial soundness is a subcategory of excessive risk-taking. However, regulators' discussions of failure to promote long-term financial soundness were often found separately from discussion of excessive risk-taking. The quote below from an Australian information paper is an example of discussion of detriment to long-term financial soundness arising from incentives, but without any specific mention of excessive risk-taking.

> *The global financial crisis in 2008 laid bare the potentially disastrous consequences of getting the balance of incentives and accountability wrong, by encouraging practices by individuals that were detrimental to the long-term interests of the financial institutions that employed them.*[6]

Implicit in regulators' discussions is that excessive risk-taking is a behaviour that can damage long-term financial soundness, but is not the only problem. Other behaviours can also damage long-term financial soundness, as further discussed in Chapter 6.

5.1.3 Shareholder short-termism

UK prudential regulators discussed shareholder short-termism. The quote below, from a speech by a UK regulator, is an example of the discussion of shareholder short-termism. In this example, the regulator discusses how market pressure for results can lead to excessive risk-taking within the firm.

> *Too often reward structures continue to encourage short-term gain and excessive risk-taking. It is also important to recognise that while progress is being made in relation to these issues, this will need patience and resolve in the face of the markets' remorseless focus on the next earnings announcement.*[7]

5.1.4 Disaster myopia

Regulators defined disaster myopia in two ways that are consistent with the prior research. The first definition is a tendency to overlook low-probability risks (Dallas, 2012). The quote below from a speech by an Australian regulator is an example of disaster myopia being discussed in terms that match the definition provided in prior literature.

> *The notion that institutions are reluctant to contemplate their own mortality is described as 'disaster myopia'. It is seen as an important psychological factor behind various banking crises over recent decades and, most recently, behind the poor performance of narrow Value-at-Risk (VAR) modelling during the crisis. In simple terms, disaster myopia refers to the propensity of economic agents to underestimate the probability of adverse outcomes after long periods of stability. Memories coloured by the 'Golden Decade' proved far too short!*[8]

The second definition is where regulators discuss the experiences of firms that adopt a business strategy without having considered, managed and mitigated all associated risks. The problem regulators discuss, found in prior research (Hopt, 2012), is failure of financial firms to recognise the risk involved in their underlying business of providing credit and transforming maturity. The quote below from a speech by an Australia prudential regulator illustrates a concern that firms have sometimes pursued a business strategy, and in some cases a high-risk business strategy, without undertaking necessary planning for potential consequences.

> *There is nothing wrong with an institution or an industry pursuing a higher risk strategy, provided it does so consciously, and with appropriate risk management capabilities and financial capacity… hindsight and supervisory scrutiny would suggest… considerations of risk were not always front of mind.*[9]

Similar discussions by regulators of a lack of planning for potential risks were found across the four jurisdictions.

5.2 REGULATORY INSTRUMENTS PROPOSED TO MITIGATE SHORT-TERMISM

The purpose of this section is to provide findings that answer research question 2: *what instruments do prudential regulators propose to mitigate short-termism?* The forms of short-termism provided in section 5.1 above are presented with the mitigations regulators propose, starting with excessive risk-taking. Regulators' discussions of mitigation of disaster myopia, shareholder short-termism and failure to promote long-term financial soundness follows. The major novel finding in the discussions of mitigations is the extent of connections regulators make. Regulators discuss a limitation of one component and connect that to the need for further components.

Following Dallas's (2012) framework of individual incentives, the analysis focuses on the regulatory components of corporate governance, remuneration and culture. Each of these three components was evident in the regulatory texts reviewed. However, regulators connect these components to additional instruments of financial capacity, market discipline, stress testing, risk management, and supervision. Figure 5 illustrates the suite of regulatory components that prudential regulators propose to mitigate short-termism, with connections between components shown. The following sections explain how prudential regulators discuss those regulatory components as mitigating various forms of short-termism, and how these components are connected. This section concludes by relating the initial components of corporate governance, remuneration and culture to the literature reviewed in Chapter 3:.

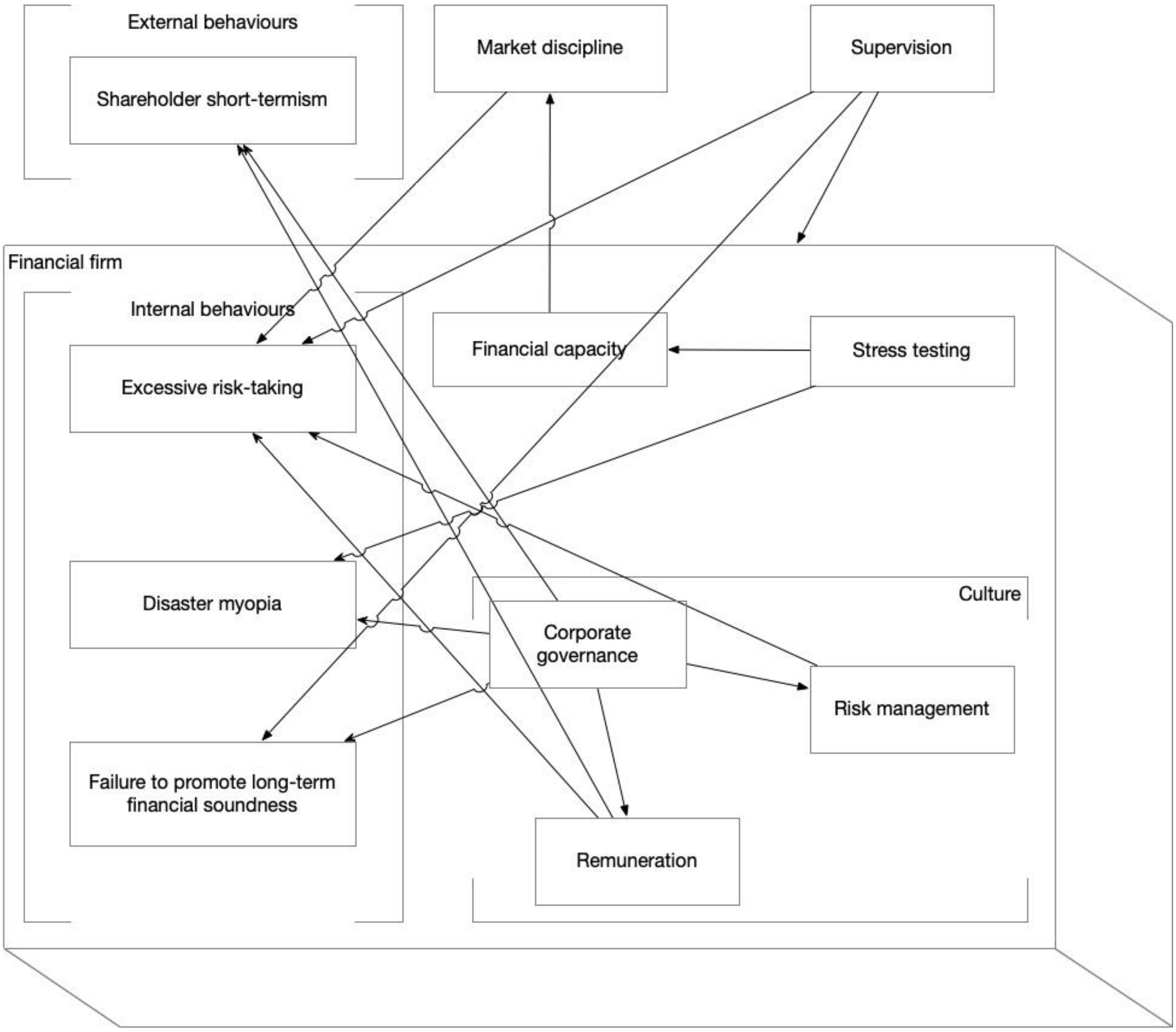

Figure 4. Regulator perceptions of short-termism and instruments cited as mitigation

5.2.1 Mitigation of excessive risk-taking

There are seven components regulators discuss as mitigating excessive risk-taking. The connections between the components and to excessive risk-taking are illustrated in **Figure 4**.

The first regulatory component is financial capacity. To simplify, financial capacity is capital and liquidity that provide the firm with a buffer against unexpected losses or market movements. The financial firm can then take risks and continue to carry out its functions if risks materialise as adverse outcomes. The quote below from a speech by a Canadian regulator illustrates the purpose of capital.

> *The world of banking is never predictable, which is where capital comes in: capital is for the unexpected.*[10]

Regulators closely associated the second component of market discipline with financial capacity. Prudential regulators require financial firms to disclose their financial capacity for risk-taking, and their risks. Regulators expect markets will discipline firms to align risks with financial capacity, and discussed excessive risk-taking as a failure of this expected discipline. The quote below from a speech by an Australian regulator is an example of failure of market discipline being discussed.

