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Exploring the Effects of the ‘Bonus Cap’ Rule: The Impact of Remuneration Structure on Risk-Taking by Bank Managers

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Exploring the Effects of the ‘Bonus Cap’ Rule: The Impact of Remuneration Structure on Risk-Taking by Bank Managers

This article explores the effects of the bonus cap rule on UK banks’ remuneration practices with a view to evaluating its likely impact on the financial incentives faced by senior managers to make risky business decisions. The main argument is that the ratio of variable to fixed remuneration is only one of the factors that determine the intensity of financial incentives for UK bank managers to make risky decisions. More crucially, the steps taken by major UK banks to evade the effects of the cap by introducing fixed pay allowances, which are paid in shares but are legally structured as fixed remuneration, have created additional risk-taking incentives. Indeed, it is shown that paying part of executive remuneration in shares as such, rather than partly determining the amount of remuneration based on corporate financial performance, is a significant driver of risk-taking. It follows that there is no reason to believe that the bonus cap has achieved any improvement in bank senior managers incentives and, therefore, that EU law’s emphasis on the ratio of variable to fixed remuneration is misplaced.

Keywords: bonus cap, executive remuneration, CRD IV Directive, prudential regulation, corporate governance, variable remuneration

I. Introduction

The 4th Capital Requirements Directive, known as CRD IV,¹ contains a controversial provision setting an upper limit to the amount of variable remuneration bank senior managers can receive

¹ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive

as a function of their fixed remuneration (the bonus cap rule). Unsurprisingly, this provision has been opposed by the Prudential Regulation Authority (PRA), which has noted that the significant increase in fixed remuneration, as a result of the new rule, is likely to weaken banks in times of crisis, as earned fixed remuneration cannot be clawed back.² In a similar vein, in September 2013 the Treasury brought an unsuccessful legal challenge against the bonus cap rule on the grounds of lack of competence by the European Union to legislate in the area.³

This article explores the effects of the implementation of the bonus cap rule on UK banks' remuneration practices and risk-taking incentives for bank senior managers. The ultimate aim is to assess whether the new rule is likely to change financial incentives in a way that is conducive to lower risk-taking, thus enhancing the safety and soundness of individual financial institutions. In doing so, the discussion draws on the law and economics school of thought, neoclassical economics and behavioural economics, which will be used to explore the likely effects of the new rule on the behaviour of senior managers. As such, it adds to the existing literature not only on executive remuneration but more broadly, as the insights regarding the relationship between external financial incentives created by legal rules and risk-taking are relevant to a broad range of issues in corporate law and financial regulation.

The main argument advanced herein is that the ratio of variable to fixed remuneration is only one of the many factors that determine the intensity of financial incentives for UK bank managers to take decisions which are optimal for bank shareholders but increase banks'

2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L176/338. From now on, it will be abbreviated as 'CRD IV'.

² Prudential Regulation Authority, 'Strengthening Capital Standards: Implementing CRD IV, Feedback and Final Rules' (PRA PS7/13, 2013), 4.7 <<http://www.bankofengland.co.uk/pr/Pages/publications/implemcrdiv.aspx>>.

³ Case C-507/13 United Kingdom v Parliament and Council [2013] was lodged on 20 September 2013 and was removed from the register on 4 May 2015.

insolvency risk (and, more broadly, their risk of failure). Strictly speaking, neither the amount nor the ratio of variable remuneration *per se* matter, but rather pay-performance sensitivity, for which the ratio of variable to fixed remuneration is not necessarily a good proxy. More crucially, the steps taken by major UK banks to evade the effects of the cap by introducing fixed pay allowances, which are paid in shares but do not depend on performance and hence are legally categorised as fixed remuneration, create additional financial incentives for senior bank managers to increase banks' risk of failure. Indeed, it is shown that paying part of executive remuneration in shares in itself, rather than determining part of the amount of remuneration on the basis on corporate financial performance, is probably the main driver of risk taking.

Despite the forthcoming withdrawal of the UK from the EU in 2019, critical engagement with CRD IV remains practically relevant, as it is a piece of EU law with EEA relevance and will thus still apply to the UK if it joins the European Economic Area,⁴ or reaches any type of agreement that preserves single market access for UK financial institutions. The rule is also of considerable academic interest, as it showcases the challenges associated with using command-and-control regulation⁵ to regulate senior executive remuneration.

The article is structured as follows. Part II provides a brief doctrinal exposition of the bonus cap rule and the broader framework of regulatory rules on the structure of executive

⁴ The European Economic Area was established by the Agreement on the European Economic Area, signed in Porto on 2 May 1992 [1994] OJ L1/3, and became effective on 1 January 1994. A detailed analysis of the status of EU law in EEA countries can be found in A Kokkinis, 'The Impact of Brexit on the Legal Framework for Cross-Border Corporate Activity' (2016) 27 EBLR 959, 963 – 966. See also L Lu, 'The End of Bankers' Bonus Cap: How Will the UK Regulate Bankers' Remuneration after Brexit?' (2016) 27 EBLR 1091.

⁵ For a succinct discussion of the notion of command-and-control regulation, see J Black, 'Paradoxes and Failures: 'New Governance' Techniques and the Financial Crisis' (2012) 75 MLR 1037, 1041 – 1042.

remuneration in banks. Part III establishes that the main policy rationale for the bonus cap rule is to strengthen financial stability, rather than to protect bank shareholders against excessive remuneration, or to curb the amount of remuneration. Part IV puts forward a conceptual framework of the relationship between remuneration structure and risk-taking in light of empirical economic research. Part V presents evidence from major UK banks documenting their response to the bonus cap rule. Based on these findings, Part VI evaluates the overall impact of the rule on financial stability. Part VII concludes.

II. A brief doctrinal analysis of the bonus cap rule and of the framework of structural rules on executive remuneration in banks

The purpose of this section is to examine the CRD IV provisions which regulate the ratio between fixed and variable remuneration.⁶ It will also explain how this rule fits within the broader structural regulatory framework applicable to executive remuneration in UK banks. As a preliminary point, it is worth noting that, in all large companies, fixed remuneration includes an executive's salary, pension contributions, and benefits in kind. Variable remuneration typically includes two types of remuneration: annual bonus awards which depend on a manager's performance during the relevant year; and awards of shares under Long-Term Incentive Plans (LTIPs) which vest after a period of time (usually three to five years) subject to the achievement of certain performance conditions.⁷

⁶ CRD IV rules on remuneration are implemented in the UK via the PRA Rulebook and FCA Handbook. As this article focuses on major banks which are regulated by the PRA, all references will be to the PRA Rulebook.

⁷ For a detailed discussion of the various components of senior executive remuneration, see MT Moore, 'Design and Control of Remuneration in UK Banks' in IHY Chiu, *The Law on Corporate Governance in Banks* (Edward Elgar, 2015), 134 – 139.

CRD IV introduced a cap on bonuses and other forms of variable remuneration paid to senior management of credit institutions and investment firms⁸ as a percentage of their fixed remuneration. Indeed, variable remuneration cannot exceed 100% of fixed remuneration,⁹ unless the shareholders approve a higher rate, up to 200%.¹⁰ The Directive prescribes the procedure to be followed in detail. Shareholders must be given reasonable notice and must be provided with a detailed statement on the impact of the proposed increase in variable pay on the bank's ability to maintain a sound capital base. In addition, the resolution approving the increase must be passed by at least 66% of the share capital provided that at least 50% of the shares are represented at the meeting, or by 75% of the share capital. Any shares held by individuals who are personally affected by the decision (e.g. directors or managers) are disqualified from voting.

In parallel, the Directive enables Member States to allow banks to apply a discounted rate to up to 25% of total variable remuneration¹¹ provided that it is paid in instruments that

⁸ The Directive defines its scope of application as covering all material risk takers including 'senior management, risk takers, staff engaged in control functions and any employee receiving total remuneration that takes them into the same remuneration bracket as senior management'. See CRD IV, article 94 (2). The exact scope of the CRD IV remuneration rules was decided by the European Banking Authority in 2014. See Commission Delegated Regulation (EU) No 604/2014 of 4 March 2014 supplementing Directive 2013/36/EU of the European Parliament and of the Council with regard to regulatory technical standards with respect to qualitative and appropriate quantitative criteria to identify categories of staff whose professional activities have a material impact on an institution's risk profile [2014] OJ L167/30. For a discussion of these standards see J Cullen and G Johnsen, 'Promoting Bank Stability through Compensation Reform: Lessons from Iceland' (2015) 11 *Icelandic Review of Politics & Administration* 333, 340 – 342.

⁹ See CRD IV, article 94 (1) (g) (i). Implemented by PRA Rulebook, CRR Firms, Remuneration 15.9.

¹⁰ See CRD IV, article 94 (1) (g) (ii). Implemented by PRA Rulebook, CRR Firms, Remuneration 15.10 – 15.12.

¹¹ CRD IV, article 94 (1) (g) (iii). Implemented by PRA Rulebook, CRR Firms, Remuneration 15.13.

are deferred for at least 5 years in accordance with guidelines prepared by the European Banking Authority. The Guidelines take into account four factors to calculate the rate of discount, namely: the national inflation rate, the average interest rate paid on EU sovereign bonds, the length of the deferral period and any additional retention period requirement.¹² According to the complex formula used, assuming that 25% of variable remuneration is paid in appropriate instruments and is deferred for 5 years, variable remuneration can reach up to 114.19% of fixed remuneration (or 228.38% with shareholder approval).¹³ Therefore, assuming that a bank obtains shareholder approval to extend variable pay to 200% of fixed pay and takes full advantage of the discounted rate, the bonus cap rule allows variable remuneration to be up to 228% of fixed remuneration, that is, up to 69.5% of the total remuneration package.

