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Royal Bank of Scotland Fiasco: Exit, Voice or Loyalty?

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This paper proposes to examine the dynamics of changing ownership structure of the Royal Bank of Scotland, starting with the period of the controversial decision of RBS management in mid-2007 for the acquisition of the Dutch banking group ABN Ambro, to determine if the market for corporate control can any longer be regarded as a protection for the capitalist system against a rent seeking managerial bureaucracy. The above controversial acquisition is now blamed on an overbearing management, and the decision to push through this merger is considered to be one of the reasons for the demise of RBS. However, there appears not to have been any expression of organised dissent from shareholders at the time of the acquisition. We propose to investigate the structure of shareholding to ascertain if the shareholders could have attempted to challenge management by exercising franchise or whether exit was the only viable option. The fact that there was no exit of large shareholding groups around the time of the merger is a puzzle that will also be examined.

JEL Classification: Corporate Governance, Mergers, Voting Power, Condorcet Jury Theorem

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1. Introduction:

The agency problem associated with corporate governance, where managers act on behalf of shareholders, has received some attention in the literature. This concern has been the focus of the managerial theories of the firm for a very long time, but these theories do not provide a clinching explanation about the reason why mergers are so often harmful to shareholder interest. This observation is a challenge to assertions of the efficiency of financial markets, and it is a difficult pill to swallow for the admirers of these markets. Whilst some authors remained sceptical for quite some time of the evidence indicating failure of mergers to deliver synergy (Jensen and Ruback 1983), but now the burden of evidence of the failure of mergers to enhance shareholder interest of bidding firms is generally acknowledged to be too strong to ignore (Mueller 1989).[1]

The importance of the literature on mergers has recently been brought into sharp focus as the impact on the wider economy of the failure of the banking sector has become painfully evident. A view has also emerged that the failure of the market for corporate control – "…the market for corporate control, often referred to as the takeover market, …[is] a market in which alternative managerial teams compete for the rights to manage corporate resources" (Jensen and Ruback 1983:6) – is due to shareholder passivity. For example, the Hempel Committee on Corporate Governance in the UK recommends shareholders to begin to exercise their right to franchise. In this paper, we look at a particular merger in the banking sector which, *inter alia*, contributed to the failure of a large segment of that sector in 2008 in the context of the above discussion about mergers. This is the contested takeover of the Dutch banking group ABN Ambro by the Royal Bank of Scotland. RBS offered around £49 bn to acquire ABN, competing against a lower offer of around £39 bn by a rival suitor, Barclays Bank. This was in October 2007. By October 2008, RBS shares collapsed even more sharply than the shares of Barclays and RBS was saved from bankruptcy by the state bailing out the bank by propping

[1] Even in the minds of those who took a relaxed view of the *status quo* about the ability of the financial markets to reconcile the conflict of interest entailed in the separation of ownership from management, accepted that there were conflicts of interest between shareholders and lenders (Jensen and Meckling 1976). The existence of a potential conflict of interest amongst bondholders and shareholders is now generally recognised in the literature (Davidson 1985).

up the shares by offering to buy them up. This spectacular decline is attributed partly to the decision a year earlier to compete against Barclays to acquire ABN. The market for corporate control failed to save RBS from its management. We come to the view that the potential voting power of shareholders could not have saved the bank from managerial failure and eventual collapse. The explanation may have to be sought in the nature of labour contracts at the highest level and the process of information disclosure.

The paper is organised as follows. Section 2 highlights the salient features of the literature on ameliorating the agency problems inherent in the separation of ownership and control through the takeover process and also through a separate mechanism of the exercise of voting rights by shareholders. Section 3 describes the shareholding pattern in RBS before and after the above merger, and critically examines the argument about voting as a means open to shareholders for keeping management in line. Section 4 speculates about other explanations for failure of the stock market to rid RBS of management that brought the bank to its knees. Section 5 concludes.

