

## 公司治理、第一大股东的所有权与企业业绩<sup>1</sup>

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### 摘要

本文以1997年以前在中国上市的508家上市公司1998-2001年4年间的2032个观察值为样本,研究了第一大股东的所有权与企业业绩和公司治理之间的关系。本文发现,不同所有权性质的上市公司第一大股东的所有权比例与企业业绩之间均存在着较为显著的“M”型“区间效应”;第一大股东的所有权比例和性质不同,企业业绩和公司治理代理变量的表现也不同,并且公司治理代理变量的差异能在一定程度上解释企业业绩的差异。本文的研究表明了“一股独大”并非是上市公司业绩低劣的根源,国家股减持存在必要性和迫切性。

关键词: 第一大股东、所有权、公司治理、企业业绩

### 一、问题的提出

当前众多的研究表明,上市公司股权结构的“一股独大”容易导致公司治理的权力制衡机制失效,从而引发大股东对外部小股东的严重侵害。多年来上

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上市公司普遍存在的经营不善、盈余管理现象盛行以及市场操纵行为，可以说在一定程度上都是“一股独大”诱发的后果。然而，上述结论都是基于理论和逻辑上的，并没有得到经验（empirical）证据的支持。本文的目的，就是从第一大股东的视角出发，在一个完整的框架内对第一大股东的所有权与公司治理、企业业绩之间的关系进行经验研究，为深刻认识“一股独大”对公司治理的影响，为探寻我国上市公司最优的所有权安排，为国有经济的战略性改组和调整等提供可信赖的经验支持。

## 二、文献回顾

大股东对公司治理和企业业绩的影响，近年来受到了越来越多的关注。大股东有强烈的管理激励使企业价值最大化，并且有能力收集信息和对经理人进行监督，从而有助于现代公司“股东和经理人之间利益冲突”这一代理问题的解决（Jensen 和 Meckling, 1976）。大股东同样有强烈的激励对经理人施加压力，甚至通过代理权争夺（proxy fight）或接管（take over）来赶走他们（Shleifer 和 Vishny, 1997）。这就是所谓的激励效应（incentive effect）。然而，大股东的出现也为企业带来成本。因为大股东代表其自身的利益，其自身利益不一定与公司的其他投资人、员工或经理人的利益相一致。这就是所谓的防卫效应（entrenchment effect）。Morck 等人（1988）发现经理人持股与企业业绩之间存在着“N”型的关系。他们的一个解释是当经理人持股比例提高时，激励效应使企业的业绩上升；随着持股比例的进一步提高，作为内部股东的经理人的追逐私利将导致对外部股东的侵害，防卫效应将超过激励效应，企业业绩下降；在持股比例提高到一定程度后，偷盗公司资产已不必要，激励效应重新超过防卫效应，企业业绩上升。Stulz（1988）用一个模型刻画了大股东存在的成本和防卫效应对企业价值的影响，预言经理人股权与企业价值之间是一个凹的关系。这一发现得到了经验证据的支持（McConnell 和 Servaes, 1990）。Claessens 等人（2002）运用东亚企业的数据发现，企业价值随第一大股东现金流所有权（cash-flow ownership）的提高而增加，与正的激励效应相一致；随第一大股东的控制权（control rights）超过其现金流所有权的提高而下降，与负的防卫效应相一致。国外文献的基本结论是在内部人持股的不同区间，因代理成本的差异导致企业业绩的差异。

国内学者对大股东所有权问题的研究，总是与公司治理和企业业绩紧密联系在一起。理论分析主要表现在对上市公司国有股“一股独大”的焦虑上，由于认识到国有股“一股独大”给公司治理带来的种种弊端，学者们纷纷主张投资主体多元化和公司股权结构分散化，并为此提出了众多的国有股减持方案。而经验研究则更多地是集中在分析股权结构与企业绩效的关系上，大量的文献都在反复地考证国有股、法人股和流通股对企业业绩的影响（许小年、王

燕，1999；陈小悦、徐晓东，2001），还没有专门的文献对大股东所有权与公司治理、企业业绩的关系问题进行系统的研究。现有的文献要么是将大股东持股与企业业绩的关系作为文章的一个侧面进行了简单的回归分析（孙永祥、黄祖辉，1999），要么是仅仅考察了大股东的所有权性质对公司治理和企业业绩的影响（徐晓东、陈小悦，2003），无论是在研究设计的合理性上还是在经验结论的可靠性上都存在问题。

本文以下各部分的安排如下：首先提出了本文的研究假设；接下来是经验分析，首先分析了第一大股东的所有权比例与企业业绩的关系，以及这种关系随第一大股东所有权性质不同所表现出的变化；接下来分析了第一大股东所有权比例和性质不同对企业业绩和公司治理代理变量造成的差异及其显著性；再在此基础上进一步探讨了公司治理代理变量的差异是否是造成不同所有权比例或性质的公司在价值和业绩上存在差异的一个原因；最后对全文进行了总结。

### 三、研究假设

我们认为，在“一股独大”的情况下<sup>4</sup>，第一大股东的所有权比例和性质决定了公司的委托—代理关系和公司治理对投资人利益的保护程度。在其它条件相同的情况下，第一大股东的所有权比例和性质的差异，将导致公司代理成本的差异并进而影响公司的业绩或价值。因此，我们提出了如下的三个研究假设：

假设1：第一大股东的持股比例与企业价值或业绩之间的关系应呈现出一个扩展的“M”型。

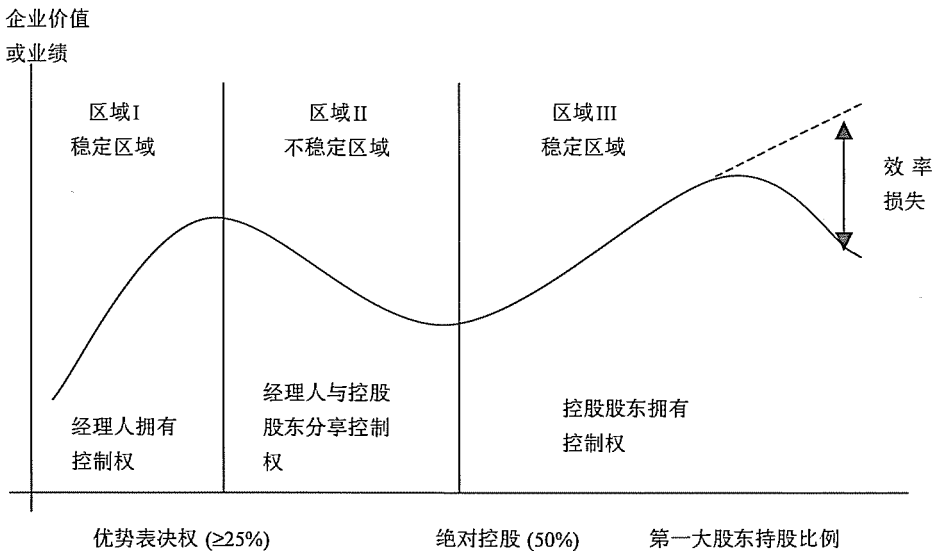
假设1也可以用图示说明，见图1。下面根据图1分区域给出假设1成立的理由。在区域I，第一大股东的持股比例低于股权制衡点，但有可能达到甚至超过25%这一优势表决权的要求（Leech 和 Leahy, 1991）。因为根据 Leech 和 Leahy (1991) 的分析，如果第一大股东的表决权比例超过25%，则在表决权争夺中，就比较容易赢得大多数其他股东的支持，处于优势表决权地位。而在第一大股东的所有权比例达到优势表决权的要求之前，公司的控制权和决策权则由公司的经理人拥有<sup>5</sup>。由于在区域I中公司的所有权和经营权处于相对分离的状态，代理问题主要为经典的“所有者和经理人之间”的委托—代理问题，因此，随着第一大股东持股比例的提高，股东越来越有能力和动力

<sup>4</sup> 根据本文的样本，1997年以前上市的公司1997—2001年五年间第一大股东和第二大股东的平均持股比例分别为41.50%和8.3%。

<sup>5</sup> 在我国，上市公司的所有权比例与表决权比例基本上是对应的，因此，按第一大股东的所有权比例（cash flow rights）对假设1进行分区，其效果与按第一大股东的表决权比例（voting rights）分区是非常接近的。

对公司的经营管理和投资决策进行监督，公司经理人也会因为越来越多地受到委托人的监督而变得不能偷懒；又因为在此区域第一大股东所有权比例的提高并不影响公司经理人决策的稳定性，由于控制权掌握在经理人手，第一大股东没有能力进行偷盗（Morck 等人，1988），所以，随着第一大股东持股比例的提高，企业价值或业绩应不断上升。在这一区域的最后阶段，由于第一大股东的持股已经达到了一定的比例，虽然仍不能掌握公司的控制权，但其对公司经理人在管理和决策上的干预会逐渐频繁，这必将导致公司价值或业绩增长的趋势会因决策效率的丧失而放缓，直至在边际上达到极大值点，我们姑且将该极值点所对应的横坐标轴刻度称之为“优势表决权”比例。

图 1



在区域 II，第一大股东的持股比例介于优势表决权 ( $\geq 25\%$ ) 和绝对控股 (50%) 之间。在这一区域，“所有权与经营权分离”的代理问题和“控股股东对外部投资者利益侵害”的代理问题同时显著存在。虽然在区域 II 中第一大股东的持股比例超越了优势表决权比例的要求，但由于我国上市公司股权结构相对集中的特点，前几大股东的相互制衡使第一大股东并不能因此而完全掌握公司的控制权，他还必须与公司在位的经理人进行控制权的争夺。在区域 II 的前段部分，公司的前几大股东因其持有的股权相差不大，对公司的经营管理和决策都有条件和能力，公司的控制权和决策权可能主要仍由公司的经理人所拥有，因为此时第一大股东与前几大股东的整体相比在表决权上仍会明显地处于劣势。随着第一大股东持股比例的提高，第一大股东对公司治理特别是控制权的争夺会愈演愈烈，从而引起控股股东与在位管理层之间在控制权分配上的此消彼长，因此，由经理人和控股股东分享控制权的这一区域为不稳定区

域。我们认为，本区域的这种被不少学者所推崇的所谓“股权制衡”的公司治理结构，由于受到经理人和控股股东之间关于控制权的掣肘和制衡，虽然能在一定程度上降低股东对公司经理人的代理成本，减少和防止管理层对自由现金流的滥用，但必然也会导致决策效率性的丧失和各种短期行为，而后者对公司业绩和价值的影响可能更为致命。现实中最糟糕的情况是，公司因为控股股东和经理人之间关于控制权的争斗导致不能持续经营而清算。因此，在这一不稳定的区域，因决策效率的丧失和短期行为，企业价值或业绩可能停止增长甚至会出现下降。另外，此时第一大股东已开始有能力盗窃公司资产，由于盗窃收益大于盗窃成本，自利动机将诱发第一大股东的败德行为，随着第一大股东持股比例的提高，其盗窃能力会越来越强，所有权激励带来的正效应将被盗窃的负效应所淹没（Morck 等人，1988）。因此，从第一大股东对外部小股东的利益侵害上看，这一阶段企业价值也应该下降。

在区域III，由于第一大股东的持股比例达到了绝对控股的水平，这标志着区域II中经理人和控股股东关于公司控制权争夺的结束，控股股东掌握了公司的控制权。因此，这一区域同样是一个稳定的区域，公司治理要解决的代理问题主要变成限制控股股东对其他外部投资者利益的侵害。随着作为公司经理人的控股股东持股比例的提高，由于盗窃收益开始小于盗窃成本，此时控股股东不再偷盗，所有权的激励将极大的降低代理成本，提高企业价值（Morck 等人，1988；La Porta 等人，2002）。在其它条件不变的情况下，公司的企业价值或业绩会随控股股东所有权比例的提高而不断地提高。但导致这一推论成立的前提，即对公司的资产收益率保持不变的假设可能并不正确，因为在这一过程中，公司投资的资产收益率很难保持不变。其原因主要有三个方面：首先，随着第一大股东持股比例的提高，由于惧怕风险的意识加强和专业才能与职业经理相比的欠缺，公司可能会选择放弃一些投资效益好但风险较高的项目，从而使企业失去提高业绩和增长价值的机会；其次，由于个人财力的有限，控股股东持股比例的提高可能意味着公司规模的小小，从而使企业失去规模经济的利益；再次，过度集中的股权结构，由于降低了流动性，降低了市场监督带来的利益（Holmstrom 和 Tirole, 1993）。一旦公司因控股股东持股比例的提高而降低的代理成本小于来自风险投资、规模经济和市场监督的损失，企业的价值或业绩将出现负增长。其中，降低代理成本的利益与风险投资、规模经济以及市场监督的损失之间的差额就是图1中的效率损失。

假设2：在其它条件相同的情况下，与包括其他股股东和国有法人股股东的非国家股东的公司相比，国家股股东的公司有着较高的代理成本和较低的企业价值，因而其公司的业绩也较差。

一般认为，由于国家股权缺乏足够的管理激励，国家拥有企业所有权是低效率的。因为作为国家的代理人，代表国家行使企业所有权的政府官员有着不

同于国家的私人权益，其个人效用函数与社会效用函数相比总是存在着差异，从而不能保证他们在选择行动时不会背离社会财富最大化的目标(Williamson, 1985)。另外，国家作为委托人也可能是不合格的。因为根据代理理论，当国家以所有者的身份对代理人进行授权时它并不是真正意义上的“委托人”，由于权责失衡和缺乏专业素养，从而使他不可能像私人产权的委托人那样去努力地对代理人实施监督。

另外，相对于其他股股东的公司，国家控股企业的低效率还表现在其往往有着多元化的目标上。为了实现这些目标，国家股份一般不能自由流动，而股权的流动性恰恰是控制权机制得以发挥作用的基本前提。同时，同样出于社会目标，国家控股的企业往往也不会因为经济原因而被宣告破产，这又使得破产机制成为威胁经理人员的最后一道防线也归于失败(Shirley 和 Walsh, 2000)。由于既没有动力也缺乏能力对公司经理人进行有效地监督，相对于其他产权，国家控股企业的股东与经理人之间的代理问题更为严重，因此，假设2中提出的在其它条件相同的情况下，与股权性质为其他股股东的公司相比，国家股股东的公司有着较高的代理成本和较低的企业价值，因而其公司的业绩也较差在逻辑上成立。

为了说明国家股股东的公司与国有法人股股东的公司在公司治理上对投资人利益保护的差异，我们首先必须对国家股和国有法人股的概念进行界定。根据《股份有限公司国有股权管理暂行办法》，国家股是指有权代表国家投资的机构或部门向股份公司出资形成或依法定程序取得的股份。在股份公司股权登记上记名为该机构或部门持有的股份。国有法人股是指具有法人资格的国有企业、事业及其他单位以其依法占用的法人资产向独立于自己的股份公司出资形成或依法定程序取得的股份。在股份公司股权登记上记名为该国有企业或事业及其他单位持有的股份。由两者在概念界定上的差异可以看出，与国家控股的企业相比，国有法人控股的企业明显地具有本位利益，其所有者缺位的情况比国家控股的企业要好得多。斯道延·坦尼夫等人(2002)的调查指出：在上市公司的董事会中，国有法人股的股东最有影响力，他们选择的董事占了由股东选举的董事的48%；而国家股股东选择的董事只占了由股东选择的董事的21%。而且，国家委派的监督者和国有法人委派的监督者也有着显然的差异，例如，前者更多的是来自政府部门，而后者则更多的是来自企业，他们较之政府官员有更多的专业背景，更了解企业的内部运作和外部环境。由以上的分析可以看出，相对于国有法人控股的企业，国家控股企业的代理问题更为严重，因此，假设2中提出的在其它条件相同的情况下，与股权性质为国有法人股股东的公司相比，国家股股东的公司有着较高的代理成本和较低的企业价值，因而其公司的业绩也较差在逻辑上同样成立。

总之，第一大股东所有权性质的差异将导致代理关系的差异，从而导致公司治理对投资人利益保护的差异和代理成本的差异。因此，假设1中提出的不

同所有权性质的公司其第一大股东的持股比例与企业业绩的“M”型关系在业绩维度上或振幅上也应该是有差异的。相对于非国家股股东的公司来说，由于国家股股东的公司其第一大股东其委托人和代理人既缺少足够的激励和监督，又缺乏专业素养，因此，第一大股东为国家股股东的公司其企业业绩不但应显著地劣于第一大股东为其他股股东的公司，而且应显著地劣于第一大股东为国有法人股股东的公司。

假设3：在一股独大的情况下，第一大股东的持股水平或性质不同，反映公司治理效力的代理变量也将会有所不同，并且公司治理代理变量的这种差异能够在某种程度上解释企业业绩或价值随第一大股东的持股水平或性质变化所表现出来的差异。

如前所述，在当前一股独大的中国资本市场上，第一大股东的持股水平和性质不同，公司的代理问题不同，从而公司治理对投资人利益的保护力度和代理成本也将会有不同，具体表现在随着第一大股东持股水平的变化，企业业绩或价值会呈现出“M”型的变化；随着第一大股东股权性质的变化，其“M”型在价值或业绩维度上又呈现出差异，其中国家股股东的公司其企业价值或业绩较低。基于这种分析和前期文献，如果我们能够找出刻画或度量公司治理效力的代理变量，则这些代理变量也必将随着第一大股东持股水平或性质的变化而变化，并且公司治理代理变量随第一大股东的持股水平或性质变化所表现出来的差异，能够在某种程度上解释企业业绩或价值随第一大股东的持股水平或性质变化所表现出来的差异。

## 四、样本及其分布

### （一）样本的行业分布

本文的研究样本包括 508 个中国上市公司 1998-2001 年 4 年间共 2032 个样本观察值。样本公司由 1997 年以前在中国上市的所有上市公司组成，但为了研究的目的，金融性公司被排除在外。样本观察值的所有财务数据，股权结构数据以及公司治理变量的所有测度数据均来自巨灵证券信息系统，中国证监会网站和台湾的 TEJ 数据银行（TEJ Data Bank）；所有市场数据均由 CSMAR2003 交易数据库咨询系统（CSMAR2003 Trading Database Inquiry System）获得。样本公司的行业和证券市场分布如表 1 所示。其中 Panel A 的样本公司行业分布是按中国证监会 2001 年颁布的行业分类标准划分的，因为制造业样本公司占全部样本公司的 50% 以上，我们又将制造业的样本公司按行业大类进行了进一步的划分。从 Panel B 中样本公司的证券市场分布来看，我们的样本公司在深圳、上海两个证券交易所的分布基本相等。

表 1 样本的分布状况表

		样本数	频率 %
<i>Panel A</i> : 行业			
农、林、牧、渔业	A	8	1.575
采掘业	B	2	0.394
制造业	C	255	50.172
食品、饮料	C <sub>0</sub>	15	2.954
纺织、服装、皮毛	C <sub>1</sub>	18	3.545
木材、家具	C <sub>2</sub>	1	0.197
造纸、印刷	C <sub>3</sub>	4	0.738
石油、化学、塑胶、塑料	C <sub>4</sub>	54	10.241
电子	C <sub>5</sub>	16	3.151
金属、非金属	C <sub>6</sub>	43	8.468
机械、设备、仪表	C <sub>7</sub>	78	15.362
医药、生物制品	C <sub>8</sub>	24	4.727
其他制造业	C <sub>9</sub>	4	0.788
电力、煤气及水的生产和供应业	D	20	3.939
建筑业	E	5	0.985
交通运输、仓储业	F	13	2.560
信息技术业	G	26	5.121
批发和零售贸易	H	64	12.604
房地产业	J	28	5.514
社会服务业	K	18	3.545
传播与文化产业	L	7	1.378
综合类	M	62	12.211
<i>Panel B</i> : 交易所			
深圳		223	43.919
上海		285	56.081
合计		508	100

## (二) 第一大股东的股权分布

我国上市公司的第一大股东大多为控股股东。这是因为，在我国上市公司的股权结构中，第一大股东因其掌握的股权优势通常能够绝对地控制公司的运作。一般认为，控股股东包括：占据 51% 以上绝对控股份额的股东；不占绝对控股地位，但相对于其他股东其持股比例处于优势，而且其他股东股权分散且联合困难。国际上通常将控股股东所必要的持股比例界定在 20%—25%



(Leech 和 Leahy, 1991)。表 2 给出了第一大股东持股比例的分布情况。由表 2 可以看出，虽然样本公司的第一大股东的股权分布区域非常广阔，但近 91% 其持股比例超过 20%，处于所谓的优势表决权地位；近 32% 其持股比例超过 50%，处于绝对控股的地位。

表 2 第一大股东的股权结构分布

第一大股东 的持股区间 (%)	国家股企业		国有法人股企业		其他企业		全部企业	
	观察值	%	观察值	%	观察值	%	观察值	%
0-20	62	6.46	30	6.44	89	14.71	182	8.96
20-30	146	15.21	84	18.03	224	37.02	454	22.34
30-40	181	18.85	95	20.39	109	18.02	385	18.95
40-50	200	20.83	70	15.02	72	11.90	342	16.83
50-60	184	19.17	84	18.03	62	10.25	330	16.24
60-70	127	13.23	69	14.81	36	5.95	232	11.42
70-100	60	6.25	34	7.30	13	2.15	107	5.27
合计	960	100.00	466	100.00	605	100.00	2032	100.00

国家股企业、国有法人股企业以及其他企业分别指其第一大股东的股权性质为国家股、国有法人股和其他股。样本观察值的年度期间为 1998-2001。

为了全面反映第一大股东持股的分布情况及其随所有权性质差异的变化，在表 2 中我们还将第一大股东分为国家股股东、国有法人股股东和其他股股东三大类，并分别对其持股比例的分布情况进行了反映。由表 2 可以看出，上市公司第一大股东的的所有权性质不同，其股权结构的分布也不同。第一大股东为国家股股东的企业与第一大股东为国有法人股股东的企业其股权分布状况比较近似；而第一大股东为其他股股东的企业则有 37.02% 的股权分布集中在 20-30% 的区间，这也与我国这一类型企业发起及上市独特背景相一致。

## 五、经验分析

### (一) 第一大股东的所有权与企业业绩

#### 1、单变量分析

为了检验假设 1 提出的“M”型区间效应的正确性，我们将第一大股东的持股比例划分成了 7 个区间研究了第一大股东的的所有权比例与企业业绩的关系；为了检验假设 2 的正确性，我们又根据第一大股东所有权性质的不同，分别研究了两者关系随第一大股东所有权性质的变化所表现出来的差异和变化。

关于企业价值或业绩的度量,本文选择了 *Tobin's Q*, 股票的年市场收益率 *Stock return*, 资产收益率 *ROA*、主营业务资产收益率 *Core ROA* 和净资产收益率 *ROE* 五个变量。其中 *Tobin's Q* 和 *Stock return* 跟公司股票的资本市场状况相联系,反映企业价值和股票的证券市场年收益状况;而资产收益率 *ROA*、主营业务资产收益率 *Core ROA* 和净资产收益率 *ROE* 三个指标则是跟公司的会计盈余数字相联系,为公司的会计收益率指标。之所以同时采用这五个业绩指标,不仅因为它们为当前的各种文献所常用,也是因为当前在中国的资本市场上这些指标均具有其先天的缺陷。例如, *Tobin's Q* 反映的是公司资产的市场价值与其重置成本之比率。但在中国当前的资本市场上,因为股权分置,缺乏公司资产的市场价值数据,所以对于公司资产的市场价值,我们只好用流通股的市场价值与非流通股和负债的账面价值之和来表示;而对于公司资产的重置成本,我们也只能用其账面价值来代替。显然, *Tobin's Q* 值的大小受公司的流通股比例和上市时间长度的影响显著;而股票的市场收益率 *Stock return* 则同样因为中国上市公司大量存在的非流通股以及股市波动的政策性难以作为公司业绩度量的恰当变量。对于三个会计收益指标,同样囿于其本身的会计估计和职业判断难以全面有效地反映企业的经营业绩,尤其是净资产收益率 *ROE*, 因其在监管和政策上的特殊含义以及在盈余管理上的易于操纵已经模糊了其本来面目。共同运用这些指标能够更好地检验本文经验结果的可靠性和稳健性(关于本文所使用的各个变量的具体定义,详见附录 A)。单变量分析的结果见表 3。

