

## 中国基金管理人持股偏好实证研究<sup>1</sup>

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### 摘要

本文以我国上市公司1998–2003年间的经验数据为样本,实证分析了公司治理机制对中国基金管理人的持股偏好的影响。研究发现,在控制了会计指标与股票特征指标等因素的影响后,信息披露与投资者保护等公司治理机制对我国基金管理人的持股偏好具有显著的影响。本文拓展了 Aggarwal *et al.* (2005) 的跨国比较研究,提供了在法律体系不健全的制度环境下公司治理机制对机构投资者的持股偏好产生影响的经验证据。

关键词:基金管理人、持股偏好、会计信息质量、投资者保护

### 一、引言

传统上,财务学领域中对决定机构投资者持股偏好的因素的研究主要围绕信息不对称、“审慎人”假说与交易成本三个主题展开,强调公司的会计指标与股票特征指标对机构投资者持股偏好的决定作用,却忽视公司内部治理结构与外部治理环境等决定公司价值的根本因素的影响。直到最近这些重要因素的影响才受到部分文献的重视。在这些文献中以 Aggarwal *et al.* (2005) 的研究最为引人注目。Aggarwal 等人检验了公司财务透明度(微观因素)与国家的

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法律体系和制度环境(宏观因素)对美国共同基金在新兴市场上的持股偏好的影响。他们的研究使我们的目光转到了公司治理机制对我国机构投资者持股偏好的影响上来。

尽管 Aggarwal 等人提供了公司透明度(会计信息质量)与国家的制度环境(投资者保护)影响美国机构投资者的持股偏好的证据,但是他们的研究结论可能无法直接应用于我国。因此,在我国特殊的制度环境下检验公司内部治理结构与外部治理环境对机构投资者持股偏好的影响是极具现实意义的。

本文沿袭 Aggarwal *et al.*(2005) 的研究,检验了会计信息披露与投资者保护等公司治理机制对我国基金的持股偏好的影响。同时本文还对 Aggarwal 等人的研究进行了拓展,检验了董事会结构对基金持股偏好的影响。本文的研究结果不仅为评价我国的证券投资基金的持股偏好的科学性提供依据,还为我国的公司治理改革的方向提供政策借鉴。研究发现,在控制了公司会计指标与股票特征指标等因素的影响后,信息披露与投资者保护等公司治理机制对我国基金的持股偏好有显著影响。

## 二、文献回顾与理论分析

### (一) 董事会的治理结构与机构投资者的持股偏好

在西方,公司董事会的治理结构被认为是决定机构投资者持股偏好的重要因素。Useem *et al.*(1993) 对美国 40 个养老基金和 40 个投资经理的调查显示,董事会的构成与独立性,董事的技能与经验是他们进行投资决策的关键参考因素。Russell Reynolds Associates (1998) 对美国机构投资者关注的公司治理问题进行了调查,得出的主要结论如下:(1) 机构投资者在进行投资决策时十分关注董事会的质量。(2) 机构投资者认为缺乏足够的信息对公司董事会进行有效评估,尤其是缺乏关于董事会成员的信息。(3) 机构投资者很关注董事会的构成。他们认为家族成员或被解雇过的 CEO (或其他高管) 担任董事是有问题的。(4) 大部分机构投资者认为 CEO 和董事会主席的职位应该分开,单独设置的董事会主席能够实现对 CEO 及其他高管工作的监督。小部分机构投资者赞成合并这两个职位,他们认为一个人出任这两个角色将更有效率。(5) 机构投资者支持董事持股及将股票作为奖励计划。Coombes and Watson (2000) 报告,McKinsey 对世界范围内的超过 200 家的机构投资者的调查显示公司董事会的治理结构是机构投资者十分注重的因素。优良的董事会治理结构应具有如下特征:董事会具有大多数的外部董事;外部董事具有真正的独立性,与公司没有经营方面的财务往来;董事持有公司的重大股权;董事报酬的大部分是股票和期权;对董事有正式的评估机制。Chiu and Monin (2003) 发现在新西兰基金经理重视上市公司治理过程和治理结构的独立性,

特别是独立董事的比例、CEO的职责和新董事的选择。总结起来，董事会的独立性、对董事的监督与激励及董事的专业能力是机构投资者最为关注的因素。尽管这些调查得出了相当一致的结论，但是西方学者却甚少就董事会的治理结构对机构投资者的持股偏好的影响进行直接的实证检验。本文试图弥补经验文献在这方面的缺乏。

上述调查报告均以西方成熟市场国家的机构投资者为调查对象，而以我国机构投资者为调查对象的类似的调查报告尚未出现。众所周知，中西方国家的制度环境存在显著差异。西方国家大多是成熟市场国家，其制度环境有一共同特点，即法律对机构投资者的行为形成了较为有效的约束。而在我国，由于缺乏对中小投资者的利益的法律诉讼保护，法律对机构投资者的行为的约束力很弱。可以猜想制度环境的显著差异极有可能导致中外机构投资者的行为的显著差异。譬如，我国的机构投资者可能从事了更多的机会主义行为，包括事前的“逆向选择”和事后的“道德风险”。我国2000年发生的令人震惊的“基金黑幕”事件就是很好的例证。这一事件揭露出我国基金管理人从事了大量的机会主义行为（平湖和李菁，2000）。譬如，参与股价的操纵，为基金发起人牟取私利，发布误导投资者的信息。而在西方，这类行为是较少发生的。可见制度环境的显著差异极可能导致了中外机构投资者行为的显著差异。因此西方的调查结果是否适用于我国成了我们不得不面对的问题。

我国上市公司的股权结构特殊，突出表现为“一股独大”，尤其是国有股“一股独大”，导致董事会极易被少数大股东所控制。那么在我国董事会治理很可能失效的情况下，董事会的治理特征是否影响到机构投资者的持股偏好成了一个悬而未决的问题。遗憾的是，长期以来鲜有文献就这一重要问题进行直接的经验检验。直到最近，肖星和王琨（2005）才利用2000-2003年间的国内上市公司数据就这一问题进行了经验分析。他们发现外部董事的比例及董事会成员的专业能力是决定基金持股的重要因素。然而肖星等人的研究在研究方法方面有待改进。他们采用了单因素的样本差异比较检验（T和Z检验），没有控制其它因素对基金持股偏好的影响；其研究结论缺乏可靠性。因此本文尝试在研究方法上改进肖星等人的研究，并期待获得更可靠的结论。

本文将主要检验董事会的独立性对机构投资者持股偏好的影响。我们这样做是基于如下考虑。首先从国内外董事会治理的实践来看，董事会治理成败的关键在于董事会的独立性。本文从董事会的独立性入手，更可能抓住问题的要害。其次，董事会治理内容繁多，试图在一篇论文中穷尽对董事会治理的分析是不必要的。从现有文献（Weisbach, 1988; Dayha *et al.*, 2002）来看，独立董事的比例是决定董事会独立性的重要因素。同时，鉴于肖星和王琨（2005）的研究，本文主要检验独立董事的比例对机构投资者持股偏好的影响。在西方国家，一般认为独立董事比例较高的董事会可以通过发挥其独立董事的声誉维持需要来防止董事会被管理者操纵，从而确保董事会决策的独立性和有效性。

同样由于存在制度环境的差异，针对西方国家的理论很可能不适用于我国。如前所述，我国“一股独大”的特殊股权结构极有可能导致董事会的控制权落入控股股东之手，从而使得董事会丧失其独立性。为了改变我国董事会的独立性缺乏的现状，证监会于2001年8月发布了《关于在上市公司建立独立董事制度的指导意见》，开始在我国上市公司中强制推行独立董事制度。从CCER提供的数据来看，截至到2003年12月，99.5%的上市公司建立了独立董事制度，75%的上市公司的独立董事人数占到全部董事人数的三成以上（包括三成）。尽管独立董事制度在我国上市公司中得到了普遍推行，但是独立董事制度的引入是否使董事会的独立性得到实质性地提高仍然悬而未决。从理论上说，独立董事的比例越高，董事会的独立性越强。如果独立董事在我国真正发挥了其提高董事会独立性的作用而机构投资者在投资决策时亦重视到了这一点，那么独立董事的比例与机构投资者持股的概率正相关；两个条件任何一个不成立都将使得独立董事的比例与机构投资者持股的概率不具有相关性。

## （二）信息不对称与机构投资者的持股偏好

在Merton (1987) 的模型中，理性投资者偏好投资他们熟悉的公司的股票。Huberman (1997) 用“Familiarity Breeds Investment”来描述这种由信息驱动的投资，并找到了经验证据支持Merton (1987) 的结论。Kang and Stulz (1997) 的研究表明本国和外国投资者之间的信息不对称导致了本国偏好。2002年McKinsey的调查显示新兴市场上70%的投资者认为会计信息披露对其投资决策非常重要。Gillan and Starks (2003) 论述说，CalPERS决定取消在印尼、马来西亚及泰国等国的投资的部分原因是财务不透明。可见信息不对称显著地影响了投资者的投资决策已经得到了理论界和实务界人士的一致认同。

一些西方学者检验了信息不对称对机构投资者持股偏好的影响，并得出了十分一致的结论，即机构投资者明显偏好投资信息不对称程度低的公司。然而他们就如何衡量信息不对称却莫衷一是。Cready (1994) 认为是否是S&P500成分股可以作为信息对称与否的一个衡量标准，其经验证据表明作为S&P500成分股的公司获得了机构投资者更高水平的投资。Falkenstein (1996) 用上市年龄和UMI数据文件里披露的新闻数量来衡量信息不对称的程度，发现美国共同基金偏好持有上市时间长、新闻数量多的股票。Coval and Moskowitz (1999) 认为地理距离可以作为信息不对称程度的衡量标准。他们认为投资者与公司之间的地理距离越短，信息不对称程度越低。他们发现美国共同基金偏好投资总部设在当地的公司，从而认为本地和外地投资者之间的信息不对称导致了投资者的本地偏好。Dahlquist and Robertsson (2001) 认为规模和国际知名度可能反映了信息不对称的程度，并发现瑞典股票市场的外国机构投资者偏好规模大、出口率高和海外上市的公司。Bradshaw *et al.* (2004) 则提出

ADR的发行和商品出口可能反映了信息不对称的程度。他们认为ADR发行和商品出口均减轻信息不对称。在研究了美国机构投资者对非美国公司的投资后，他们发现发行了ADR、发行ADR的时间长、有商品出口到美国的公司受到了美国机构投资者的偏爱。Aggarwal *et al.* (2005) 也将公司是否发行了ADR作为衡量信息不对称程度的标准，也发现美国机构投资者的偏爱投资发行了ADR的外国公司。

会计信息披露是降低信息不对称的重要手段，而会计信息披露的质量则决定了会计信息披露在降低信息不对称上的有效性。高质量的会计信息披露在实现证券市场的有效运行中的重要作用已经得到了大量文献的关注 (Scott, 1997)。但是截至目前，关于会计信息质量对机构投资者持股偏好的影响的文献还较为缺乏。最近，西方的几篇文献关注了这一问题。Bradshaw *et al.* (2004) 研究了美国机构投资者对非美国公司（世界范围）的投资情况，发现采用符合美国公认会计原则 (GAAP) 的及聘请“五大”为审计师的非美国公司获得了美国机构投资者更高水平的投资。Aggarwal *et al.* (2005) 则深入地研究了会计信息质量对美国共同基金在亚洲金融危机之后的新兴市场上的投资组合选择的影响。他们将审计师质量、合并财务报表、审计意见和国际公认的会计准则作为衡量会计信息质量的代理变量。他们认为会计信息质量高的判断标准是聘请“五大”作为审计师、编制合并财务报表、获得清洁的审计意见和采用美国 GAAP 或国际会计准则。他们按以上判断标准为每一个代理变量赋值（符合标准赋值为 1，否则赋 0）并求和得到一个取值范围为 0-4 会计质量指数。经验分析的结果显示会计质量指数与美国共同基金的持股正相关。现存文献基本上以西方成熟市场的机构投资者为研究对象；而以新兴市场（譬如中国市场）的机构投资者为研究对象并检验信息不对称对新兴市场的机构投资者持股偏好的文献十分缺乏，本文正好可以充实这类文献。

