

管制下的独立董事：不求有功，但求无过

— 基于中国独立董事制度的经验分析¹

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摘要

本文分别从独立董事改善经营业绩与降低信息风险的角度，分析了中国上市公司按证监会要求建立独立董事制度的经济后果。本文的研究结果表明，当声誉机制和人力资本市场竞争无法对独立董事提供有效激励和监督时，董事会独立性的提高并不能提高经营业绩。但是法律和诉讼风险的约束使得风险回避的独立董事要求降低公司的会计信息风险，并帮助投资者建立有效的风险预期，提高股价中公司特征信息的比例。因此，以公司信息披露质量为基础，建立和完善独立董事的责权利评价体系，是符合我国资本市场现实，有效的发挥独立董事在公司治理中的作用的有效途径。

关键词：独立董事、经营业绩、会计信息风险、股价信息含量

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一、引言

2001年8月16日，中国证监会颁布《关于在上市公司建立独立董事制度的指导意见》（简称指导意见），明确要求在上市公司中全面实行独立董事制度。截止2003年底，全部上市都已聘请独立董事，绝大多数达到1/3的独立董事比例要求。

指导意见提出，“独立董事应对上市公司及全体股东负责，维护公司整体利益，特别是中小股东的权益”。但独立董事在公司中的具体责任是什么，他们如何影响公司价值？国内外现有的研究并没有取得一致的结论。更进一步，现有的研究没有回答，公司设立独立董事制度的不同动机如何影响独立董事作用的发挥，即自发与强制要求聘请的独立董事是否在公司中发挥同样的作用？已有的理论研究表明，公司为降低代理成本、改善经营业绩，会自发聘请独立董事，独立董事与公司业绩之间存在显著的正相关关系。但是当公司为达到管制要求而聘请独立董事时，上述正相关关系依然存在吗？如果答案否定，那么对董事会独立性的监管是否有其他经济意义？目前对独立董事及其经济后果的研究，一定程度上忽视了管制在其中的作用，这也是本文的主要研究内容。

本文从证监会强制要求上市公司建立独立董事制度的角度，分析了制度和监管环境对独立董事行为及其经济后果的影响。中国上市公司独立董事的建立进行事件研究具有以下优点：

第一，中国上市公司缺乏自愿提高董事会独立性的动机。数据显示（见表1），指导意见颁布以前聘请独立董事的上市公司比例不超过10%；而到2003年，所有上市公司无一例外地按规定在董事会中设立独立董事。这说明证监会的管制行为对上市公司的独立董事制度有十分重大的影响。第二，上市公司独立董事从公司领取一定数额的“津贴”，业绩与薪酬并不直接相关。同时，由于声誉机制和人力资本市场竞争不能提供有效激励，所以独立董事在改善公司业绩方面“不求有功”。第三，如果上市公司由于虚假信息披露被处罚，独立董事也面临着市场进入、罚款等法律风险。所以独立董事在提高公司信息质量方面“但求无过”。

我国上市公司独立董事的以上特点说明，公司为达到管制要求而聘请独立董事未必能有效地改善企业的经营业绩。但是为避免法律诉讼风险，独立董事十分关注企业的信息质量，要求企业提供稳健、透明的信息。同时，独立董事降低信息风险的作用应当在股价中得到反应，股票收益中公司特征信息的比例将会提高。本文以指导意见的颁布为基准，比较了董事会独立性达标前后公司经营业绩、会计信息稳健性及股价信息含量的变化。研究结果表明，为达到管制要求而聘任的独立董事并未显著改善公司的经营业绩，却显著地提高了会计信息的稳健性，降低信息风险，使得股价更多地反应公司特征信息。

本文的研究结果具有重要的理论价值和现实意义，管制下建立的独立董事制度并不能改善公司的经营业绩；但是这并不意味着独立董事制度是无效的，独立董事可以有效地降低会计信息风险，帮助投资者建立对公司风险的正确预期，并使股价中包含更多公司特征信息。因此，以公司信息披露风险，而不是经营业绩作为衡量独立董事业绩的目标，并明确独立董事的责任为公司信息披露的公开、透明，应该更符合中国资本市场的现实需要。

本文其余部分的结构安排如下：第二部分是制度环境和假设的提出；第三部分是研究设计；第四部分是回归结果与分析；第五部分是稳健性检验；第六部分为结论。

二、制度背景与假设的提出

1. 制度背景

2001年8月16日，中国证监会颁布《关于在上市公司建立独立董事制度的指导意见》（简称指导意见），开始在上市公司中全面实行独立董事制度，要求上市公司的董事会在2002年6月至少包括2名独立董事，截止2003年6月30日应至少包括三分之一的独立董事。在其后颁布的《上市公司治理准则》中，再次对董事会独立性提出了同样的要求和时间表。表1列示了《指导意见》颁布前后上市公司聘请独立董事的情况：

表1 1999—2006年中国上市公司聘请独立董事情况

年度	1999	2000	2001	2002	2003	2004	2005	2006
聘请独立董事的公司	34	93	341	1180	1262	1352	1351	1410
恰好达到要求的公司	6	12	70	350	974	1077	1119	1156
超过要求的公司	2	4	7	27	95	168	168	207
年末上市公司数量	916	1081	1137	1203	1262	1353	1351	1410

注：样本来自CSMAR数据库，剔除了没有公布董事会人数或独立董事人数的公司以及董事会人数在19人以上的公司。恰好达到要求是指独立董事人数不少于2人，且比例为董事会人数1/3的四舍五入值（董事会人数未必能被3整除）；超过要求是指独立董事不少于2人，且比例超过董事会人数1/3的四舍五入值。

在2001年指导意见和《上市公司治理准则》颁布之前，只有不足10%的公司聘请了独立董事，聘请独立董事达到或者超过要求的公司不足2%。这表明上市公司自愿聘请独立董事的动机并不明显，或者说上市公司并未将独立董事制度作为内部公司治理的主要机制之一。

而在指导意见颁布后，独立董事的比例显著提高。从2003年起，几乎所有的上市公司都聘请了独立董事，2003年达到或者超过独立董事比例的公司约占年末上市公司数量的85%，2006年该比例为97%，其中85%的公司都选择恰好达标。与2001年相比，上市公司董事会的独立性大大提高，这一方面说明上市公司确实按照指导意见和《准则》的要求聘请了独立董事，但是另一方面也说明，上市公司提高董事会的独立性，并非源自公司降低代理成本的动机，而仅仅是为了达到管制要求的结果，因为绝大多数的公司的独立董事比例都恰好达到证监会的要求。那么，管制带来的董事会独立性在公司治理中的作用是否与代理理论的预测一致呢？这就需要更为深入的理论分析，即独立董事本身所面临的经济行为分析。

2. 独立董事改善经营业绩的作用

目前对董事会独立性及其经济后果的研究，大多基于代理理论，特别是Fama and Jensen (1983)的理论分析。Fama and Jensen (1983)认为，权力的有效分配，是保

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证公司在所有权与控制权分离情况下充分发展的根本原因。公司管理层行使提议和执行的权力，而董事会则代表股东执行批准和监督的权利，从而制约管理层的自利行为。而董事会发挥作用的重要前提之一，就是董事会意见不受管理层的影响，因此，聘请独立于管理层的外部董事，是保证董事会独立性，制约代理行为的重要机制。

那么如何激励作为外部人的独立董事去监督公司内部管理层呢？代理理论认为这主要依赖与独立董事的声誉机制。Fama (1980)和Fama and Jensen (1983)提出，人力资本市场的竞争为独立董事提供制约代理行为的动机，建立声誉，并获得更高的人力资本市场价值。因此，独立董事制度发挥作用依赖于两个重要前提：人力资本市场竞争和声誉机制的有效运作。满足这两个前提的情况下，代理理论预期独立董事能够降低代理成本，改善公司的经营业绩，即董事会独立性与公司经营业绩之间存在显著的正相关关系。但实证研究的结果却与理论并不完全一致。Hermalin and Weisbach (1991)，Mehran (1995)及Bhagat and Black (2002)对美国上市公司的研究未发现独立董事比例与公司业绩的显著正相关关系，但股票市场却对董事会独立性的提高作出正面反应(Brickley, Coles, and Terry, 1994; Byrd and Hickman, 1992; Rosenstein and Wyatt, 1990)。高明华和马守莉(2002)对2001年83家设立独立董事的中国上市公司的研究表明，独立董事比例和公司经营业绩之间存在微弱的正相关关系。Firth *et al.* (2002)采用联立方程的方法，没有发现董事会独立性会显著影响公司业绩。而王跃堂等(2006)在控制了董事会内生性的情况下，发现董事会独立性对公司经营业绩有显著的正面影响。叶康涛、陆正飞和张志华(2007)在控制独立董事内生性后，发现独立董事能够显著降低大股东对上市公司的掏空行为。

可见，独立董事与公司经营业绩之间的正相关关系并未在实证检验中取得一致结论。可能的原因，一方面独立董事及其他公司治理机制选择与公司业绩之间存在内生性问题；另一方面，人力资本市场，特别是声誉机制并不完善，对独立董事的激励与约束不足。

由于绝大多数上市公司是在证监会的强制要求下聘请了独立董事，本文的研究避免了独立董事制度与公司业绩的内生性问题，可以直接观测到独立董事制度的建立对公司业绩的影响。同时，由于我国处在人力资本市场和声誉机制不完善的转轨经济，我们可以考查激励和约束不足的情况下独立董事是否依然能改善公司经营业绩。从独立董事的角度来看，独立董事的专业能力在不完全市场中得不到有效定价，独立董事薪酬并不与公司业绩高度相关，不能胜任的独立董事也不会受到市场惩罚，因此独立董事本身并无提高公司业绩的动机。从上市公司的角度来看，独立董事制度的建立完全是为达到管制要求，公司关注的是完成达标任务，自身并没有用该制度加强公司治理的动机，独立董事很可能成为“花瓶”，不能发挥改善经营业绩的作用。根据上述分析，本文提出如下假设：

H1：董事会独立性达到管制要求后，公司经营业绩无显著提高。

3. 独立董事的信息披露作用

在不完全人力资本市场和声誉机制下，独立董事“不求有功”。为达到管制要求，上市公司也并无提高董事会独立性、约束管理层代理行为的动机。这是否意味

着独立董事在公司治理中毫无作用呢？股票市场却对董事会独立性的提高作出正面反应(Brickley, Coles, and Terry, 1994; Byrd and Hickman, 1992; Rosenstein and Wyatt, 1990)说明答案应当是否定的。事实上，已有的研究表明，独立董事在公司信息披露质量和信息风险方面的确发挥作用。Klein (2002)发现董事会独立性与累计非正常收益之间存在负相关关系，说明独立董事抑制盈余管理。Beasley (1996)和 Cornette, Marcus and Tehranian (2008)均发现董事会独立性的提高能降低公司发生财务丑闻的风险，Agrawal and Chadha (2005)通过对美国上市公司财务报表重报的研究发现有独立董事的公司财务报表重报的可能性更小。Andersona, Mansi and Reeb (2004)发现独立董事可以通过监督会计信息的产生过程降低借款成本。Ahmed and Duellman (2007)的研究表明董事会独立性与会计信息的谨慎性存在显著正相关关系。吴清华和王平心(2007)对我国上市公司的研究发现独立董事能够帮助降低上市公司的盈余管理水平。而赵德武、曾力和谭莉川(2008)发现独立董事的监督能力，特别是履职环境对提高盈余稳健性有积极作用。