Evidently the new rule presupposes a clear distinction between fixed and variable types of remuneration. This has become a major regulatory policy issue due to the use of a new type of ostensibly fixed remuneration by UK banks, typically described as fixed pay allowances or role-based allowances. As will be seen in Part V, these allowances are paid in shares which cannot be sold for a period of time. Unsurprisingly, the European Banking Authority was not convinced that they constitute fixed remuneration and sought to constrain their use. The relevant guidance asserts that all elements of remuneration are for the purposes of the Directive either fixed or variable and it is each bank's responsibility to decide the nature of each component of its executive pay package. Any type of remuneration which is described by an institution as fixed, but is in any way conditional on past or future performance or can be

¹² See EBA, 'Guidelines on the applicable notional discount rate for variable remuneration' (27 March 2014) EBA/GL/2014/01 <<https://www.eba.europa.eu/regulation-and-policy/remuneration/guidelines-on-discount-rate-for-variable-remuneration>>.

¹³ Ibid, 22.

unilaterally altered during an employee's term of employment, is, in fact, variable remuneration for regulatory purposes. The competent national authority must thus ensure that banks do not evade the overall ratio by using remuneration which is essentially variable but purports to be fixed.¹⁴ This has led major UK banks to remove one feature of their fixed pay allowances, namely the explicit provision that the amount of the allowance is to be reviewed annually, which was typical in 2014 – immediately after the coming into force of the new rule.¹⁵ Still, the EBA guidance does not restrict the possibility of altering an element of a remuneration package by individual renegotiation of the terms of an employment contract and thus flexibility in this regard is not totally lost. Also, nothing prevents banks from entering into yearly contracts of employment with senior management.

To appreciate the likely impact of the bonus cap provision from a UK perspective it is expedient to offer an overview of its immediate context i.e. the broader remuneration framework for UK banks. This framework was not extensively reformed by the CRD IV Directive because the Directive largely duplicated rules and procedures that were already in place in the UK since the onset of the recent financial crisis. Indeed, the Financial Services Act 2010¹⁶ vested the Prudential Regulation Authority with new responsibilities on executive remuneration, including the duty to require regulated firms to adopt a remuneration policy

¹⁴ See European Banking Authority, 'Guidelines on sound remuneration policies under Articles 74(3) and 75(2) of Directive 2013/36/EU and disclosures under art 450 of Regulation (EU) No 575/2013' (EBA/GL/2015/22, 2015), 120 – 123 <<http://www.eba.europa.eu/document-library>>.

¹⁵ As evinced from the latest annual reports of major UK banks with respect to 2016.

¹⁶ Section 6, which inserts section 139A into the FSMA 2000.

consistent with effective risk management¹⁷ and, most importantly, the power to prohibit relevant persons from being remunerated in a way that contravenes the above standards.

With regard to structural requirements, the provision of guaranteed variable remuneration is prohibited other than to new staff and for the first year of their employment.¹⁸ The fixed component of remuneration must be high enough to enable firms to not pay any variable remuneration when performance is poor.¹⁹ In addition, the Code requires that at least 50% of variable remuneration be paid in shares or similar share-linked instruments rather than cash.²⁰ The Code also requires large UK banks to defer at least 60% of variable senior executive remuneration for at least three years, but for five years for those designated as risk takers and seven years for senior managers, a category which includes executive directors.²¹ The deferred element must vest no faster than on a *pro rata* basis i.e. equally on each anniversary of the grant with no vesting for the first three years in the case of executive directors. All these

¹⁷ The policy must also be consistent with the 2009 Implementation Standards for Principles for Sound Compensation Practices issued by the Financial Stability Board, according to section 139 A (3) (b) FSMA. See PRA Rulebook, CRR Firms, Remuneration 6.2. This is also required by CRD IV, art 92 (2) (a).

¹⁸ PRA Rulebook, CRR Firms, Remuneration 15.7.

¹⁹ PRA Rulebook, CRR Firms, Remuneration 15.9 (2).

²⁰ PRA Rulebook, CRR Firms, Remuneration 15.15.

²¹ PRA Rulebook, CRR Firms, Remuneration 15.17 and 15.18. In particular, all regulated firms are expected to defer 40% of remuneration. However, with regard to large payments (in excess of 500,000 euros) and payments to executive directors of firms that are large of complex, 60% of remuneration must be deferred. This evidently covers the executive directors and senior managers of all major UK banks. The monetary limit was introduced by CRD IV, article 94 (1) (m). A discussion of the policy behind this can be found in PRA, 'Strengthening the alignment of risk and reward: new remuneration rules' (2015) PRA PS12/15, 7 – 8, <<http://www.bankofengland.co.uk/pr/Pages/publications/ps/2015/ps1215.aspx>>.

provisions are also included in CRD IV.²² Furthermore, banks tend to require senior managers by contract to maintain minimum levels of shareholding.²³ Crucially, banks are required to reduce any unvested remuneration (this is known as a *malus*), and take reasonable steps to recover any vested variable remuneration (this is known as a *clawback*) in case a senior manager is found guilty of misconduct or if there is a significant failure of risk management within a seven-year period.²⁴

Furthermore, regulatory rules demand firms to risk-adjust any profit-related metrics used to assess performance, in line with principles of sound risk management.²⁵ Consequently, profitability is no longer exclusively assessed by (absolute or relative) total shareholder return and earnings per share, but rather some major banks use return on risk-weighted assets. In parallel, banks are required by CRD IV to use a variety of non-profit-related metrics alongside profit-related ones.²⁶ Non-profit-related criteria typically include: capital strength, liquidity, minimisation of bad loans, customer satisfaction, compliance, risk management, corporate reputation, and strategy development.

In addition to bank-specific rules, remuneration is also regulated by general company law and corporate governance rules – mostly of procedural nature.²⁷ The UK Corporate Governance Code recommends that listed companies establish a remuneration committee,

²² CRD IV, art 94.

²³ All major UK banks have a policy of requiring their executive directors to continue to own beneficially a minimum number of shares defined as a function of their salary for the duration of their employment.

²⁴ PRA Rulebook, CRR Firms, Remuneration 15.22 and 15.23 respectively.

²⁵ PRA Rulebook, CRR Firms, Remuneration 11.2 – 11.6.

²⁶ CRD IV, art 94 (1) (a).

²⁷ For a detailed doctrinal analysis of the legal, regulatory and soft law framework on executive remuneration in banks, see Moore (above n 7), 140 – 167.

consisting of independent directors, responsible for setting the remuneration of executive directors and senior management.²⁸ In parallel, the Companies Act 2006 requires quoted public companies to have an annual advisory vote on directors' remuneration report,²⁹ and a triennial legally binding vote on remuneration policy.³⁰

III. The policy behind regulating the structure of executive remuneration in banks: prioritising financial stability over shareholder profit maximisation

Contrary to conventional wisdom in corporate governance,³¹ the regulation of executive remuneration in banks prioritises financial stability over shareholder profit maximisation. No doubt, the significance of remuneration practices as a contributing factor to the 2007 – 2009 financial crisis has been acknowledged by the Financial Stability Board, which responded in 2009 by issuing a set of principles aiming at aligning remuneration in financial institutions with prudent risk-taking.³² The FSB principles have been influential internationally and in the EU,

²⁸ See UK Corporate Governance Code, Provisions D.2.1 and D.2.2. For banks having an independent remuneration committee is mandatory by virtue of CRD IV, art 92, which has been implemented in the UK by PRA Rulebook, CRR Firms, Remuneration 7.4.

²⁹ Companies Act 2006, s 439. This rule was first introduced in 2002.

³⁰ Companies Act 2006, s 439A, inserted by s 79 of the Enterprise and Regulatory Reform Act 2013.

³¹ For a succinct discussion of the rise of shareholder value from a USA perspective, see W Lazonick and M O'Sullivan, 'Maximizing shareholder value: a new ideology for corporate governance' (2000) 29 *Economy and Society* 13. An excellent analysis of the theoretical foundations of corporate contractarianism can be found in MT Moore, 'Private Ordering and Public Policy: The Paradoxical Foundations of Corporate Contractarianism' (2014) 34 *OJLS* 693, 698 – 706.

³² See Financial Stability Forum, 'FSF Principles for Sound Compensation Practices' (2009) <<http://www.fsb.org/what-we-do/policy-development/building-resilience-of-financial->

but CRD IV went above and beyond their requirements in adopting a highly prescriptive approach to the regulation of executive remuneration in financial institutions.

The policy rationale behind the CRD IV cap on performance-based remuneration is exactly to undermine incentives for senior managers to take risks that may lead to the failure³³ of a financial institution, by reducing their financial benefits from such risk-taking, even regarding risks that are optimal for shareholders. This reflects the fact that mechanisms which can be effective in attenuating the shareholder-manager agency problem are not well-placed to prevent excessive risk taking from the taxpayers' perspective.³⁴ Indeed, the stated purpose of the Directive's approach to remuneration is to reduce financial incentives to engage in excessive risk taking, which is perceived as one of the main causes of bank failures and financial instability generally. For instance, the preamble of the Directive states that:

[institutions/compensation/](#)> accessed 4 February 2018, discussed in E Ferran, 'New Regulation of Remuneration in the Financial Sector in the EU' (2012) 9 ECFR 1, 4 – 14.

³³ Bank failure is a much broader notion than insolvency in the sense of the Insolvency Act 1986, s 122. Indeed, bank failure is defined in section 37 (9) – (10) of the Banking Reform Act 2013, as follows: (i) entering into ordinary and special bank insolvency proceedings; (ii) the use of any stabilisation option provided by the Banking Act 2009, and (iii) the inability or likely inability of a bank to satisfy claims for the purposes of the Financial Services Compensation Scheme.

³⁴ See JE Thanassoulis and M Tanaka, 'Bankers' Pay and Excessive Risk' (2015) Bank of England Staff Working Paper No. 558 <<http://www.bankofengland.co.uk/research/Documents/workingpapers/2015/swp558.pdf>>; and A Kokkinis, *Corporate Law and Financial Instability* (Routledge, 217) ch 1. On the particular issue of the interplay between remuneration design and systemic risk, see RA Albuquerque, LMB Cabral and J Guedes, 'Relative Performance, Banker Compensation, and Systemic Risk' (2016) ECGI Finance Working Paper No. 490/2016 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2884076>.

