Corporate governance and the large UK joint stock company towards the end of the long nineteenth century[*]

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Nineteenth century Britain was in the forefront of the utilisation and growth of the joint stock company with widely dispersed ownership. Opinions are divided on how well this arrangement works and worked. On the one hand, agency theorists (Berle and Means 1968, Morck, Shleifer and Vishny 1988) maintain that splitting management control from ownership in the joint stock company will misdirect managerial effort. On the other, for Britain by 1914 the separation has been represented as unleashing the management potential of a gene pool wider than that of successful firm founders and their descendants (Jeremy 1998 p171). From market competition could emerge optimum forms of corporate governance for 'divorced' management and adverse effects would be avoided (Demsetz and Lehn 1985; Demsetz and Villalonga 2001 for the later twentieth century US).

In this last case investors and managers make rational trade-offs among the advantages and disadvantages of different governance regimes, reaching the most effective firm-specific compromise. Nonetheless faith in the equilibrating properties of markets is not sufficiently widespread to prevent controlling owners being perceived as damagingly nepotistic, unwilling or unable to invest in scale or otherwise inefficient (Perez-Gonzalez 2006, Chandler 1990). This paper attempts to resolve these disputes for nineteenth century Britain by examining the governance of large joint stock companies of the period and testing how well these arrangements operated for the population of UK firms with capital of £1 million or more, quoted on the London Stock Exchange in 1911. Section 1 describes the

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[*] References and footnotes are omitted from this EBHA 2011 conference paper to save space.

corporate governance under which the greater part of capital actually operated in the long nineteenth century. Section 2 discusses the data and the test devised to assess how well the regime worked. Section 3 explains the estimation challenges and solutions while section 4 presents the results.

1. The corporate governance of the nineteenth century

Econometric studies of the spread of stock exchange investment and hence the rise of joint stock companies now emphasise the extent to which investor rights are protected. There is, however, some disagreement about how far the common law adopted by English-speaking countries has been inherently more effective in guaranteeing such rights than civil law systems. Other aspects of society or polity (ideology, trust relationships, egalitarianism, financial regulation) are potential alternative or complementary determinants of the spread of shareholdings and joint stock companies. Nonetheless most analysts agree that one of the major reasons why stock exchanges and joint stock companies are now so well developed in the USA is that one or other such factors have resulted in strong shareholder protections there.

Economists and legal historians contend that there were no significant protections for *any* shareholders early in the twentieth century. For example, one widely-used modern metric - the "anti-director rights" index - is typically rated between zero and two for pre-1914 economies, compared with the best ratings of 5-6 in the modern period. The protections required by general company legislation (on which "antidirector rights" indexes have been calculated) are now acknowledged to have been slightly better than in the USA, because the UK's general company law from 1900 permitted shareholders owning 10% of the shares to call an extraordinary meeting without the directors' consent. Small shareholders were also protected in more than a third of large companies by tiered or capped voting rights, intended to prevent the oppression of a minority by the majority. However, the compilers of the index

historically judged other "antidirector" rights to be absent, apparently reasonably, since they were not required by Britain's general company legislation until as late as 1948 (the right to vote by proxy) or 1980 (pre-emption rights to subscribe to new share issues).

Yet this scoring rests on two misconceptions. First, these protections were already required of many widely-held *statutory* corporations, such as railways, as a result of extensive UK legislation to protect investors, developed for that sector between 1845 and 1871. The security of railway investments had been a paramount parliamentary concern, and the difference was obvious to foreign observers at the time. In 1884, the Court of Appeal re-affirmed the right of a railway company's shareholders in general meeting to remove the directors by a simple majority.

