

盈余管理动机、监管环境与会计操纵

—来自长期资产减值的经验证据¹

李享 王烨 陈丽花²

摘要

中国2006年新会计准则中禁止了长期资产减值准备以公允价值回升的名义转回。本文研究发现：第一，被限制的四项长期资产减值在2003年至2005年间的确被用于多种目的的损益操纵，新准则的这一规定是有事实基础的；第二，除了减值的公允价值回升转回被用于损益操纵以外，名义上基于资产出售等交易事实的减值转出很可能也是操纵性减值转回的隐蔽通道；第三，2006年会计监管环境的强化起到了遏制减值突击转回的作用，甚至使部分多转操纵动机相比往年减弱，说明强化监管环境对遏制会计操纵具有积极意义；第四，2006年部分多减操纵动机较往年有所减弱，说明禁止转回规定已显现出遏制减值操纵的效果。

关键词：盈余管理动机、监管环境、会计操纵、长期资产减值

一、引言

中国2006年2月颁布、自2007年起在上市公司范围内执行的新企业会计准则中，资产减值政策方面包含着一项重大变化，即禁止长期资产减值准备再以公允价值回升的名义进行转回。针对这一政策变化可能诱发的准则过渡期内上市公司突击转回减值的行为，国家相关部门的会计监管行动在2006年也显著加强。这两方面的政策变动为我们研究相关的理论与政策问题提供了机会。

¹ 特别感谢本刊编辑陈世敏教授、吴东辉博士、两位匿名审稿人和南京大学杨雄胜教授对本文的宝贵修改意见，但一切可能的疏漏与错误由作者负责。

² 李享，博士生，南京大学会计学系，Email:lixiang7982@163.com。王烨，博士生，南京大学会计学系。陈丽花，副教授，南京大学会计学系。南京市汉口路22号（210093）。

首先，现有的盈余管理（或会计操纵）方面的实证研究基本上遵循着一个惯用的逻辑—盈余管理动机诱发会计操纵，这是一种动机决定行为的思维范式，突出了盈余管理诱发因素的作用，然而却忽视了制约因素—监管环境的作用。严厉的会计监管环境势必对企业的会计操纵行为产生威慑和遏制作用，因此监管因素应当纳入研究界的考虑范畴。监管环境的内容本身是宽泛的，并且在不同的国家表现形式也有差异。在中国，会计监管的内容主要是证监会和财政部主导的行政监管，二者经常针对市场上出现的会计操纵或舞弊行为，应急性地出台一些禁止性规定。³迅速灵活自然是这种监管方式的优点，但是违规的惩戒措施往往不明确，执行力度令人捉摸不定。因此这种监管方式的效果如何，也需要经验证据来回答。2006年上市公司的资产减值行为给研究这一问题提供了一个具体视角，因为根据新会计准则的规定，自2007年起上市公司不得再以公允价值回升的名义对长期资产减值进行转回，2006年作为新会计准则实施前的过渡年，上市公司有对长期资产减值进行突击转回的动机（罗平华，2006；于李胜，2007），而相关部门对这一问题的会计监管也显著加强。本文实证检验发现，2006年突击转回行为并不明显，部分多转⁴操纵动机甚至较往年减弱，说明会计监管的强化确实具有一定程度的遏制会计操纵的作用，而且中国的这种应急性行政监管方式是有一定效果的。

其次，新准则限制了长期资产减值以公允价值回升的名义转回，理由是资产减值允许转回成了企业操纵损益的工具（财政部，2005a）。然而这一判断的文献基础尚不充分，因为现有的针对中国的资产减值研究基本上是将2001年前的四项减值或2001年至2006年间的八项减值作为总体来考察的，⁵由于长、短期资产减值的使用特点不同，这些研究的结论不能完全适用于长期资产减值。因而禁止转回的合理性究竟如何，还需要直接来自原来可以转回、新准则中禁止

³ 例如，就资产减值计提，证监会在2004年和2006年发出过两次监管通知，参见证监会字[2004]1号《关于进一步提高上市公司财务信息披露质量的通知》和证监发[2006]136号《关于做好与新会计准则相关财务会计信息披露工作的通知》。

⁴ 本文中各种简略说法的含义分别是：多转是指本期多转回减值，多减是指本期多计提减值；转回是指以公允价值回升的名义进行的减值转回，对应于资产减值明细表中的“公允价值回升转回数”；转出是指因资产出售、非货币性交易或债务重组而进行的减值转出，对应于资产减值明细表中的“其他原因转出数”；总转回是指转回与转出的合计，对应于资产减值明细表中的“本期合计减少数”；突击转回是指人们预期的，由于2007年起不能进行减值转回，上市公司在2006年大规模地集中转回四项减值的可能性；“多减再多转”是指前期多计提减值，后期多转回减值。

⁵ 虽然王跃堂等（2005）、王建新（2007）、于李胜（2007）以长期资产减值为对象进行过研究，但王跃堂等（2005）以长期资产减值政策实施当年（2001年）为研究时点，并且结论是减值真实反映了资产未能收益能力的下降，王建新（2007）、于李胜（2007）以总转回（转回+转出）而非公允价值回升转回为研究对象。

转回的四项长期资产减值的证据。这四项长期资产减值是长期股权投资、固定资产、无形资产和在建工程的减值准备。⁶ 本文即以这四项减值为研究对象⁷实证检验发现，在2003年至2005年间的确有多种盈余管理动机影响着四项减值的计提与转回；盈余管理动机甚至超过经济因素，成为左右长期资产减值行为的主导因素。这一结果说明，新准则中禁止长期资产减值转回的规定是有事实基础的。

第三，按照中国资产减值明细表的披露要求，每个减值项目的转回（本文称为总转回）分为“公允价值回升转回数”（本文简称转回）和“其他原因转出数”（本文简称转出）两部分，只有前者是新准则所限制的，后者因为是基于资产出售、非货币性交易、债务重组等交易事实而转出，并未限制，也不能限制。现有的研究（如赵春光，2006；薛爽等，2006；王建新，2007；于李胜，2007）往往笼统地谈减值转回，实际检验的是转回与转出二者的合计，⁸人们却将结论和批评集中公允价值回升转回上，导致对减值转出操纵的忽视。⁹ 本文首先从会计原理上分析减值转出也有用于盈余操纵的可能，即：前期多减后期转出也能起到调节盈余的作用（参见提出假说二时的分析），上市公司也可能故意将操纵性转回的数额放在“其他原因转出数”中披露，隐蔽地实现转回。之后，本文实证检验发现，以资产处置为名的减值转出无论在运用的公司比例还是程度上，都显著高于减值转回，“其他原因转出数”也为实现盈余管理目标提供了利润转回的途径，甚至是比减值转回更主要的途径。这一结果说明，仅仅限制公允价值回升转回还不足以完全阻止减值操纵，今后必须加强注册会计师对减值转出项目（“其他原因转出数”）真实性的审计。

最后，本文还检验发现，2006年部分多减动机公司的计提率（和净计提率）较往年有明显下降，由于后期多转依赖于前期多减，这种变化说明禁止转回规定已经产生了遏制减值操纵的效果。

本文其他部分安排如下：第二部分结合制度背景进行理论分析并提出研究

⁶ 还有一些新增的减值项目被禁止转回，如商誉、以成本计量的投资性房地产、生产性生物资产的减值（张旺军，2006），但这些减值项目在2007年以前并未计提，故无从考察。

⁷ 本文所称的长期资产减值与王跃堂等（2005）、王建新（2007）、于李胜（2007）有所不同，他们的长期资产减值包括了长期债权投资减值。

⁸ 这里有一个客观原因，CSMAR、Wind、CCER数据库中都没有提供“公允价值回升转回数”和“其他原因转出数”，只有各减值项目的年末余额。

⁹ Chen *et al.*（2007）分别以总转回和公允价值回升转回（该文中称为unrealized reversal）作为关注侧面，发现经济因素和报告动机都影响减值转回，但报告动机是主导因素。该文与本文的区别有两点：一，该文以2003年至2005年间全部八项资产减值而非长期资产减值作为研究对象；二，该文仅考察单向的转回，而没考察计提或者净计提。

假说；第三部分是具体的研究设计和样本选择过程；第四部分是实证研究结果及其分析；第五部分是稳健性测试；第六部分是研究结论与启示。

二、理论分析与研究假说

中国2006年新会计准则中对长期资产减值公允价值回升转回做法的禁止，意味着原来可行的“前期多减后期多转”（简称“多减再多转”）的盈余操纵通道将受到堵塞。财政部对此项规定给出的解释是，原来减值转回成了企业损益操纵的工具（财政部，2005a）。财政部的理由估计是基于已有的实证研究结论和推理。¹⁰然而，已有的实证研究基本上是针对2001年前的四项准备和2001年至2005年的八项准备的综合结果，内含了短期资产减值和长期资产减值，¹¹而二者的使用特点是不一样的。另外，已有的研究（如李增泉，2001；赵春光，2006；薛爽等，2006；王建新，2007；于李胜，2007）基本上是将“公允价值回升转回数”和“其他原因转出数”合在一起算作减值转回的，而减值转出无论在使用的公司比例还是程度上都显著高于减值转回（参见表4的Panel A），将总转回的结论用于公允价值回升转回上，并不准确。¹²这两点问题说明，专门针对新准则禁止转回的四项长期资产减值，并且区分转回和转出进行研究具有重要意义。

长期资产减值相比于短期资产减值，既有共性又有特殊性。共性在于，在原准则下，企业（或经理人）对二者均具有双向裁量权，既可计提，也可以公允价值回升的名义转回，这为企业通过前期多减后期多转操纵损益提供了方便。而特殊性在于，长期资产减值在企业中采用的频率（指计提或转回减值的经常性）不及短期资产（参见表4的Panel A），另外，由于市价信息难以寻觅，长期资产减值计提正确与否难以验证（王跃堂等，2005；Chen *et al.*, 2007）。这里共性表明长期减值也有被用于盈余管理的可能，特殊性体现了单独检验四项减值的必要。

按照已有文献（如Strong *et al.*, 1987; Elliot *et al.*, 1988; Francis *et al.*, 1996; Riedl, 2004；戴德明等，2005）的结论，影响减值计提的因素既有盈余管理动机也有资产价值变动的真实原因。本文预期四项减值的计提与转回受到盈余管理动机的左右，于是提出假说一：

H1：长期资产减值的计提与转回受盈余管理动机的影响。

¹⁰ 例如，在2005年之前，相继有李增泉（2001）、蔡祥、张海燕（2004）、沈振宇等（2004）、Chen *et al.*（2004）研究得出了资产减值被用于盈余管理的结论。

¹¹ 参见脚注5。

¹² 参见脚注9。

虽然“其他原因转出数”用于记录资产出售、非货币性交易、债务重组等实际交易导致的减值转出，但是前期减值计提与后期的资产处置交易相配合，仍然可以起到操纵盈余的作用。其原理是：前期减值计提越多，资产的账面价值就越低，后期如果出售资产，处置收益就越多（或处置损失越少）；如果以资产抵偿债务，债务重组收益就越多（计入资本公积），或债务重组损失越少（计入当期损益）；如果进行非货币性交易（相当于资产置换），则换入资产的入账价值就越低，以后需要计提的折旧或摊销的成本就越少；另外，如果企业在非货币性交易中收到补价，能够确认的补价收益也越多。¹³

另外，实践中可能有不少上市公司故意将应当在“公允价值回升转回数”中反映的数额放在“其他原因转出数”中列示，隐蔽地进行转回。由于审计方面重视项目余额而非明细，故这种违规列示也有生存空间。¹⁴许多以总转回为对象的研究所发现的减值转回操纵，其中很可能有以资产处置为名的减值转出的影响，而非单单由公允价值回升转回所致。因此这里提出假说二。

H2：长期资产减值的“其他原因转出数”也被用于实现盈余管理目标。

2006年，基于对市场上可能出现的突击性转回减值行为（罗平华，2006；于李胜，2007）的预期，证监会和财政部加强了过渡年的会计监管。表现在，证监会在2006年11月27日发出《关于做好与新会计准则相关财务会计信息披露工作的通知》，其中强调：上市公司2006年要充分计提减值；对于大额资产减值转回，公司管理层既要提供合理性证据，也要经董事会审议；公司不得在2006年底突击转回长期资产减值；对减值转回理由不充分或未合理计提减值的，注册会计师要提请公司调整或考虑对审计意见的影响。财政部在2006年12月31日发出《关于贯彻实施企业会计准则和审计准则体系有关问题的通知》，要求有关部门加大对公司信息披露质量及会计师事务所执业质量的检查力度，重点检查新旧准则转换之际的不规范行为及新准则执行情况（笔者注：减值转回理应属于重点检查的范围）。中国注册会计师协会也做出了反应，在2007年2月6日发出的《关于做好上市公司2006年度会计报表审计工作的通知》中，强调注册会计师要警惕利用准则转轨之机操纵损益的行为，要对包括大额资产减值的计提和转回在内的高风险领域保持职业谨慎。另外，早在监管部门行动之前，媒体已经发表了舆论，表示对2006年减值突击转回可能性的关切。例如，上海证券报2006年11月13日刊登的《注册会计师十大注意事项》一文中，列出了2006年注册会计师的十大注意事项，其中就包括重大资产减值准备的转回。上述过程参见图1。对于资产减值行为的类似关注在2005年或以往并未

¹³ 这里假定交易的定价基于资产的真实价值，不受减值计提的影响。

¹⁴ 对于资产减值而言，转回与转出的分类不影响各减值项目的年末余额，也不影响对应资产的年末净额。

图1 准则过渡期的监管环境



出现，因此我们可以归结出一点：2006年针对资产减值的会计监管较往年有显著加强。

那么，会计监管环境的这种强化对企业的会计操纵行为有什么影响呢？首先就是威慑作用。上述监管通知明显地体现了监管部门对2006年减值突击转回可能性的关切，¹⁵ 企业如果行为“出格”太多，将面临监管处罚的威胁。其次是注册会计师审计把关很可能随之变严。中注协的通知体现出行业协会对此已高度关注，而行业协会对事务所的执业质量有监督检查权，对不合格的执业行为有处罚权，这势必影响到注册会计师审计把关的尺度。这两点分析表明，监管环境的加强将对2006年的突击转回动机产生遏制作用，¹⁶ 因此提出假说三。

H3：2006年不会出现长期资产减值突击转回的现象。

上述分析建立在中国这种应急性行政监管有效的假定上，当然也存在另一种可能性，即这种监管无效。如果这样，2006年就会出现突击转回现象，至少是在那些前期进行过多减操纵的本期多转动机公司中，会出现这种现象。

新准则禁止转回规定意味着2007年起长期资产减值将不能再以公允价值回升的名义转回，这样，多减动机公司在2006年理性的选择是（相比往年）减少净计提的程度。由于这类公司每年都是在净计提（参见表5和图2-3、图3-3），并且2007年以后仍然能够借资产处置进行减值转出，我们不宜推断它们2006年会完全终止多减行为。这样，本文提出假说四。

H4：2006年多减动机公司的净计提程度会较往年降低。

¹⁵ 按照一般性的预期，突击转回所指的转回主要指可能成为操纵工具的公允价值回升转回，不含减值转出。突击转回是2006年业界非常关注的一个问题，参见罗平华2006年8月8日发表于《证券时报》的文章《减值准备转回高峰暂未出现》及于李胜（2007）一文。

¹⁶ 于李胜（2007）虽然得出了类似的结论，但他是以总转回为研究对象，并且其回归结果似乎不能很好地说明他的结论。不能说明的原因是他所用的盈余管理动机变量只有BATH和SMOOTH，并且二者的回归符号与通常的预期恰恰相反，另外，他对单侧受限的因变量（转回率、计提率）没有采用Tobit回归而采用OLS回归。

三、研究设计与样本选择

1、盈余管理动机的选择

根据已有的研究减值操纵的文献，国外常见的盈余管理（减值操纵）动机有经理人变更、利润平滑和大清洗等（Strong *et al.*, 1987; Elliot *et al.*, 1988; McNichols *et al.*, 1988; Zucca *et al.*, 1992; Francis *et al.*, 1996; Riedl, 2004）。至于中国背景下的减值操纵动机，李增泉（2001）以1998年至1999年间的样本研究发现，当被强制要求执行资产减值政策时，具有扭亏动机、配股动机和临界动机的上市公司一般会选择增加（或不减少）当期收益的资产减值政策，而具有亏损动机、高管变更动机和利润平滑动机的上市公司一般会选择增加（或不减少）未来期间收益的资产减值政策。沈振宇等（2004）发现在1998年原则导向的减值政策下，配股动机、亏损动机显著影响四项减值计提。蔡祥、张海燕（2004）发现，规避或迎合政府管制政策（指*ST、ST政策）是1999年减值计提行为的主要解释因素。Chen *et al.*（2004）发现在1998年自愿计提条件下，亏损动机和高管变更动机显著影响四项减值的计提，但并不存在利润平滑现象。戴德明等（2005）以2001年至2003年间的亏损上市公司为样本，发现亏损公司有利用八项计提进行大清洗的现象。赵春光（2006）以2002年至2004年的样本为对象，发现影响八项计提的动机有避免亏损、亏损公司大清洗、利润平滑和避免盈余下降。Chen *et al.*（2007）以2003年至2005年间的八项减值为研究对象，以单向的总转回和非变现转回（指“公允价值回升转回数”）为考察侧面，发现影响减值转回的因素既有经济因素，也有报告动机（指盈余管理动机），但报告动机处于主导地位；该文中，对减值转回产生显著影响的操纵动机有“摘帽”、“躲帽”、“多减再多转”等。¹⁷