由表 3 可以看出,正如假设 1 所预见的那样,第一大股东的持股比例与企业业绩之间确实存在着“M”型的“区间效应”,很多企业的业绩变量都在 20-40% 以及 50-70% 的区间内两次达到了极值。事实上,对于公司股票的市场收益率和公司的净资产收益率来说,这种“M”型的区间效应同样存在。之所以这种区间效应既不是 McConnell 和 Servaes (1990) 所发现的倒“U”型,也不是 Morck 等人 (1988) 以及 Myeong-Hyeon Cho (1998) 所发现的“N”型,而是一个“M”型,是由我国上市公司股权结构的独特分布决定的,这一发现与 Morck 等人 (1988) 以及 Myeong-Hyeon Cho (1998) 的经验结果并不矛盾。正如前面我们所表明的,我国上市公司第一大股东持股比例的分布区间非常宽泛,超过 50% 的达 31.63%,超过 60% 的达 15.64%,超过 70% 的达 4.77%。我们在对假设 1 的分析中曾经证明过,不同的股权结构对应着不同的代理关系,并产生不同的激励和代理成本,同时影响决策的效率;而第一大股东过高的持股比例同样会导致效率损失,这就是产生“M”型区间效应的原因。另外,表 3 的最后一栏表明,虽然每一业绩变量在第一大股东的持股区间基本上都有两个极值,但前后极值之间的差异基本上不显著。表 3 还表明,上市公司第一大股东的所有权性质不同,其企业业绩或价值也不同。第一大股东为非国家股股东的公司有着更高的企业价值和更强的盈利能力。这为假设 2

表 3 第一大股东的持股区间与企业业绩

第一大股东持股区间 (%)	0-20	20-30	30-40	40-50	50-60	60-70	70-100	Wilcoxon Z
股区间 (%)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Fmax = Lmax
<i>Panel A: 全部企业</i>								
<i>Tobin's Q</i>	2.722	2.921 <sup>F</sup>	2.664	2.456	2.619	2.675 <sup>L</sup>	2.632	-2.18**
<i>Stock return</i>	-0.057	-0.042 <sup>F</sup>	-0.047	-0.052	-0.054	-0.044 <sup>L</sup>	-0.053	0.90
<i>ROA</i>	0.026	0.036	0.039 <sup>F</sup>	0.035	0.038	0.041 <sup>L</sup>	0.030	1.23
<i>Core ROA</i>	0.054	0.094 <sup>F</sup>	0.093	0.094	0.093	0.097 <sup>L</sup>	0.091	0.70
<i>ROE</i>	0.072	0.088 <sup>F</sup>	0.081	0.082	0.080	0.091 <sup>L</sup>	0.067	0.88
观察值数	[175]	[437]	[371]	[325]	[319]	[218]	[104]	-
<i>Panel B: 国家股企业</i>								
<i>Tobin's Q</i>	2.237	2.395 <sup>F</sup>	2.300	2.319	2.465	2.547 <sup>L</sup>	2.456	0.51
<i>Stock return</i>	-0.049	-0.046 <sup>F</sup>	-0.056	-0.053	-0.063	-0.053	-0.026 <sup>L</sup>	0.57
<i>ROA</i>	0.022	0.039 <sup>F</sup>	0.034	0.031	0.030	0.034 <sup>L</sup>	0.026	-1.30
<i>Core ROA</i>	0.058	0.101 <sup>F</sup>	0.088	0.085	0.102 <sup>L</sup>	0.085	0.086	0.59
<i>ROE</i>	0.072	0.093 <sup>F</sup>	0.071	0.070	0.075	0.088 <sup>L</sup>	0.081	-0.56
观察值数	[61]	[142]	[175]	[195]	[178]	[124]	[58]	-
<i>Panel C: 国有法人股企业</i>								
<i>Tobin's Q</i>	2.767	2.736	2.965 <sup>F</sup>	2.553	2.787 <sup>L</sup>	2.783	2.675	-0.65
<i>Stock return</i>	-0.069	-0.031 <sup>F</sup>	-0.045	-0.049	-0.032	-0.031 <sup>L</sup>	-0.071	0.13
<i>ROA</i>	0.031	0.038	0.049 <sup>F</sup>	0.046	0.047	0.053 <sup>L</sup>	0.037	0.33
<i>Core ROA</i>	0.054	0.096	0.097 <sup>F</sup>	0.096	0.090	0.107 <sup>L</sup>	0.094	0.50
<i>ROE</i>	0.072	0.084	0.101 <sup>F</sup>	0.091	0.083	0.103 <sup>L</sup>	0.045	0.380
观察值数	[30]	[81]	[94]	[69]	[82]	[69]	[34]	-

表 3 续

第一大股东持 股区间 (%)	0-20 (1)	20-30 (2)	30-40 (3)	40-50 (4)	50-60 (5)	60-70 (6)	70-100 (7)	Wilcoxon Z F max = L.max
<i>Panel D</i> : 其他股企业								
<i>Tobin's Q</i>	2.894	3.491 <sup>F</sup>	3.137	2.821	2.850	3.580 <sup>L</sup>	3.470	0.28
<i>Stock return</i>	-0.058	-0.046	-0.035 <sup>F</sup>	-0.055	-0.048	-0.025 <sup>L</sup>	-0.060	0.61
<i>ROA</i>	0.027	0.033	0.045 <sup>F</sup>	0.043	0.041	0.060 <sup>L</sup>	0.056	1.98**
<i>Core ROA</i>	0.052	0.088	0.094	0.101	0.112	0.128 <sup>L</sup>	0.091	-
<i>ROE</i>	0.081	0.085	0.091 <sup>F</sup>	0.087	0.093	0.107 <sup>L</sup>	0.101	-0.28
观察值数	[84]	[215]	[104]	[69]	[62]	[36]	[13]	-

*Tobin's Q*: 公司资产的市场价值与其重置成本之比。公司资产的市场价值, 我们用流通股的市场价值与非流通股和负债的账面价值之和表示, 公司资产的重置成本, 我们用其账面价值代替。

*Stock return*: 流通股股票的年市场收益率。即  $(P_1 - P_0 + DIV_1)/P_0$ , 其中对股票拆分进行了调整。

*ROA*: 公司息税前收益扣除所得税后与其总资产之比, 即  $(EBIT-Tax)/TA$ 。

*Core ROA*: 公司主营业务收益与总资产之比。

*ROE*: 公司净利润与其净资产之比。

国家股企业、国有法人股企业以及其他企业分别指其第一大股东的股权性质为国家股、国有法人股和其他股。样本观察值的年度期间为 1998-2001。F、L 为企业业绩变量随大股东股权变化呈现出的前后两个中位数的极值; 表中最后一栏为检验每行前后两个中位数值是否相等的 Wilcoxon 的 Z 值, \*\*\*, \*\* 和 \* 分别表示双尾检验在 1%, 5% 和 10% 的水平上显著。

的成立提供了证据。在附录 C 中，我们还将表 3 显示的第一大股东的持股水平与企业业绩的 M 型关系用图表进行了直观地展示。

## 2、回归分析

为了进一步检验股权结构与企业业绩之间 M 型区间效应的存在及效果，以及其在价值或业绩维度上差异的显著性，以验证我们的假设 1 和假设 2，我们按照 Morck *et al.* (1988) and Cho (1998) 的多变量分析方法，并结合当前我国上市公司第一大股东所有权类型特点，构建了如下的分段回归模型。

$$Performance_{it} = \beta_0 + \beta_1 Lhold1_{it} + \beta_2 Lhold2_{it} + \beta_3 Lhold3_{it} + \beta_4 Lhold4_{it} + \beta_5 State_{it} + \beta_6 Lnsiz_{it} + \beta_7 Leverage_{it} + FixedEffect_{it} + \varepsilon_{it}$$

式中，

*Performance* 表示公司的价值或业绩变量，本文分别用 *Tobin's Q*、*Stock return*、*ROA*、*Core ROA* 和 *ROE* 进行了分析。

*Lhold* 表示公司第一大股东的持股比例。为了刻划在不同股权区间第一大股东持股水平与业绩的关系，又将其细化为如下 4 个变量，其中，

*Lhold1* = 第一大股东的持股比例如果第一大股东的持股比例 < 0.32，  
= 0.32 如果第一大股东的持股比例 ≥ 0.32。

*Lhold2* = 0 如果第一大股东的持股比例 < 0.32，  
= 第一大股东的持股比例 - 0.32 如果 0.32 ≤ 第一大股东的持股比例 < 0.50，  
= 0.18 如果第一大股东的持股比例 ≥ 0.50。

*Lhold3* = 0 如果第一大股东的持股比例 < 0.50，  
= 第一大股东的持股比例 - 0.50 如果 0.50 ≤ 第一大股东的持股比例 < 0.75，  
= 0.25 如果第一大股东的持股比例 ≥ 0.75。

*Lhold4* = 0 如果第一大股东的持股比例 < 0.75，  
= 第一大股东的持股比例 - 0.75 如果第一大股东的持股比例 ≥ 0.75。

其中 0.32、0.50 和 0.75 为 M 型的三个拐点值，表示企业业绩随第一大股东持股水平变化取得三个极值时所对应的持股水平。三个拐点值是我们根据 Cho (1998) 使用的格点搜索法 (grid search technique) 得到的，该方法通过试算、迭代以保证股权变量在该区间得到最显著的斜率系数。显然，三个拐点值与我们表 3 以及附录 C 中图形证据的结果相符。

*State* 为反映股权性质的哑变量，如果第一大股东为国家股股东，取值为 1；否则，取值为 0。*Lnsiz*、*Leverage* 和 *FixedEffects* 为模型的控制变量，其

中  $Lnsiz$  为公司年末总资产的对数值,  $Leverage$  为公司长期负债与年末总资产的比率。  $FixedEffects$  为控制年度和行业影响的哑变量。

如果在控制了公司的规模、财务杠杆以及固定影响之后, 回归结果中第一大股东的持股比例  $Lhold1$ ,  $Lhold2$ ,  $Lhold3$ ,  $Lhold4$  的系数符号分别为正、负、正、负并且显著, 则表明假设 1 的“M”型假说成立。如果反映股权性质的哑变量  $State$  的系数为负并且显著, 则表明假设 2 成立。表 4 是回归分析的结果。

表 4 第一大股东的持股比例与企业业绩关系的回归分析

$$Performance_{it} = \beta_0 + \beta_1 Lhold1_{it} + \beta_2 Lhold2_{it} + \beta_3 Lhold3_{it} + \beta_4 Lhold4_{it} + \beta_5 State_{it} + \beta_6 Lnsales_{it} + \beta_7 Leverage_{it} + \beta_8 Lnsiz_{it} + FixedEffects_{it} + \varepsilon_{it}$$

变量	预期符号	Tobin's Q	Stock return	ROA	Core ROA	ROE
Intercept		10.427 (24.81)***	0.042 (1.68)*	0.053 (2.85)***	0.116 (7.38)***	0.021 (1.78)*
$Lhold1$	+	0.003 (1.64)*	0.0002 (1.49)	0.0008 (2.99)***	0.0008 (3.80)***	0.001 (2.01)**
$Lhold2$	-	-0.004 (-0.67)	-0.00006 (-1.83)*	-0.00003 (-1.33)	-0.0001 (-1.48)	-0.0001 (-1.86)*
$Lhold3$	+	0.0001 (0.12)	0.00005 (0.15)	0.0002 (1.68)*	0.00001 (0.15)	0.00006 (0.15)
$Lhold4$	-	-0.005 (-1.71)*	-0.004 (-1.82)*	-0.003 (-1.12)	-0.003 (-1.62)*	-0.003 (-1.62)*
$State$	-	-0.449 (-7.83)***	-0.004 (-1.91)*	-0.010 (-4.10)***	-0.006 (-2.76)***	-0.014 (-2.29)**
$Lnsales$	+	-0.025 (-0.68)	0.013 (5.20)***	0.014 (8.82)***	0.041 (26.02)***	0.034 (8.67)***
$Leverage$	-	0.003 (0.55)	0.0008 (2.20)**	-0.001 (-5.45)***	-0.00002 (-0.11)	0.0009 (1.80)*
$Lnsiz$	-	-0.601 (-11.75)***	-0.019 (-5.24)***	-0.016 (-7.23)***	-0.040 (-17.95)***	-0.030 (-5.62)***
Adj R-Sq		0.221	0.022	0.18	0.356	0.105
F		59.50	4.75	31.02	98.88	21.45
(Pr > F)		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
N		1672	1672	1672	1672	1672

$Tobin's Q$ : 公司资产的市场价值与其重置成本之比率。公司资产的市场价值, 我们用流通股的市场价值与非流通股和负债的账面价值之和表示, 公司资产的重置成本, 我们用其账面价值代替。

表 4 续

*Stock return* : 流通股股票的年市场收益率。即  $(P_1 - P_0 + \text{DIV}_1)/P_0$  , 其中对股票拆分进行了调整。

*ROA* : 公司息税前收益扣除所得税后与其总资产之比率, 即  $(\text{EBIT}-\text{Tax})/\text{TA}$  。

*Core ROA* : 公司主营业务收益与总资产之比率。

*ROE* : 公司净利润与其净资产之比率。

*Lhold1* = 第一大股东的持股比例如果第一大股东的持股比例  $< 0.32$  ,  
= 0.32 如果第一大股东的持股比例  $\geq 0.32$  。

*Lhold2* = 0 如果第一大股东的持股比例  $< 0.32$  ,  
= 第一大股东的持股比例  $-0.32$  如果  $0.32 \leq$  第一大股东的持股比例  $< 0.50$  ,  
= 0.18 如果第一大股东的持股比例  $\geq 0.50$  。

*Lhold3* = 0 如果第一大股东的持股比例  $< 0.50$  ,  
= 第一大股东的持股比例  $-0.50$  如果  $0.50 \leq$  第一大股东的持股比例  $< 0.75$  ,  
= 0.25 如果第一大股东的持股比例  $\geq 0.50$  。

*Lhold4* = 0 如果第一大股东的持股比例  $< 0.75$  ,  
= 第一大股东的持股比例  $-0.75$  如果第一大股东的持股比例  $\geq 0.75$  。

*State* : 哑变量, 如果第一大股东为国家股股东, 取值为 1 ; 否则, 取值为 0 。

*Lnsales* : 公司当年取得销售收入的销售额的对数值。

*Leverage* : 公司长期负债与年末总资产的比率。

*Lnsiz* : 公司年末总资产的对数值。

控制年度和行业等固定影响的哑变量已包含在模型中。样本观察值的年度期间为 1998-2001。括号中的为  $t$  值, \*\*\*, \*\* 和 \* 分别表示在 1% , 5% 和 10% 的水平上显著。

由表 4 可以看出, 对于将不同的业绩变量作为被解释变量的回归分析, 在控制了公司的规模、财务杠杆以及固定影响之后, *Lhold1* , *Lhold2* , *Lhold3* , *Lhold4* 的系数符号与预期的相同, 分别为正、负、正、负, 并且 *Lhold1* 与 *Lhold4* 的系数符号基本上显著, 而 *Lhold2* , *Lhold3* 的系数符号对部分业绩变量显著, 表明股权结构与企业业绩之间 M 型的区间效应不仅确实存在, 而且具有统计上的显著性。反映股权性质的哑变量 *State* 的系数为负并且全部显著, 表明假设 2 成立, 国家股权具有较高的代理成本和较低的企业业绩。另外, 需要指出的是, 模型中财务杠杆 *Leverage* 与 *ROA* 的负相关关系也与前期文献的经验结果一致 (Sun 和 Tong, 2003) 。

我们进一步将全部样本按下列股权区间  $Lhold < 0.32$  ;  $0.32 \leq Lhold < 0.50$  ;  $0.50 \leq Lhold < 0.75$  ;  $Lhold \geq 0.75$  分成 4 个子样本进行回归, 并将上述模型中的 4 个股权变量整合为一个 *Lhold* , 以检验我们的假设 1 和假设 2 的稳健性, 发现回归结果与表 3 和表 4 的一致, *Lhold* 在 4 个子样本中的系数

分别为正、负、正、负并且基本显著；控制股权性质的哑变量 *State* 的系数在 4 个样本区间中全部为负并且基本显著。

## (二) 企业业绩随第一大股东所有权水平和性质变化所表现的差异的显著性检验

### 1、“M”型区间效应低业绩区域和高业绩区域企业业绩差异的显著性

这是考察企业业绩随第一大股东所有权水平变化所表现的差异的显著性。我们将“M”型的两端 (0, 20) 和 (70, 100) 和中间业绩低的区域 (40, 50) 作为低业绩区域, 将其余均作为高业绩区域, 比较了低业绩区域与高业绩区域的公司企业业绩差异的显著性。结果见表 5。

由表 5 可以看出, 在平均数和中位数差异的比较上, *t* 检验和 Wilcoxon 秩和检验的结果基本一致。在 Panel A 中, 对于全体样本观察值来说, 除了 *Tobin's Q*, *Stock return* 的差异不显著之外, 其它业绩变量的差异均显著。对于 Panel B 的国家股公司和 Panel D 的其他股公司, 除了在市场价值或收益指标 *Tobin's Q*, *Stock return* 的差异不显著之外, 在会计收益指标净资产收益率 ROE 上的差异也不显著。而在 Panel C 中, 对于国有法人股公司来说, 所有业绩变量在两个区域的差异基本都显著。这表明, 第一大股东的所有权水平对企业业绩尤其是会计业绩有显著的影响。这一结果也与我们在前面的分析中所指出的 *Tobin's Q*, *Stock return* 和 ROE 均有致命缺陷的结论相一致。

### 2、国家股公司与非国家股公司企业业绩差异的显著性

首先我们全面考察了企业业绩随第一大股东所有权性质变化所表现的差异的显著性。按第一大股东所有权性质的不同, 我们对不同性质的公司其“M”型分区间从业绩维度上进行了比较。我们发现, 在低业绩区域, 不同所有权性质的公司其业绩差异基本不显著; 在高业绩区域, 国家股公司的业绩均显著地低于国有法人股公司以及其他股公司; 而在国有法人股公司和其他股公司之间, 除了 *Tobin's Q* 在区间 (20, 30) 以及 (60, 70) 上差异显著, 以及 Core ROA 在区间 (50, 60) 上差异显著之外, 这两类股权性质的公司在其余区间的业绩差异均不显著 (结果详见附录 B)。为了简洁, 我们将国有法人股公司与其他股公司进行了合并, 一起作为非国家股公司与国家股公司的业绩差异进行了比较。见表 6。

表 6 显示, 在 Panel A 中, 对于全部样本公司来说, 除了股票的年市场收益率 *Stock return* 之外, 其余业绩指标的差异均显著, 国家股公司的业绩显著地低于非国家股的公司。在 Panel B 中, 对于低业绩区域的样本公司来说, 除了 *Tobin's Q* 之外, 其余指标的业绩差异均不显著。非国家股公司较高的 *Tobin's Q* 值可能源于其相对较高的流通股比例。Panel C 反映了高业绩区域不同所有权性质样本公司的业绩差异, 与 Panel A 的结果相一致, 各业绩指标



表 5 低业绩区域和高业绩区域的公司企业业绩差异的比较

变量	低业绩区域			高业绩区域			t 检验	Wilcoxon 检验
	观察值	平均数	中位数	观察值	平均数	中位数		
<i>Panel A: 全部样本</i>								
<i>Tobin's Q</i>	602	2.983	2.590	1336	3.058	2.703	-0.86	-1.34
<i>Stock return</i>	592	-0.032	-0.039	1334	-0.027	-0.033	-0.85	-0.96
<i>ROA</i>	594	0.017	0.032	1342	0.034	0.042	-3.76***	-3.72***
<i>Core ROA</i>	603	0.078	0.071	1333	0.100	0.097	-5.98***	-6.49***
<i>ROE</i>	589	0.043	0.085	1352	0.060	0.093	-1.64*	-1.98**
<i>Panel B: 国家股公司</i>								
<i>Tobin's Q</i>	312	2.733	2.306	602	2.723	2.410	0.09	-0.36
<i>Stock return</i>	305	-0.023	-0.024	606	-0.030	-0.040	0.81	0.92
<i>ROA</i>	312	0.013	0.027	614	0.030	0.038	-2.58**	-2.29**
<i>Core ROA</i>	314	0.075	0.070	605	0.097	0.093	-4.55***	-4.41***
<i>ROE</i>	308	0.045	0.085	612	0.054	0.085	-0.67	-0.46
<i>Panel C: 国有法人股公司</i>								
<i>Tobin's Q</i>	131	2.894	2.599	318	3.180	2.874	-1.93**	-1.31
<i>Stock return</i>	132	-0.047	-0.065	318	-0.021	-0.026	-2.22**	-2.22**
<i>ROA</i>	128	0.021	0.037	318	0.042	0.048	-2.37**	-2.40***
<i>Core ROA</i>	131	0.085	0.086	317	0.102	0.098	-2.24**	-2.49***
<i>ROE</i>	128	0.021	0.061	326	0.076	0.100	-2.26**	-2.46***

表 5 续

变量	低业绩区域			高业绩区域			Wilcoxon 检验
	观察值	平均数	中位数	观察值	平均数	中位数	
	观察值	平均数	中位数	观察值	平均数	中位数	
<i>Panel D</i> : 其他股公司							
<i>Tobin's Q</i>	165	3.347	2.835	408	3.519	3.131	-1.01
<i>Stock return</i>	161	-0.031	-0.040	412	-0.026	-0.029	-0.57
<i>ROA</i>	162	0.021	0.040	402	0.034	0.045	-1.66*
<i>Core ROA</i>	166	0.077	0.051	403	0.101	0.100	-3.73***
<i>ROE</i>	161	0.056	0.097	406	0.058	0.100	-0.11

*Tobin's Q*: 公司资产的市场价值与其重置成本之比。公司资产的市场价值与非流通股和负债的账面价值之和表示, 公司资产的重置成本, 我们用其账面价值代替。

*Stock return*: 流通股股票的年市场收益率。即  $(P_1 - P_0 + DIV_1)/P_0$ , 其中对股票拆分进行了调整。

*ROA*: 公司息税前收益扣除所得税后与其总资产之比, 即  $(EBIT-Tax)/TA$ 。

*Core ROA*: 公司主营业务收益与总资产之比。

*ROE*: 公司净利润与其净资产之比。

低业绩区域: 哑变量, 如果第一大股东的持股区间  $Lhold < 20\%$ ; 或  $40\% \leq Lhold < 50\%$ ; 或  $Lhold \geq 70\%$ , 取值为 1, 否则取值为 0。

高业绩区域: 哑变量, 如果第一大股东的持股区间  $20\% \leq Lhold < 40\%$ ; 或  $50\% \leq Lhold < 70\%$ , 取值为 1, 否则取值为 0。

国家股企业、国有法人股企业以及其他企业分别指其第一大股东的股权性质为国家股、国有法人股和其他股。样本观察值的年度期间为 1998-2001。t 值和 Wilcoxon Z-值检验低业绩区域与业绩区域业绩差异的显著性, \*\*\*, \*\* 和 \* 分别表示在 1%, 5% 和 10% 的水平上显著。

表 6 国家股公司与非国家股公司在价值维度上的差异比较

变量	国家股公司			非国家股公司			t 检验	Wilcoxon 检验
	观察值	平均数	中位数	观察值	平均数	中位数		
<i>Panel A : 全部样本</i>								
<i>Tobin's Q</i>	914	2.724	2.399	1022	3.337	2.947	-10.45***	-10.35***
<i>Stock return</i>	913	-0.029	-0.039	1023	-0.026	-0.031	-0.96	-1.17
<i>ROA</i>	926	0.028	0.036	1010	0.035	0.045	-2.69***	-5.14***
<i>Core ROA</i>	919	0.094	0.090	1017	0.098	0.096	-1.59*	-1.74*
<i>ROE</i>	920	0.053	0.085	1021	0.062	0.098	-1.40	-4.03***
<i>Panel B : 低业绩区域</i>								
<i>Tobin's Q</i>	117	2.733	2.306	158	3.169	2.776	-2.69***	-2.74***
<i>Stock return</i>	112	-0.023	-0.024	155	-0.038	-0.047	1.30	1.35
<i>ROA</i>	117	0.013	0.027	152	0.021	0.039	-0.97	-1.36
<i>Core ROA</i>	119	0.075	0.070	159	0.080	0.072	-0.77	-0.20
<i>ROE</i>	113	0.045	0.085	151	0.042	0.086	-0.15	-0.31

表 6 续

变量	国家股公司			非国家股公司			Wilcoxon 检验
	观察值	平均数	中位数	观察值	平均数	中位数	
<i>Panel C: 高业绩区域</i>							
<i>Tobin's Q</i>	797	2.723	2.410	864	3.367	3.008	-10.24***
<i>Stock return</i>	801	-0.030	-0.040	868	-0.024	-0.029	-1.62*
<i>ROA</i>	809	0.030	0.038	858	0.038	0.047	-2.69***
<i>Core ROA</i>	800	0.097	0.093	858	0.102	0.099	-1.67*
<i>ROE</i>	807	0.054	0.085	870	0.066	0.100	-1.65*