2. Shareholders and Management

Under the British American legal system, the objective of management is to maximise shareholder wealth. The point is brought to focus in a court judgement against Henry Ford, the founder of the Ford Motor Company, as reported in Nevins and Hill 1957).

Henry Ford, then chairman of Ford Motor Company, gave an interview reported in *Detroit News* on November 4 1917. He wished to sell cars cheaply to enable wider public ownership of vehicles. His reasoning was based not on shareholder wealth maximization but on corporate responsibility to society (quoted in Nevins and Hill 1957:97):

> "I hold this view because it enables a large number of people to buy and enjoy the use of a car and because it gives a larger number of men employment at good wages. Those are the two aims I have in life. But I would not be counted a success ... if I could not accomplish that and at the same time make a fair amount of profit for myself and the men associated with me in the business."

One of the shareholders objected to the management philosophy outlined in Mr Ford's newspaper interview. The matter went to court. A decision was handed down by Judge Ostrander on February 7, 1919. The management of the Ford Motor Company (ie Henry

Ford), by taking social considerations into account, was found to have been in breach of their obligation to shareholders. Consider Judge Ostrander: (quoted in Nevins and Hill 1957:103)

> "We have no doubt that certain sentiments, philanthropic and altruistic, creditable to Mr Ford, had large influence in determining the policy to be pursued by the Ford Motor Company ... A business corporation is organized and carried out for the profit of the stockholders. The powers of the directors are employed for that end ... and do not extend to change in the end itself, to the reduction of profits or to the non-distribution of profits among stockholders in order to devote them to other purposes."

The view of the corporation underlying Judge Ostrander's edict is an organizational structure the aim of which is to maximize shareholder wealth. The economy becomes deficient within its own terms if companies are so organized as to enable managers to deviate from this aim. The focus of the rules of corporate governance in a world where managers are not shareholders is to ensure that managers cannot get away with taking decisions that enhance their own agenda and downplay the interest of shareholders. This is the agency problem in corporate governance. Managers are agents of shareholders, the principals in the equation between managers and owners. The object of devising organizational structures and articulating a legal framework for companies is to ensure that the agents are not able to pursue their own agenda at a cost to the principals, the shareholders.

In their much-cited paper, Jensen and Meckling takes a sanguine view of the Anglo-American corporate governance system to deliver maximum wealth for shareholders. They offer a Darwinian defence of the system in that, in their view, no other competing framework has emerged to supplant the present organisational form (Jensen and Meckling 1976:357):

> "Both the law and the sophistication of contracts relevant to the modern corporation are the products of a historical process in which there were strong incentives for individuals to minimize agency costs. Moreover, there were alternative organizational forms available, and opportunities to invent new ones. Whatever its shortcomings, the corporation has thus far survived the market test against potential alternatives."

As if to emphasise that agency problems are not serious, a subsequent survey of the literature by Jensen and Ruback (1983) takes a relaxed view about the potential conflicts of interest between the managerial bureaucracy and the owners of capital. The takeover process whereby

different teams of managers compete to control the task of management, in their view, can ameliorate any potential conflicts of interest between shareholders and managers (1983:47):

> "…the evidence seems to indicate that corporate takeovers generate positive gains, that target firm shareholders benefit, and that bidding firm shareholders do not lose. Moreover, the gains created by corporate takeovers do not appear to come from the creation of market power. Finally, it is difficult to find managerial actions related to corporate control that harm stockholders; the exceptions are those actions that eliminate an actual or potential bidder, for example, through the use of targeted large block repurchases or standstill agreements."

Mueller (1989:6) wonders if this strand of the literature might not have misled the business community (Mueller 1989:6):

> "With a large fraction of academic observers claiming that mergers increase efficiency, and these housed mostly in business schools and finance departments, the business community might well reach the conclusion that 'informed opinion' says that mergers enhance profitability."