Weaknesses in corporate governance in a number of institutions have contributed to excessive and imprudent risk-taking in the banking sector which has led to the failure of individual institutions and systemic problems in Member States and globally.³⁵

The Directive then identifies excessive levels of variable remuneration as one such weakness,³⁶ and asserts that a mandatory upper limit with regard to the ratio between the two forms of remuneration ought to be imposed.³⁷

It is also worth noting that safeguarding the stability of the UK financial system³⁸ has been, since the 2007 – 2009 financial crisis, one of the regulatory objectives of UK financial regulation authorities enshrined in primary legislation. Indeed, the Banking Act 2009 added a financial stability objective to the list of the statutory objectives of the Bank of England.³⁹

³⁵ CRD IV, Preamble, para 53.

³⁶ For an academic critique of the mismatch between bank executive remuneration and long-term performance, see LA Bebchuk, A Cohen and H Spamann, ‘The wages of failure: Executive compensation at Bear Sterns and Lehman 2000 – 2008’ (2010) 27 *Yale Journal on Regulation* 257.

³⁷ See CRD IV, Preamble, para 65.

³⁸ Financial stability, although intuitively appealing, is an elusive concept that is hard to give a precise definition to. Davies and Green argue that it is very difficult to say *ex ante* if a given financial system is stable or not, but with the benefit of hindsight one can define instability as loss of normalcy and resilience. See H Davies and D Green, *Banking on the Future: The Rise and Fall of Central Banking* (Princeton University Press, 2010), ch 3.

³⁹ Banking Act 2009, s 238 (1) inserting s 2A to the Bank of England Act 1998. Similarly, the Financial Services Act 2010 added financial stability to the objectives of the Financial Services Authority. Financial Services Act 2010, s 1 (3) inserting s 3A into the Financial Services and Markets Act 2000. The Act will be henceforth abbreviated as ‘FSMA 2000’.

Furthermore, the Financial Services Act 2012 strengthened the formulation of the financial stability objective of the Bank⁴⁰ and introduced the Bank's Financial Policy Committee.⁴¹

That being said, some scholars have doubted that financial incentives set by the structure of executive remuneration did not play any material role in risk-taking by executives during the 2007 – 2009 financial crisis. Indeed, empirical research on US financial institutions indicates that failed indicates that their executives had not anticipated their collapse, as they did not sell their shares in time. In addition, senior executives in failed institutions suffered tremendous personal financial losses of at least \$30 million on average.⁴² However, the same study found that institutions in which CEOs' incentives were more tightly aligned with the interests of the shareholders performed worse than others during the crisis. This supports the view that aligning the interests of managers with those of the shareholders undermines the safety and soundness of financial institutions.

Indeed, Bebchuk *et al* demonstrate that a proper interpretation of available empirical evidence supports the claim that financial incentives were – at least partly – to blame for

⁴⁰ The Act requires the Bank to 'protect and enhance the stability of the financial system of the UK' rather than merely to contribute 'to the protection and enhancement' of financial stability, as the previous statutory formulation was. See Financial Services Act 2012, s 2 (2).

⁴¹ The FPC is charged – *inter alia* – with contributing to the achievement of the Bank's financial stability objective. See Bank of England Act 1998, s 9C (inserted by the Financial Services Act 2012, s 4).

⁴² R Fahlenbrach and R Stulz, 'Bank CEO Incentives and the Credit Crisis' (2010) Dice Center Working Paper 2009-13 <<http://www.ssrn.com/abstract=1439859>>. See also DO Edwards, 'An Unfortunate Tail: Reconsidering Risk Management Incentives after the Financial Crisis of 2007 – 2009' (2010) 81 *U Colo L Rev* 247.

excessive risk-taking by financial institution managers.⁴³ After reviewing the overall gains and losses of the executives of Lehman Brothers and Bear Stearns from 2000 to 2008, the authors conclude that the management teams of these institutions earned as a group more than \$1 billion in variable remuneration, which greatly exceeds their losses when the two institutions failed. There is also empirical evidence from American retail banks that in the years leading up to the financial crisis the remuneration of CEOs was made more responsive to performance so as to create stronger incentives for CEOs to exploit new (risky) opportunities, and that CEOs responded positively to these incentives by taking more risk.⁴⁴ Moreover, evidence from European banks suggests that large long-term incentive plan rewards for CEOs are positively correlated with an increased likelihood of failure.⁴⁵

Furthermore, the causal link between shareholder empowerment and bank distress at times of crisis has recently been empirically confirmed. A major study by Erkens *et al* assessed the impact of ownership structure on the performance of financial institutions during the 2007 – 2009 financial crisis. The study examined the impact of the percentage of shares owned by institutional investors on the stock returns of 296 financial firms (primarily banks) from 30 countries during the 2007 – 2008 period.⁴⁶ It found that firms with a higher percentage of

⁴³ LA Bebchuk, A Cohen and H Spamann, ‘The Wages of Failure: Executive Compensation at Bear Sterns and Lehman 2000-2008’ (2010) ECGI Finance Working Paper No 287/2010 <http://ssrn.com/abstract_id=1513522>. See also LA Bebchuk and H Spamann, ‘Regulating Bankers' Pay’ (2010) 98 Geo LJ 247, 271 – 275.

⁴⁴ R DeYoung, E Peng and M Yan, ‘Executive Compensation and Business Policy Choices at U.S. Commercial Banks’ (2013) 48 *Journal of Financial and Quantitative Analysis* 165.

⁴⁵ See R Ayadi, E Arbak, and WP De Groen, ‘Executive Compensation and Risk-taking in European Banking’ in J Barth, C Lin, and C Wihlborg (eds), *Research Handbook on International Banking and Governance* (Edward Elgar, 2012).

⁴⁶ See D Erkens, M Hung and P Matos, ‘Corporate Governance in the 2007 – 2008 Financial Crisis: Evidence from Financial Institutions Worldwide’ (2012) 18 *Journal of Corporate Finance* 389, 389 – 392.

institutional ownership experienced worse share returns during the crisis. To further explore this finding the authors tested whether higher institutional ownership led to higher risk taking and concluded that firms with a higher percentage of institutional ownership took higher risk before the crisis, which caused them to perform worse during the crisis.⁴⁷ This finding is corroborated by Ferreira *et al*'s recent empirical study which also confirms that banks in which managers were more insulated from shareholder pressures were less likely to fail during the 2007 – 2009 crisis. The explanation suggested is that bank shareholders tend to push banks to take a level of risk that is excessive from the point of view of society.⁴⁸

In light of the above discussion, the prescriptive provisions of the Directive on the special majorities and quorums required to extend the total level of variable pay from 100% to 200% of fixed pay⁴⁹ appear paradoxical. These provisions suggest that the drafters of the Directive viewed the cap as potentially beneficial to shareholders who are thus protected from an extension to 200 per cent, unless it is approved by a special majority. This, of course, is at

⁴⁷ This may sound paradoxical, but it has to be kept in mind that most business strategies engender an element of risk if they fail, and thus following good business strategies still increases the overall insolvency risk of the relevant corporate entity. For an explanation of the divergence between the optimal level of risk for bank shareholders, on the one hand, and for society as a whole, on the other, see A Kokkinis, 'A Primer on Corporate Governance in Banks and Financial Institutions – Are Banks Special?' in HYI Chiu (ed), *The Law on Corporate Governance in Banks* (Edward Elgar, 2015).

⁴⁸ D Ferreira and others, 'Measuring Management Insulation from Shareholder Pressure' (2013) ECGI Finance Working Paper No 345/2013 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2170392##>. Other studies that support the same conclusion include: G Ferrarini, 'Bankers' Compensation and Prudential Supervision' in Jennifer Hill and Randall Thomas (eds), *Research Handbook on Executive Compensation* (Edward Elgar, 2012); and A Saunders, E Strock, and NG Travlos, 'Ownership Structure, Deregulation, and Bank Risk Taking' (1990) 45 *The Journal of Finance* 643.

⁴⁹ CRD IV, article 94 (1) (g) (ii).

odds with the both the theoretical understanding of the risk neutrality of diversified investors and with the empirical evidence reviewed in the previous paragraphs, as the cap explicitly seeks to undermine the alignment of incentives between senior managers and bank shareholders by discouraging the former from taking risks that are optimal for the latter. So, we would expect all banks to secure a nearly unanimous approval to extend the cap to 200% which, as will be shown in the next part of the article, was the case in the UK. It follows that the Directive's emphasis on shareholder voting as a gatekeeper is misplaced and misses the point of the fundamental misalignment between shareholder interests and the public interest. If it is thought that a cap of 100% is necessary – which the argument herein by no means supports – then it would make sense to dispense with the possibility of extending it with shareholder approval.

IV. A conceptual framework on remuneration structure and risk taking

Until 2009 all major UK banks were companies whose share ownership was separated from their control, having no shareholder with a controlling stake. This changed for the banks that received government support in 2009 as a result of the financial crisis. Of the two major banks that received such support, the Government has now disposed of all its shares in Lloyds, but has retained a majority stake in RBS, which is however managed on a commercial basis.⁵⁰

The main purpose of executive employment contracts in widely-held companies is to attract and retain talented individuals and provide them with incentives to pursue shareholder

⁵⁰ The government's investment has taken place through a separate corporate entity, the UK Financial Investments Ltd (UKFI). On 31 March 2017, UKFI held approximately 71.2% of the equity capital of the Royal Bank of Scotland Group plc. By 17 May 2017 UKFI Ltd held no shares in Lloyds' Banking Group plc. See *UK Financial Investments Limited (UKFI) Annual Report and Accounts 2016/17*, Cm 9451 (2017).

value while keeping transaction costs at an optimal level.⁵¹ According to agency theory, senior managers are – economically speaking – shareholders’ agents and as such, they are likely to pursue their personal interest or put suboptimal effort unless appropriate incentives are in place. This applies *inter alia* to senior managers’ willingness to take an optimal level of risk from the shareholders’ perspective. The pioneering work of Jensen and Murphy in 1990⁵² demonstrated that the remuneration of American CEOs was not linked to performance, and was lower during the 1980s than during the 1930s. They urged companies to increase variable remuneration, as better-aligned incentives would leave shareholders better-off.⁵³ In order to understand the relationship between financial incentives and risk taking for corporate managers it is necessary to provide an overview of the way economics models human behaviour and in particular preferences and attitudes to risk. In doing so, the discussion will incorporate the insights of

⁵¹ See FH Easterbrook, ‘Managers’ Discretion and Investors’ Welfare: Theories and Evidence’ (1984) 9 Del J Corp L 540; DR Fischel, ‘The Corporate Governance Movement’ (1982) 35 Vand L Rev 1259; SJ Grossman and OD Hart, ‘An Analysis of the Principal-Agent Problem’ (1983) 51 *Econometrica* 7; B Holmstrom, ‘Moral Hazard in Teams’ (1982) 13 *Bell Journal of Economics* 324; A Edmans and X Gabaix, ‘Is CEO Pay Really Inefficient? A Survey of New Optimal Contracting Theories’ (2009) 15 *European Financial Management* 486.