*Tobin's Q*: 公司资产的市场价值与其重置成本之比。公司资产的市场价值, 我们用流通股的市场价值与非流通股的账面价值之和表示, 公司资产的重置成本, 我们用其账面价值代替。

*Stock return*: 流通股股票的年收益率。即  $(P_1 - P_0 + \text{DIV}_1)/P_0$ , 其中对股票拆分进行了调整。

*ROA*: 公司息税前收益扣除所得税后与其总资产之比, 即  $(\text{EBIT-Tax})/\text{TA}$ 。

*Core ROA*: 公司主营业务收益与总资产之比。

*ROE*: 公司净利润与其净资产之比。

低业绩区域: 哑变量, 如果第一大股东的持股比例  $Lhold < 20\%$ ; 或  $40\% \leq Lhold < 50\%$ ; 或  $Lhold \geq 70\%$ , 取值为 1, 否则取值为 0。

高业绩区域: 哑变量, 如果第一大股东的持股比例  $20\% \leq Lhold < 40\%$ ; 或  $50\% \leq Lhold < 70\%$ , 取值为 1, 否则取值为 0。国家股企业与非国家股企业分别指其第一大股东的股权性质为国家股和非国家股, 其中非国家股企业包括第一大股东为国有法人股和其他股的企业。样本观察值的年度期间为 1998-2001。\*\*\*, \*\* 和 \* 分别表示 *t* 值和 Wilcoxon 秩和检验的 *Z* 值的双尾检验在 1%, 5% 和 10% 的水平上显著。

的差异均显著，国家股公司的业绩显著地低于非国家股公司的业绩。表6表明第一大股东的所有权性质对企业业绩有显著影响。

### (三) 公司治理代理变量随第一大股东所有权水平和性质变化所表现的差异的显著性检验

根据先前的经验文献 (Core J. E. *et al.*, 1999; Volpin P. F., 2002) 并考虑中国上市公司特有的制度背景, 我们用一组代理变量来度量公司治理的效力。例如, 为了度量董事会和监事会的监督效力, 我们使用了董事会规模 (*Bosize*)、监事会规模 (*Supsize*)、外部董事比例 (*Odirectp*)、外部监事比例 (*Osupvp*)、董事长与总经理两职合一 (*CEOdual*) 等五个指标。前两个规模指标预期与业绩变量成反比, 因为董事会规模较大容易导致效率损失, 且易对 CEO 的决策产生掣肘 (Jensen, 1993; Yermack, 1996); 两个外部比例指标预期与业绩变量成正比, 因为外部董事或监事的比例越高, 会使董事会和监事会产生更多的独立性和外部监督效力 (Pfeffer, 1981); 董事长与总经理两职合一 (*CEOdual*) 预期与企业业绩成反比, 因为一些经验研究认为两职合一会带来更大的代理问题 (Yermack, 1996)。当然, 经验证据表明这些代理变量与企业业绩的关系是混合的, 也存在一些相关方向的理由和证据。

为了考察董事会和监事会的激励作用, 我们使用了董事长是否在公司内部领取工资 (*Bcrc*)、CEO 是否在公司内部领取工资 (*CEOrc*) 两个哑变量以及董事长持股 (*Bcp*)、CEO 持股 (*CEOp*) 两个股权变量。设置这两个管理层股权变量是为了考察我国上市公司在公司治理改革中使用越来越普遍的管理层股权的激励作用。因为这些激励作用是正向的, 有利于降低代理成本提高企业业绩, 因此我们预期企业业绩是这四个变量的增函数。

为了测度企业管理层的稳定性, 刻划企业内会计及经营政策的连续性对企业业绩的影响, 我们使用了董事长是否变更 (*Bctnov*) 和 CEO 是否变更 (*CEOtnov*) 两个哑变量。我们预期这两个管理层变更哑变量是企业业绩的减函数, 因为管理层变更不仅为企业带来很多的负面影响, 还会导致新的管理层为了摆脱历史包袱进行洗大澡 (big bath)。另外, 为了考察管理层的激励和盈余质量我们还使用了公司是否有重大关联交易 (*Afftran*) 和公司是否有重大资产重组 (*Assetrec*) 两个哑变量。对这两个指标与企业业绩的关系我们没有给出预期, 因为正向与反向的理由同时存在 (各变量的定义及计算描述参见附录A)。

#### 1、低业绩区域和高业绩区域的公司在公司治理代理变量上差异的显著性

这是考察第一大股东的所有权水平对公司治理效力 (effectiveness) 的影响。我们首先将样本公司划分为低业绩区域公司和高业绩区域公司, 再检验两类样本公司在公司治理代理变量上的差异及其显著性。检验结果见表7。

表 7 低业绩区域和高业绩区域的公司在公司治理代理变量上的差异比较

变量	低业绩区域				高业绩区域				t 检验	Wilcoxon 检验
	观察值数	平均数	中位数	观察值数	平均数	中位数	观察值数			
<i>Bosize</i>	613	9.993	9	1417	9.632	9	1417	1.76**	0.75	
<i>Supsize</i>	613	4.380	5	1417	4.149	3	1417	2.53**	3.33***	
<i>Odirectp</i>	432	0.537	0.571	1066	0.514	0.555	1066	1.13	1.51	
<i>Osupup</i>	432	0.409	0.400	1066	0.410	0.400	1066	0.00	0.29	
<i>CEOdual</i>	613	0.260	0	1418	0.290	0	1418	-1.04	-1.03	
<i>Bcnc</i>	600	0.523	1	1339	0.579	1	1339	-1.75*	-1.74*	
<i>CEOrc</i>	600	0.894	1	1354	0.929	1	1354	-1.77*	-2.01**	
<i>Bcnov</i>	613	0.295	0	1417	0.231	0	1417	2.22**	2.34***	
<i>CEOtmov</i>	613	0.336	0	1417	0.299	0	1417	1.27	1.26	
<i>Afftran</i>	613	0.604	1	1417	0.696	1	1417	-3.14***	-3.13***	
<i>Assercc</i>	613	0.090	0	1417	0.152	0	1417	-2.78***	-3.26***	
<i>Bcp</i>	612	0.010	0.00003	1410	0.009	0.001	1410	0.29	-3.29***	
<i>CEOp</i>	612	0.009	0.001	1411	0.007	0.001	1411	0.45	-1.12	

表 7 续

<i>Bosize</i>	: 董事会规模变量, 包括董事会全部董事的人数。
<i>Supsize</i>	: 监事会规模变量, 包括监事会全部监事的人数。
<i>Odirectp</i>	: 外部董事比例, 指不在公司领取年薪的董事占全部董事的比例。
<i>Osupup</i>	: 外部监事比例, 指不在公司领取年薪的监事占全部监事的比例。
<i>CEOdual</i>	: 哑变量, 如果董事长兼任执行总裁, 取值为 1; 否则, 取值为 0。
<i>Bcr</i>	: 哑变量, 如果董事长在公司领取报酬, 取值为 1; 否则, 取值为 0。
<i>CEOrc</i>	: 哑变量, 如果执行总裁在公司领取报酬, 取值为 1; 否则, 取值为 0。
<i>Bctnov</i>	: 哑变量, 如果当年公司的董事长变更, 取值为 1; 否则, 取值为 0。
<i>CEOmouv</i>	: 哑变量, 如果当年公司的执行总裁变更, 取值为 1; 否则, 取值为 0。
<i>Afferan</i>	: 哑变量, 如果公司当年有重大关联交易发生, 取值为 1; 否则, 取值为 0。
<i>Asstrec</i>	: 哑变量, 如果公司当年有重大资产重组事件发生, 取值为 1; 否则, 取值为 0。
<i>Bcp</i>	: 董事长持股比例, 指董事长持有公司股票占公司股票总数的比例。
<i>CEOp</i>	: CEO 持股比例, 指执行总裁持有公司股票占公司股票总数的比例。
低业绩区域	: 哑变量, 如果第一大股东的持股区间 $Lhold < 20\%$ ; 或 $40\% \leq Lhold < 50\%$ ; 或 $Lhold \geq 70\%$ , 取值为 1, 否则取值为 0。
高业绩区域	: 哑变量, 如果第一大股东的持股区间 $20\% \leq Lhold < 40\%$ ; 或 $50\% \leq Lhold < 70\%$ , 取值为 1, 否则取值为 0。
样本观察值的年度期间	为 1998-2001。***, ** 和 * 分别表示 $t$ 值和 Wilcoxon 秩和检验的 $Z$ 值在 1%, 5% 和 10% 的水平上显著 (双尾)。

由表 7 可以看出,其结果与前期文献的经验结果相一致。与低业绩区域的公司相比,高业绩区域的公司有着更小的监事会规模 (*Supsize*)、更低频率的董事长替换 (*Bctnov*)、更多的董事长和执行总裁在公司内部领取工资 (*Bcrc & CEOrc*)、更多的重大关联交易 (*Affitran*)、更多的重大资产重组 (*Assetrec*) 以及董事长拥有公司更多的股权 (*Bcp*)。其它公司治理的代理变量差异不显著。显然,除了监事会规模与企业业绩的关系不明确之外,其它差异显著的变量有利于公司治理效力的提高。更多的重大关联交易会带来公司业绩的提升;更多的董事长和执行总裁在公司内部领取工资、更低频率的董事长替换和更少的重大资产重组有利于公司经营的稳定;董事长拥有更多的股权也有利于对公司业绩的提升产生正向的激励。这表明,第一大股东的所有权比例对公司治理效力有显著的影响。

## 2、国家股公司与非国家股公司在公司治理代理变量上差异的显著性

这是考察第一大股东的所有权性质对公司治理效力 (*effectiveness*) 的影响。检验结果见表 8。表 8 表明,国家股公司与非国家股公司在本文所有的公司治理代理变量上的差异均显著。与国家股公司相比,业绩高的非国家股公司有着更小的董事会规模 (*Bosize*) 和监事会规模 (*Supsize*),更高的外部董事比例 (*Odirectp*) 和外部监事比例 (*Osupvp*),更少的董事长和总经理两职兼任 (*CEOdual*),更高频率的董事长替换 (*Bctnov*) 和总经理替换 (*CEOtnov*),更少的董事长和总经理在公司内部领取工资 (*Bcrc & CEOrc*),更多的关联交易 (*Affitran*) 和资产重组 (*Assetrec*),董事长和总经理拥有更多的公司股权 (*Bcp & CEOp*)。可见,与表 7 相比,业绩高的非国家股公司同高业绩区域的公司一样,具有更小的监事会规模、更多的关联交易、董事长在公司内部拥有更多的股权。这些都与前期文献的结果相一致,表明更高的公司治理效力与企业业绩的增长相关联。但在董事长替换频率方面,在董事长和总经理是否在公司内部领取工资比例方面,在重大资产重组的频率方面,表 8 与表 7 的符号正好相反。

### (四) 公司治理代理变量的差异对企业业绩差异的解释力

通过前面的分析我们可以看出,第一大股东的所有权比例和性质不同,企业业绩和公司治理代理变量也不同。那么,在其他条件相同的情况下,公司治理代理变量的差异能否解释企业业绩的差异呢?也就是说,虽然影响企业业绩的因素有很多,如既可能有公司规模、产品的销售情况、行业以及上市时间等基本因素,也可能有公司治理效力的因素。在控制这些基本因素的情况下,公司治理代理变量的差异是否仍然是导致企业业绩差异的一个原因呢?为了回答这一问题,我们对公司治理代理变量与企业业绩的关系从经验的角度进行了考察,希望从中找出有效改善公司治理效力的途径。我们根据前期文献的经验研



表 8 国家股公司与非国家股公司在公司治理代理变量上的差异比较

变量	国家股公司				非国家股公司				t test	Wilcoxon test
	观察值数	平均数	中位数	观察值数	平均数	中位数	观察值数			
<i>Bosize</i>	960	9.827	9	1070	9.554	9	1070	2.20**	2.50**	
<i>Supsize</i>	960	4.513	4	1070	4.199	5	1070	4.94***	5.68***	
<i>Odirctp</i>	682	0.444	0.444	816	0.578	0.625	816	-10.22***	-10.71***	
<i>Osupup</i>	682	0.325	0.333	816	0.480	0.571	816	-10.43***	-10.09***	
<i>CEOdual</i>	960	0.344	0	1071	0.233	0	1071	5.55***	5.54***	
<i>Bcrr</i>	917	0.689	1	1022	0.466	0	1022	10.14***	9.88***	
<i>CEOrc</i>	925	0.941	1	1029	0.908	1	1029	2.78***	2.74***	
<i>Bctnov</i>	959	0.194	0	1071	0.281	0	1071	-4.58***	-4.52***	
<i>CEOmou</i>	959	0.277	0	1071	0.329	0	1071	-2.55**	-2.55**	
<i>Affiran</i>	960	0.623	1	1070	0.738	1	1070	-5.59***	-5.58***	
<i>Assetrec</i>	960	0.040	0	1071	0.152	0	1071	-8.79***	-8.38***	
<i>Bcp</i>	957	0.007	0	1065	0.011	0.003	1065	-2.85***	-5.34***	
<i>CEOop</i>	958	0.006	0.001	1065	0.009	0.002	1065	-2.30**	-2.94***	

表 8 续

<i>Boysize</i>	：董事规模变量，包括董事会全部董事的人数。
<i>Supsize</i>	：监事会规模变量，包括监事会全部监事的人数。
<i>Odirectp</i>	：外部董事比例，指不在公司领取年薪的董事占全部董事的比例。
<i>Osuppp</i>	：外部监事比例，指不在公司领取年薪的监事占全部监事的比例。
<i>CEOdual</i>	：哑变量，如果董事长兼任执行总裁，取值为 1；否则，取值为 0。
<i>Bcnc</i>	：哑变量，如果董事长在公司领取报酬，取值为 1；否则，取值为 0。
<i>CEOrc</i>	：哑变量，如果执行总裁在公司领取报酬，取值为 1；否则，取值为 0。
<i>Bcrtov</i>	：哑变量，如果当年公司的董事长变更，取值为 1；否则，取值为 0。
<i>CEOTov</i>	：哑变量，如果当年公司的执行总裁变更，取值为 1；否则，取值为 0。
<i>Afftran</i>	：哑变量，如果当年有重大关联交易发生，取值为 1；否则，取值为 0。
<i>Assetrec</i>	：哑变量，如果当年有重大资产重组事件发生，取值为 1；否则，取值为 0。
<i>Bcp</i>	：董事长持股比例，指董事长持有公司股票占公司股票总数的比例。
<i>CEOp</i>	：CEO 持股比例，指执行总裁持有公司股票占公司股票总数的比例。

国家股企业与非国家股企业分别指其第一大股东的股权性质为国家股和非国家股，其中非国家股企业包括第一大股东为国有法人股和其他股的企业。样本观察值的年度期间为 1998-2001。\*\*\*，\*\*和 \* 分别表示  $t$  值和 Wilcoxon 秩和检验的  $Z$  值在 1%，5% 和 10% 的水平上显著（双尾）。

究方法 (Deventer & Malatesta, 2001; Sun & Tong, 2003) , 采用了如下的回归模型 :

$$\Delta PP_{i,t} = \alpha + \sum_j \beta_j \Delta CGV\_ND_{ij,t} + \sum_j \delta_j CGV\_D_{ij,t} + \sum_j \varphi_j Control \cdot Factor_{ij,t} + \varepsilon_{i,t}$$

式中,  $\Delta PP$  为超额业绩, 为根据第一大股东所有权区间或性质划分后业绩好的样本公司的业绩变量平减业绩差的样本公司业绩变量中位数后的差额, 包括超额资产收益率  $\Delta ROA$ 、超额主营业务资产收益率  $\Delta Core ROA$  以及超额净资产收益率  $\Delta ROE$ ;  $CGV\_ND$  为通过差异显著性检验的公司治理代理变量中的非哑变量;  $CGV\_D$  为通过差异显著性检验的公司治理代理变量中的哑变量;  $\Delta CGV\_ND$  为按第一大股东所有权区间或性质划分后业绩好的样本公司非哑变量的变量值平减业绩差的样本公司对应变量中位数的差额;  $Control Factor$  为控制变量, 包括公司销售收入、资产规模、上市时间长度以及行业和年份的影响;  $\varepsilon$  为误差项。

### 1、公司治理代理变量的差异对高业绩区域公司的超额业绩的解释

我们首先以高业绩区域的公司为研究样本, 将高业绩区域公司的业绩变量值分别平减低业绩区域公司对应业绩变量中位数后的差额作为被解释变量  $\Delta PP$ ; 将通过差异显著性检验的公司治理代理变量作为解释变量, 其中公司治理变量中非哑变量的值分别用低业绩区域公司对应变量中位数的值进行了平减。模型回归的结果见表 9。

由表 9 可以看出, 关于公司治理代理变量, 超额监事会规模 ( $\Delta Supsize$ ) 对企业超额业绩的影响在方向上与预期相符, 均为负且基本显著。虽然现有文献没有关于监事会规模与企业业绩关系的直接证据, 但却表明董事会规模与企业业绩之间成反向关系 (Jensen, 1993; Yermack, 1996; Eisenberg, 1998); 董事长在公司内部领取报酬 ( $Bcrc$ ) 对各超额业绩变量的影响除  $\Delta Stock return$  为正且不显著之外, 其它均为负, 并且对  $\Delta Tobin's Q$ ,  $\Delta ROA$  和  $\Delta ROE$  的影响显著。这可能表明, 董事长缺乏独立性增加了公司的代理成本, 对公司的超额业绩存在负面影响。CEO 在公司内部领取报酬 ( $CEOrc$ ) 与各超额业绩指标的关系与预期相符, 均为正且对  $\Delta Stock return$  和  $\Delta ROE$  显著, 表明 CEO 在公司内部领取报酬虽然对公司的整体业绩提升激励不大, 但能提高资本市场投资者的信心, 并能给 CEO 更多的激励去做高净资产收益率  $ROE$ 。这也与我们前面的分析相一致, 因为  $ROE$  是政策变量, 是公司上市、退市、配股和业绩上报的重要指标, 相对于  $ROA$  和  $Core ROA$ , 其本身也更易于被盈余管理。CEO 在公司内部领取报酬, 必然提升他做高  $ROE$  的激励。

董事长变更  $Bctnov$  对两个与市场价值相关的指标  $\Delta Tobin's Q$  和  $\Delta Stock return$  的影响为正但均不显著, 表明董事长变更对市场来说可能算不上是一个

表 9 公司治理代理变量的差异对高业绩区域的公司超额业绩的解释

$$\Delta Performance_{it} = \alpha + \beta_1 \Delta Supsize_{it} + \beta_2 Berc_{it} + \beta_3 CEOrc_{it} + \beta_4 Bctnov_{it} + \delta_1 Afftran_{it} + \delta_2 Assetrec_{it} + \delta_3 \Delta Bcp_{it} + \delta_4 \Delta CEOp_{it} + \varphi_1 Lnsales_{it} + \varphi_2 Leverage_{it} + \varphi_3 Lsize_{it} + \varphi_4 Age_{it} + FixedEffects_{it} + \varepsilon_{it}$$

变量	预期符号	$\Delta Tobin's Q$	$\Delta Stock\ return$	$\Delta ROA$	$\Delta Core\ ROA$	$\Delta ROE$
Intercept		8.587 (19.28)**	0.086 (2.65)**	0.051 (3.00)**	0.093 (5.66)**	-0.012 (-0.29)
$\Delta Supsize$	-	-0.044 (-2.05)**	-0.002 (-1.71)*	-0.001 (-1.71)*	-0.002 (-3.55)**	-0.003 (-1.43)
$Berc$	?	-0.189 (-2.83)**	0.004 (0.84)	-0.004 (-1.89)**	-0.003 (-1.36)	-0.012 (-1.88)*
$CEOrc$	+	0.137 (1.06)	0.019 (2.01)**	0.006 (1.21)	0.003 (0.66)	0.020 (1.62)*
$Bctnov$	-	0.004 (0.05)	0.0006 (0.11)	-0.013 (-4.43)**	-0.011 (-3.91)**	-0.027 (-3.55)**
$Afftran$	+	0.167 (2.43)**	0.003 (0.65)	0.010 (4.04)**	-0.001 (-0.65)	0.017 (2.53)**
$Assetrec$	+	0.306 (2.68)**	-0.013 (-1.64)*	0.009 (2.17)**	0.003 (0.89)	0.019 (1.69)*
$\Delta Bcp$	+	0.611 (0.37)	-0.007 (-0.07)	0.072 (1.12)*	0.071 (1.16)	0.037 (0.23)
$\Delta CEOp$	+	-1.567 (-0.75)	0.160 (1.05)	0.095 (1.18)	0.028 (0.37)	0.335 (1.64)*
$Lnsales$	+	0.012 (0.28)	0.013 (4.20)**	0.010 (6.48)**	0.041 (26.02)**	0.028 (6.76)**

表 9 续

变量	预期符号	$\Delta$ Tobin's Q	$\Delta$ Stock return	$\Delta$ ROA	$\Delta$ Core ROA	$\Delta$ ROE
<i>Leverage</i>	-	-0.803 (-4.65)***	0.005 (0.46)	-0.092 (-13.79)***	-0.052 (-8.22)***	-0.119 (-7.03)***
<i>Lnsizc</i>	-	-0.742 (-12.24)***	-0.016 (-3.77)***	-0.009 (-3.85)***	-0.040 (-17.95)***	-0.019 (-3.30)***
<i>Age</i>	?	0.144 (8.31)***	-0.002 (-1.63)*	-0.003 (-4.87)***	-0.001 (-2.62)***	-0.005 (-2.95)***
Adj R-Sq		0.256	0.022	0.221	0.390	0.105
F		37.50	3.44	31.02	68.88	13.45
(Pr > F)		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
N		1379	1379	1379	1379	1379

*Supvisize*: 监事会规模变量, 包括监事会全部监事的人数。

*Berc*: 哑变量, 如果董事长在公司领取报酬, 取值为 1; 否则, 取值为 0。

*CEORc*: 哑变量, 如果执行总裁在公司领取报酬, 取值为 1; 否则, 取值为 0。

*Bctmou*: 哑变量, 如果当年公司的董事长变更, 取值为 1; 否则, 取值为 0。

*Afftran*: 哑变量, 如果公司当年有重大关联交易发生, 取值为 1; 否则, 取值为 0。

*Assnrec*: 哑变量, 如果公司当年有重大资产重组事件发生, 取值为 1; 否则, 取值为 0。

*Bcp*: 董事长持股比例, 指董事长持有公司股票占公司股票总数的比例。

*CEOp*: CEO 持股比例, 指执行总裁持有公司股票占公司股票总数的比例。

*Lnsales*: 公司当年取得销售收入的对数值。

*Leverage*: 公司长期负债与年末总资产的比率。

*Lnsizc*: 公司年末总资产的对数值。

*Age*: 上市公司上市的时间长度, 以年数表示。

控制年度和行业等固定影响的哑变量已包含在模型中。 $\Delta$ 表示高业绩区域的变量平减低业绩区域对应变量中位数后的差额。样本观察值的年度期间为 1998-2001。\*\*\*, \*\* 和 \* 分别表示回归系数的双尾检验在 1%, 5% 和 10% 的水平上显著。

真正的好消息。但这一指标对三个与会计数字相关的超额业绩变量的影响与预期相符，均显著为负，表明董事长变更  $Bctnov$  会导致公司业绩下降，因为很多公司都可能会以此为契机，对公司业绩进行“大清洗”（big bath），以甩掉以前年度盈余管理累积的包袱。

重大关联交易变量  $Afftran$  对超额业绩变量  $\Delta Tobin's Q$ 、 $\Delta ROA$  和  $\Delta ROE$  有显著为正的影响，但对  $\Delta Stock\ return$  和  $\Delta Core\ ROA$  的影响不显著。 $Afftran$  是超额业绩变量  $\Delta Tobin's Q$  的增函数但对  $\Delta Stock\ return$  的影响不显著表明重大关联交易能增加企业价值，但对市场可能算不上是一个真正的好消息。 $Afftran$  是超额业绩变量  $\Delta ROA$  和  $\Delta ROE$  的增函数但对  $\Delta Core\ ROA$  的影响不显著表明重大关联交易变量在很大程度上是操纵盈余的手段，但往往影响的都是线下项目，对主营业务收益没有显著影响。与重大关联交易变量的情况以及预期相符，重大资产重组变量  $Assetrec$  同样对超额业绩变量  $\Delta Tobin's Q$ 、 $\Delta ROA$  和  $\Delta ROE$  有显著为正的影响，但对  $\Delta Core\ ROA$  的影响不显著。表明重大资产重组能够提升企业价值和业绩，但同样是在很大程度上是企业操纵盈余的手段，对企业会计业绩的影响也主要是线下项目，而不是主营业务。与重大关联交易不同的是，重大资产重组对  $\Delta Stock\ return$  有在边际上显著为负的影响，表明重大资产重组对资本市场传递的是个坏消息。

