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现金分红、税收成本与“监管悖论”[1]

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摘要

本文首次系统性检验了红利税收成本在上市公司现金分红决策的价值相关性。研究发现，2005年6月13日，伴随现金分红所需缴纳的个人所得税税率下降，现金分红公司的股票收益率显著提高，说明现金分红的个人所得税是影响股票定价的重要因素。在此基础上，还检验了现金分红监管政策的有效性。2008年10月9日，证监会要求上市公司将现金分红比例提高到30%，不分红公司的股票却表现出更高的超额收益率。研究表明，由于税收成本的存在，单方面改变现金分红的监管政策未必是符合投资者利益的。因此，充分认识监管政策所面临的各种制度环境，才能够确保监管政策符合资本市场发展的需要。

关键词：现金分红、税收成本、监管悖论
中图分类号：：F217、F212.9、F721.5

[1] 本文为国家自然科学基金面上项目《税制改革与公司财务决策研究：基于中国资本市场的经验分析》（批准号：70972060）的阶段性成果，并得到上海市浦江人才计划、上海财经大学“211”重点项目、2009 年度浙江省高等学校优秀青年教师资助计划（浙教办高科（(2009）164 号）以及2010年度浙江省教育厅科研项目（批准号: Y201010040）的经费资助。

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一、引言

本文研究了现金分红税收成本在股票市场定价中的作用。在现代资本市场中，现金分红是股票投资者获得收益的重要方式，并成为衡量股票市场发展的重要指标之一。La Porta *et al.*(2000)发现，在投资者保护较好的市场中，公司更倾向于发放股票分红。而代理理论则认为，现金分红有助于减少管理层的自由现金流(Jensen, 1986)，使公司必须进入股票市场融资，接受资本市场的严格审核(Easterbrook, 1984)，降低公司潜在的代理成本，增加公司价值。我国证券监管部门也非常关注上市公司的现金分红分配状况，多次提出将现金分红作为上市公司股权再融资的前提。但是，目前国内大多数国内研究发现，市场并没有对公司现金分红做出显著的积极反应(魏刚，1998；陈浪南和姚正春，2000；俞乔和程滢，2001；何涛和陈晓，2002)。李常青等(2010)则认为，证监会对上市公司现金分红的规定，存在"监管悖论"。

本文从现金分红的税收成本角度分析了现金分红"监管悖论"产生的根源。根据我国的现行个人所得税法规定，个人投资者的股票交易所得无需纳税，而从公司获得的现金分红，则需要缴纳20%的个人所得税，2005年以后，现金分红的个人所得税率调整至10%。由于现金分红税收成本的存在，个人投资者必须权衡公司现金分红所增加的股东价值和税收成本，只有当现金分红所增加的股东价值超过税收成本的情况下，投资者才会对公司的现金分红做出正向的反应。如果通过监管的方式，在不改变税收成本的情况下，要求公司提高分红比例，在一定程度上起到强制股东缴纳个人所得税的作用，这样，以监管方式要求公司分红，未必会增加股东价值，反而会造成"监管悖论"。

本文从两个方面检验了现金分红的税收成本的经济后果：首先，我们检验了现金分红税率变化对股票定价的直接影响。2005年6月13日，财政部和国家税务总局发布《关于股息红利个人所得税有关政策的通知》(以下简称《通知》)，规定对个人投资者从上市公司取得的股息红利所得，暂减为按50%计入个人应纳税所得。本文以《通知》颁布日为事件日，运用事件研究方法，发现市场对现金分红税率下降做出了显著的正向反应，而且以往现金分红的公司，其事件期内的市场反应更好。

在此基础上，我们检验了2008年10月9日证监会发布《关于修改上市公司现金分红若干规定的决定》(以下简称《决定》)前后，公司分红状况对股票长期收益率的影响。研究结果表明，在《决定》出台后，与分红公司相比，不分红公司的股票可以为投资者带来显著的超额报酬，平均超额收益率增量为10.8%，而分红公司仅为0.5%，前者比后者的股票超额回报率增量高出近10个百分点。

上述研究结果均表明，现金分红税收成本是决定股票定价的重要因素，也是影响现金分红政策监管决策有效性的外在制度因素。2008年的证监会的《决定》，之所以出现"监管悖论"，其重要原因是忽视现金分红的税收成本，强制分红伴随着"强制纳税"，未必有利于保护中小股东的利益。因此，监管部门应当综合考虑政策影响的外部性，尽可能地降低政策的不利影响，才能够提高监管政策的有效性。

本文其余部分安排如下，第二部分是制度背景和理论分析，第三部分是实证检验结果与分析，第四部分为总结和政策含义。

二、文献回顾、制度背景和理论分析

(一)文献回顾

自Miller and Modigliani(1961)提出“股利无关论”以来，“股利之谜”(Black, 1976)就成为公司财务理论和资本市场广泛关注的研究课题。而相关的个人税收成本则是研究现金分红与股票定价的重要方面。例如，Brennan(1970)认为，由于现金分红的税收成本高于资本利得的税收成本，投资者就更愿意投资税前收益率较高的股票以期获得补偿，即现金分红越多的公司，其股票收益率越高。而Miller and Scholes(1978)则认为，投资者可以根据其税收状况和公司的现金分红水平，确定其所需要投资的股票，达到个人税收成本最小化，这样，改变税率并不会影响公司的现金分红政策，也不会影响股票价格，即“税率无关假说”。

另外，而经验研究的结论也不一致：Blume(1980)、Gordon and Bradford(1980)发现投资者并不青睐现金分红；Black and Scholes(1974)、Kalay and Michaely(2000)发现，现金分红政策并不影响股票收益率。Litzenberger and Ramaswamy(1979)、Fama and French(1998)却发现，现金分红的股票收益率更高。Morck and Yeung(2005)则在综述提出，税收成本限制了公司发放现金分红的意愿，制约了现金分红在缓解公司代理成本中的作用。我国上市公司现金分红政策对股票定价影响的相关研究，结论是基本一致：现金分红没有显著增加公司价值(魏刚，1998；陈浪南和姚正春，2000；俞乔和程滢，2001；何涛和陈晓，2002)；即使证监会将现金分红比例作为上市公司股权再融资的前提，股票价格也没有显著的变化(李常青等，2010)。在上述这些研究中，都没有探讨现金分红的税收成本及其可能影响。这也正是本文研究的主要内容。

(二)制度背景

按照我国个人所得税法的规定，作为个人收入的组成部分，现金分红所得和股票转让所得(资本利得)都需要缴纳个人所得税，但是两者的所得税率却有所不同。1994年实行《个人所得税税法》明确规定，个人在利息、股息方面的所得以及转让有价证券，股权所得在利息、股息方面的收入均须征税。现金分红按个人所得的20%征收，股票分红按股票面值的20%征收。而股票转让则暂不征收个人所得税。

2005年6月13日，财政部和国家税务总局联合发布了《关于股息红利个人所得税有关政策的通知》(财税[2005]102号)，其中规定：对个人投资者从上市公司取得的股息红利所得，暂减按50%计入个人应纳税所得额，依照现行税法规定计征个人所得税。即股息红利个人所得税实际税率为10%，但是股票转让所得仍然暂不征收个人所得税。

另一方面，我国证券监管部门对上市公司现金分红也给予高度重视。2001年3月28日，证监会颁布的《上市公司新股发行管理办法》规定，上市公司最近三年未实施分红派息的，董事会要给出不分配的合理解释，并要求证券主承销商给予重点关注并在尽职调查中予以说明。2004年12月7日颁布了《关于加强社会公众股股东权益保护的若干规定》，要求最近三年未进行利润分配的公司，不得向社会公众增发新股、发行可转债以及向原股东配股。2006年5月6日颁布了《上市公司证券发行管

理办法》，规定有再融资意愿的公司，其最近三年分红比例必须占实现年均可分配利润的20%。2008年10月9日，证监会颁布了《关于上市公司现金分红若干规定的决定》，将公司再融资的现金分红比例要求，从原来的20%提到了30%，即：最近三年以现金形式累计分配的利润不少于最近三年实现的年均可分配利润的30%。

（三）理论分析与研究假说的提出

虽然公司内在价值是根据投资项目所创造的现金流来决定的，但是投资者却是根据所能够获得的税后现金分红和资本利得来决定股票价格。在不存在个人所得税(Miller and Modigliani, 1961)或者现金分红与资本利得税率相同的情况下，投资者并不会偏好现金分红。如果现金分红的税收成本高于资本利得的税收成本，投资者通过资本利得获得的实际收益率，显然要高于通过现金分红所获得的实际收益率。与税率较低的资本利得相比，税率较高的现金分红方式不但不会增加股东财富，反而减少了股东财富。因此，改变现金分红与资本利得的个人所得税税率差异，会直接影响股东可支配的消费收入，从而影响股票定价。

2005年6月13日，财政部和税务总局颁布的《通知》，将现金分红的税率降低了50%。在资本利得继续免于征税的情况下，这实际上缩小了现金分红和资本利得两者之间的税差，提高了股东通过现金分红所实现的投资收益率。在公司现金分红数额不变的情况下，税率降低增加了股东的税后现金分红，增加了投资者可支配的财富，使发放现金分红的股票价格相对上升。对于没有发放分红的公司，股东只能通过资本利得来获得投资收益，而现金分红税率的下降，导致了资本利得收益率的相对下降，从而使得没有发放现金分红的股票价格相对下降。由此，本文提出研究假说1：

假说1：2005年6月13日《通知》颁布后，发放现金分红公司的收益率将显著高于不发放现金分红的公司。

虽然现金分红可以传递公司价值的信号(Miller and Rock, 1985)，可以降低公司代理成本(Jensen, 1986；Easterbook, 1984)，有效保护股东利益(Shleifer and Vishny, 1997；La Porta *et al.*, 2000)。但是，由于现金分红税收成本的存在，投资者必须要权衡现金分红的税收成本、信号价值和代理成本节约之间的相对大小，并根据现金分红的净效应做出反应。这就意味着，在其他条件不变的情况下，公司增加现金分红的发放，未必总是会增加股东财富，从而提高股票价格。