除上述直接针对减值准备的研究以外，陈小悦等（2000）研究发现，由于中国配股权稀缺且配股资格以权益回报率（ROE）为主要考核指标，上市公司为了配股资格而进行盈余管理。王跃堂（1999）则发现，当“配股生命线”（ROE临界值）在1999年从10%下调到了6%以后，ROE频率分布的集中区域也从原来的10%向6%附近转移。干胜道等（2006）研究发现，微利公司有避免亏损的动机（与临界动机同义）。

根据上述文献，本文将盈余管理动机归纳为六种：扭亏、保持微利（或称避免亏损）、获得配股资格、无法避免亏损时进行大清洗、高管变更时进行大

¹⁷ 本段部分概念的含义是：临界动机是指试图避免亏损，从而处于微利状态；亏损动机是指在无法避免亏损时索性进行大清洗（take a big bath）以便未来扭亏；“帽”是指因净资产为负而被在股票简称前冠以ST的“帽子”，或者因连续亏损而在股票简称前被冠以*ST“帽子”，“摘帽”是指通过扭亏而去掉这些符号；“躲帽”是指避免报告亏损以免被戴上这些“帽子”；“多减再多转”在Chen *et al.*（2007）一文是指由于前期进行了大洗澡，而在本期有转回减值的动机。

清洗、利润增长过高时平滑利润。其中，前三种为多转动机，后三种为多减动机。减值的多转与多减是对立统一的两个方面，前期多减是为了后期多转，即“多减再多转”。另外，对公司利润产生的净影响是计提与转回及转出的净额，单独的计提或转回、转出只是影响的一个侧面，因此，多转回在效果上等同于少计提，多计提在效果上等同于少转回。

2、变量计量与模型设置

在本文的主体检验中，用四项减值的净计提率作为被解释变量进行OLS回归。不用单向的转回率或转出率，是因为单独的转回或转出都不能体现减值行为对利润的净额影响。在稳健性测试部分，则改用单向的转回率、转出率和总转回率做被解释变量进行Tobit回归，以进一步分析单向行为的特点。对于净计提率，采用三种计量口径得到三个变量：*NET_REV*、*NET_OFF*和*NET_R_O*。为恰当地消除规模的影响，三种净计提率在计算时都除以四项资产合计的年初净额，具体定义参见表1。*NET_REV*作为被解释变量时，模型考察盈余管理动机对减值计提和转回的影响，以*NET_OFF*作为被解释变量考察盈余管理动机对减值计提和转出的影响，以*NET_R_O*为被解释变量的模型则考察盈余管理动机对减值计提和总转回的影响。

针对上文选定的盈余管理动机，设置*TP*、*SP*、*ISSUE*、*ILOSS*、*2LOSS*、*3LOSS*、*TURNOVER*、*SMOOTH*八个变量加以计量，具体定义参见表1。¹⁸其中，将亏损公司分为*ILOSS*、*2LOSS*、*3LOSS*三种主要是考虑到不同亏损类型的公司需要多减的程度不同，而各年的亏损公司中三种类型的相对比例又不同，若不区分亏损年数可能形成“噪音”。由于中国上市公司中高管变更频繁，为将无关的高管变更剔除在外，在确认*TURNOVER*时只限于辞职、解聘和涉案三种原因引起的董事长或总经理变更，并且继任者来自外部。在计量上，假如一个公司-年观察值符合八种动机中两种以上，则只算预期操纵动机最强的一种以避免重复使用。例如，如果某个公司-年观察值既是扭亏公司也是微利公司，则只算做扭亏公司，具体规则参见表1的计量办法说明。根据各种盈余管理动机的操纵特点，预期*TP*、*SP*、*ISSUE*与三种口径的减值净计提率均负相关，*ILOSS*、*2LOSS*、*3LOSS*、*TURNOVER*、*SMOOTH*则与之正相关。

本文的研究变量还包括有*YR06*，它虽然体现为年度变量，但代表的含义是会计监管环境加强。在模型中*YR06*反映2006年无操纵动机的公司是否进行了突击转回，与盈余管理动机变量的交叉项检验2006年这些公司操纵行为（或动机）较往年是加剧、不变还是减弱。根据假说三，预期*YR06*与多转动机变量的交互项为正或不显著，为正代表多转操纵减弱，不显著代表操纵程度未变，为负则代表多转动机公司有突击转回。根据假说四，预期*YR06*与多减动机变量的交互项为负，为负代表多减操纵减弱，即禁止转回规定产生了作用。

¹⁸ *TP*、*SP*的含义分别是Turning a Profit、Small Profit。

表1 变量定义

名称	含义	计量办法
<i>NET_REV</i>	净计提率（计提-转回）	四项准备年度计提额与公允价值回升转回额之差合计/四项资产年初净额合计
<i>NET_OFF</i>	净计提率（计提-转出）	四项准备年度计提额与其他原因转出额之差合计/四项资产年初净额合计
<i>NET_R_O</i>	净计提率（计提-转回-转出）	四项准备年度计提额与合计减少额（转回额+转出额）之差合计/四项资产年初净额合计
<i>TP</i>	旨在实现扭亏的多转动机	样本上年亏损（净利润<0）而本年盈利时取1，否则取0。
<i>SP</i>	旨在避免亏损（或保持微利）的多转动机	ROE落在区间[0, 0.015)内且非扭亏时取1，否则取0（净资产为负值时将样本剔除）。
<i>ISSUE</i>	旨在满足再融资的ROE要求的多转动机	ROE落在[0.055, 0.075)内且非扭亏时取1，否则取0（净资产为负值时将样本剔除）。
<i>1LOSS</i>	无法避免亏损时进行大清洗以便下年扭亏的动机（首次亏损）	本年发生首次亏损（净利润<0）时取1，否则取0。
<i>2LOSS</i>	无法避免亏损时进行大清洗以便下年扭亏的动机（连续二年亏损）	本年连续第二年发生亏损时取1，否则取0。
<i>3LOSS</i>	无法避免亏损时进行大清洗以便下年扭亏的动机（连续三年亏损）	本年连续第三年发生亏损时取1，否则取0。
<i>TURNOVER</i>	因本年发生高管变更而进行大清洗的动机	样本本年发生董事长或总经理变更 ¹⁹ ，且非扭亏、非微利、非配股、非亏损时取1，否则取0。
<i>SMOOTH</i>	利润增长过快时将利润平滑到下期的动机	营业利润增长超过所有发生增长的样本的75%分位值，且非扭亏、非微利、非配股、非亏损、非高管变更时取1，否则取0。
<i>YR06</i>	2006年年度哑变量	是2006年样本时取1，否则取0。

¹⁹ 确认*TURNOVER*时只限于CSMAR中提供的辞职、解聘和涉案三种原因导致的董事长或总经理变更，并且继任者来自外部。

表1 续

名称	含义	计量办法
<i>IND_ΔROA</i>	行业总资产收益率变化	总资产收益率变化额的行业中位值。
<i>IND_ΔMTB</i>	行业市净率变化	市净率变化额的行业中位值（净资产为负值的样本认定为研究变量缺失，予以剔除）。
<i>IND_G_REV</i>	行业营业收入增长率	主营业务收入增长率的行业中位值。
<i>ΔMTB</i>	市净率变化额	本年末市净率 - 上年末市净率（净资产为负值的样本认定为研究变量缺失，予以剔除）。
<i>ΔOCF</i>	经营现金净流量变化	（本年经营现金净流量 - 上年经营现金净流量）/年初总资产。
<i>G_REV</i>	营业收入增长率	本年主营业务收入/上年主营业务收入 - 1。
<i>OROA</i>	总资产营业利润率	营业利润/平均总资产。
<i>IVARS</i>	行业变量	按GICS行业分类分为10类，设置9个哑变量。
<i>YR04</i> 、 <i>YR05</i>	2004和2005年年度哑变量	是2004（2005）年样本时取1，否则取0。

另外，参照已有的文献（Francis *et al.*, 1996; Riedl, 2004; Chen *et al.*, 2004; Chen *et al.*, 2007），对影响减值计提的经济因素予以控制，变量是*IND_ΔROA*、*IND_ΔMTB*、*IND_G_REV*、*ΔMTB*、*ΔOCF*、*G_REV*、*OROA*。*IND_ΔROA*、*IND_ΔMTB*、*IND_G_REV*控制行业经济状况，*ΔMTB*、*ΔOCF*、*G_REV*、*OROA*控制公司自身的经济状况。前六个变量刻画了经济变化趋势，*OROA*则刻画本期经常性业务的盈利能力。由于按照准则四项减值的计提分别计入了投资收益和营业外支出中，七个变量都与减值计提不存在机械性关系。预期这七个变量均与净计提率负相关。

参照Francis *et al.*（1996）、Riedl（2004）、Chen *et al.*（2004）、Chen *et al.*（2007）的文章，本文构建以下四个OLS回归模型。第一个模型用于检验假说一，第二和第三个模型用于检验假说二，第四个模型用于检验假说三和假说四。因为涉及减值转出的净计提率有两种—*NET_OFF*和*NET_R_O*，所以设计了两个模型检验假说二。*NET_OFF*的模型中不加经济因素控制变量，原因是减值转出理论上讲应当依赖于真实的资产处置交易而非经济状况。²⁰运行第四个模型

²⁰ 考虑到减值计提可能受到经济状况的影响，我们也运行过控制经济因素的*NET_OFF*模型，但结果本质上并无改变。

时，2006年的对照年份分别选用2003、2004、2005三个单年，而不用三年合计，以保证单年对单年的匹配性。²¹

各模型在运用时，将对行业因素予以控制。对于运用跨年度公司-年观察值的回归，还将控制年度因素。为了降低变量间共线性水平，本文在计算 $IND_ΔROA$ 、 $IND_ΔMTB$ 、 IND_G_REV 时按照证监会的行业分类划分为21类（制造业划分至次类），控制行业因素时则按照全球行业分类标准（GICS）划分为10类。

$$NET_REV = \lambda_0 + \lambda_1 TP + \lambda_2 SP + \lambda_3 ISSUE + \lambda_4 ILOSS + \lambda_5 2LOSS + \lambda_6 3LOSS + \lambda_7 TURNOVER + \lambda_8 SMOOTH + \lambda_9 IND_ΔROA + \lambda_{10} IND_ΔMTB + \lambda_{11} IND_G_REV + \lambda_{12} ΔMTB + \lambda_{13} ΔOCF + \lambda_{14} G_REV + \lambda_{15} OROA + \varepsilon \quad (1)$$

$$NET_OFF = \lambda_0 + \lambda_1 TP + \lambda_2 SP + \lambda_3 ISSUE + \lambda_4 ILOSS + \lambda_5 2LOSS + \lambda_6 3LOSS + \lambda_7 TURNOVER + \lambda_8 SMOOTH + \varepsilon \quad (2)$$

$$NET_R_O = \lambda_0 + \lambda_1 TP + \lambda_2 SP + \lambda_3 ISSUE + \lambda_4 ILOSS + \lambda_5 2LOSS + \lambda_6 3LOSS + \lambda_7 TURNOVER + \lambda_8 SMOOTH + \lambda_9 IND_ΔROA + \lambda_{10} IND_ΔMTB + \lambda_{11} IND_G_REV + \lambda_{12} ΔMTB + \lambda_{13} ΔOCF + \lambda_{14} G_REV + \lambda_{15} OROA + \varepsilon \quad (3)$$

$$NET_REV = \lambda_0 + \beta_1 YR06 * TP + \beta_2 YR06 * SP + \beta_3 YR06 * ISSUE + \beta_4 YR06 * ILOSS + \beta_5 YR06 * 2LOSS + \beta_6 YR06 * 3LOSS + \beta_7 YR06 * TURNOVER + \beta_8 YR06 * SMOOTH + \lambda_1 YR06 + \lambda_2 TP + \lambda_3 SP + \lambda_4 ISSUE + \lambda_5 ILOSS + \lambda_6 2LOSS + \lambda_7 3LOSS + \lambda_8 TURNOVER + \lambda_9 SMOOTH + \lambda_{10} IND_ΔROA + \lambda_{11} IND_ΔMTB + \lambda_{12} IND_G_REV + \lambda_{13} ΔMTB + \lambda_{14} ΔOCF + \lambda_{15} G_REV + \lambda_{16} OROA + \varepsilon \quad (4)$$

3、样本选择与数据来源

由于上市公司中资产减值明细表的普遍披露始于2003年，²²故本文选取2003年至2006年沪深两市A股上市公司作为样本。样本中剔除金融保险行业，因为它们的减值项目与其他行业有重大差异。样本筛选过程如表2所示。

²¹ 这里对照年份的选择之所以选择了三个单年，是因为只选任何一年说服力都有些缺憾。原因是：2005年年报期间（2006年2月15日）新准则实施日期已经公布，公司可以做出一些反应，导致2005年不能完全等同于一般年份；2003年报之初（2004年1月6日）证监会发出《关于进一步提高上市公司财务信息披露质量的通知》（证监会会计[2004]1号），强调上市公司要健全有关资产减值准备计提的内部控制制度，并强调注册会计师要对减值准备计提给予足够的关注，必要时修改审计意见，这可能使得2003年、2004年的减值操纵有所收敛，但这两年离2006年较远，其他干扰因素较多。

²² 源于财政部2003年3月17日发布的《关于执行〈企业会计制度〉和相关会计准则有关问题解答（二）》（财会[2003]10号）中的规定，在此之前只有部分上市公司披露。

表2 样本选择

选择过程	2003年	2004年	2005年	2006年	合计
CCER一般上市公司财务数据库中收录的 非金融保险类A股上市公司数	1252	1341	1342	1422	5357
—没有减值准备明细表数据的公司数	76	53	29	44	202
—因所用变量数据缺失而删除的公司数	80	127	75	146	428
初步研究样本数	1096	1161	1238	1232	4727
—减值明细表未区分转回、转出的公司数	330	275	177	51	833
本文使用的研究样本数	766	886	1061	1181	3894

由表2可知，初步研究样本中总共有833个公司-年观察值的资产减值明细表未区分“公允价值回升转回数”和“其他原因转出数”，仅披露了“合计减少数”（即总转回数）。为保证减值转回、转出数据的客观性，将这些观察值予以剔除，剩下3894个公司-年观察值是本文所用的研究样本。

本文所用的财务数据均来自于色诺芬（CCER）数据库，资产减值明细表的数据来自于锐思（RESSET）数据库，董事长及总经理变更数据来自于国泰安（CSMAR）数据库。锐思数据库中的减值准备数据包括了各减值准备项目的年初数、本年计提数、公允价值回升转回数、其他原因转出数、本年合计减少数、年末数六项完整信息。笔者对来自该库的减值数据进行了多项校验，最终采用的数据是可靠的。²³数据处理采用Stata 8.0软件。

四、实证检验结果

1、变量的描述性统计

表3列示的是所用变量的描述性统计，其中连续型变量在上下1%分位上做过缩尾处理（Winsorize）。根据该表中 NET_REV 、 NET_OFF 、 NET_R_O 各自的均值可知，三种口径的净计提额分别占四项资产年初净额的0.50%、0.22%和0.13%，这么小的量值说明各模型回归系数的数值很小不足为怪。各种减值操纵动机中，（可能）有配股动机的观察值（ $ISSUE = 1$ ）数量最多，为总观察值数（3894）的13.15%；²⁴连续三年亏损的观察值（ $3LOSS = 1$ ）数量最少，为总观察

²³ 校验措施包括：将各减值项目的年初、年末数与从CSMAR“资产减值准备表文件”中导出的年初、年末数进行比对，运用“本年合计减少数 = 公允价值回升转回数 + 其他原因转出数”及“年初数 + 本年计提数 - 本年合计减少数 = 年末数”两个恒等关系进行校验。