> *The expectation of a government backstop has been one area where, unfortunately but necessarily, expectation has been matched by reality ... If this remains the prevailing expectation, then we have an even bigger problem than we thought: not only will markets fail to adequately act as a disciplining device, but they will continue to encourage and reward excessive risk-taking.*[11]

Regulators discuss the failure of market discipline to prevent excessive risk-taking as a reason for the third component of risk management. That is, since prudential regulators cannot rely on market discipline to constrain risk-taking, they will do so directly by requiring risk management that limits risk-taking to financial capacity. The quote below from a speech by a Canadian regulator illustrates how regulators discuss requirements for risk management as opposed to financial capacity alone.

> *Capital is one area which many have focused on. Capital is extremely important, but it is not a panacea. An institution will never have enough capital if there are material flaws in its risk management processes.*[12]

The following quote from a discussion paper published by the Irish regulator is an example of how regulators discuss the need for firms to align risk-taking, expressed as risk appetite, with their capacity for risk.

> *Setting risk appetite without taking into account the risk capacity of the entity may have serious consequences.*[13]

The same discussion paper considers how regulators expect firms to put limits on risk-taking, and to have systems and processes to stay within those limits.

> *Risk limits should clearly set out the qualitative or quantitative parameters used in assessing a specific category of risk and also a measurement of the aggregate amount of that risk. Risk limits need to be measurable and specific.*[14]

Regulators associate the requirement for a risk management component with the fourth component, standards of corporate governance for financial firms. The reason prudential regulators give for this is that risk management in isolation will be ineffective unless the board provides oversight within the firm. That is, regulators discuss risk management as going beyond limits on risk-taking and monitoring systems, and extending into the way that the firm carries out its business. Regulators discuss their expectations that firms will embed risk management and require board oversight. Another quote from the Irish discussion paper is an example of this expectation.

> *The responsibility for risk is not simply the risk management and compliance function. Effective risk management begins with the identification, acceptance and management of risk at the board level, carried through the management function and operationalized in the front office.*[15]

Regulators associate embedded risk management with the fifth component, remuneration policies that are aligned with risk. Regulators discuss how risk management might be undermined by remuneration incentives that promote excessive risk-taking. The following quote from a speech by an Australian regulator is an example of how regulators discuss the need for alignment of remuneration and risk management, in this case referring to deferral of pay until after risk outcomes can be assessed.

> *Theoretically, if all risks could be identified with 20-20 foresight at the time of underwriting, then no ex post adjustment would be needed. But, this is hardly realistic. For this reason, prudent remuneration structures should always contain some element of deferred pay which is subject to reassessment in line with actual risk outcomes.*[16]

Regulators also associate remuneration with corporate governance in a similar way that they associate risk management with corporate governance. The reason regulators cite is their expectation that the alignment of remuneration policies to risk management requires oversight within the firm, expected to be provided by the board.

A sixth component inside the firm is culture, which regulators associate with risk management, corporate governance and remuneration. Regulators discuss culture as being the way that other components are embedded, rather than as a separate tangible component. That is, culture is a part of attitudes to risk management in the firm, a part of how the firm is governed, and a part of how remuneration is designed within the firm. **Figure 4** illustrates those discussions, with culture shown as incorporating the other components of risk management, corporate governance and remuneration. The quote below from an information paper published by the

Australian regulator is an example of risk culture, a subset of culture, being embedded as attitudes to risk management.

> *The 2008 financial crisis revealed major shortcomings in the way the global financial sector managed risk. This was not solely an issue of poor risk measurement, or weaknesses in internal control structures. It also reflected deficiencies in institutions' attitudes towards risk. In combination, a poor risk culture and weak risk management (the former often being the root cause of the latter) led to unbalanced and ill-considered risk-taking, to significant losses and, in some cases, to institutional failures.*[17]

Other prudential regulators consider culture in a similar way as the embedding of other components. However, Australia is the only jurisdiction to formally require the board to focus on risk culture:

> *Prudential Standard CPS 220 Risk Management … introduced a new requirement for each Board of APRA regulated authorised deposit-taking institutions (ADIs) and insurers to ensure that it: 'forms a view of the risk culture in the institution, and the extent to which that culture supports the ability of the institution to operate consistently within its risk appetite, identifies any desirable changes to risk culture and ensures the institution takes steps to address those changes'.*[18]

The seventh component regulators discussed as mitigating excessive risk-taking, and one that is external to the firm, is supervision. The quote below, from a speech by an Australian prudential regulator, illustrates supervision being discussed as an intervention regulators can make if a firm is taking excessive risk.

> *[M]acro-prudential supervision is nothing new. It is what prudential supervisors have always done – or should have done … It should not be overlooked that, when done well, the timely interventions of supervisors to counteract excessive risk-taking by firms is inherently counter-cyclical.*[19]

A finding that is discussed further in Chapter 6 is that regulators across jurisdictions do not describe how supervision mitigates excessive risk-taking. In the quote above, for example, the regulator discusses intervention, but precisely how that intervention would unfold is not described. This lack of clarity as to how supervision operates was common across the four jurisdictions.

5.2.2 Mitigation of disaster myopia

Four of the components discussed by prudential regulators as mitigating excessive risk-taking – financial capacity, risk management, remuneration and governance – are also discussed as mitigation of disaster myopia. As illustrated in **Figure 4**, regulators also discuss the additional component of stress testing financial capacity. As for excessive risk-taking, regulators expect firms will have financial capacity for the risks they take, alongside systems and processes for risk management, alignment of risk through remuneration policies, and internal governance of those components. Further, prudential regulators expect firms will incorporate planning for the unexpected into the operation of those components. The quote from an Australian regulator in section 5.1.4 – *'considerations of risk were not always front of mind'* – illustrates regulators' discussion that firms must allow for the unexpected.

Regulators directly intervene for disaster myopia with stress testing of financial capacity for the unexpected. As explained previously, regulators require firms to have financial capacity for the risks they take. A limitation of that regulatory component, related in the background to short-termism in section 2.1, is that neither firms nor regulators can foresee every possible risk (Black, 2006). Regulators overcome the limitation by requiring firms to stress test and show their ability to survive the impact of unforeseen risks. Surviving the unforeseen can come from having sufficient financial capacity or from other mitigating actions. The quote below from a speech by a UK prudential regulator is an example of regulators discussing stress testing as a mitigation of the impact of unforeseen events.

> *Rather than wait to intervene at the point at which the bank runs out of capital and/or liquidity, supervisors have mandated that banks periodically run a test of how well they could cope, if the economic environment were to turn out to be significantly worse than the consensus forecast. The supervisor demands that the bank be able to demonstrate that it would be able to withstand this adverse scenario, either because the bank already has in place the capital that would enable it to do so, or because the bank could plausibly undertake in good time management actions that would enable it to withstand the stress.*[20]

5.2.3 Mitigation of shareholder short-termism

A finding limited to the UK jurisdiction is regulators discussing mitigation of shareholder short-termism with remuneration and corporate governance requirements. The main source of data for the finding was the UK regulator's consultations on remuneration regulations that it introduced in 2009, before FSB principles were finalised in 2011. As is further discussed in section 5.3, regulators in other jurisdictions adopted remuneration requirements from the FSB principles, whereas the UK developed the principles from its own research.

The finding is that UK regulators discuss remuneration standards, including required corporate governance oversight, as preventing firms from adopting policies that short-term shareholders would prefer. An example of this discussion is provided below in a quote from a UK consultation paper.

> *Pressure from shareholders with short-term perspectives is one factor why remuneration packages geared towards the short-term and leading to excessive risk-taking are offered to employees in the banking industry.*[21]

UK prudential regulators discuss a similar association between remuneration and corporate governance in the same consultation paper, quoted below. In this case, the theoretical expectation is that boards will set remuneration policies consistently with the long-term interests of the firm, but short-term shareholders may upset that theory. In response, prudential regulators require boards to take responsibility for remuneration policies and ensure alignment with risk management, resisting shareholder short-termism.

> *Company boards, assisted by remuneration committees, should work in the interests of shareholders and set appropriate remuneration policies that provide banking employees with suitable long-term incentives. However ... there is no reason to believe that this automatically happens in practice. Pressure by short-term shareholders to adopt a short-term focus may obviously also affect the board.*[22]

5.2.4 Mitigation of failure to promote long-term financial soundness

Regulators discuss four components as mitigation of failure to promote long-term financial soundness, components that they also discuss as mitigation of the three other forms of short-termism. **Figure 4** illustrates regulators' discussion of remuneration, corporate governance, culture and supervision as mitigation of failure to promote long-term financial soundness.