2008年10月9日，证监会所颁布的《决定》，要求再融资公司的现金分红比例从20%提高到30%，这同时也意味着投资者因为公司现金分红所缴纳的个人所得税，也有了相应的增加，这无疑会增加公司现金资源的净流出。而且，在公司在管制条件下增加现金分红比例，其传递信号价值的能力，或者节约代理成本的作用，就显得并不那么重要，即投资者更倾向于认为，公司分红的主要目的是为了满足再融资的要求，而不是为了股东利益的最大化；同时，由于增加分红所导致的个人所得税成本上升，也减少股东财富的增加幅度。这两种因素共同作用的结果，可能导致了与监管目标相反的结果：投资者并不认为提高现金分红比例会增加股东价值。与积

极满足现金分红要求的公司相比，投资者反而会更加青睐不分红的公司，投资者会认为，不分红的公司虽然会存在较多的信息不对称和代理成本，但还是低于现金分红的个人所得税成本，因此，在《决定》出台后，不分红公司的股票会表现出更高的超额收益率。[3]由此提出本文的研究假说2如下：

假说2：2008年10月9日《决定》提高了现金分红比例要求后，不分红公司的股票超额收益率更高。

三、样本选择与研究设计

(一)数据来源与样本选择

所有财务数据均来自深圳国泰安公司出版的中国资本市场会计研究(CSMAR)数据库和色诺芬数据库，Fama-French三因子则取自锐思金融研究数据库。以2005年6月13日和2008年10月9日《通知》和《决定》颁布日作为事件日，选择2004年末和2007年末以前发行股票上市的A股公司作为样本研究对象。为了保证结论稳健，以《通知》颁布日为事件日的研究中，本文剔除了：(1)所有金融行业的公司；(2)所有2004年净利润为负的观测；(3)所有相关控制变量观测值不存在的公司，由此确定的样本公司为991个。

在以《决定》颁布日为事件日的研究中，本文剔除了：(1)所有金融行业的公司；(2)2005年以后上市的公司；(3)2005-2007年中任何一年净利润为负的公司；(4)2006-2008年三年净利润总和为负的公司；(5)2009年净利润为负的公司；(6)剔除了年度净利润数据以及相关控制变量观测值不存在的公司。由此确定样本量为783个。为了控制极端值的影响，本文对所有连续变量均按样本1%和99%分位数做了修饰(WINSORIZE)处理。

(二)回归模型设计

Kothari(2006)指出，以短窗口为基础的事件研究结果，在相当大程度上取决于所采用的市场模型、样本数量和窗口期长短。而且，以短窗口方式研究某一特定政策的影响时，所有股票都会受到该政策的影响，那么用回归模型估计出的样本股票残差(即累积超额收益率，CAR)之间未必是独立的，这与短窗口为基础的事件研究方法要求是不吻合的。而且，在短窗口的研究中，窗口期间的选择对研究结论有很大的影响。[4]因此，本文采用购买并持有的股票收益率(Buy-and-Hold Abnormal Return：BHAR)，研究《通知》和《决定》颁布日前后，样本公司股票收益率的变化趋

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[3] 正如本文制度背景部分所述，从2001年开始，证监会陆续颁布了一系列规范上市公司分红的监管政策。之所以仅将2008年10月9日出台的《决定》作为研究事件日，主要是因为2008年的分红管制政策仅涉及现金分红比例调整，不包括股票股利，并且不受其他附加信息的干扰。所以，2008年《决定》颁布日是研究现金分红税收成本最为乾净的窗口。

[4] 例如，针对2008年分红管制要求，我们采用Sefcik and Thompson(1986)的方法，根据以往分红数据，构造了三个投资组合，结果发现，三个投资组合之间的收益率差异，随着窗口期的不同，显著性也有较大的差别。限于篇幅，我们没有在论文中报告这个结果，我们可以向感兴趣的读者提供这个结果。这也正是本文强调采用长期市场反应的一个重要原因，因为该政策在08年10月份公布，这样用10月至12月的股价，就可以充分包含了市场的对公司分红的预期以及相应的信号-税收成本的净效应。

势。其中BHAR为按照Fama-French三因素调整后的持有至到期报酬率，具体调整方法如下：[5]

$$BHAR_i(t,T) = \prod_{t=1}^{T}(1+R_{i,t}) - \prod_{t=1}^{T}(1+RMRF_t) - \prod_{t=1}^{T}(1+SMB_t) - \prod_{t=1}^{T}(1+HML_t),$$

其中$R_{i,t}$为考虑现金分红再投资的日个股回报率，$RMRF_t$指市场溢价因子，为股票投资组合日收益率与无风险日收益率之差，SMB_t指小公司投资组合的日收益率与大公司投资组合的日收益率之差，HML_t高账面市值比因子公司的投资组合日收益率与低账面市值比因子公司的投资组合日收益率之差。以上三因子均按流通市值加权。变量下标i代表公司，t，T分别代表估计股票超额回报率时间的起始点，时间跨度为上述两项政策出台前后各两个月。

因为随着2005年6月13日《通知》颁布后，投资者承担的现金分红个税成本显著降低。假定现金分红持续性假说成立，投资者预期2004年分红的公司下一年仍然会分红，那么随着红利税的降低，这些被预期到2005年仍旧继续分红的公司应该表现出更高的股票超额报酬率。本文利用回归模型(1)考察投资者分红预期与《通知》颁布日后两个月投资者获得的股票超额收益率的关系，将2004年是否分红作为投资者对2005年的分红预期，其中虚拟变量DIV_DUM_{2004}表示2004年公司实际是否分红，分红的公司定义为1，否则为0。借鉴李常青等(2010)研究，本文除了控制Fama-French(1992)三因素外，还控制了经营绩效、负债率、机构投资者持股比例、自由现金流量比例、销售增长率、第一大股东持股比例以及最终控制人性质。本文预期变量DIV_DUM系数符号显著为正。

$$BHAR_{it} = \alpha_0 + \alpha_1 DIV\_DUM_{2004} + \alpha_{2-10} CONTROLS + \varepsilon_{it} \quad (1)$$

如果说2005年6月13日《通知》的出台为本文直接检验红利税成本对公司价值的影响提供了直接的机会，则2008年10月9日《决定》的颁布为红利税成本与红利留在企业中所带来的自由现金流代理成本的权衡及其对公司价值的影响提供了间接检验机会。假定公司现金分红具有持续性，本文利用回归模型(2)检验2008年10月9日《决定》颁布日前后投资者分红预期与股票超额收益率之间的关系。出于稳健考虑，这里分别利用《决定》颁布后2009年上市公司实际分红(主要是分配2008年利润)比例和《决定》颁布前的最近三年平均分红比例两个指标代理投资者的现金分红预期。特别是针对最近三年未分红的公司，由于投资者无法根据其分红历史形成预期，采用2009年的实际分红比例作为投资者预期可能更为妥当；而对最近三年有分红历史的公司，过去三年平均分红比例是较为合适的投资者预期值。回归模型(1)和(2)的变量$CONTROLS$表示控制变量的集合。

$$BHAR_{it} = \beta_0 + \beta_1^* DIV_{it} + \beta_{2-10} CONTROLS + \xi_{it} \quad (2)$$

[5] 本文也尝试了仅按照日市场报酬率调整的BHAR，但并不影响本文的基本结论。

表1 变量定义

变量类型	变量名称	变量定义
被解释变量	$BHAR_{2008}$	以日回报率为基础从2008年10月9日到2008年12月31日的股票购买并持有收益率
	$BHAR_{2005}$	以日收益率为基础从2005年6月13日到2005年8月31日的股票购买并持有收益率
解释变量	DIV_DUM_{2004}	虚拟变量，1表示2004年发放现金分红的公司，否则为0
	DIV_{678}	2006-2008年三年各公司的平均分红比例
	DIV_{2009}	2009年各公司实际分红比例
控制变量	*BETA*	以前一年度股票日收益率为基础计算的beta系数，以衡量股票的市场风险，即个股以事件窗口左端日期为基准，往前追溯一年的风险因子
	SIZE	资产期末账面价值的自然对数
	LEV	负债账面值／期末资产账面值
	ROA	净利润／期末资产账面值
	BTM	市净率的倒数
	INSTITUTION	机构投资者持股比例
	FIRST	第一大股东持股比例
	FCF	经营活动现金流净额与投资活动现金流净额之差／期末资产账面值
	SALEGROWTH	销售收入的增长率，即为（当期营业收入／上期营业收入－1）
	INDUSTRY	中国证监会《中国上市公司分类指引》所规定的除了金融类外的12个行业大类二元0-1哑变量
	OWNER	最终控制权性质的哑变量，国企为0，非国企为1

四、实证检验结果与分析

（一）描述性统计分析

表2报告了主要变量的描述性统计结果，《决定》颁布后2个月样本公司的平均持有至到期回报率(BHAR)约为1.7%，样本公司最近三年(2006至2008年）平均分红比例为30.5%左右，而在《决定》颁布后首个分红年度上市公司平均分红比例约为28.8%，略微低于之前三年的平均分红比例。《通知》颁布后近2个月平均持有至到期报酬率约为-3.9%，最大值和最小值分别约为35.7%和-30.6%，体现出个体公司的重大差异。DIV_DUM_{2004}的均值约为62.7%，表明有过半的公司在《通知》颁布前的2004年有过分红历史。

表2 描述性统计量

变量名	观测数	均值	标准差	最小值	最大值
Panel 1：《通知》颁布					
$BHAR_{2005}$	991	-0.039	0.120	-0.306	0.357
DIV_DUM_{2004}	991	0.627	0.484	0.000	1.000
BETA	991	1.101	0.238	0.362	1.623
SIZE	991	21.387	0.956	19.383	24.869
BTM	991	0.526	0.213	0.153	1.132
LEV	991	0.480	0.171	0.073	0.848
ROA	991	0.039	0.033	0.001	0.158
INSTITUTION	991	0.094	0.148	0.000	0.655
FCF	991	0.133	0.127	-0.159	0.492
SALEGROWTH	991	0.395	0.844	-0.514	6.808
FIRST	991	0.428	0.168	0.070	0.750
OWNER	991	0.266	0.442	0.000	1.000
Panel 2：《决定》颁布					
$BHAR_{2008}$	783	0.017	0.178	-0.325	0.599
DIV_{678}	783	0.305	0.255	0.000	1.223
DIV_{2009}	783	0.288	0.329	0.000	1.898
BETA	783	1.043	0.168	0.499	1.361
SIZE	783	21.838	1.118	19.702	25.961
BTM	783	0.202	0.098	0.041	0.501
LEV	783	0.489	0.176	0.075	0.891
ROA	783	0.059	0.044	0.003	0.229
INSTITUTION	783	0.278	0.224	0.002	0.842
FCF	783	0.122	0.129	-0.215	0.491
SALEGROWTH	783	0.399	0.788	-0.445	5.863
FIRST	783	0.201	0.213	0.000	0.711
OWNER	783	0.323	0.468	0.000	1.000