关于两个超额管理层股权变量  $\Delta Bcp$  和  $\Delta CEOp$ ，虽然系数符号与预期的基本相符，但除了董事长持股比例  $\Delta Bcp$  对  $\Delta ROA$  的正向激励以及  $\Delta CEOp$  对  $\Delta ROE$  的正向激励仅在 10% 的水平上显著之外，它们与其它业绩变量的正向关系都不显著，这表明当前我国上市公司的股权激励对企业业绩的影响很小。

关于控制变量，对高业绩公司超额业绩的影响基本上在 1% 的水平上显著。其中销售业绩的影响显著为正，与预期的一致；公司资产规模对超额业绩的影响显著为负表明，公司规模可能代表风险，规模大的公司较低的风险应对应着较低的会计收益，规模带来的规模经济和市场势力对超额业绩的正向影响在这里没有显现；财务杠杆  $Leverage$  与各超额业绩变量的关系在方向上是混合的，其中与  $ROA$  的负相关关系也与前期文献的经验结果一致（Sun 和 Tong, 2003）；上市时间长度  $Age$  与超额业绩  $\Delta Tobin's Q$  成正比，应是源于上市公司上市的时间越长，其股权分置改革导致的民营化的程度越高。上市时间长度  $Age$  与其它超额业绩变量成反比表明，我国上市公司在 IPO 之后其长期业绩下降。行业及年度的影响已包含在模型中但没有报告。

总之，结合表 7 的结果，高业绩区域的公司具有更小的监事会规模（ $\Delta Supsize$ ），更低的董事长变更（ $Bctnov$ ）事件，更多的执行总裁在公司内部领取工资（ $CEOrc$ ）、更多的重大关联交易（ $Afftran$ ）、更多的重大资产重组（ $Assetrec$ ）以及董事长拥有公司更多的股权（ $\Delta Bcp$ ），表 9 的结果对我们的假设 3 在某种程度上给予了有力的支持。我们的证据表明公司治理的效力和企业

业绩随第一大股东持股水平的变化而变化，并且因第一大股东持股水平的变化所带来的公司治理代理变量的差异能够在一定程度上解释因之带来的企业业绩的差异，从而也解释了为什么 M 型区间效应能够存在，为我们的假设 1 提供了间接证据。

## 2、公司治理代理变量的差异对非国家股公司超额业绩的解释

我们首先以非国家股公司为研究样本，将非国家股公司的业绩变量值分别平减国家股公司对应业绩变量中位数后的差额作为被解释变量  $\Delta PP$ ；将通过差异显著性检验的公司治理代理变量作为解释变量，其中公司治理变量中非哑变量的值分别用低业绩区域公司对应变量中位数的值进行了平减。为了防止多重共线性，我们没有将与外部监事比例  $\Delta Osuputp$  高度相关的外部董事比例  $\Delta Odirectp$  放入模型。经验结果见表 10。

表 10 的结果与表 9 基本类似。由表 10 可以看出，关于公司治理代理变量，董事会规模 ( $\Delta Bosize$ )、监事会规模 ( $\Delta Supsize$ ) 对企业超额业绩的影响在方向上与现有文献 (Jensen, 1993; Yermack, 1996; Eisenberg, 1998) 和预期相符，均为负且部分显著。其中董事会规模对股票的市场年超额收益率  $\Delta Stock\ return$  有显著为正的影响；而监事会规模对超额主营业务收益率  $\Delta Core\ ROA$  有显著为正的影响。外部董事变量  $\Delta Odirectp$  对超额业绩变量的影响方向混合，其中对两个市场价值相关的指标  $\Delta Tobin's\ Q$  和  $\Delta Stock\ return$  的影响为正，与预期的相符，其中对  $\Delta Tobin's\ Q$  的影响在 1% 的水平上显著，表明董事会的独立性对企业的市场价值和市场收益率有正向作用，能够为资本市场投资者提供正面信息。 $\Delta Odirectp$  对超额会计业绩指标的影响均为负且对主营业务收益率  $\Delta Core\ ROA$  的影响高度显著表明，董事会的独立性在降低代理成本的同时，也会降低董事会成员对企业经营的激励。外部监事变量  $\Delta Osuputp$  对企业超额业绩的影响与预期的一致，全部为正且三个会计超额业绩指标都高度显著，表明外部监事能有效地降低公司的代理成本，提高企业业绩，尤其是会计业绩。董事长与 CEO 两职合一变量  $\Delta CEOdual$  对超额业绩的影响与现有文献和预期相符，同样提供了一个方向混合的结果。其与两个市场价值相关的指标  $\Delta Tobin's\ Q$  和  $\Delta Stock\ return$  的负向关系并且与  $\Delta Tobin's\ Q$  在 1% 的水平上高度显著支持了一些经验研究认为两职合一会带来更大的代理问题的结论 (e.g., Yermack, 1996)。但两职合一的激励对提高会计业绩的影响不显著。

董事长在公司内部领取报酬 ( $Brcr$ ) 对与两个市场价值相关的指标  $\Delta Tobin's\ Q$  和  $\Delta Stock\ return$  的影响为正，对与三个会计业绩相关的指标的影响为负，但均不显著。CEO 在公司内部领取报酬 ( $CEOrc$ ) 与各超额业绩指标的关系与预期相符，均为正且对  $\Delta Stock\ return$  显著，表明 CEO 在公司内部领取报酬虽然对公司的整体业绩提升激励不大，但能提高资本市场投资者的信心。

表 10 公司治理代理变量的差异对非国家股公司超额业绩的解释

$$\Delta Performance_{it} = \alpha + \beta_1 \Delta Bosize_{it} + \beta_2 \Delta Supsize_{it} + \beta_3 \Delta Odirect_{it} + \beta_4 \Delta Osup_{it} + \beta_5 CEOdual_{it} + \beta_6 Berc_{it} + \beta_7 CEOrc_{it} + \beta_8 Bctnov_{it} + \beta_9 CEOtnov_{it} + \delta_1 Afftran_{it} + \delta_2 Assetrec_{it} + \delta_3 \Delta Bcp_{it} + \delta_4 \Delta CEOp_{it} + \varphi_1 Lnsales_{it} + \varphi_2 Finalave_{it} + \varphi_3 Lnsizet_{it} + \varphi_4 Age_{it} + FixedEffects_{it} + \varepsilon_{it}$$

变量	预期符号	$\Delta Tobin's Q$	$\Delta Stock\ return$	$\Delta ROA$	$\Delta Core\ ROA$	$\Delta ROE$
Intercept		11.664 (23.04)***	-0.131 (-3.95)***	0.042 (1.98)**	0.148 (7.83)***	-0.019 (-0.37)
$\Delta Bosize$	-	0.002 (0.19)	-0.002 (-2.48)***	-0.0005 (-1.05)	-0.0007 (-1.46)	-0.0007 (-0.55)
$\Delta Supsize$	-	-0.030 (-1.26)	-0.000006 (-0.00)	-0.0006 (-0.61)	-0.002 (-2.79)***	-0.0006 (-0.26)
$\Delta Odirectp$	+	0.460 (2.51)***	0.006 (0.55)	-0.005 (-0.66)	-0.017 (-2.53)***	-0.014 (-0.75)
$\Delta Osup_{it}$	+	0.185 (1.33)	0.003 (0.43)	0.020 (3.52)***	0.011 (2.25)**	0.051 (3.48)***
$CEOdual$	?	-0.192 (-2.21)***	-0.008 (-1.45)	0.003 (0.82)	0.002 (0.86)	-0.001 (-0.21)
$Berc$	?	0.087 (0.99)	0.006 (1.05)	-0.004 (-1.11)	-0.005 (-1.58)	-0.008 (-0.91)
$CEOrc$	+	0.136 (1.01)	0.023 (2.67)***	0.001 (0.27)	0.002 (0.40)	0.013 (0.93)
$Bctnov$	-	-0.059 (-0.71)	-0.005 (-0.98)	-0.016 (-4.62)***	-0.011 (-3.61)***	-0.035 (-4.44)***



表 10 续

变量	预期符号	$\Delta Tobin's Q$	$\Delta Stock\ return$	$\Delta ROA$	$\Delta Core\ ROA$	$\Delta ROE$
<i>CEOturn</i>	-	0.073 (0.94)	0.005 (1.09)	-0.001 (-0.44)	0.001 (0.37)	0.001 (0.18)
<i>Affiran</i>	+	0.032 (0.42)	0.009 (1.97)**	0.014 (4.47)***	-0.002 (-0.75)	0.024 (2.97)***
<i>Assetrec</i>	?	0.276 (2.44)***	-0.003 (0.46)	0.001 (0.38)	0.002 (0.67)	0.002 (0.18)
$\Delta Bcp$	+	-1.055 (-0.54)	0.091 (0.71)	0.165 (1.98)**	0.095 (1.30)	0.172 (0.83)
$\Delta CEOp$	+	-0.633 (-0.26)	-0.085 (-0.53)	0.023 (0.23)	0.025 (0.27)	0.203 (0.77)
<i>Lnsales</i>	+	0.033 (0.75)	0.010 (3.43)***	0.012 (6.44)***	0.041 (24.99)***	0.029 (6.22)***
<i>Leverage</i>	?	-0.003 (-0.69)	0.0006 (2.19)**	-0.001 (-5.39)***	-0.00003 (-0.22)	0.0009 (1.87)*
<i>Lnsizex</i>	-	-0.867 (-13.82)***	-0.006 (-1.66)*	-0.011 (-4.16)***	-0.039 (-16.76)***	-0.021 (-3.18)***
<i>Age</i>	?	0.146 (7.64)***	0.008 (6.66)***	-0.002 (-3.10)***	-0.001 (-2.71)**	-0.001 (-0.76)
Adj R-Sq		0.297	0.069	0.116	0.364	0.066
F		30.11	6.10	10.02	40.33	5.85
( $P_t > F$ )		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
N		576	576	576	576	576

表 10 续

<i>BoSize</i>	: 董事会规模变量, 包括董事会全部董事的人数。
<i>SupSize</i>	: 监事会规模变量, 包括监事会全部监事的人数。
<i>Odirectp</i>	: 外部董事比例, 指不在公司领取年薪的董事占全部董事的比例。
<i>Ostsupvp</i>	: 外部监事比例, 指不在公司领取年薪的监事占全部监事的比例。
<i>CEOdual</i>	: 哑变量, 如果董事长兼任执行总裁, 取值为 1; 否则, 取值为 0。
<i>Berc</i>	: 哑变量, 如果董事长在公司领取报酬, 取值为 1; 否则, 取值为 0。
<i>CEOrc</i>	: 哑变量, 如果执行总裁在公司领取报酬, 取值为 1; 否则, 取值为 0。
<i>Bctnov</i>	: 哑变量, 如果当年公司的董事长变更, 取值为 1; 否则, 取值为 0。
<i>CEOtnov</i>	: 哑变量, 如果当年公司的执行总裁变更, 取值为 1; 否则, 取值为 0。
<i>Afftran</i>	: 哑变量, 如果公司当年有重大关联交易发生, 取值为 1; 否则, 取值为 0。
<i>Assetrec</i>	: 哑变量, 如果公司当年有重大资产重组事件发生, 取值为 1; 否则, 取值为 0。
<i>Bcp</i>	: 董事长持股比例, 指董事长持有公司股票占公司股票总数的比例。
<i>CEOp</i>	: CEO 持股比例, 指执行总裁持有公司股票占公司股票总数的比例。
<i>Lnsales</i>	: 公司当年取得销售收入的对数值。
<i>Leverage</i>	: 公司长期负债与年末总资产的比率。
<i>Lnsize</i>	: 公司年末总资产的对数值。
<i>Age</i>	: 上市公司上市的时间长度, 以年数表示。

控制年度和行业等固定影响的哑变量已包含在模型中。Δ表示非国家股公司的变量平减国家股公司对应变量中位数后的差额。\*\*\*, \*\*和 \* 分别表示回归系数的双尾检验在 1%, 5% 和 10% 的水平上显著。

董事长变更  $Bctnov$  对各超额业绩变量的影响与预期相符，均为负，并且对三个与会计数字相关的超额业绩变量  $\Delta ROA$ 、 $\Delta Core ROA$  和  $\Delta ROE$  高度显著，表明董事长变更  $Bctnov$  是公司新管理层进行“大清洗”（big bath），以甩掉以前年度盈余管理累积的包袱的重要契机。CEO 的更换  $CEOtNov$  对各超额业绩变量的影响不显著，这也与当前 CEO 在公司中对董事长的屈从地位相符。

重大关联交易变量  $Affitran$  对超额业绩变量  $\Delta Stock return$ 、 $\Delta ROA$  和  $\Delta ROE$  有显著为正的影响，但对  $\Delta Tobin's Q$  和  $\Delta Core ROA$  的影响不显著。 $Affitran$  是超额业绩变量  $\Delta Stock return$  的增函数但对  $\Delta Tobin's Q$  的影响不显著表明重大关联交易能够对市场提供正面消息。与表 9 的结果一致， $Affitran$  是超额业绩变量  $\Delta ROA$  和  $\Delta ROE$  的增函数但对  $\Delta Core ROA$  的影响不显著同样表明重大关联交易变量在很大程度上是操纵盈余的手段，但往往影响的都是线下项目，对主营业务收益没有显著影响。重大资产重组变量  $Assetrec$  除了对超额业绩变量  $\Delta Tobin's Q$  有显著的正向影响之外，对其它超额业绩的变量的影响不显著。其是  $\Delta Tobin's Q$  的增函数可能表明重大资产重组能够有效地提高公司的流通股比例，加快其民营化进程。

关于两个管理层股权变量  $Bcp$  和  $CEOp$ ，与表 9 的结果类似，除了董事长持股比例  $Bcp$  对  $\Delta ROA$  的正向激励在 5% 的水平上显著之外，它们与其它业绩变量的正向关系都不显著，同样表明当前我国上市公司的股权激励对企业业绩的影响很小。

关于控制变量，与表 9 的结果类似，其对非国家股公司超额业绩的影响基本上在 1% 的水平上显著。销售业绩对超额业绩的影响显著为正，公司规模对超额业绩的影响显著为负，财务杠杆  $Leverage$  以及上市时间长度  $Age$  对超额业绩的影响在方向上不明朗，其中财务杠杆  $Leverage$  与  $ROA$  的负相关关系也与前期文献的经验结果一致（Sun 和 Tong, 2003）。同样，为了行文简洁，控制行业以及年度因素的哑变量的结果在表中没有报告。

总之，结合表 8 的结果，我们发现非国家股公司更有效率的公司治理结构与其获得的超额业绩相联系。非国家股公司比国家股公司具有更小的监事会规模、更高的外部董事和外部监事比例以及更多的重大关联交易确实都是导致非国家股公司业绩较好的一个原因；虽然非国家股公司更频繁的董事长替换对公司的超额业绩也产生了显著的负面影响，只不过这种负面影响消弭在众多的正向影响之中，所以非国家股公司在总体上表现出了超额业绩。

## （五）敏感性分析

为了检验假设 3 的稳健性，我们首先计算了业绩变量与公司治理代理变量之间的相关系数矩阵，发现其结果与表 9 和表 10 中列示的结果一致。我们接着又用资本支出额和销售增长来代替  $Lnsales$ ，来控制表 9 和表 10 中的公

司增长机会，发现表中的基本结果没有改变，公司治理代理变量的系数符号与预期的相符，较高效力的公司治理结构与公司的超额业绩相联系。最后，当我们将反映股权性质的哑变量加入模型 9，将反映股权区间的哑变量加入模型 10，回归模型的结果基本相同。为了节约篇幅，我们在此没有汇报结果。

## 六、结论与启示

本文以 1997 年以前在中国上市的 508 家上市公司 1998–2001 年 4 年间的 2032 个观察值为样本，研究了第一大股东的所有权与企业业绩和公司治理之间的关系。我们认为，虽然当前众多的研究聚焦于中国上市公司股权结构、公司治理与企业业绩的关系，但是在一股独大的情况下，只有从第一大股东的视角，考察第一大股东的所有权水平和性质对公司治理和企业业绩的影响才是基础性的。

本文发现，上市公司第一大股东的所有权比例与企业业绩或价值之间存在着“M”型的“区间效应”；并且这种“区间效应”及其规律性不随第一大股东所有权性质的变化而变化。但第一大股东的所有权性质不同，其“M”型在业绩维度上的取值和振幅也不同，国家股股东的公司其“M”型在业绩维度上的取值较低，振幅较小。关于第一大股东的持股水平与企业业绩关系的研究，我们的“M”型证据与 Claessens *et al.* (2002) 的经验结果一致。通过研究东亚八个新兴市场的数据，他们发现大股东股权与企业价值的非单调关系。其企业价值代理变量权益的市场账面价值比率 (Market-to-book ratio) 随大股东股权的变化在 36–40% 和 51–55% 股权区间两次达到了极大值，然后开始下降。并且其在 36–40% 股权区间的极大值与其在两个极大值之间由 41–50% 股权区间对应的极小值相比差异显著。我们关于第一大股东的持股性质与企业业绩关系的研究，也为先前的经验研究 (Che and Qian, 1998; Sun and Tong, 2003) 提供了证据。这些研究曾表明国家股权与国有法人股权虽都是国有性质，但却对企业业绩的影响相反，国有法人股权是企业业绩的增函数。

本文的研究表明，上市公司第一大股东不同的所有权比例和性质决定着公司不同的代理关系，在其它条件相同的情况下，决定了公司代理成本的高低以及决策和战略的效率性，并导致公司业绩和价值的差异。根据本文的研究发现和结论，可以得出以下两点启示：

(一)“一股独大”并非是当前上市公司业绩低劣的根源，上市公司第一大股东存在最优的所有权结构。从企业业绩的“M”型图上可以看出，在第一大股东持股比例比较低，股权较为分散的阶段，企业的业绩和价值都比较差，甚至劣于在管理层和第一大股东共同掌握公司控制权的所谓权力制衡的不稳定区域。这表明，在当前我国法律和制度对投资者利益保护较弱的情况下，股权过于分散的公司由于得不到来自控制权市场和经理人才市场有力的规导和约束，

而所有者又没有足够的能力对公司的经理人进行监督，企业必然面临着较高的代理成本，那种认为我国上市公司应采用类似英美等国高度分散的股权结构的观点是不成熟的。另外，过分强调管理层和大股东之间的权力制衡可能也是不合适的。因为在此阶段第一大股东不但有愿望，而且也有能力盗窃公司资产；同时，由于双方的互相掣肘不利公司决策和长期战略的稳定性。只有当第一大股东的持股比例在达到优势表决权 and 绝对控股之后的局部区域，企业的业绩和价值才是较好的。前者的业绩较好可能源于公司稳定的决策以及管理层受到大股东越来越多的监督；后者的业绩较好主要可能源于公司稳定的决策以及大股东股权激励的正效应大于偷盗资产动机的负效应。由以上的分析可以看出，“一股独大”并不是上市公司业绩低劣的根源，恰恰相反，适度的“一股独大”有利于降低公司的代理成本，提高企业业绩，是在外部市场对投资人利益保护缺乏的情况下投资人保护自身利益的重要措施。

(二) 国有股减持要区别对待，应对国家股权优先减持。本文的研究表明，第一大股东为非国家股股东的公司有着更高的企业价值和更强的盈利能力，公司治理的效力更高。这表明了国家股减持的必要性和迫切性。当然，国家股减持不一定非得私有化，本文的研究表明第一大股东为国有法人股股东的公司与第一大股东为其他股股东的公司在公司治理和企业业绩上的差异均不显著。本文的研究为国有股减持和股权多元化政策的合理性提供了经验证据。

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## Appendix A. 变量的定义

本文使用的变量定义如表 11 所示。

表 11

### Panel A: 企业业绩变量

变量	变量定义
<i>Tobin's Q</i>	公司资产的市场价值与其重置成本之比率。公司资产的市场价值，我们用流通股的市场价值与非流通股和负债的账面价值表示；公司资产的重置成本，我们用其账面价值代替。
<i>Stock return</i>	流通股股票的年市场收益率。即 $(P_1 - P_0 + DIV_1)/P_0$ ，其中对股票拆分进行了调整。
<i>ROA</i>	资产收益率。公司息税前收益扣除所得税后与其总资产之比率，即 $(EBIT-Tax)/TA$ 。
<i>Core ROA</i>	主营业务资产收益率。公司主营业务收益与总资产之比率。
<i>ROE</i>	净资产收益率。公司净利润与其净资产之比率。

### Panel B: 公司治理变量

变量	变量定义
<i>CEOdual</i>	董事长兼任 CEO，哑变量，如果董事长兼任执行总裁，取值为 1；否则，取值为 0。
<i>Bosize</i>	董事会规模变量，指董事会全部董事的人数。
<i>Supsize</i>	监事会规模变量，指监事会全部监事的人数。
<i>Odirectp</i>	外部董事比例，指不在公司领取年薪的董事占全部董事的比例。
<i>Osupvp</i>	外部监事比例，指不在公司领取年薪的监事占全部监事的比例；
<i>Bctnov</i>	董事长变更，哑变量，如果当年公司的董事长变更，取值为 1；否则，取值为 0。
<i>CEOtnov</i>	CEO 变更，哑变量，如果当年公司的 CEO 变更，取值为 1；否则，取值为 0。
<i>Assetrec</i>	重大资产重组，哑变量，如果公司当年有重大资产重组事件发生，取值为 1；否则，取值为 0。
<i>Afftran</i>	重大关联交易，哑变量。如果公司当年有重大关联交易发生，取值为 1；否则，取值为 0。
<i>Berc</i>	董事长领取报酬，哑变量，如果董事长在公司领取报酬，取值为 1；否则，取值为 0。
<i>CEOrc</i>	CEO 领取报酬，哑变量，如果执行总裁在公司领取报酬，取值为 1；否则，取值为 0。



表 11 续

<i>Panel C</i> : 股权结构变量	
变量	变量定义
<i>Bcp</i>	董事长持股比例，指董事长持有公司股票占公司股票总数的比例。
<i>CEOp</i>	CEO 持股比例，指执行总裁持有公司股票占公司股票总数的比例。
<i>Lhold</i>	第一大股东持股比例，指公司第一大股东持有公司股票占公司股票总数的比例。
<i>Panel D</i> : 控制变量	
变量	变量定义
<i>Lnsales</i>	销售额，公司收益取得当年销售额的对数值。
<i>Lnsiz</i>	公司规模，公司年末总资产的对数值。
<i>Leverage</i>	财务杠杆，公司长期负债与年末总资产的比率。
<i>Age</i>	上市公司年龄，上市公司上市的时间长度，以年数表示。

## 附录 B. 不同股权性质公司其“M”型在业绩或价值维度上的差异比较

Wilcoxon 检验每一区间因第一大股东股权性质的不同其企业业绩或价值差异的显著性，结果见表 12。

表 12

第一大股东持 股区间 (%)	0-20	20-30	30-40	40-50	50-60	60-70	70-100
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Panel A: 国家股公司与国有法人股公司</i>							
<i>Tobin's Q</i>	1.828* (0.067)	2.444** (0.014)	4.670*** (0.000)	2.215** (0.026)	2.740*** (0.006)	1.908* (0.056)	0.927 (0.353)
<i>Stock return</i>	-1.254 (0.209)	0.624 (0.532)	1.617 (0.105)	-0.065 (0.947)	1.422 (0.154)	1.314 (0.188)	-1.004 (0.315)
<i>ROA</i>	0.022 (0.982)	-0.880 (0.378)	4.073*** (0.000)	2.040** (0.041)	2.783*** (0.005)	3.144*** (0.001)	1.017 (0.309)
<i>Core ROA</i>	0.589 (0.555)	-1.432 (0.152)	1.543 (0.122)	-0.809 (0.418)	0.362 (0.716)	2.327** (0.019)	0.134 (0.893)
<i>ROE</i>	0.218 (0.827)	-1.064 (0.287)	3.467*** (0.000)	0.981 (0.326)	0.861 (0.389)	2.402** (0.016)	-1.234 (0.217)
<i>Panel B: 国家股公司与其他股公司</i>							
<i>Tobin's Q</i>	-2.941*** (0.003)	-7.418*** (0.000)	5.272*** (0.000)	3.423*** (0.000)	2.422** (0.015)	4.075*** (0.000)	1.523 (0.127)
<i>Stock return</i>	0.616 (0.537)	0.754 (0.450)	1.639* (0.101)	0.203 (0.838)	-0.286 (0.774)	1.299 (0.193)	-0.050 (0.959)
<i>ROA</i>	-0.757 (0.448)	1.480 (0.138)	2.563*** (0.010)	1.629* (0.103)	3.066*** (0.002)	3.801*** (0.000)	1.142 (0.253)