There are two mechanisms suggested in the literature to keep management in check. The market for managerial control through takeovers of companies that are failing to deliver maximum wealth to shareholders is the mechanism favoured by Jensen and Ruback (1983). Now that there is greater agreement in the literature that mergers have failed to deliver the promise of ameliorating the agency problem inherent in the separation of ownership and control of companies, shareholder franchise is proposed as the favoured mechanism of those who have not given up hope about the rescuing capitalism from the clutches of the management bureaucracy.

The two mechanisms are different. The market for corporate control to exert a moderating influence on management does not require shareholders to undertake the cost of information gathering. If it worked, it would be address the problem of dispersed share ownership, especially in the UK. When shares are widely dispersed, the effort needed to put together a coalition of shareholders to force management to change direction and the effort needed in extracting the information that is necessary for that purpose can be onerous. Exit is easier for

shareholders that are unhappy with the direction of management than the effort needed to exercise a voice in management. Becht (1999:1071):

> "…dispersion [of shares] is a pre-requisite for liquid stock markets, but it entails a collective action problem: individual investors have no incentive to engage in direct monitoring".

The model of the market for corporate control claims to address the problem of collective action. (Jensen and Ruback 1983:6):

> "We view the market for corporate control, often referred to as the takeover market, as a market in which alternative managerial teams compete for the rights to manage corporate resources….Viewing the market for corporate control as the arena in which management teams compete is a subtle but substantial shift from the traditional view, in which financiers and activist stockholders are the parties who (alone or in coalition with others) buy control of a company and hire and fire management to achieve better resource utilization. The managerial competition model instead views competing management teams as the primary activist entities, with stockholders (including institutions) playing a relatively passive, but fundamentally important, judicial role. Arbitrageurs and takeover specialists facilitate these transactions by acting as intermediaries to value offers by competing management teams, including incumbent managers."

In the market for corporate control, shareholders have little need for detailed information about how the company is run (Jensen and Ruback 1983:6):

> "…stockholders in this system have relatively little use for detailed knowledge about the firm or the plans of competing management teams beyond that normally used for the market's price setting function. Stockholders have no loyalty to incumbent managers; they simply choose the highest dollar value offer from those presented to them in a well functioning market for corporate control, including sale at the market price to anonymous arbitrageurs and takeover specialists."

Now that it is generally accepted that the market for corporate control has not delivered on its promise (Scherer 1988), rules on corporate governance to safeguard the interest of the owners of capital from the managerial bureaucracy that runs companies have began to focus on

shareholder participation. For example, Sir Ronald Hempel, chair of the eponymous committee on corporate governance, makes a direct appeal to shareholders to vote:[2]

. . . what we are doing increasingly is encouraging people to make judgements

. . . I believe that every encouragement should be given to shareholders to vote.

Similar sentiments have been expressed by the Cadbury Committee appointed by the London Stock Exchange. The voting power literature examines the issue of the possibility shareholder franchise (Leech 1988, 2002).

There is debate in the literature about defining the concept of voting power especially because the ideas of power and representation are sometimes conflated, and the idea of power and influence are different to separate. There is the point about unrealised *ex ante* potential for influencing decisions and the *ex post* outcome of the exercise of influence. This debates (Felsenthal and Machover 1998, Morriss 2003) are kept in abeyance here. There are various ways of measuring whatever it is that is desired to be captured in an index of voting power and we consider for illustrative purposes the Penrose index (Penrose 1946) which in a normalised version is also known as the Bahnzhaf index (Bahnzhaf 1965).

The idea behind the Penrose index is to measure the proportion of times that a voter may be able to nullify a decision by breaking up a winning coalition. Examining the ownership data of the Royal Bank of Scotland in the period leading up to the merger with ABN Ambro (10 October 2007) and the period immediately following the merger, we find that the index is not monotonic and larger shareholders could not have reliably estimated their power without knowing whether the very small shareholders would even bother to participate. In any event, the shareholders appear not to have attempted to exercise independent franchise; instead less than 1 per cent voted against the merger that turned out to be disastrous for the shareholders within months, and almost 90 per cent voted in favour. The voting power indices at different periods of time and different assumptions about participation by small shareholders are reported in an appendix.