注：本文对连续变量在1%和99%分位数处做了Winsorize处理。

（二）分红政策变更影响公司股票超额收益率吗？

为了控制样本公司股票收益率在政策出台前可能存在的差异，本文采用了双重差分方法(Difference-in-Difference，DID)，比较两个政策出台前后近2个月时间投资者获得的持有至到期回报率增量。目的是为了检验政策对不同分红类型的股票收益率的影响。

表3报告了《通知》和《决定》颁布前、后2个月的投资者所持股票超额收益率增量。Panel 1结果表明，对于04年有分红的公司而言，《通知》颁布日前、后2个月投资者所获股票超额收益率增量为2.5%，远大于04年没有分红的公司，这说明投资者认为过去一年现金分红的公司下一年仍然会分红，考虑到未来红利个税的下调，投

资者给予预期会继续保持分红记录的公司更高市场定价。Panel 2列示了《决定》颁布日前、后股票超额收益率的增量。将样本分为最近三年未分红公司和三年内有分红公司，在《决定》颁布前、后两个月投资者所获的股票超额收益率增量分别为10.8%和0.5%，前者几乎是后者的20多倍，投资者如长期持有三年内未分红公司可以获得近20倍于持有最近三年有分红公司持有至到期回报率，即投资者预期未来不分红公司的股价表现远优于分红公司，这说明《决定》颁布后，投资者所预期未来承担的现金分红个税成本远大于现金流留在企业中所产生的自由现金流代理成本损失，该发现为现金分红的税收成本提供了间接证据。

表3 政策颁布前后持有至到期回报率的增量(DID)

Difference in Difference(DID)	观测数	BHAR增量
Panel 1《通知》颁布日		
04年没有分红的公司	370	-0.068
04年有分红的公司	621	0.025
Panel 2《决定》颁布日		
三年内没有分红的公司	119	0.108
三年内有分红的公司	665	0.005

注：增量=政策颁布后的BHAR减去政策颁布前的BHAR。

(三)多元回归结果与分析

为了结论的稳健性和可靠性，借鉴Fama and French(1992)三因素模型和李常青等(2010)的研究，本文控制了公司特征变量以及机构投资者持股、第一大股东持股和最终控制人性质等公司治理因素，执行了如下多元回归分析。表4报告了2005年《通知》颁布后红利个税的下调之对分红预期和股票超额收益率关系的影响。将2004年是否实际现金分红作为投资者的分红预期，分红预期变量DIV_DUM_{2004}系数均为3.6%，且在1%水平通过统计显著性检验。平均而言，伴随红利个税的下调，较之预期不分红公司，投资者预期未来分红公司将获得的股票超额收益率(BHAR)要多出3.6个百分点，从而验证了研究假说1。

无论《决定》颁布前三年是否有过分红经历，本文分别将《决定》颁布前三年(2006至2008年)平均实际分红比例(=总派息数／总可分配利润)和2009年实际分红比例作为投资者的预期，考察投资者的分红预期是否影响公司的长期股价。

红利税成本是否影响了《决定》颁布后的长期市场反应？根据Cremer(2005)的解释，在《决定》颁布后，原来不分红的公司(可以认为是公司治理最差的公司)未来分红的可能性将增加，这样会提高投资者对公司未来分红的预期，并反映到股票价格中。第二种解释，就是分红税收成本未必有利于上市公司的股东，因此分红管制很有可能不利于投资者，因此投资者对此反应不积极。为了区分这两种可能性，分别采用最近三年平均分红比例和2009年实际分红比例作为投资者的分红预期，着重考察投资者预期分红之对其股票超额收益率的影响。依据投资者分红预期变量的回归系数判断所支持的研究假说：如果回归系数为正，则如Cremer(2005)所言，投资者预期分红比例越高，未来获得的股票超额收益率越高；反之，如果回归系数为负，则支持分红税收成本假说，为现金分红的监管悖论提供了间接的证据。

表4 《通知》颁布、投资者分红预期与持有至到期收益率

变量	符号预测	栏(1)	栏(2)
		DIV_DUM_{2004} = 04年实际分红与否=投资者分红预期	
		因变量= $BHAR_{2005}$	因变量= $BHAR_{2005}$
DIV_DUM_{2004}	+	0.036***	0.036***
		(4.16)	(4.06)
SIZE	-	-0.000	-0.000
		(-0.07)	(-0.01)
BTM	-	-0.0182	-0.019
		(-0.79)	(-0.95)
BETA	-	-0.015	-0.015
		(-0.89)	(-0.72)
LEV	+	0.0062	0.005
		(0.22)	(0.17)
ROA	+	0.417***	0.392**
		(2.61)	(2.20)
INSTITUTION	+	0.049	0.047
		(1.44)	(1.37)
FCF	-		0.028
			(0.84)
SALEGROWTH	+		-0.001
			(-0.21)
FIRST	?	0.058**	0.057**
		(2.38)	(2.34)
OWNER	?	-0.004	-0.005
		(-0.49)	(-0.52)
行业效应		控制	控制
截距项	?	0.064	0.035
		(0.59)	(0.27)
F值		5.75	6.37
Prob>F		<0.000	<0.000
方差膨胀系数		6.54	6.09
Adj. R^2		0.092	0.111
N		991	991

注：括号内数字为T值，星号代表统计显著性水平，其中* p < 10%, ** p < 5%, *** p < 1%。

具体检验做法：无论上市公司是否最近三年有过分红历史，本文将2009年实际分红比例和最近三年平均分红比例作为投资者对公司未来分红的预期，在控制公司特征变量和公司治理等因素后，将BHAR作为因变量，通过如下模型考察投资者

的未来分红预期是否影响公司的长期股价表现。表5栏(1)和(2)分别报告了回归的结果，解释变量DIV_{678}、DIV_{2009}分别代表公司最近三年平均分红比例和2009年的实际分红比例，它们都将作为投资者对公司未来分红的预期值，三变量的系数分别约为-3.9%和-2.8%，均为负数，且均在10%水平通过统计显著性检验，说明投资者的预期分红比例越高，其未来获得持有至到期报酬率越低，公司价值越小，这与分红代理成本和信号假说是不一致的，却支持了现金分红成本假说。

表5 《决定》颁布、投资者分红预期与股票超额收益率

变量	预测符号	栏(1)	栏(2)
		DIV_{678}=最近三年平均现金分红比例=投资者分红预期因变量=$BHAR_{2008}$	DIV_{2009}=2009年实际分红比例=投资者分红预期因变量=$BHAR_{2008}$
DIV_{678}	-	-0.039*	
		(-1.74)	
DIV_{2009}	-		-0.028*
			(-1.66)
SIZE	-	-0.039***	-0.039***
		(-5.73)	(-5.67)
BTM	-	0.004	-0.007
		(0.05)	(-0.09)
BETA	-	-0.196***	-0.192***
		(-4.45)	(-4.34)
LEV	+	0.047	0.051
		(1.10)	(1.21)
ROA	+	0.109	0.122
		(0.55)	(0.61)
INSTITUTION	+	-0.012	-0.012
		(-0.32)	(-0.31)
FCF	-	-0.121**	-0.117**
		(-2.23)	(-2.16)
SALEGROWTH	+	0.005	0.006
		(0.67)	(0.83)
FIRST	?	-0.003	-0.007
		(-0.10)	(-0.25)
OWNER	?	0.008	0.009
		(0.57)	(0.69)
行业效应		控制	控制
截距项	?	1.074***	1.070***
		(7.06)	(6.85)
F值		7.62	7.78
Prob>F		<0.000	<0.000
VIF		4.33	4.32
Adj. R^2		0.166	0.166
N		783	783

注：括号内数字为T值，星号代表统计显著性水平，其中* p < 10%, ** p < 5%, *** p < 1%。

(四)进一步分析

虽然长时间窗检验为本文的重点，但本文也以此为基础进一步分别考察了《通知》和《决定》颁布日前后短期市场反应与投资者分红预期的关系。表6报告了《通知》颁布日前、后共计5天的市场超额累计报酬率，与前述类似，采用2004年实际分红与否作为衡量投资者分红预期的指标。研究表明，较之预期不分红的公司而言，预期分红公司的5天超额累计回报率要高出约0.6个百分点，且在5%水平通过统计显著性检验。此外，第(1)栏还报告了不考虑控制变量的回归结果，与模型(2)结果类似。可见，即使在短窗口内，研究假说1也是成立的。

表6 《通知》颁布、投资者分红预期与短期超额累计回报率

变量	预期符号	栏(1)	栏(2)
		DIV_DUM =2004实际分红与否=投资者分红预期因变量= ***CAR*(-1, +3)**	***DIV_DUM*** = 2004实际分红与否=投资者分红预期因变量= ***CAR*(-1, +3)**
DIV_DUM	+	0.005**	0.006**
		(2.31)	(2.14)
SIZE	-		0.000
			(0.13)
ROA	+		-0.020
			(-1.45)
BETA	-		0.007
			(1.32)
BTM	-		0.001
			(0.13)
INSTITUTION	+		-0.012
			(-1.15)
FCF	-		0.001
			(0.71)
SALEGROWTH	+		0.001
			(0.67)
FIRST	?		0.028***
			(3.89)
OWNER	?		0.003
			(1.05)
行业效应			控制
截距项	?	-0.008***	-0.002
		(-4.20)	(-0.38)
F值		5.34	2.37
Prob>F		<0.011	<0.000
VIF		1.00	4.85
Adj. R^2		0.004	0.029
N		992	992