²⁴ $ISSUE$ 的计量方法决定了这里的说法含有噪音，即有些公司ROE落在界定区域内却不一定有配股动机。

表3 变量的描述性统计

变量	均值	标准差	中位数	最小值	最大值
<i>NET_REV</i>	0.0050	0.0200	0.0000	-0.0598	0.2258
<i>NET_OFF</i>	0.0022	0.0232	0.0000	-0.1180	0.2176
<i>NET_R_O</i>	0.0013	0.0248	0.0000	-0.1570	0.2105
<i>TP</i>	0.0755	0.2642	0.0000	0.0000	1.0000
<i>SP</i>	0.0924	0.2897	0.0000	0.0000	1.0000
<i>ISSUE</i>	0.1315	0.3380	0.0000	0.0000	1.0000
<i>1LOSS</i>	0.0878	0.2831	0.0000	0.0000	1.0000
<i>2LOSS</i>	0.0321	0.1763	0.0000	0.0000	1.0000
<i>3LOSS</i>	0.0039	0.0620	0.0000	0.0000	1.0000
<i>TURNOVER</i>	0.0668	0.2497	0.0000	0.0000	1.0000
<i>SMOOTH</i>	0.0670	0.2501	0.0000	0.0000	1.0000
<i>IND_ΔROA</i>	-0.0013	0.0057	-0.0007	-0.1114	0.0351
<i>IND_ΔMTB</i>	-0.1554	0.5330	-0.3486	-0.9723	1.2061
<i>IND_G_REV</i>	0.1565	0.0814	0.1429	-0.0373	0.4991
<i>ΔMTB</i>	0.0048	2.7083	-0.2214	-21.7572	31.1463
<i>ΔOCF</i>	0.0079	0.1037	0.0076	-0.3882	0.4482
<i>G_REV</i>	0.2314	0.5532	0.1593	-0.8775	6.3733
<i>OROA</i>	0.0303	0.0673	0.0283	-0.3688	0.2593

值数（3894）的0.39%。从变量数值的分布可以看出，经过缩尾处理后各变量不存在奇异值（Officers）。

2、减值行为的发生频率与程度

表4中统计的是减值行为的发生频率与程度。发生频率是指发生计提（或转回、转出、净计提）的观察值数占所有有效观察值数（3894）的比例。Panel A中的发生程度是指减值发生额与四项资产年初净额之比率的均值，Panel B中的发生程度是指两种口径的净计提额与当年营业利润（相当于减值前利润）之比率的均值。两个Panel中均值的计算都以发生计提（或转回、转出、净计提）的观察值为范围，不包括相应减值行为是0的观察值。Panel A中，减值计提和减值转出的发生频率均为减值转回的大约4倍，二者的发生程度均达到了减值转回的大约2倍，说明计提和转出行为对利润的影响大大超过了减值转回，考察减值操纵不能撇开计提和转出单独看转回。Panel B表明，四项减值净计提发生频率较高的是固定资产和长期股权投资的减值，这符合企业的一般情况。

表4 减值操作的发生频率与程度

年度		2003			2004			2005			2006			合计		
		公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度
计提数≠0		345	45.0%	0.0107	372	42.0%	0.0174	421	39.7%	0.0188	431	36.5%	0.0147	1569	40.3%	0.0156
公允价值回升转回≠0		64	8.4%	0.0038	64	7.2%	0.0055	94	8.9%	0.0074	165	14.0%	0.0105	387	9.9%	0.0078
其他原因转出数≠0		247	32.2%	0.0107	316	35.7%	0.0114	415	39.1%	0.0152	532	45.0%	0.0128	1510	38.8%	0.0128
NET_REV≠0		370	48.3%	0.0093	399	45.0%	0.0154	456	43.0%	0.0158	502	42.5%	0.0092	1727	44.4%	0.0124
NET_OFF≠0		440	57.4%	0.0024	506	57.1%	0.0057	598	56.4%	0.0026	695	58.8%	-0.0007	2239	57.5%	0.0022
NET_R_O≠0		447	58.4%	0.0018	515	58.1%	0.0049	617	58.2%	0.0014	731	61.9%	-0.0030	2310	59.3%	0.0009

Panel B：分减值项目情况

减值项目	长期股权投资			固定资产			无形资产			在建工程			四项合计		
	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度	公司 家数	发生 比例	发生 程度
NET_REV≠0	908	23.3%	0.2450	1081	27.8%	0.0665	131	3.4%	0.0898	236	6.1%	0.0841	1727	44.4%	0.1888
NET_R_O≠0	1089	28.0%	0.0504	1804	46.3%	-0.2904	203	5.2%	-0.3529	347	8.9%	-0.0320	2310	59.3%	-0.2389

注：发生频率是指发生计提（或转回、转出、净计提）的观察值数占所有有效观察值数的比例，Panel A中的发生程度是指减值发生额与四项资产年初净额之比率的均值，Panel B中的发生程度是指净计提额与当年营业利润（相当于减值前利润）之比率的均值，两个Panel中发生程度的计算都以发生计提（或转回、转出、净计提）的观察值为范围，不包括相应的减值操作余额是0的观察值。

3、净计提率的单变量检验

根据可能具有的减值操纵动机，本文将有效观察值分为了三类：多转动机样本，多减动机样本和控制样本，定义分别是： $TP=1$ 或 $SP=1$ 或 $ISSUE=1$ 的观察值， $ILOSS=1$ 或 $2LOSS=1$ 或 $3LOSS=1$ 或 $TURNOVER=1$ 或 $SMOOTH=1$ 的观察值，两类样本之外的、假定其没有减值操纵动机的观察值。三类样本的净计提率是否具有预期的操纵特征？本文首先进行了单变量的t检验。

表5 Panel A中的单个样本类型的检验结果是，考虑减值转出以后，多转动机样本在净转回（ NET_R_O 小于0），控制样本没有明显偏向，多减动机样本是在净计提（ NET_R_O 大于0）；样本类型间的比较则显示，多转动机样本的 NET_R_O 则显著低于控制样本，控制样本的 NET_R_O 又显著低于多减动机样本。这说明考虑减值转出时，三类样本的净计提率符合预期的操纵特征。

但Panel A也显示出了值得注意的一点，即如果不考虑减值转出，多转动机样本合计来看是在净计提（ NET_REV 大于0），这不太符合人们对这类公司通过减值转回操纵损益的预期。这里的原因到底是由于某种多动机的计量产生的“噪音”，还是因为减值转出的确很重要？对此我们分多动机进行了Panel B所示的检验。检验结果是：三种多动机样本的 NET_REV 均值都大于0， NET_R_O 均值都小于0，说明三种多动机样本均要依赖于减值转出来实现利润的净转回。由此可见，“其他原因转出数”对于这类公司能否通过减值实现利润的净转回影响重大。

表5 Panel C中的结果显示，若不考虑减值转出，五种多减动机样本都是在净计提（ NET_REV 都显著为正），这符合预期；考虑减值转出以后，只有首次亏损（ $ILOSS=1$ ）和连续两年亏损（ $2LOSS=1$ ）的样本在净计提（ NET_R_O 为正）， $3LOSS=1$ 、 $TURNOVER=1$ 、 $SMOOTH=1$ 的样本减值行为无明显偏向（ NET_R_O 不显著），这也显示出减值转出的重要影响。再结合各种多减动机净计提率的均值和t值的大小来判断，可知多减动机最强的公司是首次亏损公司和连续两年亏损公司。

由于2007年起长期资产减值不得再以公允价值回升的名义转回，为了考察多减动机公司对此规定的反应，专门针对2006年的多减动机样本进行了表5 Panel D所示的t检验。结果是：除 $SMOOTH=1$ 之外，各种多减动机样本2006年并未停止净计提。这是为什么呢？笔者认为，很可能是因为这类公司事前已经预期到以后年度允许的以资产处置为名的减值转出可以充当操纵性减值转回的隐蔽通道。

4、减值比率的变化趋势

为了考察减值行为在年度间的变化，本文提供了反映减值比率变化趋势的示意图。图2-1和图2-2表明，若不考虑减值转出，多动机样本及控制样本每年

表5 净计提率的单变量检验

Panel A 三类样本的t检验及样本类型间的比较 (2003-2006年样本)

检验变量	单个样本类型的检验			样本类型间的比较											
	多转动机样本			控制样本			多转动机样本			多转样本VS.控制样本			控制样本VS.多转样本		
	均值	t值	中位数	均值	t值	中位数	均值	t值	中位数	t值	z值	t值	z值	t值	z值
NET_REV	0.0021	6.75***	0.00	0.0020	9.17***	0.00	0.0145	12.52***	0.00	0.23	0.72	-10.61***	-9.60***		
NET_R_O	-0.0029	-4.68***	0.00	-0.0001	-0.31	0.00	0.0087	6.60***	0.00	-4.01***	-3.54***	-6.48***	-6.46***		

注：多转动机样本是TP=1或SP=1或ISSUE=1的样本，多转动机样本是ILOSS=1或2LOSS=1或3LOSS=1或TURNOVER=1或SMOOTH=1的样本，控制样本是二者之外的样本；t值来自t检验，z值来自秩和检验 (Wilcoxon rank-sum test)。

Panel B 各种多转动机的t检验 (2003-2006年样本)

检验变量	TP=1			SP=1			ISSUE=1		
	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值
NET_REV	294	0.0032	3.92***	360	0.0017	4.24***	512	0.0019	4.37***
NET_R_O	294	-0.0106	-5.13***	360	-0.0016	-2.15**	512	-0.0010	-1.58*

Panel C 各种多减动机的t检验 (2003-2006年样本)

动机种类	1LOSS=1			2LOSS=1			3LOSS=1			TURNOVER=1			SMOOTH=1		
	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值
NET_REV	342	0.0190	9.29***	125	0.0377	7.47***	15	0.0210	3.04***	260	0.0088	4.97***	261	0.0052	4.22***
NET_R_O	342	0.0152	7.04***	125	0.0330	6.39***	15	0.0087	0.96	260	0.0011	0.47	261	-0.0013	-0.70

Panel D 各种多减动机的t检验 (2006年样本)

动机种类	1LOSS=1			2LOSS=1			3LOSS=1			TURNOVER=1			SMOOTH=1		
	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值	样本数	均值	t值
NET_REV	72	0.0189	4.51***	48	0.0288	4.14***	4	0.0096	1.71*	79	0.0074	2.42***	70	0.0014	1.24
NET_R_O	72	0.0118	2.35***	48	0.0236	3.22***	4	0.0093	1.61*	79	0.0003	0.07	70	-0.0096	-2.44***

注：***、**、*分别代表单尾检验下1%、5%和10%的显著性水平。

图2 三类样本净计提率的变化趋势²⁵

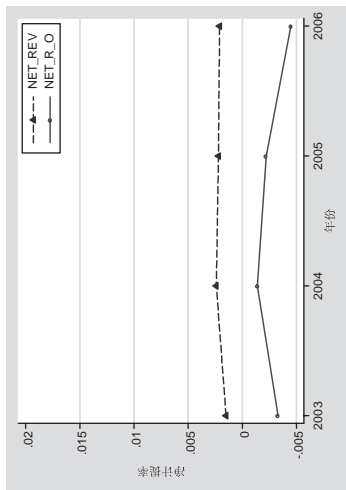


图 2-1 多转动机样本

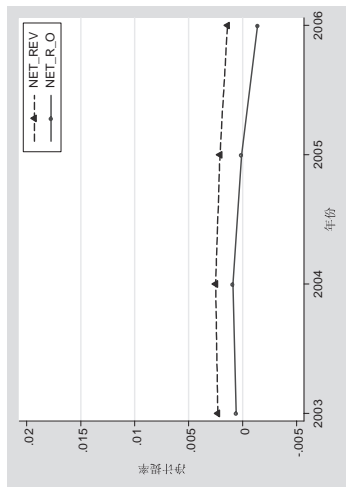


图 2-2 控制样本

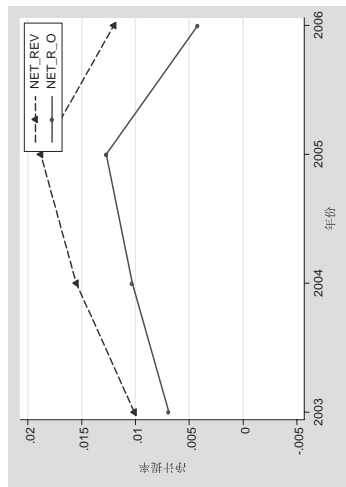


图 2-3 多减动机样本

25 图中连线所用的值是各样本各年NET_REV和NET_R_O的均值。

表6 首次亏损和连续两年亏损样本的年度分布（单位：个）

亏损类型	2003年	2004年	2005年	2006年
1LOSS=1	54	95	121	72
2LOSS=1	19	21	37	48

都是净计提（ NET_REV 为正），且年度间变化不大。考虑减值转出以后，多转动机样本在每年都是净转回（ NET_R_O 为负），且2006年样本的净转回程度高出前面三年；2006年控制样本的 NET_R_O 由往年的略显为正变为略显为负，但变动幅度很小。2006年多转动机样本的 NET_R_O 相比往年明显下偏，但 NET_REV 的变动却不明显，说明2006年多转动机公司有利用“其他原因转出数”隐蔽地进行减值转回的可能。²⁶

图2-3则表明，多减动机样本每年都是在净计提（ NET_REV 、 NET_R_O 均为正），这符合预期。但是两种净计提率在前面三年一直上升，原因是什么呢？通过分析，我们认为原因主要是多减动机最强的首次亏损公司和连续二年亏损公司（参见上文的判断）的个数在前面三年一直上升。而两种净计提率在2006年均明显下降，则与这一年首次亏损公司和亏损公司总数较往年大幅减少有关，同时也有另一方面的原因，即多减动机公司对禁止转回规定作出了反应（H4）。后者的判断依据是：2006年首次亏损和连续两年亏损的公司数之和超过了2004年，但这一年的两种净计提率都低于2004年（参见图2-3）。关于各年首次亏损和连续两年亏损的公司家数，参见表6的统计。

对图2中所用的净计提率进一步拆分，得到由计提率、转回率、转出率和总转回率的连线构成的图3。四个比率分别是四项准备年度计提额、转回额、转出额、总转回额（转回额与转出额之和）与四项资产年初净额合计数的比值。由三张子图可知，各类样本公司2006年的减值转回率和转出率均有微小幅度的上升，减值转出率的上升幅度略大，再次说明“其他原因转回数”在2006年有可能充当了减值转回的隐蔽通道。多减动机公司的计提率前面三年一直上升，2006年却大幅下降（参见图3-3），计提率大幅下降和转回率及转出率上升，导致多减动机公司这一年的净计提率（ NET_R_O ）最小（参见图2-3），说明对于多减动机而言，新准则禁止转回规定已经显示出一定的效果（参见上段对图2-3的分析，H4）。

²⁶ 在2006年转回动机强烈，而监管环境也随之强化的情况下，多转动机公司进行隐蔽转回以逃避外界关注是完全有可能的。

图3 三类样本四种减值比率的变化趋势²⁷

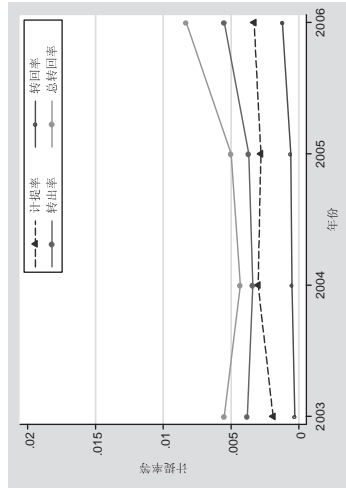


图 3-1 多转动机样本

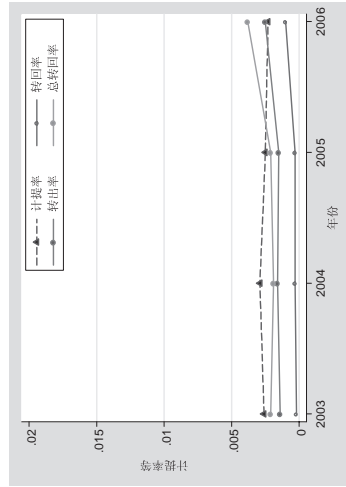


图 3-2 控制样本

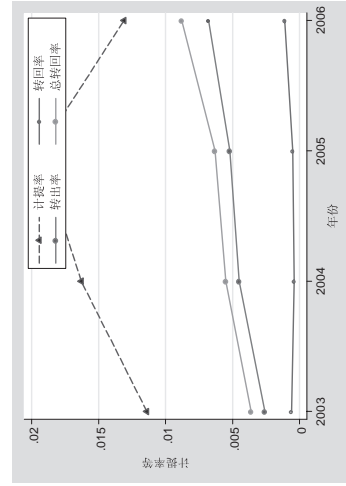


图 3-3 多减动机样本

27 图中连线所用的值是各类样本各年计提率、转回率、转出率和总转回率的均值。

5、多元回归结果²⁸

表7中2003年至2005年数据的回归表明，*SP*、*ISSUE*、*ILOSS2*、*2LOSS*、*3LOSS*、*TURNOVER*、*SMOOTH*都影响到四项减值的计提与转回（H1）。其中，影响最显著（*t*值绝对值最大）、最稳定（在各年均显著）的动机是*ILOSS2*、*2LOSS*，下文以*NET_R_O*为因变量的回归结果也是如此（参见表9），说明上市公司最强烈的减值操纵动机是无法避免亏损时进行大清洗，以便以后顺利实现扭亏，这与上市公司规避*ST、ST和退市处罚的重大必要性有关。以2006年数据的回归表明，这一年的多转操纵均不显著（H3）。多减动机方面，只有首次亏损（*ILOSS*）和连续二年亏损（*2LOSS*）的公司在继续多提，这与这两种公司多减（或以后扭亏）的动机非常强烈有关，同时也说明这类公司已经预期到2007年后可以通过减值转出来转回利润（H2）。本表各回归中*TP*均不显著，其原因需要结合下文中*NET_OFF*和*NET_R_O*的回归结果进行分析。