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[2] Comment quoted in Manifest report on the Hempel Committee:

3. The RBS ABN Merger

Let us first look at the shareholding pattern of Royal Bank of Scotland immediately prior to and following the controversial merger with ABN Ambro that is alleged to have been largely responsible for subsequent difficulties leading to virtual nationalisation of the bank. There are very few blocks of more than 3 per cent of the outstanding equity and none above 8 per cent. Even if one gets down to blocks of no more than 1 per cent of outstanding shares, there are at most between 20-25 blocks. The total holding of these top 20-25 shareholders is a little less than 50 per cent of equity. The rest is distributed even smaller than 1 per cent parcels amongst roughly 1400 shareholders. This pattern remains throughout the period examined here, both before and after merger. Tables 3.1 to 3.4 indicate some turnover in shares, certainly amongst the large blockholders, further investigation reveals that it does not indicate any systematic exit by any group of large block holder to be replaced by another. The cumulative holding by the top five is around 25 per cent for the entire period. Furthermore, it is also noticeable (Table 3.5) that the top five shareholders, those holding 3 per cent or more of outstanding equity, remain the same between 31 December 2006 and 31 December 2007. If there was some turnover of shares, it did not suggest an exit strategy due to dis-satisfaction with management.

Table 3.1 Distribution of RBS Shares 31 December 2006

Block size	No of blocks	% of equity	Cumulative % of equity
More than 7%	Nil		
6+ to 7%	2	12.56	12.56
3+ to 6%	3	12.56	25.12
2+ to 3%	4	9.34	34.46
1+ to 2%	10	13.40	47.86
1% or less	Approx 750	52.14	100

Source: Thompson Reuters

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www.manifest.co.uk/hempel.htm.

Table 3.2 Distribution of RBS Shares 31 March 2007

Block size	No of blocks	% of equity	Cumulative % of equity
More than 7%	Nil		
6+ to 7%	1	6.29	6.29
3+ to 6%	4	17.39	23.68
2+ to 3%	4	9.53	33.21
1+ to 2%	9	12.32	45.53
1% or less	Approx 850	54.47	100

Source: Thompson Reuters

Table 3.3 Distribution of RBS Shares 30 September 2007

Block size	No of blocks	% of equity	Cumulative % of equity
More than 7%	Nil		
6+ to 7%	Nil		
3+ to 6%	5	22.64	22.64
2+ to 3%	2	4.80	27.45
1+ to 2%	14	19.94	47.39
1% or less	Approx 980	52.61	100

Source: Thompson Reuters

Table 3.4 Distribution of RBS Shares 31 December 2007

Block size	No of blocks	% of equity	Cumulative % of equity
More than 7%	1	7.80	
6+ to 7%	Nil		
3+ to 6%	4	16.67	24.47
2+ to 3%	1	2.46	26.2
1+ to 2%	17	24.56	51.50
1% or less	Approx 820	48.50	100

Source: Thompson Reuters

Despite some adjustments in their portfolio over the year, the tip five shareholders remained at the top and there was no exodus of the holders of small blocks of shares.

Table 3.5: Tope 5 Shareholders

	Percent of outstanding equity held on			
Name	31 Dec 06	31 Mar 07	30 Sep 07	31 Dec 07
Legal & General Investment Management Ltd. (UK)	6.29	6.29	5.98	7.80
Barclays Global Investors (UK) Ltd.	6.27	4.73	4.50	4.44
Capital Research & Management Company	4.73	4.73	4.49	4.43
M & G Investment Management Ltd.	4.20	4.23	3.75	3.57
Standard Life Investments Ltd.	3.64	3.71	3.92	4.23