For remuneration, prudential regulators discuss expectations firms will internalise the substance of regulatory requirements, rather than merely follow the rules. Regulators discuss internalisation of the substance as necessary for remuneration policies that promote long-term financial soundness. The below quote from an Australian information paper is an example of how regulators discuss an expectation that firms will internalise objectives of remuneration principles to promote long-term financial soundness.

> *When APRA first consulted on its prudential requirements on remuneration for ADIs, general and life insurers in 2009, the related discussion paper noted: 'APRA's principles-based approach ... will be aimed at ensuring compliance with both the intent and the substance of these requirements'. APRA's review found that, overall, remuneration frameworks and practices across the sample did not consistently and effectively meet APRA's objective of sufficiently encouraging behaviour that supports risk management frameworks and institutions' long-term financial soundness.*[23]

Regulators discuss culture as the embedding of other components, including corporate governance, as essential for promotion of long-term financial soundness. The quote below from a speech by an Irish regulator is an example of how prudential regulators connect culture, governance and long-term financial soundness.

> *The culture within an institution is a key factor in determining its safety and soundness, as it is key to the effectiveness of its governance arrangements. It drives the values and beliefs which govern how individuals treat others, perform their tasks, take decisions, assess risk and, perhaps most importantly, do the right thing to ensure they operate in a safe and sound manner. It is the foundation upon which a strong governance framework is built and is critical to a firm's long-term prosperity.*[24]

The final component that regulators discuss as necessary to promote long-term financial soundness is supervision. Prudential regulators discuss supervision as adaptable to complexity in a way that rules-based oversight is not. Regulators discuss rules that cannot respond quickly or flexibly enough to promote long-term financial soundness, and supervision as an essential activity that rules do not constrain. The following quote from a speech by an Australia regulator illustrates this type of discussion.

> *An alternate philosophy recognises that no set of rules can adequately and efficiently deal with something as complex as a financial system. This philosophy views supervision as the primary means by which we can promote long-term safety and soundness of financial firms, and regulation is a tool that supports and empowers supervision. Such an approach can be tailored and take account of*

nuances and subtleties in individual and national circumstances in a manner a rulebook cannot, and will be more flexible and responsive than a 'regulation first' philosophy.[25]

5.3 HOW REGULATORS JUSTIFY REGULATORY COMPONENTS

This section provides findings that address research question 3: *how do prudential regulators justify and explain those instruments proposed to mitigate short-termism?* Table 11 summarises the justifications regulators give, the proportion in which they were found, describes the justification and provides indicative examples. Subsequent subsections further explain these justifications. **Table 11** lists the justifications in descending order, from the most commonly given by regulators to least commonly given.

The detail provided over the following subsections illustrates how the failure of prior regulatory regimes, such as during the GFC, provides justifications for reform. In particular, regulators discuss the unmet expectations of markets to prevent excessive risk-taking as a market failure. Market failure highlights that additional forms of regulation are required, discussed by prudential regulators as gaps in regulation. In a formal sense, the source of those reforms is international regulation from bodies such as the FSB and BCBS; in a less formal sense, regulators look to lessons learned from peers. In some instances, regulators justify reform with their own research and analysis. Government policy and industry acceptance are other justifications found, though less often.

Table 11 Regulators' justifications for regulatory reforms

Justification	Proportion	Number of observations	Description	Indicative example
International regulation	31%	77	Principles issued by an international regulatory body, such as the BCBS or FSB, are cited as making local regulation necessary, or the work of international peer regulators being cited as justifying the local regulator's activities.	*The international regulatory framework has been significantly strengthened since the GFC. In addition to higher capital and liquidity requirements, there has been much more attention given to governance, remuneration, risk appetite, and risk culture.*[26]
Lessons learned	25%	61	Regulators identify deficiencies in regulatory components, or lack of a necessary component, through crises or failures of firms.	*There are a lot of lessons to be gleaned from what happened in the lead-up to the GFC. But, to me, the one over-arching takeaway for supervisors is that effective prudential supervision of financial institutions is about risks, rather than rules.*
Research and analysis	20%	49	Regulators conducting their own empirical analysis of firms, or relying on research conducted by others, such as inquiries or academics.	*In November and December last year we asked 22 firms (9 investment banks, 6 major UK banks, 5 smaller UK banks and 2 building societies) to provide us with information about their remuneration practices.*[27]
Gaps in regulation	13%	31	Identification of a requirement or instrument that does not operate as predicted or intended, or is voluntary, or does not require enough of financial firms to function effectively.	*[A] firm's ability to deal with a situation where inappropriate remuneration policies are leading or could lead to excessive risk taking is limited, since there is [currently] no express requirement to ensure that a firm's remuneration strategy is consistent with sound risk management.*[28]

Market failure	5%	13	The failure of markets to regulate firms as expected.	*[M]arkets should be supported to act as a disciplining device on wayward financial institutions. Unfortunately, this is another area where expectations have yet to be matched by reality. As an ally for the supervisor, market discipline has tended to be a fickle friend.*[29]
Government policy	3%	8	Government's desire for new or changed regulatory requirements.	*In October 2008, the Prime Minister announced that the Government would be examining with APRA what domestic policy actions on executive remuneration would be appropriate to avoid excessive risk-taking in Australia's financial institutions.*[30]
Industry acceptance	2%	6	Firms' acceptance of regulatory requirements, either by already complying, or in welcoming additional requirements.	*Some of the Heads of [human resources] HR and Non-executive Directors of firms we spoke to welcomed the increased attention on remuneration risk, as they felt it increased their relative power (vis-à-vis the revenue generating business areas) to both influence the set-up of remuneration policies and exert control over the outcome of bonus decisions.*[31]
	100%	247		

5.3.1 International regulation

As noted in section 3.5, regulators may ‘satisfice’ to deal with the problem of high information costs of responding to a regulatory problem with a new requirement. The formal ‘satisficing’ by regulators to address news problems is in referring to principles introduced by international regulatory bodies, such as the BCBS and FSB. This is consistent with prior research findings that regulators are giving increased attention to corporate governance because of BCBS principles (Hopt, 2012) and introducing remuneration requirements because of FSB principles (Cerasi et al., 2017). References to these principles are found in regulators’ discussions of those components.

Regulators provide similar justifications for increasing international attention to culture. In the quote below from an Australian information paper, the regulator discusses the introduction of principles by the FSB, and the activities of peer regulators, as justifying the activities it is undertaking in relation to risk culture.

> *Consistent with the FSB’s Guidance on Supervisory Interaction with Financial Institutions on Risk Culture, there has also been a move by prudential supervisors to place greater emphasis on specifically assessing risk culture, and considering how risk culture affects the safety and soundness of institutions.*[32]

In the same information paper, the regulator cites the public challenges to financial firms to do better on culture as justifying its own public advocacy.

> *Globally, many financial sector regulators have sought to draw attention to failings in risk culture within the financial sector, and publicly challenged the industry to do better.*[33]

5.3.2 Lessons learned

A less formal ‘satisficing’ as justification for new regulatory components is regulators learning lessons from peer jurisdictions. This is the case for remuneration, where requirements have been adopted in Australia and Canada despite their relatively better performance during the GFC. The quote below is an example of the discussion of lessons learned from other jurisdictions.

> *Financial institutions are clearly at risk if their performance incentives reward underwriting without also ensuring that the payment of those incentives is aligned to the quality of the business being written. That seems obvious. Well, it might be obvious, but that didn't stop it happening in the lead up to the global financial crisis … Thankfully, most of these examples occurred overseas … But, we also shouldn't sit idly on our hands and think: 'that couldn't happen here'.*34

The same type of justification is found consistently across all four jurisdictions, not only for remuneration and not only with reference to peer jurisdictions. For example, prudential regulators discuss instances outside financial firms where corporate governance has been found deficient. The quote below from a speech by an Irish regulator is an example of this type of discussion. In the full speech, a dominant CEO is correlated with deficient corporate governance that can cause failure or near-failure of financial firms, such as that of AIG during the GFC.