本文认为，即使由于制度原因独立董事未得到有效激励和约束，但他们仍须为公司的信息披露行为承担法律风险。我国《公司法》和《公司治理准则》中没有对独立董事的责任做出特别规定，但这意味着独立董事需承担与其他董事相同责任，其中包括信息披露的透明、可靠。中国仅有的一例对独立董事处罚案也在一定程度上明确了独立董事的信息披露责任。2001年9月，证监会对郑州百文的董事事会成员实施了行政处罚，主要原因包括公司(1)虚假上市；(2)上市后虚增利润；(3)配股资金用途与信息披露不符；(4)隐瞒重大投资项目等。公司独立董事陆家豪不仅被罚款10万元，而且被认定为市场禁入者。在此判例中，证监会处罚独立董事的主要原因不是公司业绩低下，而是独立董事没有有效约束公司的信息虚假披露。这从法律的角度明确了独立董事需要为公司的信息披露承担责任。

既然独立董事并不承担公司经营成果的责任，而对公司信息披露承担法律风险，风险回避的独立董事将会提高对公司信息披露的质量的要求，保证公司信息披露的可靠性。当独立董事面临信息风险过高时，他们为避免法律风险可能会选择“用脚投票”。这一点在李康、叶雅和张明坤(2004)关于2004年以前我国上市公司独立董事辞职原因的问卷调查中得到证实，独立董事辞职的第一原因是规避风险和避免影响声誉。支晓强和童盼(2005)的研究发现公司盈余管理的程度越高，独立董事离任的可能性也越高。罗党论，唐清泉，王莉(2006)的研究也表明在发生违规行为、重大诉讼、重大关联和重大担保的上市公司，独立董事辞职的可能性更高。

由此可见，在人力资本市场不完全竞争的情况下，风险回避对独立董事的行为有十分重要的影响。独立董事缺乏足够的动机提高公司业绩，但却为避免法律风险在降低公司的信息风险做出努力，即独立董事更关注公司的下方风险(downside risk)。在会计信息方面，风险回避的独立董事要求会计信息充分、准确地反映公司的经营风险，特别是及时确认损失的风险、降低盈余管理的风险。独立董事“但求无过”。根据以上分析，我们提出假设2：

H2：董事会独立性达到管制要求后，公司会计信息的谨慎性显著提高。

如果风险回避的独立董事能够提高公司信息质量，那么公司的透明度会更高，信息不对称程度更低，因此投资者会更多地依赖公司的特征信息定价和制定投资决

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策，产生更多的知情交易 (informed trading)。Jin and Myers (2006) 发现股价同步性与信息透明度之间的负相关关系，Gul, Kim and Qiu (2010) 对中国上市公司的研究发现，审计质量高的公司股价同步性更低，并且股价反应更多的公司盈余信息含量。因此，我们预期独立董事降低公司信息风险、提高透明度的直接结果便是降低公司内部人与投资者之间的信息不对称程度，提高股价中公司具体信息的含量，股价同步性降低。

Gordon (2007) 回顾了美国独立董事制度的发展进程，发现董事会独立性的提高与股票市场股价同步性的降低在时间上的一致性，一定程度上验证了二者之间的相关关系。已有的研究表明，与独立董事在信息披露方面发挥相似作用的独立审计高度关注公司的会计信息风险，并且有很强的风险回避倾向以维护自己的声誉。高质量的独立审计能够提高会计信息质量，降低会计信息风险 (Becker, DeFond, Jiambalvo and Subramanyam 1998; Francis, Maydew, and Sparks, 1999; Krishnan, 2003)。进一步，Gul, Kim and Qiu (2010) 对中国上市公司的研究发现，高质量的独立审计能够降低股价同步性。由于独立董事与外部审计均在提高公司信息披露质量方面发挥积极作用，本文预期，董事独立性提高后，股价同步性降低、股价中公司特征信息含量增加。根据以上分析，我们提出假设3：

H3：公司董事会独立性达到管制要求后，股价同步性降低。

三、研究设计

1. 样本与样本期间选择

本文选择2002年以前上市的，而且在2001年《指导意见》颁布以前没有聘请独立董事的上市公司作为研究样本，分析样本公司在董事会独立性达到管制要求前后，公司经营业绩、会计信息稳健性和股价信息含量的变化。由于1999年起可以获得上市公司治理变量，本文的样本包括了1999至2006年内有完整的董事会结构数据和必要的财务数据 (包括总资产、总负债、净利润、经营利润、经营现金流、主营业务收入和年末收盘价) 的所有A股上市公司。本文剔除金融行业公司 (证监会行业代码首位为I的上市公司)，最终得到5322个公司年度观测值。为剔除极端值的影响，本文对所有连续变量都进行了1%和99%分位上的缩尾处理 (winsorized)。本文研究数据均来源于CSMAR数据库。

2. 研究方法

本文主要分析比较公司在董事会独立性达到管制要求前后经营业绩、会计信息稳健性和股价信息含量的变化。董事会独立性达标定义为：独立董事占董事会人数的比例不少于1/3。本文使用ROA、ROE和经营现金流量 (OCF) 几个常用指标来衡量公司的经营业绩。假设1的回归方程如下：

$$\begin{aligned}
 Operating_{it} = & \beta_0 + \beta_1 Post_{it} + \beta_2 Operating_{it-1} + \beta_3 Size_{it} \\
 & + \beta_4 Lev_{it} + \beta_5 Turnover_{it} + \beta_6 Growth_{it} + \beta_7 Loss_{it} \\
 & + SICdummies_i + u_{it}
 \end{aligned} \tag{1}$$

根据前文分析,在人力资本市场不完全竞争和管制条件下,董事会独立性与经营业绩应当不存在显著正相关关系。因此董事会达到管制要求后,本文预期经营业绩无显著变化,即无法拒绝 $\beta_1 = 0$ 的假设。回归方程中控制上一期经营业绩、公司规模、负债率、总资产周转率、销售增长率、是否发生损失及行业对本期经营业绩的影响。

对会计信息谨慎性的在达标前后的比较,本文使用Basu(1997)模型和Zhang(2008)的谨慎性应计来衡量。分别使用如下回归模型:

$$EP_{it} = \alpha_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D^* R_{it} + \alpha_1 Post_{it} + \gamma_1 Post_{it} * D_{it} + \gamma_2 Post_{it} * R_{it} + \gamma_3 Post_{it} * D_{it} * R_{it} + u_{it} \quad (2)$$

$$Con_Acc_{it} = \beta_0 + \beta_1 Post_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} + \beta_5 Turnover_{it} + \beta_6 Growth_{it} + \beta_7 Loss_{it} + \beta_8 BoardSize_{it} + \beta_9 Liquidratio_{it} + \beta_{10} Private_{it} + SICdummies_i + u_{it} \quad (3)$$

如果董事会独立性提高后公司会计信息稳健性显著提高,发生损失的信息应当更加及时地在股票收益中得到反应,Basu模型中的系数 γ_3 应当显著为正。模型(3)中的 Con_Acc 由累计非经营性应计/总资产计算得出(Zhang, 2008; Givoly and Hayn, 2000)。累计非经营性应计为经营性应计项减去营运资本应计项。累计非经营性应计项目反映了过去所有年份损失的总计,包括资产减值、重组等。与Basu模型相同,该指标反映了及时确认损失的谨慎性原则,但该指标不受股票收益的影响,不依赖于股票收益能否准确代表经济收益,而反映了公司通过实施低估资产、高估负债、提前确认损失、推迟确认收益等谨慎性原则产生较低应计项目的结果。为便于解释,与Zhang(2008)一致,本文将 Con_Acc 定义为负的累计非经营性应计,即 Con_Acc 越高会计信息越稳健,如果董事会独立性提高后会计信息稳健性提高,方程(3)中 β_1 将显著为正。

控制变量的选择上,除了加入公司特征变量以外,我们还加入了公司治理变量,包括董事会规模、流通股比例和民营企业的虚拟变量。Lipton and Lorsch(1992)和Jensen(1993)均认为规模较小的董事会更为有效,Yermack(1996)和Eisenberg, Sundgren and Wells(1998)为此提供了经验证据。流通股比例和民营企业控制了我国上市公司所有权结构对信息特征的影响。

对假设3的检验,我们将比较董事会独立性达标前后公司股价的信息含量。本文使用Morck *et al.*(2000)提出的股价信息含量指标。回归方程如下:

$$\varphi_{it} = \beta_0 + \beta_1 Post_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} + \beta_5 Turnover_{it} + \beta_6 Growth_{it} + \beta_7 Loss_{it} + \beta_8 BoardSize_{it} + \beta_9 Liquidratio_{it} + \beta_{10} Private_{it} + \beta_{11} Con_Acc + SICdummies_i + u_{it} \quad (4)$$

φ_{it} 由根据三因素模型得到的 R^2 计算得出。 φ_{it} 越高,说明股价同步性越高,即股价中公司特征信息的含量越少。因此,如果独立董事能够帮助投资者建立对公司

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信息风险的准确预期，提高股价的信息含量，董事会独立性达标后，股价同步性指标应当显著降低，即 β_1 将显著为负。同样，在回归方程中，我们控制了公司特征和股权结构的影响，还加入了会计信息稳健性指标作为会计信息风险的控制变量。

本文回归中用到各个变量的具体定义见表2：

表2 变量定义

变量名	变量含义	计算方法
<i>Post</i>	董事会达标虚拟变量	$Post = 1$ ，如果独立董事占董事会人数比例 $\geq 1/3$ ，且独立董事人数不少于2人；否则 $Post = 0$
<i>Indrate</i>	独立董事比例	独立董事人数/董事会总人数
<i>ROA</i>	总资产回报率	净利润/平均总资产
<i>ROE</i>	净资产回报率	净利润/平均所有者权益
<i>OCF</i>	经营现金流量	经营现金流/平均总资产
<i>EP</i>	盈利-价格比	每股收益/上年末收盘价
<i>R</i>	股票持有收益	年度股票持有收益
<i>D</i>	损失虚拟变量	$D = 1$ ，如果当年的股票持有收益 < 0
<i>Con_Acc</i>	稳健性非正常应计	$(-1) * [(净利润 + 折旧 - 经营现金流) - (\Delta 应收账款 + \Delta 存货 + \Delta 预付帐款 - \Delta 应付帐款 - \Delta 应交税金)] / 总资产$
ϕ	股价信息含量	$\log(R^2/1-R^2)$ ，其中 R^2 用股票日收益率的三因素模型计算得出
<i>Size</i>	规模	$\log(总资产)$
<i>Lev</i>	负债率	总负债/总资产
<i>Turnover</i>	总资产周转率	主营业务收入/总资产
<i>Growth</i>	销售增长率	$(本年主营业务收入 - 上年主营业务收入) / 上年主营业务收入$
<i>Bodsize</i>	董事会规模	$\log(董事会人数)$
<i>Liquidratio</i>	流通股比例	流通股数/总股数
<i>Private</i>	民营企业虚拟变量	$Private = 1$ ，如果公司的最终控制人为个人；否则 $Private = 0$