⁵² See MC Jensen and KJ Murphy, ‘CEO Incentives: It’s Not How Much You Pay, But How’ [1990] *Harvard Business Review* 138.

⁵³ Of course, other scholars have argued that given the very limited decision-making powers of US shareholders, variable remuneration has been used as a way to camouflage excessive executive remuneration. See e.g. LA Bebchuk, JM Fried and DI Walker, ‘Managerial Power and Rent Extraction in the Design of Executive Compensation’ (2002) 69 U Chi L Rev 751, 789-794. See also LA Bebchuk and JM Fried, ‘Paying for long-term performance’ (2010) 158 U Pa L Rev 1915; and *ibid*, ‘Pay without Performance: Overview of the Issues’ (2004) 30 J Corp L 647. An overview of law and economics research insights on executive remuneration can be found in DI Walker, ‘The law and economics of executive compensation: Theory and evidence’ in CA Hill and BH McDonnell (eds), *Research Handbook on the Economics of Corporate Law* (Edward Elgar, 2012).

both neoclassical and behavioural economics, starting from the standard neoclassical model and then refining it by reference to the findings of behavioural economic research.⁵⁴

a. The standard neoclassical economic model of decision-making

The standard model describes human decision-making based on three fundamental assumptions, namely: that individuals are rational, selfish and possess unlimited willpower. The notion of rationality in this context is a subject of much debate. The core minimum of the notion of rationality refers to ‘choosing the best means to the chooser’s ends’⁵⁵ which entails comparing the cost and benefits of various potential courses of action in terms of the utility and disutility they bring to the individual in question and making the choice that maximises his utility. In a broader sense, frequently used by economists, rationality is also defined to mean that an individual’s preferences comply with the axioms of completeness (all possible outcomes are ranked), transitivity (if outcome A is preferred over outcome B and B is preferred over C then A is preferred over C), monotonicity (if positive outcomes are bundled the individual will prefer the bundle that contains more of at least one outcome and no less of any other) and convexity (in ranking various bundled outcomes the individual will prefer averages rather than extremes).⁵⁶ In the broadest sense, rational preferences are defined as coherent,

⁵⁴ The forthcoming discussion, however, will not examine the literature on the impact of board psychological dynamics on the amount of executive remuneration, due to the scope of this article. On this, see CA O’Reilly III and BGM Main, ‘Economic and psychological perspectives on CEO compensation: a review and synthesis’ (2010) 19 *Industrial and Corporate Change* 675.

⁵⁵ RA Posner, ‘Rational Choice, Behavioral Economics, and the Law’ (1998) 50 *Stan L Rev* 1551, 1551.

⁵⁶ M Rabin, ‘A Perspective on Psychology and Economics’ (2002) 46 *European Economic Review* 657.

independent of immaterial factors⁵⁷ and ‘not incompatible with empirical observations known to the individual in question’.⁵⁸

In the case of decisions made under risk or uncertainty, the standard model assumes that rational individuals seek to maximise their expected utility which is calculated using Bayesian statistics. A positive net expected value means that the expected future benefits arising from a given decision outweigh the expected future losses, the relevant figures being calculated based on the probability distribution of all potential outcomes. Most crucially, rational choice models assume that individuals are risk averse which is a consequence of the axiom of diminishing marginal utility which applies *inter alia* to wealth. The degree of risk aversion of each individual will depend on the shape of their utility function. This means that an individual will always prefer – say – to gain £10 rather than to be given a 50% chance of gaining £20 (or zero) and to convince them to accept the risky option the expected gain will have to be higher than the gain under the risk-free option. Of course, risk-aversion reduces significantly or even disappears if an individual has the option of taking a risk multiple times, as sophisticated individuals are aware of the law of large numbers, according to which the actual ratio of outcomes will converge on the theoretical, or expected, ratio of outcomes, as the number of experiments increases. This explains the anecdote related by Thaler involving a colleague of him refusing to take a bet on a coin where he would either gain \$200 or lose \$100 but proposing instead to take 100 bets in which case he expected to win \$5,000 and the chance of him making a loss would be extremely small. The apparent inconsistency of preferences (rejecting one bet but accepting 100 bets) was described by Thaler as irrational,⁵⁹ arguably

⁵⁷ E Shafir and R LeBoeuf, ‘Rationality’ (2002) 53 *Annual Review of Psychology* 491.

⁵⁸ N Wilkinson and M Klaes, *An Introduction to Behavioral Economics* (2nd edn, Palgrave Macmillan, 2012),

⁵⁹ RH Thaler, *Misbehaving: The Making of Behavioral Economics* (WW Norton & Company, 2015), 192 – 195.

wrongly so, as it is in line with the mathematical definition of probability, which is only applicable to repeated phenomena.⁶⁰ In any case, this indicates that diversified equity investors will tend to be risk-neutral regarding risk-taking by investee companies i.e. they will prefer the option with the highest expected value, irrespective of risk. In the case of decisions, the outcomes of which occur in the future, the standard models' assumption is that individuals discount future utility compared to present utility at a constant rate and, in that sense, they have consistent time preferences. This is due to the risk that the individual may die before the outcome materialises.

The other two fundamental assumptions of rational choice models are less crucial in the sense that alternative assumptions can be accommodated by such models with appropriate modifications. Selfishness – in the strictest possible sense – means that an individual's utility is independent of the utility of others. In a broader sense, an individual is still selfish if they are motivated by what can be termed as impure altruism, that is, emotional benefit or harm arising out of the utility or disutility of others. In the broadest sense, an individual's utility includes hedonic pleasure arising out of moral sentiments.⁶¹ Finally, the assumption of unlimited willpower means that individuals will never knowingly act in a way which conflicts with their own preferences.

⁶⁰ According to BV Gnedenko, *Theory of Probability* (BD Seckler trns, Chelsea Publishing, 1962), 16, 'a wide range of phenomena exists for which, whenever the set of conditions C is realised *repeatedly*, the proportion of occurrences of the event A only seldom deviates significantly from some average value and this number can thus serve as a characteristic index of the mass phenomenon' [emphasis original].

⁶¹ In the latter sense, all rational behaviour is by definition selfish and therefore the assumption does not have any predictive value. For a discussion of self-interest, see Wilkinson and Klaes (above n 58), 393 – 396.

b. Modifying the standard model based on evidence from behavioural economics

Behavioural economics can be defined as a strand of scholarship that seeks to identify and classify phenomena that cannot be explained using the standard model described above with a view to ‘improving the explanatory power of economic theories by giving them a sounder psychological basis’.⁶² The birth of the field was marked by Kahneman and Tversky’s work on prospect theory⁶³ in the late 1970s and its first major application to legal academic thinking was marked by the work of Thaler *et al* in the late 1990s⁶⁴ who asserted that the analysis of legal rules and prescriptive statements about the law ought to take into account evidence suggesting that individuals have bounded rationality,⁶⁵ selfishness and willpower. As it is impossible to do justice to the extremely rich behavioural economic literature within the constraints of the present study,⁶⁶ the discussion below will focus on the aspects of behavioural

⁶² Wilkinson and Klaes (above n 58), 20. See also BS Frey, *Economics as a Science of Human Behavior: Towards a New Social Science Paradigm* (Kluwer Academic Publishers, 1992). For a brief history of the area, see H Schwartz, *Rationality Gone Awry? Decision Making Inconsistent with Economic and Financial Theory* (Praeger Publishers, 1998), 3 – 6. JM Keynes is generally recognised as a forefather of behavioural economics, especially his monograph *The General Theory of Employment, Interest and Money* (Macmillan, 1936).

⁶³ D Kahneman and A Tversky, ‘Prospect Theory: An Analysis of Decision Under Risk’ (1979) 47 *Econometrica* 263.

⁶⁴ C Jolls, CR Sunstein and RH Thaler, ‘A Behavioral Approach to Law and Economics’ (1998) 50 *Stan L Rev* 147; and *ibid*, ‘Theories and Tropes: A Reply to Posner and Kelman’ (1998) 50 *Stan L Rev* 1593.

⁶⁵ On this, see D Kahneman, ‘New Challenges to the Rationality Assumption’ in KJ Arrow and others (eds), *The Rational Foundations of Economic Behaviour* (Palgrave Macmillan, 1996).

⁶⁶ It is worth noting that according to its proponents, behavioural economic analysis of law raises jurisprudential questions around the acceptability of paternalism. Indeed, Thaler is a proponent of a soft type of paternalism. See CR Sunstein and RH Thaler, ‘Libertarian Paternalism Is Not An Oxymoron’ (2003) 70 *Uni Chi L Rev* 1159. This view has met considerable opposition. See e.g. G Mitchell, *Libertarian Paternalism Is an Oxymoron* (2005) 99 *Nw U L Rev* 1245. On paternalism generally, see G Dworkin, ‘Paternalism’ (1972) 56 *The Monist* 64.

economics that are most relevant from the perspective of understanding the impact of financial incentives on risk taking.