There were newspaper reports from early 2007 that RBS management wished to compete with Barclays, which was then in negotiation with ABN for merger, to acquire ABN for a price which was to be greater than the market value of the entire outstanding equity in RBS. A financial website, *This Is Money*, reported on 25 March 2007 that RBS management were planning to outbid the offer from Barclays to the shareholders of ABN Ambro. The BBC news website was reporting exactly a month later that a bid for £49 bn, about £10 bn above the amount offered by Barclays, was being dangled by RBS in front of ABN shareholders. Exactly a year later, RBS shares went into a freefall and the crisis at RBS was such that only a sudden purchase by government of 60 per cent of the shares prevented complete collapse.

Table 3.6 Stock market valuation of shares (£bn)

Bank	15 Oct 2007	10 Oct 2008
Barclays	41.0	17.0
Royal Bank of Scotland (RBS)	41.7	11.0

Source: Thompson Reuters as reported by BBC on 13 October 2007

There was no flight of either small or large shareholders from RBS. Despite some turnover in shares, the top five shareholders, those holding 3 per cent or more of total equity, remained the same throughout the year 2007 (Table 3.5 above). Amongst shareholders with the smallest 100 blocks, over 40 per cent increase their holdings during the year. The total number of small shareholders went up sharply in September 2007 as new shares were issued, taking the outstanding number of shares outstanding from 6068133142 at the start of the year to

6380915216. Some of these new shareholders promptly exited even though the total number of shares in the company rose marginally to 6471887178.

There is evidence of dispersed shareholding where the market for corporate control instead of shareholder activism is more likely to prevail, if we accept the logic of Jensen and Ruback (1983), to keep management from losing focus on shareholder wealth maximisation. Nothing of this kind happened and the RBS management enjoyed a free hand, without shareholder interference through activism or through exit facilitating a takeover of RBS before management could destroy shareholder wealth. At a meeting of RBS shareholders on 10 October to approve the acquisition, increase share capital to do so and to approve specific authority to management to issue shares, shareholders expressed a massive vote of confidence in management. The voting figures (source: Manifest) are reported in Table 3.7 below. Percentages are calculated by reference to the total outstanding security on 31 September 2007. It is clear that none of the five major shareholders objected to the acquisition.

Table 3.7 Votes on proposal by RBS management on 10 October 2007

	Votes	% Of total equity outstanding on 31 September 2007
FOR	5741774485	89.98
AGAINST	67318357	1.05
ABSTENTION	Rest of the shares	8.97

4. Speculations about competence

We outline first some of the standard arguments about why shareholders may fail to stop managers from taking decisions that reduce shareholder wealth. Most of these arguments are based on agency theory. We go on to speculate that perhaps there is a different problem arising out of the way mangers and specialists in financial markets are selected. The competence of those on whom shareholders depend on advice is questionable for reasons that are not entirely due to agency problems.

It is implicit in the agency approach to corporate governance that there may be a conflict of interest between shareholders and managers, but all parties are competent in managing their own interest. Those who still have faith in the superiority of finance capitalism over other forms of organisations would seek organisational efficiency through contracts, incentives and market opportunities. A successful organizational form minimises this conflict and allows for a realigning of interest. There are at least three strands of this literature.

The first and most influential is the work by Michael Jensen and colleagues on the market for corporate control. If the market did indeed work, the beauty of it would lie in the absence of the need for shareholders to exercise informed franchise rights. They need not gather information about the details of how their capital is managed. They can put their faith in specialist intermediaries, arbitrageurs, who have the competence and resources to put together teams of experts to dislodge non-performing managers through takeover of companies that are not managed to maximise shareholder wealth.