> *While aggressive accounting policies and earnings management, were undoubtedly part of the financial scandals in the early nineties, this was combined with the existence of an overly dominant CEO in many of the cases. Tanzi at Parmalat, Kozlowski at Tyco among others, whose own greed, hubris and personal ambition brought about the failure of these companies. We saw these symptoms emerge again during the financial crisis of 2008.*35

5.3.3 Research and Analysis

As **Table 11** shows, regulators justify particular requirements most often by referring to lessons learned or to other regulators. An explanation from prior research is that information costs of new forms of regulation are high (Birkland & Warnement, 2017). The justifications found in the data imply that information costs are borne in one jurisdiction, and the findings transmitted to others. The UK is the only jurisdiction in the study that justifies remuneration as a new regulatory component with reference to prior research, followed by empirical analysis. The quote below from a UK consultation paper cites academic research that correlates shareholder short-termism with short-term remuneration incentives.

> *Bolton et al. (2006) ... show that in this case optimal remuneration packages may give emphasis on boosting stock values in the short-term at the expense of the long-term value of the firm ... Bushee (2001) demonstrates that institutional investors with a short-investment horizon do place undue weight on near-term expected earnings ...Graham et al. (2005) ... find that a significant proportion of respondents would forgo profitable investments to meet a short-term earnings target. They also find that 78% of CFOs would sacrifice long-term firm value to smooth quarterly earnings.*[36]

The consultation paper continues with findings from the regulator's own research:

> *We found good practice in many firms, and instances also where firms were changing their practices in response to the crisis, generally in the right direction. However we also found significant weaknesses around a number of areas.*[37]

Regulators also use their own research findings to justify stronger governance of remuneration policy. The quote below from the consultation paper refers to a finding that board-level remuneration committees lack skilled and experienced members and lack independence from management of the firm.

> *In most cases members of remuneration committee members lack expertise in risk assessment. We have also seen cases where remuneration committees may have acted with less independence from the executive members of the board than would be desirable.*[38]

The UK regulator also uses its own research findings to justify broader requirements for remuneration policy coverage than remuneration committees have typically overseen. The quote below from the consultation paper reports a finding that, prior to regulations being introduced, remuneration committees oversighted executive remuneration only, while excessive risk-taking within firms could manifest at lower levels.

> *Remuneration committees have generally low levels of engagement in remuneration policies below those for executive members of the board. However, inappropriate remuneration structures at other senior management levels (and sometimes for more junior staff in the trading environment) can be key drivers for excessive risk taking.*[39]

5.3.4 Gaps in regulation

Prudential regulators discuss gaps in regulation in terms of either how an existing regulatory component is not operating as expected, or how an additional component will improve regulation overall. Their starting point is failures of market discipline. As the findings presented in subsection 5.2.1 showed, prudential regulators expect market discipline to prevent excessive risk-taking. However, the GFC illustrated that market discipline does not function as regulators expected. The quote below from a speech by a UK regulator is an example of this discussion, providing the failure of market discipline as a justification for other forms of regulation.

> *[A]s I describe in my Review, market discipline is often ineffective ... I suspect we simply have to accept that there is a 'too-big-to-fail' and 'too-connected-to-fail' category, and accept that the primary discipline on excessive risk-taking by this category comes through regulation rather than market discipline.*[40]

What those other forms of regulation are is left unsaid in the example above. The components are found in other discussions by regulators of gaps in regulation. An example discussion is of the previous lack of alignment of risk management with incentives because remuneration was not subject to regulation. The quote below from a UK regulator begins that discussion.

> *On compensation, we must integrate risk management considerations into remuneration policies.*[41]

For the first time, regulators propose addressing the gap in regulation by regulating remuneration:

> *That has not been done before, in the UK or elsewhere in the world, either by individual firms or by regulators. As a result, some bankers have been encouraged by the promise of big bonuses to take excessive risks with other people's money.*[42]

A variant of the justification is in the gaps left by voluntary codes, such as the Australian Stock Exchange (ASX) corporate governance principles evaluated by Salim et al. (2016). Regulators discuss codes of governance but justify a role for themselves in strengthening those to change voluntary compliance to compulsory requirements. The quote below from a speech by an Irish regulator is an example of those discussions.

Why did corporate governance fail? … Was it too easy for strong individuals to override principles that had no statutory backing and no enforceability? There was no statutory obligation on enterprises to comply with the corporate governance recommendations which were generally issued by international organisations unable to enforce them.[43]

5.3.5 Market failure

Regulators' discussions of the failure of market discipline to constrain excessive risk-taking were incorporated into the findings at subsection 5.2.1. Regulators also discuss market failure to justify other regulatory components. The quote below is another example of a regulator discussing an expectation that markets should provide credit discipline, but that they did not.

You might say – as Alan Greenspan did say – that the credit discipline comes from the market; that the investors – as the ultimate holders of the risk on the mortgages – would price the credit risk when purchasing securities. They should, but did they? Investors were too far removed from the point of lending to do this, and often also had the same 'pass-the-parcel' approach to risk that the Wall Street banks had. This is a classic case of market failure.[44]

5.3.6 Government policy

Government policy is found as a justification in much lower proportion than others presented here – less than a tenth as often as international regulation was discussed. Where found, the justification appeared after other justifications had been given. The quote below from an Australian discussion paper is an example. In the discussion paper, government policy is discussed after more detailed reference to international regulation, lessons learned and gaps in regulation.

In October 2008, the Prime Minister announced that the Government would be examining with APRA what domestic policy actions on executive remuneration would be appropriate to avoid excessive risk-taking in Australia's financial institutions.[45]

An interesting finding from the UK is the way regulators cite government policy to support their own views. The quote below from a speech by a UK regulator refers to government findings of a need for further reform of remuneration regulations to increase deferral periods. The regulator discusses this as advancing their agenda, rather than providing the primary impetus for the reform.

> *Later this year we will also be taking forward the recommendations in the report by the Parliamentary Commission on Banking Standards, and there too we will be issuing a consultation. On remuneration specifically, we have said publicly that we very much welcome the thrust of the Commission's recommendations, which provide the opportunity to strengthen key aspects of the current regime. One of these is deferral, where the Commission argued for longer deferral periods for variable remuneration. We agree. The current [Capital Requirements Directive] requirements of 3 to 5 years are clearly not sufficient in providing adequate alignment between risk and reward and there is, in our view, a strong case for longer periods.*[46]

5.3.7 Industry acceptance

The justification found least often overall is industry acceptance. Where found, regulators usually note industry practices are changing in anticipation of upcoming regulations. In one case, the justification was firms actively welcoming new requirements that are supporting management initiatives.

> *Some of the Heads of HR and Non-executive Directors of firms we spoke to welcomed the increased attention on remuneration risk, as they felt it increased their relative power (vis-à-vis the revenue generating business areas) to both influence the set-up of remuneration policies and exert control over the outcome of bonus decisions. They mentioned that they had been planning to make changes for some time and that our Code gave them both the incentive and the opportunity to do so.*[47]

5.4 SUMMARY OF FINDINGS

The major finding is that when discussing short-termism, regulators often cite more than one form of the problem, cite more than one instrument as a mitigant, and cite the same instrument as mitigating different forms of the problem. This supports prior research explaining short-termism as a multi-faceted problem requiring multi-faceted regulatory responses (Dallas, 2012). The following quote from a speech by an Irish prudential regulator is an example of how prudential regulators connect regulatory responses as both mitigating forms of short-termism and promoting the long-term public interest. In this case the form of short-termism named is excessive risk-taking, but a reference to surviving a plausible stress implies that disaster myopia is also evident in the regulator's thinking. The components discussed include financial capacity, stress testing, risk management, corporate governance and culture, and the regulator sums those up as forming a cohesive whole, rather than being separate components.

> *The ultimate outcome we are seeking is that banks operating in Ireland are serving the economy and society in Ireland and across Europe and in a way that is in the long term public interest – i.e., not taking excessive risk, which leaves the tax payer at risk of losses. I believe the best way to achieve this is for the banks (and indeed non-banks) operating in Ireland to … have sufficient financial resources to meet both capital and liquidity requirements today and under a severe but plausible stress; have sustainable, capital-accretive business models through the economic cycle; be governed appropriately with clear and embedded risk appetites, which drive an appropriate risk culture and control framework; and be able to recover if they get into difficulty and be resolvable if they fail, without recourse to the tax payer. These are obviously not separate objectives, but complementary and connected and they drive all that we do.*[48]

The justifications regulators commonly give – international regulation and lessons learned – suggest that regulators mostly look to each other for new regulatory responses to emerging problems, which prior research has also found (Birkland & Warnement, 2017). Regulators in all jurisdictions refer to the GFC as prompting a review of individual and collective regulatory components. Regulators discuss reform of existing regulatory components, such as risk management and corporate governance, and addition of new components, such as remuneration and stress testing. The main source of reform is peer regulators, either formally through the BCBS and FSB, or informally as lessons learned. This is also implicit in the findings this chapter reports being broadly similar between jurisdictions, except where specifically noted. To an extent, this was expected, since prior research has noted the harmonising influence of international bank regulation (Jakovljević et al., 2015).