继表7的回归之后，参照Chen *et al.*（2007）的做法，先后专门以盈余管理动机变量、经济因素变量为解释变量做*NET_REV*的回归，以考察哪类因素是影响减值计提与转回的主导因素。结果发现前一回归的Adj-R²值是0.1687，后一回归的Adj-R²值是0.0856（篇幅所限，回归结果未作列示），前者解释力明显大于后者，说明是盈余管理动机而非真实的经济状况主导着四项减值的计提与转回。²⁹

表8列示了*NET_OFF*的回归结果。由该表可知，*NET_OFF*每年都受到盈余管理动机的显著影响，而且与*TURNOVER*以外的七种盈余管理动机都有较显著的相关性。这一结果说明，表面上基于真实资产交易的减值转出，很可能与前期的多减操纵相配合，形成了“前期多减后期转出”这一较为隐蔽的操纵模式（H2）。根据推测，我们所见到的减值转出数据，一部分可能是基于真实发生的资产交易，另一部分很可能是对操纵性减值转回的隐蔽列示。但即便是基于真实的资产交易，预计后期将发生资产交易时前期故意多提减值也是一种可调节盈余的会计操纵行为。

以*NET_R_O*为被解释变量相比*NET_OFF*而言，内含了减值转回的影响。表9中的结果进一步说明，*NET_R_O*也受到多种盈余管理动机的影响（H2）。值得注意的是，*TP*在以*NET_REV*为因变量时均不显著而在以*NET_OFF*和*NET_R_O*为因变量时各年均显著，意味着这种公司主要依赖于减值转出来实现扭亏，这与亏损公司经常通过资产重组扭亏脱困的事实是一致的（资产重组就会伴随着减值转出）。另外也暗藏着一种可能，即由于扭亏事项比较惹人注意，这类公司更可能故意将操纵性减值转回放在“其他原因转出数”中隐蔽反映。

²⁸ 所有OLS回归中各变量的VIF值均未超过10（详见各表的注释），故可认为不存在多重共线性问题。

²⁹ 这一发现与Chen *et al.*（2007）关于八项减值的总转回和公允价值回升转回受报告动机而非经济因素主导的结论类似。

表7 NET_REV的影响因素

因变量	NET_REV				NET_REV				
	预期符号	2003年	2004年	2005年	2003-2005年	2006年	预期符号	系数	t值
TP	-	0.0000	0.0008	0.0030	0.0014	0.43	不显著	-0.0001	-0.09
SP	-	-0.0025	-0.0033	0.0008	-0.0017	-2.19***	不显著	0.0005	0.31
ISSUE	-	-0.0011	-0.0030	0.0013	-0.0009	-1.96***	不显著	0.0019	1.31
ILOSS	+	0.0082	0.0102	0.0204	0.0145	4.93***	+	0.0186	4.04***
2LOSS	+	0.0261	0.0276	0.0445	0.0371	5.31***	+	0.0279	4.01***
3LOSS	+	0.0213	0.0147	0.0228	0.0192	2.07**	?	0.0065	0.88
TURNOVER	+	-0.0006	0.0056	0.0012	0.0022	1.11	?	0.0021	0.76
SMOOTH	+	0.0040	0.0074	0.0015	0.0047	2.40***	?	-0.0021	-1.06
IND_AROA	-	0.0318	0.0811	0.1640	0.1236	1.73*	-	0.0926	0.66
IND_AMTB	-	-0.0032	-0.0049	-0.0069	-0.0012	-0.71	-	0.0004	0.16
IND_G_REV	-	-0.0055	-0.0005	0.0011	0.0059	-0.96	-	-0.0081	-0.71
ΔMTB	-	-0.0002	0.0003	0.0036	0.0007	1.39	-	0.0000	0.10
ΔOCF	-	-0.0068	0.0029	0.0003	0.0006	0.14	-	0.0034	0.64
G_REV	-	-0.0004	-0.0001	0.0008	0.0000	0.00	-	0.0011	0.76
OROA	-	-0.0073	-0.0613	0.0347	-0.0112	-0.87	-	0.0085	0.75
Cons.	?	0.0025	0.0026	-0.0022	0.0020	1.15	?	0.0022	0.81
Obs.		766	886	1061	2713			1181	
Prob>F		0.0001	0.0000	0.0000	0.0000			0.0056	
Adj-R ²		0.1516	0.2375	0.2023	0.1735			0.1571	

注：行业和年度控制变量未作列示；有明确符号预期的变量，回归结果若与预期相符，星号按单尾p值标示，否则按双尾p值标示；***、**、*分别代表1%、5%和10%的显著性水平；2006年多转动机的符号预期根据假说三形成，多减动机的符号预期根据2007年起减值不得转回的规定及各种公司多提减值的必要性确定；本表列示的所有回归中各变量的VIF值均小于3。

表8 NET_OFF的影响因素

因变量	NET_OFF				NET_OFF				
	预期符号	2003年	2004年	2005年	2003-2005年	2006年	预期符号	系数	t值
TP	-	-0.0098	-0.0045	-0.0144	-2.73***	-0.0094	-	-0.0052	-2.10**
SP	-	-0.0033	-0.0006	-0.0022	-1.90**	-0.0020	-	-0.0009	-0.52
ISSUE	-	-0.0012	-0.0036	0.0000	-2.74***	-0.0015	-	0.0011	0.68
ILOSS	+	0.0086	0.0181	0.0172	4.83***	0.0157	+	0.0138	2.91***
ZLOSS	+	0.0279	0.0376	0.0451	2.89***	0.0388	+	0.0243	3.41***
LOSS	+	0.0014	0.0338	0.0060	11.70***	0.0092	?	0.0073	1.70*
TURNOVER	+	0.0016	0.0037	-0.0057	0.87	-0.0003	?	-0.0009	-0.26
SMOOTH	+	0.0025	-0.0005	0.0027	-0.20	0.0013	?	-0.0054	-1.79*
Cons.	?	0.0007	-0.0002	0.0013	0.56	0.0001	?	0.0032	1.33
Obs.		766	886	1061	2713				1181
Prob>F		0.0000	0.0000	0.0000	0.0000	0.0000		0.0002	
Adj-R ²		0.1278	0.1614	0.1457	0.1347	0.1347		0.0901	

注：行业和年度控制变量未作列示；有明确符号预期的变量，回归结果若与预期相符，星号按单尾p值标示，否则按双尾p值标示；***、**、*分别代表1%、5%和10%的显著性水平；由于减值转出行为不大受关注，故2006年多转动机的符号预期为负；多减动机的符号预期根据2007年起减值不得转回的规定及各种公司多提减值的必要性确定；本表列示的所有回归中各变量的VIF值均小于2.5。

表9 NET_R_O的影响因素

因变量	NET_R_O											
	预期符号	2003年	2004年	2005年	2003-2005年	2006年						
自变量	预期符号	系数	t值	系数	t值	系数	t值	预期符号	系数	t值		
TP	-	-0.0124	-3.80***	-0.0099	-2.70***	-0.0084	-1.56*	-0.0105	-4.52***	-	-0.0062	-1.86**
SP	-	-0.0012	-0.70	-0.0035	-2.17**	0.0010	0.57	-0.0014	-1.41*	-	0.0004	0.17
ISSUE	-	0.0003	0.22	-0.0037	-2.92***	0.0010	0.75	-0.0007	-0.95	-	-0.0004	-0.17
ILOSS	+	0.0104	2.57***	0.0115	2.94***	0.0219	4.32***	0.0157	5.90***	+	0.0184	3.28***
2LOSS	+	0.0289	4.08***	0.0259	2.19**	0.0463	4.41***	0.0370	5.72***	+	0.0314	4.09***
3LOSS	+	0.0192	1.08	0.0136	1.59*	0.0132	1.62**	0.0167	1.53*	?	0.0233	2.25***
TURNOVER	+	0.0006	0.19	0.0022	0.55	-0.0037	-0.69	-0.0003	-0.12	?	0.0012	0.32
SMOOTH	+	-0.0005	-0.22	-0.0007	-0.21	-0.0011	-0.24	-0.0008	-0.38	?	-0.0083	-1.83*
IND_AROA	-	0.1544	0.54	0.0645	0.64	-0.1580	-1.00	-0.0601	-0.54	-	0.0951	0.41
IND_AMTB	-	-0.0015	-0.49	-0.0022	-0.46	0.0055	0.52	0.0024	1.16	-	-0.0016	-0.42
IND_G_REV	-	0.0056	0.43	0.0077	0.91	0.0057	0.26	0.0068	0.84	-	0.0264	1.18
ΔMTB	-	0.0000	0.02	0.0006	0.78	0.0023	1.64*	0.0007	1.32	-	-0.0004	-0.77
ΔOCF	-	-0.0107	-1.66**	0.0045	0.63	-0.0001	-0.01	-0.0018	-0.41	-	0.0088	0.79
G_REV	-	-0.0023	-1.30*	-0.0005	-0.43	-0.0005	-0.11	-0.0009	-0.83	-	-0.0057	-1.50*
OROA	-	0.0295	1.44	-0.0295	-1.56*	0.0441	1.89*	0.0130	1.05	-	0.0526	2.55***
Cons.		-0.0029	-1.05	-0.0012	-0.33	0.0002	0.03	-0.0013	-0.66	?	-0.0016	-0.40
Obs.		1096	1161	1238	3495	1232						
Prob > F		0.0000	0.0000	0.0000	0.0000	0.0000						
Adj-R ²		0.1152	0.1206	0.1562	0.1219	0.1028						

注：行业和年度控制变量未作列示；有明确符号预期的变量，回归结果若与预期相符，星号按单尾p值标示，否则按双尾p值标示；***、**、*分别代表1%、5%和10%的显著性水平；由于NET_R_O中包含了减值转出，而减值转出不大受关注，故NET_R_O的2006年回归中多转动机的符号预期为负；2006年多转动机的符号预期则根据2007年起减值不得转回的规定及各种公司多减的必要性的确定；本表列示的所有回归中各变量的VIF值均小于3。

表10中, 2006年减值情况与2003、2004、2005各年的比较结果是, 在盈余管理动机变量显著者符号都与预期一致的基础上, $YR06$ 自身不显著, 说明控制样本所代表的没有减值操纵动机的公司在2006年未突击转回。 $YR06$ 与多转动机变量的交互项要么不显著, 要么显著且与代表操纵减弱的预期符号一致(参见 $YR06*ISSUE$ 、 $YR06*SP$), 说明尽管不得转回规定使得2006年有突击转回的可能, 但监管环境的加强使得多转操纵不但未加剧, 反而出现了一定程度的减弱(H3)。³⁰另外, $YR06$ 与 $2LOSS$ 、 $3LOSS$ 、 $SMOOTH$ 的交互项为负, 且每一组中都有显著的交互项, 说明2006年多减动机公司的净计提程度较往年有所下降(H4), 由于后期多转依赖于前期多减, 这一变化说明禁止转回规定已经对“多减再多转”操纵产生了遏制作用。

五、稳健性测试

上文用净计提率作为被解释变量, 反映的是减值计提与转回、转出的净额结果。为考察单向的转回、转出及总转回的使用情况, 笔者将被解释变量 NET_REV 、 NET_OFF 、 NET_R_O 分别换成减值转回率(REV)、减值转出率(OFF)及总转回率(REV_OFF)³¹进行考察, 结果摘录如表11、表12所示。由于转回、转出及总转回与多转动机相关, 参照Chen *et al.* (2007)模型的设法, 这里列示的模型中没有放入 $1LOSS$ 等多减动机变量。由于 REV 、 OFF 、 REV_OFF 都是小于0一侧的观测受限的变量, 故对它们采用Tobit回归而非OLS回归(Maddala, 1991; Francis *et al.*, 1996; Chen *et al.*, 2007)。为节省篇幅, 对2003年至2005年样本不再列示分年度结果, 只列示了三年合计样本的结果。表11中 REV 、 OFF 、 REV_OFF 的Tobit回归分别对应着表7、表8和表9中的OLS回归, 表12则对应着表10。

表11、表12中的回归结果与主体测试中的结果并无冲突, 只是某些变量的显著性变弱了, 这说明主体测试的结果是稳健的。用Tobit回归时部分盈余管理动机变量显著性减弱, 很可能是由于仅考察单向的转回或转出时忽略了减值计提的运用, 使结果具有“噪音”。Tobit回归下显著的多转动机是 TP , 与以 NET_OFF 、 NET_R_O 为被解释变量作OLS回归时的结果具有一致性。

³⁰ 2006年多转操纵没有恶化, 甚至某些多转动机有所减弱, 就说明强化监管环境起到了作用, 不能指望通过加强监管完全消除会计操纵。

³¹ 三个变量的定义分别是: $REV = \text{四项准备年度公允价值回升转回数合计} / \text{四项资产年初净额合计}$, $OFF = \text{四项准备年度其他原因转出数合计} / \text{四项资产年初净额合计}$, $REV_OFF = \text{四项准备年度总转回数合计} / \text{四项资产年初净额合计}$, 总转回数 = 公允价值回升转回数 + 其他原因转出数。

表10 2006年NET_REV与其他年份的比较

因变量		NET_REV					
样本年度		2003+2006年		2004+2006年		2005+2006年	
自变量	预期符号	系数	t值	系数	t值	系数	t值
YR06*TP	+	0.0000	0.01	-0.0035	-1.16	-0.0016	-0.71
YR06*SP	+	0.0022	1.45*	0.0002	0.15	0.0009	0.58
YR06*ISSUE	+	0.0044	2.09**	0.0054	2.58***	0.0034	1.62**
YR06*1LOSS	-	0.0082	1.41	-0.0008	-0.15	-0.0007	-0.13
YR06*2LOSS	-	0.0003	0.03	-0.0119	-0.95	-0.0223	-1.60**
YR06*3LOSS	-	-0.0173	-1.04	-0.0244	-3.39***	-0.0199	-1.48*
YR06*TURNOVER	-	0.0022	0.55	-0.0033	-0.80	0.0010	0.22
YR06*SMOOTH	-	-0.0030	-1.37*	-0.0031	-1.28	-0.0070	-1.60**
YR06	不显著	-0.0001	-0.09	0.0002	0.11	-0.0013	-0.56
TP	-	0.0003	0.20	0.0023	0.82	0.0019	0.91
SP	-	-0.0018	-2.03**	-0.0012	-1.01	0.0001	0.08
ISSUE	-	-0.0011	-1.94**	-0.0024	-3.57***	0.0002	0.24
1LOSS	+	0.0098	2.34***	0.0163	4.60***	0.0198	4.19***
2LOSS	+	0.0273	3.53***	0.0358	3.29***	0.0500	4.19***
3LOSS	+	0.0236	1.55*	0.0267	5.43***	0.0224	2.13**
TURNOVER	+	-0.0002	-0.05	0.0055	1.74**	0.0006	0.17
SMOOTH	+	0.0022	1.12	0.0042	2.19***	0.0038	0.89
IND_ΔROA	-	0.1332	1.13	0.0379	0.39	0.1810	2.00**
Ind_ΔMTB	-	-0.0015	-1.09	-0.0019	-0.88	-0.0012	-0.48
Ind_G_Rev	-	-0.0099	-1.47*	-0.0072	-1.14	-0.0105	-1.08
ΔMTB	-	0.0000	-0.02	0.0001	0.25	0.0004	1.35
ΔOCF	-	-0.0012	-0.33	0.0034	0.82	0.0032	0.71
G_Rev	-	0.0007	0.63	0.0006	0.77	0.0005	0.39
OROA	-	0.0031	0.31	-0.0194	-1.81**	0.0181	1.47
Cons.	?	0.0030	1.80	0.0038	1.41	0.0030	1.00
Obs.		1947		2067		2242	
Prob>F		0.0000		0.0000		0.0000	
Adj-R ²		0.1503		0.1849		0.1680	

注：行业和年度控制变量未作列示；有明确符号预期的变量，回归结果若与预期相符，星号按单尾p值标示，否则按双尾p值标示；***、**、*分别代表1%、5%和10%的显著性水平；本表列示的所有回归中各变量的VIF值均小于10。