注：括号内数字为T值，星号代表统计显著性水平，其中* p < 10%, ** p < 5%, *** p < 1%。

表7报告了《决定》颁布日前、后共计5天内市场超额累计报酬率与投资者分红预期的回归结果。[6] DIV_DUM_1和DIV_DUM_2分别表示《决定》颁布日前的三年从未有过分红历史，且2009年实际不分红和实际分红的公司。由于这些公司没有分红历史，投资者难以据此形成对公司未来分红与否或者分红多少的预期。那么，2009年分红与否则成为公司的“首次”分红，表7的回归结果考察了投资者对公司“首次”分红的短期市场反应。这里的“首次”还不是真正意义上的第一次，仅是相对于过去较长时间没有分红的历史的公司而言。本文将上述两个变量同时控制在回归模型里，研究发现，投资者对2009年“首次”分红公司的短期市场反应显著为负，且均能够通过5%水平的统计显著性检验。于此形成鲜明对比的是，对于以往不分红，而且2009年仍不分红的公司而言，投资者的市场几乎没有给出明显的市场反应。出于稳健考虑，本文还通过改变时间窗口，如尝试窗口(-2, +2)、(0, 4)，研究结果不随短期事件窗口的改变而发生改变。

另外，本文还试图考察投资者对在《决定》颁布日前、后第一次发放股利的短期市场反应及其差异。具体做法：以2008年10月9日《决定》颁布日为分水岭，将在该颁布日之前和之后所有第一次发放股利的实施日作为研究时点，计算股利发放实施日前、后共计7天的短期超额累计报酬率，考察《决定》颁布前、后时期第一次发放股利的公司在实施日的投资者市场反应。《决定》颁布日前，共计1627起第一次分红，之后共计264起第一次分红。与表7的研究对象相区别的是，这里所言的“第一次”是指从公司上市日算起，以前从未分过红的公司。并且，计算超额累计报酬率的事件窗口是公司实际分红实施日前、后3天。因此，短期市场反应不会受到分红预期的影响，因为对所有公司均为第一次分红，如果分红税收成本是影响投资者对分红实施日市场反应的重要因素，那么在《决定》颁布日前、后时期，投资者在分红实施日的短期市场反应应该表现出显著系统差异，即：较之《决定》颁布前，在《决定》颁布后，投资者应对分红给出显著的负面反应。表8报告的相关结果，在《决定》颁布日之前和之后，分红实施日前、后共计3天的超额累计报酬率均值分别约为4.7%和-0.7%，均值的T检验为-1.96，且在5%水平通过统计显著性检验，这充分说明投资者并不认同《决定》所体现的“预先取之，必先予之”的变相强制分红政策，即：《决定》颁布后，投资者在公司第一次分红实施日给予了更为负面的反应，而分红税收成本则是导致这一结果的重要因素。

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[6] 表7中的变量*SIZE*、*DIF*、*MAMT*和*MRET*分别定义为：事件日前一天的流通股市场价值(取对数)，分红的变化(2009年度分红 – 2006至2008年三年平均分红)，2009年9月24日前50个交易日的交易量(目的是控制印花税的可能影响，交易量越大，印花税越高)，2009年9月24日前五十日个股回报率的均值。

表7 《决定》颁布、投资者分红预期与短期超额累计回报率

变量	预期符号	模型(1) DIV_DUM_1（前三年不分红，2009年仍不分红的为1，否则为0）=投资者分红预期因变量= $CAR(-1, +3)$	模型(2) DIV_DUM_2（前三年不分红，2009年分红的为1，否则为0）=投资者分红预期因变量= $CAR(-1, +3)$
DIV_DUM_1	-	0.001	-0.003
		(0.08)	(-0.39)
DIV_DUM_2	-	-0.037**	-0.041**
		(-2.33)	(-2.44)
SIZE	-		0.007*
			(1.62)
DIF	+		0.044
			(1.57)
MRET	+		-0.396
			(-0.52)
MAMT	-		-0.013***
			(-3.18)
FIRST	?		0.014
			(1.18)
Owner	?		0.000
			(0.08)
行业效应			控制
截距项	?	-0.025***	0.017
		(-8.12)	(0.52)
F值		2.76	4.90
Prob>F		<0.064	<0.000
VIF		1.01	5.44
Adj. R^2		0.004	0.076
N		907	907

注：括号内数字为T值，星号代表统计显著性水平，其中* p < 10%, ** p < 5%, *** p < 1%。

表8 表投资者对《决定》颁布日前后首次分红实施日的市场反应

$CAR(-3, +3)$	数目	均值	方差	最小值	最大值
政策颁布前	1627	0.047	0.089	-0.423	0.231
政策颁布后	264	-0.007	0.086	-0.423	0.231
t检验（政策颁布日前的分红实施日CAR =政策颁布日后的分红实施日CAR）：t =-1.96					

(五)一些敏感性测试

出于结论可靠性考虑，本文还执行了如下敏感性测试：(1)采用经风险因子调整后的Jensen-Alpha衡量投资者的股票超额收益率(表9和表10)；[7](2)另外改变短期事件窗口的长短，研究结果并无实质改变。上述敏感性测试均未实质性改变先前的基本结论，所以本文认为，研究结论是基本稳健的。

表9 《通知》颁布、投资者分红预期与股票超额收益率

变量	符号预测	模型(1)	模型(2)
		DIV_DUM_{2004}= 2004年实际分红与否 = 投资者分红预期因变量 =*JENSEN-ALPHA*	DIV_DUM_{2004}= 2004年实际分红与否 = 投资者分红预期因变量 =*JENSEN-ALPHA*
DIV_DUM_{2004}	+	0.0002**	0.0003**
		(2.11)	(2.07)
LEV	+	0.0002	0.0002
		(0.63)	(0.61)
ROA	+	0.0062***	0.0060**
		(2.83)	(2.70)
INSTITUTION	+	0.0007	0.0007
		(1.51)	(1.46)
FCF	-		0.0002
			(0.39)
SALEGROWTH	+		-0.0000
			(-0.20)
FIRST	?	0.0000	0.0000
		(0.10)	(0.09)
OWNER	?	-0.0002*	-0.0002*
		(-1.66)	(-1.66)
行业效应		控制	控制
截距项	?	0.0013*	0.0013*
		(1.76)	(1.75)
F值		4.05	3.65
Prob>F		<0.000	<0.000
VIF		7.16	6.58
Adj. R^2		0.053	0.051
N		991	991

注：括号内数字为T值，星号代表统计显著性水平，其中* p < 10%, ** p < 5%, *** p < 1%。

[7] 关于Jensen-Alpha 与BHAR 的区别请参见Kothari, S. P. and Warner, J. B. (2006), "Econometrics of Event Studies", *Financial Management*, in *Handbook of Corporate Finance*, Volume 1, Chapter 1, pp.30-60。本文以Fama-French 三因素模型为基础，2005 年6 月14 日开始至2005 年8 月31 日的股票日收益率计算《通知》颁布日后的$JENSEN\text{-}ALPHA_{2005}$，以2008年10 月10 日开始至2008 年12 月31 日的日股票收益率计算《决定》颁布日后的$JENSEN\text{-}ALPHA_{2008}$。

表10 《决定》颁布、投资者分红预期与股票超额收益率[8]

变量	符号预测	模型(1) DIV_{2009} = 2009年实际分红比例 = 投资者分红预期 因变量 = *JENSEN-ALPHA*	模型(2) DIV_{678} = 最近三年平均现金分红比例 = 投资者分红预期 因变量 = *JENSEN-ALPHA*
DIV_{2009}	-	-0.0005*	
		(-1.80)	
DIV_{678}	-		-0.0008*
			(-1.71)
LEV	+	0.0001	0.0001
		(0.07)	(0.13)
ROA	+	0.0014	0.0009
		(0.50)	(0.29)
INSTITUTION	+	0.0010**	0.0009
		(1.62)	(1.56)
FIRST	?	0.0003	0.0004
		(0.55)	(0.66)
OWNER	?	0.0002	0.0002
		(1.06)	(0.92)
行业效应		控制	控制
截距项	?	-0.001	-0.001
		(-0.71)	(-0.83)
F值		5.18	4.66
Prob>F		<0.000	<0.000
VIF		4.34	4.47
Adj. R^2		0.071	0.065
N		783	783

注：括号内数字为T值，星号代表统计显著性水平，其中* p < 10%, ** p < 5%, *** p < 1%

五、总结

本研究通过选择《通知》和《决定》两个重要政策颁布窗口，首次为红利税收成本与分红政策的价值相关性提供了直接和间接的证据。以2005年6月13日财政部、国家税务总局下发了关于下调红利税的《通知》，《通知》的颁布为直接检验税收成本对股票定价的影响提供了绝佳的机会。长期来看，2005年《通知》颁布后投资者持有预

[8] 表10 也尝试控制了*FCF* 和*SALEGROWTH* 两个变量，遗憾地是解释变量DIV_{2009}和DIV_{678}仍然为负数，但变得不再显著。于此同时，*FCF* 和*SALEGROWTH* 两个控制变量也无法取得统计显著性检验，故未报告控制该两变量的结果。本文认为这不会实质影响本文的基本结论。

期分红公司的股票将会获得更高的持有至到期报酬率。可见，税收成本是投资者进行股票定价重要考察因素。2008年10月9日证监会颁布了旨在保护中投资者利益的《决定》，该政策首次将企业再融资与其最近三年的现金分红历史联系了起来，本文发现较之无分红预期公司，投资者持有具有分红预期公司的股票获得持有至到期收益率降低。这一发现证明了不仅投资者要承担现金分红税收成本，而且该税收成本甚至大于红利留在企业内部所产生的潜在自由现金流代理成本。

本研究的理论意义在于：采取“预先取之，必先予之”的分红管制政策之所以未能真正起到保护中小投资者利益的目的，是因为相对较高的现金分红的税收成本，降低了中小投资者在《决定》颁布之日后从预期分红的公司获得的股票超额回报。所以，只有充分考虑各种监管政策可能存在的外部约束条件，才能够保证监管政策实施的有效性。在现金分红政策方面，正如中国证监会副主席范福春所言，中国的税收政策与资本市场的发展要求不相匹配是投资者不敢做长期投资的原因。[9]因此，在完善上市公司治理结构的同时，建设与资本市场健康良性发展激励相容的证券税收体系也是推动我国资本市场发展的重要环节。

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Cash Dividends, Taxation Costs, and the Regulation Paradox[1]

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Abstract

Does the Decision promulgated by the CSRC on 9 October 2008 really protect the interests of minority shareholders? This paper provides some direct and indirect evidence by systematically examining the value relevance of cash dividend taxation and dividend regulation. Using the data of listed firms within the sample years 2003 to 2008, the BHAR of dividend payers is found to be significantly higher than that of non-payers after the announcement of the Notice on reduction of the dividend taxation rate. After the Decision was announced on 9 October 2008, which set a higher cash dividend requirement for financing, non-payers exhibit a significantly higher BHAR than do payers. The findings indicate that cash dividend taxation is an important pricing factor for investors, and the efficiency of cash dividend regulation by the governing body is adversely affected by taxation. The implication of this paper is that setting up a securities taxation system that properly matches the development of stock markets is the key to enhancing the efficiency of cash dividend regulation.