本文借鉴西方的文献将审计意见作为衡量会计信息质量高低的一个标准。但是在我国审计意见能否作为衡量会计信息质量高低的标准仍是一个问题 (夏立军和杨海斌，2002；陈晓和陈武朝，2005；李维安等，2005)，这在很大程度上归因于我国特殊的制度环境。与西方国家相比，我国的制度安排存在如下两个鲜明的特点：其一，会计师事务所普遍采取有限责任公司制的组织形式。目前，我国有限责任制的会计师事务所的最低注册资本是 30 万元；从事证券、期货相关业务的会计师事务所的注册资本、风险基金及事业发展基金也只需不低于 200 万元。我们认为在我国法律体系很不健全的情况下，低风险的有限责任制的组织形式极易诱发注册会计师激进的商业动机和行为。其二，会计师对审计失败所承担的法律风险多为行政责任，鲜有民事责任。袁园和刘骏 (2005) 报告从 1998 年 1 月 1 日至 2002 年 6 月 30 日 4 年半的时间里，全国受到行政处罚的注册会计师有 687 人次，会计师事务所所有 1073 家次；承担民事责任的注册会计师只有 1 人，赔偿金额 1 万元，承担民事责任的会计师

事务所 28 家，赔偿金额 864 万元。这种状况削弱了民事法律责任对会计师独立审计行为的约束。我们认为我国特殊的制度环境造就了会计师在享有高收益的同时却承担很低的风险，继而导致了我国会计信息质量的普遍低下。可见在我国会计信息质量普遍低下的情况下，清洁（标准无保留）的审计意见很可能不是会计信息质量高的象征，而是审计意见购买的结果。那么将清洁审计意见视为衡量高质量会计信息的标准是存在误将低质量的会计信息视为高质量的风险的。尽管如此，何红渠和张志红（2003）和李维安等（2005）的研究表明在我国审计意见仍包涵了会计信息质量高低的信息。而且王克敏和陈井勇（2004）已将审计意见作为衡量会计信息质量高低的标准。因此本文仍将审计意见作为衡量会计信息质量高低的标准。我们预期获得清洁审计意见的公司将更能得到机构投资者的青睐。

西方的诸多文献，譬如 Titman and Trueman (1986)，Reed *et al.* (2000)，Mitton (2002)，Bradshaw *et al.* (2004) and Aggarwal *et al.* (2005)，已经将“五大”（或“六大”）审计师与更高的审计质量等同起来。由于“五大”会计公司有更高的声誉维持需要 (Michaely and Shaw, 1995)，可能比当地会计公司有更高的独立性，或者需要为犯错承担更大的法律责任 (Dye, 1993)，因此他们更有可能确保透明度和消除公司财务报告的错误。在我国“五大”会计公司同样可能比本土会计公司有更高的声誉维持需要，也可能比本土会计公司有更高的独立性。此外，根据胡旭阳 (2002) 的研究，“五大”的声誉在我国资本市场中具有显著的信息含量。因此我们认为可以将财务报告是否由“五大”会计公司审计作为衡量会计信息质量高低的另一标准。可以预期由“五大”会计公司审计的公司更能获得机构投资者的偏好。

### （三）投资者保护与机构投资者的持股偏好

投资者保护是指商业法律及其执行保护投资者免受公司内部人侵占利益的程度 (Castro *et al.*, 2004)。一些文献探讨了法律在形成有效的保护投资者利益的公司治理中的重要作用 (La Porta *et al.*, 1997, 1998, 2000)。La Porta 等人基于对 49 个国家的数据的分析得出，普通法国家对投资者利益的保护显著优于大陆法国家，而且健全的投资者保护法律可以提高会计信息的质量并促进资本市场的发展。Leuz *et al.* (2003) 报告在那些对投资者利益的法律保护越强的国家提供给外部投资者的信息质量越高。而另一些文献则强调了宏观层面（国家）的治理与微观层面（公司）的治理两者对于形成有效的投资者保护的重要意义。譬如，Klapper and Love (2004) 的经验证据表明在那些法律环境脆弱的国家，公司层面的治理更加重要，而且有效的公司层面的治理能在一定程度上弥补脆弱的法律环境的不足。同时他们指出国家层面的治理与公司层面的治理之间不是替代关系而是互补关系。西方的文献主要探讨了世界范围内的投资者保护的國家间差异。而樊纲和王小鲁 (2001) 根据大量的统计和调查

资料，采用“主成分分析法”，编制出中国各地区的法治水平指标与政府干预程度指标<sup>5</sup>。这为本文研究我国地区间的投资者保护水平的差异提供了依据。

一些学者提出政府能够通过非法律的手段来影响公司治理（Berglof and von Thadden, 1999; Rajan and Zingales, 1999）。在大陆法国家，政府很可能未将经济决策权授予法院（La Porta *et al.*, 2000），并利用政府权力直接对经济进行干预。这极有可能导致政府权力超越法律的情形出现，从而极大地削弱法律保护投资者利益的功能，导致低下的投资者法律保护（La Porta *et al.*, 2000）。在我国，国家出于保持公有制主体地位的需要而直接控制着大量企业，随之而来地是政府对企业经营的大量行政干预。过多的行政干预极有可能导致政府权力超越法律的情况发生，并最终导致我国的商业法律对中小投资者利益的保护乏力。同时，我国股票市场设立的初衷本就是为国企改革和解困服务，而有效的投资者法律保护与这样的社会目标很可能是相互冲突的（夏立军和方轶强，2005）。这样政府为了实现其社会目标，难免凌驾于法律之上。我们认为在我国特殊的制度环境下，政府权力对法律的超越是导致我国投资者法律保护低下的根本原因。

近来西方学者开始探讨投资者保护对机构投资者持股偏好的影响。Aggarwal *et al.* (2005) 利用 La Porta *et al.* (1998) and Pistor *et al.* (2000) 构造的世界各国的股东权利指数（指数值越大表示对股东权利保护越好）和 Berkowitz *et al.* (2003) 构造的世界各国的法律体系与制度环境指数（指数值越大表示法律体系越有效、制度环境越优良）研究了股东保护、法律与制度对美国共同基金在新兴市场上的投资组合选择的影响。他们的经验结果表明股东权利指数、法律体系与制度环境指数均与美国共同基金持股正相关。Aggarwal *et al.* (2005) 检验的是国家间的投资者保护的差异对美国的机构投资者的持股偏好的影响。与孙铮等人 (2005) 的观点一致，我们亦认为这类国家间的比较研究存在的一个明显缺陷，即难以控制非正式制度因素（如文化、道德水平、风俗习惯、声誉机制等）的影响。我们认为非正式制度与正式制度（法律、政府政策法规等）一样在形成有效的保护投资者利益的公司治理中的意义重大。因此，针对具有相同的非正式制度，正处于制度变迁、地区经济发展不平衡的同一国家的内部研究就显得很有必要。与 Aggarwal 等人的国家间的比较研究不同的是，本文将更多地关注在投资者法律保护体系整体不健全的情况下，我国地区间的投资者保护程度的差异对机构投资者持股偏好的影响。从总体来看，我国的法治水平较西方国家低下，政府对经济的干预程度较西方国家更

<sup>5</sup> 樊纲和王小鲁（2001）编制的指标体系涉及五个方面，分别是政府与市场的关系、非国有经济的发展、产品市场的发育程度、要素市场的发育程度及市场中介发育与法律制度环境。其中第一个方面与第五个方面的指标分别代表了地区的政府干预程度与法治水平。

高。同时，我国的法治水平与政府干预程度在地域分布上很不均衡。与中西部地区相比，东部地区法治水平高、政府干预程度低（樊纲和王小鲁，2001）。根据前文的理论分析，可以认为地区间的法治水平与政府干预程度的显著差异会导致地区间投资者保护水平的显著差异。因此，本文将利用樊纲和王小鲁编制的法治水平指数与政府干预程度指数研究我国投资者保护水平的地区间差异对机构投资者持股偏好的影响。可以预期机构投资者偏好投资法治水平高、政府干预程度低的地区的公司。

在公司制企业内部，公司治理的功能主要是解决利益相关者（stakeholders）之间的利益冲突，即代理冲突（Gillan and Starks，2003）。委托人与代理人之间的信息不对称和偏好不一致是产生代理冲突的两个来源。不同经济体系中的公司面临的主要代理问题有巨大差异。在美国，股权普遍高度分散，代理问题突出表现在股东与管理者之间（Berle and Means, 1932; Jensen and Meckling, 1976; Jensen 1986; Roe, 1990）。而在美国之外的许多国家，股权普遍高度集中且存在控股股东（La Porta *et al.*, 1999; Becht and Roell, 1999; Claessens *et al.*, 2000; Faccio and Lang, 2002），代理问题突出表现为控股股东对小股东利益的侵占（Shleifer and Vishny, 1997; Faccio *et al.*, 2001; Claessens *et al.*, 2002）。而在我国，股权高度集中，突出表现为“一股独大”，因此我国上市公司普遍面临的代理问题是后一类。在我国公司内部人对外部投资者进行利益剥夺的一种重要方式是大量占用上市公司的资金（李增泉等，2004；唐清泉等，2005）。我们认为控股股东对上市公司资金的大量占用既是我国上市公司内部高昂的代理成本的直接反映，也是我国法律对投资者利益的保护乏力的直接表现。马曙光等（2005）的模型表明控股股东对上市公司资金的大量占用是赤裸裸的掏空行为，会严重损害上市公司的价值。那么回到本文的主题，机构投资者，作为专业的投资者，是否意识到大股东的掏空行为，并拒绝投资那些遭到大股东严重掏空的公司？回答这一问题需要取得相关的经验证据。遗憾的是迄今为止尚无文献就这一重要问题进行经验分析。本文正想弥补这方面的空白。我们预期上市公司的资金被占用的程度与机构投资者持股的概率负相关。

大量的研究（Coffee, 1999, 2002; Stulz, 1999; Reese and Weisbach, 2002; Doidge *et al.*, 2004）认为跨境到美国上市会缓和控股股东对小股东利益剥夺的代理问题，因为这些公司必须遵循美国的投资者保护法律。Bai *et al.*（2004）提出发行 H 股或者 B 股的中国大陆公司的投资者保护水平更高。我们认为 Bai 等人将发行 H 股和发行 B 股的公司归为同一类是欠妥的，这是因为发行 B 股的公司并未受到其它市场的投资者法律保护体系的约束，其投资者保护水平是否更高尚未可知。而 B 股市场的持续低迷则表明发行 B 股的公司投资者保护水平很可能并不比其它公司更高。因此本文将区分发行 H 股的公司与发行 B 股的公司，而仅检验发行 H 股对机构投资者持股偏好的影

响。我们认为发行 H 股的公司由于受到香港市场的投资者保护法律的约束，其投资者保护水平高于未发行 H 股的公司。我们预期发行 H 股的公司更能获得机构投资者的青睐。

### 三、 研究设计

#### (一) 样本选取与数据来源

本文以 1998–2003 年间剔除数据缺失的非金融上市公司为研究样本。采用的数据包括基金持股数据、法治水平与政府干预程度数据、内部治理结构数据、财务数据和股票特征数据。基金持股数据是通过统计公司十大股东文件数据而得到的。由于各地区的法治水平和政府干预程度在不同年度间相对稳定，本文以樊纲和王小鲁（2001）报告的 2000 年度的数据作为各地区 6 个年度的法治水平和政府干预程度的衡量，这与夏立军和方轶强（2005）的处理类似。而内部治理结构数据、财务数据和股票特征数据均来源于 CCER 中国证券市场数据库。