In considering lessons from the GFC, prudential regulators discuss the requirement for more than rules alone for a system as complex as the financial sector. The findings illustrate that prudential regulators regard a combination of hard requirements and soft principles as necessary given the complexity in which they operate. Apart from soft principles, regulators also discuss their supervision of financial firms as being at least as important as the rules. Supervision is discussed by regulators as not being constrained by rules, and therefore more adaptable to changing circumstances.

Chapter 6: Analysis

The purpose of this chapter is to analyse the findings reported in Chapter 5. The analysis is structured into four subsections. The first, section 6.1, analyses regulators' discussions of excessive risk-taking and failure to promote long-term financial soundness. Section 6.2 builds on Dallas's (2012) framework of high-level causes, specific problems, and regulatory responses to short-termism, providing additional elements and more detail for existing components. Section 6.3 analyses the component of supervision, noting that the importance ascribed to it by prudential regulators supports a conclusion that the financial sector is a complex adaptive system. The final section, 6.4, analyses lessons for regulation of complex adaptive systems arising from the findings of this thesis.

6.1 RISK-TAKING AND LONG-TERM FINANCIAL SOUNDNESS

As observed in Chapter 5, regulators often discuss excessive risk-taking and failure to promote long-term financial soundness without providing a clear definition. Their discussions suggest agreement with prior research defining excessive risk-taking as prioritising short-term profit over long-term financial soundness (Dallas, 2012). However, in other contexts regulators discuss excessive risk-taking as a consequence of a flawed business strategy that fails to recognise risk; of a failure to control risk-taking; and of remuneration incentives that are not aligned with risk appetite. In other contexts, regulators discuss long-term financial soundness without referring to excessive risk-taking. Regulators refer to a need for firms to internalise principles that rules cannot prescribe, going beyond legal compliance to promote long-term financial soundness.

There are two interpretations this thesis provides of excessive risk-taking and long-term financial soundness. The first is that excessive risk-taking is not well defined by regulators because it is difficult to define. The second is that regulators know that excessive risk-taking is not the only threat to long-term financial soundness, and rules cannot prescribe what financial firms should do about those risks. These interpretations are explained below.

The first interpretation of excessive risk-taking is that it is difficult to define an acceptable level of risk-taking. Regulators discuss setting a boundary between prudent risk-taking, an essential part of banking,[49] and excessive risk-taking, which damages long-term financial soundness. This quote from a speech by a Canadian regulator points to the difficulty in setting that boundary.

> *Drawing the line between no risk taking and acceptable levels of risk taking is extremely challenging. It requires judgement, judgement and more judgement.*[50]

The second interpretation is that not all risks to long-term financial soundness come from excessive risk-taking in a financial firm's basic business model of providing credit and transforming maturity (Hopt, 2012). A 2019 survey of banking executives included legacy information technology, disruptive innovation and inability to attract talent among the perceived highest risks (Protiviti, 2019). Firms cannot choose to not take those risks and, given the uncertainties, a regulator cannot make rules to prescribe mitigation. This quote from a speech by an Irish regulator is perhaps the clearest prescription available:

> *[T]he creation of long-term value by the firm can only be assured by practical and effective risk management which pro-actively anticipates the comprehensive range of risks underlying every business.*[51]

6.2 FRAMEWORK OF CAUSES OF SHORT-TERMISM AND REGULATOR RESPONSES

The purpose of this section is to further extend the framework of causes of and regulatory responses to short-termism initially presented at Table 1. Table 12 summarises the expanded framework, developed from literature reviewed (Chapter 3:) and the findings of this thesis (Chapter 5:). This table extends Dallas's (2012) framework to provide a more granular set of categories under the information problems, structural problems and individual incentives that Dallas' framework identifies. The framework also adds planning problems as a new high-level cause. The following subsections explains these additional elements in more detail. In providing this framework, it is worth repeating Dallas's (2012) observation that each element in the framework is worthy of its own specialist paper.

Table 12 Expanded framework of high-level causes, specific problems and regulatory responses to short-termism

High-level cause	Specific problem	Regulatory response
Information problems (Dallas, 2012)	Financial reporting focused on short-term results (Dallas, 2012)	Attempts to shift focus to long-term value of firms (Dallas, 2012)
	Inaccurate assessments by Credit Ratings agencies (Dallas, 2012)	Regulation of Credit Rating agencies (Dallas, 2012)
	Complex, opaque derivatives (Dallas, 2012)	Tighter regulation of derivatives (Dallas, 2012)
	Failure of market discipline – market participants assume financial firms are too big to fail (this analysis)*	Regulation as primary restraint on risk-taking by financial firms (this analysis)*
Planning problems (this analysis)	Business strategy inconsistent with financial capacity for risk-taking, and fails to allow for unforeseen risks (this analysis)	Business strategy consistent with financial capacity – business models (Kellermann, 2015, this analysis)#[52]
		Risk management processes and systems consistent with business strategy (Kellermann, 2015, this analysis)#
		Risk management systems and remuneration policies that recognise high impact, low probability events (this analysis)*
		Stress testing of financial capacity for risk-taking from high-impact low-probability events (this analysis)*
Structural problems (Dallas, 2012)	Non-standard derivatives and other financial products (Dallas, 2012)	Standard derivatives (Dallas, 2012)
	Short-term traders versus long-term investors (Dallas, 2012)	Empowering long-term shareholders (Dallas, 2012)
		Corporate governance and remuneration standards that require the firm to resist pressure from short-term traders (this analysis)*

High Level Cause	Specific problem	Regulatory response
Individual incentives (Dallas, 2012)	Unethical, ‘trading’ cultures in firms (Dallas, 2012)	Promotion of covenantal relationship between firms and employees (Dallas, 2012)
	Ethical culture (Blair, 2016)**	Internalisation of systemic consequences of firm failure (Blair, 2016)**
		Recognise role of financial firms in serving the economy and society (Blair, 2016, O’Brien, Gilligan & Miller, 2015)**
		Embracing principles as the spirit of the law (Blair, 2016)**
	Risk and ethical culture**	Unbalancing of competing logics of opportunity and precaution (Palermo, Power & Ashby, 2016)**
	Risk climate**	Attitude to risk management (Sheedy et al., 2015, this analysis)#
	Poor corporate governance	Stronger corporate governance requirements (Hopt, 2012, this analysis)#
		Regulatory attention to board effectiveness (Kellermann, 2015, this analysis)#
		Boards that recognise governance as a mechanism for effectively dealing with complexity (this analysis)#
		Governance as internal control, Boards that take ownership of risk identification and acceptance (Aebi et al., 2012)**
	Compensation of managers (Dallas, 2012), and risk-takers within the firm (Cerasi, 2017, this analysis)#	Regulation of remuneration to align incentives with risk management – requiring deferral of incentives, malus, clawback (Dallas, 2012, Cerasi et al., 2017, this analysis)#
		Remuneration regulations that prevent firms from responding to shareholder encouragement of excessive risk-taking (this analysis)*

* New element in framework from this analysis. ** New element in framework from other prior research. # New element in framework from a combination of this analysis and other prior research.

6.2.1 Information problems

Information problems are a high-level cause of short-termism from the original Dallas (2012) framework (see Table 1). The basic problem is that market participants lack information about the long-term value of firms. Information problems arise from what the firm does or does not disclose, and how. Regulatory responses proposed by Dallas include changes to financial reporting to capture the long-term value of firms.

This thesis adds failure of market discipline as a specific problem to information problems. Prudential regulators require financial firms to disclose their financial capacity and their risks, and expect that markets will discipline firms to limit risk-taking to financial capacity. The GFC showed that market discipline does not operate as expected, partly because market participants assume financial firms are too big to fail. The regulatory response is to place greater emphasis on other regulations to constrain risk-taking, rather than relying on market discipline.

6.2.2 Planning problems

Planning problems are a new high-level cause of short-termism added to the framework by this thesis. Prior research has shown the inherent difficulty for businesses in managing for both short- and long-terms (Marginson & Macauley, 2008), a high-level cause not present within the existing Dallas framework. The interpretation this thesis adopts is that regulators are giving attention to how firms plan their business activities in the face of uncertainty.