表 12 续

第一大股东持 股区间 (%)	0-20 (1)	20-30 (2)	30-40 (3)	40-50 (4)	50-60 (5)	60-70 (6)	70-100 (7)
<i>Panel B: 国家股公司与其他股公司</i>							
Core ROA	-0.577 (0.563)	3.514*** (0.000)	0.498 (0.617)	-1.179 (0.238)	3.202*** (0.001)	3.536*** (0.000)	0.393 (0.693)
ROE	-0.902 (0.366)	1.225 (0.220)	2.384* (0.017)	1.763* (0.077)	1.897* (0.057)	2.742*** (0.006)	0.038 (0.969)
<i>Panel C: 国有法人股公司与其他股公司</i>							
Tobin's Q	-0.808 (0.418)	-3.372*** (0.000)	-0.979 (0.327)	-0.968 (0.333)	0.153 (0.877)	2.437** (0.014)	1.500 (0.133)
Stock return	-0.794 (0.426)	1.341 (0.179)	0.060 (0.951)	-0.191 (0.848)	-1.497 (0.134)	0.361 (0.718)	0.232 (0.816)
ROA	-0.471 (0.637)	0.310 (0.756)	1.111 (0.266)	-0.190 (0.848)	0.467 (0.640)	0.855 (0.392)	0.591 (0.554)
Core ROA	0.089 (0.928)	1.250 (0.211)	0.967 (0.333)	0.319 (0.749)	2.533** (0.012)	1.184 (0.236)	0.380 (0.703)
ROE	-0.433 (0.664)	-0.219 (0.826)	0.678 (0.497)	-0.665 (0.505)	1.124 (0.261)	0.478 (0.632)	0.676 (0.498)

*Tobin's Q*: 公司资产的市场价值与其重置成本之比。公司资产的市场价值, 我们用流通股的市场价值与非流通股和负债的账面价值之和表示, 公司资产的重置成本, 我们用其账面价值代替。

*Stock return*: 流通股股票的年市场收益率。即  $(P_1 - P_0 + DIV_1)/P_0$ , 其中对股票拆分进行了调整。

*ROA*: 公司息税前收益扣除所得税后与其总资产之比, 即  $(EBIT-Tax)/TA$ 。

*Core ROA*: 公司主营业务收益与总资产之比。

*ROE*: 公司净利润与其净资产之比。

国家股企业、国有法人股企业与其他股企业分别指其第一大股东的股权性质为国家股、国有法人股和其他股的企业。样本观察值的年度期间为 1998-2001。\*\*\*, \*\* 和 \* 分别表示  $t$  值和 Wilcoxon 秩和检验的  $Z$  值的双尾检验在 1%, 5% 和 10% 的水平上显著。

### 附录 C. 表 3 的图示情况

图 2 直观地显示了企业业绩或价值与第一大股东所有权之间的关系。

图 2-1

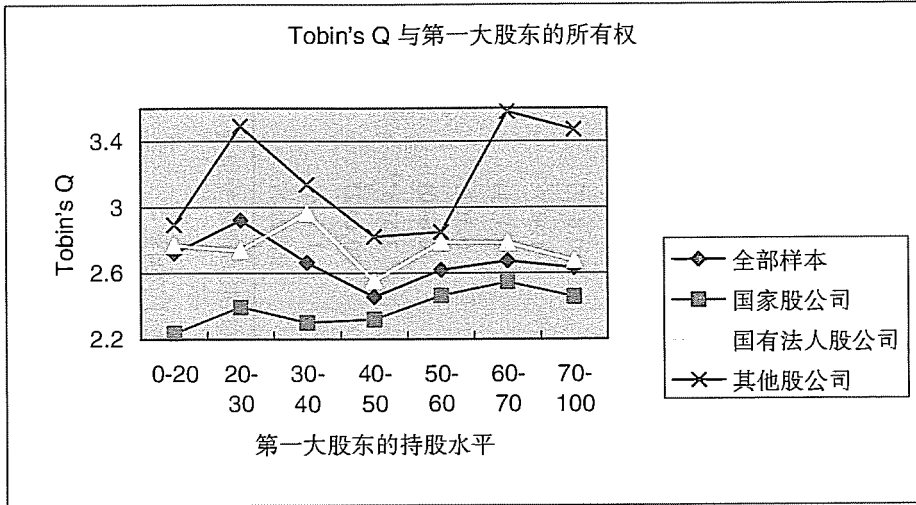


图 2-2

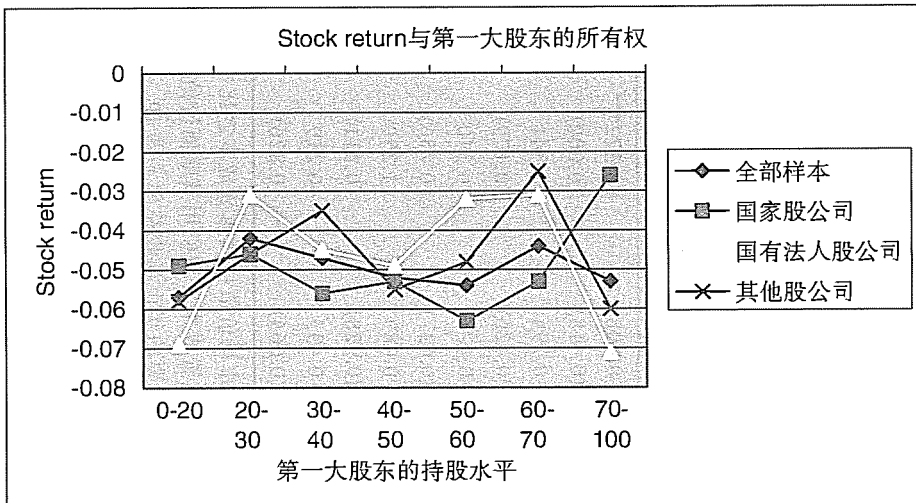


图 2-3

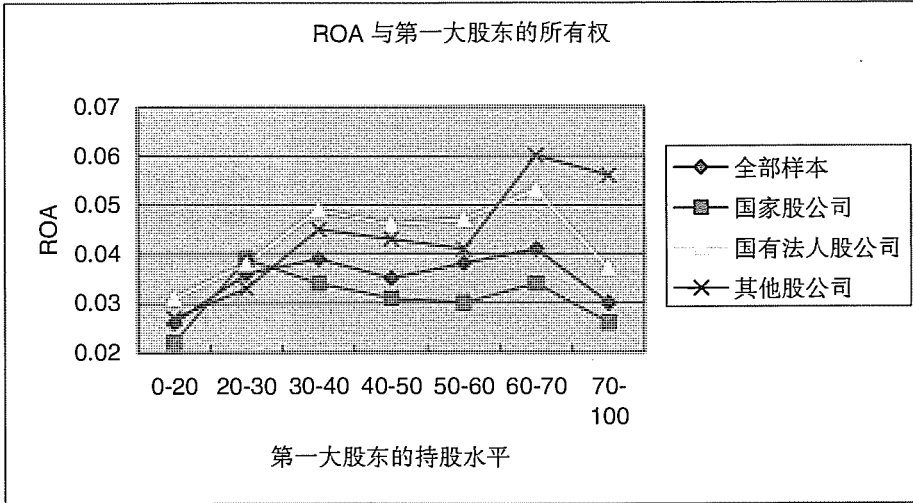


图 2-4

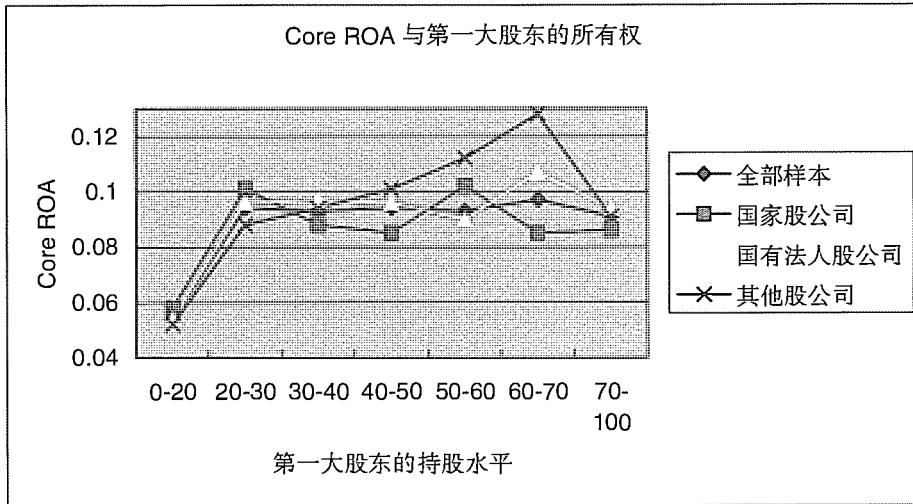
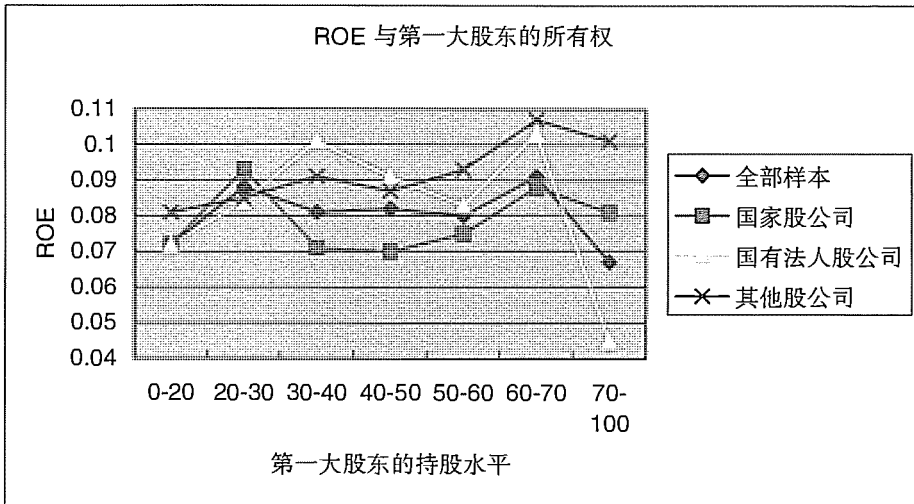


图 2-5



## CORPORATE GOVERNANCE, OWNERSHIP OF THE LARGEST SHAREHOLDER, AND FIRM PERFORMANCE<sup>1</sup>

Xiaodong Xu<sup>2</sup> and Xia Wang<sup>3</sup>

### ABSTRACT

We investigate the relationship between ownership of the largest shareholder and firm performance. Based on a total of 2,032 samples obtained from 508 pre-1997 listed firms over the four-year period between 1998 and 2001 in China, we find that the relationship between cash flow rights held by the largest shareholder and firm performance shows a rather significant 'M-shaped regional effect'. The performance of the proxies for firm performance and corporate governance will be different should the proportion and the nature of ownership not be the same, and the performance differences among proxies of corporate governance do, to a certain extent, explain the differences in firm performance. Our results suggest that the dominating ownership structure is not the source of poor firm performance; hence, there is an urgent need to reduce the shareholding of state shares.

*Keywords:* The Largest Shareholder, Ownership Structure, Corporate Governance, Firm Performance

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## I. INTRODUCTION

Based on the relevant extant studies which show that a dominating ownership structure brings about negative effects on both corporate governance and firm performance, this paper explores an empirical relationship between corporate governance and ownership of the largest shareholder as well as firm performance from the perspective of the largest shareholder.

## II. LITERATURE REVIEW

A large body of literature examines the effect of ownership structure on firm value, and shows that there is a non-linear relation between the two (Morck *et al.*, 1988; McConnell and Servaes, 1990; Myeong-Hyeon Cho, 1998; Claessens *et al.*, 2002). Morck *et al.* (1988) find an N-shaped relationship between managerial equity ownership and firm valuation by using a sample of US firms. One interpretation is that firms' performance improves with greater managerial ownership (the incentive effect), but the incentive effect will be surpassed by the entrenchment effect with an even higher level of managerial ownership as managers pursue their private benefits at the expense of external investors. The costs of large shareholding and entrenchment are formalised in the model of Stulz (1988), which predicts a concave relationship between managerial ownership and firm value. McConnell and Servaes (1990) provide empirical support for this relationship by using US data. Claessens *et al.* (2002), on the other hand, provide evidence by using the data of East Asian firms to show that while firm value increases with an increase in cash flow ownership of the largest shareholder, which is consistent with the incentive effect, firm value drops when the control rights of the largest shareholder exceed cash flow ownership, which is consistent with the entrenchment effect.

Domestic studies always associate the ownership structure of the largest shareholder closely with corporate governance and firm performance, with the analysis being focused on 'dominant shareholding'. Diversification in investment and ownership structure are then proposed to help reduce the bad influences brought about by dominant shareholding. Instead of studying the relationship between ownership structure and corporate governance as well as firm performance, empirical studies concentrate on analysing the relationship between corporate structure, such as state shares, legal person shares, and tradable shares, and firm performance (Xu and Wang, 1999; Chen and Xu, 2001), or on analysing such a relationship via a simple regression exercise (Sun and Huang, 1999), or on examining the impact of the nature of ownership structure on corporate governance and firm performance (Xu and Chen, 2003), neither models of which are well-designed, nor are the results reliable.

The rest of the paper is organised as follows: Section III discusses the institutional background and hypotheses development; Section IV details our sample and data; empirical tests and results are presented in Section V; and the last section summarises our main findings.



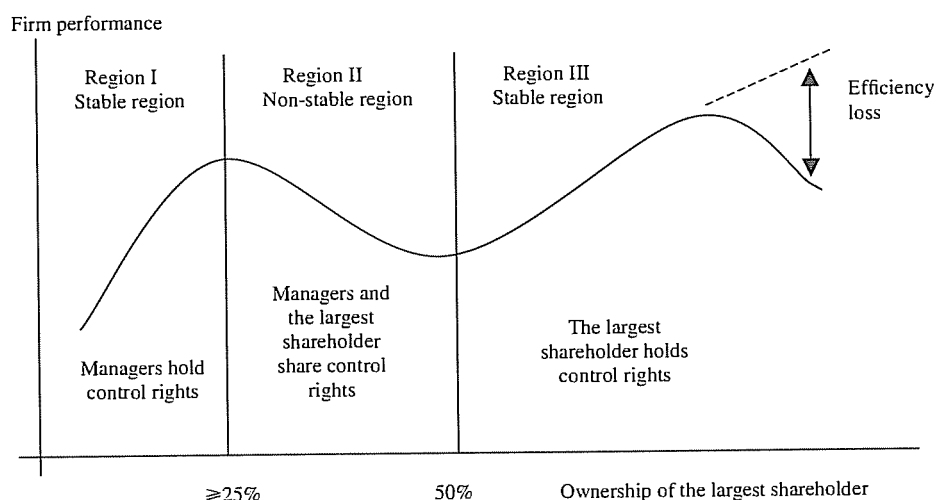
### III. HYPOTHESES DEVELOPMENT

In the Chinese capital market, both the ownership and the nature of the largest shareholder<sup>4</sup> have an important effect on principal-agent problems and the effectiveness of corporate governance. So we argue that in the Chinese capital market, *ceteris paribus*, firm performance is affected by the agency cost, which is determined by the largest shareholder's nature and shareholdings. We suggest that the greater the agency problem, the poorer the firm performs. We examine these conjectures by using the following three hypotheses:

**H1: The relationship between cash flow rights held by the largest shareholder and firm performance shows an 'M-shaped regional effect'.**

H1 can be illustrated by Figure 1 below. In Figure 1, we divide cash flow rights of the largest shareholder into three regions: Region I, managers hold complete control rights as the largest shareholder does not have dominate voting rights (Leech and Leahy, 1991); Region II, managers and the largest shareholder share control rights; and Region III, the largest shareholder holds control rights completely.

**Figure 1** The Relationship between Firm Performance and Ownership of the Largest Shareholder in Chinese Listed Firms



<sup>4</sup> According to our sample, the mean shareholdings of the largest and the second largest shareholders between 1997 and 2001 for firms listed before 1997 account for 41.5 per cent and 8.3 per cent, respectively.

In Region I, the voting rights controlled by the largest shareholder are too small to be dominant, so managers hold complete control rights and the management makes long-term decisions; this region then becomes quite stable. With an increase in cash flow rights, firm performance also increases as the largest shareholder has greater incentives and abilities to maximise firm value and monitor managers<sup>5</sup> (Jensen and Mecking, 1976; Shleifer and Vishny, 1997). However, firm performance fails to be sustained when cash flow rights increase even further as the largest shareholder is now more capable of expropriating as well as intervening in the decision-making of the management; hence, in Region I, the marginal rate of the curve on ownership is declining, or is more than zero. When the ownership level held by the largest shareholder approaches the right boundary of Region I, the marginal rate of the curve on ownership equals zero. At the margin, the costs of entrenchment effects equal the benefits of incentive effects.

In Region II, the voting rights held by the largest shareholder become comparatively dominant and both managers and the largest shareholder share the control rights, so this region is not that stable. Because there are always conflicts between managers and the largest shareholder, it is not beneficial for the management to make long-term decisions. In particular, entrenchment effects that are associated with expropriation will exceed the incentive benefits of ownership as cash flow rights increase. Low efficiency of decision-making and weak investor protection consequently induce firm performance to decrease. Similarly, firm performance fails to be sustained when cash flow rights increase as the largest shareholder could share more from the firm's net income; hence, there is no need for him or her to entrench further. When the ownership level held by the largest shareholder approaches the right boundary of Region II, or the margin, the costs of entrenchment effects equal the benefits of incentive effects.

In Region III, the cash flow rights held by the largest shareholder exceed 50 per cent, hence the largest shareholder controls the firm completely. Based on the interpretation given by Morck *et al.* (1988) and the theory developed by La Porta *et al.* (2002), firm performance should be closely related to increasing ownership held by the largest shareholder, that is, the more the cash flow rights held by the controlling shareholder, the better the firm performs. However, when the cash flow rights exceed a critical point, firm performance may decrease again. This is because the more the cash flow rights held by the controlling shareholder, the poorer the liquidity of firm assets is. In addition, cash flow rights at too high a level would result in less monitoring from the capital market, engaging only in less risky projects and direct control by the owner who will not consider employing professional managers. Poor liquidity, weak monitoring, low risk-tolerance, and excluding professionals all contribute to poorer firm performance (Holmstrom and Tirole, 1993), which is indicated as 'efficiency loss' in Figure 1. If firm performance represents firm value

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<sup>5</sup> In China, cash flow rights and voting rights correspond to each other. Classifying the intervals by cash flow rights or voting rights, therefore, does not make much difference.

here, the difference between the dashed line and the line underneath shows the present value of 'efficiency loss'.

Extensive studies suggest that state ownership is inefficient and corporate governance of state-owned firms is weak as state ownership has multi-agents and multi-objectives, and lacks a professional background (Williamson, 1985; Shirley and Walsh, 2000). Furthermore, state-owned legal persons behave differently from the state government, contrasting with the evidence that state ownership and state-owned legal-person ownership have a negative and positive impact on firm performance respectively (Xu and Wang, 1997; Sun and Tong, 2003). Since state-owned legal-person ownership has a professional background and will pursue its own interests, we predict that the largest shareholder with a state character performs poorer than with a non-state character. We therefore hypothesise:

**H2: The 'M-shaped' performance curve of state firms is lower than that of non-state firms.**

Moreover, the difference in ownership level or nature of the largest shareholder creates various agency problems that will affect the effectiveness of investor protection, so we argue that a different ownership level or nature of the largest shareholder will have different impacts on corporate governance, hence influencing firm performance. We therefore hypothesise:

**H3: A different ownership level or nature of the largest shareholder will have different impacts on corporate governance, which helps explain the formation of an 'M-shaped' curve and a lower 'M-shaped' performance curve for firms with a state character than for those with a non-state character.**

#### IV. SAMPLE AND DATA SELECTION

Our sample includes all Chinese A-share pre-1997 listed companies, and a total of 508 listed firms are finally selected with samples collected over a period from 1998 to 2001 after excluding banks and financial institutions from the empirical analysis. Financial statements, data on ownership structure and corporate governance are collected from the *Genius Securities Information System*, a database prepared by the Shenzhen GTI Financial Information Limited that contains all historical financial data from the annual reports of publicly traded companies in China. Market data are obtained from *CSMAR2003 Trading Database Inquiry System*, which is prepared by the China Accounting and Finance Research Center of the Hong Kong Polytechnic University and the Shenzhen GTI Financial Information Limited, supplemented by various issues of Shenzhen Stock Exchange Fact Book, Shanghai Stock Exchange Annual Statistics, and the annual financial reports of individual companies. In addition, we also retrieve some missing data from the Taiwan Economic Journal (TEJ) Data Bank. With the unavailability of a full set of data for all sample firms across all years, the number of firms analysed varies from year to year according to data availability.

Table 1 describes the sample composition by industry and stock exchange. Panel A presents the industry classification of our sample firms in accordance with the classification codes promulgated by the China Securities Regulatory Commission (CSRC) in 2001. Because the manufacturing industry accounts for more than 50 per cent of the entire sample, this industry has been sub-classified. Panel B shows the stock exchange distribution of our sample firms, from which the distribution of the two stock exchanges, namely the Shenzhen Stock Exchange (SZSE) and the Shanghai Stock Exchange (SHSE), of our sample firms is almost the same.

**Table 1** Sample Firms by Industry and Stock Exchange

		No. of firms	Frequency %
<i>Panel A: Sample Firms by Industry</i>			
Agriculture, forestry, animal husbandry, and fishery	A	8	1.575
Mining	B	2	0.394
Manufacturing	C	255	50.172
Food and drink	C <sub>0</sub>	15	2.954
Textiles, clothing and fur	C <sub>1</sub>	18	3.545
Timber and furniture	C <sub>2</sub>	1	0.197
Paper making and printing	C <sub>3</sub>	4	0.738
Petroleum, chemistry and plastics	C <sub>4</sub>	54	10.241
Electronics	C <sub>5</sub>	16	3.151
Metal, non-metal mining	C <sub>6</sub>	43	8.468
Machinery, equipment and instruments	C <sub>7</sub>	78	15.362
Medicine, biological products	C <sub>8</sub>	24	4.727
Other manufacturing	C <sub>9</sub>	4	0.788
Electricity, gas, water supply	D	20	3.939
Construction	E	5	0.985
Transportation and storage	F	13	2.560
Information technology	G	26	5.121
Wholesale and retail trade	H	64	12.604
Real estate	J	28	5.514
Social service	K	18	3.545
Communication and culture	L	7	1.378
Miscellaneous	M	62	12.211
<i>Panel B: Sample Firms by Stock Exchange</i>			
Shenzhen		223	43.919
Shanghai		285	56.081
Total		508	100

Table 2 presents the distribution of sample observations by nature and ownership of the largest shareholder. The level of ownership held by the largest shareholder is measured by the largest shareholdings, which are extracted from the ownership structure database of *Genius Securities Information System* and defined in Appen-

**Table 2** Distribution of Sample Observations by Character and Ownership Intervals of the Largest Shareholders

Ownership intervals (%)	State shares		State-owned legal person shares		Other shares		Entire sample	
	Obs.	%	Obs.	%	Obs.	%	Obs.	%
	0-20	62	6.46	30	6.44	89	14.71	182
20-30	146	15.21	84	18.03	224	37.02	454	22.34
30-40	181	18.85	95	20.39	109	18.02	385	18.95
40-50	200	20.83	70	15.02	72	11.90	342	16.83
50-60	184	19.17	84	18.03	62	10.25	330	16.24
60-70	127	13.23	69	14.81	36	5.95	232	11.42
70-100	60	6.25	34	7.30	13	2.15	107	5.27
Total	960	100.00	466	100.00	605	100.00	2032	100.00

Ownership intervals represent the intervals of the ownership held by the largest shareholders. State shares, state-owned legal person shares, and other shares denote the character of the ownership held by the largest shareholders as state shares, state-owned legal person shares, and non state-owned shares respectively.

dix A. Ownership is divided into seven intervals and most of the largest shareholders are the controlling ones. Of the total 2,032 sample observations, over 91 per cent, nearly 69 per cent, and almost 33 per cent of firms have the largest shareholdings of over 20 per cent, 30 per cent, and over 50 per cent respectively. Based on the generally accepted standard that a controlling shareholder should hold essential cash flow rights of between 20 and 25 per cent (Leech and Leahy, 1991), more than 70 per cent of Chinese listed firms have a controlling shareholder, and half of the firms have an absolute controlling shareholder.

