

AGENCY THEORY AND REMUNERATION POLICY: PERFORMANCE INCENTIVES IN THE FINANCIAL SECTOR

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During a time when bankers' bonuses inspire such outrage, this paper uses the agency approach to objectively evaluate the implications of remuneration policy on employee behaviour in the financial sector. Mark Sykes outlines the theory of the principle agent problem and its relevance to managerial capitalism and the separation of ownership and control in organisations, using contemporary international and Irish examples to illustrate the problem and finally discusses the regulatory response to date.

Introduction

'The bonus-hunting bankers...stand charged with destroying wealth on an epic scale. Foolish, greedy, irresponsible behaviour and excessive risk-taking led to massive losses and the crisis in the banking system which is now costing millions their jobs and many their homes. Why should such failure be rewarded?' (Cable, 2009).

The recent financial crisis has shone a tremendous light upon the theory and question of remuneration policy in the financial sector. The level and type of remuneration provided in the run up to the crisis, and in some instances following it, has led to emotional and populist responses from policy makers and commentators alike. The terms 'banker' and 'bonus' have become tainted, and when used together, resemble a popular byword for excess and irresponsible behaviour.

This essay shall use the tools of agency theory to analyse remuneration in the financial sector. Specifically, it will attempt to ascertain whether remuneration policy can lead to excessive risk taking, and if this is the case, whether it should be controlled by regulation. Firstly, it will discuss the concept of agency theory and the principle agent problem, and how it inevitably arises once ownership and control are separated in organisations. It shall then show how the problem can be partially solved by performance based incentives, such as bonuses and share options, and argue that excessive risk taking

can be an unintended consequence of these solutions. It will also contend that the principle-agent problem is particularly difficult to solve in the financial sector. The essay will conclude by arguing that wholesale changes to the remuneration policies of the financial sector are necessary but that these changes are already underway.

Agency Theory and Organisational Structure

‘The directors of such (joint stock) companies, however, being the managers rather of other people’s money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private company frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master’s honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company’ (Smith, 1776 cited in Jensen and Meckling, 1976, p.305).

The field of economics lays at its foundation an emphasis on incentives; it is thus no surprise that Adam Smith, one of the fathers of the field, foresaw the applicability of the principle-agent problem to organisational structure. Agency theory treats individuals as rational utility maximisers, and shows that, in the presence of asymmetric information a principle-agent problem will arise whereby the agent does not act in the best interests of the principle (Stiglitz, 2008: 637-643).

Example: A Theoretical Justification of Agency Costs.

Consider for example a situation whereby an employer (C) engages an employee (L) to produce output (Q) in exchange for a wage (W). The employee’s output is a function of effort (e), skill (s) and luck (l). Assume the worker dislikes work. Initially the employer can only observe output.

$$U(C) = f(Q, -W)$$

$$U(L) = f(-e, W)$$

$$Q = f(e, s, l)$$

For a given wage, the employee will minimise effort to maximise their utility. The employer, in seeking to maximise their own utility can then either incur supervision costs to observe and encourage effort, or can try to incentivise effort via making W a function of Q (carrot and stick). However, these actions will never be complete solutions; effort may not be perfectly observed (or the costs could be prohibitive) and given that output is a function of factors outside of the employee’s

control, it is an imperfect basis to remunerate on (i.e. rewarding a lazy but lucky worker over a hardworking but unlucky worker).

Thus, the principle-agent problem is one of asymmetric information and divergent objectives leading to moral hazard. The pay-off to the agent will differ to that of the principle, the agent will not in general take the action which the principle would like him to take, or that they would contract for in the presence of perfect information (Stiglitz, 2008, p.638). The employee may not adjust his effort as the situation requires or may engage in too much or too little risk taking (Stiglitz, 2008, p.638). The solution is to look for the compensation scheme which maximises the expected utility of the principle, given that the agent will undertake the actions which maximise his own expected utility and that the agent must be willing to accept the contract (Stiglitz, 2008, p.639). We can thus quantify the totality of agency costs as consisting of: monitoring expenditures by the principal, bonding expenditures by the agent and a residual loss (resulting from the agent making decisions which do not maximise the welfare of the principal) (Jensen and Meckling, 1976, p.311).

Given these agency costs, one might reasonably wonder, as Smith did, whether a publicly owned firm can ever compete with owner run organisations. As Coase (1937) and Fama and Jensen (1983b, p.302) argued, the firm is simply a set of contracts among factors of production. In competitive markets, inefficient functional forms will not survive. Thus, the ex-post presence of publicly owned organisations in an industry is a sufficient condition for them to be the most efficient functional form. Specifically, Fama (1980, p.291) and Markowitz (1952) argued that the separation of ownership and control allows investors to diversify their portfolios, hence reducing risk in line with modern portfolio theory and enabling the use of specialised managers (Fama and Jensen, 1983a, p.330). Fama also argued that competitive managerial labour markets, along with internal and external monitoring devices would 'evolve to stimulate the on-going efficiency of the corporate firm, and with the market for outside takeovers providing discipline of last resort' (Fama, 1980, p.295).