表11 Tobit回归：REV、OFF及REV_OFF的影响因素

因变量	REV				OFF				REV_OFF				
	预期符号	2003-2005	2006	2003-2005	2006	2003-2005	2006	2003-2005	2006	2003-2005	2006	2003-2005	2006
TP	+	0.0040	2.09**	-0.0021	-0.72	0.0170	10.21***	0.0107	4.11***	0.0228	10.02***	0.0092	2.77***
SP	+	-0.0001	-0.08	0.0008	0.27	-0.0004	-0.28	0.0002	0.06	-0.0018	-0.91	-0.0010	-0.25
ISSUE	+	0.0000	0.01	0.0002	0.08	0.0010	0.78	0.0002	0.05	0.0007	0.42	0.0000	-0.01
IND_ΔROA	+	-0.1262	-1.24	0.3535	0.88					0.0699	0.53	-0.0439	-0.10
IND_ΔMTB	+	0.0017	0.58	0.0050	1.02					-0.0016	-0.46	0.0067	1.09
IND_G_REV	+	0.0045	0.54	-0.0165	-0.70					0.0000	0.00	-0.0136	-0.48
ΔMTB	+	0.0000	-0.04	0.0000	0.08					-0.0007	-2.21**	0.0008	3.14***
ΔOCF	+	-0.0076	-1.64*	0.0024	0.27					0.0003	0.06	-0.0082	-0.72
G_REV	+	0.0011	1.35	0.0018	1.30					0.0010	0.90	0.0126	6.91***
ORA	+	-0.0095	-1.20	-0.0115	-0.81					-0.0396	-4.28***	-0.0646	-3.78***
Cons.	?	-0.0198	-6.08***	-0.0204	-3.94***	-0.0138	-6.49***	-0.0155	-3.93***	-0.0159	-4.26***	-0.0168	-2.69***
Obs.		2713	1181	1181	2713	2713	1181	1181	2713	2713	1181	1181	1181
Prob > chi2		0.1260	0.0492	0.0000	0.0000	0.0000	0.0023	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2		-0.0932	-0.1117	-0.0389	-0.0389	-0.0389	-0.0184	-0.0570	-0.0570	-0.0570	-0.0570	-0.0572	-0.0572
Log likeli.		167.35	150.32	1662.41	1662.41	1662.41	847.50636	1558.37	1558.37	1558.37	886.11	886.11	886.11

注：行业和年度控制变量未作列示；列示的预期符号不适用于2006年样本；***、**、*分别代表1%、5%和10%的显著性水平。

表12 Tobit回归：2006年与其他年份比较

因变量		<i>REV</i>		<i>REV</i>		<i>REV</i>	
样本年份		2003+2006		2004+2006		2005+2006	
自变量	预期符号	系数	t值	系数	t值	系数	t值
<i>YR06*TP</i>	-/不显著	-0.0114	-2.69***	0.0105	1.29	-0.0062	-1.37*
<i>YR06*SP</i>	-/不显著	0.0022	0.42	-0.0030	-0.65	0.0032	0.77
<i>YR06*ISSUE</i>	-/不显著	0.0001	0.02	-0.0036	-0.88	0.0015	0.40
<i>YR06</i>	不显著	0.0012	0.33	0.0020	0.43	-0.0003	-0.09
<i>TP</i>	+	0.0100	2.90***	-0.0125	-1.33	0.0046	1.22
<i>SP</i>	+	-0.0012	-0.27	0.0039	1.09	-0.0025	-0.79
<i>ISSUE</i>	+	-0.0004	-0.15	0.0034	1.27	-0.0018	-0.75
<i>IND_ΔROA</i>	+	0.0936	0.33	-0.4006	-1.70*	0.0370	0.24
<i>IND_ΔMTB</i>	+	0.0045	1.42	0.0086	2.11**	0.0050	1.41
<i>IND_G_REV</i>	+	0.0122	0.83	0.0099	0.65	-0.0050	-0.43
<i>ΔMTB</i>	+	0.0002	0.95	-0.0001	-0.26	0.0000	0.04
<i>ΔOCF</i>	+	-0.0046	-0.74	-0.0032	-0.46	-0.0010	-0.18
<i>G_REV</i>	+	0.0014	1.27	0.0022	2.15**	0.0019	1.76*
<i>OROA</i>	+	-0.0072	-0.69	-0.0174	-1.56	-0.0090	-0.94
Cons.	?	-0.0226	-5.49***	-0.0263	-4.55***	-0.0199	-4.83
Obs.		1947		2067		2242	
Prob > chi2		0.0000		0.0000		0.0001	
Pseudo R2		-0.1979		-0.2108		-0.1434	
Log likeli.		213.78		174.50		225.21	

注：行业和年度控制变量未作列示；有明确符号预期的变量，回归结果若与预期相符，星号按单尾p值标示，否则按双尾p值标示；***、**、*分别代表1%、5%和10%的显著性水平。

由于从逻辑的角度分析，具有多减动机的公司在多提减值的同时，也会减少转回或不作转回，故笔者预期多减动机变量与减值转回率（*REV*）、总转回率（*REV_OFF*）负相关。在另外的测试中，笔者将五个多减动机变量也放入二者的Tobit回归模型中，结果是这些变量要么为负，要么不显著，符合预期。篇幅所限，结果在此未作列示。

另外，将界定*SP*、*ISSUE*的ROE区间分别改为[0, 0.01)和[0.06, 0.075)，以及把计算净计提率的分子换成“年末资产净额+本年净计提额”，发现上述结论基本不受影响。篇幅所限，结果在此不作列示。

六、研究结论与启示

本文围绕中国2006年新会计准则中限制长期资产减值转回的这一规定，以及准则实施前的过渡期2006年防止减值准备突击转回的会计监管也显著加强的事实，以被限制的长期股权投资、固定资产、无形资产和在建工程四项减值准备在2003年至2006年间的运用情况为研究对象，通过理论分析与实证检验，得出了以下四点研究结论与启示。

首先，现有的盈余管理（或会计操纵）实证研究基本上局限于回答这样一个问题：即一些制度因素，尤其是与会计数字有关的契约条款，如何诱发管理层的盈余管理动机，进而产生会计操纵行为。这是一种动机决定行为的思维范式，忽视了会计监管等盈余管理制约因素的作用。本文利用2006年作为新准则实施之前的过渡年，上市公司有对长期资产减值进行突击转回的动机，而相关的会计监管在这一年也显著加强的事实，实证检验发现，2006年并未出现四项长期资产减值的突击转回现象，部分多转操纵动机在这一年甚至出现减弱。这种结果说明，强化会计监管环境具有遏制市场会计操纵的作用，监管环境应当纳入盈余管理研究的考虑范畴。并且，由于中国的会计监管在方式上有别于西方，是以应急性的行政监管为主，其效果如何尚缺乏经验证据。本文的检验结果则说明，中国这种应急性的行政监管模式是具有一定成效的。

其次，准则制定者宁愿让中国会计准则与国际财务报告准则（IFRS）之间多存留一项实质性差异，³²也要坚持长期资产减值不得转回的规定，理由是资产减值允许转回成了企业操纵损益的工具（财政部《资产减值（征求意见稿）》，2005）。然而，已有的针对中国的资产减值实证研究基本是将2001年前的四项准备和2001年至2005年的八项准备作为研究对象的，由于长、短期资产减值的使用特点不同，判断这一政策的合理性还需要直接针对禁止转回的四项长期资产减值的证据。本文研究发现，2003年至2005年间四项长期资产减值的计提与转回的确受到了盈余管理动机的影响，并且盈余管理动机超过经济因素起到了主导作用。这种结果说明，新准则中禁止长期资产减值以公允价值回升名义转回是有事实基础的。

第三，由于数据可获得性的限制，已有的研究基本上是将减值转回与减值转出混在一起算作转回，人们又将所得的结论简单地套用在减值转回（“公允价值回升转回数”）上，导致对减值转出操纵的忽视。本文首先从会计原理上分析减值转出也具有操纵性运用的可能，进而实证发现减值转出在公司中的运用比例与程度都超过了减值转回，考虑减值转出的净计提率及单向的减值计提

³² 参见财政部2005年11月16日发布的新闻（财政部，2005b）：《中国会计准则委员会—国际会计准则理事会会计准则趋同会议圆满结束并签署联合声明》，这份声明中确认资产减值不得转回是中国会计准则与国际财务报告准则之间仅存的三项实质性差异之一。

率均与多种盈余管理动机显著相关,名义上基于资产出售等交易事实的“其他原因转出数”很可能被用作了操纵性减值转回的隐蔽通道。这一结果说明,仅仅限制公允价值回升转回还不足以完全阻止减值操纵,今后必须加强注册会计师对减值转出项目(“其他原因转出数”)真实性的审计。

第四,本文还检验发现,2006年多减动机公司的净计提程度较往年有明显下降,由于后期多转依赖于前期多减,这一结果说明禁止转回规定已经显示了遏制减值操纵的效果。

参考文献

- 蔡祥、张海燕. 2004. “资产减值准备的计提、追溯与市场效应”.《中国会计与财务研究》第3期,31-55。
- 财政部. 2003. “关于执行《企业会计制度》和相关会计准则有关问题解答(二)”(3月17日)。
- 财政部. 2005a. “企业会计准则第××号—资产减值(征求意见稿)”(7月19日)。
- 财政部. 2005b. “中国会计准则委员会秘书长—国际会计准则理事会主席联合声明”(11月16日)。
- 财政部. 2006. “关于贯彻实施企业会计准则和审计准则体系有关问题的通知”(12月31日)。
- 陈小悦、肖星、过晓燕. 2000. “配股权与上市公司利润操纵”.《经济研究》第1期,30-36。
- 戴德明、毛新述、邓璠. 2005. “中国亏损上市公司资产减值准备计提行为研究”.《财经研究》第7期,71-82。
- 干胜道、钟朝宏、田艳. 2006. “微利上市公司盈余管理实证研究”.《财经论丛》第6期,59-64。
- 李增泉. 2001. “我国上市公司资产减值政策的实证研究”.《中国会计与财务研究》第4期,70-113。
- 罗平华. 2006. “减值准备转回高峰暂未出现”.《证券时报》(8月8日)。
- 沈振宇、王金圣、薛爽. 2004. “坏账准备与上市公司利润操纵”.《中国会计与财务研究》第2期,93-111。
- 王建新. 2007. “公司治理结构、盈余管理动机与长期资产减值转回:来自我国上市公司的经验证据”.《会计研究》第5期,60-66。
- 王跃堂. 1999. “对证券市场监管政策的经济后果的分析”.《经济科学》第5期,82-87。
- 王跃堂、周雪、张莉. 2005. “长期资产减值:公允价值的体现还是盈余管理行为”.《会计研究》第8期,31-35。
- 薛爽、田立新、任帅. 2006. “八项计提与公司盈余管理的实证研究”.《上海立信会计学院学报》第3期,14-19。

- 佚名. 2006. “注册会计师十大注意事项”. 《上海证券报》(11月13日)。
- 于李胜. 2007. “盈余管理动机、信息质量与政府监管”. 《会计研究》第9期, 42-49。
- 张旺军. 2006. “资产减值会计新政策解读”. 《财会月刊(会计)》第8期, 27-28。
- 赵春光. 2006. “资产减值与盈余管理”. 《会计研究》第3期, 11-17。
- 中国证监会. 2004. “关于进一步提高上市公司财务信息披露质量的通知”(1月6日)。
- 中国证监会. 2006. “关于做好与新会计准则相关财务会计信息披露工作的通知”(11月27日)。
- 中国注册会计师协会. 2007. “关于做好上市公司2006年度会计报表审计工作的通知”(2月6日)。
- Chen, C. J. P., Chen, S., Su, X., and Wang, Y. (2004), ‘Incentives for and Consequences of Initial Voluntary Asset Write-downs in the Emerging Chinese Market’, *Journal of International Accounting Research* 3 (1): 43-61.
- Chen, S., Wang, Y., and Zhao, Z. (2007), ‘Evidence of Asset Impairment Reversals from China: Economic Reality or Earnings Management?’, *Working Paper*, The Hong Kong Polytechnic University.
- Elliott, J. A. and Show, W. H. (1988), ‘Write-offs as Accounting Procedures to Manage Perceptions’, *Journal of Accounting Research* 26: 91-119.
- Francis, J., Hanna, J. D., and Vincent, L. (1996), ‘Causes and Effects of Discretionary Asset Write-offs’, *Journal of Accounting Research* 34: 117-134.
- Maddala, G. S. (1991), ‘A Perspective on the Use of Limited Dependent and Qualitative Variables Models in Accounting Research’, *The Accounting Review* 66 (October): 788-807.
- McNichols, M. and Wilson, G. P. (1988), ‘Evidence of Earnings Management from the Provision for Bad Debts’, *Journal of Accounting Research* 26 (Supplement): 1-29.
- McDonald, J. F. and Moffitt, R. A. (1980), ‘The Use of Tobit Analysis’, *The Review of Economics and Statistics* (May): 318-321.
- Rees, L., Gill, S., and Gore, R. (1996), ‘An Investigation of Asset Write-downs and Concurrent Abnormal Accruals’, *Journal of Accounting Research* 34: 157-169.
- Riedl, E. J. (2004), ‘An Examination of Long-lived Asset Impairments’, *The Accounting Review* 79 (3): 823-852.
- Strong, J. S. and Meyer, J. R. (1987), ‘Asset Write-downs: Managerial Incentives and Security Returns’, *Journal of Finance* XLII: 643-661.
- Zucca, L. J. and Gampbell, D. R. (1992), ‘A Closer Look at Discretionary Write-downs of Impaired Assets’, *Accounting Horizons* (September): 30-41.

EARNINGS MANAGEMENT INCENTIVES, REGULATORY ENVIRONMENT, AND ACCOUNTING MANIPULATION: EVIDENCE FROM LONG-LIVED ASSET IMPAIRMENTS¹

Xiang Li, Ye Wang, and Lihua Chen²

ABSTRACT

The Standard for Asset Impairment issued in 2006 by the Chinese authorities forbids the reversal of long-lived asset impairment provisions. This paper documents the following points. First, four restricted impairments were assuredly used for earnings manipulation between 2003 and 2005, indicating that the new prohibition on reversals was grounded in fact. Second, in addition to impairment reversals, impairment write-offs are probably another covert way to reverse impairments. Third, for 2006, the consolidation of the regulatory environment not only prevented the anticipated phenomenon of an onrush of reversals, but also further weakened incentives for over-reversals, implying that strengthening regulations does help restrain accounting manipulation. Fourth, for 2006, incentives for over-provisions weakened, showing that the new prohibition on reversals did restrain impairment manipulation.

Key words: Earnings Management Incentive, Regulatory Environment, Accounting Manipulation, Long-lived Asset Impairment

I. INTRODUCTION

In February 2006 China formally issued a new accounting standard for enterprises, which would apply to listed companies from 2007 onwards. This transition period induced an important change concerning asset impairments, because the new Standard for Asset Impairment no longer permits reversals of impairments on the basis of a recovery of fair value for long-lived assets (though reversals of short-lived asset

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² Xiang Li, Doctoral Student, Accounting Department of Nanjing University, Email: lixiang7982@163.com. Ye Wang, Doctoral Student, Accounting Department of Nanjing University. Lihua Chen, Associate Professor, Accounting Department of Nanjing University. Correspondence address: No.22, Hankou Road, Nanjing 210093, P.R.China.

impairments [SAIs] are still permitted). It was expected that this new prohibition would motivate some companies to reverse long-lived asset impairments (LAIs) on a large scale in 2006. To prevent such an occurrence, government authorities accordingly strengthened accounting regulations that same year. These concurrent changes provide a good opportunity for studying the relevant theoretical and policy issues.

Firstly, existing earnings management-oriented research basically follows a common logic: earnings management incentives (EMIs) lead to accounting manipulation. This thinking pattern gives prominence to incentives for earnings management, but omits the restrictive effects of a regulatory environment. Theoretically, because a severe regulatory environment is bound to help restrict manipulation behaviour, it should draw attention from researchers. However, the scope of accounting regulation is extensive and displays various forms in different countries. In China, accounting regulation is implemented mainly through administrative measures driven by the China Securities Regulatory Commission (CSRC) and the Ministry of Finance (MOF). These two institutions often issue prohibitive regulations on an ad hoc basis against accounting manipulation or fraudulence that has emerged in the market.³ Obviously, such regulatory measures have the advantages of quick implementation and flexibility, but they also carry disadvantages: the penalties are usually vague, and the extent of execution is generally unpredictable. The effect of this mode of regulation needs to be tested through empirical research. Fortunately, the impairment operations of companies in 2006 provide a feasible perspective from which to conduct such a study. Because companies have been deprived of the right to reverse LAIs since 2007, they were surely motivated to reverse them in 2006 (Luo, 2006; Yu, 2007); however, the authorities accordingly intensified accounting regulation that same year. Our tests provide evidence that in 2006 a rush to reverse impairments was prevented, and some over-reversal incentives⁴ (ORIs) became even weaker than before. These findings indicate that

³ For example, the CSRC issued two regulatory notices concerning impairing provisions in 2004 and 2006, respectively. They are the “Notice on Further Improving Financial Information Disclosure Quality” (Zhengjiankuaijizi [2004] No. 1) and the “Notice on Implementing Financial Accounting Information Disclosure Relevant to the New Accounting Standards” (Zhengjianfa [2006] No. 136).

⁴ Explanations of terms used herein: “over-reversal” means reversing impairment provisions to excess in the current year; “over-provision” means making excess provisions for impairment in the current year; “reversal” means impairment reversals in the name of fair value recovery, corresponding to “fair value recovery reversals” disclosed in asset impairment breakdowns; “write-off” means impairment write-offs due to transactions like asset sales, non-cash deals, or debt restructurings, corresponding to “write-offs due to other reasons” disclosed in asset impairment breakdowns; “total reversal” means the summation of impairment reversals and impairment write-offs, corresponding to “total reductions in the current year” disclosed in asset impairment breakdowns; “onrush of reversals” means the probability that listed companies would reverse on a large scale the impairment provisions of four restricted assets in 2006 in response to the prohibition on reversals to be enforced in 2007; “over-provisions followed by over-reversals” means making impairment provisions to excess in earlier years and then reversing them to excess in later years.

consolidating regulation can help restrain accounting manipulation, and that China's ad hoc administrative regulatory pattern has had certain effects.