#### (二) 变量定义

##### 1. 因变量

本文模型的因变量是一个哑变量  $FH$ ，当公司被基金持股时赋值为 1，否则为 0。我们通过查阅上市公司年报，统计了基金作为公司前十大股东的情况。若有基金作为公司前十大股东的就被定义为基金持股公司，其它情况均被界定为基金未持股公司。我们这样处理是基于如下考虑：基金作为公司前十大股东成员时，基金持股数量较大，对基金的业绩有重大影响，更可能代表了基金的长期投资策略。这一处理方法与王琨和肖星（2005）一致。

##### 2. 测试变量

###### (1) 如何衡量董事会的独立性？

根据前文的分析，我们采用独立董事比例 ( $ID$ ) 来衡量董事会的独立性。正如前文所述，在我国这一指标可能不能很好地俘获董事会独立性的信息。但是在没有找到更好的衡量方法之前，权且采用这一指标。

###### (2) 如何衡量会计信息披露质量？

根据前文的分析，我们采用审计意见 ( $AUDI$ )、审计师质量 ( $FIVE$ ) 衡量会计信息披露质量。同样这些指标也很难说完美。

###### (3) 如何衡量投资者保护程度？

前文的分析表明大股东对上市公司的资金占用 ( $OCCU$ ) 可以作为投资者保护程度的衡量。现有文献显示衡量资金占用的方法有两种。一种是李增泉等

(2004)采用的方法,用关联方应收应付款净值除以总资产作为资金占用的度量。另一种是马曙光等(2005)采用的方法,用其它应收款除以总资产作为资金占用的度量。我们认为两种方法均有缺陷。由于在实务中许多上市公司隐瞒了大股东对上市公司的资金占用状况而不在关联方应收应付款中披露,因此李增泉等人的方法会存在低估资金占用数量的风险。很明显,其它应收款不仅包含了大股东占用的资金,还包含了上市公司正常经营所形成的资金。由于马曙光等人的界定方法无法区分这两类资金,导致存在高估资金占用数量的风险。由于我们没能完整地收集到1998-2003年间的关联方应收应付款的数据。我们决定借鉴马曙光等人的界定方法,同时我们对马曙光等人的界定做了一定的改进。马曙光等人仅考虑到了大股东占用上市公司资金的情形,而实际上上市公司也会占用大股东的资金。因此我们要去除上市公司占用大股东的这部分资金,从而得到大股东占用上市公司资金的净额。基于此,我们采用(其它应收款 - 其它应付款) / 总资产来衡量上市公司的资金被占用的程度。

根据前文,我们将是否发行H股(HS)作为投资者保护程度的又一衡量指标。正如前文所述,樊纲和王小鲁(2001)构造的中国各地区法治水平指数(LAW)和政府干预指数(GOV)俘获了外部治理环境的差异所导致的投资者保护程度的差异的信息,是本文重点检验两个变量。

### 3. 控制变量

现有文献(Badrinath *et al.*, 1989; Del Guercio, 1996; Falkenstein, 1996; Eakins *et al.*, 1998; Gompers and Metrick, 2001; Dahlquist and Robertsson, 2001; 杨德群等, 2004; 胡倩, 2005)显示上市公司的会计指标及股票特征指标是影响机构投资者持股的重要因素。因此我们控制了一些重要的会计指标与股票特征指标,具体包括毛利对资产总额比率(ROA)、财务杠杆比率(LEVE)、上市年龄(AGE)、规模(CMV)、市场风险系数(BETA)。

此外,为了控制宏观经济因素和行业因素的影响,我们分别设置了5个年度哑变量和20个行业哑变量。全部变量的定义见表1。

### (三) 研究模型

本文的因变量是一个哑变量,因此适用二元选择模型(Binary-Choice Model)。常用二元选择模型有Probit、Logit和Extreme value模型。本文借鉴Aggarwal *et al.*(2005)的研究,我们采用Logit模型。令 $P(i, t)$ 为股票 $i$ 在第 $t$ 期被基金持有的概率, $x(i, t-j)$ 为公司 $i$ 在第 $t-j$ 期的特征构成的向量, $b$ 是待估参数向量,那么可以构造Logit概率分布函数为:

$$P(i, t) = \frac{1}{1 + e^{-(a + b \cdot x(i, t-j))}}$$

表 1 变量定义

变量名	变量定义
<i>FH</i>	哑变量。当基金作为公司前十大股东时取 1，否则取 0。
<i>ID</i>	独立董事比例 = 独立董事总数 / 全部董事总数。
<i>AUDI</i>	审计意见，哑变量。审计意见类型为标准无保留意见时取 1，否则取 0。
<i>FIVE</i>	审计师质量，哑变量。审计师为“五大”时取 1，否则取 0。
<i>EXPR</i>	资金占用 = (其它应收款 - 其它应付款) / 总资产。
<i>HS</i>	H 股发行，哑变量。发行了 H 股时取 1，否则取 0。
<i>LAW</i>	法治指数。该变量取值范围为 1-10，数值越大，表示法治水平越高。
<i>GOV</i>	政府干预指数。该变量取值范围为 1-10，数值越大，表示政府干预程度越低。
<i>ROA</i>	毛利对资产总额比率 = 主营业务利润 / 总资产。用来控制会计绩效的影响。
<i>LEVE</i>	财务杠杆比率。用来控制财务风险的影响。
<i>AGE</i>	上市年龄。用来控制上市时间的影响。
<i>CMV</i>	规模 = 流通市值的自然对数。用来控制规模的影响。
<i>BETA</i>	CAPM 模型中的贝塔系数。控制公司市场风险的影响。
<i>YEAR</i>	年度哑变量，用来控制宏观经济因素的影响。本文涉及 6 年的数据，因此设置了 5 个年度哑变量。
<i>INDU</i>	行业哑变量，用来控制行业因素的影响。按证监会的分类标准（除制造业按小类划分，其它以大类为准），共有 22 个行业。剔除金融行业，最后设置了 20 个行业哑变量。

上式说明股票  $i$  在  $t$  期被基金持有的概率取决于公司在第  $t-j$  期的公司特征  $x(i, t-j)$ 。需要讨论的是  $j$  的取值。现有文献采用了两种处理方法。一种是  $j$  取 0，即用当期的公司特征变量解释同期的机构投资者持股 (Bradshaw *et al.*, 2004)；另一种是  $j$  取 1，即用当期的公司特征变量解释滞后一期的机构投资者持股 (Eakins *et al.*, 1998)，Eakins *et al.* (1998) 认为这样处理可以避免“look ahead bias”。我们将同时采用这两种方法。还需要讨论的是，用单期的横截面数据还是用多期的混合数据进行实证分析？Falkenstein (1996) and Eakins *et al.* (1998) 用单期横截面数据进行回归分析，而 Dahlquist and Robertsson (2001) 同时采用了这两种方法。我们也同时采用这两种方法。需要指出的是横截面数据模型的优势是克服了混合数据模型的自相关问题。另外我们对自变量进行相关性分析后发现变量 *LAW* 与 *GOV* 之间存在高度的相关性 (见表 4)，相关系数达到 0.76，因此我们将它们分别纳入检验模型，从而避免模型出现共线性问题。

## （四）数据描述

表 2 是相关变量的描述性统计特征。它显示，基金持股的公司达到 40.9%，这说明超过四成的公司的前十大股东中至少有一个是基金公司。外部董事的比例平均为 0.127。绝大多数公司（87.4%）获得了清洁的审计意见。由“五大”审计的公司比例很低（5.9%），这说明中国绝大多数公司聘请了质量较低的本国审计师。大股东对上市公司资金的净占用达到总资产的 3%。到香港上市的公司仅占 2%，这表明只有极少比例的公司受到香港市场更严格的投资者保护法律的约束。

表 2 变量的描述性统计特征

	均值	中值	标准差	样本量
<i>FH</i>	0.409	0.000	0.492	5845
<i>ID</i>	0.127	0.000	0.149	5840
<i>AUDI</i>	0.874	1.000	0.332	5845
<i>FIVE</i>	0.059	0.000	0.236	5833
<i>EXPR</i>	0.030	0.010	0.144	5791
<i>HS</i>	0.020	0.000	0.141	5840
<i>LAW</i>	5.794	5.630	1.280	5798
<i>GOV</i>	6.687	7.380	1.357	5798
<i>ROA</i>	0.107	0.098	0.073	5791
<i>LEVE</i>	0.474	0.435	0.534	5796
<i>AGE</i>	4.615	4.500	2.801	5845
<i>CMV</i>	20.483	20.447	0.711	5845
<i>BETA</i>	1.034	1.047	0.288	5521

## 四、经验分析与结果

### （一）单变量分析

基金持股与未持股公司的特征是否存在系统性差异？表 3 列示了基金持股与未持股的两类公司特征变量的混合数据的参数检验结果。测试变量的检验结果表明：（1）两类公司的独立董事的比例不存在显著差异<sup>6</sup>。根据前文的

<sup>6</sup> 这与肖星和王琨（2005）的检验结果不一致。可能的原因有二：其一是由于两文所采用的数据不同所致。本文采用了 6 个年度的数据，而肖星和王琨采用了 4 个年度的数据。其二是由于所采用的研究方法本身的缺陷所致。我们知道，混合数据的样本均值比较检验根本无法控制数据结构性变化的问题，从而使得检验结果的可靠性下降。

表 3 样本公司特征变量的面板数据分组检验

	是否持股	样本数	均值	均值差异	T 值
<i>ID</i>	1	2388	0.126		
	0	3452	0.127	-0.001	-0.412
<i>AUDI</i>	1	2389	0.916		
	0	3456	0.844	0.072	8.531***
<i>FIVE</i>	1	2384	0.066		
	0	3449	0.055	0.011	1.730*
<i>EXPR</i>	1	2380	0.019		
	0	3411	0.038	-0.020	-5.749***
<i>HS</i>	1	2388	0.027		
	0	3452	0.016	0.011	2.763***
<i>LAW</i>	1	2380	5.836		
	0	3418	5.765	0.071	2.071**
<i>GOV</i>	1	2380	6.699		
	0	3418	6.619	0.080	1.992**
<i>ROA</i>	1	2380	0.122		
	0	3411	0.097	0.025	12.704***
<i>LEVE</i>	1	2381	0.413		
	0	3415	0.517	-0.103	-8.318***
<i>AGE</i>	1	2389	4.048		
	0	3456	5.007	-0.959	-13.060***
<i>CMV</i>	1	2389	20.707		
	0	3456	20.328	0.379	21.122***
<i>BETA</i>	1	2202	1.040		
	0	3319	1.029	0.010	1.359

\* , \*\* 和 \*\*\* 分别表示双侧 t 检验在 10% , 5% 和 1% 的水平下显著。

分析,可从如下两个方面探究其原因。其一,在我国上市公司普遍存在内部人控制的状况下,独立董事根本没有发挥其治理功能,而基金管理人意识到了这一点,从而没有将独立董事比例的高低作为其投资决策的重要参考因素。其二,独立董事发挥了其提高董事会独立性的治理功能,但是基金管理人却没有意识到了这一点,或者意识到了但认为不重要,从而也没有将这一指标作为其投资决策的参考因素。(2) 基金持股公司的会计信息质量更高。获得清洁审计意见并由“五大”审计的公司获得了基金的青睐。(3) 基金持股的公司的投资者保护程度更高。具体表现为大股东占用资金的数量更低、发行了 H

股、所在地区的法治水平更高与政府干预程度更低。控制变量的检验结果显示,基金持股公司的资产利润率更高、资产负债率更低、上市时间更短、规模更大。这与国内现有文献(杨德群等, 2004; 肖星和王琨, 2005)的研究结果一致。此外,我们还对横截面数据进行了分组检验并得到与混合数据分组检验大体一致的结果,限于篇幅不再报告。