As such, we can view the choice of organisational form as a cost benefit analysis. Agency costs are the biggest negative relating to the separation of ownership and control, but these can be somewhat mitigated via rational managerial labour markets which incorporate expected underperformance on an ex-ante basis (Fama, 1980, p.296). On the benefits side of the ledger, publicly owned corporations provide important diversification and specialisation, and facilitate the access of additional external capital¹.

Remuneration and Agency Costs in the Financial Sector

It is important to predicate our discussion of remuneration policy in the financial sector by highlighting relevant differences between many financial firms and non-financial firms. Firstly,

¹ Thus, for instance, we would expect industries which benefit greatly from economies of scale (telecommunications, energy) to be organised as joint stock companies. Conversely, we expect professional service firms, with high risks from agency costs and limited capital requirements to be organised as partnerships.

although all corporations in which ownership and control are separated face moral hazard arising from increased agency costs, financial firms can also face moral hazard via their being ‘too big to fail’. That is, in many cases, the negative externalities associated with their failure outweigh the costs to the exchequer of socialisation of losses via a public ‘bail-out’. This is essentially an extension of the moral hazard created by having limited liability in the first place, and can incentivise additional risk taking on behalf of debt and other providers of capital as their downside risk is limited. As such, the perceived presence of moral hazard and excessive risk taking ex-post in a financial firm does not prove that remuneration policies were to blame.

Financial firms are generally more highly levered and thus their returns more volatile than non-financial firms. As such, the effects of remuneration policies which encourage risk taking are likely to be more severe. Furthermore, in many areas of the financial sector, the full effects on profitability of an employee’s actions are not known within a single financial year and thus remunerating on this basis is inefficient. For example, profits accruing from a loan or insurance policy will not be known with certainty until it is fully repaid in the case of a loan or elapses in the case of an insurance policy (unless they are securitised and sold, in which case the information problem falls to the purchaser of the security). In fact, there will always be an information asymmetry between management and employees in these instances, that is, given that the financial product was sold under conditions of uncertainty, their ex-post profitability does not indicate whether the employee adhered to the appropriate lending/credit standards when initiating the contract.

It is also useful to note, given the diversified nature of many financial institutions, that the ability of individual employees to take risks, even if their remuneration policies implicitly incentivise them to, varies widely between business units and is often constrained by internal controls. That said, it remains plausible that senior management, whose actions, given their importance, could have a meaningful influence on share price value, could be capable of taking excessive risks were their remuneration policy incentivising such activities.

Lastly, it is worth acknowledging the argument that there exists a ‘bonus culture’ in financial institutions. If true, in isolation, this is not a negative attribute which would engender risk taking. As explained in ‘A Theoretical Justification of Agency Costs’, above, relating remuneration to output or performance is a useful mitigant of agency costs and serves to align shareholder and employee’s utility functions. However, these policies could plausibly lead to risk taking by management in excess of that demanded by investors, an issue which we will shortly discuss in more detail.

The Global and Local Financial Crisis and Remuneration Policy

As alluded to already, notwithstanding that created by remuneration policy, there exists a significant amount of moral hazard in the financial sector, which plausibly encourages risk taking in excess of that which maximises shareholder value. As such, we cannot conclusively attribute any excessive risk taking in the run up to the financial crisis to misaligned incentives driven by

remuneration policy. That said, we can still gain meaningful insights by examining what management should do in theory - maximise the present discounted value of the firm and as such the share price Figure 1 - and what their remuneration policy incentivised them to do.

Figure 1

$$P_t = \sum_{k=0}^{\infty} \left(\frac{1}{1+r} \right)^{k+1} E_t d_{t+k}$$

(Sheffrin, 1996, p.122)

Using the examples of senior management remuneration in Bear Stearns, Lehman Brothers, Allied Irish Banks (AIB) and Anglo Irish Bank ('Anglo'), four institutions which either failed or required state support during the recent financial crisis, shows that senior management remuneration was primarily composed of base salary, performance related bonuses and share options (Bebchuk, Cohen and Spamann, 2009) (Anglo, 2007, pp.124-130) (AIB, 2007, pp.160-165).

In all cases, though the proportion varied widely, *base salaries* were the smallest portion of executive pay and in the case of Lehman Brothers and Bear Stearns was almost negligible in terms of total compensation. Taken on its own, this is a positive in terms of principle-agent problem mitigation, returning to 'A Theoretical Justification of Agency Costs' above; fixed salaries provide limited incentive for effort² on the part of management.