四、回归结果及分析

1. 描述性统计

表3A和表3B分别列示了回归因变量和自变量的描述性统计结果。公司董事会独立性未达标观测为2443个，达标观测为2879个。通过达标前后独立董事的比例(*Indrate*)的比较再次说明上市公司聘请独立董事很大程度上是为了达到监管要求：董事会独立性达标前，上市公司独立董事比例的平均值为10.5%，中值为0；而达标后，独立董事比例的均值和中值均约为证监会所要求的1/3。另外，达标后独立董事比例的10%分位值为1/3，90%分位值为0.4也说明了相同的问题(篇幅所限未列示在表中)。经营业绩方面，ROA在董事会独立性达标前后无显著差异，ROE和OCF在

达标后有所提高。谨慎性应计项在达标后显著提高, 股价同步性指标则显著降低。描述性统计的比较结果与我们的预期基本相符, 当然, 还需要进一步的回归分析来验证本文的假设。表3B列示了本文使用控制变量的描述性统计结果。从达标前后各项指标的均值比较可以发现, 公司规模、负债率、总资产周转率和流通股比例都有所提高, 而销售增长率和董事会规模并无显著变化。

表3 变量描述性统计

变量名	观测数	中值	均值	标准差	最小值	最大值
表3A 经营业绩、谨慎性应计及股价同步性达标前后描述性统计						
<i>Post = 0</i>						
<i>Indrate</i>	2,443	0	0.105	0.125	0	0.714
<i>ROA</i>	2,443	0.032	0.028	0.060	-0.278	0.191
<i>ROE</i>	2,443	0.032	0.024	0.063	-0.355	0.149
<i>OCF</i>	2,443	0.046	0.050	0.074	-0.198	0.263
<i>Con_Acc</i>	2,443	0.004	0.007	0.103	-0.336	0.398
φ	2,443	-0.122	-0.195	0.884	-2.676	1.183
<i>Post = 1</i>						
<i>Indrate</i>	2,879	0.333	0.346***	0.046	0	0.750
<i>ROA</i>	2,879	0.026	0.028	0.060	-0.278	0.191
<i>ROE</i>	2,879	0.023	0.021**	0.059	-0.355	0.149
<i>OCF</i>	2,879	0.055	0.056***	0.076	-0.198	0.263
<i>Con_Acc</i>	2,879	0.017	0.021***	0.099	-0.336	0.398
φ	2,879	-0.344	-0.409***	0.636	-2.676	1.183
表3B 控制变量描述性统计						
<i>Post = 0</i>						
<i>Size</i>	2,443	7.142	7.198	0.848	4.409	10.152
<i>Lev</i>	2,443	0.392	0.406	0.188	0.069	1.130
<i>Growth</i>	2,443	0.128	0.227	0.571	-0.765	3.653
<i>Turnover</i>	2,443	0.429	0.533	0.393	0.0420	2.419
<i>Loss</i>	2,443	0	0.100	0.300	0	1
<i>Bodsize</i>	2,433	2.197	2.233	0.269	0.693	2.944
<i>Liquidratio</i>	2,443	0.387	0.404	0.127	0.098	1
<i>Private</i>	2,443	0	0.120	0.324	0	1
<i>Post = 1</i>						
<i>Size</i>	2,879	7.493	7.521***	0.928	4.183	11.895
<i>Lev</i>	2,879	0.462	0.467***	0.189	0.069	1.131
<i>Growth</i>	2,879	0.156	0.240	0.540	-0.765	3.653
<i>Turnover</i>	2,879	0.526	0.660***	0.487	0.042	2.419
<i>Loss</i>	2,879	0	0.0952	0.294	0	1
<i>Bodsize</i>	2,879	2.197	2.242	0.218	1.386	2.890
<i>Liquidratio</i>	2,879	0.446	0.469***	0.152	0.087	1
<i>Private</i>	2,879	0	0.243***	0.429	0	1

注：“**”，“***”分别表示两组变量的均值在5%和1%的水平上存在显著差异。

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2. 董事会独立性与公司经营业绩

本文的回归模型均使用控制了行业变量的普通最小二乘法 (OLS)，使用调整异方差和序列相关的标准误差。未使用固定效应模型的原因在于固定效应模型假设不可观测的公司特征在整个样本期内保持不变。而证监会对独立董事制度的设立要求很可能对公司的治理结构、信息产生过程产生影响，从而违背了不可观测的公司特征在整个样本期内保持不变的假设 (描述性统计中对于达标前后公司各项指标的比较也反映了这一点)。因此，我们认为此处使用控制行业变量的 OLS 更为合适。

表4列示了分别以 ROA、ROE 和 OCF 作为公司业绩变量的回归结果，整体上并不支持代理理论的观点。在控制了公司规模、负债率、周转率、成长性、是否发生亏损等因素的影响后，公司董事会独立性是否达到监管要求并不影响经营业绩。我们的解释是，由于人力资本市场的不完全竞争和声誉机制的不完善，在管制条件下，独立董事并未有效发挥改善公司经营业绩的作用。上市公司设立独立董事的原因主要是为达到监管要求，而自身并没有聘请独立董事来提高经营效率的动机。因此，独立董事在改善公司经营业绩方面“不求有功”。

表4 董事会独立性与经营业绩

	ROA	ROE	OCF
<i>Post</i>	0.002 (1.53)	-0.001 (-1.34)	-0.001 (-0.29)
<i>Lag(ROA)</i>	0.416*** (19.53)		
<i>Lag(ROE)</i>		0.225*** (13.11)	
<i>Lag(OCF)</i>			0.141*** (7.71)
<i>Size</i>	0.000 (0.14)	0.001*** (2.01)	0.005*** (3.82)
<i>Lev</i>	-0.017*** (-3.17)	-0.029*** (-6.72)	0.008 (1.30)
<i>Turnover</i>	0.014*** (9.35)	0.010*** (6.92)	0.026** (8.53)
<i>Growth</i>	0.016*** (9.68)	0.009*** (8.82)	0.007*** (2.73)
<i>Loss</i>	-0.097*** (-30.62)	-0.131*** (-34.46)	-0.034*** (-9.83)
<i>Constant</i>	0.009* (1.79)	0.019*** (3.78)	-0.021** (-1.94)
R ²	0.649	0.650	0.149
N	5,322	5,322	5,322

注：

1. “***”，“**”，和“*”分别表示在1%，5%和10%的水平上显著，括号中为双尾检验的t值。
2. 回归结果控制了行业因素；

表5是使用Basu模型对假说2检验模型的回归结果。回归结果显示，公司董事会独立性经证监会管制要求提高后，收益与损失确认的非对称性显著提高， $Post*DR$ 的回归系数在1%的水平上显著为正，说明公司更为及时地确认经济损失，会计信息的稳健性显著提高。管制情况下聘请的独立董事虽未得到有效激励改善公司经营业绩，但他们仍面临着信息披露的法律风险。风险回避的独立董事为降低自身风险会要求管理层提高公司信息披露的质量，特别提高对可能发生的损失披露的及时性。

表5 董事会独立性与会计信息谨慎性—Basu模型

	(i)	(ii)	(iii)
R	-0.001 (-0.13)	-0.001 (-0.11)	-0.002 (-0.49)
D	0.011 (1.44)	0.013 (1.47)	0.004* (1.88)
$D*R$	0.144*** (5.69)	0.137*** (5.03)	0.043*** (5.60)
$Post$	-0.003 (-0.32)	0.023*** (2.25)	-0.003 (-0.95)
$Post*R$	0.010 (0.89)	0.005 (0.36)	0.004 (1.13)
$Post*D$	0.071*** (4.95)	0.056*** (3.58)	0.023*** (5.56)
$Post*D*R$	0.118*** (2.77)	0.125*** (2.91)	0.043*** (3.44)
$Constant$	0.054*** (6.34)	0.048*** (4.76)	0.017*** (5.60)
R^2	0.073	0.096	0.066
N	5,322	5,322	5,322

注：

1. “***”，“**”，和“*”分别表示在1%，5%和10%的水平上显著，括号中为双尾检验的t值。
2. 列(i)的因变量为用净利润计算的收益—价格比，列(ii)用营业利润计算，列(iii)则使用了剔除非正常损益的净利润计算。
3. 回归结果控制了行业因素。

表6报告了董事会独立性提高后谨慎性应计项目的变化。 Con_Acc 越大，会计信息的稳健性越高。在控制了公司规模、负债率、盈利能力、成长性等特征指标、董事会规模及所有权指标等变量后，董事会独立性的提高与会计信息谨慎性存在显著的正相关关系，董事会独立性达标的虚拟变量在1%的水平上显著为正。另外，控制变量中公司规模、负债率、销售增长率和民营企业虚拟变量都对公司会计信息谨慎性存在显著相关关系。

表6 董事会独立性与会计信息谨慎性—谨慎性应计项目

<i>Con_Acc</i>	(i)	(ii)
<i>Post</i>	0.015*** (5.45)	0.013*** (4.30)
<i>Size</i>	0.006*** (3.41)	0.007*** (3.91)
<i>Lev</i>	-0.071*** (-6.06)	-0.077*** (-6.58)
<i>ROA</i>	-0.047 (-1.14)	-0.053 (-1.28)
<i>Growth</i>	0.038*** (8.87)	0.038*** (8.73)
<i>Loss</i>	0.035*** (5.21)	0.034*** (5.06)
<i>Bodsize</i>		0.009 (1.52)
<i>Liquidratio</i>		0.002 (0.20)
<i>Private</i>		0.022*** (5.17)
<i>Constant</i>	-0.005 (-0.36)	-0.033* (-1.77)
R ²	0.075	0.082
N	5,322	5,312

注：

1. “***”，“**”，和“*”分别表示在1%、5%和10%的水平上显著，括号中为双尾检验的t值。
2. 回归结果控制了行业因素；
3. 因变量为根据Zhang(2008)定义的谨慎性应计项目 (*Con_Acc*)。

表5和表6的回归结果显示，为达到监管要求而聘请的独立董事虽然不能有效改进公司的经营业绩，但却能够提高会计信息谨慎性，说明独立董事更关注公司的下方风险，“但求无过”。根据本文第二部分的理论分析，独立董事能够有效提高会计信息披露质量，特别是及时确认损失，以避免可能发生的法律风险。当独立董事在公司信息披露方面发挥积极作用时，公司透明度提高、信息不对称程度降低，投资者会在投资决策中更多考虑公司个别信息，使得股价中包含更多的公司特征信息。这便解释了为什么公司聘任独立董事后股票市场做出正面反应(如Brickley, Coles, and Terry, 1994; Byrd and Hickman, 1992; Rosenstein and Wyatt, 1990)。表7报告了董事会独立性提高后股价同步性(即股价中市场信息相对于公司特征信息所占的比例)的变化。

表7 董事会独立性与股价信息含量

φ	(i)	(ii)
<i>Post</i>	-0.252*** (-12.42)	-0.238*** (-11.34)
<i>Lag(φ)</i>	0.267*** (19.52)	0.270*** (19.80)
<i>Size</i>	0.129*** (11.01)	0.139*** (11.41)
<i>Lev</i>	-0.300*** (-5.20)	-0.327*** (-5.61)
<i>ROA</i>	-0.878*** (-3.80)	-0.924*** (-4.00)
<i>Growth</i>	-0.060*** (-3.22)	-0.040*** (-2.11)
<i>Loss</i>	-0.138*** (-3.28)	-0.119*** (-2.82)
<i>Con_Acc</i>		-0.524*** (-5.01)
<i>Liquidratio</i>		-0.126* (-1.86)
<i>Bodsize</i>		-0.099*** (-2.16)
<i>Private</i>		-0.011 (-0.44)
<i>Constant</i>	-0.821*** (-7.67)	-0.602*** (-4.24)
R^2	0.151	0.157
N	5,321	5,311