表4列示了基于混合数据的相关性分析结果。表中第一列数据是我们关注的焦点,它显示所有变量的检验结果与表3的分组检验的结果保持很高程度的一致的。此外,我们还对6个年度横截面数据分别进行了相关性分析并发现大部分变量的分析结果保持很高的一致性,限于篇幅不再报告。

## (二) 多变量分析

### 1. 混合数据的回归分析

表5是混合数据的Logit回归分析结果。考虑到构成混合数据的各横截面数据可能存在的结构性差异(源于宏观经济因素的变化),我们采用设置时间哑变量的方法来解决这一问题。同时我们还控制了行业因素的影响。鉴于法治指数与政府干预指数之间的高度相关性,本文将它们分别纳入回归模型。

表5显示,当期和滞后1期的模型的回归结果完全一致。在控制住会计指标、股票特征指标、宏观经济因素和行业因素的影响后,本文的测试变量(除ID外)仍具有显著的解释力。在此我们对重要的结果进行描述与分析:(1)、独立董事比例没有显著的解释能力。这与单变量分析的结果一致。可见当我们改进了研究方法,解决了数据结构性变化的问题,仍然没有发现独立董事比例对基金持股偏好有显著影响。这进一步表明独立董事的比例不是决定基金持股偏好的重要因素。(2)、会计信息的质量是决定基金持股偏好的重要因素。这从变量AUDI与FIVE的回归系数可以看出。这与Aggarwal *et al.* (2005)的结果一致。这表明尽管中外的制度环境有别,但是会计信息的质量仍是决定机构投资者持股偏好的重要因素。(3)、投资者保护程度是决定我国基金管理人持股偏好的重要因素。首先,EXPR与FH显著负相关,这表明掏空程度越高的公司会遭到基金的拒绝。其次,HS与FH显著正相关,这说明接受香港市场的投资者保护法律的约束会显著提高公司被基金持股的概率。这暗示了政府应积极地支持国内公司到香港或其它成熟市场上市。最后,变量LAW和GOV均与FH显著正相关。这表明政府提供的投资者保护环境也是决定基金持股偏好的重要因素。这暗示了我国政府要着力改变对经济行政干预过多的现状,提高法律在保护投资者利益中的作用,从根本上改善投资者保护环境。其它控制变量的检验结果与国内现有文献一致。

表 4 相关性分析

	FH	ID	AUDI	FIVE	EXPR	HS	LAW	GOV	ROA	LEVE	AGE	CMV
ID	-0.01 (0.34)											
AUDI	0.11 (0.00)	0.10 (0.00)										
FIVE	0.02 (0.04)	0.14 (0.00)	0.05 (0.00)									
EXPR	-0.07 (0.00)	-0.11 (0.00)	-0.14 (0.00)	-0.05 (0.00)								
HS	0.04 (0.00)	0.11 (0.00)	0.01 (0.29)	0.36 (0.00)	-0.02 (0.11)							
LAW	0.03 (0.02)	0.03 (0.02)	-0.07 (0.00)	0.11 (0.00)	0.00 (0.40)	0.04 (0.00)						
GOV	0.01 (0.09)	0.01 (0.13)	-0.02 (0.04)	0.07 (0.00)	-0.04 (0.00)	0.05 (0.00)	0.76 (0.00)					
ROA	0.17 (0.00)	0.06 (0.00)	0.25 (0.00)	0.09 (0.00)	-0.10 (0.00)	0.02 (0.05)	0.02 (0.04)	0.07 (0.00)				
LEVE	-0.10 (0.00)	0.06 (0.00)	-0.22 (0.00)	-0.04 (0.00)	-0.21 (0.00)	-0.01 (0.25)	0.04 (0.00)	0.03 (0.01)	-0.14 (0.00)			
AGE	-0.17 (0.00)	0.31 (0.00)	-0.10 (0.00)	0.07 (0.00)	-0.02 (0.07)	0.02 (0.07)	0.20 (0.00)	0.18 (0.00)	-0.10 (0.00)	0.17 (0.00)		
CMV	0.26 (0.00)	-0.09 (0.00)	0.15 (0.00)	0.09 (0.00)	-0.03 (0.01)	0.04 (0.00)	0.08 (0.00)	-0.01 (0.32)	0.19 (0.00)	-0.14 (0.00)	0.00 (0.48)	
BETA	0.02 (0.10)	0.11 (0.00)	-0.01 (0.28)	0.00 (0.48)	-0.01 (0.24)	-0.03 (0.02)	0.05 (0.00)	-0.01 (0.24)	-0.13 (0.00)	0.04 (0.00)	0.08 (0.00)	-0.19 (0.00)

表中括号内为 Spearman 检验的概率值，该值在区间 [0, 0.01]、[0.01, 0.05]、[0.05, 0.1] 内分别表示统计检验在 1%、5%、10% 的水平下显著。

表 5 混合数据的 Logit 回归分析

	j = 0	j = 0	j = 1	j = 1
	(1)	(2)	(3)	(4)
<i>C</i>	-19.470 (0.000)	-19.920 (0.000)	-18.630 (0.000)	-19.180 (0.000)
<i>ID</i>	0.333 (0.418)	0.338 (0.344)	0.392 (0.450)	0.311 (0.547)
<i>AUDI</i>	0.675 (0.000)	0.659 (0.000)	0.738 (0.000)	0.721 (0.000)
<i>FIVE</i>	0.112 (0.069)	0.103 (0.072)	0.125 (0.089)	0.108 (0.078)
<i>EXPR</i>	-1.939 (0.000)	-1.907 (0.000)	-2.361 (0.000)	-2.329 (0.000)
<i>HS</i>	1.978 (0.006)	1.883 (0.009)	3.435 (0.000)	3.295 (0.000)
<i>LAW</i>	0.093 (0.000)		0.123 (0.000)	
<i>GOV</i>		0.075 (0.002)		0.099 (0.000)
<i>ROA</i>	3.267 (0.000)	3.186 (0.000)	3.620 (0.000)	3.501 (0.000)
<i>LEVE</i>	-0.819 (0.000)	-0.817 (0.000)	-0.935 (0.000)	-0.939 (0.000)
<i>AGE</i>	-0.143 (0.000)	-0.142 (0.000)	-0.127 (0.000)	-0.125 (0.000)
<i>CMV</i>	0.952 (0.000)	0.975 (0.000)	0.895 (0.000)	0.922 (0.000)
<i>BETA</i>	0.846 (0.000)	0.877 (0.000)	0.685 (0.000)	0.720 (0.000)
<i>YEAR</i>	YES	YES	YES	YES
<i>INDU</i>	YES	YES	YES	YES
<i>R</i> <sup>2</sup>	0.143	0.143	0.134	0.133
<i>N</i>	5317	5317	4047	4047

表中括号内为双尾 Z 检验的概率值，该值在区间[0, 0.01]、[0.01, 0.05]、[0.05, 0.1]内分别表示统计检验在 1%、5%、10% 的水平下显著。

## 2. 横截面数据的回归分析

由于混合数据可能存在自相关问题，因此本文进行了分年度的横截面数据回归分析以获得进一步的证据。在进行横截面数据回归分析时，我们仍采用两种处理法：用当期的自变量分别回归当期和滞后1期的因变量。我们发现两种处理得出的主要结论是一致的。因此我们只报告用当期的自变量回归当期的因变量的结果。表6列示了横截面数据的Logit回归分析结果。可以看出，在控制住会计指标、股票特征指标、宏观经济因素和行业因素的影响后，本文的测试变量（除*ID*外）仍具有显著的解释力。我们对重要的结果描述如下。*ID*的回归系数在所有年度均不显著。这与混合数据模型的检验结果一致。除1999年外的5个年度，*AUDI*的回归系数均显著为正。而*FIVE*的回归系数仅在2003年显著为正。这表明审计意见具有一贯的信息含量，而“五大”审计师直到2003年才具有显著的信息含量。但无论如何，这些证据进一步表明了会计信息质量是决定我国基金管理人持股偏好的重要因素。除1998年外的

表 6 横截面数据的 Logit 回归分析

	1998	1998	1999	1999	2000	2000
	(5)	(6)	(7)	(8)	(9)	(10)
<i>C</i>	-15.149 (0.000)	-15.282 (0.000)	-7.432 (0.012)	-7.577 (0.012)	-13.203 (0.000)	-13.939 (0.000)
<i>ID</i>	32.874 (0.254)	32.710 (0.282)	-1.933 (0.497)	-2.203 (0.434)	2.479 (0.206)	2.318 (0.239)
<i>AUDI</i>	0.571 (0.053)	0.557 (0.057)	0.235 (0.246)	0.225 (0.268)	0.773 (0.001)	0.766 (0.001)
<i>FIVE</i>	-0.510 (0.516)	-0.524 (0.504)	0.241 (0.122)	0.218 (0.137)	-0.819 (0.413)	-0.793 (0.427)
<i>EXPR</i>	-0.139 (0.898)	-0.164 (0.879)	-1.647 (0.044)	-1.599 (0.050)	-2.757 (0.002)	-2.620 (0.003)
<i>HS</i>	2.356 (0.452)	2.054 (0.389)	3.069 (0.169)	3.110 (0.158)	-0.524 (0.804)	-0.562 (0.789)
<i>LAW</i>	0.181 (0.020)		0.177 (0.009)		0.062 (0.327)	
<i>GOV</i>		0.141 (0.091)		0.129 (0.041)		0.093 (0.065)
<i>ROA</i>	3.030 (0.103)	2.790 (0.130)	2.548 (0.091)	2.395 (0.112)	2.890 (0.038)	2.736 (0.050)
<i>LEVE</i>	0.687 (0.338)	0.619 (0.384)	0.097 (0.850)	0.069 (0.894)	-1.381 (0.005)	-1.384 (0.005)
<i>AGE</i>	-0.151 (0.017)	-0.143 (0.024)	-0.206 (0.000)	-0.191 (0.000)	-0.146 (0.000)	-0.153 (0.000)
<i>CMV</i>	0.633 (0.001)	0.644 (0.001)	0.323 (0.028)	0.341 (0.021)	0.627 (0.000)	0.648 (0.000)
<i>BETA</i>	0.007 (0.986)	-0.047 (0.904)	0.924 (0.008)	0.972 (0.005)	0.544 (0.053)	0.609 (0.032)
<i>INDU</i>	YES	YES	YES	YES	YES	YES
<i>R<sup>2</sup></i>	0.101	0.100	0.080	0.076	0.116	0.117
<i>N</i>	656	656	731	731	852	852

表中括号内为双尾 Z 检验的概率值，该值在区间 [0, 0.01]、[0.01, 0.05]、[0.05, 0.1] 内分别表示统计检验在 1%、5%、10% 的水平下显著。