Although most modern discussion of the historical development of British legislation protecting shareholders has focused on the general limited-liability company law, this was irrelevant before 1856 (when many banks, insurers, railways, canals, docks and water and gas utilities were founded) and by the end of the century applied to more *private* unquoted companies than *public* ones. Statutory and chartered corporations offering enhanced shareholder rights - all domestic railways, and some gas, water, canal, shipping, electrical and financial companies - were not subject to that law, yet actually constituted the *majority* of the London Stock Exchange's domestic market capitalisation for most of the nineteenth century. Commentators on UK corporate law have missed the key point that it was this different body of (more shareholder-friendly) law that was for long most relevant to stock exchange investors, and that the appropriate "antidirector rights" ranking for the corporate law that was relevant to most listed securities would be higher from the mid-nineteenth century.

However, the parallel legal world of (non-statutory) public joint-stock limited liability companies supervised by the Board of Trade was, from 1856, growing faster. With its increasing significance, the 1900 legislation obliged such companies to offer the right of a

10% minority to convene shareholder meetings without the directors' consent. Moreover, the promoters of such UK quoted (non-statutory) companies, presumably motivated by a desire to foster investor confidence, often voluntarily granted enhanced shareholder rights, above and beyond what the basic limited liability law required, in their corporate charters (known as the memorandum and articles of association in the UK).

The second misconception then is that legal requirements for anti-directors rights reflected actual rights. While US corporations engaged in a "race to the bottom," seeking out the lowest standards of governance in New Jersey or Delaware charters, UK corporate issuers could choose not only between virtually identical (and uniformly less permissive) Scots (civil law), English, Welsh and Irish (common law) and Cornish (stannary law) joint stock company regulations, but they also opted voluntarily to emulate the even higher standards already well established in the kingdom-wide statutory corporate sector.

In 1890, for example, the Scottish sewing cotton combine, J & P Coats (which was soon to become Europe's largest industrial) was floated under the general joint-stock law, attracting 15,000 public subscriptions. Its articles of association - before any of this was required by law - did not require prior share deposit to qualify for voting, accorded proxy voting and pre-emption rights to all shareholders, required the directors to post an audited balance sheet and profit and loss account to shareholders seven days before the AGM, authorised owners of one-twentieth of the shares to call an extraordinary general meeting, and empowered any shareholder to submit a resolution to a general meeting, which could summarily dismiss any director by extraordinary resolution (requiring a 75% majority). This meant that its rating on the "antidirector rights" index was 4, rather than the 1 minimally required at that time by the general joint-stock law.

Coats's articles (drawn up jointly by the leading City solicitors, Linklaters, and their Paisley equivalent, Dunns) were neither idiosyncratic nor particularly original. They were

based on the model articles ("Table A") that appeared in the Companies Acts, which such specialist corporate lawyers re-drafted with their own favourite tweaks for adoption by companies seeking a broad ownership base. Large IPOs such as Coats even protected investors beyond what was suggested in Table A: in Coats' case, for example, the provision for holders of only 5% of shares to call an extraordinary general meeting was stronger than the 10% required for statutory companies and recommended in table A.

Since investor-friendly articles were familiar features of the landscape to intermediaries and the informed investing public, companies exercising their legal right to *omit* such protections were sending an uncomfortable and transparent signal to the market. It is hardly surprising then that it was mainly private, smaller or less reputable joint-stock enterprises that chose to suppress these protections.

We sampled non-statutory companies with issued share capital of over £1 million and almost all provided a similar range of rights to Coats, with proxy voting and accounts disclosure being universal. The least common voluntary provision was the pre-emption rights that were normal in statutory companies, but which were only required by the general companies laws from 1980 . Only a minority of the sampled firms granted these to ordinary shareholders in their articles, but debenture and preference holders often had legally watertight safeguards against prior issues diluting their interests.

If anybody believed that these protections were unnecessary, the shareholders in the companies in our sample that offered the least protection could have advised them otherwise. At Waring & Gillow (the upmarket furniture manufacturer and retailer) the debenture trustees took control of the company and the painful and necessary reconstruction then in train not only wiped out *all* shareholders, but much of the debenture capital also.