Faith in specialists have lost its shine as the evidence of the failure of the takeover system to deliver synergy has become too ubiquitous to ignore. Shareholder activism, as an alternative, has not supplanted the market for corporate control idea partly because of the public goods problem. In a stock exchange comprising companies characterised by dispersed shareholding, good management is a public good the benefit of which is available to all shareholders but the cost of gathering information and engaging in activism falls on a few. There are two sets of information costs. The first is to find out about the true state of finances of the company. Another uncertainty arises in decisions to incur the cost of participate in voting at shareholder meetings because the outcome of votes depends on how many of the dispersed shareholders are bothered to turn out to vote. The voting power indices reported here illustrate this point.

Shareholders have been urged to do by those, for example the Cadbury Committee and the Hempel Committee, by those who place faith in shareholder democracy. The outcome of such widespread participation at the Extraordinary General Meeting of the Royal Bank of Scotland on the 10th of October 2007 appears to have had the opposite outcome to the aim of shareholder wealth maximisation. The information costs mentioned above may provide an explanation of this seeming puzzle. The Condorcet Jury Theorem which can be cited to extol the virtues of majority decision can also be cited to argue against mass participation if the

participants are ignorant. If each participant is correct with probability p less than half, then the majority is correct with probability P which is not only less than half but it is less than p and P goes to zero as the size of the majority increases.

A new argument, about employment contracts, is gaining ground. There are three strands of this argument. Firstly, some argue that rewards offered on the basis of performance are awarded before performance can be measured. Thus bonus payments based on short term outcome of decisions whose long term impact is not known can encourage behaviour that reduces shareholder wealth in the long term. Secondly, there are nested agencies in the way shares are held. For example, institutional shareholders are represented by management of these institutions who have their own agenda separate from that of the principals that they represent. If a pension fund manager is rewarded on doing well in the short term in comparison with other similar managers, they could all reap bigger rewards by not exposing the errors of each other if there is no prisoners' dilemma inherent in the game amongst fund managers. Herd behaviour could be beneficial to fund managers. All these arguments are informed by agency theory. In this paper we draw attention to a different problem which may also have a bearing on the observation that the specialists on whom Jenkins and Ruback (1983) place faith in keeping corporate management from destroying shareholder wealth. The problem may lie in the manner of selection of those who exercise power and influence in the financial and stock market.

A paradox could arise if employees are selected in a sequential manner starting with a large set of potential managers that is reduced at each stage through promotion to an upper level. WE do not have data on personnel selection to argue that the following model necessarily holds, but the seeming incompetence observed in the financial markets, outcomes that are not entirely explained by competent choice albeit under uncertainty, invites speculation about how people get to be considered capable of making business decisions.

It is explained here how the paradoxical situation could arise in a hierarchical organisation if selection is based on sequential elimination of the type described here. The paradox that could arise is that the **conditional probability** of a person holding a higher level position being competent to hold that position could be less than the conditional probability of a junior employee being competent in his job as a junior employee. This result would obtain if the

following assumptions hold.

1. The selection process is hierarchical in that only those who have been selected for a lower level job can apply for a higher level post.
2. The selection of a manager can be regarded as a choice under uncertainty. There are two elements of uncertainty, and the selectors need to possess two different types of abilities to cope with them. **The first requirement** of selection is to ensure that a candidate who is selected is indeed competent for the job. **The second requirement** for selection is that a candidate who is rejected is indeed not competent for the job.
3. The selectors may not posses both the above abilities -- ability to recognise the competent and the ability to recognise the incompetent -- in equal proportions.

We then examine the relative strength of above two abilities. For a range of relative strengths, it can be shown that the higher is the level of the manager, the greater is the likelihood that the person will fail to live up to the competence required of the job. This is a mathematical – i.e. a logical -- proposition inherent in the nature of decisions under uncertainty (Chakravarty 1993, Kraekel 1998).

All mathematical propositions come at a cost. The cost can be regarded as the assumptions needed to prove the proposition. We assume that the likelihood of a manager's decisions turning out to be correct depends on his ability to comprehend the complexity of the decision at hand. We further assume, following Ronald Heiner (1983, 1986), that the higher is the level of hierarchy in an organization, the greater is the complexity of the decision facing a manager working at that level. We also maintain that an aggregate measure of competence can be found such that every individual can be ranked by the degree of competence possessed by that person. We do not consider the possibility that the selectors may be unwilling to form a judgement.