Secondly, although the MOF attributes the new prohibition on reversals to the use of impairment reversals to manipulate earnings (MOF, 2005a), there is little empirical evidence that directly supports this judgement. Most impairment-oriented studies in China focus on four impairments existing before 2001 or eight impairments between 2001 and 2006.⁵ Such research objects are actually a collection of all impairment items, including both SAIs and LAIs. However, since LAIs and SAIs differ in how they are used, the conclusions of current research do not fully apply to LAIs. Therefore, the rationale of the new prohibition on reversals requires empirical evidence through research specifically on four LAIs that existed before 2007: impairments of long-lived equity investment, fixed assets, intangible assets, and constructions in progress.⁶ We empirically find that the provisions for and reversals of these four LAIs⁷ were influenced by EMIs between 2003 and 2005. Moreover, the influential power of EMIs surpasses that of economic factors. These findings imply that the new prohibition on reversals has been grounded in fact.

Thirdly, according to the disclosure requirements of asset impairment breakdowns in China, the current-year total reductions for each impairment provision (hereinafter called "total reversals") should be divided into two portions: "fair value recovery reversals" (hereinafter called "reversals") and "write-offs due to other reasons" (hereinafter called "write-offs"). Write-offs are not prohibited because theoretically they are based on real transactions such as asset sales, non-cash deals, and debt restructurings. In existing papers (e.g. Zhao, 2006; Xue *et al.*, 2006; Wang, 2007; Yu, 2007), impairment reversal is usually a misused blurry concept, and in fact it usually corresponds to the summation of reversals and write-offs.⁸ Total reversal-based evidence is often misused to criticise reversal behaviour, simply omitting the

⁵ Although Wang *et al.* (2005), Wang (2007), and Yu (2007) have studied LAIs, Wang *et al.* (2005) employ the first year (2001) of enforcing the LAI policy as the research time, and document that impairment provisioning truly reflects the decrease in future profitability of assets. Wang (2007) and Yu (2007) conduct research on total reversals (fair value recovery reversals plus write-offs due to other reasons), not merely fair value recovery reversals.

⁶ Some newly added impairment items are also prohibited from being reversed: impairments of goodwill, real estate for investment measured at cost, and productive biological assets (Zhang, 2006). Nevertheless, since these items did not exist before 2007, we do not examine them.

⁷ The LAIs studied in this paper differ a little from those studied by Wang *et al.* (2005), Wang (2007), and Yu (2007), which include impairments of long-term debt investment.

⁸ There is an objective reason that databases, such as CSMAR, CCER, and Wind, do not provide data of "fair value recovery reversals" or "write-offs due to other reasons", but only year-end balances of each impairment item.

influence of writing off.⁹ In this paper, we first argue that theoretically write-offs can also be used for earnings reversals through “over-provisioning followed by writing off” (referring to the analysis for proposing the second hypothesis). On the other hand, it is also possible that some companies deliberately misclassify write-offs as reversals when filling in asset impairment breakdowns, which is a kind of covert reversal. We empirically find that write-offs are significantly higher than reversals in both size and frequency; “write-offs due to other reasons” serve as another way, or even the dominant way, to reverse profits. Such conclusions imply that impairment manipulation cannot be wholly prevented by prohibiting reversals; thus, certified public accountants (CPAs) should audit the “write-offs due to other reasons” item more carefully to test its veracity.

Lastly, we find that the impairment provision ratio (or net write-down ratio) had an evident decrease in 2006 compared with previous years. Since future over-reversals rely on previous over-provisions, this change implies that the new prohibition on reversals has worked to hinder impairment manipulation as anticipated.

The remainder of the paper proceeds as follows. The second section provides the theoretical and institutional analysis, and develops the hypotheses. The third section gives the detailed research design and sample selection process. The fourth section presents the empirical results and analysis. The fifth section documents the sensitivity tests. The last section concludes the paper with a summary of the findings and their implications.

II. THEORETICAL ANALYSIS AND HYPOTHESIS DEVELOPMENT

The new prohibition on reversals blocks the manipulation of earnings by over-provisions followed by over-reversals with respect to LAIs. The MOF’s argument that reversals are being used to manipulate earnings (MOF, 2005a) is presumably taken from existing research and reasoning.¹⁰ However, existing empirical studies generally focus on a total of four impairments prior to 2001 or a total of eight impairments between 2001 and 2005.¹¹ Such research objects are actually syntheses of SAIs and LAIs, although these two categories differ in how they are used. Additionally, the impairment reversals that existing literature (e.g. Li, 2001; Zhao, 2006;

⁹ Chen *et al.* (2007) examine total reversals and fair value recovery reversals (called “unrealised reversals” in their paper), and document that both economic factors and reporting incentives influence impairment reversals, whereas reporting incentives dominate economic factors. There are two differences between that paper and ours: first, that paper regards all eight impairments between 2003 and 2005, not merely LAIs; second, that paper examines unilateral reversing, excluding provisions or net provisions.

¹⁰ For instance, before 2005, Li (2001), Cai and Zhang (2004), Shen *et al.* (2004), and Chen *et al.* (2004) document that asset impairments are used for earnings management.

¹¹ See Footnote 5.

Xue *et al.*, 2006; Wang, 2007; Yu, 2007) refers to actually comprise both “fair value recovery reversals” and “write-offs due to other reasons”. Nevertheless, impairment write-offs are evidently higher in occurrence frequency or magnitude than reversals (see Panel A of Table 4), so it is incorrect to apply findings on total reversals to judge fair value recovery reversals.¹² These two limitations make it important to conduct special research on the four restricted LAIs.

Compared with SAIs, LAIs have both a commonality and a particularity. The commonality is that companies (or managers) have bidirectional discretionary rights (provisioning and reversing) on both items, making them convenient to manipulate by over-provisions followed by over-reversals. As to the particularity, LAIs occur less frequently than SAIs (referring to Panel A of Table 4 for universality of impairment operations). Moreover, the objectivity of LAIs is more difficult to verify than that of SAIs, because the market prices of long-lived assets are harder to find (Wang *et al.*, 2005; Chen *et al.*, 2007). The commonality implies that LAIs are possibly used to manage earnings, whereas the particularity makes it necessary to especially examine the four restricted impairments.

By reference to current literature (e.g. Strong *et al.*, 1987; Elliot *et al.*, 1988; Francis *et al.*, 1996; Riedl, 2004; Dai *et al.*, 2005), both EMIs and fluctuations in asset value influence impairment operations. Therefore, we predict that the provisioning and reversing of the four restricted impairments will be affected by EMIs, and propose the first hypothesis as follows:

H1: The provisioning and reversing of LAIs will be affected by EMIs.

Although theoretically impairment write-offs should follow real transactions like asset sales, non-cash deals, and debt restructurings, previous over-provisions in combination with later asset disposals can also help manage earnings. The mechanism is that the more provisions are made for impairment of an asset, the lower its net book value becomes. If the asset is then sold later, more disposal income (or less disposal loss) can be recognised; if the asset is used to cancel out debts, more restructuring income (credited as capital surplus) or less restructuring loss (debited as current-period loss) can be recognised; if a non-cash deal is done with the asset (equivalent to asset exchange), the received asset can be recognised at a lower value, and thus fewer provisions for depreciation are made, or fewer costs in future are amortised; and if supplemental cash is received from the deal, more non-cash deal income can be recognised.¹³

In addition, in practice some companies may intentionally misclassify “fair value recovery reversals” as “write-offs due to other reasons” in asset impairment breakdowns to reverse impairments covertly. Since auditors usually think much of the item balance, but omit its composing details, it is believed that this type of

¹² See Footnote 9.

¹³ We assume that transaction pricing is based on real asset value, and not influenced by impairment provisions.

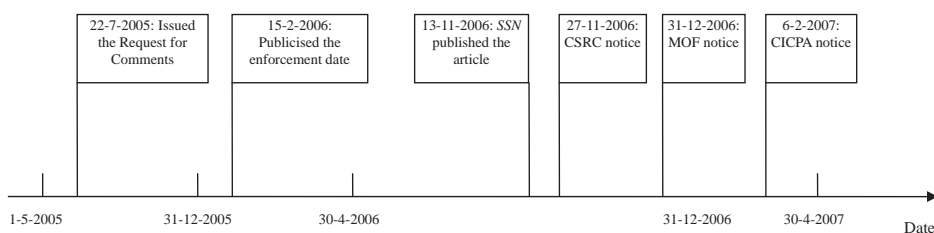
disclosure can escape the audit.¹⁴ Manipulation by reversals documented in many total reversal-based studies probably comprises the influence of write-offs, not merely fair value recovery reversals. Thus our second hypothesis is developed as follows:

H2: Write-offs of LAIs will also be used to manage earnings.

In 2006, to prevent the anticipated onrush of reversals (Luo, 2006; Yu, 2007), both the CSRC and MOF strengthened accounting regulations. On 27 November 2006, the CSRC promulgated the “Notice on Implementing Financial Accounting Information Disclosure Relevant to the New Accounting Standards”, stressing that listed companies should make adequate impairment provisions in 2006; for large amounts of impairment reversals, company management should provide supporting proofs and should obtain confirmation from the board of directors; companies should not reverse LAIs to a large extent in 2006; and if unreasonable reversals or inadequate provisions are found, CPAs should require companies to make adjustments or consider changing their audit opinions. Afterwards, the MOF required in the “Notice on Thoroughly Enforcing the Systems of Enterprise Accounting Standards and Audit Standards” issued on 31 December 2006 that relevant authorities should strengthen inspections of the quality of company information disclosure and the audit quality of CPA firms; they should also pay extra attention to misbehaviour during the transition from the old to the new standards and investigate the status of execution of the new standards (we believe that impairment reversals certainly fall within the scope of inspection). The Chinese Institute of Certified Public Accountants (CICPA) also reacted by issuing the “Notice on Auditing Annual Financial Reports of Listed Companies” on 6 February 2007. Through this document, the CICPA specially reminds CPAs to watch out for earnings manipulations during the transition of standards, and to remain cautious with highly risky fields like large numbers of impairment reversals. In addition, long before the above monitoring actions were launched, the public media had already expressed concerns about the possibility of an onrush of reversals in 2006. For example, *Shanghai Securities News* published an article entitled “Top Ten Issues Requiring CPAs’ Concern” on 13 November 2006, in which one concern was a large number of asset impairment reversals. Please refer to Figure 1 for the above processes. Similar attention to asset impairments did not appear in 2005 or earlier, so we can conclude that accounting regulation concerning impairments was evidently consolidated in 2006.

What effects would a strengthened regulatory environment have on accounting manipulation? The first is the overawing effect. Since the above-mentioned regulatory documents expressed high concerns about the probability of an onrush of

¹⁴ As to asset impairments, the categorisation between reversals and write-offs does not influence the year-end balance of any impairment item, or the year-end net balance of the corresponding asset.

Figure 1 Regulatory Environment in the Transitional Year

reversals in 2006,¹⁵ excessive violation would surely bring regulatory punishment. Another effect is that audits would probably become stricter in response to regulatory pressures. The CICPA has the power to monitor the practice quality of CPA firms and to penalise unqualified practices, so its keen concern over impairments was bound to make CPAs perform stricter audits. These two effects suggest that strengthened accounting regulation could restrain the anticipated onrush of reversal incentives in 2006.¹⁶ Hence, we put forward the third hypothesis as follows:

H3: The phenomenon of an onrush of reversals of LAIs did not arise in 2006.

The above analysis is based on the assumption that China's mode of ad hoc administrative regulation is effective. But it is also possible that it is not effective. If so, the onrush of reversals phenomenon would appear in 2006, at least within companies with over-reversal incentives.

The new prohibition on reversals meant that LAIs could no longer be reversed in the name of fair value recovery starting from 2007. The rational choice for companies with over-provision incentives (OPIs) in 2006 would have been to make fewer impairment provisions than in previous years. Since OPI companies make net provisions every year (referring to Table 5 and Figures 2-3 and 3-3), and write-offs were still feasible in and after 2007, it is inappropriate to predict that companies would have completely stopped over-provisioning in 2006. Therefore, we propose the fourth hypothesis as follows:

H4: In 2006, the magnitude of net provisions of OPI companies was smaller than that in previous years.

¹⁵ According to general anticipation, an onrush of reversals refers mainly to fair value recovery reversals that are regarded as a manipulation tool, excluding write-offs. The onrush of reversals was a highly attractive issue in 2006, as mentioned in Luo's article "Impairment Reversal Has Not Reached the Peak" published in *Securities Times* (Chinese) on 8 August 2006, and Yu (2007).

¹⁶ Although Yu (2007) documents a similar conclusion, he studies total reversals. Also, his regression results do not support such a conclusion, one reason being that the variables used for earnings management incentives include *BATH* and *SMOOTH* only, and their signs differ from general predictions. Another reason is that the OLS regression, but not the Tobit regression, is used to explain unilaterally restricted dependent variables: the total reversal ratio and the provision ratio.

III. RESEARCH DESIGN AND SAMPLE SELECTION

3.1 Recognition of Earnings Management Incentives

According to previous literature on impairment manipulation, general EMIs (or impairment manipulation incentives) in Western countries include senior management turnover, profit smoothing, and taking a big bath (Strong *et al.*, 1987; Elliot *et al.*, 1988; McNichols, 1988; Zucca *et al.*, 1992; Francis *et al.*, 1996; Riedl, 2004). As to incentives in the Chinese context, Li (2001) finds from observations between 1998 and 1999 that when companies are compulsorily required to carry out asset impairment policies, companies aiming to turn a profit or to make seasoned equity offerings, or that have critical profit incentives, will choose policies that can increase (or will not decrease) current-period income; whereas loss companies, or companies having senior management turnover or profit smoothing motivations, will choose policies that can increase (or will not decrease) future-period income. Shen *et al.* (2004) find that under the principle-based impairment policies in 1998, incentives for seasoned equity offerings or loss significantly influenced the provisioning of the four impairments. Cai and Zhang (2004) find that evading or catering to governmental regulation (such as the *Special Treatment or Special Treatment policy) is the dominant explanatory factor for impairment provisions in 1999. Chen *et al.* (2004) document that under the voluntary impairment policies in 1998, incentives for loss or CEO turnover significantly influenced the provisioning of the four impairments, but there was no phenomenon of profit smoothing. Using loss companies between 2001 and 2003 as the sample, Dai *et al.* (2005) find that loss companies used eight impairments to take a big bath. Zhao (2006) finds from observations between 2002 and 2004 that the eight impairments were affected by incentives for avoiding loss, taking a big bath when loss was unavoidable, profit smoothing, and avoiding income decrease. Chen *et al.* (2007) study eight impairments between 2003 and 2005 and focus on unilateral total reversals and unrealised reversals (corresponding to “fair value recovery reversals”) to find that both economic factors and reporting incentives (EMIs) influence impairment reversals, whereas reporting incentives dominate economic factors; manipulation incentives affecting impairment reversals include getting rid of or avoiding the *Special Treatment (or Special Treatment), and making over-provisions followed by over-reversals.¹⁷

¹⁷ Definitions for some concepts in this paragraph are as follows. Critical profit incentives mean trying to avoid loss, thus putting the company in a small profit status. Loss incentives mean taking a big bath when evading loss is impossible, thus helping the company to turn a profit in following years. A company receiving *Special Treatment means that its stock name is marked with an “*ST” symbol because it has reported a loss for two consecutive years, whereas a company receiving Special Treatment means that its stock name is marked with an “ST” symbol because its net assets have fallen below zero; thus, incentives for getting rid of or avoiding *Special Treatment (or Special Treatment) mean trying to record profits to get rid of or avoid such an undesirable mark. Incentives for “over-provisions followed by over-reversals” in Chen *et al.* (2007) mean that after taking a big bath in former years, a company has the incentive to reverse the impairment in the current year.

Apart from the above direct studies on impairments, Chen *et al.* (2006) find that because approval for seasoned equity offerings is scarce in China and because the return on equity (ROE) is used as the main check index for granting approval, listed companies usually manage earnings to win approval. Wang (1999) finds that as the critical value of ROE for granting approval moves from 10 per cent to 6 per cent, the dense area of ROE's frequency distribution also moves from 10 per cent to 6 per cent. Gan *et al.* (2006) find that small-profit companies have incentives to evade loss (similar to the critical profit incentives).