As such, it is essential to focus on prospect theory. Prospect theory developed to explain a series of common phenomena that cannot be explained by standard expected utility theory,⁶⁷ such as the *status quo* bias in consumer choice,⁶⁸ the very high equity premium⁶⁹ in capital markets, and the longshot bias⁷⁰ and end of the day effect in horse racing.⁷¹ These phenomena have now been explained as due to the combined effect of the following cognitive errors: (a) reference dependence; (b) loss aversion; (c) uncertainty aversion; and (d) a tendency to estimate probabilities in a biased manner.⁷² Dependence on reference points means that individuals tend

⁶⁷ For a taxonomy of such phenomena, see CF Camerer, 'Prospect Theory in the Wild: Evidence from the Field' in D Kahneman and A Tversky, *Choice, Values and Frames* (CUP, 2000).

⁶⁸ This phenomenon refers to consumers being likely to stick to default options to the effect that their ultimate choice is heavily influenced by the setting of the default option. See R Korobkin, 'The Status Quo Bias and Contract Default Rules' (1997) 83 Cornell L Rev 608, esp 625 – 647.

⁶⁹ Mehra and Prescott found that in the 1889 – 1978 period in the US, shares performed on average 6% higher than safe Government bonds. See R Mehra and EC Prescott, 'The Equity Premium: A Puzzle' (1985) 15 *Journal of Monetary Economics* 145.

⁷⁰ Gamblers tend to bet excessively on horses with a low probability to win.

⁷¹ Gamblers who have made large losses during a racing day tend to make very risky bets towards the end of the day as only these bets, if successful, allow them to return to the position they were at the beginning.

⁷² The availability bias refers to estimating probabilities based on the availability of relevant recent events in the subject's memory. See A Tversky and D Kahneman, 'Judgment Under Uncertainty: Heuristics and Biases' in D Kahneman, P Slovic and A Tversky (eds), *Judgment Under Uncertainty: Heuristics and Biases* (CUP, 1982). The well-known hindsight bias refers to overestimating the probability of an event once we know that it happened. See B Fischhoff, 'Hindsight ≠ Foresight: The Effect of Outcome Knowledge on Judgment Under Uncertainty' (1975) 1 *Journal of Experimental Psychology, Human Perception and Performance* 288. Finally, individuals tend

to adopt a certain *status quo* (either their current state or some expected future state) as a reference point to assess whether the various outcomes they are asked to choose from (defined technically as prospects) represent a gain or a loss compared to their *status quo*. Loss aversion means that individuals tend to be much more averse to perceived losses than they are keen to achieve gains. As a result, as soon as an individual has incurred large losses compared to their reference point, they tend to become risk-seeking in a desperate attempt to return to that point. Also attitude to risk depends on the perceived probability of gain or loss. Based on the available empirical evidence it appears that most individuals are risk-averse in relation to high and medium probability gains, risk-seeking in relation to small probability gains, risk-averse in relation to small probability losses and risk-seeking in relation to medium and large probability losses.⁷³ Furthermore, empirical evidence implies that the discount applied to future gains and losses grows as the gains or losses come further in the future, so that the function of future to present utility is mathematically a hyperbole. It follows that preferences are inconsistent over time and thus that individuals tend to be irrationally short-termist.⁷⁴

The above analysis suggests that, in the absence of any form of performance-sensitive remuneration, corporate executives would be likely to refrain from taking optimal risks that engender a non-negligible probability of a very severe negative outcome – which includes, but is not limited to, the insolvency of the company in question. Indeed, they would stand nothing to gain from taking such risks, but would stand to suffer the risk of losing their position should

to overestimate low and underestimate high probabilities in the case of negative events. See ND Weinstein, 'Unrealistic Optimism About Future Life Events' (1980) 39 *Journal of Personality and Social Psychology* 806.

⁷³ A Tversky and D Kahneman, 'Advances in Prospect Theory: Cumulative Representation of Uncertainty' (1992) 5 *Journal of Risk and Uncertainty* 297. See also M Rabin and RH Thaler, 'Anomalies: Risk Aversion' (2001) 15 *The Journal of Economic Perspectives* 219.

⁷⁴ D Laibson, 'Golden Eggs and Hyperbolic Discounting' (1997) 112 *The Quarterly Journal of Economics* 443.

the severely negative scenario materialise. Empirical evidence suggests that dismissal comes at a high cost for executives, as on top of the direct cost of searching for an alternative position they are likely to face a considerable period of unemployment and, when they do find alternative employment, it is usually at a significantly lower rate of pay. Indeed, a study found that a 1% increase in the dismissal risk of a CEO is associated with a 7% increase in the overall subjective value of the CEO's remuneration package, thus supporting the view that being dismissed is costly for CEOs. Behavioural analysis suggests that, in the context of decision making that can impact a company's insolvency risk, being dismissed would be perceived as a loss compared to current *status quo*. It follows that managers would tend to overestimate the probability of low probability losses and would thus refrain from taking risks that are desirable from the perspective of (risk-neutral) diversified shareholders.

The second area of behavioural economics that is crucial for the purposes of the present discussion is game theory and, in particular, the relationship between external and intrinsic incentives. Experiments that involve situations where cooperation is rationally desirable for both parties, such as the ultimatum game,⁷⁵ indicate that most individuals will refuse to cooperate (thus reducing their material wealth) in order to retaliate against what they perceive as unfair behaviour by the other party. Furthermore, experimental evidence suggests that

⁷⁵ In ultimatum games, a sum that will be earned by the players only if they agree on how to distribute it amongst them. One player makes a one-off offer and the other can accept it or reject it. Rationally, it would make sense for the offeror to offer the other party a minimal amount and for the other party to accept. However, in reality a wide variety of percentages are offered with an average of around 25%. See C Camerer and RH Thaler, 'Anomalies: Ultimatums, Dictators, and Manners' (1995) 9 *Journal of Economic Perspectives* 209.

individuals tend to value their possessions irrationally high due to a feeling of entitlement and that if they feel entitled to a gain they are reluctant to share any part of it with others.⁷⁶

An implication of the above is that creating external financial motives can remove intrinsic motives arising from social norms.⁷⁷ This observation has led some corporate law scholars to doubt the efficacy of performance-based remuneration.⁷⁸ From the viewpoint of the present discussion, this argument implies that regulatory rules such as the bonus cap are unlikely to have any effect on senior managers' behaviour and therefore are immaterial both from the perspective of financial stability and from the perspective of shareholder wealth. However, the aforementioned studies focus on non-market contexts where strong social norms prevail and therefore it is too speculative to try to import their findings in the context of professional corporate managers. Indeed, empirical studies focusing on the labour market suggest that 'trust contracts' where the employer offers a high wage trusting the employee to perform well tend to perform very badly and make losses for both parties, whereas 'bonus

⁷⁶ For experimental evidence on this, see D Kahneman, JL Knetsch and RH Thaler, 'Experimental Tests of the Endowment Effect and the Coase Theorem' (1990) 98 *Journal of Political Economy* 1325; and L Babcock and G Loewenstein, 'Explaining Bargaining Impasse: The Role of Self-Serving Biases' (1997) 11 *Journal of Economic Perspectives* 109. On the Coase Theorem, see RH Coase, 'The Problem of Social Costs' (1960) 3 *Journal of Law and Economics* 1.

⁷⁷ EL Deci, R Koestner and RM Ryan, 'A Meta-Analytic Review of Experiments Examining the Effect of Extrinsic Rewards on Intrinsic Motivation' (1999) 125 *Psychological Bulletin* 627.

⁷⁸ For instance, Moore argues that, due to the effect of individuals' bounded rationality and subjective perceptions of relative deprivation, offering the senior managers of a company high levels of variable remuneration in order to motivate them can have negative consequences on the motivation of both the beneficiaries of such remuneration and other employees. See MT Moore, 'Corporate Governance, Pay Equity, and the Limitations of Agency Theory' (2015) 68 CLP 431, 449 – 461. See also GA Akerlof and J.L. Yellen, 'The Fair Wage Effort Hypothesis and Unemployment' (1990) 105 *The Quarterly Journal of Economics* 255.

contracts' where the employer reserves discretion to reward the employee if performance is good work much better.⁷⁹ This provides strong support for the effectiveness and of performance-based remuneration from the perspective of shareholders and hence for the potential significance of remuneration regulation as a tool to protect financial stability.

V. The reaction of major UK banks to the introduction of the bonus cap rule

The aim of this section is to document the reaction of UK banks to the bonus cap rule, which is necessary to assess whether the reform in question is likely to achieve its objective of enhancing financial stability. It is worth noting that based on the standard neoclassical model, as enriched by behavioural insights, one would expect the subjective value of executive remuneration packages in UK banks to remain unaffected by the introduction of the bonus cap rule. This is because the subjective value of remuneration packages depends on supply and demand in the managerial labour market. Still, the (objective) expected value of remuneration packages would be expected to reduce, due to risk aversion. In other words, as banks increase the fixed component and reduce the variable component of remuneration packages, the risk premium demanded by risk-averse senior managers reduces and hence a package with a lower expected value than before will have the same subjective value. Finally, it is reasonable to expect the maximum potential value of remuneration packages to reduce more steeply than expected value, in tandem with the reduction in variable remuneration.

All data is taken from the relevant banks' annual reports and accounts documents for 2013 and 2014, which are available on their respective websites.⁸⁰ 'Major UK banks' refers to

⁷⁹ On this, see E Fehr, A Klein and KM Schmidt, 'Fairness and Contract Design' (2007) 114 *Econometrica* 121.

⁸⁰ The relevant Annual Reports and Accounts were published in spring 2014 and 2015 respectively.

banks that are public companies whose ultimate parent company is a bank or bank holding company registered in the UK and whose shares are traded on the London Stock Exchange. At the time of writing these include: Barclays Bank plc, HSBC Holdings plc, Lloyds Banking Group plc, the Royal Bank of Scotland Group plc and Standard Chartered plc.⁸¹ UK banks that are subsidiaries of foreign banks are excluded as they do not operate within the same company law framework.⁸² The analysis below is limited to the remuneration packages of the Chief Executive Officers (CEOs) of the aforementioned banks. This is because banks only disclose in full detail the remuneration structure of executive directors rather than senior managers⁸³ and because the remuneration package of a CEO is generally representative of the remuneration structure of all senior executives.⁸⁴

The tables below summarise the structure of CEOs' remuneration packages and the actual and potential level of remuneration before and after the implementation of the bonus cap.⁸⁵ The years 2013 and 2014 were chosen because the former was the final year before the

⁸¹ In Tables 1, 2 and 3, Standard Chartered Bank plc is abbreviated as SCB.