Keywords: Cash Dividends, Taxation Costs, Regulation Paradox
CLC codes: F217, F212.9, F721.5

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I. Introduction

The main aim of the paper is to examine the role of taxation costs of cash dividends in the stock valuation of the capital market. In modern capital markets, declaring cash dividends is an important method through which shareholders harvest returns, and is a measure of the healthy development of the stock market as well. La Porta *et al.* (2000) propose that in a market with better investor protection, firms have greater propensity to pay cash dividends. According to the agency theory of dividend policy, cash payouts are instrumental in alleviating agency problems of free cash flow (Jensen, 1986), receiving stricter scrutiny from capital markets (Easterbrook, 1984), and reducing corporate potential agency costs to improve firm value. The securities regulators of China also put special emphasis on the cash dividend record of listed firms, and carry out regulations requiring listed firms to pay out as a prerequisite for raising new money. However, most domestic research findings suggest that the stock market does not react favourably to corporate cash dividends (Wei, 1998; Chen and Yao, 2000; Yu and Cheng, 2001; He and Chen, 2002). Li *et al.* (2010) suggest that a "Regulation Paradox" exists in these regulations pertaining to cash dividends promulgated by the China Securities Regulatory Commission (CSRC).

This paper examines the origins of the "Regulation Paradox" in relation to cash dividends from the perspective of dividend taxation costs. According to the current personal income taxation law of China, individual investors do not need to pay capital gain taxes, but have to pay individual income tax for cash dividends they receive. After the year 2005, the individual income tax rate for cash dividends received was reduced to 10 per cent. In view of the individual income tax for cash dividends, individual investors have to make a trade-off between the value of cash dividends and taxation costs. Only when incremental benefits are larger than dividend taxation costs will individual investors react favourably to cash payout behaviour. Consequently, the regulations that require firms to gorge more cash without changing dividend taxation costs would become, to a certain extent, a way of forcing individual shareholders to pay individual income taxes for cash dividends they receive. As a result, the method of increasing corporate payouts by means of mandatory regulations will not necessarily be beneficial to individual shareholders, but on the contrary will contribute to the "Regulation Paradox".

This study examines the economic consequences of the taxation costs of cash dividends. First, we examine the direct role of the individual income taxation of cash dividends on stock valuation. On 13 June 2005, the Ministry of Finance and the National Taxation Bureau jointly promulgated the *Notice on Relevant Policies Regarding Individual Income Taxation of Cash Dividends* (hereinafter the "Notice"). The Notice provides that only half of the cash dividends received by individual investors from listed firms belong to taxable income, meaning that the dividend taxation rate is reduced to 10 per cent. Using the announcement date of the Notice as the event day, our research finds that the stock market has a significantly positive reaction at the Notice announcement

day through the event study approach, and that the market's positive reaction is higher for firms that have a history of payouts.

On 9 October 2008, the CSRC promulgated the *Decision on the Revision of Several Regulations Regarding Cash Dividends* (hereinafter the "2008 Decision"). This paper studies the relationship between payout expectations and long-run abnormal return. The findings indicate that after the 2008 Decision is in practice, the non-dividend payers exhibit significantly abnormal returns of 10.8 per cent compared to 0.5 per cent for dividend payers. The difference between the returns for dividend payers and non-payers is nearly 10 percentage points.

The above evidence suggests that the taxation costs of cash dividends are an important factor for stock valuation, as well as an external institutional factor affecting the effectiveness of regulatory policies on cash dividends. The so-called "Regulation Paradox" following the 2008 Decision promulgated by the CSRC is partly attributable to ignorance of cash dividends taxation and mandatory taxation payment; therefore, the 2008 Decision could not necessarily protect the interests of individual investors. In short, the regulator is expected to consider policy externalities comprehensively, and make every effort to reduce negative externalities and finally to improve policy effectiveness.

The remainder of this paper is organised as follows. Section II outlines some of the theoretical arguments, the institutional background, and the hypothesis development. Section III describes the empirical evidence and analysis. Section IV provides the robustness check. The last section, Section V, concludes and outlines some policy implications.

II. Literature Review, Institutional Background, and Hypothesis Development

2.1 Literature Review

Since Miller and Modigliani (1961) put forward the "dividend irrelevance hypothesis", the "dividend puzzle" has preoccupied the attention of scholars in corporate finance and capital market research. However, the individual income taxation of cash dividends has become an essential point in research on cash dividends and stock valuation. For example, Brennan (1970) suggests that individual investors have a greater propensity to invest in a stock with a higher pre-tax stock return, which means that the higher are the cash payouts, the higher is the required rate of returns. In addition, Miller and Scholes (1978) believe that investors form a stock portfolio, which minimises their individual taxation costs based on their taxation status and current level of cash dividends. So changing the tax rate will not necessarily affect corporate cash dividend policies or the stock price, and this is so-called the "tax rate irrelevance hypothesis".

On the other hand, the empirical evidence is not consistent: Blume (1980) and Gordon and Bradford (1980) both find that investors do not care about cash dividends.

Black and Scholes (1974) and Kalay and Michaely (2000) suggest that the cash dividend policy does not affect stock returns. Litzenberger and Ramaswamy (1979) and Fama and French (1998) provide the opposite evidence that stock returns of dividend payers are higher. Morck and Yeung (2005) argue in a literature review that the taxation costs restrict the inclination of corporate payouts and reduce the functions of cash dividends in alleviating agency costs. Evidence from studies in China about the effect of cash dividends on corporate valuation may be more consistent. Payout policy does not significantly increase firm value (Wei, 1998; Chen and Yao, 2000; Yu and Chen, 2001; He and Chen, 2002). Although the CSRC stipulates that cash dividend history is the premise for future refinancing, the stock price reaction does not increase significantly (Li *et al.*, 2010). The above literature does not discuss the dividend taxation issue and its relevant influence, which is emphasised in this paper.

2.2 Institutional Background

In accordance with the individual income taxation law in China, cash dividends and capital gains, as part of individual income, are both subject to individual income taxation, which has different tax rates. The individual income taxation law enforced in 1994 provides that individual investors have to bear individual income tax for their interest and dividend income and capital gains from stocks and equity transactions. Cash dividends are subject to an individual income tax rate of 20 per cent, while stock dividends are subject to a tax rate of 20 per cent on their par value. Capital gains from stock transfers are currently exempted from taxation.

On 13 June 2005, the Ministry of Finance and National Taxation Bureau circulated the Notice, which stipulates that only half of the cash dividends received by individual investors from listed firms are subject to taxation, meaning that the dividend taxation rate is reduced to 10 per cent. But capital gains are still free from any individual income taxation.

On the other hand, the CSRC put more emphasis on cash dividend payouts of listed firms. The *Measures on New Share Issuance of Listed Firms*, promulgated by the CRSC on 28 March 2001, stipulate that for firms that have not paid dividends for the latest three years, the board could be required to give reasonable explanations, and securities brokerage firms should attach much attention and explain in their due diligence investigation. The *Regulations on Reinforcing Protection of Public Investors' Interest*, promulgated by the CRSC on 7 December 2004, also stipulate that firms without a payout history for the latest three years should not be permitted to issue new shares, convertible bonds, or rights offerings to public investors. Moreover, the *Administrative Measures on Share Issuance of Listed Firms*, promulgated by the CRSC on 6 May 2006, further emphasises that firms planning refinancing have to meet the requirement that the payout ratio for the latest three years must account, on average, for 20 per cent of earnings payable. The 2008 Decision then raises the baseline of the cash dividend payout ratio

from 20 per cent to 30 per cent, which means that cumulative earnings distributed to investors in the form of cash should not be less than 30 per cent of yearly distributable earnings for the latest three years.

2.3 Hypothesis Development

A firm's intrinsic value is determined by net cash flows generated from investment projects, but its stock price is determined by after-tax cash dividends and capital gains both received by investors, while investors determine stock prices according to both after-tax cash dividends and capital gains. Without individual income taxation (Miller and Modigliani, 1961) or if the same tax rate is imposed for cash dividends and capital gains, investors would not prefer cash dividends over capital gains. If taxation costs of cash dividends are higher than those of capital gains, the actual returns received from capital gains will obviously be much higher than those from cash dividends. Compared with capital gains with lower taxation, cash dividends cannot enhance shareholders' wealth but instead destroy it. As a result, changing the relative tax rate difference between cash dividends and capital gains will directly influence shareholders' deployable income consumed as well as the corporate valuation.

The Notice has the effect of reducing the tax rate of cash dividends by 50 per cent. As taxation of capital gains is exempted, the Notice actually reduces the relative tax rate difference between cash dividends and capital gains, which increases the return on investment from cash dividends. Without any change in the sum of cash dividends, a drop in the tax rate enhances after-tax cash dividends received by shareholders, increases investors' deployable wealth, and raises the stock price for dividend payers. For non-payers, shareholders can only benefit from capital gains, and this results in a relative drop in the yield in capital gains. Hence, the stock price drops for non-payers. Therefore, we propose the first hypothesis as follows:

Hypothesis 1: After the Notice was issued on 13 June 2005, the buy-and-hold abnormal returns for dividend payers are significantly higher than those for non-payers.

Cash dividends can send a signal of the firm's valuation to the market (Miller and Rock, 1985), reduce the agency costs (Jensen, 1986; Easterbook, 1984), and effectively protect the interest of shareholders (Shleifer and Vishny, 1997; La Porta *et al.*, 2000). However, for the taxation costs, investors have to make a trade-off between the taxation costs of cash dividends, the valuation effect of signalling, and agency cost savings, and make decisions based on the net effect of cash dividends. *Ceteris paribus*, the increase in payouts does not necessarily enhance shareholder wealth or increase the stock price.