In all cases, *performance bonuses* were a multiple of base salary and on an ex-post basis were the most valuable form of compensation. They were paid in cash and on the basis of annual performance³, including on metrics such as share price and earnings per share. For example, the average Bear Stearns senior executive received an annual cash bonus of just over \$10m between 2000 and 2006 with the equivalent for Lehman being \$5m (Bebchuk, Cohen and Spamann, 2009, p.12). Executive directors in AIB received an average bonus of €1m in 2006 and €700k in 2007 (AIB, 2007, pp.161-162). In Anglo the equivalent figures were just under €1m⁴ in both 2006 and 2007 (Anglo, 2007, pp.126-127). As discussed previously, remuneration based on annual results may be inefficient for a financial firm, given the multi-annual implications of decisions made during the year. Similarly, the fact that these bonuses were in cash meant that employees futures were not tied to the long term performance of the firm and using the agency approach as always, incentivised short term profits at the expense of long term performance, contrary to the shareholders objective function given in

² However, the 'stick' side of incentivisation would remain, with unemployment plausibly being a risk of underperformance. Similarly, as with the rest of the paper, we take the narrow agency view, ignoring potential non-monetary motivations for work: the importance of self-esteem, peer approval, etc.

³ Not explicitly stated that bonus was in the form of cash for AIB.

⁴ Figures exclude John Rowan who retired on 31 Dec 2005, and received a €1.1m retirement bonus (Anglo, 2007, p.127).

equation Figure 1. That said, this misalignment of incentives is somewhat mitigated by the presence of share price performance in the evaluation criteria, which in the presence of rational markets should evaluate company performance based upon the same criteria in Figure 1, i.e. should not reward short term profit taking at the expense of long term growth.

At first glance, *share options* appear the form of remuneration which would best align management incentives to the objectives of shareholders, given that you are broadly connecting their pay-offs. Furthermore, the use of options rather than the issuing of shares directly is somewhat equivalent to giving management a levered position in the company, giving them far larger incentive to maximise returns relative to the same number of shares. Given this, it is understandable that these options, although now worthless in most cases, were a large part of compensation in each company. On December 31st 2007 each of the Executive Directors of AIB held in excess of 90,000 share options, with their equivalents in Anglo all holding in more than 500,000 on September 30th of the same year (AIB, 2007, p.164) (Anglo, 2007, p.129). In the cases of Lehman Brothers and Bear Stearns many awarded options were cashed out over the period 2000-2007 but in 2008 the top 5 Executive Directors still held 18.8m and 6.8m shares respectively (Bebchuk, Cohen and Spamann, 2009, p.17).

That said, it is important to note the obvious intuitive fact that the value of a share option is not solely a function of the underlying share price. It is also a function of the volatility of the share price (Black and Scholes, 1973). That is, *ceteris paribus*, the value of an option generally increases as the 'riskiness' or expected variation in the stock price increases. Secondly, the very fact that downside risk is limited in relation to a call option generates incentives for risk taking as the pay-off from success in an endeavour is far in excess of the potential losses from failure.

Thus, we can summarise that base salaries, because of their small proportion of overall remuneration, had only a limited impact on management behaviour. Performance bonuses and share option schemes certainly provided incentives for management to be short-sighted and take risks in excess of that which maximised the net present value of the firm, as per the shareholder view of the firm. However, the extent to which this behaviour actually occurred is difficult to quantify and disentangle from the wider causes of the financial crisis.

Lastly in relation to this portion of the essay it is useful to make a further note, that although remuneration policies on both sides of the Atlantic have been shown to encourage excessive risk taking and that large amounts of remuneration were cashed out in the run up to the financial crisis, Chief Executives still retained a large amount of 'skin in the game' and made significant personal losses when their respective firms share prices collapsed. In September 2008, when Lehman Brothers collapsed, their CEO, Richard Fuld, held almost 11m of their worthless shares, a loss of almost \$1bn from peak valuation (Bebchuk, Cohen and Spamann, 2009, p.17; Yahoo!Finance). Similarly, as Figure 1 estimates, Irish Chief Executives made large losses from their institutions failures.

Although the losses made by the AIB CEO were smaller, they in fact represented a larger percentage of overall awarded compensation.

Figure 2

	AIB CEO	Anglo CEO
Shares Held	255,845	510,899
Peak Share Price	€21.57	€17.31
Current/Final Share Price	€0.27	€0.00
Loss from Peak	€5,499,499	€8,843,662
Options Held	120,000	1,201,834
Weighted Average Exercise Price	€13.78	€7.43
Loss From Peak	€934,800	€11,874,120
Accumuated Loss	€6,384,299	€20,717,782

(Anglo Annual Report 2007; AIB Annual Report 2007; Yahoo! Finance)

Note: AIB CEO also conditionally held 251,163 shares which would have been awarded between 2008 and 2010 based on certain performance targets been met. Those were not met.