Based on the above literature, we obtain six types of EMIs: turning a profit, remaining with a small profit (or evading a loss), acquiring qualifications for seasoned equity offerings, taking a big bath if loss is unavoidable, taking a big bath when there is senior management turnover, and smoothing income when it grows too fast. The first three incentives can be summarised as ORIs, and the last three as OPIs. Over-reversals and over-provisions are opposite but uniform operations, because previous over-provisions are made for future over-reversals. In addition, what really influences income is the net amount of provisions minus reversals and write-offs; provisions, reversals, or write-offs individually produce unilateral effects only. Hence, an over-reversal is equivalent to making fewer provisions, and an over-provision is equivalent to making fewer reversals in effect.

3.2 Variable Measurement and Model Setting

For the main tests, we develop OLS regression models with the net write-down ratios of the four restricted impairments as dependent variables. We do not use the unilateral reversal ratio or write-off ratio because neither represent the net influence of bidirectional impairment operations on income. For the sensitivity tests, to further examine unilateral impairment operations we turn to Tobit regression models with the unilateral reversal ratio, write-off ratio, and total reversal ratio as dependent variables. For the net write-down ratio, we use three definitions to obtain three measures: *NET_REV*, *NET_OFF*, and *NET_R_O*. To appropriately control for asset scale, we calculate three measures all with net write-downs divided by corresponding beginning net assets. See Table 1 for details. When using *NET_REV* as the dependent variable, the model examines how EMIs influence impairment provisions and reversals, whereas the model with *NET_OFF* (*NET_R_O*) examines how EMIs influence impairment provisions and write-offs (total reversals).

In view of the above EMIs, we design eight research variables: *TP*, *SP*, *ISSUE*, *ILOSS*, *2LOSS*, *3LOSS*, *TURNOVER*, and *SMOOTH*.¹⁸ See Table 1 for details. Loss companies are divided into three types: *ILOSS*, *2LOSS*, and *3LOSS*, because different loss years require different degrees of over-provisions, and the three types of loss differ from year to year in terms of the proportions of their observation numbers; therefore, a single variable *LOSS* will contain too much "noise" if it is not partitioned in terms of loss years. Considering that senior management changes

¹⁸ *TP* and *SP* represent turning a profit and remaining with a small profit, respectively.

Table 1 Definitions of Variables

Var. Name	Meaning	Measurement
<i>NET_REV</i>	Net write-down ratio (provisions – reversals)	Current-year (provisions – reversals of the total four impairments) / beginning net assets
<i>NET_OFF</i>	Net write-down ratio (provisions – write-offs)	Current-year (provisions – write-offs of the total four impairments) / beginning net assets
<i>NET_R_O</i>	Net write-down ratio (provisions – reversals – write-offs)	Current-year (provisions – reversals – write-offs of the total four impairments) / beginning net assets
<i>TP</i>	Turning a profit	1 for previous year posting a loss (net income < 0) but current year posting a profit, and 0 otherwise
<i>SP</i>	Avoiding loss (or remaining with a small profit)	1 for ROE within [0, 0.015) and <i>TP</i> = 0, and 0 otherwise (delete obs. with negative net assets)
<i>ISSUE</i>	Satisfying the ROE requirement for seasoned equity offerings	1 for ROE within [0.055, 0.075) and <i>TP</i> = 0, and 0 otherwise (delete obs. with negative net assets)
<i>1LOSS</i>	Taking a big bath when loss is unavoidable (first year of loss)	1 for posting the first year of loss (net income < 0), and 0 otherwise
<i>2LOSS</i>	Taking a big bath when loss is unavoidable (two consecutive years of loss)	1 for posting two consecutive years of loss (net income < 0), and 0 otherwise
<i>3LOSS</i>	Taking a big bath when loss is unavoidable (three consecutive years of loss)	1 for posting three consecutive years of loss (net income < 0), and 0 otherwise
<i>TURNOVER</i>	Taking a big bath when senior management changes	1 for board chairman or general manager turnover ¹⁹ and non- <i>TP</i> , non- <i>SP</i> , non- <i>ISSUE</i> or non- <i>Xloss</i> , and 0 otherwise
<i>SMOOTH</i>	Smoothing profits to the following period when they grow too fast	1 for operating income growth rate beyond the 75% level of all positive growth rates and non- <i>TP</i> , non- <i>SP</i> , non- <i>ISSUE</i> , non- <i>XLOSS</i> , or non- <i>TURNOVER</i> , and 0 otherwise
<i>YR06</i>	Dummy variable for the year 2006	1 for observations of year 2006, and 0 otherwise
<i>IND_ΔROA</i>	Change in industry ROAs	Industry median of change in ROAs
<i>IND_ΔMTB</i>	Change in industry market-to-book ratios	Industry median of change in market-to-book ratios (delete obs. with negative net assets)

¹⁹ We limit *TURNOVER* to board chairman or general manager turnover resulting from resignation, dismissal, or involvement with legal cases, plus the successor must come from outside. Such data are taken from the CSMAR database.

Table 1 *Continued*

Var. Name	Meaning	Measurement
<i>IND_G_REV</i>	Industry growth rate of operating revenue	Industry median of growth rates of main operating revenue
<i>ΔMTB</i>	Change in market-to-book ratios	Current year-end <i>MTB</i> – previous year-end <i>MTB</i> (delete obs. with negative net assets)
<i>ΔOCF</i>	Change in net operating cash flows	(current-year net operating cash flows – previous-year net operating cash flows) / beginning total assets
<i>G_REV</i>	Growth rate of operating revenue	Current-year main operating revenue / previous-year main operating revenue – 1
<i>OROA</i>	Operating income ratio	Operating income / average total assets between year beginning and year end
<i>IVARS</i>	Industry variables	9 industry dummy variables for 10 industries classified according to GICS
<i>YR04, YR05</i>	Dummy variables for the years 2004 or 2005	1 for observations of years 2004 or 2005, and 0 otherwise

frequently in Chinese listed companies, to kick out irrelevant management alteration we limit *TURNOVER* to change of the board chairman or general manager resulting from resignation, dismissal, or involvement with legal cases, plus the successor should come from outside. If a company-year observation accords with two or more types of EMIs, we choose the stronger (or strongest) incentive to avoid repetition. For example, if one company-year observation belongs to both incentives for turning a profit and maintaining a small profit, we regard it only as an observation of turning a profit. See measurements in Table 1 for specific rules. In accordance with their respective manipulation characteristics, we predict that *TP*, *SP*, and *ISSUE* will all be negatively related to the net write-down ratios, but *ILOSS*, *2LOSS*, *3LOSS*, *TURNOVER*, and *SMOOTH* will all be positively related to them.

Research variables include *YR06* as well. Although it is a year dummy variable, it represents the strengthening of the accounting regulatory environment in 2006. In the models, *YR06* itself reflects whether companies without manipulation incentives had an onrush of reversals in 2006, whereas its interactions with EMIs examine whether manipulation behaviour (or incentives) grew stronger or weaker, or remained unchanged, in 2006. According to the third hypothesis, the interactions of *YR06* with ORIs are expected to be positive in sign or insignificant; a positive coefficient means that ORIs weakened; an insignificant coefficient means that ORIs remained unchanged, while a negative coefficient means that ORI companies had an onrush of reversals. According to the fourth hypothesis, the interactions of *YR06* with OPIs

are expected to be negative in sign, indicating that OPIs weakened in 2006 and implying that the new prohibition on reversals worked as anticipated.

Following current literature (Francis *et al.*, 1996; Riedl, 2004; Chen *et al.*, 2004; Chen *et al.*, 2007), we control for economic factors with *IND_ΔROA*, *IND_ΔMTB*, *IND_G_REV*, *ΔMTB*, *ΔOCF*, *G_REV*, and *OROA*. *IND_ΔROA*, *IND_ΔMTB*, and *IND_G_REV* control for industry-level economic conditions, whereas *ΔMTB*, *ΔOCF*, *G_REV*, and *OROA* control for company-level economic conditions. The first six variables portray the trend in economic changes, whereas *OROA* represents the current-year profitability of recurring business. Since the four impairments should be debited as investment income or non-operating expenses according to accounting standards, none of the seven variables has any mechanical relation with impairment operations. All seven variables are predicted to be negatively related to the net write-down ratios.

By reference to Francis *et al.* (1996), Riedl (2004), Chen *et al.* (2004), and Chen *et al.* (2007), we construct four OLS models. The first model is to test H1, the second and third are to test H2, and the fourth is to test H3 and H4. Considering that there are two net write-down ratios influenced by write-offs, we design two models to test H2. The model of *NET_OFF* does not control for economic factors, because theoretically write-offs should be based on asset transactions, not economic conditions.²⁰ When running the fourth model, we choose individual years 2003, 2004, and 2005 (not a total of three years) as comparison years against 2006, so that a single year can be matched with a single year.²¹

$$\begin{aligned} NET_REV = & \lambda_0 + \lambda_1 TP + \lambda_2 SP + \lambda_3 ISSUE + \lambda_4 ILOSS + \lambda_5 2LOSS \\ & + \lambda_6 3LOSS + \lambda_7 TURNOVER + \lambda_8 SMOOTH \\ & + \lambda_9 IND_ΔROA + \lambda_{10} IND_ΔMTB + \lambda_{11} IND_G_REV \\ & + \lambda_{12} ΔMTB + \lambda_{13} ΔOCF + \lambda_{14} G_REV + \lambda_{15} OROA + \varepsilon \end{aligned} \quad (1)$$

$$\begin{aligned} NET_OFF = & \lambda_0 + \lambda_1 TP + \lambda_2 SP + \lambda_3 ISSUE + \lambda_4 ILOSS + \lambda_5 2LOSS \\ & + \lambda_6 3LOSS + \lambda_7 TURNOVER + \lambda_8 SMOOTH + \varepsilon \end{aligned} \quad (2)$$

²⁰ Considering that impairment provisioning may be influenced by economic conditions, we also run *NET_OFF*'s model with economic factors controlled, but the result is qualitatively unchanged.

²¹ We choose three single years for comparison, because it is not sufficiently persuasive to choose only one. The reasons are, first, the enforcement date for the new accounting standards was announced during the annual report period for 2005 (15 February 2006), and companies still had time to react to it rationally; therefore, the year 2005 is not a good proxy for any general year. Second, early in the annual report period for 2003, the CSRC issued the "Notice on Further Improving Financial Information Disclosure Quality" on 6 January 2004, emphasising that listed companies should establish and consummate their internal control systems concerning impairment operations, and that CPAs should pay adequate attention to impairment operations and should amend audit opinions if necessary. This notice may have restrained impairment manipulation between 2003 and 2004, but these two years are relatively far from 2006, causing other interrupting factors.

$$\begin{aligned}
NET_R_O = & \lambda_0 + \lambda_1 TP + \lambda_2 SP + \lambda_3 ISSUE + \lambda_4 ILOSS + \lambda_5 2LOSS \\
& + \lambda_6 3LOSS + \lambda_7 TURNOVER + \lambda_8 SMOOTH + \lambda_9 IND_ΔROA \\
& + \lambda_{10} IND_ΔMTB + \lambda_{11} IND_G_REV + \lambda_{12} ΔMTB + \lambda_{13} ΔOCF \\
& + \lambda_{14} G_REV + \lambda_{15} OROA + \varepsilon
\end{aligned} \tag{3}$$

$$\begin{aligned}
NET_REV = & \lambda_0 + \beta_1 YR06*TP + \beta_2 YR06*SP + \beta_3 YR06*ISSUE \\
& + \beta_4 YR06*ILOSS + \beta_5 YR06*2LOSS + \beta_6 YR06*3LOSS \\
& + \beta_7 YR06*TURNOVER + \beta_8 YR06*SMOOTH + \lambda_1 YR06 \\
& + \lambda_2 TP + \lambda_3 SP + \lambda_4 ISSUE + \lambda_5 ILOSS + \lambda_6 2LOSS + \lambda_7 3LOSS \\
& + \lambda_8 TURNOVER + \lambda_9 SMOOTH + \lambda_{10} IND_ΔROA \\
& + \lambda_{11} IND_ΔMTB + \lambda_{12} IND_G_REV + \lambda_{13} ΔMTB + \lambda_{14} ΔOCF \\
& + \lambda_{15} G_REV + \lambda_{16} OROA + \varepsilon
\end{aligned} \tag{4}$$

We control for industry factors in each model. For regressions that use cross-year observations, we also control for year factors. To lower the multicollinearity level, we divide all industries into 21 categories (the manufacturing industry is further divided into sub-industries) for calculating *IND_ΔROA*, *IND_ΔMTB*, and *IND_G_REV*, but divide them into 10 categories according to the Global Industry Classifying Standards (GICS) to control for industry factors.

3.3 Sample Selection and Data Sources

Because pervasive disclosure of asset impairment breakdowns within listed companies began in 2003,²² we use A-share listed companies between 2003 and 2006 in the Shanghai and Shenzhen Stock Exchanges as the sample. Companies in the financial and insurance industries are excluded because their impairment items differ greatly from those of the other industries. See Table 2 for the sample selection process.

As Table 2 shows, the primary sample comprises 833 company-year observations that disclose “current-year total reductions” only (equalling total reversals), which are not divided into “fair value recovery reversals” and “write-offs due to other reasons”. To ensure the objectivity of the reversal and write-off data, we eliminate these 833 observations and have the remaining 3894 company-year observations as the final valid sample.

All financial data used are taken from the CCER database, the data of asset impairment breakdowns from the RESSET database, and the data of board chairman or general manager turnover from the CSMAR database. The impairment data taken from RESSET comprise all six types of information for each impairment item: beginning balance, current-year increases (equalling current-year provisions), current-year total reductions (equalling total reversals), fair value recovery reversals, write-offs due to other reasons, and ending balance. We conduct several tests on

²² Pervasive disclosure was driven by a regulation stated in the “Answers to Questions about Enforcing the Accounting System for Enterprises and Related Accounting Standards (II)” issued by the MOF on 17 March 2003 (Caikuai [2003] No. 10). Before that, only some listed companies disclosed asset impairment breakdowns.

Table 2 Sample Selection

Selection Process	2003	2004	2005	2006	Total
A-share non-financial companies included in CCER Financial Database of General Listed Companies	1252	1341	1342	1422	5357
Less: Observations without asset impairment breakdowns	76	53	29	44	202
Less: Observations with missing variables	80	127	75	146	428
Primary sample	1096	1161	1238	1232	4727
Less: Observations not divided into reversals and write-offs	330	275	177	51	833
Final valid sample	766	886	1061	1181	3894

the RESSET data, and are confident that the data ultimately used are reliable.²³ All data are processed with the software Stata 8.0.

IV. EMPIRICAL RESULTS

4.1 Descriptive Statistics of Variables

Table 3 contains the descriptive statistics of the variables used, in which all continuous variables are winsorised at the 1 per cent and 99 per cent levels. According to the mean values of *NET_REV*, *NET_OFF*, and *NET_R_O*, the net write-downs in the three measurements are equal to 0.50 per cent, 0.22 per cent, and 0.13 per cent of beginning net assets in magnitude, respectively. The low magnitude indicates that the variables of all models surely have very small coefficients. Among all manipulation incentives, seasoned equity offerings (*ISSUE* = 1) have the largest number of observations, accounting for 13.15 per cent of total observations (3894),²⁴ whereas loss for three consecutive years has the smallest number of observations, representing only 0.39 per cent of total observations (3894). It can be seen from the value distribution of variables that no variable has outliers after winsorisation.

4.2 Occurrence Frequency and Magnitude of Impairments

Table 4 contains the occurrence frequency and magnitude of various impairment operations. The occurrence frequency is defined as the number of observations with

²³ Tests include (1) comparing each item's beginning balance and ending balance from RESSET with those from CSMAR, and (2) testing two equations: current-year total reductions = current-year fair value recovery reversals + current-year write-offs due to other reasons, and beginning balance + current-year provisions – current-year total reductions = ending balance.

²⁴ Measuring *ISSUE* determines that some companies may not have incentives for seasoned equity offerings although their ROEs fall into the approval range, thus causing noise here.

Table 3 Descriptive Statistics of Variables

Variable	Mean	SD	Median	Minimum	Maximum
<i>NET_REV</i>	0.0050	0.0200	0.0000	-0.0598	0.2258
<i>NET_OFF</i>	0.0022	0.0232	0.0000	-0.1180	0.2176
<i>NET_R_O</i>	0.0013	0.0248	0.0000	-0.1570	0.2105
<i>TP</i>	0.0755	0.2642	0.0000	0.0000	1.0000
<i>SP</i>	0.0924	0.2897	0.0000	0.0000	1.0000
<i>ISSUE</i>	0.1315	0.3380	0.0000	0.0000	1.0000
<i>ILOSS</i>	0.0878	0.2831	0.0000	0.0000	1.0000
<i>2LOSS</i>	0.0321	0.1763	0.0000	0.0000	1.0000
<i>3LOSS</i>	0.0039	0.0620	0.0000	0.0000	1.0000
<i>TURNOVER</i>	0.0668	0.2497	0.0000	0.0000	1.0000
<i>SMOOTH</i>	0.0670	0.2501	0.0000	0.0000	1.0000
<i>IND_ΔROA</i>	-0.0013	0.0057	-0.0007	-0.1114	0.0351
<i>IND_ΔMTB</i>	-0.1554	0.5330	-0.3486	-0.9723	1.2061
<i>IND_G_REV</i>	0.1565	0.0814	0.1429	-0.0373	0.4991
<i>ΔMTB</i>	0.0048	2.7083	-0.2214	-21.7572	31.1463
<i>ΔOCF</i>	0.0079	0.1037	0.0076	-0.3882	0.4482
<i>G_REV</i>	0.2314	0.5532	0.1593	-0.8775	6.3733
<i>OROA</i>	0.0303	0.0673	0.0283	-0.3688	0.2593

non-zero current-year provisions (or reversals, write-offs, or net write-downs) divided by the total observation number (3894). The occurrence magnitude in Panel A is defined as the mean value of the ratios of impairments to beginning net assets, whereas the occurrence magnitude in Panel B is defined as the mean value of ratios of net write-downs to current-year operating income (equivalent to pre-impairment income). The calculations of mean value in both panels are limited to observations with non-zero current-year provisions (or reversals, write-offs, or net write-downs), excluding those with zero corresponding impairment operations. In Panel A, the occurrence frequencies (magnitude) of provisions and write-offs are both about four times (twice) that of reversals on average, showing that the influential power of either provisions or write-offs is far greater than that of reversals on profits. This further indicates that when examining impairment manipulation, we should not exclude impairment provisions or write-offs and only check reversals. Panel B reveals that fixed asset impairments and long-lived equity investment impairments are comparatively higher in occurrence frequency, consistent with conventionality.