The selectors are prepared to rank all applicants. However, the selection process being an exercise in decision making under uncertainty, there are two types of errors which could occur. The first type of error occurs when a competent person is failed to be recognised as such. The second type of error occurs when an applicant who does not possess the required ability for the level of the job concerned is incorrectly promoted to the post. The above

probabilities are not necessarily identical and each of them reflects a particular aspect of the quality of the selection process.

In the context of the above assumptions, consider a pool of talent comprising 100 individuals. The top fraction Y is to be selected at the first stage. The bottom (100-Y) is to be filtered out. However, the problem is that the selection process can sometime end up identifying applicants incorrectly, believing someone to be in the top competency of Y when (s)he is not quite there. Define

Suppose, instead, that the selection process is more exclusive, and only applicants belonging to the top Y per cent, individuals belonging to this ability group are a subset of those belonging to the ability group X, are desired. Then we can write:

$P_y(s)$ = Probability of being selected.

$P_y(s,c)$ = Probability of being selected and also having the ability, ability is denoted by the letter c, of the top Y fraction, percentage in this case because the total population size is assumed to be 100.

$P_y(s|c)$ = The conditional probability that the selection process identifies a person as belonging to the group of people in the Y level competence and thus selecting the person.

$P_y(s|nc)$ = The conditional probability that the selection process lets someone belonging to the lower, ie (100-Y), ability group slip through the net and gets selected.

$P_y(c|s)$ = The conditional probability that a person selected also happens to belong to the top Y per cent ability group.

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Now suppose that there is second level of hierarchy which is restricted to a more exclusive ability group belonging to the top X per cent of the population. Those belonging to this ability group are a subset of those belonging to the lower ability group Y. The selection process, by assumption, entertains applicants for selection to the more exclusive level from amongst those who have already have been selected for the lower level. Following previous notation, define:

$P_x(s)$ = Probability of being selected for the more exclusive position..

$P_x(s,c)$ = Probability of being selected and also having the ability, ability is denoted by the letter c, of the top X fraction, percentage in this case because the total population size is

assumed to be 100.

$P_x(s|c)$ = The conditional probability that the selection process identifies a person as belonging to the group of people in the X level competence and thus selecting the person.

$P_x(s|nc)$ = The conditional probability that the selection process lets someone belonging to the lower, ie (100-X), ability group slip through the net and gets selected.

$P_x(c|s)$ = The conditional probability that a person selected also happens to belong to the top X per cent ability group.

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Two types of errors enter into the equation at the very outset of the selection process. Note that some of those selected at the first stage may not be in the Y rage of ability, but of lower ability that have managed to slip through the net and are now eligible to apply for the higher level position. Likewise, some of those that have been filtered out in the first stage may well have been rejected by mistake because the selection process is not perfect in its ability to identify ability. Despite the presence of this curse at the outset, suppose that greater care is applied at the second stage of selection such that someone who is competent to do the job and is also in the applicant pool is less likely to be overlooked than someone who is competent to do the lesser level job and is in the larger applicant pool for that lower level job. This can be formally written as follows:

$$P_x(s|c) = \alpha\, P_y(s|c), \text{ where the parameter } \alpha \geq 1 \qquad (4.1)$$

The equality sign weakens the last sentence of the above paragraph in that we are now saying that the more rigorous selection at the higher level is no worse in competent applicants. Suppose further that the more rigorous selection process at the higher level is no worse at allowing unqualified candidates from the pool of applicants to slip through the net than the more lax process for lower level positions. Formally,

$$P_x(s|c) = \beta\, P_y(s|c), \text{ where the parameter } \beta \leq 1 \qquad (4.2)$$