Though most of the largest shareholders in Chinese listed firms are controlling shareholders, the composition of sample observations is quite different with the change in shareholders' nature. Table 2 reveals that Chinese listed firms with a state share character or state-owned legal-person share character almost comply with the normal distribution, whereas Chinese listed firms with a share character other than these two categories comply with a partial distribution, of which more than 81 per cent of firms have the largest shareholdings of less than 50 per cent. This is consistent with the view that ownership is more concentrated in state-related Chinese listed companies than in non-state-related ones.

## V. EMPIRICAL ANALYSIS

We first investigate Hypotheses 1 and 2 by following existing studies such as Morck *et al.* (1988), Claessens *et al.* (2002), La Porta *et al.* (2002), and Volpin (2002), and examine the relationship between firm performance and ownership of the largest

shareholder. We then test if, with the change in the nature of the largest shareholder, the difference between firm performance and corporate governance is statistically significant or not. After that, a multivariate analysis is used to examine Hypothesis 3, which predicts that different levels of corporate governance would help explain the formation of a 'regional effect' and the lower firm performance for firms with a state character than those with a non-state character.

## 5.1 The Relationship between Firm Performance and the Largest Shareholdings

### 5.1.1 Univariate Test

We use firm performance, measured by return on assets (*ROA*), core return on assets (*Core ROA*), return on equity (*ROE*), *Tobin's Q*, and *Stock return*, to document evidence of the relationship between firm performance and the largest shareholdings in our sample. *ROA* is the ratio of earnings before interest and tax to total assets. *Core ROA* is defined as the ratio of core income to total assets. *ROE* is the ratio of net income to equity. *Tobin's Q* is the ratio of the firm's market value divided by the replacement cost of the assets. While the market value of the firm is calculated by using the market value of tradable equity plus the book value of non-tradable equity and liabilities, the replacement cost of the assets is measured by using the book value of the total assets. *Stock return* is the annual stock market return on tradable A-shares.

The major reason for using so many variables (definitions of all the variables used in this paper are shown in Appendix A) to measure firm performance is to enhance the robustness and reliability of our results as all three measurements, *ROE*, *Tobin's Q*, and *Stock return*, have their limitations. *ROE* is always affected by earnings management. For *Tobin's Q* and *Stock return*, the segmented nature of capital markets in a transitional economy like China, A-shares, B-shares, and H-shares are all non-transferable, coupled with the fact that state shares and legal-person shares are not tradable, *Tobin's Q* and *Stock return* in the Chinese capital market are unreal with the absence of a fair market price for them. *Tobin's Q* is also easily affected by the volume of tradable shares held in a firm as well as the time taken for launching the IPO.

To examine Hypothesis 1, which predicts that the relationship between cash flow rights held by the largest shareholder and firm performance shows 'an M-shaped regional effect', we start by dividing the largest shareholdings into seven intervals and investigate the change in the median of the sub-sample observations in each interval. To test Hypothesis 2, we investigate if the 'regional effect' is robust.

The association between firm performance and ownership of the largest shareholder is shown in Table 3. Firm performance, measured by five performance variables, generally forms an 'M' shape should cash flow rights be rested with the largest owner, consistent with the prediction for Hypothesis 1. Firms with the largest shareholdings that fall in the intervals of 0 to 20 per cent, 40 to 50 per cent, and 70 to 100 per cent, generally have a lower median in firm performance than those in the intervals of 20 to 40 per cent, and 50 to 70 per cent; and the differences are

**Table 3** The Relationship between the Ownership Held by the Largest Shareholders and Firm Performance

Ownership intervals (%)	0-20	20-30	30-40	40-50	50-60	60-70	70-100	Wilcoxon Z
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Fmax = Lmax
<i>Panel A: Whole Sample</i>								
<i>Tobin's Q</i>	2.722	2.921 <sup>F</sup>	2.664	2.456	2.619	2.675 <sup>L</sup>	2.632	-2.18 <sup>**</sup>
<i>Stock return</i>	-0.057	-0.042 <sup>F</sup>	-0.047	-0.052	-0.054	-0.044 <sup>L</sup>	-0.053	0.90
<i>ROA</i>	0.026	0.036	0.039 <sup>F</sup>	0.035	0.038	0.041 <sup>L</sup>	0.030	1.23
<i>Core ROA</i>	0.054	0.094 <sup>F</sup>	0.093	0.094	0.093	0.097 <sup>L</sup>	0.091	0.70
<i>ROE</i>	0.072	0.088 <sup>F</sup>	0.081	0.082	0.080	0.091 <sup>L</sup>	0.067	0.88
Obs.	[175]	[437]	[371]	[325]	[319]	[218]	[104]	-
<i>Panel B: State Shares</i>								
<i>Tobin's Q</i>	2.237	2.395 <sup>F</sup>	2.300	2.319	2.465	2.547 <sup>L</sup>	2.456	0.51
<i>Stock return</i>	-0.049	-0.046 <sup>F</sup>	-0.056	-0.053	-0.063	-0.053	-0.026 <sup>L</sup>	0.57
<i>ROA</i>	0.022	0.039 <sup>F</sup>	0.034	0.031	0.030	0.034 <sup>L</sup>	0.026	-1.30
<i>Core ROA</i>	0.058	0.101 <sup>F</sup>	0.088	0.085	0.102 <sup>L</sup>	0.085	0.086	0.59
<i>ROE</i>	0.072	0.093 <sup>F</sup>	0.071	0.070	0.075	0.088 <sup>L</sup>	0.081	-0.56
Obs.	[61]	[142]	[175]	[195]	[178]	[124]	[58]	-
<i>Panel C: State-Owned Legal-Person Shares</i>								
<i>Tobin's Q</i>	2.767	2.736	2.965 <sup>F</sup>	2.553	2.787 <sup>L</sup>	2.783	2.675	-0.65
<i>Stock return</i>	-0.069	-0.031 <sup>F</sup>	-0.045	-0.049	-0.032	-0.031 <sup>L</sup>	-0.071	0.13
<i>ROA</i>	0.031	0.038	0.049 <sup>F</sup>	0.046	0.047	0.053 <sup>L</sup>	0.037	0.33
<i>Core ROA</i>	0.054	0.096	0.097 <sup>F</sup>	0.096	0.090	0.107 <sup>L</sup>	0.094	0.50
<i>ROE</i>	0.072	0.084	0.101 <sup>F</sup>	0.091	0.083	0.103 <sup>L</sup>	0.045	0.380
Obs.	[30]	[81]	[94]	[69]	[82]	[69]	[34]	-

Table 3 Continued

Ownership intervals (%)	0-20	20-30	30-40	40-50	50-60	60-70	70-100	Wilcoxon Z
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Fmax = Lmax
<i>Panel D: Other Shares</i>								
<i>Tobin's Q</i>	2.894	3.491 <sup>F</sup>	3.137	2.821	2.850	3.580 <sup>L</sup>	3.470	0.28
<i>Stock return</i>	-0.058	-0.046	-0.035 <sup>F</sup>	-0.055	-0.048	-0.025 <sup>L</sup>	-0.060	0.61
<i>ROA</i>	0.027	0.033	0.045 <sup>F</sup>	0.043	0.041	0.060 <sup>L</sup>	0.056	1.98 <sup>##</sup>
<i>Core ROA</i>	0.052	0.088	0.094	0.101	0.112	0.128 <sup>L</sup>	0.091	-
<i>ROE</i>	0.081	0.085	0.091 <sup>F</sup>	0.087	0.093	0.107 <sup>L</sup>	0.101	-0.28
Obs.	[84]	[215]	[104]	[69]	[62]	[36]	[13]	-

Variables are defined as follows:

*Tobin's Q*: The ratio of the market value of the firm divided by the replacement cost of the assets. For the market value of the firm, we use the market value of tradable equity plus the book value of non-tradable stock and liability; for the replacement cost of the assets, we use the book value of the total assets.

*Stock return*: The annual stock market return on the common stock.

*ROA*: The ratio of earnings before interest and tax to total assets.

*Core ROA*: The ratio of core return to total assets.

*ROE*: The ratio of net earnings to equity.

F and L denote the first and the last maximum of medians in each interval, respectively. Observations are all firm-year observations from 1998 to 2001. Wilcoxon Z-values test the significance of the difference between the first and the last maxima, <sup>##</sup>, <sup>#</sup>, and \* indicate significance at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively (two-tailed).



statistically significant. Though the interval of 20 to 40 per cent enjoys the highest median in firm performance, and the interval of 50 to 70 per cent is the second highest median in firm performance, the difference between these two is not statistically significant except for *Tobin's Q* in relation to the entire sample observations, and *ROA* in relation to firms of non-state and non-state-owned legal-person shares. This suggests that there is no unique ownership structure in Chinese listed firms. Table 3 also shows that the 'M-shaped regional effect' is largely robust under various natures of ownership held by the largest shareholder.

Table 3 also provides suggestive evidence on Hypothesis 2. In each ownership interval, the performance of firms with a state share character is almost lower than those of other characters. This implies that state firms are somehow ineffective in enhancing firm performance. The M-shaped curve that depicts the relationship between the largest shareholdings and firm performance is graphically shown in Appendix C.

### 5.1.2 Multivariate Analysis

To test the robustness of the M-shaped association between firm performance and ownership of the largest shareholder presented in Table 3, and to further examine our hypotheses H1 and H2 by following Morck *et al.* (1988) and Cho (1998), we construct the following piecewise regression model allowing for three changes in the slope coefficient on the largest shareholder's ownership:

$$Performance_{it} = \beta_0 + \beta_1 Lhold1_{it} + \beta_2 Lhold2_{it} + \beta_3 Lhold3_{it} + \beta_4 Lhold4_{it} + \beta_5 State_{it} + \beta_6 Lsize_{it} + \beta_7 Leverage_{it} + FixedEffects_{it} + \varepsilon_{it}$$

Let *Lhold* represent the ownership percentage of the largest shareholder,

*Lhold1* = ownership of the largest shareholder if ownership of the largest shareholder < 0.32,

= 0.32 if ownership of the largest shareholder ≥ 0.32.

*Lhold2* = 0 if ownership of the largest shareholder < 0.32,

= ownership of the largest shareholder - 0.32 if 0.32 ≤ ownership of the largest shareholder < 0.50,

= 0.18 if ownership of the largest shareholder ≥ 0.50.

*Lhold3* = 0 if ownership of the largest shareholder < 0.50,

= ownership of the largest shareholder - 0.50 if 0.50 ≤ ownership of the largest shareholder < 0.75,

= 0.25 if ownership of the largest shareholder ≥ 0.50.

*Lhold4* = 0 if ownership of the largest shareholder < 0.75,

= ownership of the largest shareholder - 0.75 if ownership of the largest shareholder ≥ 0.75.

The three cut-off points of 0.32, 0.50, and 0.75, which capture the three extrema of the 'M' shape, are identified by using the grid search technique described by Cho (1998). This method produces the most significant slope coefficients on the ownership variables. The three cut-off points are also consistent with our results shown in

Table 3 and the graphical evidence. *Lnsizes*, *Leverage*, and *FixedEffects* are control variables. *State* is a dummy variable for 'state share'; it equals one if the largest shareholder is a state shareholder, and zero otherwise.

Table 4 reports the estimates of the piecewise regression model. Consistent with the results reported in Table 3, the coefficients of the four ownership variables *Lhold1*, *Lhold2*, *Lhold3*, and *Lhold4* have the expected positive, negative, positive, and negative signs respectively. These results further confirm that firm performance, in terms of *Tobin's Q*, *Stock return*, *ROA*, core *ROA*, and *ROE*, changes with the level of the largest shareholder's ownership in the four regions, and the relation between firm performance and the largest shareholders' cash flow rights can be well demonstrated by an 'M-shaped regional effect'. The coefficient on ownership character variable *State* exhibits a negative and significant association with *Tobin's Q*, which is consistent with Hypothesis 2. Note also that the negative relation between *Leverage* and *ROA* is also consistent with our former results and prior work (Sun and Tong, 2003).

We further break down the total sample into four sub-samples according to the following ownership intervals,  $Lhold < 0.32$ ,  $0.32 \leq Lhold < 0.50$ ,  $0.50 \leq Lhold < 0.75$ ,  $Lhold \geq 0.75$ , to test the robustness of our two hypotheses, H1 and H2, and find the same results, as shown in Tables 3 and 4. *State* is significantly negative and the signs of *Lhold* in the four intervals are positive, negative, positive, and negative, respectively.

## 5.2 Statistical Significance Test on Firm Performance

### 5.2.1 The Statistical Significance Test on Firm Performance between Low and High Performance Regions

A statistical significance test on the 'M-shaped regional effect' of firm performance is conducted. Based on Table 3, ownership intervals at 0 to 20 per cent, 40 to 50 per

**Table 4** Association between Firm Performance and Ownership of the Largest Shareholder: Full Sample Analysis

$$Performance_{it} = \beta_0 + \beta_1 Lhold1_{it} + \beta_2 Lhold2_{it} + \beta_3 Lhold3_{it} + \beta_4 Lhold4_{it} + \beta_5 State_{it} + \beta_6 Lnsales_{it} + \beta_7 Leverage_{it} + \beta_8 Lnsizes_{it} + FixedEffects_{it} + \varepsilon_{it}$$

Variables	Pred. sign	<i>Tobin's Q</i>	<i>Stock return</i>	<i>ROA</i>	Core <i>ROA</i>	<i>ROE</i>
Intercept		10.427 (24.81)***	0.042 (1.68)*	0.053 (2.85)***	0.116 (7.38)***	0.021 (1.78)*
<i>Lhold1</i>	+	0.003 (1.64)*	0.0002 (1.49)	0.0008 (2.99)***	0.0008 (3.80)***	0.001 (2.01)**
<i>Lhold2</i>	-	-0.004 (-0.67)	-0.00006 (-1.83)*	-0.00003 (-1.33)	-0.0001 (-1.48)	-0.0001 (-1.86)*
<i>Lhold3</i>	+	0.0001 (0.12)	0.00005 (0.15)	0.0002 (1.68)*	0.00001 (0.15)	0.00006 (0.15)
<i>Lhold4</i>	-	-0.005 (-1.71)*	-0.004 (-1.82)*	-0.003 (-1.12)	-0.003 (-1.62)*	-0.003 (-1.62)*

**Table 4** *Continued*

Variables	Pred. sign	<i>Tobin's Q</i>	<i>Stock return</i>	<i>ROA</i>	<i>Core ROA</i>	<i>ROE</i>
State	-	-0.449 (-7.83)***	-0.004 (-1.91)*	-0.010 (-4.10)***	-0.006 (-2.76)***	-0.014 (-2.29)**
<i>Lnsales</i>	+	-0.025 (-0.68)	0.013 (5.20)***	0.014 (8.82)***	0.041 (26.02)***	0.034 (8.67)***
<i>Leverage</i>	-	0.003 (0.55)	0.0008 (2.20)**	-0.001 (-5.45)***	-0.00002 (-0.11)	0.0009 (1.80)*
<i>Lnsiz</i>	-	-0.601 (-11.75)***	-0.019 (-5.24)***	-0.016 (-7.23)***	-0.040 (-17.95)***	-0.030 (-5.62)***
Adj R-Sq		0.221	0.022	0.18	0.356	0.105
F		59.50	4.75	31.02	98.88	21.45
(Pr > F)		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
N		1672	1672	1672	1672	1672

*Tobin's Q*: The ratio of the market value of the firm divided by the replacement cost of the assets. For the market value of the firm, we use the market value of tradable equity plus the book value of non-tradable stock and liability; for the replacement cost of the assets, we use the book value of the total assets.

*Stock return*: The annual stock market return on the common stock.

*ROA*: The ratio of earnings before interest and tax to total assets.

*Core ROA*: The ratio of core return to total assets.

*ROE*: The ratio of net earnings to equity.

*Lhold1* = ownership of the largest shareholder if ownership of the largest shareholder < 0.32,

= 0.32 if ownership of the largest shareholder ≥ 0.32.

*Lhold2* = 0 if ownership of the largest shareholder < 0.32,

= ownership of the largest shareholder - 0.32 if 0.32 ≤ ownership of the largest shareholder < 0.50,

= 0.18 if ownership of the largest shareholder ≥ 0.50.

*Lhold3* = 0 if ownership of the largest shareholder < 0.50,

= ownership of the largest shareholder - 0.50 if 0.50 ≤ ownership of the largest shareholder < 0.75,

= 0.25 if ownership of the largest shareholder ≥ 0.50.

*Lhold4* = 0 if ownership of the largest shareholder < 0.75,

= ownership of the largest shareholder - 0.75 if ownership of the largest shareholder ≥ 0.75.

*State*: Dummy variable equals one if the largest shareholder is a state shareholder, and zero otherwise.

*Lnsales*: The natural log of the value of sales, which refers to the year in which return is gained.

*Leverage*: The ratio of total long-term liabilities to total assets.

*Lnsiz*: The natural log of the value of total assets.

Dummy variables controlling for fixed effects of calendar years and industry are also included. Observations are all firm-year observations from 1998 to 2001. T-values are shown in parentheses. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

cent, and 70 to 100 per cent are classified as the low performance region and the rest of the intervals are classified as the high performance region. We then test the difference of firm performance between these two regions. The mean, median, and results of the Wilcoxon test of firm performance of the sample firms are shown in Table 5.

Panel A of Table 5 presents the test results that in the whole sample, the difference of *ROA*, *Core ROA*, and *ROE* between high and low performance regions is statistically significant; Panels B and D show that the difference in *ROA* and *Core ROA* between the two regions is statistically significant. However, in Panel C, under the state-owned legal-person shares character, the difference of almost all firm performance measurements between the two regions is statistically significant except for *Tobin's Q*. Though the test results of Table 5 are different among listed firms with different characters, the difference in *ROA* and *Core ROA* between these two regions is always statistically significant irrespective of the character of the sub-sample, consistent with our earlier perception that *Tobin's Q*, *Stock return*, and *ROE* have fatal limitations.

### 5.2.2 The Statistical Significance Test on Firm Performance between State Share Firms and Non-State Share Firms

Next, we compare the performance of sample firms of state shareholding with firms of non-state shareholding; the results are summarised in Table 6. State-owned legal-person shareholding firms and firms without state shareholding are pooled together as sample firms of non-state shareholding because Wilcoxon tests on firm performance between these two types of firms are generally insignificant as presented in Appendix B, and the results are consistent with our interpretation in Hypothesis 2. Panel A of Table 6 shows that all the differences of firm performance are statistically significant except *Stock return*. Panels B and C of Table 6 summarise the results of the Wilcoxon test classified by the two ownership regions. The results show that, except for *Tobin's Q*, all the statistically significant results appear only in the high performance region. The evidence given in Table 6 is consistent with Hypothesis 2 that Chinese listed firms of a non-state share character have higher firm performance.

### 5.3 Statistical Significance Test on Measurements of Corporate Governance

Following prior empirical work (Core *et al.*, 1999; Volpin, 2002) and considering the unique institutional background of Chinese listed firms, we use a set of proxies to measure the effectiveness of corporate governance. For example, seven proxies are used to measure the effectiveness of monitoring by the board of directors and the board of supervisors, namely the size of the board of directors (*Bosize*), the size of the board of supervisors (*Supvsize*), the proportion of external directors (*Odirectp*), the proportion of external supervisors (*Osupvp*), the dual identity of the board of directors and the general manager (*CEOdual*), the chairperson of the Board's receiving compensation from the firm (*Bcrc*), and the Chief Executive Officer's (CEO)

Table 5 Comparison of Firm Performance between High and Low Performance Intervals

Variables	Low performance region			High performance region			t test	Wilcoxon test
	Obs.	Mean	Median	Obs.	Mean	Median		
<i>Panel A: Whole Sample</i>								
<i>Tobin's Q</i>	602	2.983	2.590	1336	3.058	2.703	-0.86	-1.34
<i>Stock return</i>	592	-0.032	-0.039	1334	-0.027	-0.033	-0.85	-0.96
<i>ROA</i>	594	0.017	0.032	1342	0.034	0.042	-3.76***	-3.72***
<i>Core ROA</i>	603	0.078	0.071	1333	0.100	0.097	-5.98***	-6.49***
<i>ROE</i>	589	0.043	0.085	1352	0.060	0.093	-1.64*	-1.98**
<i>Panel B: State Shares</i>								
<i>Tobin's Q</i>	312	2.733	2.306	602	2.723	2.410	0.09	-0.36
<i>Stock return</i>	305	-0.023	-0.024	606	-0.030	-0.040	0.81	0.92
<i>ROA</i>	312	0.013	0.027	614	0.030	0.038	-2.58**	-2.29**
<i>Core ROA</i>	314	0.075	0.070	605	0.097	0.093	-4.55***	-4.41***
<i>ROE</i>	308	0.045	0.085	612	0.054	0.085	-0.67	-0.46
<i>Panel C: State-Owned Legal-Person Shares</i>								
<i>Tobin's Q</i>	131	2.894	2.599	318	3.180	2.874	-1.93**	-1.31
<i>Stock return</i>	132	-0.047	-0.065	318	-0.021	-0.026	-2.22**	-2.22**
<i>ROA</i>	128	0.021	0.037	318	0.042	0.048	-2.37**	-2.40***
<i>Core ROA</i>	131	0.085	0.086	317	0.102	0.098	-2.24**	-2.49***
<i>ROE</i>	128	0.021	0.061	326	0.076	0.100	-2.26**	-2.46***

Table 5 Continued

Variables	Low performance region		High performance region		t test	Wilcoxon test		
	Obs.	Mean	Median	Obs.			Mean	Median
<i>Panel D: Other Shares</i>								
<i>Tobin's Q</i>	165	3.347	2.835	408	3.519	3.131	-1.01	-1.54
<i>Stock return</i>	161	-0.031	-0.040	412	-0.026	-0.029	-0.57	-0.84
<i>ROA</i>	162	0.021	0.040	402	0.034	0.045	-1.66*	-2.22**
<i>Core ROA</i>	166	0.077	0.051	403	0.101	0.100	-3.73***	-4.00***
<i>ROE</i>	161	0.056	0.097	406	0.058	0.100	-0.11	-1.08

Variables are defined as follows:

*Tobin's Q*: The ratio of the market value of the firm divided by the replacement cost of the assets. For the market value of the firm, we use the market value of tradable equity plus the book value of non-tradable stock and liability; for the replacement cost of the assets, we use the book value of the total assets.

*Stock return*: The annual stock market return on the common stock.

*ROA*: The ratio of earnings before interest and tax to total assets.

*Core ROA*: The ratio of core return to total assets.

*ROE*: The ratio of net earnings to equity.

Low performance intervals: Indicator variable that equals one if the ownership of the largest shareholders is less than 20 per cent; or is more than 40 per cent but less than 50 per cent; or more than 70 per cent, and 0 otherwise.

High performance intervals: Indicator variable that equals one if the ownership of the largest shareholders is more than 20 per cent but less than 40 per cent; or more than 40 per cent but less than 70 per cent, and 0 otherwise.

Observations are all firm-year observations from 1998 to 2001. T-values and Wilcoxon Z-values test the significance of the difference of firm performance between high and low firm performance intervals. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

**Table 6** Comparison of Firm Performance between Firms with State Share and Non-State Share Character

Variables	State share			Non-State share			t test	Wilcoxon test
	Obs.	Mean	Median	Obs.	Mean	Median		
<i>Panel A: Whole Sample</i>								
<i>Tobin's Q</i>	914	2.724	2.399	1022	3.337	2.947	-10.45***	-10.35***
<i>Stock return</i>	913	-0.029	-0.039	1023	-0.026	-0.031	-0.96	-1.17
<i>ROA</i>	926	0.028	0.036	1010	0.035	0.045	-2.69***	-5.14***
<i>Core ROA</i>	919	0.094	0.090	1017	0.098	0.096	-1.59*	-1.74*
<i>ROE</i>	920	0.053	0.085	1021	0.062	0.098	-1.40	-4.03***
<i>Panel B: Low Performance Intervals</i>								
<i>Tobin's Q</i>	117	2.733	2.306	158	3.169	2.776	-2.69***	-2.74***
<i>Stock return</i>	112	-0.023	-0.024	155	-0.038	-0.047	1.30	1.35
<i>ROA</i>	117	0.013	0.027	152	0.021	0.039	-0.97	-1.36
<i>Core ROA</i>	119	0.075	0.070	159	0.080	0.072	-0.77	-0.20
<i>ROE</i>	113	0.045	0.085	151	0.042	0.086	-0.15	-0.31

Table 6 Continued

Variables	State share			Non-State share			t test	Wilcoxon test
	Obs.	Mean	Median	Obs.	Mean	Median		
<i>Panel C: High Performance Intervals</i>								
<i>Tobin's Q</i>	797	2.723	2.410	864	3.367	3.008	-10.24***	-10.12***
<i>Stock return</i>	801	-0.030	-0.040	868	-0.024	-0.029	-1.62*	-1.94**
<i>ROA</i>	809	0.030	0.038	858	0.038	0.047	-2.69***	-5.17***
<i>Core ROA</i>	800	0.097	0.093	858	0.102	0.099	-1.67*	-1.94**
<i>ROE</i>	807	0.054	0.085	870	0.066	0.100	-1.65*	-4.30***

Variables are defined as follows:

*Tobin's Q*: The ratio of the market value of the firm divided by the replacement cost of the assets. For the market value of the firm, we use the market value of tradable equity plus the book value of non-tradable stock and liability; for the replacement cost of the assets, we use the book value of the total assets.