Even when a company's vendors, issuers and directors chanced issuing their shares publicly without offering such safeguards, a wide and liquid market required that they

at least needed to consider the formal requirements for stock exchange listing. The LSE did not evaluate the quality of quoted shares - *caveat emptor* was its watchword - but its listing committee did impose certain minimum governance standards beyond what the law required. It checked that the corporate and financial documentation complied with the law and listing rules. In addition the Exchange insisted that newly listed companies publish balance sheets (before that was legally required in 1907) and profit and loss accounts (before that was legally required in 1929). Moreover it demanded that at least two-thirds of any officially listed security be initially held by the general public rather than the vendors (to encourage liquid markets and discourage ramps and corners). The Exchange committee also required that the articles of listed companies contain provisions for directors personally to own shares, provisions that directors abstain from voting on (and disclose any personal interest in) any contract with the company, and a clause preventing companies buying back their own shares (judged legitimate today, but then considered detrimental to the market's transparency and price discovery role).

It is therefore clear that protection for shareholders in the pre-1914 UK was better than has generally been allowed, or than in many other countries at the time. If we rank the UK on the "antidirector rights" index, taking into account what was available to the holders of *most corporate securities by value on the LSE* between 1870 and 1914, its rating would be around 4, rather than the 1 (before 1900) or 2 (after that date) on which those assessing only the *legal minimum* for non- statutory joint stock companies have scored it. The *de facto* protection of shareholder rights in both statutory and other limited liability companies listed on the LSE already approached the high standard expected in modern markets.

British shareholders in many leading quoted corporations were better informed and more able to discipline their managers than US equivalents before 1914, inducing their directors to behave with appropriate circumspection. For example, the professional managers

on the board of the armaments manufacturer, Armstrong-Whitworth, marshalled sufficient support to force the ineffective founder's heir and largest shareholder, Lord Armstrong, off the board in 1908. If the board were not so disloyal, they could be prompted by shareholders' committees, who dismissed chief executives and multiple directors. So the spendthrift and incompetent Percy Allsopp had been replaced as chairman of Allsopp's brewery in 1901, as a result of small shareholder pressure. Directors could not shelter behind their auditors: if shareholders suspected they were, they could dismiss the auditors too, as they did in British Cotton & Wool Dyers.

In the light of all these factors, it is hardly surprising that the UK's corporate governance advantages inspired more investor confidence then, as similar safeguards do globally today, even if they were only rarely used. It also did not much matter whether they were imposed by statutory corporation law, or (in non-statutory joint-stock companies) by issuers in corporate constitutions and by private-order stock exchange regulations, rather than, as today, mainly by economy-wide government decree.

2. A Test of the Effectiveness of Corporate Governance

Was the confidence justified? How well did this corporate governance work? Did it promote rapid growth of numbers and sizes of joint stock companies? Apparently it did, because London before 1914 was *the* global stock market. The LSE listed one third of the world's securities and 71 of the world's hundred largest quoted corporations listed at least one of their securities on the Exchange.

To study further the effectiveness of governance we have created a population of £1 million plus capital UK companies on the LSE. The principal source is the *Investor's Year Book* coverage of which appears to be comprehensive, comparing favourably with lists of large firms compiled for dates between 1904 and 1919 by nineteen, very diversely-focused, researchers.

In the majority of cases, the *Investor's Year Book* provided data on shareholdings, but for nearly a third of companies omitted data on board holdings and/or shareholder numbers. No reason is given, but many railways were so big and their shareholdings obviously so widely dispersed that publishing precise information was probably considered superfluous. An overseas, parliamentary or royal charter (which often allowed access only to shareholder addresses - not holdings - and at company headquarters not Somerset House) appears to have inhibited reporting for some companies, as did occasional bearer shares. For more than a tenth of the companies, we have used estimates from company histories, known voting caps, archives and other sources. As a last resort, for around one-fifth of the companies (mainly railways), we have estimated board shareholdings econometrically from their known correlates (company size, sector, corporate age, numbers of directors and of shareholders and main places of listing and of operation).