⁸² The most important foreign bank operating in the UK retail market is currently Santander UK plc which is a wholly owned subsidiary of the Spanish bank Banco Santander SA.

⁸³ For senior managers who are not board members the following pieces of information is disclosed by UK banks consistent with the relevant regulatory requirements: (a) the total number of employees whose remuneration exceeds £1 million; (b) the total remuneration of the five highest paid employees; and (c) the total remuneration and breakdown by component of the eight highest-paid senior executives.

⁸⁴ It has been found that CEO remuneration is a significant but partial predictor of the level and structure of remuneration of the top management team. See MA Carpenter and WG Sanders, 'Top Management Team Compensation: The Missing Link Between CEO Pay and Firm Performance?' (2002) 23 *Strategic Management Journal* 367, 372.

⁸⁵ All sums are given in the currencies reported by the banks, that is, British Pounds Sterling for all banks except for the data for Standard Chartered Bank which is given in US Dollars.

implementation of the bonus cap rule and the latter was the first year after its implementation and hence comparing between these two years illustrates the rule's impact. 'Actual remuneration' refers to the amount paid with respect to performance during a financial year even if it is subject to some performance conditions in the future. 'Potential remuneration' refers to the maximum amount of remuneration under the relevant component that the remuneration committee could have awarded for a given year based on the bank's remuneration policy. In the case of bonuses all banks set a maximum potential award and decide annually how much of that – if any – is to be awarded to each executive director. In the case of LTIPs, however, most banks simply make a set award which is a function of an executive's salary so that the incentivisation effect is only due to the nature of the payment, that is, in shares.

<INSERT TABLE 1 HERE>

As can be seen in Table 1, UK banks had to make considerable changes to the structure of their executive remuneration packages to ensure that the ratio between fixed and variable components does not exceed the prescribed maximum. Their original position was one where the available variable remuneration was between 3.5 and 6 times the fixed components with the exception of RBS, which was already operating within the CRD IV imposed limit. This is probably attributable to the fact that the Treasury has had since 2009 a majority stake in RBS. Indeed, RBS is the only UK major bank which has not yet sought shareholder approval to extend variable pay to 200 per cent of fixed pay following the procedures prescribed by the Directive. All other banks obtained such approval at the respective 2014 annual general meetings, and it is notable that the overwhelming majority of their shareholders voted in favour. Conversely, many major banks have not made use of the possibility of benefiting from the Directive's discount rate, which appears to only have been utilised by RBS and Lloyds, possibly due to the very demanding deferral requirements in place for remuneration to qualify for the discount, and the modest rate of discount. With regard to the actual level of remuneration

paid out the picture is mixed, with an increase in Barclays, and Lloyds, a small decrease in HSBC and a significant decrease in Standard Chartered and RBS.

<INSERT TABLE 2 HERE>

The introduction of the bonus cap rule had a major impact on the fixed component of bank CEO remuneration packages,⁸⁶ as is evident from Table 2. Total fixed remuneration increased dramatically in 2014 in all banks apart from RBS:⁸⁷ by 91 per cent in HSBC, by 86 per cent in Standard Chartered, by 65 per cent in Barclays and by 55 per cent in Lloyds. This was achieved mostly by introducing a new type of fixed remuneration described as an allowance and paid in shares, which are released *pro rata* over a period of five years,⁸⁸ and occasionally by increasing pension contributions and benefits in kind. It is notable that the bank which introduced the highest role-based allowance compared to CEO salary, HSBC, was also the bank that had to adapt its executive remuneration structure more to comply with the bonus cap. Thus, fixed pay allowances appear to operate as quasi-variable remuneration. Indeed, the use of fixed pay allowances can be explained as an attempt to maintain the pay performance sensitivity of executive remuneration packages despite the cap, as will be explained in the next part of the article.

<INSERT TABLE 3 HERE>

⁸⁶ This includes the following elements: salary, fixed allowance, pension contribution and benefits.

⁸⁷ The figure for the CEO of RBS in 2013 is adjusted to reflect the annual rate of pay. In fact, Ross McEwan joined RBS on 1 October 2013, so the actual amounts paid were 25 per cent of those appearing on the table.

⁸⁸ No such allowance was paid with regard to 2014 but RBS remuneration policy provided for a potential fixed allowance paid wholly in shares of a value up to 100 per cent of an executive director's salary. Such allowance of £1m was actually paid with respect to 2015.

Table 3 demonstrates the change in variable remuneration that resulted from the implementation of the bonus cap rule. Regarding the structure of variable remuneration, out of the five major UK banks, RBS and Standard Chartered now use a single component of variable remuneration, while Barclays, HSBC, and Lloyds follow the more conventional policy of using both annual bonuses and LTIPs. It should be clarified that the values shown in Table 3 represent the present value of the shares awarded to each CEO with respect to the relevant financial, subject to a vesting period of 3 to 5 years. These figures should not be confused with the actual value of shares that vest during a given financial year, which is the value included in the total annual remuneration figure provided by many banks. The effects of CRD IV are not yet fully visible with regard to the latter figure as the shares were awarded before the coming into force of the Directive, which only applies to remuneration earned from 2014 onwards.

From Tables 1, 2 and 3, we can calculate the substitution ratio of variable remuneration by fixed remuneration. This is the ratio of the increase in fixed remuneration to the decrease in maximum available variable remuneration. Expressed as a percentage, the substitution ratio was, in 2014, 27.7% in Barclays, 41.5% in HSBC, 123% in Lloyds, and 44.5% in SCB. In RBS, there was no increases in fixed remuneration in 2014, but there was in 2015 in which year the substitution ratio amounted to 69.4%. As explained at the beginning of this section, we would expect the increase in fixed pay to be lower than the reduction in the maximum potential variable pay, as the change makes the overall level of remuneration less subject to risk. This has two effects. First, executives will only need to be compensated for the expected value of the reduced variable components which is much less than their maximum potential value. Second, the change reduces the risk premium demanded by senior executives as a result of their risk aversion. The very high ratio in Lloyds is probably attributable to the bank's effective return to full private sector ownership during the relevant period and the consequent increase in overall remuneration of all types. The other banks' ratios are all considerably below

100% thus confirming the hypothesis that total available remuneration would decrease after the implementation of the bonus cap rule.

Overall, the examination of the response of major UK banks to the bonus cap rule reveals that overall levels of available remuneration have decreased in most banks, as expected due to the reduction of the element of risk in remuneration packages and that banks have sought to minimise the impact of the rule on incentives by introducing role-based allowances which are paid in shares. Of course, neither the expected value of remuneration packages nor their subjective value can be surmised from publicly available information on which the previous analysis is based. This could be explored by future empirical research.

VI. Evaluating the bonus cap rule from the perspective of financial stability

This part assesses the likely impact of the bonus cap rule on risk taking by financial institution senior managers and hence on financial stability. The discussion will challenge the Directive's core assumption, shared by some academic commentators,⁸⁹ that the total amount of available variable remuneration and its relative size to fixed remuneration are the main factors determining incentives to take decisions that increase financial institutions risk of failure. At this point a caveat is necessary. The analysis below is based on the remuneration structure of UK banks, which is based on the UK regulatory framework, and thus does not automatically apply to banks incorporated in other EU Member States.⁹⁰ A detailed examination of the effect

⁸⁹ See eg A Johnston, 'Preventing the Next Financial Crisis? Regulating Bankers' Pay in Europe' (2014) 41 J Law & Soc 6, 25 – 26.

⁹⁰ In any case, most non-UK EU banks were not significantly affected by the bonus cap rule as they never paid so high variable remuneration. In 2013, the average ratio of variable to fixed remuneration for high earners in the UK banking sector was 400%, while in all but four other Member States it was up to 250%. See European Banking

of the bonus cap rule in other Member States is a very interesting line for future research, but evidently falls outside the scope of the discussion herein.

(a) Understanding how various forms of remuneration shape risk-taking incentives

It is essential to note that making part of executive remuneration dependent on performance conditions is not the only technique available to set incentives. Regular reviews of fixed pay levels with a view to increasing basic salary in line with the growth of the company's size or profitability is *per se* a mechanism that creates a financial incentive to pursue the maximisation of shareholder value or (as the case may be) the expansion of the relevant company's size. More crucially, paying remuneration in shares or share options rather than cash is a powerful tool to set incentives. Share options have been demonstrated to produce perverse incentives to take risks that are excessive from the perspective of shareholders as they reward strategies that increase a company's share price volatility.⁹¹ As a result, they have become unpopular in recent years, and no major UK bank uses them at the time of writing. Awarding shares that vest in the future, however, is seen as a powerful tool to align the interests of senior managers with the interests of diversified shareholders and is heavily used in the UK. In the case of banks, at least 50% of variable remuneration must be paid in shares.⁹² As was discussed in the previous part, fixed pay allowances are also paid in restricted shares by all major UK Banks. The award of

Authority, 'Benchmarking of Remuneration Practices at the European Union Level and Data on High Earners' (EBA-OP-2016-05, 30 March 2016), 17 <<https://www.eba.europa.eu/-/eba-publishes-report-on-benchmarking-of-remuneration-practices-in-the-eu>>.

⁹¹ Share options have not been used recently by any major UK banks and have fallen in popularity in the corporate sector in recent years. For a critique of share options, see MC Jensen, KJ Murphy and EG Wruck, 'Remuneration: Where We've Been, How We Got to Here, What Are The Problems, and How To Fix Them' (Harvard Business School NOM Research Paper No. 04-28, 12 July 2004), 59 – 61 <<http://ssrn.com/abstract=561305>>.

⁹² PRA Rulebook, CRR Firms, Remuneration 15.15.

restricted shares ensures that over time a senior manager will always have a substantial number of shares vesting in any given year and therefore will have a sustained incentive to ensure that in any given year share prices are as high as possible. This is, of course, problematic from the perspective of financial stability as the level of risk that is optimal for shareholders is excessive from the perspective of the public interest.