表 6 续

	2001	2001	2002	2002	2003	2003
	(11)	(12)	(13)	(14)	(15)	(16)
<i>C</i>	-25.512 (0.000)	-25.732 (0.000)	-19.924 (0.000)	-20.409 (0.000)	-43.835 (0.000)	-44.416 (0.000)
<i>ID</i>	-0.159 (0.818)	-0.126 (0.856)	0.213 (0.825)	0.315 (0.744)	0.956 (0.468)	1.027 (0.434)
<i>AUDI</i>	0.506 (0.032)	0.481 (0.041)	0.774 (0.002)	0.752 (0.003)	1.111 (0.001)	1.053 (0.001)
<i>FIVE</i>	0.138 (0.621)	0.156 (0.575)	0.206 (0.352)	0.251 (0.258)	0.584 (0.013)	0.682 (0.003)
<i>EXPR</i>	-1.276 (0.089)	-1.288 (0.087)	-2.270 (0.005)	-2.225 (0.006)	-2.354 (0.018)	-2.336 (0.021)
<i>HS</i>	4.263 (0.020)	4.233 (0.021)	3.062 (0.084)	2.961 (0.095)	4.336 (0.020)	4.297 (0.021)
<i>LAW</i>	0.097 (0.089)		0.159 (0.003)		0.221 (0.000)	
<i>GOV</i>		0.041 (0.431)		0.094 (0.073)		0.129 (0.032)
<i>ROA</i>	4.419 (0.000)	4.433 (0.000)	3.074 (0.006)	3.073 (0.006)	5.685 (0.000)	5.622 (0.000)
<i>LEVE</i>	-0.298 (0.243)	-0.297 (0.246)	-1.680 (0.000)	-1.686 (0.000)	-0.560 (0.097)	-0.547 (0.097)
<i>AGE</i>	-0.161 (0.000)	-0.158 (0.000)	-0.189 (0.000)	-0.188 (0.000)	-0.119 (0.000)	-0.118 (0.000)
<i>CMV</i>	1.121 (0.000)	1.138 (0.000)	0.921 (0.000)	0.949 (0.000)	2.048 (0.000)	2.080 (0.000)
<i>BETA</i>	2.333 (0.000)	2.358 (0.000)	1.446 (0.000)	1.481 (0.000)	1.072 (0.000)	1.119 (0.000)
<i>INDU</i>	YES	YES	YES	YES	YES	YES
<i>R<sup>2</sup></i>	0.149	0.148	0.154	0.152	0.321	0.320
<i>N</i>	1000	1000	1052	1052	1145	1145

表中括号号为双尾 Z 检验的概率值, 该值在区间[0, 0.01]、[0.01, 0.05]、[0.05, 0.1]内分别表示统计检验在 1%、5%、10% 的水平下显著。

5个年度，*EXPR*均与*FH*显著负相关。可见被严重掏空的公司遭到了基金的一贯拒绝。这暗示了大股东对上市公司的资金占用问题已成了急需解决的问题。仅在2001-2003年度*HS*的回归系数显著，而之前的3个年度均不显著。我们猜想原因可能是直到2001年基金才意识到发行*H*股的公司投资者保护水平更高。除2000年外的5个年度，*LAW*的回归系数均显著为正，这表明基金一贯地偏好投资法治水平高的地区的公司。除2001年外的5个年度，*GOV*的回归系数均显著为正，这表明基金向来偏好投资政府干预程度低的地区的公司。这进一步支持了投资者保护环境影响机构投资者持股偏好的论点。其它控制变量的检验结果与国内现有文献报告的结果一致，因此不再赘述。

## 五、结论与局限性

本文以1998-2003年间的中国上市公司为样本检验了董事会的治理结构、会计信息披露与投资者保护等公司治理机制对基金持股偏好的影响。本文的分析得出了如下结果：首先，没有证据表明独立董事的比例影响了基金的持股偏好。其次，会计信息质量是决定基金持股偏好的重要因素。会计信息质量高（清洁审计意见与“五大”作为审计师）的公司更能吸引基金的注意。最后，投资者保护也是决定基金持股偏好的重要因素。大股东掏空的程度低、发行*H*股的公司更能得到基金的青睐。同时，基金偏好投资法治水平高与政府干预程度低的地区的公司。这些检验结果暗示了在我国，政府和企业进行如下治理改革的重要意义。第一，推行董事会治理改革，强化独立董事的法律责任，提高董事会治理过程的独立性。第二，改革有限责任制的会计公司为合伙制，强化审计师承担的民事责任，从而提高审计师审计的独立性，并最终提高上市公司会计信息的质量。第三，加大监管的力度，减少大股东对上市公司的资金占用。第四，鼓励国内公司到香港等成熟市场上市，提高公司的投资者保护水平。第五，减少政府对经济的行政干预，充分发挥法律的治理功能。

本文的贡献在于拓展了 Aggarwal *et al.* (2005) 的跨国比较研究，在我国特殊的制度环境下找到了公司治理机制（内部治理结构与外部治理环境）影响机构投资者（证券投资基金）持股偏好的经验证据。然而，本文仍然存在下列局限性。首先，本文仅从独立董事的角度研究了公司董事会治理对基金持股偏好的影响，显然这还不够深入。董事会的治理涉及到董事会的结构、董事的监督与激励和董事会的运作等各个方面，可见这些因素对基金持股偏好的影响还有待研究。其次，正如前文所述，仅从审计意见和审计师质量的角度衡量会计信息质量也很难说完美。最后，我们未能取得基金持股的完整明细数据。如果以基金持股的明细数据为样本，并以基金持股比例为因变量进行回归分析将会得到更加全面的结论。

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## EMPIRICAL STUDY ON THE STOCK-HOLDING PREFERENCES OF CHINESE FUND MANAGERS<sup>1</sup>

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### ABSTRACT

This paper, using data from Chinese listed firms between 1998 and 2003 as its sample, empirically analyses the impact of corporate governance mechanisms on Chinese fund managers' stock-holding preferences. After we control for accounting indexes and stock characteristics, we find that corporate governance mechanisms, such as information disclosure and investor protection, have a significant impact on fund managers' holding preferences. This paper extends the cross-national study of Aggarwal *et al.* (2005), while providing empirical evidence on how corporate governance mechanisms influence institutional investors' stock preferences in an underdeveloped legal environment.

*Keywords:* Fund Manager, Holding Preference, Quality of Accounting Information, Investor Protection

### I. INTRODUCTION

Traditionally, financial studies on the determinants of institutional investors' stock-holding preferences focus on three subjects: information asymmetry, hypothesis of the prudent man, and transaction costs. In particular, they emphasise the deciding role of corporate accounting indexes and stock characteristics on institutional in-

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vestors' stock preferences. Yet they pay little attention to the influence of such fundamental factors as internal corporate governance structure or the external governance environment that may determine a firm's value. Only recently have these influences received attention in certain studies, among them Aggarwal *et al.* (2005), which has garnered much attention. The study examines how corporate financial transparency (micro level) and national legal systems and institutional environments (macro level) affect the stock preferences of American mutual funds in emerging markets. Its research has drawn our attention to the impact of corporate governance mechanisms on the stock-holding preferences of Chinese institutional investors.

Although Aggarwal *et al.* find evidence that corporate financial transparency (quality of accounting information) and national institutional environment (investor protection) affect American institutional investors' stock preferences, their research results cannot be directly applied to China. Thus it is necessary to study how internal governance mechanisms and the external governance environment affect institutional investors in China.

This paper follows Aggarwal *et al.* (2005) by examining the impact of corporate governance mechanisms such as accounting information disclosure and investor protection on Chinese fund managers' stock-holding preferences. The paper also extends Aggarwal *et al.*'s (2005) study by examining how board structure affects fund managers' preferences. Our research results provide evidence on the stock preferences of Chinese fund managers; in addition, they have policy implications for Chinese corporate governance reform. We find that after controlling for accounting indexes and stock characteristics, corporate governance mechanisms such as information disclosure and investor protection have a significant impact on Chinese fund managers' investment preferences.

## II. LITERATURE REVIEW AND THEORETICAL ANALYSIS

### 2.1 Board Structure and Institutional Investors' Stock-Holding Preferences

In the US and Europe, board structure is an important factor affecting the stock preferences of institutional investors. Useem *et al.* (1993) investigate 40 American pension funds and 40 investment managers and find that the structure and independence of the board, as well as board members' expertise and experience, are determining factors behind their investment decisions. Russell Reynolds Associates (1998) investigates the corporate governance problems that concern American institutional investors. They conclude that (1) when making investment decisions, institutional investors are deeply concerned about the quality of the board; (2) institutional investors opine that they lack sufficient information (especially on board members) to effectively evaluate the board's performance; (3) institutional investors are greatly concerned about board structure and have reservations over having family members or previously dismissed CEOs (or other senior managers) serve as board members; (4) whereas most institutional investors think that the job functions of the CEO and the board chairperson should be separated so that the latter can effectively

monitor the former and other senior managers, others argue that the dual identity of the CEO and the board chairperson can enhance work efficiency; and (5) institutional investors support board members holding stocks and agree to using stocks as an incentive for board members. According to Coombes and Watson (2000), McKinsey surveyed over 200 institutional investors worldwide and determined that institutional investors pay great attention to board structure. Excellent board structure should have the following features: (1) most board members should come from outside and should be truly independent and have no financial dealings with the firm; (2) board members should have significant shareholdings in the firm, and they should be largely paid by stocks and options; and (3) there should be a formal appraisal mechanism for board members. Chiu and Monin (2003) find that fund managers in New Zealand take due note of the ratio of independent board members, the CEO's responsibilities, and the selection of new board members. In short, institutional investors in particular care about the independence of the board, as well as about the supervision and the professional skills of the board members. Although these surveys draw similar conclusions, few Western scholars have examined the impact of board structure on institutional investors' stock-holding preferences. This paper strives to fill this gap.

Although the surveys mentioned above study institutional investors in developed countries, there are no comparable reports on Chinese institutional investors. It is well known that Chinese and Western institutional environments differ significantly. Most Western countries have mature markets with one common feature: institutional investors are effectively protected by the law. In China, however, because of the lack of legal protections for small investors, the law has little constraint on the behaviour of institutional investors. It may well be that significant differences in the institutional environment cause Chinese institutional investors and their foreign counterparts to behave very differently. For instance, Chinese institutional investors may engage in more opportunistic behaviour, including adverse selection and moral hazards. In 2000, China was shocked by the fund misconduct incident showing that Chinese fund managers engage in a great deal of opportunistic behaviour (Ping and Li, 2000). For instance, they manipulate stock prices, obtain private benefits for founders of funds, and disseminate misleading information. In Western countries, this kind of behaviour is rather rare. This clearly demonstrates that the significant differences in institutional environment between China and the West result in totally different behaviours between Chinese institutional investors and their foreign counterparts. We therefore have reservations as to whether survey results in Western countries can still apply to China.

Chinese listed firms also have a unique stock ownership structure. They often have one dominant shareholder, who is usually the state. The board can thus be easily controlled by a few large shareholders. With ineffective board governance in China, it is an open question whether the board can affect the stock preferences of institutional investors. Unfortunately, this important question has rarely been empirically tested. Not until recently did Xiao and Wang (2005) use the data of Chinese listed firms between 2000 and 2003 to analyse this question empirically.

They find that the ratio of external directors and board members' professional skills are important factors in determining fund managers' stock holdings. Yet their research methodology can be improved. Although they use the comparative test of a sample difference of one factor (T test and Z test), they do not control for the impact of other factors on fund managers' stock-holding preferences. The reliability of their conclusions is thus open to question. This paper therefore strives to improve upon their research methods to arrive at more reliable conclusions.

The current study primarily examines the impact of board independence on the stock-holding preferences of institutional investors. We choose this topic based on the following considerations. First, from the perspective of corporate practice, the success of board governance is largely determined by board independence. And second, although board governance is a big topic, it is unnecessary to exhaust all content related to board governance in one paper. According to Weisbach (1998) and Dayha *et al.* (2002), the ratio of independent directors is an important factor in board independence. Thus, based on Xiao and Wang (2005), this paper primarily tests the impact of the ratio of independent directors on institutional investors' investment preferences. In Western countries, it is generally believed that a board with more independent directors can prevent the board's manipulation by managers, thus ensuring the independence and effectiveness of the board. To uphold board independence in China, in August 2001 the China Securities Regulatory Commission (CSRC) promulgated "Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies" ("the Guidelines") to implement the independent director system in Chinese listed companies mandatorily. From the data provided by the China Center of Economic Research at Peking University, as of December 2003, 99.5 per cent of listed firms had established an independent director system, and 75 per cent of listed Chinese firms now have a ratio over 30 per cent of independent directors on the board. Although Chinese firms have established an independent director system, it is unclear whether the system has substantially increased the boards' independence. Theoretically speaking, the more independent directors there are, the greater the independence of the corporate board. If independent directors are able to enhance board independence, and if institutional investors take note of this, there should be a positive association between the ratio of independent directors and the probability of institutional investors' stock holdings. If one of the above-mentioned propositions is not true, then no relationship should exist between the two.