注：

1. “***”，“**”，和“*”分别表示在1%，5%和10%的水平上显著，括号中为双尾检验的t值。
2. 回归结果控制了行业因素。

表7的回归结果显示，公司董事会独立性达标后，股价同步性指标显著降低。在控制公司特征、会计信息风险和所有权结构特征后，董事会独立性达标的虚拟变量在1%的水平上显著。同时，规模小、负债率高、营利性高、成长快、会计信息谨慎性高、董事会规模小的公司股价同步性更低。回归结果与本文的预期一致，说明独立董事在降低公司信息风险方面的作用在股票市场中得到反映。

五、稳健性检验

1. 会计准则实施的影响

由于我国上市公司从2001年起开始实施《企业会计准则》，所以独立董事制度的建立与会计准则的实施时间部分重合，有必要进一步分析本文所发现的结果是否由会计准则的实施引起。从表1列示的上市公司建立独立董事制度的情况可以看出，从2002年起，大部分上市公司才开始聘请独立董事，约30%的上市公司达到或超过《指导意见》的要求。而2003年是绝大多数公司达到1/3独立董事比例要求（本文定义关键变量 $Post = 1$ ）的年份，约85%的上市公司达到或超过监管要求，所以独立董事制度大规模建立的时间和会计准则实施的时间并不完全重合。为进一步消除2001年会计准则实施的影响，我们在表8和表9中分别比较了剔除会计准则主要实施年份（2001和2001年），以及会计准则在2001年实施后，独立董事比例是否达标对会计信息及股价同步性的影响。回归结果与表5—表7的结果一致。

表8 董事会独立性与会计信息谨慎性—Basu模型

	2001年后			剔除2001和2002年		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
<i>R</i>	-0.004 (-0.28)	-0.003 (-0.20)	-0.003 (-0.51)	-0.005 (-0.41)	-0.002 (-0.13)	-0.002 (-0.56)
<i>D</i>	0.026** (-2.16)	0.005 (-0.38)	0.006* (-1.88)	0.006 (-0.53)	0.015 (-1.16)	0.003 (-0.88)
<i>D*R</i>	0.183*** (-6.25)	0.177*** (-5.43)	0.055*** (-5.96)	0.115** (-2.50)	0.092* (-1.95)	0.043*** (-2.89)
<i>Post</i>	0.003 (-0.21)	0.006 (-0.42)	-0.004 (-0.95)	-0.003 (-0.33)	0.029*** (-2.68)	-0.002 (-0.83)
<i>Post*R</i>	0.012 (-0.80)	0.006 (-0.35)	0.005 (-0.96)	0.013 (-1.14)	0.005 (-0.35)	0.005 (-1.20)
<i>Post*D</i>	0.055*** (-3.27)	0.063*** (-3.38)	0.020*** (-4.24)	0.082*** (-4.72)	0.059*** (-3.10)	0.026*** (-5.32)
<i>Post*D*R</i>	0.079* (-1.76)	0.085* (-1.84)	0.031** (-2.26)	0.157*** (-2.67)	0.176*** (-2.99)	0.047*** (-2.59)
<i>Constant</i>	0.048 -3.79	0.064 -4.44	0.018 -4.25	0.054*** (-5.09)	0.042*** (-3.21)	0.017*** (-4.44)
R^2	0.076	0.099	0.071	0.07	0.092	0.073
<i>N</i>	4,498	4,498	4,498	3,843	3,843	3,843

注：

1. “***”，“**”，和“*”分别表示在1%，5%和10%的水平上显著，括号中为双尾检验的t值。
2. 列(i)的因变量为用净利润计算的收益-价格比，列(ii)用营业利润计算，列(iii)则使用了剔除非正常损益的净利润计算。
3. 回归结果控制了行业因素。

表9 董事会独立性与谨慎性应计、股价信息含量

	2001年后		剔除2001和2002年	
	<i>Con_Acc</i>	φ	<i>Con_Acc</i>	φ
<i>Post</i>	0.016*** (-4.69)	-0.545*** (-25.16)	0.007* -1.95	-0.268*** -11.05
<i>Size</i>	0.007*** (-3.50)	0.096*** (-7.94)	0.006*** -3.05	0.121*** -9.89
<i>Lev</i>	-0.071*** (-5.55)	-0.373*** (-6.38)	-0.073*** (-5.52)	-0.289*** (-4.90)
<i>ROA</i>	-0.045 (-0.99)	-0.566** (-2.44)	-0.062 (-1.34)	-0.400* (-1.75)
<i>Growth</i>	0.037*** (-7.8)	-0.058*** (-3.14)	0.038*** -7.77	-0.023 (-1.15)
<i>Loss</i>	0.034*** (-4.85)	-0.140*** (-3.55)	0.0386*** -4.84	-0.112*** (-2.63)
<i>Liquidratio</i>	-0.004 (-0.33)	-0.115* (-1.76)	-0.008 (-0.68)	-0.061 (-0.92)
<i>Bodsize</i>	0.013** (-2.00)	-0.154 (-3.48)	0.006 -0.88	0.003 -0.06
<i>Private</i>	0.024*** (-5.42)	-0.042* (-1.68)	0.019*** -4.11	0.016 -0.6
<i>Con_Acc</i>		-0.732*** (-4.35)		-0.146 (-0.73)
<i>Lag(φ)</i>		0.258*** (-18.67)		0.290*** -18.28
<i>Constant</i>	-0.043 (-2.08)	0.172 (-1.27)	-0.013 (-0.61)	-1.313*** (-9.28)
N	4,498	4,498	3,833	3,832
R ²	0.08	0.269	0.084	0.203

注：

1. “***”，“**”，和“*”分别表示在1%，5%和10%的水平上显著，括号中为双尾检验的t值。
2. 回归结果控制了行业因素。

表8和表9的回归结果表明，剔除企业会计准则实施年份的影响及会计准则实施后的期间内，独立董事制度的实施均对会计信息稳健性和股价信息含量发挥作用。用Basu模型衡量的及时确认损失及Zhang(2008)模型计算的稳健性盈余在公司独立董事达标后均有显著提高，达标后股价中公司特征信息含量也有显著提高。虽然不能完全排除与会计准则实施同期的影响，但以上的检验结果均说明独立董事制度依然有重要的解释能力。

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2. 董事会独立性提高后的截面研究

上市公司根据《指导意见》建立独立董事制度后，独立董事比例的高低是否对会计信息有不同的影响呢？根据表1对上市公司聘请独立董事情况的描述，至2003年，所有上市公司都聘任了独立董事，恰好达到证监会要求的公司比例为77%，超标公司的比例仅为约7.5%。对达标后 ($Post = 1$) 独立董事比例 ($Indrate$) 的描述性统计也显示独立董事比例的中值、均值均约为《指导意见》所要求的1/3。这些统计数据充分表明，大多数上市公司聘任独立董事是出于达到监管要求的动机，而非市场选择的结果。因此我们认为，在管制情况下，法律诉讼风险作为独立董事发挥作用的底线使得达标与否具有经济后果，而达标以后独立董事人数的增加是否具有增量效果则不能确定。由于绝大多数公司选择恰好达标，我们预期难以发现独立董事人数进一步增加的边际效应。

表10 独立董事比例与谨慎性—Basu模型(2003-2006)

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
	$X = Normal$			$X = High$		
R	0.045*** (2.72)	0.029* (1.85)	0.015*** (2.74)	0.001 (0.07)	-0.010 (-0.68)	0.003 (0.69)
D	0.202*** (3.81)	0.132*** (2.67)	0.062*** (3.53)	0.077*** (2.82)	0.043 (1.37)	0.028*** (3.47)
$D*R$	0.302** (2.04)	0.250* (1.91)	0.105** (2.05)	0.322*** (4.69)	0.307*** (4.29)	0.094*** (4.75)
X	0.118*** (3.12)	0.092*** (2.65)	0.036*** (3.21)	0.000 (-0.01)	-0.015 (-0.60)	0.005 (0.80)
$X*R$	-0.040** (-2.31)	-0.028* (-1.66)	-0.013** (-2.34)	0.009 (0.73)	0.014 (0.92)	-0.000 (-0.07)
$X*D$	-0.129** (-2.35)	-0.066 (-1.28)	-0.037** (-2.07)	0.008 (0.27)	0.031 (0.90)	-0.000 (-0.07)
$X*D*R$	-0.039 (-0.26)	0.011 (0.08)	-0.018 (-0.35)	-0.072 (-0.92)	-0.055 (-0.69)	-0.008 (-0.36)
R^2	0.081	0.100	0.089	0.076	0.096	0.082
N	2,632	2,632	2,632	3,019	3,019	3,019

注：

1. “***”，“**”，和“*”分别表示在1%，5%和10%的水平上显著，括号中为双尾检验的t值。
2. 列(i)，(iv)的因变量为用净利润计算的收益-价格比，列(ii)，(v)用营业利润计算，列(iii)，(vi)则使用了剔除非正常损益的净利润计算。
3. 恰好达标与超常达标的比较使用2003-2006年董事会独立性达标的样本，低于中值与高于中值的比较使用2003-2006年的全部样本。
4. 回归结果控制了行业因素。

表 11 独立董事比例与谨慎性应计、股价信息含量 (2003-2006)

	<i>Con_Acc</i>		φ	
	<i>X = High</i>	<i>X = Normal</i>	<i>X = High</i>	<i>X = Normal</i>
<i>X</i>	0.003 (0.69)	-0.001 (-0.11)	0.045 (1.58)	0.014 (0.40)
<i>Size</i>	0.005** (2.27)	0.006** (2.34)	0.093*** (7.08)	0.091*** (6.43)
<i>Lev</i>	-0.065*** (-4.31)	-0.072*** (-4.43)	-0.335*** (-5.23)	-0.317*** (-4.60)
<i>ROA</i>	-0.045 (-0.85)	-0.082 (-1.47)	-0.210 (-0.87)	-0.459* (-1.75)
<i>Growth</i>	0.038*** (6.68)	0.039*** (6.38)	-0.038* (-1.76)	-0.043* (-1.85)
<i>Loss</i>	0.040*** (4.61)	0.032*** (3.45)	-0.101** (-2.29)	-0.128*** (-2.68)
<i>Bodsize</i>	0.011 (1.36)	0.012 (1.30)	0.007 (0.13)	-0.029 (-0.47)
<i>Liquidratio</i>	-0.018 (-1.44)	-0.022* (-1.73)	-0.011 (-0.16)	-0.006 (-0.09)
<i>Private</i>	0.021*** (4.28)	0.021*** (4.17)	0.016 (0.57)	0.010 (0.35)
<i>Con_Acc</i>			-0.087 (-0.26)	-0.171 (-1.29)
<i>Lag(φ)</i>			0.287*** (16.77)	0.281*** (15.29)
R^2	0.078	0.174	0.181	0.174
N	3,019	2,631	3,018	2,631