Table 1 charts the timing of the processes generating this upper tail of the UK company size distribution, showing in column 1 the inauguration dates - when they were established in their modern form - for all 337 companies. This is not always the date of foundation, for some of these companies had earlier origins as sole proprietorships, partnerships or deed-of-settlement companies. Even if it was a second incorporation, the inauguration date highlighted in directories often marked a strategic decision to operate on a larger scale (merger or a major new capital-raising) or slightly pre-dated the IPO of the shares of one-time family-owned firms or of new concessions established by venture capitalists.

Half had been established in their modern corporate form in the last four decades, but several were pre-industrial: the oldest was Hudson's Bay, chartered in London in 1670. Many statutory, chartered and deed-of-settlement companies had begun to separate ownership from control well before general joint-stock registration in 1844, general limited liability in 1855 and limited liability for banks in 1858, as columns 1-4 collectively suggest. Columns 5 and 6

show the rise of the simplified new incorporations under the 1844 and subsequent Companies

Acts: mostly smaller and including increasing numbers of private, unquoted companies.

Table 1. Inauguration Dates of UK Companies in our Population (col. 1) and more generally (cols 2-6).

Date	1911 £1m+ Companies (numbers)	All Life Insurance Companies (numbers)	All 1911 UK Railways (numbers)	Banks (numbers)	All Companies Acts Registrations (numbers)	(Paid-up Cap £m)
Pre-1800	10	48	na	7	na	na
1800-29	15	68	5	7	na	na
1830-39	31	57	14	29	na	na
1840-49	20	119	24	2	500†	na
1850-59	18	129	22	4	1,316	na
1860-69	42	108	34	14	6,362	926*
1870-79	27	19	15	10	10,155	844
1880-89	61	9	30	8	18,583	1,971
1890-99	80	11	22	15	37,682	2,042
1900-11	28	16	13	9	59,719	1,753

* no values available for 1860-61.

† The 1844 Companies Act took effect on 1 November. In September 1844, 947 English and 47 Irish companies were already known, under various dispensations such as common law deeds-of-settlement, the 1821-26 Banking Acts or the 1837 Trading Companies Act (but excluding many companies with royal charters or private acts of parliament); their earlier inauguration dates are not recorded. The 1844-56 figures in this column also exclude Scottish companies, and are arbitrarily allocated between the 1840s (500) and 1850s (456).

Source: col. 1: authors' calculations; col. 2: Andras, *Historical Review*, pp. 101-18 (this encompasses an eclectic range of chartered, statutory, mutual and deed-of- settlement insurers and Companies Act registrations and many which were defunct or no longer independent by 1911); col. 3: authors' calculations based on all 179 extant domestic railways in the *Stock Exchange Official Intelligence 1912* (excluding tramways, light railways and joint committees; note also that most post-1870 new UK statutory rail companies were modest branch lines and urban undergrounds); col. 4: authors' calculations based on all 105 extant UK-headquartered banks and discount companies in the *SEOI 1912* (excluding private banks; note that most post-1870 new UK bank incorporations operated primarily overseas); cols. 5 and 6: Shannon, "First Five Thousand," pp. 420-24; *SEOI 1912*, p.1626 (note that these columns exclude many large companies such as domestic railways and other statutory and chartered corporations and that most of those included did not survive).

Columns 1 and 6 together suggest incorporations trended upwards in the long

nineteenth century, with a notable surge in larger formations in the 1880s and 1890s, and a

lull after 1900. On the other hand the growth in numbers of all companies continued to rise in

the first decade of the twentieth century. The UK managerial "revolution" is thus most

plausibly located in the last two decades of the nineteenth century (when most large

manufacturing and distribution firms and many new utilities and British ventures overseas

went public). But "evolution" is perhaps the more appropriate term economy-wide; for example, the change was already well-advanced for many domestic railways and financial companies by the mid-Victorian period.