## **2.2 Information Asymmetry and Institutional Investors' Stock Preferences**

According to Merton's model (1987), rational investors prefer to invest in stocks issued by firms they are familiar with. Huberman (1997) uses the phrase "familiarity breeds investment" to describe this kind of information-driven investment and finds empirical evidence to support Merton (1987). Kang and Stulz (1997) show that information asymmetry between local and foreign investors causes a home bias. McKinsey's (2002) survey shows that 70 per cent of investors in emerging

markets believe that accounting information disclosure is very important to their investment decisions. Gillan and Starks (2003) argue that CalPERS's decision to cancel investments in Indonesia, Malaysia, and Thailand was partially due to a lack of financial transparency. Thus, a consensus exists that information asymmetry significantly affects investment decisions.

Some Western scholars testing the impact of information asymmetry on institutional investors' stock preferences come to a similar conclusion: institutional investors prefer firms with less information asymmetry. But how to measure information asymmetry is left undetermined. Cready (1994) argues that being a member of the S&P 500 means less information asymmetry; S&P 500 companies can thus attract more investment from institutional investors. Falkenstein (1996) uses the number of years listed and the quantity of news in UMI data files to measure information asymmetry, and establishes that American mutual funds prefer to hold stocks that have been listed a long time and that have higher news coverage. Coval and Moskowitz (1999), on the other hand, use geographic distance to measure information asymmetry. Their findings show that the shorter the distance between investors and firms, the less the information asymmetry; in addition, American mutual funds prefer to hold stocks of firms whose headquarters are nearby. Thus, they argue that information asymmetry leads to a home bias. Dahlquist and Robertsson (2001) argue that size and international reputation may reflect information asymmetry. They find that foreign institutional investors in the Swedish stock market prefer sizable and overseas listed firms with high export rates. Bradshaw *et al.* (2004) propose that ADRs and product export can reflect information asymmetry. After studying American institutional investors' holdings of non-American firms, they find that these investors prefer firms that have been issuing ADRs for a long time and whose products are exported to the US. Aggarwal *et al.* (2005) also use a firm's issuance of ADRs as a measurement of information asymmetry, by which they also find that American institutional investors prefer to invest in firms that have issued ADRs.

Accounting information disclosure is also an important measure for minimising information asymmetry. High-quality accounting information disclosure plays an important role in the effective function of stock markets (Scott, 1997). But the impact of the quality of accounting information on institutional investors' preferences has received little attention, though recently some Western studies have focused on this. Bradshaw *et al.* (2004) study the investment of American institutional investors in worldwide non-American firms. Their findings indicate that American institutional investors prefer to invest in firms that conform to GAAP accounting standards and that engage the Big Five accounting firms. Aggarwal *et al.* (2005) further study the impact of the quality of accounting information on American mutual funds' portfolio investments in emerging markets after the Asian financial crisis. Their proxies are auditor quality, combined financial statements, audit opinions, and international accounting standards for measuring the quality of accounting information. They believe that the criteria for quality accounting information consist of (1) engaging the Big Five accounting firms as auditors, (2) compiling combined financial statements, (3) obtaining clean audit opinions, and (4) using the

American GAAP or international accounting standards. Using the above standards, they give every proxy a value (1 if the proxy meets the standard and 0 otherwise), and then add up the values and get an accounting quality index ranging from 0 to 4. The outcome of the empirical analysis shows that the accounting quality index is positively associated with American mutual funds' stock holdings. But the existing literature focuses on institutional investors in mature Western markets with little research on emerging markets such as China. This paper strives to enrich the literature in this respect.

This study uses audit opinion as a standard to measure the quality of accounting information. It is, however, doubtful whether this standard can apply to China because of China's special institutional environment (Xia and Yang, 2002; Chen and Chen, 2005; Li *et al.*, 2005). The Chinese accounting system has two unique features. First, accounting firms usually have limited responsibilities. We believe that with the unsound legal system in China, limited liability easily triggers aggressive business behaviour on the part of auditors. Second, because auditors hold administrative rather than civil responsibilities, civil responsibility fails to govern the independent auditing behaviour of auditors, thus resulting in low quality accounting information. The equation of clean audit opinions with quality accounting information may thus be misleading. Yuan and Liu (2005) report that from 1998 to 30 June 2002, few auditors were held responsible for misconduct. Nonetheless, He and Zhang (2003) and Li *et al.* (2005) show that Chinese audit reports contain information on the quality of accounting information. Wang and Chen (2004) also adopt audit opinion as a measurement of accounting information quality. This paper thus does the same. We expect that institutional investors will prefer firms whose audit reports contain clean opinions.

Many studies link the Big Five accounting firms to high-quality auditing (Titman and Trueman, 1986; Reed *et al.*, 2000; Mitton, 2002; Bradshaw *et al.*, 2004; Aggarwal *et al.*, 2005). The Big Five firms may be more independent than local firms as the former have greater need to maintain their reputation (Michaely and Shaw, 1995) or have more legal responsibilities (Dye, 1993). They are therefore more likely to ensure the transparency and accuracy of a firm's financial reports. According to Hu (2002), the reputation of the Big Five accounting firms contains significant information content in China. Therefore, we can use whether a financial report is audited by one of the Big Five accounting firms as a measurement of accounting information quality. We expect that institutional investors will prefer to invest in firms that are audited by these accounting firms.

### **2.3 Investor Protection and Institutional Investors' Stock Preferences**

Commercial law prevents the interests of investors from being infringed upon (Castro *et al.*, 2004). Some studies investigate the important role of law in protecting investors (La Porta *et al.*, 1997, 1998, 2000). Analysing the data of 49 nations, La Porta *et al.* find that investor protection in common-law countries is significantly higher than in code-law countries. Also, a sound legal system for investor protection can increase the quality of accounting information and foster the development of a

capital market. Leuz *et al.* (2003) report that nations with strong investor protection provide quality information to external investors. Other literature points to the importance of macro (national) and micro (corporate) governance in shaping an effective investor protection system. For instance, the empirical evidence of Klapper and Love (2004) shows that corporate governance is even more important in countries where the legal system is underdeveloped since effective corporate governance can, to a certain extent, remedy the deficiency of a weak legal system. They also point out that national and corporate governance are complementary. Western literature explores the national differences in investor protection. Employing a large amount of statistical data, Fan and Wang (2001) use “major component analysis” to compile indexes on the rule of law and government intervention all over China<sup>5</sup>. All these bare valuable references in our study on the differences in investor protection among the various regions in China.

Certain scholars suggest that the government can influence corporate governance by non-legal means (Berglof and Thadden, 1999; Rajan and Zingales, 1999). In code-law countries, it is possible that governments exercise direct intervention in the economy and have not vested the law courts with economic decisions (La Porta *et al.*, 2000). As a result, the government’s power overrides the law, which in turn leads to weak investor protection (La Porta *et al.*, 2000). This is very much the case in China. The primary purpose in setting up the Chinese stock market is to pave the way for the reformation of state firms and to relieve their financial burdens; in this situation, an effective investor protection system may conflict with the social objective (Xia and Fang, 2005). We believe that the power of the government to override the law is the fundamental reason for weak investor protection.

Recently, Western scholars have examined the impact of investor protection on institutional investors’ investment preferences. Aggarwal *et al.* (2005) use the stockholder rights index compiled by La Porta *et al.* (1998) and Pistor *et al.* (2000), along with the legal system index compiled by Berkowitz *et al.* (2003), to study how investor protection affects the portfolio selections of American mutual funds in emerging markets. They find that investor protection is positively associated with a mutual fund’s stock holdings. As do Sun *et al.* (2005), we believe that this kind of national comparison has one obvious drawback: it is difficult to control for the influences of informal institutional factors such as culture, ethical standards, customs, and so forth. Since we consider both formal (laws and government policies, etc.) and informal institutions to be equally important in developing an effective investor protection system, regional comparisons within the same country should be made on a similar basis. As opposed to the national approach of Aggarwal *et al.*, we focus on the impact of differences in regional investor protections on institutional investors’ stock preferences. Overall, compared with the West, our rule of law is rela-

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<sup>5</sup> Fan and Wang (2001) prepare five indexes, namely, the relationship between the government and the market, non-state economic development, the maturity of consumer and factor markets, and the maturity and the legal environment of the intermediary market. The first and the last indexes represent regional governmental intervention and the rule of law respectively.

tively inferior, with greater economic intervention from the government. Even within China, the level of rule of law is higher with less government intervention in the eastern than in the central and western regions (Fan and Wang, 2001). We then adopt the rule-of-law index and the government-intervention index compiled by Fan and Wang to study the impact of regional differences in investor protection on the stock preferences of institutional investors. We expect that institutional investors prefer to invest in firms located in regions where there is a high level of rule of law and little government intervention.

The main function of corporate governance is to solve the conflict of interests among stakeholders (Gillan and Starks, 2003). Agent conflict stems from two major sources: information asymmetry and different preferences. In the US, stock ownership is highly scattered. The agent problem exists mainly between shareholders and managers (Berle and Means, 1932; Jensen and Meckling, 1976; Jensen, 1986; Roe, 1990). In many other countries, stock ownership is concentrated with dominant shareholders (La Porta *et al.*, 1999; Becht and Roell, 1999; Claessens *et al.*, 2000; Faccio and Lang, 2002). The agent problem occurs when the holding shareholder infringes upon the interests of the smaller shareholders (Shleifer and Vishny, 1997; Faccio *et al.*, 2001; Claessens *et al.*, 2002). In China, stock ownership is highly concentrated, and insiders largely appropriate the funds of listed firms (Li *et al.*, 2004; Tang *et al.*, 2005). This is partly the result of high internal agency costs, and is also a direct result of the absence of an effective legal system for investor protection. The model of Ma *et al.* (2005) shows that holding shareholders in China engage in tunnelling by appropriating corporate assets, which severely undermines corporate value. Are institutional investors aware of such tunnelling activities, and do they decline to invest in firms that suffer from tunnelling? Unfortunately, almost no empirical research has been done on these questions. We hope that this paper will help to answer them. Asset appropriation is predicted to be negatively related to the probability of institutional investors' stock holdings.

Coffee (1999, 2002), Stulz (1999), Reese and Weisbach (2002) and Doidge *et al.* (2004) argue that getting foreign firms listed in the US might lessen the agent problem, since these firms have to follow US law. Bai *et al.* (2004) argue that Chinese firms that have issued H shares or B shares have better investor protection. We believe that it is inappropriate to put H shares and B shares together. Firms that have issued B shares are not constrained by laws in markets other than in mainland China. Therefore, this paper differentiates firms that have issued H shares from those that have issued B shares. We test the impact of issuing H shares on institutional investors' stock preferences. We expect that institutional investors prefer firms that have issued H shares.

### III. RESEARCH DESIGN

#### 3.1 Sample Selection and Data Source

This paper uses the data of non-financial listed firms between 1998 and 2003 for its sample. Firms with missing data are excluded from the study. We collect data on

funds' stock holdings, rules of law, government intervention, corporate governance, finances, and stocks. The data on a fund's stock holdings are obtained by tabulating the firm's 10 largest shareholders. Similar to Xia and Fang (2005), we use the data in Fang and Wang (2001) as a measurement of the rule of law and government intervention, while we extract corporate governance, financial, and stock data from the CCER database.

## 3.2 Variable Definition

### 3.2.1 Dependent Variable

The dependent variable in our test is a dummy variable *FH*. The variable takes 1 if the firm's stocks are held by a fund and 0 otherwise. We refer to the annual reports of listed firms and tabulate the top 10 shareholders of a firm. If a fund company is one of the top 10 shareholders, we regard the fund as having invested in the firm. This is because a large shareholding in the firm not only has a significant influence on the fund's performance, but may also represent the long-term investment strategy of the fund. This method is also used in Wang and Xiao (2005).