The 2008 Decision raises the payout ratio requirement from 20 per cent to 30 per cent for firms undergoing refinancing, which means that investors have to pay more

individual income taxes for cash dividends, and there will undoubtedly be a much higher net cash outflow. Meanwhile, in a regulated market, the capability of signalling and agency cost savings of cash dividends seem to be unimportant, because investors are inclined to believe that the main purpose of corporate payout policy is to meet the demand for re-financing rather than the maximisation of shareholder wealth. In addition, cash dividends increase the individual income taxation costs for investors and decrease the incremental wealth of shareholders. The joint impact of the above two factors will probably lead to the opposite outcome to cash dividend regulations. In other words, investors do not believe that an increase in cash dividends will contribute to shareholder wealth, and so they prefer non-dividend payers rather than firms that actively seek to meet the payout requirement. Although there are costs related to information asymmetry and agency problems, these costs are still lower than the individual income costs associated with cash dividends. As a result, after the 2008 Decision, non-payers could exhibit higher buy-and-hold abnormal returns than payers;[5] therefore, we propose the following hypothesis:

Hypothesis 2: After the 2008 Decision, non-dividend payers exhibit much higher buy-and-hold abnormal returns than dividend payers.

III. Sample Selection and Research Design

3.1 Data Sources and Sample Selections

All financial data are taken from the CSMAR database of Shenzhen GTA Corporation and the SinoFin database. Fama-French three factors are sourced from the Resset financial research database. We choose 13 June 2005 and 9 October 2008, on which the Notice and Decision were respectively promulgated, as the event dates. All A-share firm-years that are already listed before 2004 or 2007 are included in our research sample. For robustness, in the event studies on the Notice promulgation date, we execute the following deletion procedures: (1) delete all financial firm-years; (2) delete all firm-years with negative net income in year 2004; and (3) delete all firm-years with missing data. Finally, we have 991 firm-year observations available.

In the event studies on the Decision promulgation date, we execute the following deletion procedures: (1) delete all financial firm-years; (2) delete all firm-years which are listed after year 2005; (3) if a firm's net income for any one year between 2005 and 2007 is negative, delete all observations of that firm; (4) delete all firm-years with negative total net income for the three years from 2006 to 2008; (5) delete all firm-years with

[5] As described in the Institutional Background, the CSRC promulgated several policies to regulate dividend payouts of listed companies from 2001 onwards. The day of 9 October 2008, on which the Decision was issued, is chosen as the event date, mainly because the regulatory policy in 2008 is concerned about the cash payout ratio only, excluding stock dividends. There is no noise from other additional information, and thus the issuance date of the Decision is the cleanest window for studying taxation costs of cash dividends.

negative net income in 2009; and (6) delete all firm-years with missing data. Finally, we have 783 firm-year observations left. To further control for outliers, we winsorise all variables at the 1 per cent and 99 per cent percentiles.

3.2 Design of the Regression Model

Kothari (2006) suggests that short-window event studies are affected to a large extent by the market model applied, observations available, and the length of the event window. Moreover, when the market's reaction to a specific policy is examined using short-window event studies, all firms are affected by the policy, and so the residuals from the regression of market models (that is, the cumulative abnormal returns, CARs) are not necessarily independent of each other, leading to violations of basic assumptions of short-window event studies. In addition, in short-window event studies, the choice of research window length has a great influence on conclusions.[6] Consequently, we use the long-window buy-and-hold abnormal return (BHAR) to study change trends in stock returns around the announcement dates of the Notice and the 2008 Decision. BHARs are adjusted by Fama-French three factors:[7]

$$BHAR_i(t,T) = \prod_{t=1}^{T}(1+R_{i,t}) - \prod_{t=1}^{T}(1+RMRF_t) - \prod_{t=1}^{T}(1+SMB_t) - \prod_{t=1}^{T}(1+HML_t),$$

where $R_{i,t}$ represents the daily stock return with cash dividends reinvested. $RMRF_t$ represents stock investment portfolio return minus risk-free return, SMB_t the daily return of a small enterprise investment portfolio minus that of a large enterprise investment portfolio, and HML_t the daily return of a high market-to-book enterprise portfolio minus that of a low market-to-book enterprise portfolio. The Fama-French three factors are all weighted by tradable market value. The subscript i of the variables indicates the firm, and t and T represent the beginning and ending dates for estimating BHARs, respectively. The length of the event window is two months before and after the Notice and the 2008 Decision announcement dates.

When the Notice came into practice on 13 June 2005, the taxation costs of cash dividends borne by investors were significantly reduced. Assuming that the payout policy can persist into the future, investors expect that the payers will continue to pay cash dividends if they did so in 2004. With the drop in cash dividend taxation costs, those firms that are expected to pay cash dividends in 2005 will exhibit significantly higher BHAR. Model (1) is applied to examine the relationship between two-month BHAR and

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[6] For example, regarding the cash dividend regulations in 2008, this paper follows the methods applied in Sefcik and Thompson (1986) and constructs three investment portfolios based on past dividend payout data. We find that return differences and their statistical significance between the three portfolios change with the length of research windows. To save space, this paper does not report the results. This is an important reason why this paper emphasises long-run market reactions, which allow the market to completely impound investors' cash dividend expectations and net effects of signalling taxation after the Decision announced on 9 October 2008.

[7] We also try to adjust BHAR with daily market returns, but our basic findings do not materially change.

investors' cash dividend expectations around the Notice announcement date. We use a dummy variable indicating whether or not a firm is a payer in year 2004 to represent investors' dividend payout expectations for the year 2005. Following Li *et al.* (2010), we control for firms' operating performance, leverage, institutional holdings, free cash flow, sales growth, largest shareholdings, and the nature of controlling ownership apart from the three factors of Fama-French (1992). We expect the variable *DIV_DUM* (1 for payers and 0 for non-payers in the year 2004) to be significantly positive.

$$BHAR_{it} = \alpha_0 + \alpha_1 DIV\_DUM_{2004} + \alpha_{2\text{-}10} CONTROLS + \varepsilon_{it} \quad (1)$$

If the Notice promulgated by the CSRC on 13 June 2005 provides us with an opportunity to directly examine the effect of cash dividend taxation on firm value, the Decision promulgated on 9 October 2008 would offer an indirect chance to study investors' trade-off between cash dividend taxation costs and agency costs of free cash flow, and their joint effect on firm value. Assuming that payers continue to pay cash dividends in the future, we apply Model (2) to test the relationship between investors' dividend payout expectations and BHAR before and after 9 October 2008 when the Decision came into effect. For robustness considerations, we use actual cash dividends in the year 2009 (mainly profits earned in 2008 that are distributed) and average cash dividends for the latest three years as proxies for investors' payout expectations. Especially for firms without a cash payout history for at least one year during the last three years, the investors could not easily form an expectation about future cash payouts, and so the actual cash payout ratio in 2009 may be a better measure for investors' expectations. For firms with a cash payout history in the last three years, the average cash payout ratio for the last three years may be a better measure for investors' expectations. The variable *CONTROLS* in Models (1) and (2) represents the vectors of control variables.

$$BHAR_{it} = \beta_0 + \beta_1 * DIV_{it} + \beta_{2\text{-}10} CONTROLS + \xi_{it} \quad (2)$$

IV. Empirical Evidence and Analysis

4.1 Summary Statistics

Table 2 reports summary statistics of the main variables. The buy-and-hold abnormal returns for two months after the 2008 Decision is about 1.7 per cent. The three-year average cash payout ratio from 2006 to 2008 is 30.5 per cent, while the mean cash payout ratio is about 28.8 per cent for 2009 (the first year after the 2008 Decision), which is a little lower than that for the previous three years. In addition, the mean BHAR is about-3.9 per cent for the two months after the Notice announcement date, while the maximum and minimum BHAR are 35.7 per cent and-30.6 per cent, respectively, representing great differences between firm-years. The mean value of DIV_DUM_{2004} is 62.7 per cent, which means that more than half of the firm-years paid cash dividends in 2004 before the announcement of the Notice.

Table 1 Variable Descriptions

Variable type	Variable name	Definitions of variables
Dependent variables	$BHAR_{2008}$	Buy-and-hold abnormal return from 9 October 2008 to 31 December 2008
	$BHAR_{2005}$	Buy-and-hold abnormal return from 13 June 2005 to 31 August 2005
Independent variables	DIV_DUM_{2004}	Dummy variable; 1 represents payers in 2004, and 0 otherwise
	DIV_{678}	Average cash payouts from 2006 to 2008
	DIV_{2009}	Actual cash payouts for 2009
Control variables	*BETA*	Systematic risk measured by daily stock return for the preceding year
	SIZE	Natural logarithm of book value of assets
	LEV	Book value of debt/book value of assets
	ROA	Net income/book value of assets
	BTM	Book value of equity per share/price per share
	INSTITUTION	Institutional holdings
	FIRST	The largest shareholdings
	FCF	(Net operating cash flow minus net investment cash flow)/book value of assets
	SALEGROWTH	(Final sales revenue – initial sales revenue)/initial sales revenue
	INDUSTRY	0-1 dummy variable for 12 industries except financials stipulated in the *Classification Guidance for Chinese Listed Firms* issued by the CSRC
	OWNER	Ultimate ownership dummy variable; 0 for state-owned firms, and 1 for others

Table 2 Summary Statistics

Name of variable	Obs	Mean	Standard deviation	Minimum	Maximum
Panel 1 Notice announced					
$BHAR_{2005}$	991	-0.039	0.120	-0.306	0.357
DIV_DUM_{2004}	991	0.627	0.484	0.000	1.000
BETA	991	1.101	0.238	0.362	1.623
SIZE	991	21.387	0.956	19.383	24.869
BTM	991	0.526	0.213	0.153	1.132
LEV	991	0.480	0.171	0.073	0.848
ROA	991	0.039	0.033	0.001	0.158
INSTITUTION	991	0.094	0.148	0.000	0.655
FCF	991	0.133	0.127	-0.159	0.492
SALEGROWTH	991	0.395	0.844	-0.514	6.808
FIRST	991	0.428	0.168	0.070	0.750
OWNER	991	0.266	0.442	0.000	1.000
Panel 2 2008 Decision announced					
$BHAR_{2008}$	783	0.017	0.178	-0.325	0.599
DIV_{678}	783	0.305	0.255	0.000	1.223
DIV_{2009}	783	0.288	0.329	0.000	1.898
BETA	783	1.043	0.168	0.499	1.361
SIZE	783	21.838	1.118	19.702	25.961
BTM	783	0.202	0.098	0.041	0.501
LEV	783	0.489	0.176	0.075	0.891
ROA	783	0.059	0.044	0.003	0.229
INSTITUTION	783	0.278	0.224	0.002	0.842
FCF	783	0.122	0.129	-0.215	0.491
SALEGROWTH	783	0.399	0.788	-0.445	5.863
FIRST	783	0.201	0.213	0.000	0.711
OWNER	783	0.323	0.468	0.000	1.000

Note: All continuous variables are winsorised at the 1% and 99% percentiles.