Moving Forward: Incentive Alignment and Regulatory Response

‘[There] is agreement by supervisors and regulatory bodies...that the inappropriate remuneration structures of some financial institutions have been a contributory factor (to the financial crisis). Remuneration policies which give incentives to take risks that exceed the general level of risk tolerated by the institution can undermine sound and effective risk management and exacerbate excessive risk-taking behaviour’ (CEBS, 2010, p.6).

As should be evident at this stage, agency costs are a very real and important issue, particularly in the financial sector when they are added to the additional moral hazard created by the issue of ‘too big to fail’. The only perfect solution is to have the owners run the business, which is not feasible or desirable given the many benefits of the separation of ownership and control. In fact, even in this instance, agency issues would occur in relation to debt holder’s objectives (Jensen and Meckling, 1976, p.350). As such, any response will only be a partial solution, but it is certainly

plausible that better efforts can be made to align incentives than those described previously in relation to the financial crisis.

The CEBS (2010) has made many wide ranging recommendations in relation to remuneration policy, its composition and oversight in the financial sector. For instance, it has emphasised the need for remuneration to be consistent with effective risk management (CEBS, 2010, p.48), has set tough guidelines for the composition of remuneration committees (CEBS, 2010, p.32), has proposed the outlaw of variable remuneration not linked to performance such as ‘golden parachutes’ and ‘minimum bonuses’ (CEBS, 2010, p.41-42) and has argued for increased deferral of remuneration and the use of non-cash instruments (CEBS, 2010, p.18). The Irish Financial Regulator has echoed these sentiments, particularly in relation to risk management (Central Bank of Ireland, 2010).

These responses, in general, appear reasonable, and should more closely align management and shareholder objectives, somewhat mitigating management’s incentive to be short sighted. Furthermore, they are in line with those being taken by major financial institutions following shareholder consultation. For instance, Credit Suisse (2011) has announced remuneration structures in excess of the minimum stringency set out by the CEBS. Variable compensation will vest over 4 years, be linked to the firm’s return on equity and be linked to the firm’s share price with no element of leverage (Credit Suisse, 2011). Similarly, Barclays has pioneered the use of contingent convertible bonds or ‘CoCos’ as part of senior executive variable remuneration. These awards will convert to equity and thus be capable of taking losses should the bank’s core capital fall below 7%⁵ (Barclays, 2011, p.19).

It is important to distinguish between reforms which relate to how remuneration is paid versus the level of remuneration itself. The discussion thus far has sought to explain how moral hazard may arise in a given remuneration structure and what methods could be used to mitigate it. It has made no value judgment as to the determination of the level of remuneration. While it may be politically popular to impose pay restrictions or ceilings on the level of remuneration in financial firms, particularly those whose failures have led to public expenses, these would likely lead to efficiency losses. The need for regulation to reduce the probability of future socialisation of losses in the financial sector is inarguable, but this does not imply the state should have any say in the battle between capital and talent⁶ in an individual institution.

Conclusion

While impossible to prove outright, there appears no doubt that the incentives created by remuneration policy in the financial sector contributed to the financial crisis which is still ongoing in

⁵ For 2010 bonuses these awards were synthetic, pending regulatory approval of the use of traded ‘CoCos’ (Jones, 2011).

⁶ As discussed generally in Martin and Moldoveanu (2003). Essentially this is an issue between the relative returns to labour and capital in financial institutions. Reducing remuneration levels would essentially be a transfer of wealth from labour to capital (ignoring the potential for deadweight loss).

Ireland. Using the tools of agency theory we have set up the problem, rationalised the failure and applauded the majority of the regulatory response.

However, we must caution that regulatory interventions are prone to unforeseeable consequences. The incentives created by remuneration policy will never perfectly align employee's incentives with the objectives of shareholders. Similarly, we must caution against the maximisation of shareholder value as the only objective for financial firms. Given the large positive and negative externalities they are capable of generating, a wider stakeholder view may be more appropriate. The narrow shareholder theory ignores the importance of the credit and lending channels to the functioning of the economy and equally disregards the potential socialisation of losses if a systematically important private institution becomes illiquid or insolvent.

Finally, it is worth noting the imperfections of agency theory itself. It leaves no room for non-financial motivations and assumes perfect rationality. Nevertheless, this author feels that the approach has merit, and although its assumptions are incorrect it has useful predictive power, which is all we require of a model. If economics has succeeded in anything, it has shown that incentives matter - and the financial sector is no exception.

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