### 3.2.2 Test Variable

#### A. How to measure board independence?

Based on the analysis above, we use the ratio of independent directors (*ID*) to measure board independence.

#### B. How to measure the quality of accounting information disclosure?

Based on the analysis above, we use audit opinion (*AUDI*) and quality of auditors (*FIVE*) to measure the quality of accounting information disclosure.

#### C. How to measure investor protection?

Asset appropriation by large shareholders is a measure for investor protection. Li *et al.* (2004) and Ma *et al.* (2005) use different methods to measure asset appropriation, but both methods are unreliable. Therefore, we have improved Ma's version by using (other receivables - other payables) / total assets to measure asset appropriation. Also, we use whether H shares (*HS*) have been issued to measure investor protection. As stated above, the rule-of-law index (*LAW*) and government intervention (*GOV*), which are the focuses of our examination, capture differences in the external governance environment.

### 3.2.3 Control Variables

Because corporate accounting standards and stock characteristics affect institutional investors' investment preferences (Badrinath *et al.*, 1989; Del Guercio, 1996; Falkenstein, 1996; Eakins *et al.*, 1998; Gompers and Metrick, 2001; Dahlquist and Robertsson, 2001; Yang *et al.*, 2004; Hu, 2005), we control for the following factors: ratio of return over assets (*ROA*), financial leverage (*LEVE*), number of years being listed (*AGE*), size (*CMV*), and market risk coefficient (*BETA*).

Moreover, to control for macroeconomic and industrial factors, we set up five yearly dummy variables and 20 industry dummy variables. The definitions of all variables are listed in Table 1.

**Table 1** Definitions of Explanatory Variables

Variable	Definition
<i>FH</i>	Dummy variable, which equals 1 if the fund company is one of the top 10 stockholders in a firm, or 0 otherwise.
<i>ID</i>	Ratio of independent directors, which equals number of independent directors / number of total directors.
<i>AUDI</i>	Audit opinion, a dummy variable, which equals 1 if it contains a clean opinion, or 0 otherwise.
<i>FIVE</i>	Quality of auditors, a dummy variable, which equals 1 if it is a Big Five accounting firm, or 0 otherwise.
<i>EXPR</i>	Asset appropriation, which equals (other receivables – other payables) / total assets.
<i>HS</i>	H shares, a dummy variable, which equals 1 if H shares have been issued, or 0 otherwise.
<i>LAW</i>	The rule-of-law index, which ranges between 1 and 10. The higher the value, the higher the level of the rule of law.
<i>GOV</i>	Government intervention index, which ranges between 1 and 10. The higher the value, the less government intervention.
<i>ROA</i>	Ratio of return over assets equals return/assets, which measures the impact of accounting performance.
<i>LEVE</i>	Financial leverage ratio, which measures the impact of financial risk.
<i>AGE</i>	Years of being listed, which measures the impact of the number of years listed.
<i>CMV</i>	Size equals natural log of market value, which measures the impact of size.
<i>BETA</i>	Beta coefficient in CAPM model, which measures the impact of market risk.
<i>YEAR</i>	Yearly dummy, which measures the impact of macroeconomics. Since we have data for 6 years, there are five yearly dummy variables altogether.
<i>INDU</i>	Industry dummy, which measures the impact of industries. We follow the classification of the CSRC, which has 22 industries. Altogether there are 20 industry dummies after excluding the financial industry.

### 3.3 Research Model

Our dependent variable is a dummy variable. Therefore, we use a binary-choice model, which normally includes the probit, logit, and extreme value models. We follow Aggarwal *et al.* (2005) and use the probit model. We use  $P(i,t)$  as the probability that stock  $i$  is being held by funds at period  $t$ , and use  $x(i,t-j)$  to denote the vector of firm  $i$ 's characteristics at period  $t-j$ .  $b$  is the coefficient vector pending estimation. We can construct the probability distribution function as follows:

$$P(i,t) = \frac{1}{1 + e^{-(a+bx(i,t-j))}}$$

This equation shows that the probability of stock  $i$  being held by funds in period  $t$  depends on the firm's characteristics  $x(i,t-j)$  in period  $t-j$ . In terms of the value of  $j$ , there are two processing methods. First, we can give 0 to  $j$ . That is, we use the

corporate characteristics of the current period to explain institutional investors' stock holdings in the current period (Bradshaw *et al.*, 2004). Second,  $j$  can take value 1. That is, we use the corporate characteristics of the current period to explain the institutional investors' stock holdings in the next period (Eakins *et al.*, 1998). Eakins *et al.* (1998) maintain that "look ahead bias" can be avoided. Both methods are used in this paper. The next question is whether cross-sectional data or pooled data should be used. While Falkenstein (1996) and Eakins *et al.* (1998) use cross-sectional data for regression analysis, Dahlquist and Robertsson (2001) use both cross-sectional and pooled data. We follow the latter's practice by using both types of data. Using cross-sectional data can help avoid auto-correlation in pooled data. Moreover, after conducting a correlation analysis, we find a high degree of correlation between *LAW* and *GOV* (see Table 4) and a correlation index of 0.76. Therefore, we put these two variables separately into our model to avoid multicollinearity.

### 3.4 Data Description

Table 2 shows the descriptive statistics of the variables. Of the firms, 40.9 per cent have at least one fund company among their top 10 largest shareholders. The average ratio of external directors is 12.7 per cent. The audit reports for most firms (87.4 per cent) receive a clean opinion. Very few firms (5.9 per cent) are audited by the Big Five, which demonstrates that most of the firms engage local audit firms of lower quality. The asset appropriation by large shareholders accounts for 3 per cent of total assets. Only 2 per cent of firms are listed in Hong Kong, which clearly indicates that only a very small proportion of firms are governed by laws that provide better protection to investors.

**Table 2** Descriptive Statistics of the Variables

	Mean	Median	Standard Error	Sample Size
<i>FH</i>	0.409	0.000	0.492	5845
<i>ID</i>	0.127	0.000	0.149	5840
<i>AUDI</i>	0.874	1.000	0.332	5845
<i>FIVE</i>	0.059	0.000	0.236	5833
<i>EXPR</i>	0.030	0.010	0.144	5791
<i>HS</i>	0.020	0.000	0.141	5840
<i>LAW</i>	5.794	5.630	1.280	5798
<i>GOV</i>	6.687	7.380	1.357	5798
<i>ROA</i>	0.107	0.098	0.073	5791
<i>LEVE</i>	0.474	0.435	0.534	5796
<i>AGE</i>	4.615	4.500	2.801	5845
<i>CMV</i>	20.483	20.447	0.711	5845
<i>BETA</i>	1.034	1.047	0.288	5521

## IV. EMPIRICAL ANALYSIS RESULTS

### 4.1 Single Variable Analysis

Table 3 lists the test results showing the differences between firms whose stocks are held by funds and those whose stocks are not (pooled data). The first result is that there is no significant difference between the ratios of independent directors of these two groups of firms<sup>6</sup>. There are two possible reasons for this. First, fund managers do not take the ratio of independent directors into serious consideration when making investment decisions, since independent directors do not function properly in China. Or second, though independent directors do serve their purpose, fund managers do not take note of this, or do not think it is an important factor when making

**Table 3** Test of Differences in Corporate Characteristics on Panel Data

	Holding Stock or Not	Sample Size	Mean	Mean Difference	T Value
<i>ID</i>	1	2388	0.126		
	0	3452	0.127	-0.001	-0.412
<i>AUDI</i>	1	2389	0.916		
	0	3456	0.844	0.072	8.531***
<i>FIVE</i>	1	2384	0.066		
	0	3449	0.055	0.011	1.730*
<i>EXPR</i>	1	2380	0.019		
	0	3411	0.038	-0.020	-5.749***
<i>HS</i>	1	2388	0.027		
	0	3452	0.016	0.011	2.763***
<i>LAW</i>	1	2380	5.836		
	0	3418	5.765	0.071	2.071**
<i>GOV</i>	1	2380	6.699		
	0	3418	6.619	0.080	1.992**
<i>ROA</i>	1	2380	0.122		
	0	3411	0.097	0.025	12.704***
<i>LEVE</i>	1	2381	0.413		
	0	3415	0.517	-0.103	-8.318***
<i>AGE</i>	1	2389	4.048		
	0	3456	5.007	-0.959	-13.060***
<i>CMV</i>	1	2389	20.707		
	0	3456	20.328	0.379	21.122***
<i>BETA</i>	1	2202	1.040		
	0	3319	1.029	0.010	1.359

\*, \*\* and \*\*\* denote statistically significant at 10%, 5% and 1% levels respectively in a two-tailed t test.

<sup>6</sup> The results are inconsistent with those of Xiao and Wang (2005), which may possibly result from outcome differences in research data and methods. Also, the results may become less reliable because of structural problems with the data.

their investment decisions. The second result is that fund companies favour firms that are audited by the Big Five and have audit reports with clean opinions. Finally, firms with investments from fund companies have better investor protection. In a nutshell, they suffer less from tunnelling, have issued H shares, and are located in regions with better rule of law and little government intervention. Firms with investment from funds have a higher profit ratio, a lower debt ratio, and a relatively short listing history, and are larger in size. All these findings are consistent with those of the existing literature on China (Yang *et al.*, 2004; Xiao and Wang, 2005). We also conduct this test on cross-sectional data with similar results.

Table 4 presents the results of a correlation analysis of pooled data, which are similar to those shown in Table 3.

## 4.2 Multi-Variable Analysis

### 4.2.1 Regression Analysis of Pooled Data

Table 5 contains the results of the logit model of pooled data. We use a time dummy variable to avoid structural differences due to macroeconomic factors. We also control for industrial factors. Because the rule of law is highly correlated with government intervention, we put them into the model separately.

The regression results of the current period and the next period are entirely consistent. After we control for accounting standards, stock characteristics, macroeconomic factors, and industrial factors, our independent variables (except *ID*) have explanatory power. We analyse the results as follows. First, the ratio of independent directors has no significant explanatory power. This is consistent with the single variable analysis. This further demonstrates that the ratio of independent directors is not the determining factor of a fund's preference in stock holdings even after we have improved our research methods. Second, the quality of accounting information is an important factor affecting a fund's investment preferences as indicated by the coefficients of *AUDI* and *FIVE*. This is consistent with Aggarwal *et al.* (2005). And third, investor protection is also an important factor affecting a fund's investment preferences. In the first place, *EXPR* and *FH* are negatively associated, with a statistically significant relationship. This shows that fund companies will refuse to invest in firms that engage in tunnelling activities. Second, *HS* and *FH* are positively associated, with a statistically significant relationship. This implies that the government should encourage more firms to obtain listing in Hong Kong and other mature financial markets. Finally, both *LAW* and *GOV* are positively associated with *FH*, with a statistically significant relationship. This implies that the Chinese government should curb government intervention and protect investors with a sound legal system. The results for the other control variables are consistent with those of the existing literature on China.