The specific problems the category of planning problems aims to highlight is regulators' perceptions that financial firms take risks that are inconsistent with financial capacity (excessive risk-taking) and may fail to allow for unexpected events (disaster myopia). The specific regulatory responses are (i) requiring firms to have a business strategy consistent with financial capacity, (ii) requiring firms to have risk management processes and systems consistent with business strategy, (iii) risk management systems and remuneration policies that recognise high-impact, low-probability events, and (iv) stress testing of financial capacity.

Regulators' attention to planning problems may challenge Goodhart's (2011) opposition to regulators intervening to dictate how much risk financial firms should take, or even to prevent what seems like high risk-taking. However, Goodhart's opposition is predicated on either effective market discipline or on the consequences of failure of a financial firm being borne solely by shareholders or professional investors. And, to clarify, regulators are not dictating or restricting risk-taking levels *per se*. Rather, in response to failure of market discipline to prevent excessive risk-taking, prudential regulators require financial firms to plan and manage the level of risks they take.

Requirements to plan levels of risk-taking are also directed at disaster myopia, by forcing financial firms to take into account the impact of high-impact, low-probability events. This requirement targets Taleb's (2005) proverbial 'picking up pennies in front of a steamroller'; financial firms may adopt a high-risk strategy, one that makes consistent small pay-offs in normal times. In a crisis, that strategy may not only cease to provide pay-offs, but also expose the financial firm to a loss that exceeds the total of all prior gains.

Planning problems also incorporates stress testing as a specific regulatory response to disaster myopia. Prior research has discussed that neither firms nor regulators can foresee every possible risk (Black, 2006). Stress testing and incorporating results into planning mean that neither firms nor regulators have to foresee the worst risks. Daniel Mudd, former CEO of Fannie Mae, said during the GFC that it isn't fair to blame anyone for not predicting the unthinkable. Structural engineers avoid that problem entirely; they design bridges to survive 1 in 2000 year flooding (Setunge et al., 2018), a stress event unlikely to occur in any given human lifetime.

6.2.3 Structural problems

Structural problems are characteristics of financial markets that encourage short-termism. Among the specific problems Dallas (2012) discusses are complex derivatives that encourage speculative trading and share traders' pressure on firms for short-term results.

The typology in Table 12 adds two specific problems to the structural problems Dallas (2012) highlights, namely, (i) corporate governance, and (ii) remuneration. The specific problem Dallas discussed is that short-term shareholders may pressure firms to deliver quick profits by taking excessive risks. The response Dallas proposes is to empower long-term shareholders, which is an external regulatory intervention. As

Chapter 5 documents, prudential regulators in the UK (only) discussed remuneration requirements, including aspects of corporate governance, that prevent the firm from succumbing to pressure from short-term shareholders. Those interventions stop the firm from adopting remuneration incentives that target short-term results, providing an internal regulatory intervention to a structural problem.

6.2.4 Individual incentives

Dallas (2012) discusses individual incentives as how managers in firms respond to incentives. Dallas describes how remuneration, culture and corporate governance can operate to either encourage management of the firm for the long-term, or instead to cause short-termism.

This thesis found regulators' discussions of specific problems and regulatory responses broadly consistent with Dallas (2012). However, her categories of culture, corporate governance and remuneration are expanded with additional detail from the literature, this thesis or a combination of both. This subsection summarises this detail.

Before giving that detail, however, there is one exception to the broad confirmation of Dallas's framework of individual incentives; namely, her 'trading culture' is not discussed by regulators. Dallas (2012) discusses 'trading culture' as arising from perceived transactional relationships between employees and firms, singling out high levels of senior executive remuneration as one cause. This thesis found prudential regulators specifically excluded levels of remuneration from their purview:

> *[O]n this topic it is for boards, not the FSA, to determine individual levels of remuneration.*[53]
>
> *We have always seen the setting of remuneration levels as the responsibility of boards and shareholders.*[54]

Prudential regulators were found giving greater attention to culture, albeit with little clarity around how it manifests. The literature reviewed in Chapter 3 identifies numerous definitions of culture, including as risk culture (Sheedy et al., 2015) and as ethical culture (O'Brien, Gilligan, & Miller, 2015), with interactions between the two (Palermo, Power, & Ashby, 2016). This thesis finds prudential regulators discussing risk culture as attitudes to risk, but also attending to to other aspects of culture. Regulators closely associate culture with remuneration and governance, and with internalisation of the objective of long-term financial soundness. As for a 'hard' finding, this thesis identifies regulatory attention to the various aspects of culture as worthy of additional research.

This analysis expands the Dallas framework in the areas of corporate governance and remuneration. Regulatory attention to board effectiveness was discussed by Kellermann (2015), and this analysis finds that attention being given by prudential regulators. As reported by Hopt (2012), corporate governance has long been a part of international banking regulation. Post-GFC, prudential regulators are giving greater attention to how corporate governance operates. One aspect of that operation is regulatory attention to whether corporate governance is viewed as a compliance requirement by the firm, or whether sound governance is viewed as essential to dealing with complexity in a manner that ensures long-term financial soundness. Prudential regulators also expect, as a minimum, that boards will provide oversight of risk and controls within the firm, extending to remuneration incentives for all risk-takers in the firm.

6.3 MITIGATION OF SHORT-TERMISM WITH SUPERVISION

Prudential regulators discuss supervision as not constrained by rules, and as adapting to changing circumstances. The framework of regulatory responses at **Table 12** is, at a high level, the current set of rules that mitigate short-termism in the prudentially regulated financial sector. But prudential regulators note that rules alone are insufficient, particularly for promotion of long-term financial soundness. Implicit in regulators' discussions is a view of supervision as part of implementing the framework in a complex adaptive system such as the financial sector (White, 2014), rather than as a component of the framework itself.

The emphasis regulators placed on supervision has important implications for the **Table 12** framework of components proposed for mitigation of short-termism. Regulators regard supervision of the components as being as important as, or more important than, the components themselves. This suggests that individual components or the whole framework could not be adapted to other domains unless something like supervision is present for implementation. This interpretation finds support in prior research; Hopt (2012), for example, is supportive of strengthening bank corporate governance regulation post-GFC, but considers the component as only appropriate for the financial sector, where supervision is present. This thesis finds prudential regulators share that perspective; their discussion of the importance of supervision suggests that without it other requirements will be ineffective.

6.4 LESSONS FROM COMPLEX ADAPTIVE SYSTEMS

The finding that prudential regulators mostly cite international regulation and lessons learned supports Birkland and Warnement's (2017) proposition that, since the information costs of developing new regulations are high, regulators 'satisfice' by importing or adapting regulations from peer jurisdictions. This proposition is supported by Goodhart's (2011) discussion of international banking regulation developing through peer regulators meeting to discuss their responses to the latest crisis. That process is reported to settle on a best practice, which is then adopted by all prudential regulators.

Consistent responses to short-termism across jurisdictions support an interpretation that prudential regulators confine their lessons to the experience of their peers, rather than broader regulatory domains. As White (2014) observes, prudential regulation of the financial sector, as a complex adaptive system, may have lessons to learn from regulators of other complex adaptive systems, such as transportation, forestry management, communications, food safety or infectious diseases.

While regulators discuss lessons from peers, there remains potential to revisit learnings from both within and outside prudential regulation, an analysis not possible within the space of this thesis. An example within prudential regulation is research finding regulators have responded to past crises with increased capital requirements, but never to a level that would have been enough to have prevented the failures of financial firms during those crises (Kobrak & Troege, 2015). This cycle may be continuing, as regulators have increased capital requirements in response to the GFC, rather than considering other proposals such as adopting insurance as a form of resilience for financial firms (Kashyap, Rajan & Stein, 2008). Regulators steering away from levels of remuneration may be locking themselves into a similar cycle of repeatedly lengthening required deferral periods for incentives but not considering proposals for discouraging perceptions of transactional relationships between employees and financial firms.

Chapter 7: Conclusions

This chapter summarises the thesis, including theoretical and practical contributions (section 7.1), limitations of the study and suggestions for further research (section 7.2).

7.1 SUMMARY OF THESIS

The underlying issue this thesis has sought to examine is how prudential regulators define and mitigate short-termism, and how they justify their mitigations of it. The site of the analysis is the regulatory reform that followed the GFC of 2007–09, an event discussed in prior research as the manifestation of short-termism (Dallas, 2012).

The GFC prompted a suite of regulatory reform, including a third Basel accord on capital measures for banks – although increased requirements would not have been enough to have prevented any of the failures of financial firms of 2007–09 (Kobrak & Troege, 2015). Regulators have recognised that it may be more efficient to target underlying behaviour that causes short-termism rather than technical requirements alone. This thesis followed that turn in regulation, focusing on behaviour.