4.2 Does Cash Payout Policy Affect Firms' BHAR?

To control for any difference in stock returns before the policy is put into practice, we use the difference-in-difference approach to compare two-month incremental BHARs that investors have before and after the policy announcement dates with the aim of examining the impact of policies on stock returns over firms with different payout histories.

Table 3 reports incremental BHARs two months before and after the 2008 Decision and the Notice announcement dates. In Panel 1, the BHAR for two months before and after the Notice announcement for payers in 2004 is 2.5 per cent, which is much higher than that for non-payers in the same year. The phenomenon could be explained by the

fact that when investors expect payers in the previous year to continue to pay in the following year, investors could give a much higher stock valuation for payers expected to pay in the future, when the individual income taxation on cash dividends is expected to drop. Panel 2 presents the incremental BHAR before and after the 2008 Decision announcement date. We divide the sample into two sub-samples: non-payers representing firms without a cash payout history in the past three years, and payers with a cash payout history for at least one year over three consecutive years. The BHARs for non-payers and payers for two months before and after the 2008 Decision announcement date are 10.8 per cent and 0.5 per cent, respectively, and the former is 20 times higher than the latter, meaning that the BHAR realised by investors holding shares of non-payers is 20 times larger than that for payers. Table 3 provides the evidence that the cash dividend taxation costs borne by investors are higher than the agency costs of free cash flow, which offers indirect supporting evidence of the cash dividend taxation costs.

Table 3 Difference-in-Difference Analysis of BHARs Before and After Policy Announcement Dates

Difference in Difference (DID)	**Obs.**	**Differential BHAR**
Panel 1: Notice announcement date		
Non-payers in 2004	370	–0.068
Payers in 2004	621	0.025
Panel 2: 2008 Decision announcement date		
Non-payers in the last three years	119	0.108
Payers in the last three years	665	0.005

Note: Difference = BHAR after the announcement date minus BHAR before the announcement date.

4.3 Multivariate Regression and Analysis

To ensure the robustness and reliability of results, following Fama and French (1992) for the three factors and Li *et al.* (2010), we control for a vector of variables including variables of corporate financial conditions and corporate governance, such as institutional holdings and the largest shareholding, and perform the following regression analysis.

Table 4 reports regression results about the relationship between cash payout expectations and BHAR with the decrease in the individual income taxation of cash dividends. Using a dummy variable indicating whether a firm paid cash dividends in 2004 to represent cash dividend expectations, the coefficient of DIV_DUM_{2004} is 3.6 per cent, which is significant at the 1 per cent level. On average, after the cash dividend taxation decreases, the BHAR of payers realised by investors is higher than that of non-payers in 2004 by 3.6 percentage points, which supports Hypothesis 1.

Regardless of whether a firm has a cash payout history in the three years before the 2008 Decision was announced, we use the actual cash payout ratio in 2009 and the average cash payout ratio for the three years before the 2008 Decision was announced (2006 to 2008) to examine the influence of investors' cash dividend expectations on the long-run stock price performance.

Does cash dividend taxation affect the long-run stock performance after the 2008 Decision was announced? According to the analysis of Cremer (2005), after the 2008 Decision, the probability for non-payers, which could be believed to be with poor governance quality, to pay dividends increases, and thereby enhances investors' confidence in future cash dividend expectations, which are then impounded into stock prices. The other explanation is that cash dividend taxation is not necessarily beneficial to investors' interests, and the regulation of the cash payout policy is probably harmful to investors, so investors do not react positively. To differentiate between the above two explanations, we use the average cash payout ratio for the last three years and the actual cash payout ratio for 2009 as proxies for investors' cash payout expectations, respectively, to examine the effect of investors' cash payout expectations on BHAR.

If the coefficient of cash dividend expectations is positive, this means that the higher are the cash payout expectations, the higher is BHAR realised by investors, and the arguments of Cremer (2005) are supported. In contrast, if the coefficient of cash dividend expectations is negative, the cash dividend taxation hypothesis is supported, providing indirect evidence for the regulation paradox of cash dividends.

The specific procedures are as follows. Regardless of whether firms have cash payout records, we use the actual cash payout ratio in 2009 and the average three-year cash payout ratio as proxies for investors' cash payout expectations. After controlling for corporate characteristic variables and corporate governance, we perform the following regression to test whether investors' cash payout expectations influences the long-run stock performance using BHAR as the dependent variable. Columns (1) and (2) of Table 5 report the regression results. Explanatory variables DIV_{678} and DIV_{2009} represent the average three-year cash payout ratio and the actual payout ratio in 2009, respectively, which represent investors' cash payout expectations. In Columns (1) and (2), the coefficients of DIV_{678} and DIV_{2009} are -3.9 per cent and -2.8 per cent respectively, which are both negative and significant at the 10 per cent level. This is not consistent with the agency costs or the signalling hypothesis, but supports the cash payout taxation costs hypothesis.

Table 4 Notice Announcement, Cash Payout Expectations, and BHAR Realised by Investors

Variables	Sign expected	Column (1)	Column (2)
		***DIV_DUM*$_{2004}$ = dummy variable indicating whether a firm paid cash dividends in 2004 = investors' payout expectation**	
		Dependent variable = *BHAR*$_{2005}$	**Dependent variable = *BHAR*$_{2005}$**
DIV_DUM$_{2004}$	+	0.036***	0.036***
		(4.16)	(4.06)
SIZE	–	-0.000	-0.000
		(-0.07)	(-0.01)
BTM	–	-0.0182	-0.019
		(-0.79)	(-0.95)
BETA	–	-0.015	-0.015
		(-0.89)	(-0.72)
LEV	+	0.0062	0.005
		(0.22)	(0.17)
ROA	+	0.417***	0.392**
		(2.61)	(2.20)
INSTITUTION	+	0.049	0.047
		(1.44)	(1.37)
FCF	–		0.028
			(0.84)
SALEGROWTH	+		-0.001
			(-0.21)
FIRST	?	0.058**	0.057**
		(2.38)	(2.34)
OWNER	?	-0.004	-0.005
		(-0.49)	(-0.52)
Industry effects		Controlled	Controlled
constant	?	0.064	0.035
		(0.59)	(0.27)
F value		5.75	6.37
Prob>F		<0.000	<0.000
VIF		6.54	6.09
Adj. R^2		0.092	0.111
N		991	991

Note: T values in parentheses. *, **, and *** denote significance levels of $p < 10\%$, $p < 5\%$, and $p < 1\%$, respectively.

Table 5 2008 Decision Announcement, Investors' Cash Payout Expectations, and BHAR

Variable	Sign expected	Column (1) DIV_{678} = average payout ratio for the last three years = investors' payout expectation Dependent variable = $BHAR_{2008}$	Column (2) DIV_{2009} = actual payout ratio in 2009 = investors' payout expectation Dependent variable = $BHAR_{2008}$
DIV_{678}	–	-0.039*	
		(-1.74)	
DIV_{2009}	–		-0.028*
			(-1.66)
SIZE	–	-0.039***	-0.039***
		(-5.73)	(-5.67)
BTM	–	0.004	-0.007
		(0.05)	(-0.09)
BETA	–	-0.196***	-0.192***
		(-4.45)	(-4.34)
LEV	+	0.047	0.051
		(1.10)	(1.21)
ROA	+	0.109	0.122
		(0.55)	(0.61)
INSTITUTION	+	-0.012	-0.012
		(-0.32)	(-0.31)
FCF	–	-0.121**	-0.117**
		(-2.23)	(-2.16)
SALEGROWTH	+	0.005	0.006
		(0.67)	(0.83)
FIRST	?	-0.003	-0.007
		(-0.10)	(-0.25)
OWNER	?	0.008	0.009
		(0.57)	(0.69)
Industry effect		Controlled	Controlled
Constant	?	1.074***	1.070***
		(7.06)	(6.85)
F value		7.62	7.78
Prob>F		<0.000	<0.000
VIF		4.33	4.32
Adj. R^2		0.166	0.166
N		783	783

Note: T values in parentheses. *, **, and *** denote significance levels of $p < 10\%$, $p < 5\%$, and $p < 1\%$, respectively.

4.4 Further Analysis

Although this paper emphasises long-window tests, we further test the relationship between investors' cash payout expectations and short-window CARs before and after the Notice and 2008 Decision announcement dates. Table 6 reports five-day CARs before and after the Notice announcement date. Consistent with the former BHAR analysis, we use *DIV_DUM*, indicating whether a firm is a payer in 2004, to represent investors' cash payout expectations. The coefficient of *DIV_DUM* is 0.6 per cent, which indicates that the average five-day CARs for payers in 2004 is significantly higher than that for non-payers in 2004. In addition, Column (1) reports similar regression results without any control variables. The results shown in Table 6 support Hypothesis 1.

Table 7 reports the regression results on the relationship between five-day CARs and investors' cash payout expectations.[8] For firms that do not have a cash payout record during the three years before the 2008 Decision announcement, *DIV_DUM1* represent those that did not pay cash dividends in 2009, while *DIV_DUM2* represent those that did in 2009. Without a cash payout record, it is difficult for investors to form expectations for their future payout. As a result, the cash payout in 2009 will be the "first" payout after the 2008 Decision. Table 7 shows short-window market reactions of investors to the "first" cash dividend payers. The "first" cash payout herein is interpreted in a relative sense, as compared with no cash payout record for a long period of time in the past.

We control for both *DIV_DUM1* and *DIV_DUM2* in a regression model at the same time. The findings indicate that investors react significantly and negatively to the "first-time" payers in 2009, which can pass statistical significance at the 5 per cent level. While in great contrast, investors do not react significantly for non-payers in 2009 that do not have a cash payout record. For robustness, we adjust the research window to (-2, +2) and (0, 4). The findings do not change materially with changes in the event window.