If British capital markets generally worked well, we would not necessarily expect that corporate governance arrangements were optimal for each firm (the Demsetz and Villalonga DV proposition). (If it were so we should instead explain these corporate governance features as functions of among other things, corporate performance). The DV contention puts great weight on the speed of corporate adjustment to market signals. Where institutional change is concerned, before the First World War disequilibrium is likely to be observed. If more directors were preferable to less, those firms with more would be outperforming those with less and sending a market signal that more directors were desirable. Supply rather than demand side considerations may be binding; more directors may be wanted but none suitable may be available. In which case, observations will be of disequilibrium. Directors might want to reach a mass market for their shares so as to reduce their price of capital, but their corporate reputation or marketing may not permit the popularity to which they aspire, so average size of shareholding remains high and numbers of shareholders relatively small. Or share ownership may not be sufficiently concentrated to incentivize successful monitoring of management because some shareholders refuse to sell to others. In these disequilibrium cases we would expect to observe significant correlations between corporate performance and governance variables.

To test whether corporate governance arrangements influenced performance when other contributors are controlled, we estimate by various regression methods the return on issued share capital in 1911 with broadly the following model for the ith firm;

CORPORATE PERFORMANCE$_i$ = f(BOARDVOTIN$_i$, SIZESH$_i$, NOofDIRECT$_i$, DEBTRATIO$_i$, RISK$_i$, YEAR$_i$, SIZE$_i$, SECTOR$_i$, U$_i$ ….(1)

The first three variables measure the impact of corporate governance. If the board of directors' share of votes ('boardvotin') is positively and significantly associated with return on equity either this reflects behavior induced by the stronger directors' incentive – similar to an incentive contract- or the benefit of greater 'insider' control unchallenged by shareholders. If the return on equity falls with increases in the average size of shareholding ('sizesh'), agency problems are not apparent from share dispersion, for dispersed shareholdings are harder to coordinate. If the return increases with number of directors ('noofdirect', 'dirs') then marginal and intra-marginal director are earning their keep rather than fleecing shareholders. Turning to the controls the debt ratios for preferences shares and debentures are expected to have negative coefficients, consistent with greater debt lowering profit available to shareholders. Greater risk measured by dispersion of the share price over the year may affect profit as might where the firm is based. Size ('lsize') might influence profitability-large firms may be able to afford to be less profitable because they are less likely to be bankrupted, or perhaps are more prone to 'control loss'. 'Year' since flotation may reflect a corporate lifecycle perhaps with profitability falling with age.

3. Estimation

The fundamental statistical or econometric problem is to establish whether any association between these governance measures and the performance indicator variable reflects 'impact' or instead is a response of governance to the (usually unmeasured) different circumstances of firms that also lead to variations in return on equity. If the disturbance term, U_i, of equation 1 above is uncorrelated with the explanatory variables – as is assumed in OLS estimation- then the coefficients estimated on the governance variables will reflect their impact on performance. On the other hand if for instance unusually energetic or talented management (measured by the disturbance term U_i) was responsible both for above average performance and for changes in corporate governance, the governance variables and the

disturbance terms would be correlated and OLS estimates of the effects of corporate governance would be biased upwards and inconsistent.

The conventional approach is to use instrumental variables (IV) estimation for the governance indicators under analysis. The technique is to employ variables that are correlated with the governance indicators but not with the random disturbance term U_i to estimate a predicted value of the governance indicators that can replace the actual values. These predicted values will then be uncorrelated with U_i and therefore in a second stage OLS equation the coefficients are likely to be unbiased and consistent, which is the payoff for the greater variance of the IV relative to the OLS estimator. The difficulty is usually to find such instrumental variables. With 'invalid' or 'weak' instruments the treatment for the correlated disturbance term in (1) can be worse than the 'disease' - the IV coefficient estimates will be more biased and inconsistent, as well as having larger standard errors than those of OLS. An invalid instrument is one that is correlated with the disturbance term and a weak instrument is insufficiently highly correlated with the variable to be instrumented.