### 4.2.2 Cross-Sectional Regression Analysis

Because there might be an auto-correlation problem with the pooled data, this paper uses yearly cross-sectional data to obtain further evidence. We use two methods to conduct the cross-sectional regression: an independent variable in the current period,

**Table 4** Correlation Analysis

	<i>FH</i>	<i>ID</i>	<i>AUDI</i>	<i>FIVE</i>	<i>EXPR</i>	<i>HS</i>	<i>LAW</i>	<i>GOV</i>	<i>ROA</i>	<i>LEVE</i>	<i>AGE</i>	<i>CMV</i>
<i>ID</i>	-0.01 (0.34)											
<i>AUDI</i>	0.11 (0.00)	0.10 (0.00)										
<i>FIVE</i>	0.02 (0.04)	0.14 (0.00)	0.05 (0.00)									
<i>EXPR</i>	-0.07 (0.00)	-0.11 (0.00)	-0.14 (0.00)	-0.05 (0.00)								
<i>HS</i>	0.04 (0.00)	0.11 (0.00)	0.01 (0.29)	0.36 (0.00)	-0.02 (0.11)							
<i>LAW</i>	0.03 (0.02)	0.03 (0.02)	-0.07 (0.00)	0.11 (0.00)	0.00 (0.40)	0.04 (0.00)						
<i>GOV</i>	0.01 (0.09)	0.01 (0.13)	-0.02 (0.04)	0.07 (0.00)	-0.04 (0.00)	0.05 (0.00)	0.76 (0.00)					
<i>ROA</i>	0.17 (0.00)	0.06 (0.00)	0.25 (0.00)	0.09 (0.00)	-0.10 (0.00)	0.02 (0.05)	0.02 (0.04)	0.07 (0.00)				
<i>LEVE</i>	-0.10 (0.00)	0.06 (0.00)	-0.22 (0.00)	-0.04 (0.00)	-0.21 (0.00)	-0.01 (0.25)	0.04 (0.00)	0.03 (0.01)	-0.14 (0.00)			
<i>AGE</i>	-0.17 (0.00)	0.31 (0.00)	-0.10 (0.00)	0.07 (0.00)	-0.02 (0.07)	0.02 (0.07)	0.20 (0.00)	0.18 (0.00)	-0.10 (0.00)	0.17 (0.00)		
<i>CMV</i>	0.26 (0.00)	-0.09 (0.00)	0.15 (0.00)	0.09 (0.00)	-0.03 (0.01)	0.04 (0.00)	0.08 (0.00)	-0.01 (0.32)	0.19 (0.00)	-0.14 (0.00)	0.00 (0.48)	
<i>BETA</i>	0.02 (0.10)	0.11 (0.00)	-0.01 (0.28)	0.00 (0.48)	-0.01 (0.24)	-0.03 (0.02)	0.05 (0.00)	-0.01 (0.24)	-0.13 (0.00)	0.04 (0.00)	0.08 (0.00)	-0.19 (0.00)

Spearman test probability is given in parentheses.

**Table 5** Logit Regression Analysis of Pooled Data

	j = 0		j = 0		j = 1		j = 1	
	(1)		(2)		(3)		(4)	
<i>C</i>	-19.470	(0.000)	-19.920	(0.000)	-18.630	(0.000)	-19.180	(0.000)
<i>ID</i>	0.333	(0.418)	0.338	(0.344)	0.392	(0.450)	0.311	(0.547)
<i>AUDI</i>	0.675	(0.000)	0.659	(0.000)	0.738	(0.000)	0.721	(0.000)
<i>FIVE</i>	0.112	(0.069)	0.103	(0.072)	0.125	(0.089)	0.108	(0.078)
<i>EXPR</i>	-1.939	(0.000)	-1.907	(0.000)	-2.361	(0.000)	-2.329	(0.000)
<i>HS</i>	1.978	(0.006)	1.883	(0.009)	3.435	(0.000)	3.295	(0.000)
<i>LAW</i>	0.093	(0.000)			0.123	(0.000)		
<i>GOV</i>			0.075	(0.002)			0.099	(0.000)
<i>ROA</i>	3.267	(0.000)	3.186	(0.000)	3.620	(0.000)	3.501	(0.000)
<i>LEVE</i>	-0.819	(0.000)	-0.817	(0.000)	-0.935	(0.000)	-0.939	(0.000)
<i>AGE</i>	-0.143	(0.000)	-0.142	(0.000)	-0.127	(0.000)	-0.125	(0.000)
<i>CMV</i>	0.952	(0.000)	0.975	(0.000)	0.895	(0.000)	0.922	(0.000)
<i>BETA</i>	0.846	(0.000)	0.877	(0.000)	0.685	(0.000)	0.720	(0.000)
<i>YEAR</i>	YES		YES		YES		YES	
<i>INDU</i>	YES		YES		YES		YES	
<i>R</i> <sup>2</sup>	0.143		0.143		0.134		0.133	
<i>N</i>	5317		5317		4047		4047	

The two-tailed Z test probability is given in parentheses.

and one in the next period as well. All yield similar results. Therefore, we report only the outcome with independent variables in the current period. Table 6 lists the regression results. After controlling for accounting standards, stock characteristics, macroeconomics factors, and industry factors, our test variables (except *ID*) still have significant explanatory power. The coefficients of *ID* are insignificant throughout all five years. This is consistent with the results of the model with pooled data. In all five years (except 1999), the coefficients of *AUDI* are positive and statistically significant. The coefficient of *FIVE* is significantly positive only in 2003. This shows that audit opinions contain consistent information, and the audit reports audited by the Big Five firms have significant information only after 2003. This evidence shows that the quality of accounting information seriously affects fund managers' investment preferences. In all five years (except 1998), *EXPR* and *FH* are significantly negatively correlated, which indicates that the problem of asset appropriation should be urgently dealt with. The coefficient of *HS* is significant only from 2001 to 2003. One possible reason is that it was not until 2001 that the fund managers became aware that investors who invest in H shares receive greater legal protection. In all five years (except 2000), the coefficients of *LAW* are positive and statistically significant. This shows that fund companies consistently prefer to invest in firms that are located in regions with a higher degree of rule of law. In all five years (except 2001), the coefficients of *GOV* are positive and statistically significant,

**Table 6** Cross-Sectional Logit Regression Analysis

	1998	1998	1999	1999	2000	2000			
	(5)	(6)	(7)	(8)	(9)	(10)			
<i>C</i>	-15.149	-15.282	-7.432	-7.577	(0.012)	-13.203	(0.000)	-13.939	(0.000)
<i>ID</i>	32.874	32.710	-1.933	-2.203	(0.434)	2.479	(0.206)	2.318	(0.239)
<i>AUDI</i>	0.571	0.557	0.235	0.225	(0.268)	0.773	(0.001)	0.766	(0.001)
<i>FIVE</i>	-0.510	-0.524	0.241	0.218	(0.137)	-0.819	(0.413)	-0.793	(0.427)
<i>EXPR</i>	-0.139	-0.164	-1.647	-1.599	(0.050)	-2.757	(0.002)	-2.620	(0.003)
<i>HS</i>	2.356	2.054	3.069	3.110	(0.158)	-0.524	(0.804)	-0.562	(0.789)
<i>LAW</i>	0.181	0.020	0.177	0.129	(0.041)	0.062	(0.327)	0.093	(0.065)
<i>GOV</i>	3.030	2.790	2.548	2.395	(0.112)	2.890	(0.038)	2.736	(0.050)
<i>ROA</i>	0.687	0.619	0.097	0.069	(0.894)	-1.381	(0.005)	-1.384	(0.005)
<i>LEVE</i>	-0.151	-0.143	-0.206	-0.191	(0.000)	-0.146	(0.000)	-0.153	(0.000)
<i>AGE</i>	0.633	0.644	0.323	0.341	(0.021)	0.627	(0.000)	0.648	(0.000)
<i>CMV</i>	0.007	-0.047	0.924	0.972	(0.008)	0.544	(0.053)	0.609	(0.032)
<i>BETA</i>	YES	YES	YES	YES	YES	YES	YES	YES	YES
<i>INDU</i>	0.101	0.100	0.080	0.076	(0.116)	0.116	(0.116)	0.117	(0.117)
<i>R<sup>2</sup></i>	656	656	731	731	852	852	852	852	852
<i>N</i>									

The two-tailed Z test probability is given in parentheses.

Table 6 Continued

	2001		2002		2002		2003		2003			
	(11)	(12)	(13)	(14)	(15)	(16)	(15)	(16)	(16)	(16)		
<i>C</i>	-25.512	(0.000)	-25.732	(0.000)	-19.924	(0.000)	-20.409	(0.000)	-43.835	(0.000)	-44.416	(0.000)
<i>ID</i>	-0.159	(0.818)	-0.126	(0.856)	0.213	(0.825)	0.315	(0.744)	0.956	(0.468)	1.027	(0.434)
<i>AUDI</i>	0.506	(0.032)	0.481	(0.041)	0.774	(0.002)	0.752	(0.003)	1.111	(0.001)	1.053	(0.001)
<i>FIVE</i>	0.138	(0.621)	0.156	(0.575)	0.206	(0.352)	0.251	(0.258)	0.584	(0.013)	0.682	(0.003)
<i>EXPR</i>	-1.276	(0.089)	-1.288	(0.087)	-2.270	(0.005)	-2.225	(0.006)	-2.354	(0.018)	-2.336	(0.021)
<i>HS</i>	4.263	(0.020)	4.233	(0.021)	3.062	(0.084)	2.961	(0.095)	4.336	(0.020)	4.297	(0.021)
<i>LAW</i>	0.097	(0.089)			0.159	(0.003)			0.221	(0.000)		
<i>GOV</i>			0.041	(0.431)			0.094	(0.073)			0.129	(0.032)
<i>ROA</i>	4.419	(0.000)	4.433	(0.000)	3.074	(0.006)	3.073	(0.006)	5.685	(0.000)	5.622	(0.000)
<i>LEVE</i>	-0.298	(0.243)	-0.297	(0.246)	-1.680	(0.000)	-1.686	(0.000)	-0.560	(0.097)	-0.547	(0.097)
<i>AGE</i>	-0.161	(0.000)	-0.158	(0.000)	-0.189	(0.000)	-0.188	(0.000)	-0.119	(0.000)	-0.118	(0.000)
<i>CMV</i>	1.121	(0.000)	1.138	(0.000)	0.921	(0.000)	0.949	(0.000)	2.048	(0.000)	2.080	(0.000)
<i>BETA</i>	2.333	(0.000)	2.358	(0.000)	1.446	(0.000)	1.481	(0.000)	1.072	(0.000)	1.119	(0.000)
<i>INDU</i>	YES		YES		YES		YES		YES		YES	
<i>R<sup>2</sup></i>	0.149		0.148		0.154		0.152		0.321		0.320	
<i>N</i>	1000		1000		1052		1052		1145		1145	

The two-tailed Z test probability is given in parentheses.

showing that fund companies always prefer to invest in firms located in regions with little government intervention.

## V. CONCLUSIONS AND LIMITATIONS

Using the data of Chinese listed firms between 1998 and 2003 as its sample, this paper studies the impact of board governance structure, accounting information disclosure, and investor protection on fund managers' stock preferences with the following results. First, there is no evidence to show that the ratio of independent directors affects investment preference. Second, the quality of accounting information affects fund managers' investment preferences. Finally, investor protection also affects fund managers' investment preferences. These results have the following implications for corporate governance: (1) that both the government and local enterprises should strengthen the legal responsibilities of independent directors; (2) that a partnership structure should be introduced to accounting firms with the ultimate goal of increasing the quality of accounting information; (3) that financial supervision should be enhanced; (4) that domestic firms should be encouraged to go public in mature financial markets such as Hong Kong to strengthen investor protection; and (5) government intervention in the economy should be reduced.

Our paper enriches the existing literature by extending the cross-national comparative study of Aggarwal *et al.* (2005). We offer empirical evidence concerning how corporate governance mechanisms affect institutional investors in China's special institutional environment. This paper does, however, have the following limitations. First, we study board governance only from the perspective of independent directors. How other factors, such as board structure, supervision, and function, affect the investment preferences of fund managers needs to be studied further. Second, focusing on the quality of accounting information disclosure through audit opinions and auditor quality alone fails to give us a full picture. Finally, because a complete set of data on the stock holdings of institutional investors is unavailable, we are unable to conduct the regression analysis on the ratio of stocks held by institutional investors as a dependent variable; if we could, our conclusions could be more comprehensive.

## REFERENCES

Please refer to P. 20–23