Moreover, we try to study the difference in short-window investors' reactions to cash dividend initialisation before and after the decision announcement date. Specifically, using 9 October 2008, the Decision announcement date, as the watershed, we study seven-day CARs before and after the ex-dividend day for firms with dividend initialisation in order to examine the influence of the 2008 Decision on cash payout behaviour. There are a total of 1627 dividend initialisations before and 264 after the 2008 Decision announcement. In contrast to Table 7, the dividend "initialisation" herein refers to first-time cash payouts since the firms are listed.

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[8] The definitions of control variables *SIZE*, *DIF*, *MAMT*, and *MRET* in Table 7 are as follows: Natural logarithm of market value of liquid shares on the day before the event date; changes in dividends (actual dividend payout in 2009 minus average dividend payout for the three years from 2006 to 2008); average trading volume for 50 trading days before 24 September 2009 (to control for the influence of stamp duty; the larger the trading volume, the higher the stamp duty); average daily return for 50 trading days before 24 September 2009.

Table 6 Notice Announcement, Investors' Cash Payout Expectations, and CAR

Variable	Sign expected	Column (1)	Column (2)
			DIV_DUM **= dummy variable indicating whether a firm paid cash dividends in 2004 = investors' payout expectations**
		Dependent variable = *CAR* (-1, +3)	**Dependent variable = *CAR* (-1, +3)**
DIV_DUM	+	0.005**	0.006**
		(2.31)	(2.14)
SIZE	–		0.000
			(0.13)
ROA	+		-0.020
			(-1.45)
BETA	–		0.007
			(1.32)
BTM	–		0.001
			(0.13)
INSTITUTION	+		-0.012
			(-1.15)
FCF	–		0.001
			(0.71)
SALEGROWTH	+		0.001
			(0.67)
FIRST	?		0.028***
			(3.89)
OWNER	?		0.003
			(1.05)
Industry effects		Controlled	Controlled
Constant	?	-0.008***	-0.002
		(-4.20)	(-0.38)
F value		5.34	2.37
Prob>F		<0.011	<0.000
VIF		1.00	4.85
Adj. R^2		0.004	0.029
N		992	992

Note: T values in parentheses. *, **, and *** denote significance levels of $p < 10\%$, $p < 5\%$, and $p < 1\%$, respectively.

Table 7 Decision Announcement, Investors' Cash Payout Expectations, and Short-Window CAR

Variable	Sign expected	Column (1) DIV_DUM_1 (for non-payers in the last three years and those who continue to be non-payers, 0 for others) = investors' payout expectation Dependent variable = CAR (-1, +3)	Column (2) DIV_DUM_2 (for non-payers in the last three years and those who become payers in 2009, 0 for others) = investors' payout expectation Dependent variable = CAR (-1, +3)
DIV_DUM1	–	0.001	-0.003
		(0.08)	(-0.39)
DIV_DUM2	–	-0.037**	-0.041**
		(-2.33)	(-2.44)
SIZE	–		0.007*
			(1.62)
DIF	+		0.044
			(1.57)
MRET	+		-0.396
			(-0.52)
MAMT	–		-0.013***
			(-3.18)
FIRST	?		0.014
			(1.18)
OWNER	?		0.000
			(0.08)
Industry effect		Controlled	Controlled
constant	?	-0.025***	0.017
		(-8.12)	(0.52)
F value		2.76	4.90
Prob>F		<0.064	<0.000
VIF		1.01	5.44
Adj. R^2		0.004	0.076
N		907	907

Note: T values in parentheses. *, **, and *** denote significance levels of $p < 10\%$, $p < 5\%$, and $p < 1\%$, respectively.

Table 8 Market Reactions to First Cash Payout Implementations Before and After the 2008 Decision

CAR (-3, +3)	Obs.	Mean	Std	Min	Max
Before	1627	0.047	0.089	-0.423	0.231
After	264	-0.007	0.086	-0.423	0.231

T test (CAR around the cash payout implementation date before the 2008 Decision is equal to that after the 2008 Decision): t = -1.96

Table 9 Notice Announcement, Investors' Cash Payout Expectations, and Jensen-Alpha

Variable	Sign expected	Column (1)	Column (2)
		***DIV_DUM*$_{2004}$ = dummy variable indicating whether a firm is a payer in 2004 = investors' payout expectation**	
		Dependent variable = *JENSEN-ALPHA*	**Dependent variable = *JENSEN-ALPHA***
DIV_DUM$_{2004}$	+	0.0002**	0.0003**
		(2.11)	(2.07)
LEV	+	0.0002	0.0002
		(0.63)	(0.61)
ROA	+	0.0062***	0.0060**
		(2.83)	(2.70)
INSTITUTION	+	0.0007	0.0007
		(1.51)	(1.46)
FCF	–		0.0002
			(0.39)
SALEGROWTH	+		-0.0000
			(-0.20)
FIRST	?	0.0000	0.0000
		(0.10)	(0.09)
OWNER	?	-0.0002*	-0.0002*
		(-1.66)	(-1.66)
Industry effect		Controlled	Controlled
Constant	?	0.0013*	0.0013*
		(1.76)	(1.75)
F value		4.05	3.65
Prob>F		<0.000	<0.000
VIF		7.16	6.58
Adj. R^2		0.053	0.051
N		991	991

Note: T values in parentheses. *, **, and *** denote significance levels of $p < 10\%$, $p < 5\%$, and $p < 1\%$, respectively.

Table 10 2008 Decision Announcement, Investors' Cash Payout Expectations, and Jensen-Alpha[9]

Variable	Sign expected	Column (1) DIV_{2009} = actual payout ratio in 2009 = investors' payout expectation Dependent variable = *JENSEN-ALPHA*	Column (2) DIV_{678} = average payout ratio in the last three years = investors' payout expectation Dependent variable = *JENSEN-ALPHA*
DIV_{2009}	–	-0.0005* (-1.80)	
DIV_{678}	–		-0.0008* (-1.71)
LEV	+	0.0001 (0.07)	0.0001 (0.13)
ROA	+	0.0014 (0.50)	0.0009 (0.29)
INSTITUTION	+	0.0010** (1.62)	0.0009 (1.56)
FIRST	?	0.0003 (0.55)	0.0004 (0.66)
OWNER	?	0.0002 (1.06)	0.0002 (0.92)
Industry effect		Controlled	Controlled
constant	?	-0.001 (-0.71)	-0.001 (-0.83)
F value		5.18	4.66
Prob>F		<0.000	<0.000
VIF		4.34	4.47
Adj. R^2		0.071	0.065
N		783	783

Note: T values in parentheses. *, **, and *** denote significance levels of $p < 10\%$, $p < 5\%$, and $p < 1\%$, respectively.

[9] In Table 10, we control for *FCF* and *SALEGROWTH* variables. Unfortunately, DIV_{200} and DIV_{678} remain negative but insignificant. *FCF* and *SALEGROWTH* do not achieve statistical significance, so we do not report the results of controlling for these two variables. We believe that it does not affect the conclusions even if we control for *FCF* and *SALEGROWTH*.

We choose the three-day CARs before and after the ex-dividend day; therefore, short-run market reactions are not affected by investors' cash payout expectations, because all firms pay cash dividends for the first time. If cash dividend taxation is one of the important factors determining market reactions to ex-dividend behaviour, there should be a systematic difference in CARs before and after the 2008 Decision announcement. If the cash dividend taxation hypothesis is supported, we can expect that the average difference between CARs after the 2008 Decision would be more negative.

Table 8 provides the relevant results. The three-day CARs for the ex-dividend day before and after the 2008 Decision are 4.7 per cent and -0.7 per cent, respectively, with T testing at -1.96. The findings suggest that investors do not agree with the implication of the 2008 Decision, and give a more negative reaction to the regulation; we believe that the cash payout taxation costs are an influential contributor to this result.

4.5 Some Robustness Checks

To check the robustness of our results, we perform the following sensitivity tests: (1) use the risk-adjusted Jensen-Alpha approach to measure abnormal returns for investors (Tables 9 and 10);[10] (2) change CARs by using short windows of different lengths. The above sensitivity tests do not materially affect our conclusions, and we can conclude that our research is robust.

V. Conclusions and Policy Implications

This paper provides, for the first time, direct and indirect evidence for the value relevance of taxation costs to cash dividend regulation by examining market reactions to two important policies. On 13 June 2005, the Ministry of Finance and the National Taxation Bureau jointly stipulated the Notice, which cuts down the individual income tax rate for cash dividends. The exogenous policies provide us with a superb opportunity for directly testing the effect of taxation costs on stock pricing. Our findings indicate that, in the long run, investors can realise higher BHAR for firms that are expected to pay dividends. It is evident that the effect of taxation costs on cash dividends is a vital pricing factor. On 9 October 2008, the CSRC promulgated the Decision with the aim of protecting minority shareholders. The 2008 Decision relates, for the first time, firms' financing decisions to their cash dividend records for the latest three years. This paper finds that investors can realise higher BHAR by holding shares of payers rather than those of non-payers. The findings indicate that investors have to bear taxation costs for cash dividends, and that the taxation costs would be larger than the potential agency costs of free cash flow retained in the firms.

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[10] Please refer to the following for the difference between Jensen-Alpha and BHAR: Kothari, S. P. and Warner, J. B. (2006), "Econometrics of Event Studies", in *Handbook of Corporate Finance* Volume 1, Chapter 1, pp. 30-60. Our research is based on the Fama-French three factors, and we calculate $JENSEN\text{-}ALPHA_{2005}$ after the Notice announcement date using daily stock returns from 14 June to 31 August 2005, and $JENSEN\text{-}ALPHA_{2008}$ after the 2008 Decision using daily stock returns from 10 October to 31 December 2008.

The theoretical implications of the paper are as follows. The cash dividend regulation policy does not, in a real sense, play a positive role in protecting the interests of minority shareholders, because the higher taxation costs of cash dividends reduce the BHAR realised by holding shares of expected payers after the 2008 Decision is announced. Consequently, only by taking into account all kinds of external restrictive conditions comprehensively will the effectiveness of securities regulatory policies be guaranteed. From the perspective of cash dividends, in the words of Fuchun Fan, Vice President of the CSRC, "the status quo of China's taxation policies not matching the development of capital market is the main reason that investors are not inclined to do long term investment".[11] Finally, with the optimisation of corporate governance of listed firms, constructing a healthy and incentive-compatible securities taxation system is a pivotal channel through which to promote capital market development.

References

Please refer to pp. 79-80.

[11] Source: *The Securities Herald*, 20 March 2008.