Note that by assumption, $Y > X$, $\alpha \geq 1$, and $\beta \leq 1$. Then the following seemingly anomalous outcome can be proved (Chakravarty 1993:296):

Lemma: If $\beta \succ \dfrac{\{\alpha X(100-Y)\}}{\{Y(100-X)\}}$, then $P_x(c|s) < P_y(c|s)$

The implication of the lemma is that the conditional probability that someone who has managed to get selected for the higher-level-of-competence job, a job entailing competence level X, is indeed at that level of competence is lower than the conditional probability of someone who has slipped through the lower level net also being competent at that level.

Looking at evidence of the RBS saga and the general performance of the corporate and financial sectors, one cannot but wonder if the sequence through which one goes through to get to the top of the corporate sector is a process that requires careful examination.

5. Conclusions

The existence of corporations is problematic for the market model in economics in that the model entails assumptions of self interest competently executed albeit under the constraints of both exogenous and behavioural (ie game theoretic) uncertainty. In the theory of the firm, the self interest of owners is to maximize profit. The problem with complex forms of organizations such as corporations is that the owners are not the decision makers. This detracts from theorems of market efficiency. The deviation from market efficiency is generally explained keeping faith with the individual maximization paradigm in various guises of agency theory. Even the discussion about employment contracts and the bonus culture that have recently gained special attention following the simultaneous collapse of a large number of financial institutions is within the context of agency theory. The failure of RBS was so spectacular and the failure of the professionals to spot that disaster was looming near the horizon was so spectacular that we may wish to broaden this discussion to examine whether the nature of the selection process that propels people up the bureaucratic ladder in modern corporations is inherently defective. To this end, a speculative idea about the consequences of certain types of hierarchical selection has been highlighted here. The argument is not that such a process necessarily obtains in real life, but the argument is that we cannot ignore the selection process to the bureaucratic club.

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Appendix

Various indices of voting power can now be easily calculated thanks to a suite of user-friendly computer programmes have been made available to the public by Professor Dennis Leech. As part of an investigation into whether the shareholders could have protested if they so wished against management decision through the exercise of shareholder franchise in October 2007, we calculated the Penrose index of voting power based on shareholding data for the 30th of September in that year. We do not pursue this investigation further because there was not much evidence of dissent, only about 1 per cent of the eligible voters voted against the decision of the RBS management for the acquisition of ABN Ambro, against management leading shareholders to disaster. We are persuaded that the problem lies not in the lack of shareholder participation, but in this case in shareholder participation.

An interesting observation, although it is well known it is worth highlighting, that is illustrated here is that the voting power of even the larger shareholder blocks is not dependent only on the share of votes controlled by the blocks but also on the decision by the smaller shareholders whether or not to participate in voting. We know that power is not monotonically related to the size of the shareholding. There is also uncertainty about what the power would turn out to be depending on how many other shareholders participate.

On the 30th of September (Table 3.3), there were 21 shareholding blocks in control of roughly half of the shares. There were only 5 blocks holding 3 per cent or more, the same five blocks that we observe as the top shareholders from December 30 2006 until December 30 2007. To give greater importance to these blocks, we assume that no one other than the top 20 shareholders even consider participating in votes. The voting power of Legal and General goes down as the number of participants increase. It is, however, not monotonically declining for Barclays Global or Capital Research. Sharper examples of non-monotonicity occurs when the size distribution at the top end has greater variance.

Table A.1: Penrose Power Index

Name of shareholder	Size (%) of holding	Penrose index depending on number of the top 20 blockholders participating in elections		
		20	13	7
Legal and General	5.98	0.420345	0.442383	0.46875
Barclays Global	4.50	0.300938	0.298828	0.34375
Capital Research	4.49	0.300224	0.297852	0.34375
Standard Life	3.92	0.259308	0.269531	0.28125
M and G Investment	3.75	0.24662	0.264648	0.28125