*Stock return*: The annual stock market return on the common stock.

*ROA*: The ratio of earnings before interest and tax to total assets.

*Core ROA*: The ratio of core return to total assets.

*ROE*: The ratio of net earnings to equity.

Low performance intervals: Indicator variable that equals one if the ownership of the largest shareholders is less than 20 per cent; or is more than 40 per cent but less than 50 per cent; or more than 70 per cent, and 0 otherwise.

High performance intervals: Indicator variable that equals one if the ownership of the largest shareholders is more than 20 per cent but less than 40 per cent; or more than 40 per cent but less than 70 per cent, and 0 otherwise.

Observations are all firm-year observations from 1998 to 2001. T-values and Wilcoxon Z-values test the significance of the difference of firm performance between firms with state share and non-state share character. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.



receiving compensation from the firm (*CEOrc*). The first two size proxies are expected to be associated with less effective board monitoring, based on the argument that larger boards are less effective and more susceptible to the influence of the CEO (Jensen, 1993; Yermack, 1996); *CEOdual* is defined as an indicator variable, which equals one if the chairperson of the board is also the CEO, and zero otherwise. A number of empirical studies suggest that agency problems are higher when the CEO serves also as the chairperson of the board (e.g. Yermack, 1996).

Pfeffer (1981) opines that the higher the percentage of external directors, the greater the independence and effectiveness in external monitoring. However, as discussed above, there is mixed evidence regarding the relationship between the effectiveness of the board and the percentage of inside directors; accordingly, we make no prediction for the coefficient sign of the related variables.

In Chinese listed companies, quite a number of chairpersons of the board and CEOs receive compensation from the parent companies instead of the serving companies; so we use two dummy variables *Bcrc* and *CEOrc*, which are equal to one if the chairperson of the board and the CEO receive the compensation from the companies respectively, and zero otherwise, to capture their effects on corporate governance. We expect that *CEOrc* has a positive effect on firm performance because of the incentive effect. With regard to *Bcrc*, no sign prediction is made because of its mixed effects.

To proxy for the stability of firm management, we use two dummy variables to feature the continuity of accounting and business policies. The two dummy variables are the chairperson of the board turnover (*Bctnov*) and CEO turnover (*CEOtnov*), which are equal to one if turnover happens, and zero otherwise. We also use two dummy variables, affiliated transaction (*Affitran*) and assets reconstruction (*Assetrec*), to proxy for earnings management. *Affitran* equals one if a sample firm has a material affiliated transaction with affiliated firms during the year, and zero otherwise; *Assetrec* equals one if a sample firm has a substantial assets reconstruction during the year, and zero otherwise. We expect that sample firms that have *Bctnov* or *CEOtnov* have lower firm performance because of 'big bath' or other negative effects. For earnings management measurements, no sign prediction is made for their impact on firm performance because even though the two variables induce high firm performance, sample firms with poor firm performance may have stronger incentive to manipulate earnings than other firms.

We employ two measures for the ownership structure of the firm: the chairperson of the board ownership (*Bcp*) and CEO ownership (*CEOp*). The former is measured by the percentage of outstanding shares owned by the chairperson of the board, and the latter is measured by the percentage of outstanding shares owned by the corporate CEO. We expect that firm performance is an increasing function of the two ownership measures because of the incentive effect of the equity holdings.

### 5.3.1 The Statistical Significance Test on Measurements of Corporate Governance between High and Low Performance Regions

We start by examining the performance difference of proxies of corporate governance between high and low performance regions to show the effects stemming

from cash flow rights of the largest shareholder. The mean, median, and results of the Wilcoxon test of the corporate governance's measurements between high and low performance regions are presented in Table 7. Consistent with prior work, we find that sample firms in the high performance region have smaller *Supvsize*, less *Bctnov*, higher *Bcp*, and more *Bcrc*, *CEOrc*, *Affitran*, and *Assetrec*, which are all consistent with our analyses and expectations.

### 5.3.2 The Statistical Significance Test on Measurements of Corporate Governance between State Share Firms and Non-State Share Firms

We argue that not only the cash flow rights, but also the nature of ownership of the largest shareholder in the Chinese capital market play an important role in determining the effectiveness of corporate governance. Table 8 presents the mean, median, and results of the Wilcoxon test, which demonstrate that all the differences of corporate governance's proxies between state share and non-state share firms are statistically significant at no less than the 5 per cent level. Consistent with prior evidence and our expectations, listed firms with non-state share character have smaller *Bosize* and *Supvsize*, and higher *Bcp* and *CEOp*. Similar to firms in the high performance region in Table 7, firms with non-state share character also have more *Affitran* and *Assetrec*. However, in contrast with firms in the high performance region in Table 7, firms with non-state share character have less *Bcrc* and *CEOrc*, but even more *Bctnov* and *CEOnov*. Also, firms with non-state share character have less frequency of *CEOdual*, and larger *Odirectp* and *Osupvp*. The signs of the corporate governance variables are generally consistent with prior empirical work and the interpretation that the effectiveness of governance structures is positively associated with an increase in firm performance.

### 5.4 Cross-Sectional Test

Hypothesis 3, which predicts that different ownership levels or different natures of the largest shareholder will have different impacts on corporate governance, which helps explain the formation of an 'M-shaped' curve and the lower 'M-shaped' performance curve for firms with a state character than those with a non-state character, is tested. The Wilcoxon test does not take into consideration the difference between firm performance and corporate governance's proxies performance, nor does it take into account differences in firm attributes. We conduct a cross-sectional regression following a prior empirical approach (Deventer and Malatesta, 2001; Sun and Tong, 2003) to examine the differences in firm performance and corporate governance by controlling the possible factors on fixed effects, with the following regression model:

$$\Delta PP_{i,t} = \alpha + \sum_j \beta_j \Delta CGV\_ND_{ij,t} + \sum_j \delta_j CGV\_D_{ij,t} + \sum_j \varphi_j Control \cdot Factor_{ij,t} + \varepsilon_{i,t}$$

The sign ' $\Delta$ ' is the difference of variables between high performance firms and the median of low performance firms, in which high performance firms are firms with non-state share character, and low performance firms are firms with state share

Table 7 Comparison of Corporate Governance Variables between High and Low Performance Intervals

Variables	Low performance region			High performance region			t test	Wilcoxon test
	Obs.	Mean	Median	Obs.	Mean	Median		
<i>Boysize</i>	613	9.993	9	1417	9.632	9	1.76**	0.75
<i>Supysize</i>	613	4.380	5	1417	4.149	3	2.53***	3.33***
<i>Odirectp</i>	432	0.537	0.571	1066	0.514	0.555	1.13	1.51
<i>Osupvp</i>	432	0.409	0.400	1066	0.410	0.400	0.00	0.29
<i>CEOdual</i>	613	0.260	0	1418	0.290	0	-1.04	-1.03
<i>Bcvc</i>	600	0.523	1	1339	0.579	1	-1.75*	-1.74*
<i>CEORc</i>	600	0.894	1	1354	0.929	1	-1.77*	-2.01**
<i>Bctnov</i>	613	0.295	0	1417	0.231	0	2.22**	2.34***
<i>CEOmov</i>	613	0.336	0	1417	0.299	0	1.27	1.26
<i>Affiran</i>	613	0.604	1	1417	0.696	1	-3.14***	-3.13***
<i>Assetrec</i>	613	0.090	0	1417	0.152	0	-2.78***	-3.26***
<i>Bcp</i>	612	0.010	0.00003	1410	0.009	0.001	0.29	-3.29***
<i>CEOp</i>	612	0.009	0.001	1411	0.007	0.001	0.45	-1.12

**Table 7** *Continued*

Variables are defined as follows:

*Boardsize*: The total number of board directors.

*Supysize*: The total number of directors on the board of supervisors.

*Odirec*: The ratio of board directors who receive compensation from the firm to the total number of board directors.

*Osupvp*: The ratio of board supervisors who receive compensation from the firm to the total number of board supervisors.

*CEOdual*: Indicator variable that equals one if the CEO is also the chairperson of the board, and zero otherwise.

*Berc*: Dummy variable that equals one if the chairperson of the board receives compensation from the firm, and zero otherwise.

*CEOrc*: Dummy variable that equals one if the CEO receives compensation from the firm, and zero otherwise.

*Bctnov*: Dummy variable that equals one if there is a change in the chairperson of the board, and zero otherwise.

*CEOtnov*: Dummy variable that equals one if there is a change in the CEO, and zero otherwise.

*Afftran*: Dummy variable that equals one if the firm has material affiliated transactions, and zero otherwise.

*Assetrec*: Dummy variable that equals one if the firm has material asset reconstructions in the year, and zero otherwise.

*Bep*: The percentage of outstanding shares owned by the chairperson of the board.

*CEOop*: The percentage of outstanding shares owned by the CEO.

Low performance intervals: Indicator variable that equals one if the ownership of the largest shareholders is less than 20 per cent, or is more than 40 per cent but less than 50 per cent; or more than 70 per cent, and 0 otherwise.

High performance intervals: Indicator variable that equals one if the ownership of the largest shareholders is more than 20 per cent but less than 40 per cent; or more than 40 per cent but less than 70 per cent, and 0 otherwise.

Observations are all firm-year observations from 1998 to 2001. T-values and Wilcoxon Z-values test the significance of the difference of firm performance between firms with state share and non-state share character. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

**Table 8** Comparison of Corporate Governance Variables between Firms with State Share and Non-State Share Character

Variables	State share			Non-State share			t test	Wilcoxon test
	Obs.	Mean	Median	Obs.	Mean	Median		
<i>Boysize</i>	960	9.827	9	1070	9.554	9	2.20**	2.50**
<i>Supvsize</i>	960	4.513	4	1070	4.199	5	4.94***	5.68***
<i>Odirectp</i>	682	0.444	0.444	816	0.578	0.625	-10.22***	-10.71***
<i>Osupvp</i>	682	0.325	0.333	816	0.480	0.571	-10.43***	-10.09***
<i>CEOdual</i>	960	0.344	0	1071	0.233	0	5.55***	5.54***
<i>Bcrv</i>	917	0.689	1	1022	0.466	0	10.14***	9.88***
<i>CEOrc</i>	925	0.941	1	1029	0.908	1	2.78***	2.74***
<i>Bcmov</i>	959	0.194	0	1071	0.281	0	-4.58***	-4.52***
<i>CEOtnov</i>	959	0.277	0	1071	0.329	0	-2.55**	-2.55**
<i>Afftran</i>	960	0.623	1	1070	0.738	1	-5.59***	-5.58***
<i>Assetrec</i>	960	0.040	0	1071	0.152	0	-8.79***	-8.38***
<i>Bcp</i>	957	0.007	0	1065	0.011	0.003	-2.85***	-5.34***
<i>CEOp</i>	958	0.006	0.001	1065	0.009	0.002	-2.30**	-2.94***

**Table 8** *Continued*

Variables are defined as follows:

*Boysize*: The total number of board directors.

*Supvsize*: The total number of directors on the board of supervisors.

*Odirectp*: The proportion of board directors who receive compensation from the firm to the total number of board directors.

*Osupvvp*: The proportion of board supervisors who receive compensation from the firm to the total number of board supervisors.

*CEOduat*: Indicator variable that equals one if the CEO is also the chairperson of the board, and zero otherwise.

*Bcr*: Dummy variable that equals one if the chairperson of the board receives compensation from the firm, and zero otherwise.

*CEOrc*: Dummy variable that equals one if the CEO receives compensation from the firm, and zero otherwise.

*Bcmov*: Dummy variable that equals one if there is a change in the chairperson of the board, and zero otherwise.

*CEOtmov*: Dummy variable that equals one if there is a change in the CEO, and zero otherwise.

*Afftran*: Dummy variable that equals one if the firm has material affiliated transactions, and zero otherwise.

*Assetrec*: Dummy variable that equals one if the firm has material asset reconstructions in the year, and zero otherwise.

*Bcp*: The percentage of outstanding shares owned by the chairperson of the board.

*CEOop*: The percentage of outstanding shares owned by the CEO.

Observations are all firm-year observations from 1998 to 2001. *T*-values and Wilcoxon *Z*-values test the significance of the difference of corporate governance variables between firms with state share and non-state share character. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

character. PP represents the performance proxies including *Tobin's Q*, *Stock return*, *ROA*, *Core ROA*, and *ROE*. Though *Tobin's Q* and *Stock return* have not passed the significant Wilcoxon test shown in Table 5 and have limitations in the Chinese capital market, we present the results here to check the robustness of these performance variables. *CGV\_ND* denotes corporate governance non-dummy variables while *CGV\_D* denotes corporate governance dummy variables. Control factors are variables that control for the effects of size, sales, leverage, and years. In order to control industries, we standardise all performance variables and all non-dummy corporate governance measurements by their industrial median.

#### 5.4.1 Examination of Excess Performance and Proxies of Corporate Governance by Ownership Regions

We start by computing the regression of the difference of firm performance and the proxies of corporate governance between high and low performance regions. The regression results presented in Table 9 generally conform to the results in Table 7.

The regression results presented in the first column of Table 9 demonstrate that the level of the excess *Tobin's Q* ( $\Delta$ *Tobin's Q*) is cross-sectionally related to the proxies of corporate governance and control factors. Larger  $\Delta$ *Supvsize* and *Bcrc* have lower  $\Delta$ *Tobin's Q*, which reflects that board monitoring is less effective (Jensen, 1993; Yermack, 1996) with lower independence. The coefficients on *CEOrc* and *Bctnov* are not significant, though the signs of the coefficients are consistent with what we expect. The coefficients on *Affitran* and *Assetrec* exhibit a positive and significant association with  $\Delta$ *Tobin's Q*. The coefficients for the two ownership variables,  $\Delta$ *Bcp* and  $\Delta$ *CEOp*, are positive, but are statistically insignificant. The four control factors are generally significant at conventional levels except *Lnsales*. *Age* has a significant positive association with  $\Delta$ *Tobin's Q*, which is consistent with our analysis that *Tobin's Q* increases with a longer history of listed firms in the Chinese stock market because there will be an increase in the proportion of tradable shares after privatisation.

The second column of Table 9 presents the results when  $\Delta$ *Stock return* is used as the dependent variable. Consistent with the first column, larger  $\Delta$ *Supvsize* has lower  $\Delta$ *Stock return*, which also conforms to our prediction. However, the coefficient on *Assetrec* changes sign and becomes negative, and is significant at the 10 per cent level, reflecting that material assets reconstructions are bad news to outside investors. Relative to the regression of  $\Delta$ *Tobin's Q*, while we observe that *Affitran* and *Leverage* are no longer significant, the variables *CEOrc* and *Lnsales* become significant, and the *F*-statistic decreases from 37.50 to 3.44 ( $p < 0.0001$ ).

The third column of Table 9 presents the results when  $\Delta$ *ROA* is used as the dependent variable. These results are virtually identical to those using  $\Delta$ *Tobin's Q*, with the exceptions that the variable measuring *Bctnov* changes sign and becomes significant, and the variables measuring  $\Delta$ *Bcp* and *Lnsales* become significant. As expected, the amount of sales is significant when associating with accounting performance, and the adjusted-R<sup>2</sup> of this regression is 22.1 per cent, which yields an *F*-statistic of 31.02 ( $p < 0.001$ ).

**Table 9** Analyses of the Effect of Interval

$$\Delta Performance_{it} = \alpha + \beta_1 \Delta Supvsize_{it} + \beta_2 Bcr_{it} + \beta_3 CEOrc_{it} + \beta_4 Bctnov_{it} + \delta_1 Affiran_{it} + \delta_2 Assetrec_{it} + \delta_3 \Delta Bcp_{it} + \delta_4 \Delta CEOp_{it} + \varphi_1 Lnsales_{it} + \varphi_2 Leverage_{it} + \varphi_3 Lnsize_{it} + \varphi_4 Age_{it} + FixedEffects_{it} + \epsilon_{it}$$

Variables	Pred. sign	$\Delta Tobin's Q$	$\Delta Stock\ return$	$\Delta ROA$	$\Delta Core\ ROA$	$\Delta ROE$
Intercept		8.587 (19.28)***	0.086 (2.65)***	0.051 (3.00)***	0.093 (5.66)***	-0.012 (-0.29)
$\Delta Supvsize$	-	-0.044 (-2.05)**	-0.002 (-1.71)*	-0.001 (-1.71)*	-0.002 (-3.55)***	-0.003 (-1.43)
$Bcr$	?	-0.189 (-2.83)***	0.004 (0.84)	-0.004 (-1.89)**	-0.003 (-1.36)	-0.012 (-1.88)*
$CEOrc$	+	0.137 (1.06)	0.019 (2.01)**	0.006 (1.21)	0.003 (0.66)	0.020 (1.62)*
$Bctnov$	-	0.004 (0.05)	0.0006 (0.11)	-0.013 (-4.43)***	-0.011 (-3.91)***	-0.027 (-3.55)***
$Affiran$	+	0.167 (2.43)***	0.003 (0.65)	0.010 (4.04)***	-0.001 (-0.65)	0.017 (2.53)***
$Assetrec$	+	0.306 (2.68)***	-0.013 (-1.64)*	0.009 (2.17)**	0.003 (0.89)	0.019 (1.69)*
$\Delta Bcp$	+	0.611 (0.37)	-0.007 (-0.07)	0.072 (1.12)*	0.071 (1.16)	0.037 (0.23)
$\Delta CEOp$	+	-1.567 (-0.75)	0.160 (1.05)	0.095 (1.18)	0.028 (0.37)	0.335 (1.64)*
$Lnsales$	+	0.012 (0.28)	0.013 (4.20)***	0.010 (6.48)***	0.041 (26.02)***	0.028 (6.76)***
$Leverage$	-	-0.803 (-4.65)***	0.005 (0.46)	-0.092 (-13.79)***	-0.052 (-8.22)***	-0.119 (-7.03)***



Table 9 Continued

Variables	Pred. sign	$\Delta$ Tobin's Q	$\Delta$ Stock return	$\Delta$ ROA	$\Delta$ Core ROA	$\Delta$ ROE
<i>Lnsize</i>	-	-0.742 (-12.24)***	-0.016 (-3.77)***	-0.009 (-3.85)***	-0.040 (-17.95)***	-0.019 (-3.30)***
<i>Age</i>	?	0.144 (8.31)***	-0.002 (-1.63)*	-0.003 (-4.87)***	-0.001 (-2.62)***	-0.005 (-2.95)***
<i>Adj R-Sq</i>		0.256	0.022	0.221	0.390	0.105
<i>F</i>		37.50	3.44	31.02	68.88	13.45
<i>(Pr &gt; F)</i>		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
<i>N</i>		1379	1379	1379	1379	1379

Variables are defined as follows:

*Supvsize*: The total number of directors on the board of supervisors.

*Bvrc*: Dummy variable that equals to one if the chairperson of the board receives compensation from the firm, and zero otherwise.

*CEOrc*: Dummy variable that equals one if the CEO receives compensation from the firm, and zero otherwise.

*Bctnov*: Dummy variable that equals one if there is a change in the chairperson of the board, and zero otherwise.

*Affitran*: Dummy variable that equals one if the firm has material affiliated transactions, and zero otherwise.

*Assvtrcc*: Dummy variable that equals one if the firm has material asset reconstructions in the year, and zero otherwise.

*Bcp*: The percentage of outstanding shares owned by the chairperson of the board.

*CEOp*: The percentage of outstanding shares owned by the CEO.

*Lnsales*: The natural log of the value of sales, which refers to the year in which return is gained.

*Leverage*: The ratio of total long-term liabilities to total assets.

*Lnsize*: The natural log of the value of total assets.

*Age*: The duration of a listed firm from the reporting period to the IPO period measured by years.

Dummy variables controlling for fixed effects of calendar years and industry are also included. The sign "Δ" denotes the difference between a variable value of high firm performance and the median of that variable of low firm performance. Observations are all firm-year observations from 1998 to 2001. T-values are shown in parentheses. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

The last two columns of Table 9 report the results when  $\Delta\text{Core ROA}$  and  $\Delta\text{ROE}$  are used as the dependent variables respectively, which we use as consistency checks on our  $\Delta\text{ROA}$  results. Relative to the regression of  $\Delta\text{ROA}$ , we observe that the variables *Bcrc*, *Assetrec*, and  $\Delta\text{Bcp}$  are no longer significant; the variable *Affitran* changes sign and becomes insignificant when  $\Delta\text{Core ROA}$  is used as a dependent variable; the variables  $\Delta\text{Supvsize}$  and  $\Delta\text{Bcp}$  are insignificant; and the variable  $\Delta\text{CEOp}$  becomes significant when  $\Delta\text{ROE}$  is used as a dependent variable. That the variables measuring *Affitran* and *Assetrec* are insignificant when  $\Delta\text{CoreROA}$  is used as a dependent variable, together with the significant coefficients in both of our  $\Delta\text{ROA}$  and  $\Delta\text{ROE}$  results, suggest that material affiliated transactions and material assets reconstructions generally affect the income of below-the-line items.

As sample firms in the high performance region have smaller *Supvsize*, less *Bctmov*, more *CEOrc*, and more *Affitran* and *Assetrec*, as shown in Table 7, our results partially provide strong support for Hypothesis 3 that different ownership levels or different natures of the largest shareholder will have different impacts on corporate governance, which helps explain the formation of an 'M-shaped' curve and the lower 'M-shaped' performance curve for firms with a state character than those with a non-state character.

#### 5.4.2 Examination of Excess Performance and Proxies of Corporate Governance by Ownership Characters

We regress on the difference of firm performance and the proxies of corporate governance between state share character and non-state share character to examine whether the regression results are generally consistent with the results shown in Table 8. Similarly, the regression equation includes a dependent variable that is one of the five measures of excess firm performance and an independent variable that has passed the significant test shown in Table 8 as proxies for corporate governance effectiveness and the control factors variables. Table 10 shows the regression results.

The regression results presented in the first column of Table 10 indicate that  $\Delta\text{Tobin's } Q$  is related to  $\Delta\text{Odirectp}$ , *CEOdual*, *Assetrec*, firm size, and *Age*. Consistent with our  $\Delta\text{Tobin's } Q$  results shown in Table 9, the coefficients on *Assetrec* and *Age* exhibit a positive and significant association with  $\Delta\text{Tobin's } Q$ , reflecting the process of privatisation as the proportion of tradable A-shares will be increased after privatisation. *CEOdual* is significantly negative, which is consistent with a number of empirical studies (e.g. Yermack, 1996), and suggests that there are more agency problems when the CEO also serves as the chairperson of the board.