To avoid such problems the strategy adopted here for both performance indicators is first to obtain benchmark OLS estimates. Then IV estimates are obtained that have significant Anderson Canonical Correlation coefficients (ACC, Anderson 1984 ch12) and statistically insignificant Hansen-Sargan J coefficients (HJ, Hansen 1982). The Hansen-Sargan test for validity (lack of correlation with the disturbance term) is challenging because the disturbance term is a theoretical concept not an observed measure; we cannot directly test the validity of the assumption. For the indirect test more instruments than endogenous variables are needed. The test is based on the idea that using just one instrumental variable for one potentially endogenous independent variable, the estimated effect should be the same as if estimating the model with two or more- if the instruments are valid. So the test looks at the correlation between the residuals obtained from an IV equation estimated in the more restricted case and

the extra instrumental variables. The extra instrumental variables should be uncorrelated with the residuals to be valid. In short the Hansen coefficient tests the joint null hypothesis that the instruments are valid (uncorrelated with the disturbance term) and that the excluded instruments are correctly excluded from the estimated equation.

The Anderson coefficients measure the correlation between the instrumented variables and the instruments – a high correlation being a necessary condition for a good instrument. But the weak-instrument problem can arise even when the first-stage tests are statistically significant and there is a large sample (Staiger and Stock 1997). One approach to a weak instrument problem is to be parsimonious in the choice of instruments. Moreira's (2003) Conditional Likelihood Ratio (CLR) corrects (only one endogenous regressor) for when instruments are weak. A small p value means that the true value of the coefficient (allowing for the weakness of the instrument) is unlikely to be zero.

Finally for the IV estimation we use the (two step) General Method of Moments (GMM) which is efficient in the presence of heteroscedasticity. It uses the moment conditions that the disturbance terms must be uncorrelated with the exogenous or instrumental variables with equation weights chosen to achieve the lowest variance of the estimator.

4. Results

Average shareholding size and number of directors boosts profit significantly in OLS equations 1 and 2 Table 2 (in the same way as with the here unreported stockmarket performance measure). Including the ratio of shares owned by management as a measure of director's interest as well as board voting control achieve significant positive coefficients in the OLS models, while board voting is negative. This appears to mean that board control and interests have a slightly different effect on short term performance than on the longer term. Company size enters highly significantly and negative. Volatility is barely significant and negative and whereas the debt ratios (prefrat and gear) are significant and negative.

Following Demsetz and Villalonga we obtain IV estimates for each of the governance variables separately – as far as we can. The negative impact of average shareholding size on returns almost doubles in size relative to OLS and remains statistically significant with the GMM and weak instruments estimates (equations 3 and 4 compared with 2 Table 2). Numbers of directors also exercises a considerably larger and significant influence once endogeneity is taken into account (equations 5 and 6 compared with equation 2). The negative effect of board voting is greatly increased with endogeneity (equations 7 and 8) but then also so is the positive offsetting effect of directors' shareholding proportions (sh). Multiplying each coefficient in equations 2 and 7 by one standard deviation of the relevant variable yields a net directors' effect on returns of respectively +0.01 and -0.04 (compared with a mean value of returns in 1911 of 0.17). However the shareholding proportion is not instrumented with these estimates, and it proved difficult to find satisfactory instruments for this variable. Given that instrumenting boosts the absolute size of the coefficient relative to OLS it is perhaps not entirely surprising that instrumenting the negative coefficient variable (board voting) leads to a greater offset to the positive one (sh). Assuming both directors control variables are endogenous (equation 9) provides even larger, and still significant, estimates of the two coefficients.

Overall then it appears that for both performance indicators OLS estimates are downward biased measures of corporate governance impact in 1911 and that corporate governance worked well.

5. Conclusion.

Corporate governance of larger UK nineteenth century joint stock companies was considerably less permissive than conventionally judged. This arrangement worked well compared to corporate governance in later times. Smaller average shareholdings boosted the the return on assets in 1911. One interpretation is that firms that could or did attract a wider

shareholding achieved a higher return on equity by appealing to more of a mass market. This was not offset by less individual shareholder influence over management, as a dysfunctional view of corporate governance might suggest. Some companies might have liked to attracted lots of small shareholders who were willing to accept directors' guidance unquestioningly but may not have been able to attract them for lack of reputation or appropriate marketing.