Dallas (2012) gives a comprehensive overview of how short-termism is correlated to the GFC, and structures regulatory responses to those causes. Focusing on prudential regulation, this thesis adopted Dallas (2012) as a framework to classify regulators' discussion of mitigation of short-termism. Prior research has examined the regulatory responses within individual incentives such as corporate governance, remuneration and culture (Hopt, 2012; de Haan & Vlahu, 2015; Cerasi et al., 2017; Wilson & Wilson, 2016). However, these have not been examined as a cohesive whole, nor in the specific context of short-termism. This thesis has addressed that gap with analysis of the voice of the regulator, which has been largely unheard in the prior literature. The research questions addressed how regulators define short-termism, the instruments proposed as mitigation of short-termism, and the justifications discussed for those mitigations.

An implication from this thesis is that future research of prudential regulation should consider interconnections between regulatory instruments more closely. Prior research in banking regulation focuses on capital and financial impacts (Jakovljević et al., 2015). From this thesis it is evident that regulators are concerned with capital as an element of financial capacity for risk-taking, but are also interested in limiting firms' risk-taking to that financial capacity. That interest in limiting risk-taking has further implications for research into the instruments discussed by regulators as constraining risk-taking. Prior research into the instruments of corporate governance, remuneration and culture, for example, is generally limited to one of those instruments (e.g., Aebi et al., 2012; Cerasi et al., 2017; Wilson & Wilson, 2016). Regulators regard each instrument as part of a connected whole, an interconnection not evident in prior research with the notable exception of White (2014).

A practical contribution of this thesis is to suggest that prudential regulators take up White's (2014) suggestion of learning lessons from regulators of other complex adaptive systems. Findings are mostly consistent between jurisdictions, partly due to the harmonising effect of international bank regulation (Jakovljević et al., 2015) and partly to the 'satisficing' found in prior research – importing and adapting a regulatory instrument from another jurisdiction (Birkland & Warnement, 2017).

This thesis expands Dallas's (2012) framework with one new high-level cause, five new specific problems, and 17 new regulatory responses to short-termism (summarised in **Table 12**). The new high-level cause added is planning problems, with one specific problem added to this cause: a business strategy inconsistent with financial capacity for risk. Four new regulatory responses are applied to that specific problem: requiring a strategy consistent with financial capacity for risk, requiring controls to limit risk-taking to that capacity, requiring risk management processes to recognise high-impact, low-probability events, and stress testing of financial capacity. The thesis adds failure of market discipline to the high-level cause of information problems, and regulation as the primary restraint on risk-taking is the regulatory response added. The thesis adds one regulatory response to the high-level cause of structural problems, namely, corporate governance and remuneration regulation to require firms to resist pressure form short-term traders. The thesis adds ethical culture, risk climate, and risk and ethical culture as specific problems to the high-level cause of individual incentives. The thesis adds 11 aspirational and actual regulatory responses from the findings and from prior research (Palermo et al., 2016; Blair, 2016; O'Brien et al., 2015) to the high-level cause of individual incentives.

An important finding the expanded framework captures is that regulators interconnect the various components directed at short-termism, rather than proposing each as a separate item. For example, regulators discuss excessive risk-taking as a failure of market discipline, requiring regulation of risk management in response; risk management requires oversight, provided by corporate governance; and incentives can undermine risk management, requiring regulation of remuneration. Prudential regulators connect components into a whole because they discuss the financial sector as a complex adaptive system, one in which rules alone will be ineffective in preventing the short-termism that leads to instability.

A second important finding is that regulators discuss the need for both hard and soft law. Limitations of space prevent further exploration of that finding in this thesis. One element of this is that regulators seek internalisation of principles, particularly ones that value the long-term over short-term profit. The turn to principles as a response to a complex adaptive system has been found in prior research (White, 2014), as regulators consider it more efficient to target behaviour as the root cause of crises (Jakovljević et al., 2015). The second element is the importance regulators place on supervision. Regulators discuss supervision as being unconstrained by rules, and thus able to respond to complexity. While regulators across jurisdictions were found emphasising the importance of supervision, a Canadian regulator was found noting the lack of academic attention to supervision.[55]

The expanded framework provides a structure for research of other regulatory domains for the exchange of lessons and practices. Research of other regulatory domains need not be limited to the complex adaptive systems recommended by White (2014) and could be limited to a particular aspect of other domains. For example, prior research has identified a focus on short-term profit and a lack of planning as the cause of inadequate mine rehabilitation in the mineral extraction industry (McCullough, 2016). Regulatory tools found in that domain – financial capacity for successful site rehabilitation, and closure plans with clear completion criteria (Blommerde, Taplin & Raval, 2015) – bear superficial similarities to instruments that prudential regulators discuss. Since mine rehabilitation regulation has provided a mixture of both good and bad outcomes (Lamb & Erskine, 2016), there is potential for both it and prudential regulation to learn lessons from broader sources.

In considering the framework here, and any other framework that structures analysis, it should not be overlooked that prudential regulators discuss their responses to short-termism as a cohesive whole. This presents an issue for future research, which should concentrate on specific elements to provide depth in analysis, but in doing so risks emphasis on particular elements, rather than the whole. The GFC, for example, should serve as a reminder of prior over-reliance on market discipline as the only constraint on excessive risk-taking.

7.2 LIMITATIONS AND FURTHER RESEARCH

The purpose of this section is to set out research limitations of this thesis and recommendations for further research.

7.2.1 Analytical limitations

The analytical framing of this thesis is that short-termism is a set of behavioural problems that manifested in the GFC, problems that can be changed or mitigated with regulatory responses. That framing, and the space limitations of the thesis, mean that deeper criticisms of neoliberal policy as encouraging 'light-touch' regulation and causing the GFC have not been explored here (Cioffi, 2011; Fenger & Quaglia, 2015). Also left unaddressed is prior research that criticises 'regulatory orthodoxy' that remains neoliberal even after the failures of the GFC (Tombs, 2015).

One direction further research could take is assessing whether regulation is as 'light touch' as is argued. That would involve a detailed evaluation of the regulatory responses covered in this thesis, an approach taken elsewhere in evaluation of BCBS credit-risk regulation (Baud & Chiapello, 2017). That research found the extent of intrusive rules challenging views that a light-touch neoliberal agenda dominates. Further research taking that direction might find nuances in regulatory practice not recognised in debates about neoliberalism.

7.2.2 Data and method limitations

There are limitations inherent in the choice of data and method adopted for this research. Data was sourced from regulator publications from four English-speaking jurisdictions with common-law legal frameworks. Relying on publications limits the ability to clarify meanings and test propositions drawn from the analysis. An example of where more clarity would have been beneficial is in seeking a clearer definition of excessive risk-taking from regulators, and more detail of what they consider essential for promotion of long-term financial soundness.

Clarifying what prudential regulators mean by excessive risk-taking, and how they think it should be prevented, would be a rich vein of further research. Research that provides quantifiable assessment and disclosure of acceptable risk against financial capacity would be particularly worthwhile and may reinvigorate market discipline as a regulatory component. Having said that, the degree of interconnectedness regulators perceive between instruments is not evident in prior research. For further research to make a practical contribution to prudential regulation it should avoid concentrating on regulatory instruments as discrete responses.

7.2.3 Research of other complex adaptive systems

Prudential regulators discuss their supervision of firms as an essential regulatory component over and above the rules, an indication of a complex, adaptive system, but observe that supervision receives less research attention than the rules.[56] A related observation is the difficulty of measuring effectiveness of supervision, since the only evidence of success is that no firms have failed.[57] Research of regulation of other complex adaptive systems could examine components similar to supervision, and how effectiveness of that component is measured in that domain.

Comparative research into other complex adaptive systems could also consider regulators' justifications found in this thesis. The post-GFC regulatory reforms in prudential regulation are policy responses, yet it is not apparent from this analysis what justifications should be accepted for this type of response. If, for example, there is a necessary standard for evidence-based policy, it is not clear how these regulatory responses would be assessed against that standard. Future research could compare justifications discussed by prudential regulators with other regulatory domains with a safety objective but a different evidence frame, such as aviation, for insights into policy development.

Notes

1 Kay sourced the quote from Ian Fraser, *Shredded: Inside RBS, The Bank That Broke Britain* (Edinburgh: Birlinn, 2014). Fraser, in turn, attributed the quote to Vincent Dahinden, an RBS investment banker. In fact the article with the quote does not provide a source. The full quote, from a 2004 article in Institutional Investor:

> One CDO originator said although the Scottish fund management community includes some of the largest fund managers in the U.K., they do not traditionally invest in structured products and most of their assets are in equities or government bonds. He said that over the next five years these are likely to move into credit products, but he added, 'We're investment bankers, we don't care what happens in five years'.