The regression results presented in the second column of Table 10 generally conform to the results shown in the second column of Table 9: the variable *CEOrc* is significantly positive, indicating that *CEOrc* helps enhance investors' confidence. The variable measuring *Affitran* becomes significant, whereas the variable indicating *Assetrec* becomes insignificant. Specifically, *Bosize* is significantly negative, which is consistent with prior empirical evidence (Jensen, 1993; Yermack, 1996), implying that smaller *Bosize* is associated with greater excess *Stock return* ( $\Delta\text{Stock return}$ ). The four variables capturing control factors are generally significant at con-

**Table 10** Analyses of the Effect of Character  
 $\Delta Performance_i = \alpha + \beta_1 \Delta Bsize_i + \beta_2 \Delta Supvsize_i + \beta_3 \Delta Odirectp_i + \beta_4 \Delta Osupvtp_i + \beta_5 CEOdual_i + \beta_6 Bcrv_i + \beta_7 CEOrc_i + \beta_8 Bctnov_i + \beta_9 CEOtnov_i$   
 $+ \delta_1 Affitran_i + \delta_2 Assetrec_i + \delta_3 \Delta Bcp_i + \delta_4 \Delta CEOp_i + \varphi_1 Lnsales_i + \varphi_2 Leverage_i + \varphi_3 Lnsize_i + \varphi_4 Age_i + FixedEffects_i + \epsilon_i$

Variables	Pred. sign	$\Delta Tobin's Q$	$\Delta Stock\ return$	$\Delta ROA$	$\Delta Core\ ROA$	$\Delta ROE$
Intercept		11.664 (23.04)***	-0.131 (-3.95)***	0.042 (1.98)**	0.148 (7.83)***	-0.019 (-0.37)
$\Delta Bsize$	-	0.002 (0.19)	-0.002 (-2.48)***	-0.0005 (-1.05)	-0.0007 (-1.46)	-0.0007 (-0.55)
$\Delta Supvsize$	-	-0.030 (-1.26)	-0.000006 (-0.00)	-0.0006 (-0.61)	-0.002 (-2.79)***	-0.0006 (-0.26)
$\Delta Odirectp$	+	0.460 (2.51)***	0.006 (0.55)	-0.005 (-0.66)	-0.017 (-2.53)***	-0.014 (-0.75)
$\Delta Osupvtp$	+	0.185 (1.33)	0.003 (0.43)	0.020 (3.52)***	0.011 (2.25)**	0.051 (3.48)***
$CEOdual$	?	-0.192 (-2.21)***	-0.008 (-1.45)	0.003 (0.82)	0.002 (0.86)	-0.001 (-0.21)
$Bcrv$	?	0.087 (0.99)	0.006 (1.05)	-0.004 (-1.11)	-0.005 (-1.58)	-0.008 (-0.91)
$CEOrc$	+	0.136 (1.01)	0.023 (2.67)***	0.001 (0.27)	0.002 (0.40)	0.013 (0.93)
$Bctnov$	-	-0.059 (-0.71)	-0.005 (-0.98)	-0.016 (-4.62)***	-0.011 (-3.61)***	-0.035 (-4.44)***
$CEOtnov$	-	0.073 (0.94)	0.005 (1.09)	-0.001 (-0.44)	0.001 (0.37)	0.001 (0.18)
$Affitran$	+	0.032 (0.42)	0.009 (1.97)**	0.014 (4.47)***	-0.002 (-0.75)	0.024 (2.97)***

Table 10 Continued

Variables	Pred. sign	$\Delta Tobin's Q$	$\Delta Stock\ return$	$\Delta ROA$	$\Delta Core\ ROA$	$\Delta ROE$
<i>Assetrec</i>	?	0.276 (2.44)***	-0.003 (0.46)	0.001 (0.38)	0.002 (0.67)	0.002 (0.18)
$\Delta Bcp$	+	-1.055 (-0.54)	0.091 (0.71)	0.165 (1.98)**	0.095 (1.30)	0.172 (0.83)
$\Delta CEOp$	+	-0.633 (-0.26)	-0.085 (-0.53)	0.023 (0.23)	0.025 (0.27)	0.203 (0.77)
<i>Lnsales</i>	+	0.033 (0.75)	0.010 (3.43)***	0.012 (6.44)***	0.041 (24.99)***	0.029 (6.22)***
<i>Leverage</i>	?	-0.003 (-0.69)	0.0006 (2.19)**	-0.001 (-5.39)***	-0.00003 (-0.22)	0.0009 (1.87)*
<i>Lnsize</i>	-	-0.867 (-13.82)***	-0.006 (-1.66)*	-0.011 (-4.16)***	-0.039 (-16.76)***	-0.021 (-3.18)***
<i>Age</i>	?	0.146 (7.64)***	0.008 (6.66)***	-0.002 (-3.10)**	-0.001 (-2.71)**	-0.001 (-0.76)
Adj R-Sq		0.297	0.069	0.116	0.364	0.066
F		30.11	6.10	10.02	40.33	5.85
(Pr > F)		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
N		576	576	576	576	576

**Table 10** *Continued*

Variables are defined as follows:

*Bosize*: The total number of board directors.

*Supysize*: The total number of directors on the board of supervisors.

*Odirecnp*: The ratio of board directors who receive compensation from the firm to the total number of board directors.

*Osupvp*: The ratio of board supervisors who receive compensation from the firm to the total number of board supervisors.

*CEOdual*: Indicator variable that equals one if the CEO is also the chairperson of the board, and zero otherwise.

*Bcrz*: Dummy variable that equals one if the chairperson of the board receives compensation from the firm, and zero otherwise.

*CEorc*: Dummy variable that equals one if the CEO receives compensation from the firm, and zero otherwise.

*Bcrnov*: Dummy variable that equals one if there is a change in the chairperson of the board, and zero otherwise.

*CEOtmov*: Dummy variable that equals one if there is a change in the CEO, and zero otherwise.

*Afftran*: Dummy variable that equals one if the firm has material affiliated transactions, and zero otherwise.

*Assetrec*: Dummy variable that equals one if the firm has material asset reconstructions in the year, and zero otherwise.

*Bep*: The percentage of outstanding shares owned by the chairperson of the board.

*CEOp*: The percentage of outstanding shares owned by the CEO.

*Lnsales*: The natural log of the value of sales, which refers to the year in which return is gained.

*Leverage*: The ratio of total long-term liabilities to total assets.

*Lnsize*: The natural log of the value of total assets.

*Age*: The duration of a listed firm from the reporting period to the IPO period measured by years.

Dummy variables controlling for fixed effects of calendar years and industry are also included. The sign 'Δ' denotes the difference between a variable value of high firm performance and the median of that variable of low firm performance. Observations are all firm-year observations from 1998 to 2001. T-values are shown in parentheses. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

ventional levels. Similar to our  $\Delta Tobin's Q$  results, there is also a statistically positive association between *Age* and  $\Delta Stock\ return$ .

The third column of Table 10 presents the results when  $\Delta ROA$  is used as the dependent variable. Consistent with the results of  $\Delta ROA$  shown in Table 9, the level of the  $\Delta ROA$  is related to the variables *Bctnov*, *Affitran*, *Assetrec*,  $\Delta Bcp$ , and all the four control variables. Relative to the regression of  $\Delta ROA$  in Table 9, we observe that the variables  $\Delta Supvsize$  and *Bcrc* become significant. Specifically, the excess proportion of outside supervisors (*Osupvtp*) is significantly positive, implying that the higher the *Osupvp*, the higher the  $\Delta ROA$ .

Similar to Table 9, we also use  $\Delta Core\ ROA$  and  $\Delta ROE$  as the dependent variables to check the consistency of our results of accounting performance variable  $\Delta ROA$ , which is shown in the last two columns in Table 10. These results are virtually identical to those using  $\Delta ROA$ , with the exceptions that the variables measuring  $\Delta Supvsize$  and *Osupvtp* in our  $\Delta Core\ ROA$  results become significant, the variable indicating *Affitran* in our  $\Delta Core\ ROA$  results becomes insignificant, and the variable measuring  $\Delta Bcp$  in both the last two columns become insignificant. However, the results presented in the  $\Delta Core\ ROA$  column show that the variable measuring  $\Delta Supvsize$  is significantly negative and the variable indicating *Affitran* becomes insignificant, which are quite similar to the results shown in Table 9, reflecting that larger *Supvsize* is usually associated with less effective board monitoring, and *Affitran* generally affects the income of below-the-line items.

Bearing in mind the evidence shown in Table 8, we find that the signs of the coefficients on the proxies of corporate governance are consistent with the interpretation that a higher level of effective governance structure is associated with excess firm performance. Chinese listed firms with non-state share character have smaller *Bosize* and *Supvsize*, more *Affitran*, and higher *Osupvp*, and are indeed associated with a smaller agency problem and high firm performance. Though firms with non-state share character have more *Bctnov* than state share firms, the significantly excess firm performance indicates that the negative effects of *Bctnov* on firm performance are obviously offset by the positive effects of all other corporate governance variables with significant coefficients. Our results provide partially strong support for Hypothesis 3.

## 5.5 Sensitivity Analysis

To check the robustness of Hypothesis 3, we first calculate the correlation matrix between firm performance variables and the proxies of corporate governance, and find consistent results with our empirical results displayed in Tables 9 and 10. We also use capital expenditure and sales growth to substitute *Lnsales* to control for growth opportunities in Tables 9 and 10, and find that our results remain unchanged; generally, the signs of the coefficients on the proxies of corporate governance are consistent with the interpretation that a higher level of effective governance structures is associated with excess firm performance. When ownership character and the ownership interval dummy are added in Tables 9 and 10 respectively, the basic regression results remain the same. For simplicity's sake, the results are not reported here.

## VI. CONCLUSION

This paper documents that the ownership regions and the nature of the largest shareholders are associated with firm performance in the Chinese stock market after controlling for standard empirical determinants of firm performance. The ownership structure of the Chinese stock market is very complicated and dominated by the largest shareholders, yet rigorous evaluations of the association between ownership regions and the nature of the largest shareholdings are limited with no consensus. Our study serves to fill this gap. Based on the data collected between 1998 and 2001 on a total sample of 508 listed firms in China, we have first examined the behaviour of the measurements of firm performance with the change in cash flow rights and the nature of the largest shareholder, before we analysed the relationship between excess of firm performance and the proxies of corporate governance. We find that the relationship between cash flow rights held by the largest shareholder and firm performance shows an 'M-shaped regional effect'. Though this effect is robust under various characters of the ownership held by the largest shareholder, firms controlled by a state shareholder have poorer firm performance than those controlled by a non-state shareholder. Furthermore, we find that the performance of the proxies for firm performance and corporate governance will be different should the proportion and the nature of ownership not be the same, and the performance differences among proxies of corporate governance do, to a certain extent, explain the differences in firm performance after controlling for the standard empirical determinants of firm performance.

Regarding the impact of cash flow rights on firm performance, our evidence is consistent with the empirical results of Claessens *et al.* (2002). Using the data of eight East Asian emerging markets, they find that the relationship between company valuation and ownership of the largest shareholder is not monotonous. Firm value, as measured by market-to-book ratios, peaks twice when shareholdings of the largest shareholder amount to the intervals of 36 to 40 per cent and 51 to 55 per cent, respectively, and then falls again. Shareholdings of 41 to 50 per cent are associated with lower mean market valuation than those of 36 to 40 per cent, and the difference is statistically significant.

When investigating the impact of ownership characters, we find that in the Chinese capital market, both the ownership and the nature of the largest shareholder have an important effect on principal-agent problems and the effectiveness of corporate governance. Our findings also provide support for prior empirical results (Che and Qian, 1998; Sun and Tong, 2003), in which state shares and legal-person shares have reverse impacts on firm performance, even though legal-person shares are mostly state-owned in nature. Our results suggest that the dominating ownership structure is not the source of poor firm performance; hence, there is an urgent need to reduce the shareholding of state shares.

## REFERENCES

Please refer to P.135–137

## APPENDIX A. Description of the Variables

Definitions of the variables used in the analysis are presented in Table 11.

**Table 11**

*Panel A: Firm Performance Variables*

Variable	Description
<i>Tobin's Q</i>	The ratio of the market value of the firm divided by the replacement cost of the assets. For the market value of the firm, we use the market value of tradable equity plus the book value of non-tradable stock and liability; for the replacement cost of the assets, we use the book value of the total assets.
<i>Stock return</i>	The annual stock market return on the common stock
<i>ROA</i>	The ratio of earnings before interest to total assets; that is, (EBIT-Tax)/TA.
<i>Core ROA</i>	The ratio of core return to total assets
<i>ROE</i>	The ratio of net earnings to equity

*Panel B: Corporate Governance Variables*

Variable	Description
<i>CEO duality (CEOdual)</i>	Indicator variable that equals one if the CEO is also the chairperson of the board, and zero otherwise.
<i>Board size (Bosize)</i>	The total number of board directors.
<i>Supervisors size (Supvsize)</i>	The total number of directors on the board of supervisors.
<i>Outside director proportion (Odirectp)</i>	The ratio of board directors who receive compensation from the firm to the total number of board directors.
<i>Outside supervisor proportion (Osupvp)</i>	The ratio of board supervisors who receive compensation from the firm to the total number of board supervisors.
<i>Board Chair-person turnover (Bcmov)</i>	Dummy variable that equals one if there is a change in the chairperson of the board, and zero otherwise.
<i>CEO turnover (CEOmov)</i>	Dummy variable that equals one if there is a change in the CEO, and zero otherwise.
<i>Material assets reconstruction (Assetrec)</i>	Dummy variable that equals one if the firm has material assets reconstructions in the year, and zero otherwise.
<i>Material affiliated transaction (Affitran)</i>	Dummy variable that equals one if the firm has affiliated transactions, and zero otherwise.
<i>Board Chair-person receives compensation in firm (Bcrc)</i>	Dummy variable that equals one if the chairperson of the board receives compensation from the firm, and zero otherwise.



**Table 11** *Continued*

CEO receives compensation in firm ( <i>CEOrc</i> )	Dummy variable that equals one if the CEO receives compensation from the firm, and zero otherwise.
<i>Panel C: Ownership Variables</i>	
Variable	Description
Board Chair-person proportion ( <i>Bcp</i> )	The percentage of outstanding shares owned by the chairperson of the board.
CEO proportion ( <i>CEOp</i> )	The percentage of outstanding shares owned by the CEO.
Ownership of the largest shareholder ( <i>Lhold</i> )	The percentage of the shares held by the largest shareholder.
<i>Panel D: Control Variable</i>	
Variable	Description
<i>Lnsales</i>	The natural log of the value of sales, which refers to the year in which return is gained.
<i>Lnsiz</i>	The natural log of the value of total assets.
<i>Lverage</i>	The ratio of total long-term liabilities to total assets.
<i>Age</i>	The history of a firm from the time it went public.

## APPENDIX B. Comparison of the 'M' Shape at the Performance Dimension among Firms with Different Characters of the Largest Shareholders

Results of the Wilcoxon test in each interval on firm performance between different characters of the largest shareholders are presented in Table 12

Table 12

Intervals of the ownership (%)	0-20	20-30	30-40	40-50	50-60	60-70	70-100
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Panel A: State Shares vs. State-Owned Legal-Person Shares</i>							
<i>Tobin's Q</i>	1.828* (0.067)	2.444** (0.014)	4.670*** (0.000)	2.215** (0.026)	2.740*** (0.006)	1.908* (0.056)	0.927 (0.353)
<i>Stock return</i>	-1.254 (0.209)	0.624 (0.532)	1.617 (0.105)	-0.065 (0.947)	1.422 (0.154)	1.314 (0.188)	-1.004 (0.315)
<i>ROA</i>	0.022 (0.982)	-0.880 (0.378)	4.073*** (0.000)	2.040** (0.041)	2.783*** (0.005)	3.144*** (0.001)	1.017 (0.309)
<i>Core ROA</i>	0.589 (0.555)	-1.432 (0.152)	1.543 (0.122)	-0.809 (0.418)	0.362 (0.716)	2.327** (0.019)	0.134 (0.893)
<i>ROE</i>	0.218 (0.827)	-1.064 (0.287)	3.467*** (0.000)	0.981 (0.326)	0.861 (0.389)	2.402** (0.016)	-1.234 (0.217)
<i>Panel B: State Shares vs. Other shares</i>							
<i>Tobin's Q</i>	-2.941*** (0.003)	-7.418*** (0.000)	5.272*** (0.000)	3.423*** (0.000)	2.422** (0.015)	4.075*** (0.000)	1.523 (0.127)
<i>Stock return</i>	0.616 (0.537)	0.754 (0.450)	1.639* (0.101)	0.203 (0.838)	-0.286 (0.774)	1.299 (0.193)	-0.050 (0.959)
<i>ROA</i>	-0.757 (0.448)	1.480 (0.138)	2.563*** (0.010)	1.629* (0.103)	3.066*** (0.002)	3.801*** (0.000)	1.142 (0.253)

Table 12 Continued

Intervals of the ownership (%)	0-20	20-30	30-40	40-50	50-60	60-70	70-100
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Core ROA	-0.577 (0.563)	3.514*** (0.000)	0.498 (0.617)	-1.179 (0.238)	3.202*** (0.001)	3.536*** (0.000)	0.393 (0.693)
ROE	-0.902 (0.366)	1.225 (0.220)	2.384** (0.017)	1.763* (0.077)	1.897* (0.057)	2.742*** (0.006)	0.038 (0.969)

Panel C: State-Owned Legal-Person Shares vs. Other Shares							
Tobin's Q	-0.808 (0.418)	-3.372*** (0.000)	-0.979 (0.327)	-0.968 (0.333)	0.153 (0.877)	2.437** (0.014)	1.500 (0.133)
Stock return	-0.794 (0.426)	1.341 (0.179)	0.060 (0.951)	-0.191 (0.848)	-1.497 (0.134)	0.361 (0.718)	0.232 (0.816)
ROA	-0.471 (0.637)	0.310 (0.756)	1.111 (0.266)	-0.190 (0.848)	0.467 (0.640)	0.855 (0.392)	0.591 (0.554)
Core ROA	0.089 (0.928)	1.250 (0.211)	0.967 (0.333)	0.319 (0.749)	2.533*** (0.012)	1.184 (0.236)	0.380 (0.703)
ROE	-0.433 (0.664)	-0.219 (0.826)	0.678 (0.497)	-0.665 (0.505)	1.124 (0.261)	0.478 (0.632)	0.676 (0.498)

Variables are defined as follows:

*Tobin's Q*: The ratio of the market value of the firm divided by the replacement cost of the assets. For the market value of the firm, we use the market value of tradable equity plus the book value of non-tradable stock and liability; for the replacement cost of the assets, we use the book value of the total assets.

*Stock return*: The annual stock market return on the common stock.

*ROA*: The ratio of earnings before interest and tax to total assets.

Core *ROA*: The ratio of core return to total assets.

*ROE*: The ratio of net earnings to equity.

Wilcoxon Z-values test the significance of the difference between firm performance with different characters of the largest shareholders in each interval, and P-values are shown in parentheses. Observations are all firm-year observations from 1998 to 2001. \*\*\*, \*\*, and \* indicate significance for a two-tailed test at less than 1 per cent, 5 per cent, and 10 per cent levels, respectively.

### APPENDIX C. Figures of Table 3

Figure 2 shows the association between firm performance and ownership of the largest shareholder.

Figure 2-1

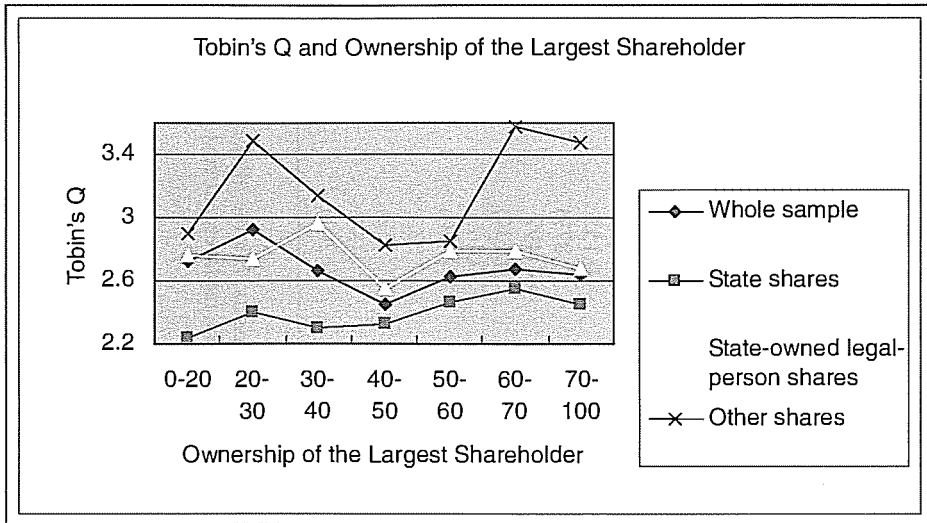


Figure 2-2

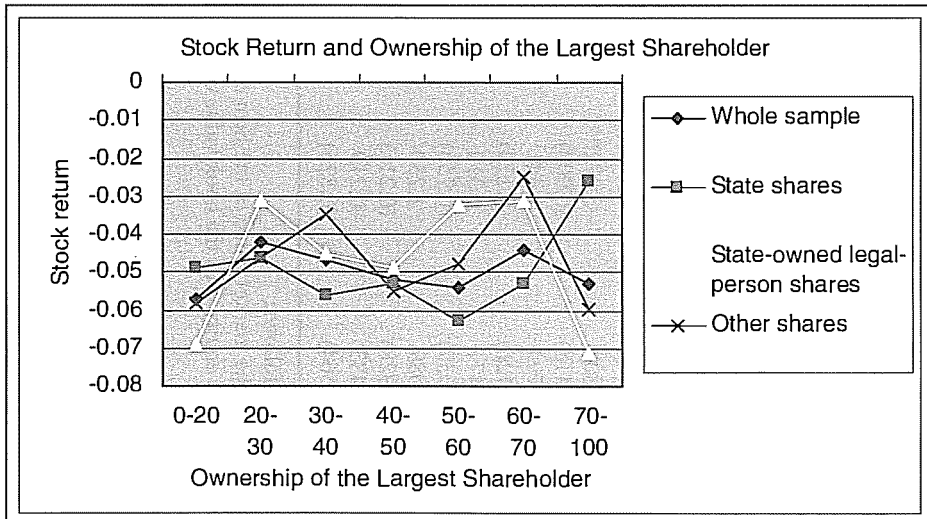


Figure 2-3

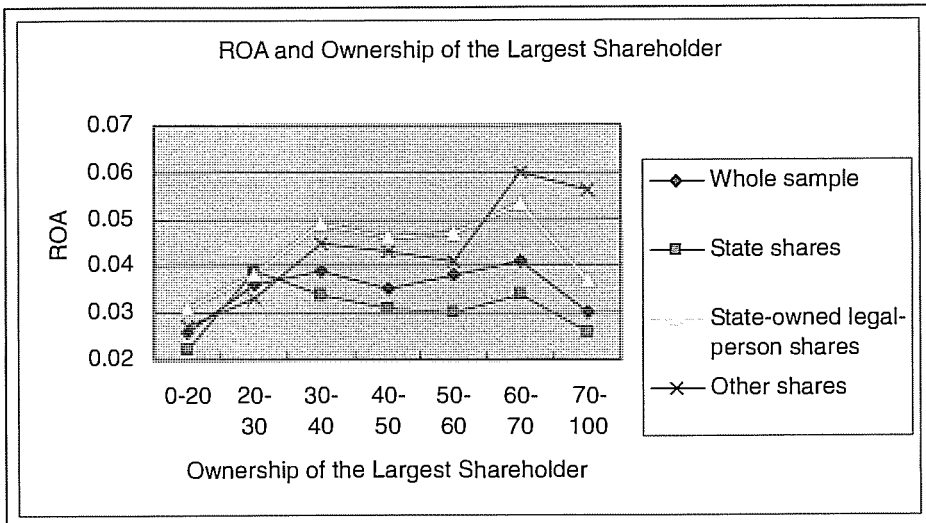


Figure 2-4

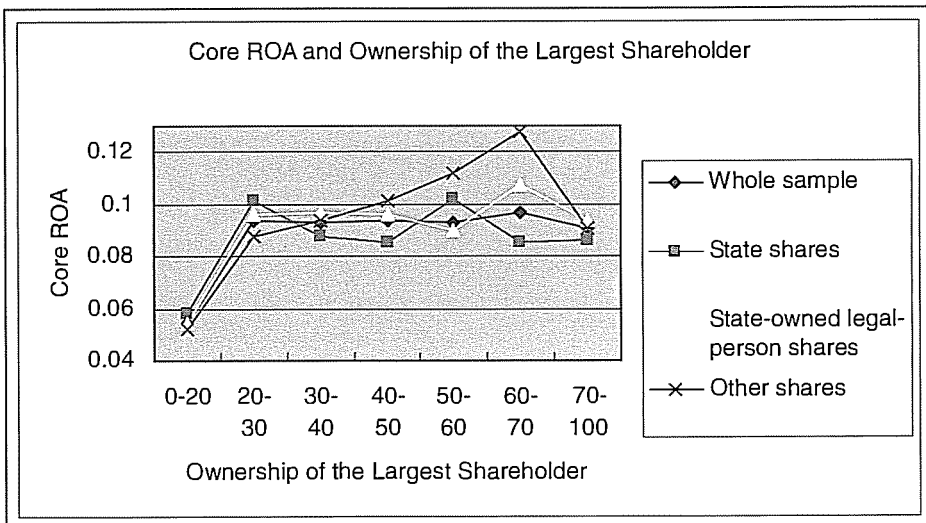


Figure 2-5