1. “***”, “**”, 和 “*” 分别表示在 1%、5% 和 10% 的水平上显著, 括号中为双尾检验的 t 值。
2. 恰好达标与超常达标的比较使用 2003-2006 年董事会独立性达标的样本, 低于中值与高于中值的比较使用 2003-2006 年的全部样本。
3. 回归结果控制了行业因素。

至 2003 年所有上市公司都聘任了独立董事, 因此我们用 2003 至 2006 年的数据进行比较。由于上市公司独立董事比例大都集中在 1/3 左右, 用独立董事比例的连续变量过于集中, 在此定义公司独立董事比例恰好达标与超标 (根据表 1 中的定义) 及独立董事比例高于中值与低于中值的虚拟变量: $Normal = 1$ 表明公司恰好达标, $Normal = 0$ 为超常达标; $High = 1$ 表明公司独立董事比例高于或等于样本的年度中值, $High = 0$ 为独立董事比例低于年度中值。表 10 和表 11 列示了 2003 至 2006 年公司独立董事比例对会计信息稳健性和股价同步性的回归结果。

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表10与表11对会计信息谨慎性的回归结果表明，在达到管制要求后，独立董事比例正常与超常达标，或低于与高于中值对会计信息的谨慎性无显著影响。我们认为，这主要是由于上市公司按照管制要求选择独立董事的比例，并无自愿提高董事会独立性的动机造成的。独立董事对于公司信息披露质量的贡献仅限于达到其风险回避的要求，而声誉机制无法为独立董事提供足够的动机进一步降低会计信息风险，因此高的独立董事比例并无边际贡献。

注：

表11所列示达标后独立董事比例对股价信息含量影响也说明了相同的问题。当独立董事比例达到管制要求后，提高独立董事比例并不能进一步降低会计信息风险，对股价的公司特征信息含量也无边际贡献。在2003年后，按照恰好达标与超常达标分组，或独立董事比例低于与高于中值分组均未发现独立董事比例对股价同步性的显著影响。

六、结论

本文分别从独立董事改进经营业绩与降低信息风险的角度，分析了中国上市公司按证监会要求建立独立董事制度的经济后果。根据代理理论，在声誉机制有效运行和人力资本市场竞争的条件下，独立董事能够有效约束管理层的自利行为，降低代理成本，提高公司经营业绩。但是，当声誉机制和人力资本市场竞争无法对独立董事提供有效激励和监督时，代理理论的结论是否还成立？如果不成立，独立董事是否成为了“花瓶”摆设，还是发挥其他作用呢？

本文从独立董事的风险回避倾向入手，分析了管制条件下独立董事在降低公司会计信息风险的作用，外生的管约束使我们能有效控制在大部分公司治理研究中存在的独立董事制度内生性问题。本文的研究结果表明，公司按照证监会要求执行独立董事制度后，经营业绩并无明显变化，但是以谨慎性衡量的会计信息风险却显著降低，公司与外部投资者之间信息不对称程度降低，股价中公司特征信息含量显著提高。这说明在人力资本市场不完善的转型经济中，独立董事虽未能发挥有效改善经营业绩的作用，但依然受到法律风险的约束，高度关注公司下方信息风险。风险回避的独立董事“不求有功，但求无过”。

目前的法律法规虽然要求公司聘请独立董事，但是独立董事和其他董事究竟有何差异，在权利和责任方面究竟有什么差异，却没有做出明确的规定。如果独立董事承担的责任与权利不匹配，将使得独立董事无法得到有效的激励和约束。而且对独立董事的责任的明确，必须考虑独立董事的风险规避倾向，增加独立董事的风险未必能够提高独立董事制度的效用。例如，让独立董事承担公司经营业绩的风险，显然是不恰当的。本文研究结果的现实意义在于，在目前的经济环境中，独立董事虽然并不能改善公司经营业绩，但在提高会计信息质量方面发挥了重要作用，独立董事制度还是有效的。一方面可以在信息披露的角度完善对独立董事的激励和约束，另一方面应当逐渐改进独立董事的构成，引入更多同行业专家，使得独立董事在提高公司经营业绩方面发挥积极作用。

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Playing Safe on the Board: The Role of Independent Directors – Evidence from Listed Firms in China¹

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Abstract

This paper studies the economic consequences of improved board independence on operating performance and information risk. We find that a more independent board does not automatically improve operating performance if reputation and competition in the human capital market do not effectively motivate directors. But risk-averse independent directors do increase the conservativeness of financial reports and the informativeness of stock prices to avoid potential litigation risks. These results suggest that the board mainly plays the role of a “gatekeeper”, with risk reduction as its main objective instead of performance improvement.

Keywords: Board Independence, Information Risks, Informativeness of Stock Prices

CLC codes: F271, F272.9, F721.5

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I. Introduction

On 21 August 2001, the China Securities Regulatory Commission (CSRC) issued the *Guidance on the Establishment of the Independent Director System in Listed Firms* (hereinafter “the *Guidance*”), which required all Chinese listed firms to recruit at least two independent directors on their boards before June 2002 and independent directors to make up at least one-third of boards before the end of June 2003.

Although the *Guidance* states that the role of independent directors is to protect the benefits of both the firm and the shareholders (particularly minority shareholders), it does not explicitly specify their responsibilities. Prior research also has reached no conclusions on how independent directors affect firm value. In this paper, we examine how a firm’s motivation affects the effectiveness of independent directors. Agency theory suggests that firms voluntarily hire independent directors to monitor managers and improve operating performance. But what if a firm increases the board’s independence only to meet regulatory requirements? If independent directors do not effectively improve operating performance in such a case, do they benefit shareholders in other aspects? These are the questions this paper focuses on.

We use the mandatory increase in board independence as an event to study the effect of regulation on the role of independent directors. There are several advantages to considering this event. First, Chinese listed firms are reluctant to hire independent directors. Table 1 shows that less than 10 per cent of listed firms had hired independent directors before the *Guidance* was issued. In contrast, every listed firm had independent directors on its board by 2003. This means that the CSRC regulation has had a strong impact on the behaviour of listed firms. Second, independent directors receive an allowance from the firm they serve, and this allowance is not directly related to the firm’s operating performance. On the other hand, independent directors are not constrained by competition in the human capital market to acquire a high reputation as industry experts. Finally, independent directors have to assume legal responsibility for financial fraud, which may even prevent them from entering the market themselves. Independent directors are thus strongly motivated to “play it safe”.

The empirical results of the study show that although the involuntary increase in board independence does not improve operating performance, it does reduce the information risk faced by both investors and the independent directors themselves. Specifically, after a firm meets or exceeds the requirements for independent directors under the *Guidance*, accounting information becomes more conservative, and stock prices co-move less with the market. These results are quite robust across a couple of robustness tests.

This paper contributes to the broad literature on the effectiveness of independent directors as a corporate governance mechanism. While the mandatory increase in board independence may not improve operating performance, it does significantly reduce information risk and increase the informativeness of stock prices. Thus, it could be more

effective to evaluate and compensate independent directors on the basis of disclosure quality and information risk rather than operating efficiency.

The rest of the paper is organised as follows. Sections II and III frame our research questions and empirical design. Section IV tests our predictions and discusses the results. Section V conducts the robustness tests, and Section VI concludes.

II. Hypotheses Development

2.1 Institutional Background

On 21 August 2001, the CSRC issued the *Guidance* requiring that all Chinese listed companies have at least two independent directors on their boards before June 2002 and that they make up at least one-third of the board before the end of June 2003. The *Code of Governance for Listed Firms* issued later restated the requirements and further specified the timeline. Table 1 reports the change in board structure in Chinese listed firms after the *Guidance* was issued.

Table 1 Board Structure of Chinese Listed Firms from 1999 to 2006

Year	1999	2000	2001	2002	2003	2004	2005	2006
# of firms hiring independent directors	34	93	341	1180	1262	1352	1351	1410
# of firms just meeting the requirements	6	12	70	350	974	1077	1119	1156
# of firms exceeding the requirements	2	4	7	27	95	168	168	207
# of listed firms	916	1081	1137	1203	1262	1353	1351	1410

All data are taken from the CSMAR database. We delete firms that do not report board structures or that have very large boards (more than 19 directors). Firms just meeting the requirements refers to those having two independent directors that make up at least one-third of their boards. Firms exceeding the requirements refers to those having more than two independent directors and ratios higher than one-third.

As listed in Table 1, less than 10 per cent of listed firms had hired independent directors and less than 2 per cent met or exceeded the requirements before 2001. This means that listed firms are not motivated to hire independent directors voluntarily.

But after the *Guidance* was issued, the seats of independent directors on boards increased dramatically. By 2003, almost every firm had hired independent directors. About 85 per cent met or exceeded the requirements in 2003, and 97 per cent in 2006. Another 85 per cent chose to just meet the requirements in 2006. Compared with 2001, these numbers suggest that board structures changed significantly after the regulation. The fact that most firms chose to just meet the requirements suggests that they did

so only because of the regulation. Further analysis is necessary to understand whether independent directors still work as an effective corporate governance mechanism as predicted by agency theory.

2.2 The Effect of Independent Directors on Operating Performance

Most previous research on independent directors is based on agency theory (Fama, 1980; Fama and Jensen, 1983). Fama and Jensen (1983) argue that the effective allocation of rights ensures the survival of firms with separated ownership and control. Management initiates and implements, while the board ratifies and monitors management on behalf of the shareholders. Because one premise of an effective board is the independence of directors from managers, hiring external experts as independent directors could be a mechanism for limiting manager expropriation.

How are independent directors motivated as an external party of the firm? Agency theory suggests the mechanism of reputation. Fama (1980) and Fama and Jensen (1983) argue that competition in the human capital market motivates independent directors to build their reputation and receive higher compensation for their human capital. Thus, two premises need to be satisfied for independent directors to be effective: a competitive human capital market, and the incentive to develop one's reputation. With these two premises fulfilled, agency theory predicts a positive correlation between board independence and operating performance. Empirically, Hermalin and Weisbach (1991), Mehran (1995), Firth *et al.* (2002), and Bhagat and Black (2002) find no positive correlation in US firms. But Brickley, Coles, and Terry (1994), Byrd and Hickman (1992), and Rosenstein and Wyatt (1990) all find that the stock market positively reacts to the announcement of increased board independence. Gao and Ma (2002) study 83 Chinese firms with independent directors on the board in 2001 and find a weak correlation between board independence and performance. Wang *et al.* (2006) control for the endogeneity of board structure and find a positive correlation. Ye, Lu, and Zhang (2007) find that independent directors reduce the expropriation of controlling shareholders.

We suggest two possible reasons for the mixed results. One could be the endogenous choice of board independence and operating performance; the other is that an undeveloped human capital market and the reputation mechanism do not motivate independent directors effectively. Since in China the increase in board independence has resulted primarily from the exogenous regulation, this study greatly reduces the endogeneity problem; that is to say, we measure how increased board independence affects performance. The developing human capital market in China also enables us to investigate the effectiveness of independent directors when they are under-motivated.

From the perspective of the independent directors, if their professional competence is not priced on the human capital market, and if their payments are not directly related to the firm's operating performance, they have no incentive to improve performance. From the perspective of the listed firm, improved board independence is involuntary.

Firms aim only to meet regulation requirements, not to improve performance. We thus propose the following hypothesis:

H1: Increased board independence will not improve operating performance.