In parallel, the power of boards and shareholders to remove senior management (strictly speaking CEOs and other executive directors, but this has knock-on effects on other senior managers) can also create incentives to take an optimal level of risk. Therefore, taking optimal risk (and thus assuming some risk of dismissal due to the company's increased insolvency risk) can be the best strategy to minimise the chances of being dismissed. However, it seems that despite the rise in shareholder activism in the UK in recent years, directors are still unlikely to be removed unless a company is seriously underperforming,⁹³ and hence remuneration remains the major technique used to ally the interests of senior management with the interests of shareholders. The same is not necessarily true for boards of directors, which are more likely to

⁹³ This is a complex issue which cannot be fully tackled within the limits of the present discussion. For a succinct discussion of UK shareholders voting powers and the practical limitations to their use, see MT Moore, *Corporate Governance in the Shadow of the State* (Hart, 2013), 208 – 212. A broader discussion of the balance of powers between directors and shareholders can be found in JG Hill, 'The Rising Tension between Shareholder and Director Power in the Common Law World' (2010) 18 *Corporate Governance: An International Review* 344.

remove underperforming CEOs, especially when consisting of a large majority of independent directors,⁹⁴ as is the case in all major UK banks.⁹⁵

Let us then examine the incentives faced by bank senior managers with regard to taking decisions that they expect to maximise the bank's value, but which entail an increase in the risk of failure. Senior managers who follow optimally risky strategies will maximise the chances of receiving the highest possible level of variable remuneration, to the extent that the latter is sensitive to financial performance.⁹⁶ In addition, pursuing optimal strategies also maximises the value of any shares already held by senior managers, irrespective how they came to own them. It is also likely that pursuing optimally risky strategies will lead to an increase in basic salary in tandem with an increase in the company's size. The latter normally has a knock-on effect on future variable remuneration opportunity levels which are typically a function of an executive's basic salary. Finally, taking optimally risky decisions minimises a senior manager's the risk of dismissal by the board or failure of re-election by the shareholders in all cases except for the case that the risk actually leads to the bank's failure.

Conversely, the financial cost of pursuing optimally risky strategies for a hypothetical senior manager is as follows. If a given strategy leads to the failure of the relevant bank the senior manager in question will fail to earn any variable remuneration for the relevant financial year and will lose any unvested shares awarded in previous years as part of LTIPs, fixed-pay

⁹⁴ See MS Weisbach, 'Outside Directors and CEO Turnover' (1988) 20 *Journal of Financial Economics* 431. See also V Laux, 'Board Independence and CEO Turnover' (2008) 46 *Journal of Accounting Research* 137.

⁹⁵ As of 1 April 2017, the percentage of independent board members (excluding board chairmen) in major UK banks was as follows: 84.6% in Barclays, 76.2% in HSBC, 76.9% in Lloyds, 76.9% in RBS and 78.6% in Standard Chartered.

⁹⁶ For a discussion of pay-performance sensitivity, see Jensen and Murphy (above n 52), 144 – 148.

allowances or bonus.⁹⁷ In addition, he will also lose the value of any shares already vested but retained either due to a mandatory retention period (or due to the institution's shareholding requirement for senior executives) or voluntarily retained. Depending on the relevant contractual terms (commonly referred to as clawback clauses),⁹⁸ the senior manager will also have to pay back the value of vested variable remuneration, such as the cash portion of bonuses, and the consideration for shares that have already been sold, for up to seven years. Furthermore, the cost of pursuing an optimal level of risk includes the direct cost of dismissal.

<INSERT TABLE 4 HERE>

Table 4 summarises the benefits and cost of pursuing optimally risky strategies (from the perspective of shareholders) for bank senior managers.⁹⁹ It is evident that variable remuneration generates incentives to avoid bank failures in a number of ways:¹⁰⁰ (a) loss of variable pay for the year during which the negative outcome occurs; (b) loss of awarded but unvested shares with respect to previous years; (c) liability to repay the cash portion of previous years' bonuses and the proceeds of realised performance shares for a number of years; and (d) loss of the value of any vested shares owned at the time of insolvency. So, apart from encouraging risk taking, variable remuneration in banks also creates some incentives to avoid failure which are strengthened by the combined effect of regulatory rules, such as deferral periods, retention periods and claw-backs. It therefore follows that both the ratio between fixed and variable remuneration and the absolute amount of variable remuneration are not by

⁹⁷ On the regulatory rules on variable remuneration deferral, see above n 21 and accompanying text.

⁹⁸ On the regulatory rules on clawback, see above n 24 and accompanying text.

⁹⁹ In Table 4, the terms 'cost' and 'benefit' refer to the subjective value to senior managers of what they perceive to be the expected cost and benefit of a course of action.

¹⁰⁰ For a discussion of variable remuneration as a risk management tool, see JE Thanassoulis, 'The Case for Intervening in Bankers' Pay' (2012) 67 *The Journal of Finance* 849.

themselves relevant factors, a finding that questions the utility of the bonus cap rule. That being said, the second and third of the benefits listed on Table 4 depend on pay-performance sensitivity, which might indeed have been reduced as a result of the implementation of the bonus cap rule, as will be explained below.

(b) Exploring the impact of the bonus cap rule on bank executives' incentives

The following paragraphs will explore the ways in which the bonus cap rule reduces pay-performance sensitivity and thus works positively to enhance financial stability, but also the ways in which it reduces the cost of failure for senior management or removes incentives to act prudently, thus leading to negative unintended consequences.

Regarding the positive effects of the bonus cap, it has evidently reduced the size of potentially available bonuses and LTIPs,¹⁰¹ thus reducing the amount of money at risk if performance targets are not met. This, of course, is only relevant to the extent that performance criteria are linked to profitability such as total shareholder return and earnings per share as such criteria incentivise behaviour that entails optimal risk taking from the shareholders' perspective. In parallel, in view of the incentive effect created by payment in shares *per se*, the cap reduces the number of shares awarded as part of bonus and LTIP schemes to the extent that it reduces the potential size of these remuneration components. Of course, these benefits can be undermined if banks increase the elasticity of remaining variable remuneration components. The latter technique entails making variable remuneration more steeply connected to performance which can compensate for the size of variable remuneration. For instance, a variable component that ranges from 0 to £1 million and will be £0.5 million for average performance and £1 million for top performance (amongst a selected basket of comparable companies) results in a similar level of elasticity as a package ranging from 0 to £0.5 million

¹⁰¹ As can be seen in Table 3.

that provides 0 for average performance and £0.5million for top performance, assuming they both increase at the same rate and that performance conditions in both cases are equally attainable. Of course, the difference would be that in the second case no incentives are created as soon as performance drops below average, so the overall incentive is not the exactly same. Still, from the perspective of the present discussion it is important to note that making variable remuneration more sharply connected to financial performance can undermine the reduction of risk taking incentives achieved by the bonus cap rule.

Turning to the unintended consequences of the bonus cap, they mostly flow from undermining the positive effect of other regulatory rules such as the claw back rules. Indeed, reducing the size of variable remuneration reduces the amounts that can be clawed back in case of an adverse subsequent event. Also, reducing the potential size of variable remuneration reduces what executives stand to lose if they perform badly with respect to the relevant performance period. Furthermore, increasing the relative size of fixed remuneration compared to variable remuneration reduces banks' ability to make quick and large reductions of executive remuneration in case they face difficulties, thus increasing the total salary expenditure of ailing banks which in itself increases the risk of failure.¹⁰²

Furthermore, unlike LTIP awards, fixed pay allowances are not subject to performance conditions during a vesting period, and cannot be clawed back in case of an adverse change in a bank's financial position. This means that paying executives a given amount of money as a fixed pay share allowance creates powerful incentives to take risky decisions, in some cases even to act in a risk-seeking manner without the mitigating factors of the possibility to cancel vesting and claw back vested awards that exist in the case of LTIPs. In addition, if the amount of fixed pay allowances is reviewed more regularly than basic salaries to reflect the

¹⁰² On the views of the PRA, see above n 2 and accompanying text.

performance of the relevant bank (as appears to be part of the reason for introducing this new type of remuneration) this creates a further positive incentive to take risks that are optimal from the shareholders' perspective. This goes against the Directive's policy of removing incentives to increase banks' level of risk and is a clear manifestation of the phenomenon of adverse unintended consequences of regulatory measures.¹⁰³

Indeed, behavioural economics insights suggest that paying part of (fixed or variable) remuneration in restricted shares can cause senior managers to act in a risk-seeking manner in certain circumstances thus creating perverse incentives to take risk that is excessive even for risk-neutral shareholders let alone for financial stability. The reason for this is the phenomenon of loss aversion and the observation that individuals tend to be risk-seeking with regard to high probability losses. This analysis requires us to appreciate that senior managers will adopt a given remuneration level as their reference point. In the case of remuneration paid in shares, this will probably be the value of the shares at the time of the award. If at the time of vesting the value of the shares has increased, this will be perceived as a gain and if it has decreased as a loss. So, an executive who shortly before the vesting time observes that the value of unvested shares has dropped significantly, will perceive this as a high probability loss and will be likely to take a very high level of risk, as only such risk taking can restore the value of the portfolio

¹⁰³ The area of the regulation and governance of executive remuneration is one where unintended consequences are a frequent and serious phenomenon. For instance, the disclosure of levels of remuneration has arguably led to an increase of the overall levels of remunerations. See EM Matsumura and JY Shin, 'Corporate Governance Reform and CEO Compensation: Intended and Unintended Consequences' (2005) 62 *Journal of Business Ethics* 101. Dignam has also discussed this problem in A Dignam, 'Remuneration and Riots: Rethinking Corporate Governance in the Age of Entitlement' (2013) 66 CLP 401, 403. A notable critique of economic inequality was advanced recently by Picketty See T Picketty, *Capital in the Twenty-First Century* (Harvard University Press, 2014), 330 – 333.

to the reference point.¹⁰⁴ This effect will be stronger if executives have accumulated a significant number of vested shares over time to the extent that they are free to dispose of them. Also, the closer senior managers are to retirement the stronger such perverse incentives are, as they have less to lose in terms of dismissal and reputational cost if a risk turns out badly.