2 *Reforming Remuneration Practices in Financial Services*. FSA Consultation Paper 09/10, March 2009.

3 *Delivering Effective Corporate Governance: The Financial Regulator's Role*. Speech by Hector Sants, Chief Executive, FSA, at Merchant Taylors' Hall, 24 April 2012.

4 *Transforming Banking For Customers: A Regulatory Perspective*. Speech by Ed Sibley, Deputy Governor, Central Bank of Ireland, 20 October 2017.

5 *Remuneration Practices at Large Financial Institutions*. Information Paper April 2018.

6 *Delivering Effective Corporate Governance: The Financial Regulator's Role*. Speech by Hector Sants, Chief Executive, FSA, at Merchant Taylors' Hall, 24 April 2012.

7 *The Australian Banking System Under Stress?* Speech by John Laker, Chairman, APRA, at Australian Business Economists, Sydney, 9 June 2010.

8 *Risk Culture*. APRA Information Paper, October 2016.

9 *Challenges Facing Financial Institutions and Regulators*. Remarks by Superintendent Julie Dickson, Office of the Superintendent of Financial Institutions Canada (OSFI) to the Langdon Hall Financial Services Forum, Cambridge, Ontario, 6 May 2008.

10 *Matching Expectations With Reality*. Speech by Wayne Byres, Chairman, APRA, to Hong Kong Monetary Authority (HKMA), Global Association of Risk Professionals (GARP) Global Risk Forum, Hong Kong, 11 November 2015.

11 *Changing Times: The Regulatory Future and Canada's Banking Sector*. Remarks by Superintendent Julie Dickson, Office of the Superintendent of Financial Institutions Canada (OSFI) to the Montreal Chapter of Chartered Financial Analysts (CFA) Montreal, Quebec, 27 October 2010.

12 *Risk Appetite: A Discussion Paper*. CBI, 2014

13 Ibid.

14 Ibid.

15 Executive remuneration as part of risk governance.

16 *Risk Culture*. APRA Information Paper, October 2016.

17 Ibid.

18 *Risk-Based Supervision: How Can We Do Better? An Australian Supervisory Perspective*. Speech by David Lewis, General Manager, APRA, to Toronto Centre Program on Supervisory Experiences in Implementing Global Banking Reforms, Toronto, 19 June 2013.

19 *A Cure for Crises: Work in Progress*. Speech by Thomas F. Huertas, Director, Banking Sector, and Vice Chairman, FSA, Merton College, Oxford, 14 September 2010.

20 *Reforming Remuneration Practices In Financial Services*. FSA Consultation Paper 09/10, March 2009.

21 Ibid.

22 *Remuneration Practices at Large Financial Institutions*. Information Paper, April 2018.

23 Address by Ed Sibley, Director of Credit Institutions, to the Institute of Banking, 17 November 2016.

24 *Matching Expectations With Reality*. Speech by Wayne Byres, Chairman, APRA, to Hong Kong Monetary Authority (HKMA), Global Association of Risk Professionals (GARP), Global Risk Forum, Hong Kong, 11 November 2015.

25 *Risk Culture*. APRA Information Paper, October 2016.

26 *Reforming Remuneration Practices In Financial Services*. FSA Consultation Paper 09/10, March 2009.

27 Ibid.

28 *Matching Expectations With Reality*. Speech by Wayne Byres, Chairman, APRA, to Hong Kong Monetary Authority (HKMA), Global Association of Risk Professionals (GARP), Global Risk Forum, Hong Kong, 11 November 2015.

29 *Remuneration: Proposed Extensions to Governance Requirements for APRA-Regulated Institutions*. APRA Discussion Paper, 28 May 2009.

30 *Reforming Remuneration Practices In Financial Services*. FSA Consultation Paper 09/10, March 2009.

31 *Risk Culture*. APRA Information Paper, October 2016.

32 Ibid.

33 *Executive Remuneration as Part of Risk Governance*. Speech by David Lewis, General Manager, APRA, to the The Financial Institutions' Remuneration Group Annual Conference, 18 September 2012.

34 *Culture and Governance: Acting Together for a Happy Marriage*. Address by Sylvia Cronin, Director of Insurance Supervision, to the Life Conference, 18 November 2015.

35 *Reforming Remuneration Practices In Financial Services*. FSA Consultation Paper 09/10, March 2009.

36 Ibid.

37 Ibid.

38 Ibid.

39 *Building a More Stable Global Banking System*. Speech by Adair Turner, Chairman, FSA Global Financial Forum, New York, 27 April 2009.

40 Turner Review Press Conference: speech by Adair Turner, Chairman, FSA – speaking notes and slides for the press, 18 March 2009.

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42 *The Regulation Agenda: Update on Bank Recapitalisation and New Corporate Governance Requirements*. Address by Matthew Elderfield, Head of Financial Regulation, CBI, to the Association of Compliance Officers in Ireland, 22 November 2010.

43 *Risk-Based Supervision: How Can We Do Better? An Australian Supervisory Perspective*. Speech by David Lewis, General Manager, APRA, to Toronto Centre Program on Supervisory Experiences in Implementing Global Banking Reforms, Toronto, 19 June 2013.

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45 *The Changing Face of Prudential Policy*. Speech by Katharine Braddick, Director for Prudential Policy, Prudential Regulation Authority, at the The Future of Financial Services Summit, London, 11 March 2014.

46 *Remuneration Practices in the Wider Financial Sector*. FSA Discussion Paper FS09/5, December 2009.

47 The Banking Landscape. Speech by Ed Sibley, Director of Credit Institutions Supervision, 14 March 2017.

48 Regulators in all jurisdictions discuss risk-taking as part of banking. This quote from a speech by a Canadian regulator is an example: ‘Our role as Canada’s prudential regulator requires an ongoing balance between restraining excessive risk-taking while allowing financial institutions to take reasonable risks and compete effectively.’ From *Risk and Resilience – Preparing for the Unforeseen*. Remarks by Assistant Superintendent Jamey Hubbs (OSFI) to the 2017 Risk Canada Conference, Toronto, Ontario, 8 June 2017.

49 *Consolidated Oversight and the Special Nature of Financial Institutions*. Remarks by Superintendent Julie Dickson, Office of the Superintendent of Financial Institutions Canada (OSFI), to the INSOL Eighth World Quadrennial Congress, Vancouver, British Columbia, 21 June 2009

50 Remarks by Sylvia Cronin, Director of Insurance Supervision, CBI, at European Insurance Forum, 16 March 2016.

51 Although Kellermann (2015) does not provide extensive detail of what her ‘business models’ regulatory component involves, she provides enough to inductively credit that component to her work.

52 *Delivering Effective Corporate Governance: The Financial Regulator’s Role*. Speech by Hector Sants, Chief Executive, FSA, at Merchant Taylors’ Hall, 24 April 2012.

53 John F, Laker, Chairman, Australian Prudential Regulation Authority, opening statement to the Senate Standing Committee on Economics, Canberra, 23 October 2008.

54 ‘For any capital regime to work, supervisory agencies need to have the real world expertise and specialization to oversee market practitioners, mandates that are focused on the important and specialized function of supervision and regulation, and the will and operational independence to act. But these initiatives require a lot more work than setting a capital rule, and have attracted much less academic attention. That needs to change.’ Remarks by Superintendent Julie Dickson, Office of the Superintendent of Financial Institutions Canada (OSFI), to the 2011 Financial Services Invitational Forum Cambridge, Ontario, 27 April 2011.

55 ‘Globally, there are many more people involved in supervision than in writing the rules, which suggests we have a vested interest in determining what makes supervision effective. So why is so much attention being paid to rules, with virtually no focus on the role of supervision?’ *Too Focused on the Rules; The Importance of Supervisory Oversight in Financial Regulation*. Remarks by Superintendent Julie Dickson, Office of the Superintendent of Financial Institutions Canada (OSFI), to the Heyman Center on Corporate Governance New York, New York, 16 March 2010

56 ‘One of the challenges of supervision is that it can sometimes be difficult to measure success. Failure on the other hand is much more obvious, and public.’ *Risk-Based Supervision: How Can We Do Better? An Australian Supervisory Perspective*. Speech by David Lewis, General Manager, APRA, to Toronto Centre Program on Supervisory Experiences in Implementing Global Banking Reforms, Toronto, 19 June 2013.

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