2.3 The Effect of Independent Directors on Information Risk

According to the above analysis, independent directors are not motivated to improve performance under the regulation. Does this mean that they are simply ineffective in corporate governance? The reaction of the stock market to increased board independence gives a negative answer (Brickley, Coles, and Terry, 1994; Byrd and Hickman, 1992; Rosenstein and Wyatt, 1990). In fact, independent directors do help firms improve disclosure quality and reduce information risk. Klein (2002) shows that they suppress earnings management by demonstrating a negative correlation between board independence and abnormal accruals. Beasley (1996) and Cornette, Marcus, and Tehranian (2008) both find that increased board independence reduces the possibility of financial fraud. Agrawal and Chadha (2005) show that firms with independent directors on their board are less likely to restate financial reports. Anderson, Mansi, and Reeb (2004) report that independent directors reduce the cost of debt by monitoring the information-generating process. Ahmed and Duellman (2007) show a negative correlation between board independence and accounting conservatism. Wu and Wang (2007) report reduced earnings management after board independence is improved. Zhao, Zeng, and Tan (2008) find that independent directors help increase earnings conservatism.

Although independent directors are not effective at improving performance for various reasons, they are still responsible for a firm's disclosure quality. China's Corporate Law and the Rule of Corporate Governance do not distinguish the responsibilities of independent directors from other directors, meaning that independent directors must be responsible for the reliability of financial information as other directors are. The only lawsuit against independent directors in China further clarifies that independent directors are responsible for information credibility. In September 2001, the board of directors of Zhengzhou Department Store Ltd. were sued for financial fraud in the initial public offering, profit manipulation, the distorted use of funds from the rights offering, and concealment of a major investment. One independent director was fined 100,000 renminbi and forbidden to re-enter the market. In this case, independent directors were punished not for the bad performance of the firm but for the fraudulent financial information.

If independent directors have to play it safe to avoid litigation risks, then risk-averse directors have to ensure high disclosure quality and the reliability of financial information. Independent directors may even choose to "vote with their feet" in severe cases. A survey by Li, Ye, and Zhang (2004) shows that the primary reason independent

directors resign is to avoid risk and to protect their reputation. Zhi and Tong (2005) also find that independent directors are more likely to leave if a firm has higher levels of earnings management. Wang (2006) reports that independent directors tend to resign if a firm faces lawsuits or warrants or has major related-party transactions.

To avoid litigation risks, independent directors are motivated to reduce information risk, particularly the downside risk. With respect to accounting information, independent directors will ask managers to report financial information that fully reflects the operating and financial risks in a timely manner. We thus expect independent directors to be safe players, as reflected in the following hypothesis:

H2: Increased board independence will enhance accounting conservatism.

If risk-averse independent directors increase disclosure quality, a firm will become more transparent. Thus, lower information asymmetry will facilitate informed trading, and stock prices will be more informative. As Jin and Myers (2006) show, stock price synchronicity is negatively correlated with transparency. Gul, Kim, and Qiu (2010) study Chinese listed firms and find that those with higher auditing quality show lower price synchronicity. In line with the above literature, we expect stock prices to include more firm-specific information after board independence is increased.

Gordon (2007) reviews the development of the independent director system and finds a time consistency between higher board independence and lower stock price synchronicity. He considers this phenomenon as evidence of the correlation between these two variables. Independent directors play the same role as independent auditors in a firm's disclosure. Both are highly concerned about the firm's information risk and are strongly motivated to protect their own reputations. Prior studies also find that high auditing quality improves earnings quality and reduces price synchronicity (Becker *et al.*, 1998; Francis, Maydew, and Sparks, 1999; Krishnan, 2003b; Gul, Kim, and Qiu, 2010). Thus, we expect independent directors to have the same effect, as follows:

H3: Increased board independence will reduce stock price synchronicity.

III. Research Design

3.1 Sample Selection

Our sample includes all A-share firms that went public before 2002 and did not hire independent directors before the *Guidance* was issued. Since corporate governance measures are available only after 1999, we study those firms with complete board structure data and financial data from 1999 to 2006. We then exclude the financial industry and obtain 5322 firm-year observations. We winsorise all variables at the top and bottom 1 per cent levels, and take all data from the Chinese Stock Market and Accounting Research (CSMAR) database.

3.2 Empirical Design

We compare the changes in operating performance, accounting conservatism, and stock price informativeness before and after board independence reaches the regulation requirements. If the percentage of independent directors is at least one-third, we consider board independence to have met the requirements of the *Guidance*. We use ROA, ROE, and OCF (operating cash flows) to measure operating performance and conduct the following regressions to test H1:

$$\begin{aligned} Operating_{it} = & \beta_0 + \beta_1 Post_{it} + \beta_2 Operating_{it-1} + \beta_3 Size_{it} \\ & + \beta_4 Lev_{it} + \beta_5 Turnover_{it} + \beta_6 Growth_{it} + \beta_7 Loss_{it} \\ & + SICdummies_i + u_{it} \end{aligned} \quad (1)$$

According to the above analysis, we expect no significant changes in operating performance after board independence has met the requirements; that is to say, the hypothesis that $\beta_1 = 0$ cannot be rejected. Lagged operating performance, firm size, leverage, asset turnover, sales growth, a loss dummy, and industry dummies are included as control variables.

To examine the changes in accounting conservatism, we consider the Basu (1997) model and use the conservative accruals of Zhang (2008). The regression equations are as follows:

$$\begin{aligned} EP_{it} = & \alpha_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D * R_{it} + \alpha_1 Post_{it} + \gamma_1 Post_{it} * D_{it} + \gamma_2 Post_{it} * R_{it} \\ & + \gamma_3 Post_{it} * D_{it} * R_{it} + u_{it} \end{aligned} \quad (2)$$

$$\begin{aligned} Con_Acc_{it} = & \beta_0 + \beta_1 Post_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} \\ & + \beta_5 Turnover_{it} + \beta_6 Growth_{it} + \beta_7 Loss_{it} + \beta_8 BoardSize_{it} \\ & + \beta_9 Liquidratio_{it} + \beta_{10} Private_{it} + SICdummies_i + u_{it} \end{aligned} \quad (3)$$

If increased board independence improves accounting conservatism, bad news should be reflected in stock prices more quickly. We thus expect a significant and negative γ_3 in Equation (2). Following Zhang (2008) and Givoly and Hayn (2000), we define the *Con_Acc* in Equation (3) as the cumulative non-operating accruals scaled by book assets. The cumulative discretionary accruals summarise all realised bad news in the past, including asset write-downs and restructurings. This measure also reflects the timely recognition of economic loss. It differs from the measure of Basu (1997), however, in that it is not subject to the volatility of stock prices and it reflects the cumulative results from conservative accounting, that is, underestimating assets and revenues and overestimating liabilities and expenses. We multiply *Con_Acc* by negative one so that the higher this measure, the more conservative is the firm. We expect a positive β_1 in Equation (3) if increased board independence improves conservatism.

Apart from firm characteristics, we further include several corporate governance variables as controls. These variables are board size, the percentage of tradable shares, and the non-state-owned firm dummy. Lipton and Lorsch (1992) and Jensen (1993) both consider smaller boards to be more effective; Yermack (1996) and Eisenberg, Sundgren, and Wells (1998) provide empirical support for this argument. The tradable shares and the non-state-owned firm dummy control for the ownership structure of Chinese listed firms, which may affect the disclosure attributes.

To test H3, we compare the informativeness of stock prices before and after the board structure meets the regulatory requirements. We use the firm-specific return variance to measure stock price informativeness as suggested by Morck, Yeung, and Yu (2000) and Durnev *et al.* (2003, 2004). The regression equation is as follows:

$$\begin{aligned} \varphi_{it} = & \beta_0 + \beta_1 Post_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} \\ & + \beta_5 Turnover_{it} + \beta_6 Growth_{it} + \beta_7 Loss_{it} + \beta_8 BoardSize_{it} \\ & + \beta_9 Liquidratio_{it} + \beta_{10} Private_{it} + \beta_{11} Con_Acc + SICdummies_i + u_{it} \end{aligned} \quad (4)$$

We calculate φ_{it} from the Fama and French (1992) three-factor model. The higher φ_{it} suggests more informative stock prices; that is to say, stock prices include more firm-specific information. If independent directors help investors establish correct expectations on information risk and increase stock price informativeness, stock price synchronicity will be lower after board independence is improved. We thus expect a significant and negative β_1 in Equation (4). We additionally include firm characteristics, ownership structure, and conservative accruals as control variables. Table 2 lists the definitions of all variables in the regressions.

IV. Empirical Results

4.1 Summary Statistics

Tables 3A and 3B list the summary statistics of the dependent and independent variables, respectively. There are 2,443 firm-year observations that do not meet the CSRC requirements in our sample, and 2,879 that do. The comparison of the percentage of independent directors (*Indrate*) confirms our expectation that firms recruit independent directors only to meet the regulatory requirements. Before the mandatory increase in board independence, only 10.5 per cent of the directors are independent on average, whereas after the increase, the mean and median values are both exactly one-third as required. Furthermore, the 10th percentile value of one-third and the 90th percentile value of 0.4 both show the same results (not listed in the table). As for operating performance, *ROA* does not change significantly after the regulation, whereas conservative accruals and price synchronicity do exhibit great change. These preliminary results are consistent with our hypotheses. The mean values of firm size, leverage, asset turnover, and tradable shares differ significantly from before the regulation, whereas sales growth and board size do not change much.

Table 2 Variable Definitions

Variable	Description	Definition
<i>Post</i>	Dummy for meeting CSRC requirements	$Post = 1$ if the percentage of independent directors $\geq 1/3$ and the number of independent directors ≥ 2 ; otherwise, $Post = 0$.
<i>Indrate</i>	Percentage of independent directors	# of independent directors / # of directors on the board
<i>ROA</i>	Return on total assets	Net income/average book assets in year t
<i>ROE</i>	Return on net assets	Net income/average book equity in year t
<i>OCF</i>	Operating cash flows	Cash flows from operations/average book assets in year t
<i>EP</i>	Earnings-price ratio	Earnings per share/year-end closing stock price
<i>R</i>	Annual stock return	(Closing stock price at end of year t /Closing stock price at end of year $t-1$) - 1
<i>D</i>	Loss dummy	$D = 1$ if $R < 0$; otherwise, $D = 0$
<i>Con_Acc</i>	Conservative accruals	$(-1) * [(\text{Net income} + \text{depreciation and amortisation} - OCF) - (\Delta \text{accounts receivable} + \Delta \text{inventory} + \Delta \text{prepaid expenses} - \Delta \text{accounts payable} - \Delta \text{tax payable})] / \text{year-end book assets}$
φ	Price informativeness	$\log(R^2/1-R^2)$, where R^2 is the regression R-square from the daily stock return regression on the three-factor model over year t
<i>Size</i>	Firm size	$\log(\text{year-end book assets})$
<i>Lev</i>	Leverage	Total liabilities/total assets at end of year t
<i>Turnover</i>	Assets turnover	Sales revenue/book assets
<i>Growth</i>	Sales growth	(Sales revenue in year t /sales revenue in year $t-1$) - 1
<i>Bodsize</i>	Board size	$\log(\# \text{ of directors})$
<i>Liquidratio</i>	Tradable shares	# of tradable shares/# of total shares at end of year t
<i>Private</i>	Non-state-owned firm dummy	$Private = 1$ if ultimate largest shareholder is an individual; otherwise, $Private = 0$ in year t