An additional unintended consequence of the bonus cap rule is that it has led to a reduction in cash bonuses in some major banks. Empirical evidence suggests that bonus payments in cash are correlated with lower bank default risk and should therefore be encouraged by prudential regulation.¹⁰⁵ This is due to the fact that bonuses are lost if an institution fails and, as they are payable in cash, their value does not grow in tandem with the institution's share price. In that sense, the reaction of Barclays, HSBC and Lloyds to the cap, which involved a significant reduction in the annual cash bonus opportunity available to their CEOs is deplorable from a prudential regulation perspective.¹⁰⁶

<INSERT TABLE 5 HERE>

Table 5 summarises the positive and negative consequences of the bonus cap rule. Overall, the introduction of fixed pay allowances paid in shares, the regular revision of the

¹⁰⁴ On the contrary, behavioural economic research suggests that the positive effect of performance-based remuneration in encouraging risk-taking will be smaller than expected particularly in relation to strategies with a high probability of success, as senior executives are likely to be risk-averse in such circumstances.

¹⁰⁵ Indeed, Vallascas and Hagendorff conclude that: 'Our results show that banks where CEOs receive large bonus payments (both in absolute terms as well as relative to their total cash compensation) display lower levels of default risk. [...] Thus, CEO cash bonuses are solvency-contingent and, therefore, incentivize CEOs to avoid institutional failure.' F Vallascas and J Hagendorff, 'CEO Bonus Compensation and Bank Default Risk: Evidence from the U.S. and Europe' (2013) 22 *Financial Markets, Institutions and Instruments* 47, 84.

¹⁰⁶ Compared to 2013, bonus opportunity in 2014 was lower by 29.8% in Barclays, 36.1% in HSBC and 37.8% in Lloyds. RBS and SCB were not using cash bonus at all in the relevant period. The data derives from Table 3.

amount of fixed pay allowances and a likely increase in the elasticity of remaining variable remuneration components may outweigh the prima facie reduction in pay-performance sensitivity resulting from the reduced ratio of variable to fixed remuneration. At the same time, the cap comes at a cost to bank shareholders. As the cap reduces the relative weight of annual bonuses which can incentivise particular aspects of individual performance beyond risk taking, it has no doubt had a negative impact on the amount of effort that senior managers are incentivised to make. The reduced flexibility in designing remuneration packages due to the need to comply with the maximum ratio of fixed and variable remuneration may make it more difficult to align senior management and shareholder interests, especially with regard to providing adequate motivation for exceptional levels of performance, as illustrated by Murphy's recent study.¹⁰⁷

The preceding analysis suggests that the bonus cap rule is a blunt tool and that it is by no means clear whether its advantages outweigh its shortcomings. This finding is corroborated by available empirical evidence suggesting that the bonus cap rule has had no effect on risk taking by bank senior managers.¹⁰⁸ If the cap is to be retained, an obvious way to reduce its unintended consequences would be to stipulate that fixed remuneration cannot be paid in

¹⁰⁷ KJ Murphy, 'Regulating Banking Bonuses in the European Union: A Case Study in Unintended Consequences' (2013) 19 *European Financial Management* 631. On the unintended economic consequences of the cap, see also G Ferrarini, 'CRD IV and the Mandatory Structure of Bankers' Pay' (2015) ECGI Law Working Paper N° 289/2015 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2593757>.

¹⁰⁸ This finding derives from a survey of financial institution staff discussed in Commission, 'Assessment of the remuneration rules under Directive 2013/36/EU and Regulation (EU) No 575/2013' (Report) COM (2016) 510 final, 10.

shares, nor is financial instruments the value of which depends on the share price¹⁰⁹, and that remuneration contracts ought to last for a minimum term, during which no revision of remuneration is possible. This, of course, would not mitigate the remaining negative consequences of the bonus cap rule which might still outweigh its benefits.

Assuming that more radical regulatory reforms in the area are possible, the present analysis suggests that instead of focusing on the ratio between fixed and variable remuneration, regulation should focus on limiting the award shares as part of executive remuneration packages in banks. Conversely, variable remuneration paid in cash does not create incentives to increase a bank's risk of failure.¹¹⁰ If it was coupled with the existing deferral and claw back requirements, it could positively incentivise senior managers to avoid failure. This would entail abandoning the bonus cap rule and the current rule that compels banks to pay half of variable remuneration in shares.¹¹¹ The successful implementation of such a reform would require regulation to prescribe in more detail the type of criteria used to award variable remuneration, both financial and non-financial, with a view to ensuring that taking decisions that increase the risk of failure does not lead to higher awards of variable remuneration. This could be achieved by requiring banks to use financial performance metrics that are appropriately risk-weighted and a preponderance of non-financial metrics which depend on a bank's safety and soundness, such as the total value of non-performing loans and loan impairments.

¹⁰⁹ Regarding share options, which are not currently used by any major UK banks, there are strong arguments for explicitly prohibiting their use altogether as they create perverse incentives to take risks that are not desirable even for (risk-neutral) shareholders. See Jensen, Murphy and Wruck (above n 91).

¹¹⁰ See Vallascas and Hagendorff (above n 105).

¹¹¹ See above n 20 and accompanying text.

VII. Conclusions

Having examined the effect of the bonus cap rule on the incentives of bank senior managers to take risks that are undesirable from a financial stability point of view, it is submitted that it is not clear whether the rule has resulted in any reduction in incentives to take excessive risk, and it is not impossible that it might, in fact, have caused such incentives to increase. Indeed, the bonus cap rule is a blunt tool that has had some positive impact but has also resulted in adverse unintended consequences which may have fully outweighed the benefits of the rule. Of course, calculating the exact level of pay-performance sensitivity before and after the reform is not feasible based on publicly available information alone and falls beyond the scope of this paper. Such research question would be an appropriate area of interrogation for future quantitative empirical work. At the same time, the bonus cap rule also comes at an inevitable cost to bank shareholders.

Indeed, it was demonstrated that the bonus cap rule may have failed to deliver its intended effect in the UK for two main reasons: on the one hand, CRD IV erroneously conflates the ratio of variable to fixed remuneration with the overall level of pay-performance sensitivity, and, on the other, the rule neglects the partially positive role of variable remuneration in ensuring that senior bank managers stand to suffer a personal financial loss if the bank they work for fails. It thus stands as an illustration of the inherent difficulties associated with attempting to impose inflexible regulatory rules on sophisticated corporate entities, and of the risks associated with taking prompt legislative or regulatory measures to respond to the lack of public confidence in banks following a financial crisis, without full consideration of the likely consequences of such measures. If the cap is to be retained, it must be strengthened by prohibiting fixed remuneration from being paid in shares. If more radical reforms are possible, the analysis herein suggested abandoning the bonus cap rule in favour of focusing on rules that

would restrict the ability of banks to pay part of executive remuneration in shares or similar financial instruments.

Table 1. The impact of the bonus cap on major bank CEOs' total remuneration

	Year	Barclays £ 000	HSBC £ 000	Lloyds £ 000	RBS £ 000	SCB \$ 000
Actual total remuneration	2014	6,409	6,977	6,990	3,053	4,719
	2013	5,864	7,375	6,685	4,512	9,505
Potential total remuneration	2014	7,239	10,725	7,898	3,053	14,157
	2013	9,714	13,125	7,730	4,512	14,615
Ratio of max variable to fixed remuneration	2014	200%	200%	212%	104%	200%
	2013	564%	600%	352%	198%	412%

Table 2. The impact of the bonus cap on major bank CEOs' fixed remuneration

	Year	Barclays £ 000	HSBC £ 000	Lloyds £ 000	RBS £ 000	SCB \$000
Salary	2014	1,100	1,250	1,061	1,000	1,826
	2013	1,100	1,250	1,061	1,000	1,680
Role-based allowances	2014	950	1,700	900	-	1,100
	2013	-	-	-	-	-
Total fixed pay	2014	2,413	3,575	2,530	1,493	4,719
	2013	1,464	1,875	1,630	1,512	2,855

Table 3. The impact of the bonus cap on major bank CEOs' variable remuneration

	Year	Barclays £ 000	HSBC £ 000	Lloyds £ 000	RBS £ 000	SCB \$ 000
Max. potential bonus	2014	1,930	2,395	1,708	-	-
	2013	2,750	3,750	2,745	-	-
Ratio of max. bonus to fixed pay	2014	80%	67%	67%	-	-
	2013	188%	200%	146%	-	-
Max. potential LTIP award	2014	2,896	4,755	3,660	1,560	9,438
	2013	5,500	7,500	3,355	3,000	11,760
Ratio of max. LTIP to fixed pay	2014	120%	133%	145%	104%	200%
	2013	376%	400%	206%	198%	412%

Table 4. The factors determining the incentives of senior managers to take optimal risk

Benefits of pursuing an optimally risky strategy (in case it is successful)	Cost of pursuing an optimally risky strategy (in case it leads to the company's failure)
1. Possible increase in amount of fixed remuneration and consequent increase in future variable remuneration opportunity.	1) Loss of any elements of unvested variable remuneration (bonuses and LTIPs).
2. Increased pay-offs under existing variable remuneration schemes.	2) Losses due to the claw-back of variable remuneration that has already vested.
3. Increase in the value of shares owned, both unvested and vested.	3) Loss of value of any vested shares owned by the senior manager.
4. Reduction of risk of dismissal due to being too conservative in taking risks.	4) Losses due to dismissal (cost of finding new post and reputational cost).

Table 5. The positive and negative impact of the bonus can rule on financial stability

Positive impact	Negative impact
Reduction of future payoffs under bonus and LTIP schemes that depend on profitability.	Reduction of bonus and LTIP awards to be lost in case of adverse financial events.
Reduction of the value of shares awarded as part of bonus and LTIP schemes.	Reduction of amounts that are subject to be clawed back in case of adverse events.
	Incentives to take excessive risk due to fixed pay allowances paid in shares.
	Reduction of the ability of banks to decrease remuneration in times of financial distress.