The positive impact of the number of directors on the returns may have stemmed from their information function and expertise. Or, their reputation was such the market thought they had value. In any case the result runs counter to the recent experience reported by Hermalin and Weisbach (2003), again suggesting the UK 1911 market worked quite well.

For board voting control there is evidence that greater control favoured shareholders. In short for whatever reason, corporate governance may not have been optimal in the London market of 1911, but most arrangements operated to benefit of shareholders.

Table 2 Profit on paid up capital 1911

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	ols	ols	GMM	condiv	gmm	condiv	gmm	condiv	gmm
sizeshar	-0.0854**	-0.0912**	[-0.158**]	[-0.160*]	-0.0271	-0.0349	-0.0739**	-0.0998***	-0.0987**
	(-3.25)	(-3.27)	(-2.86)	(-2.27)	(-0.60)	(-0.82)	(-2.65)	(-3.78)	(-2.77)
lsize1	-0.139***	-0.134***	-0.0992*	-0.100*	-0.174***	-0.181***	-0.126***	-0.172***	-0.174***
	(-4.39)	(-4.33)	(-2.10)	(-2.60)	(-5.10)	(-5.10)	(-4.73)	(-6.79)	(-5.03)
lboardvotin	-0.0466**	-0.0430**	-0.049***	-0.0459*	-0.0765**	-0.0774*	[-0.159***]	[-0.187***]	[-0.233***]
	(-3.29)	(-3.19)	(-3.80)	(-2.22)	(-2.84)	(-2.58)	(-4.18)	(-3.65)	(-3.33)
prefrat1	-0.0404*	-0.0485**	-0.0450**	-0.0488	-0.00498	0.00916	0.00477	-0.00271	0.0169
	(-2.38)	(-2.81)	(-2.60)	(-1.24)	(-0.15)	(-0.19)	(0.21)	(-0.06)	(0.49)
gear1	-0.000124***	-0.000132***	-0.0000780	-0.0000775	-0.000155***	-0.000161	-0.000247***	-0.000287	-0.000331***
	(-4.55)	(-4.73)	(-1.49)	(-0.30)	(-4.20)	(-0.59)	(-4.96)	(-1.02)	(-4.80)
Noofdirector	0.0281**	0.00866*	0.00524	0.00485	[0.0303*]	[0.0298*]	0.0129**	0.0155**	0.0174***
	(2.79)	(2.38)	(1.04)	(0.96)	(2.15)	(2.26)	(3.03)	(3.54)	(3.33)
Dirs	-0.000618*								
	(-2.26)								
Vol	-0.0822	-0.0891*	-0.0722	-0.0771	-0.0518	-0.0641	-0.0591	-0.0827	-0.0754
	(-1.92)	(-2.06)	(-1.50)	(-1.10)	(-1.24)	(-0.86)	(-1.15)	(-1.10)	(-1.12)
Sh	0.727**	0.690**	0.859***	0.828*	0.750**	0.772*	2.044***	2.414***	[2.984*]
	(2.79)	(2.71)	(3.59)	(2.30)	(2.88)	(2.15)	(4.13)	(3.65)	(2.22)
Cons	-0.552**	-0.485*	-0.990*	-0.994	-0.180	-0.223	-0.390	-0.549**	-0.552*
	(-2.77)	(-2.53)	(-2.44)	(-1.90)	(-0.72)	(-0.89)	(-1.96)	(-2.73)	(-2.05)
N	248	248	248	248	247	247	247	247	248
ACC			31.060, 0.000		10.898 , 0.0043		51.752, 0.000		8.199, 0.0421
HJ			0.893, 0.3347		0.499, 0.4798		5.333, 0.1490		1.082, 0.5823
CLR				p=0.0264		p=0.0026		p=0.000	
excluded Instruments			year part		part equalvoting		f equalvoting m r		b m r part
B-P/C-W hettest		357, 0.000							

t statistics in parentheses

* p<0.05   *** p<0.001