Table 3 Summary Statistics

Variables	Obs.	Median	Mean	Sd. Dev.	Min.	Max.
Panel A Operating Performance, Conservative Accruals, and Price Synchronicity						
<i>Post = 0</i>						
<i>Indrate</i>	2,443	0	0.105	0.125	0	0.714
<i>ROA</i>	2,443	0.032	0.028	0.060	-0.278	0.191
<i>ROE</i>	2,443	0.032	0.024	0.063	-0.355	0.149
<i>OCF</i>	2,443	0.046	0.050	0.074	-0.198	0.263
<i>Con_Acc</i>	2,443	0.004	0.007	0.103	-0.336	0.398
φ	2,443	-0.122	-0.195	0.884	-2.676	1.183
<i>Post = 1</i>						
<i>Indrate</i>	2,879	0.333	0.346***	0.046	0	0.750
<i>ROA</i>	2,879	0.026	0.028	0.060	-0.278	0.191
<i>ROE</i>	2,879	0.023	0.021**	0.059	-0.355	0.149
<i>OCF</i>	2,879	0.055	0.056***	0.076	-0.198	0.263
<i>Con_Acc</i>	2,879	0.017	0.021***	0.099	-0.336	0.398
φ	2,879	-0.344	-0.409***	0.636	-2.676	1.183
Panel B Control Variables						
<i>Post = 0</i>						
<i>Size</i>	2,443	7.142	7.198	0.848	4.409	10.152
<i>Lev</i>	2,443	0.392	0.406	0.188	0.069	1.130
<i>Growth</i>	2,443	0.128	0.227	0.571	-0.765	3.653
<i>Turnover</i>	2,443	0.429	0.533	0.393	0.042	2.419
<i>Loss</i>	2,443	0	0.100	0.300	0	1
<i>Bodsize</i>	2,433	2.197	2.233	0.269	0.693	2.944
<i>Liquidratio</i>	2,443	0.387	0.404	0.127	0.098	1
<i>Private</i>	2,443	0	0.120	0.324	0	1
<i>Post = 1</i>						
<i>Size</i>	2,879	7.493	7.521***	0.928	4.183	11.895
<i>Lev</i>	2,879	0.462	0.467***	0.189	0.069	1.131
<i>Growth</i>	2,879	0.156	0.240	0.540	-0.765	3.653
<i>Turnover</i>	2,879	0.526	0.660***	0.487	0.042	2.419
<i>Loss</i>	2,879	0	0.0952	0.294	0	1
<i>Bodsize</i>	2,879	2.197	2.242	0.218	1.386	2.890
<i>Liquidratio</i>	2,879	0.446	0.469***	0.152	0.087	1
<i>Private</i>	2,879	0	0.243***	0.429	0	1

*, **, and *** indicate that the value of the variable differs significantly across the two groups at the 10%, 5%, and 1% levels, respectively.

4.2 Board Independence and Operating Performance

We apply ordinary least squares to all regression models with industry dummies. We also adjust standard errors for heteroskedasticity and serial correlations. Since a fixed-effect model requires that unobservable firm effects do not change across the sample period, we do not think it fits our case. The regulation probably affects the corporate governance and information attributes of the firm and changes the unobserved firm effects.

Table 4 lists the regression results for Equation (1) with *ROA*, *ROE*, and *OCF* as the dependent variables. The results generally do not support the agency theory; that is to say, improved board independence does not affect operating performance after controlling for firm size, leverage, asset turnover, growth, and the loss dummy. Since competition in the labour market is incomplete and the reputation mechanism is ineffective, the involuntary increase in board independence does not improve operating performance.

Table 4 Board Independence and Operating Performance

	<i>ROA</i>	<i>ROE</i>	<i>OCF</i>
<i>Post</i>	0.002 (1.53)	-0.001 (-1.34)	-0.001 (-0.29)
<i>Lag(ROA)</i>	0.416*** (19.53)		
<i>Lag(ROE)</i>		0.225*** (13.11)	
<i>Lag(OCF)</i>			0.141*** (7.71)
<i>Size</i>	0.000 (0.14)	0.001*** (2.01)	0.005*** (3.82)
<i>Lev</i>	-0.017*** (-3.17)	-0.029*** (-6.72)	0.008 (1.30)
<i>Turnover</i>	0.014*** (9.35)	0.010*** (6.92)	0.026** (8.53)
<i>Growth</i>	0.016*** (9.68)	0.009*** (8.82)	0.007*** (2.73)
<i>Loss</i>	-0.097*** (-30.62)	-0.131*** (-34.46)	-0.034*** (-9.83)
<i>Constant</i>	0.009* (1.79)	0.019*** (3.78)	-0.021** (-1.94)
R ²	0.649	0.650	0.149
N	5,322	5,322	5,322

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. T-statistics are reported in brackets.
2. Industry effects are controlled for in all regressions.

Table 5 reports the regression results using the Basu (1997) model. The asymmetric timely loss recognition is higher after a firm meets the regulatory requirements. The coefficient of $Post*DR$ is positive and significant at the 1 per cent level, suggesting that firms recognise losses in a more timely manner and that the accounting information is more conservative. Thus, although the mandatory increase in board independence does not improve operating efficiency, it does greatly enhance disclosure quality. Because risk-averse independent directors are highly concerned about information risks, they will monitor the information-generating process and reduce downside risks to avoid possible litigation risks.

Table 5 Board Independence and Conservatism – Basu Model

	(i)	(ii)	(iii)
<i>R</i>	-0.001 (-0.13)	-0.001 (-0.11)	-0.002 (-0.49)
<i>D</i>	0.011 (1.44)	0.013 (1.47)	0.004* (1.88)
<i>D*R</i>	0.144*** (5.69)	0.137*** (5.03)	0.043*** (5.60)
<i>Post</i>	-0.003 (-0.32)	0.023*** (2.25)	-0.003 (-0.95)
<i>Post*R</i>	0.010 (0.89)	0.005 (0.36)	0.004 (1.13)
<i>Post*D</i>	0.071*** (4.95)	0.056*** (3.58)	0.023*** (5.56)
<i>Post*D*R</i>	0.118*** (2.77)	0.125*** (2.91)	0.043*** (3.44)
<i>Constant</i>	0.054*** (6.34)	0.048*** (4.76)	0.017*** (5.60)
<i>R</i> ²	0.073	0.096	0.066
<i>N</i>	5,322	5,322	5,322

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.
2. Industry effects are controlled for in all regressions.
3. Column (i) uses net income to calculate the price-to-earnings ratio, while Column (ii) uses operating income and Column (iii) uses earnings before extraordinary items.

Table 6 shows the change in conservative accruals after the improvement of board independence. The higher value of *Con_Acc* indicates more conservative accounting information. The coefficient of *Post* is positive and significant at the 1 per cent level, meaning that a firm's accounting information becomes more conservative after the mandatory increase in board independence. Firm size, leverage, sales growth, and the non-state-owned firm dummy are all significantly related to the conservative accruals.

Table 6 Board Independence and Conservatism – Conservative Accruals

<i>Con_Acc</i>	(i)	(ii)
<i>Post</i>	0.015*** (5.45)	0.013*** (4.30)
<i>Size</i>	0.006*** (3.41)	0.007*** (3.91)
<i>Lev</i>	-0.071*** (-6.06)	-0.077*** (-6.58)
<i>ROA</i>	-0.047 (-1.14)	-0.053 (-1.28)
<i>Growth</i>	0.038*** (8.87)	0.038*** (8.73)
<i>Loss</i>	0.035*** (5.21)	0.034*** (5.06)
<i>Bodsize</i>		0.009 (1.52)
<i>Liquidratio</i>		0.002 (0.20)
<i>Private</i>		0.022*** (5.17)
<i>Constant</i>	-0.005 (-0.36)	-0.033* (-1.77)
R ²	0.075	0.082
N	5,322	5,312

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.
2. Industry effects are controlled for in both regressions.
3. *Con_Acc* is defined according to Zhang (2008).

Tables 5 and 6 thus show that although the mandatory increase in board independence does not improve operating performance, it does effectively enhance accounting conservatism. The independent directors control downside risks since they have to play it safe. According to the above analysis, independent directors are able to

effectively improve earnings quality, particularly recognising losses in a timely manner to avoid possible litigation risks. The increased earnings quality reduces information asymmetry and makes the firm more transparent. Rational investors will then use more firm-specific information in their investment decisions. As a result, stock prices become more informative and include more firm-specific information. These results explain the positive market reaction to the increase in board independence (Brickley, Coles, and Terry, 1994; Byrd and Hickman, 1992; Rosenstein and Wyatt, 1990). Table 7 presents the changes in stock-price synchronicity after the improvement of board independence.

Table 7 Board Independence and Stock Price Synchronicity

φ	(i)	(ii)
<i>Post</i>	-0.252*** (-12.42)	-0.238*** (-11.34)
<i>Lag(φ)</i>	0.267*** (19.52)	0.270*** (19.80)
<i>Size</i>	0.129*** (11.01)	0.139*** (11.41)
<i>Lev</i>	-0.300*** (-5.20)	-0.327*** (-5.61)
<i>ROA</i>	-0.878*** (-3.80)	-0.924*** (-4.00)
<i>Growth</i>	-0.060*** (-3.22)	-0.040*** (-2.11)
<i>Loss</i>	-0.138*** (-3.28)	-0.119*** (-2.82)
<i>Con_Acc</i>		-0.524*** (-5.01)
<i>Liquidratio</i>		-0.126* (-1.86)
<i>Bodsize</i>		-0.099*** (-2.16)
<i>Private</i>		-0.011 (-0.44)
<i>Constant</i>	-0.821*** (-7.67)	-0.602*** (-4.24)
R^2	0.151	0.157
N	5,321	5,311

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.
2. Industry effects are controlled for in both regressions.

Table 7 shows a significant decrease in stock price synchronicity after a firm meets the regulatory requirements for board independence. The coefficient of *Post* is negative and significant at the 1 per cent level. Firms of smaller size and with higher leverage, profitability, and growth rates and more conservative information exhibit lower price synchronicity. The results are quite consistent with our expectation, suggesting that the stock market reflects the effects of independent directors on information risk.

Table 8 Board Independence and Conservatism – Basu Model

	After 2001			Excluding 2001 and 2002		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
<i>R</i>	-0.004 (-0.28)	-0.003 (-0.20)	-0.003 (-0.51)	-0.005 (-0.41)	-0.002 (-0.13)	-0.002 (-0.56)
<i>D</i>	0.026** (-2.16)	0.005 (-0.38)	0.006* (-1.88)	0.006 (-0.53)	0.015 (-1.16)	0.003 (-0.88)
<i>D*R</i>	0.183*** (-6.25)	0.177*** (-5.43)	0.055*** (-5.96)	0.115** (-2.50)	0.092* (-1.95)	0.043*** (-2.89)
<i>Post</i>	0.003 (-0.21)	0.006 (-0.42)	-0.004 (-0.95)	-0.003 (-0.33)	0.029*** (-2.68)	-0.002 (-0.83)
<i>Post*R</i>	0.012 (-0.80)	0.006 (-0.35)	0.005 (-0.96)	0.013 (-1.14)	0.005 (-0.35)	0.005 (-1.20)
<i>Post*D</i>	0.055*** (-3.27)	0.063*** (-3.38)	0.020*** (-4.24)	0.082*** (-4.72)	0.059*** (-3.10)	0.026*** (-5.32)
<i>Post*D*R</i>	0.079* (-1.76)	0.085* (-1.84)	0.031** (-2.26)	0.157*** (-2.67)	0.176*** (-2.99)	0.047*** (-2.59)
<i>Constant</i>	0.048 -3.79	0.064 -4.44	0.018 -4.25	0.054*** (-5.09)	0.042*** (-3.21)	0.017*** (-4.44)
<i>R</i> ²	0.076	0.099	0.071	0.07	0.092	0.073
<i>N</i>	4,498	4,498	4,498	3,843	3,843	3,843

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.
2. Industry effects are controlled for in all regressions.
3. Column (i) uses the net income to calculate the price-to-earnings ratio, while Column (ii) uses operating income and Column (iii) uses earnings before extraordinary items.

Table 9 Board Independence, Conservative Accruals, and Price Synchronicity

	After 2001		Excluding 2001 and 2002	
	<i>Con_Acc</i>	φ	<i>Con_Acc</i>	φ
<i>Post</i>	0.016*** (-4.69)	-0.545*** (-25.16)	0.007* -1.95	-0.268*** -11.05
<i>Size</i>	0.007*** (-3.50)	0.096*** (-7.94)	0.006*** -3.05	0.121*** -9.89
<i>Lev</i>	-0.071*** (-5.55)	-0.373*** (-6.38)	-0.073*** (-5.52)	-0.289*** (-4.90)
<i>ROA</i>	-0.045 (-0.99)	-0.566** (-2.44)	-0.062 (-1.34)	-0.400* (-1.75)
<i>Growth</i>	0.037*** (-7.8)	-0.058*** (-3.14)	0.038*** -7.77	-0.023 (-1.15)
<i>Loss</i>	0.034*** (-4.85)	-0.140*** (-3.55)	0.0386*** -4.84	-0.112*** (-2.63)
<i>Liquidratio</i>	-0.004 (-0.33)	-0.115* (-1.76)	-0.008 (-0.68)	-0.061 (-0.92)
<i>Bodsize</i>	0.013** (-2.00)	-0.154 (-3.48)	0.006 -0.88	0.003 -0.06
<i>Private</i>	0.024*** (-5.42)	-0.042* (-1.68)	0.019*** -4.11	0.016 -0.6
<i>Con_Acc</i>		-0.732*** (-4.35)		-0.146 (-0.73)
<i>Lag(φ)</i>		0.258*** (-18.67)		0.290*** -18.28
<i>Constant</i>	-0.043 (-2.08)	0.172 (-1.27)	-0.013 (-0.61)	-1.313*** (-9.28)
N	4,498	4,498	3,833	3,832
R ²	0.080	0.269	0.084	0.203

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.

2. Industry effects are controlled for in all regressions.

V. Robustness Checks

5.1 Implementation of the Accounting Standards

Since Chinese listed firms started applying the new accounting standards in 2001, it may be a concern that our results actually capture the effect of the new accounting standards. Table 1, however, shows that most firms started recruiting independent directors in 2002. About 30 per cent of firms met the requirements in that year, and about

85 per cent the following year. This suggests that 2003 is the year that the regulation really took effect. The timelines of these two institutional changes are not exactly the same. To further eliminate the effect of accounting standards, we re-do the regressions with the subsample from 2001-2006. The results are quite robust. We further exclude 2001 and 2002 and run the same regressions. The results do not change.

Tables 8 and 9 show that improved board independence strongly affects conservatism and price synchronicity after eliminating the effects of the new accounting standards. Both the conservatism coefficients and the conservative accruals are significantly higher after board independence is increased. Stock prices also include more firm-specific information. The results suggest that increased board independence does explain at least part of the change in information risk.

5.2 Cross-Sectional Analysis of the Post-Regulation Period

In this section, we investigate whether a higher ratio of independent directors is correlated with lower information risk after a firm meets the regulatory requirements. By 2003, every firm in our sample has independent directors on its board; 77 per cent firms just meet the required ratio of independent directors, and only 7.5 per cent exceed the requirements. The summary statistics (Table 1) also show that the mean and median percentages of independent directors are both one-third as required by the CSRC. These facts suggest that firms are not motivated to improve board independence voluntarily but do so only to meet the requirements of the regulators. Thus, litigation risk serves as a bottom-line motivation for and constraint on independent directors. The incremental effects of additional independent directors are uncertain. Since most firms choose to just meet the requirements, we do not expect marginal effects from an increased number of independent directors after they have done so.

All firms have hired independent directors by 2003, and so we study the 2003-2006 sub-periods. Since the percentage of independent directors is highly concentrated at one-third across all firms, the continuous variable is not well distributed in our sample. We then define two dummy variables to indicate whether a firm has a high or low independent-director ratio. The first variable *Normal* takes the value of 1 if the firm just meets the regulatory requirements, and 0 if it exceeds them (according to the definition in Table 1). The second variable *High* takes the value of 1 if the ratio of independent directors is above the annual median, and 0 if below. Tables 10 and 11 report the regression results of the effects of increasing numbers of independent directors on accounting conservatism and stock price synchronicity from 2003 to 2006.

The regression results in Tables 10 and 11 suggest that increasing the ratio of independent directors has only marginal effects on conservatism after a firm meets the regulatory requirements. This could be because incentive to voluntarily improve board independence is lacking. Since independent directors improve disclosure quality only to meet the threshold of litigation risk, a higher percentage of independent directors on the board would make only a marginal contribution.

Table 11 shows the same results as Table 10 of the regressions on stock price synchronicity. After a firm meets the regulatory requirements, further increase in the percentage of independent directors does not reduce information risk or stock price synchronicity. No significant difference appears between those groups meeting or exceeding the requirements in all regressions after 2003.

Table 10 Board Independence and Conservatism – Basu Model (2003-2006)

	(i)	(ii)	(iii)	(iv)	(v)	(vi)
	<i>X = Normal</i>			<i>X = High</i>		
<i>R</i>	0.045*** (2.72)	0.029* (1.85)	0.015*** (2.74)	0.001 (0.07)	-0.010 (-0.68)	0.003 (0.69)
<i>D</i>	0.202*** (3.81)	0.132*** (2.67)	0.062*** (3.53)	0.077*** (2.82)	0.043 (1.37)	0.028*** (3.47)
<i>D*R</i>	0.302** (2.04)	0.250* (1.91)	0.105** (2.05)	0.322*** (4.69)	0.307*** (4.29)	0.094*** (4.75)
<i>X</i>	0.118*** (3.12)	0.092*** (2.65)	0.036*** (3.21)	0.000 (-0.01)	-0.015 (-0.60)	0.005 (0.80)
<i>X*R</i>	-0.040** (-2.31)	-0.028* (-1.66)	-0.013** (-2.34)	0.009 (0.73)	0.014 (0.92)	-0.000 (-0.07)
<i>X*D</i>	-0.129** (-2.35)	-0.066 (-1.28)	-0.037** (-2.07)	0.008 (0.27)	0.031 (0.90)	-0.000 (-0.07)
<i>X*D*R</i>	-0.039 (-0.26)	0.011 (0.08)	-0.018 (-0.35)	-0.072 (-0.92)	-0.055 (-0.69)	-0.008 (-0.36)
R ²	0.081	0.100	0.089	0.076	0.096	0.082
N	2,632	2,632	2,632	3,019	3,019	3,019

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.
2. Industry effects are controlled for in all regressions.
3. Columns (i) and (iv) use net income to calculate the price-to-earnings ratio, while Columns (ii) and (v) use operating income and Columns (iii) and (vi) use the earnings before extraordinary items.
4. The regressions with *Normal* use the sample firms that meet or exceed the requirements between 2003 and 2006. The regressions with *High* use all firms between 2003 and 2006.

Table 11 Board Independence, Conservative Accruals, and Price Synchronicity (2003-2006)

	<i>Con_Acc</i>		φ	
	<i>X = High</i>	<i>X = Normal</i>	<i>X = High</i>	<i>X = Normal</i>
<i>X</i>	0.003 (0.69)	-0.001 (-0.11)	0.045 (1.58)	0.014 (0.40)
<i>Size</i>	0.005** (2.27)	0.006** (2.34)	0.093*** (7.08)	0.091*** (6.43)
<i>Lev</i>	-0.065*** (-4.31)	-0.072*** (-4.43)	-0.335*** (-5.23)	-0.317*** (-4.60)
<i>ROA</i>	-0.045 (-0.85)	-0.082 (-1.47)	-0.210 (-0.87)	-0.459* (-1.75)
<i>Growth</i>	0.038*** (6.68)	0.039*** (6.38)	-0.038* (-1.76)	-0.043* (-1.85)
<i>Loss</i>	0.040*** (4.61)	0.032*** (3.45)	-0.101** (-2.29)	-0.128*** (-2.68)
<i>Bodsize</i>	0.011 (1.36)	0.012 (1.30)	0.007 (0.13)	-0.029 (-0.47)
<i>Liquidratio</i>	-0.018 (-1.44)	-0.022* (-1.73)	-0.011 (-0.16)	-0.006 (-0.09)
<i>Private</i>	0.021*** (4.28)	0.021*** (4.17)	0.016 (0.57)	0.010 (0.35)
<i>Con_Acc</i>			-0.087 (-0.26)	-0.171 (-1.29)
<i>Lag(φ)</i>			0.287*** (16.77)	0.281*** (15.29)
R ²	0.078	0.174	0.181	0.174
N	3,019	2,631	3,018	2,631

1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Two tailed t-statistics are reported in brackets.
2. Industry effects are controlled for in all regressions.
3. The regressions with Normal use sample firms that meet or exceed the requirements between 2003 and 2006. The regressions with High use all firms between 2003 and 2006.

VI. Conclusions

Based on the agency and information asymmetry theories, we study the economic consequences of the mandatory implementation of the independent director system in China. Given an efficient reputation mechanism and a competitive human capital market, agency theory suggests that independent directors improve operating performance. But if the reputation mechanism and the human capital market are inefficient, do independent directors still have the same effect on firm operations? If not, do they bring any benefits to investors?

Starting with the risk aversion of independent directors, we examine their role in information risk. The exogenous institutional change in China greatly reduces any concern over the endogeneity of the board-structure choice. The regression results show that although operating performance does not change after the mandatory increase in board independence, firms do exhibit higher accounting conservatism and lower stock price synchronicity. These findings suggest that in a transforming economy with an undeveloped labour market, independent directors do not improve operating efficiency but do reduce information risk only because they have to play it safe.

Current company laws require listed firms to recruit independent directors, but their rights and responsibilities are not clearly specified. This makes it hard to motivate and compensate them efficiently. To solve this problem, the risk aversion of independent directors should be carefully considered. For example, it would be unfair to make independent directors responsible for operating outcomes; in the economic institutions of China, the independent director system is effective at reducing information risk rather than improving operating efficiency. One policy implication would be to evaluate independent directors according to a firm's disclosure quality rather than operating performance. Increasing seats for industry professionals on a firm's board would also be necessary to help it perform better.

References

Please refer to pp. 126-129.