4.3 Univariate Tests of Net Write-down Ratios

Based on manipulation incentives, we divide the final valid sample into three categories: the ORI sample, the OPI sample, and the control sample, which are defined as comprising observations of $TP = 1$, $SP = 1$, or $ISSUE = 1$; observations of $ILOSS$

Table 4 Occurrence Frequency and Magnitude of Impairment Operations

Panel A: By year															
Year	2003			2004			2005			2006			Total Four Years		
	N.	Freq.	Mag.	N.	Freq.	Mag.	N.	Freq.	Mag.	N.	Freq.	Mag.	N.	Freq.	Mag.
Provisions \neq 0	345	45.0%	0.0107	372	42.0%	0.0174	421	39.7%	0.0188	431	36.5%	0.0147	1569	40.3%	0.0156
Reversals \neq 0	64	8.4%	0.0038	64	7.2%	0.0055	94	8.9%	0.0074	165	14.0%	0.0105	387	9.9%	0.0078
Write-offs \neq 0	247	32.2%	0.0107	316	35.7%	0.0114	415	39.1%	0.0152	532	45.0%	0.0128	1510	38.8%	0.0128
NET_REV \neq 0	370	48.3%	0.0093	399	45.0%	0.0154	456	43.0%	0.0158	502	42.5%	0.0092	1727	44.4%	0.0124
NET_OFF \neq 0	440	57.4%	0.0024	506	57.1%	0.0057	598	56.4%	0.0026	695	58.8%	-0.0007	2239	57.5%	0.0022
NET_RO \neq 0	447	58.4%	0.0018	515	58.1%	0.0049	617	58.2%	0.0014	731	61.9%	-0.0030	2310	59.3%	0.0009

Panel B: By impairment item															
Impairment	Long-lived Equity Investment			Fixed Assets			Intangible Assets			Constructions in Progress			Total Four Items		
	N.	Freq.	Mag.	N.	Freq.	Mag.	N.	Freq.	Mag.	N.	Freq.	Mag.	N.	Freq.	Mag.
NET_REV \neq 0	908	23.3%	0.2450	1081	27.8%	0.0665	131	3.4%	0.0898	236	6.1%	0.0841	1727	44.4%	0.1888
NET_RO \neq 0	1089	28.0%	0.0504	1804	46.3%	-0.2904	203	5.2%	-0.3529	347	8.9%	-0.0320	2310	59.3%	-0.2389

Notes: Occurrence frequency = number of observations for provisioning (or reversing, writing off, net writing down) / total observation number (3894); occurrence magnitude in Panel A = mean value of impairment amounts / four assets' beginning total net balance; occurrence magnitude in Panel B = mean value of net write-down amounts / current-year operating income (equivalent to pre-impairment income). Each panel's mean value is calculated within observations having a non-zero current-year provision (or reversal, write-off, or net write-down) balance, excluding observations of corresponding impairment operations of zero balance.

= 1, $2LOSS = 1$, $3LOSS = 1$, $TURNOVER = 1$, or $SMOOTH = 1$; and other observations without manipulation incentives, respectively. To check whether the three sample categories have manipulation features as predicted, we conduct the univariate t tests.

Tests on the single sample in Panel A of Table 5 show that, after taking write-offs into account, the ORI sample turns to net reversals (NET_R_O is below zero), whereas the control sample shows no obvious deflection, and the OPI sample turns to net write-downs (NET_R_O is above zero). Comparing samples shows that the NET_R_O of the ORI sample is lower than that of the control sample, and the NET_R_O of the control sample is lower than that of the OPI sample, indicating that after considering write-offs, the net write-down ratios of the three samples accord with the predicted manipulation features.

Nevertheless, Panel A shows another notable point that, if write-offs are not considered, the ORI sample turns to net write-downs (NET_REV is above zero), contradicting the common concept that this kind of company manipulates earnings by reversing impairments. Is this the result of “noise” caused by inaccurate measurement of individual ORIs, or is it because writing off is really important? For this we conduct t -tests on each ORI as shown in Panel B. As a result, the NET_REV of each ORI is above zero, whereas each NET_R_O is below zero, indicating that each ORI relies on write-offs to reverse income. Hence, “write-offs due to other reasons” have a great impact on profit reversals.

Panel C of Table 5 shows that, if write-offs are not considered, the five OPI samples all turn to net write-downs (NET_REV is above zero), consistent with our predictions. But if write-offs are considered, only companies posting the first year of loss ($ILOSS = 1$) or two consecutive years of loss ($2LOSS = 1$) show net write-downs (NET_R_O is above zero), whereas companies of $3LOSS = 1$, $TURNOVER = 1$, or $SMOOTH = 1$ have no obvious deflection (NET_R_O is insignificant). All these reflect again the importance of write-offs. Judging from the mean values and t -values of the net write-down ratios for each OPI, the strongest OPIs are posting the first year of loss and two consecutive years of loss.

To examine OPI companies’ reactions to the new prohibition on reversals, we specifically do t -tests on five OPIs with observations for 2006 as shown by Panel D of Table 5. The results indicate that apart from the observations of $SMOOTH = 1$, no other OPI companies stopped net write-downs in 2006. This is probably because OPI companies anticipated that asset disposal-based write-offs allowed in later years could serve as a covert way to reverse impairments in the future.

4.4 Trend in Changes of Impairment Ratios

To examine how impairment operations change from year to year, we provide figures reflecting the trend in changes of impairment ratios. Figures 2-1 and 2-2 show that if write-offs are not considered, the ORI sample and control sample both show net write-downs (NET_REV is positive) and do not fluctuate much between years. But if write-offs are considered, the ORI sample turns to net reversals each year (NET_R_O is negative), and the net reversals for 2006 are higher than those for

Table 5 Univariate Tests on Net Write-down Ratios
 Panel A T-tests on Single Samples and Comparison Between Samples (Observations of Years 2003 to 2006)

Test Type	T-test on Single Sample				Comparison Between Samples								
	ORI sample		Control sample		OPI sample		ORI vs. Control		Control vs. OPI				
Variable	mean	t-value	Median	mean	t-value	median	mean	t-value	median	t-value	z-value	t-value	z-value
<i>NET_REV</i>	0.0021	6.75***	0.00	0.0020	9.17***	0.00	0.0145	12.52***	0.00	0.23	0.72	-10.61***	-9.60***
<i>NET_R_O</i>	-0.0029	-4.68***	0.00	-0.0001	-0.31	0.00	0.0087	6.60***	0.00	-4.01***	-3.54***	-6.48***	-6.46***

Notes: The ORI sample is composed of observations of $TP = 1$ or $SP = 1$ or $ISSUE = 1$; the OPI sample is composed of observations of $LOSS = 1$ or $2LOSS = 1$ or $3LOSS = 1$ or $TURNOVER = 1$ or $SMOOTH = 1$; the control sample is composed of other observations. The t-values are generated from the t-test and z-values from the Wilcoxon rank-sum test.

Panel B T-tests on Each ORI (Observations of Years 2003 to 2006)

Incentive	$TP = 1$			$SP = 1$			$ISSUE = 1$		
	N.	mean	t-value	N.	mean	t-value	N.	mean	t-value
<i>NET_REV</i>	294	0.0032	3.92***	360	0.0017	4.24***	512	0.0019	4.37***
<i>NET_R_O</i>	294	-0.0106	-5.13***	360	-0.0016	-2.15**	512	-0.0010	-1.58*

Table 5 *Continued*

Panel C T-tests on Each OPI (Observations of Years 2003 to 2006)

Incentive	<i>ILOSS</i> = 1			<i>2LOSS</i> = 1			<i>3LOSS</i> = 1			<i>TURNOVER</i> = 1			<i>SMOOTH</i> = 1		
	Tested Var.	N.	mean	t-value	N.	mean	t-value	N.	mean	t-value	N.	mean	t-value	N.	mean
<i>NET_REV</i>	342	0.0190	9.29***	125	0.0377	7.47***	15	0.0210	3.04***	260	0.0088	4.97***	261	0.0052	4.22***
<i>NET_R_O</i>	342	0.0152	7.04***	125	0.0330	6.39***	15	0.0087	0.96	260	0.0011	0.47	261	-0.0013	-0.70

Panel D T-tests on Each OPI (Observations of Year 2006)

Incentive	<i>ILOSS</i> = 1			<i>2LOSS</i> = 1			<i>3LOSS</i> = 1			<i>TURNOVER</i> = 1			<i>SMOOTH</i> = 1		
	Tested Var.	N.	mean	t-value	N.	mean	t-value	N.	mean	t-value	N.	mean	t-value	N.	mean
<i>NET_REV</i>	72	0.0189	4.51***	48	0.0288	4.14***	4	0.0096	1.71*	79	0.0074	2.42***	70	0.0014	1.24
<i>NET_R_O</i>	72	0.0118	2.35***	48	0.0236	3.22***	4	0.0093	1.61*	79	0.0003	0.07	70	-0.0096	-2.44***

Notes: ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively, for one-tailed tests.

Figure 2 Trend in Changes of Net Write-down Ratios within Three Samples²⁵

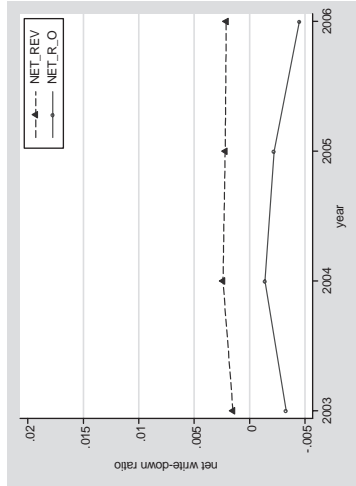


Figure 2-1 ORI Sample

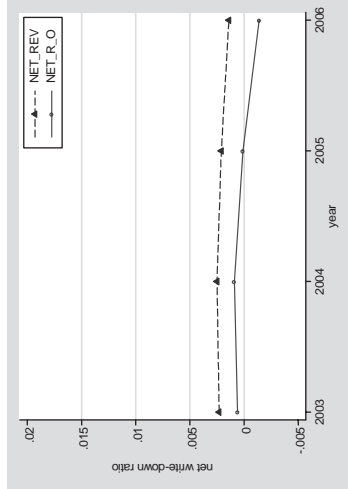


Figure 2-2 Control Sample

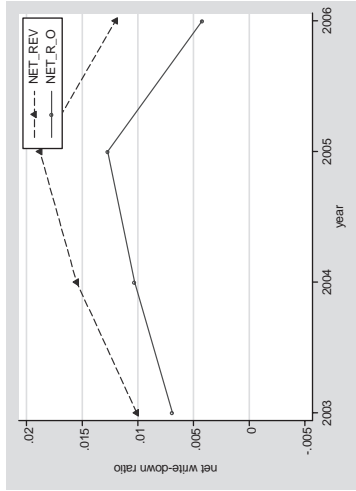


Figure 2-3 OPI Sample

²⁵ Graphs are drawn by mean-values of *NET_REV* and *NET_R_O* within each sample and each year.

Table 6 Yearly Distribution of *ILOSS* and *2LOSS* Companies

Loss Type	2003	2004	2005	2006
<i>ILOSS</i> = 1	54	95	121	72
<i>2LOSS</i> = 1	19	21	37	48

previous years in magnitude; *NET_R_O* of the control sample turns out to be negative in 2006, but with a very small fluctuation range. In 2006, the *NET_R_O* graph of the ORI sample goes down obviously, whereas its *NET_REV* graph has no obvious deflection, indicating that in 2006 ORI companies probably employed “write-offs due to other reasons” to covertly reverse impairments.²⁶

Figure 2-3 shows that the OPI sample shows net write-downs every year as predicted (*NET_REV* and *NET_R_O* are positive). The two net write-down ratios both go up during the previous three years. Why is this so? Through analyses, we think it happens mainly because the two strongest OPIs—posting the first year of loss and two consecutive years of loss—increase in observation numbers during the previous three years, whereas the two net write-down ratios both decline obviously in 2006; this can be partially attributed to a great decrease in the number of observations of posting the first year of loss and the two consecutive years of loss in that year. At the same time, there is another reason that OPI companies reacted rationally to the new prohibition on reversals (H4). The latter judgement is based on the fact that the aggregate number of companies posting the first year of loss and two consecutive years of loss in 2006 exceeds that in 2004, but the two net write-down ratios of 2006 are both lower than that of 2004 (see Figure 2-3). The observation numbers of posting the first year of loss or two consecutive years of loss in each year are listed in Table 6.

By further splitting the net write-down ratios in Figure 2, we obtain Figure 3, which comprises graphs of provision ratio, reversal ratio, write-off ratio, and total reversal ratio. Four ratios are respectively defined as the mean values of ratios of the four impairments’ current-year provisions, reversals, write-offs, and total reversals to total beginning net balance of the four assets. It can be seen from the three sub-figures that the reversal ratio and write-off ratio of each sample go up slightly in 2006; the rise of the write-off ratio is a little larger, implying once more that in 2006, write-offs were probably used covertly to reverse impairments. The provision ratio of OPI companies rises continuously over the previous three years, but declines greatly in 2006 (see Figure 3-3). The remarkable decline of the provision ratio and the increases in the reversal ratio and write-off ratio jointly cause the net write-down ratio of 2006 (*NET_R_O*) to be the lowest among all four years (see Figure

²⁶ Under the conditions in 2006 in which reversal incentives were especially strong and regulation was accordingly consolidated, it is possible that ORI companies conducted hidden reversals to evade outside attention.

Figure 3 Trend in Changes of Four Impairment Ratios within Three Samples²⁷

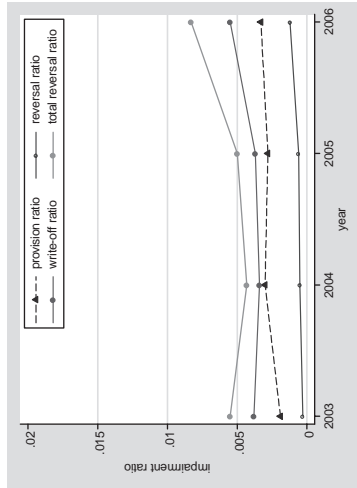


Figure 3-1 ORI Sample

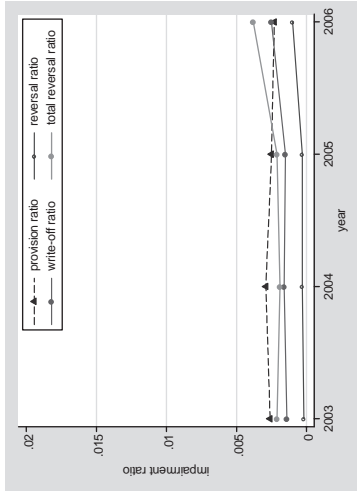


Figure 3-2 Control Sample

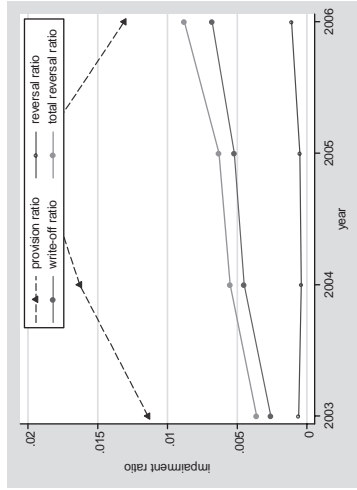


Figure 3-3 OPI Sample

²⁷ Graphs are drawn by mean-values of four impairment ratios within each sample and each year.

2-3). All these findings prove that the new prohibition on reversals did function to hinder OPIs (referring to the analysis on Figure 2-3 in the above paragraph, H4).

4.5 Multivariate Regression Results²⁸

Regressions with data between 2003 and 2005 in Table 7 show that *SP*, *ISSUE*, *ILOSS*, *2LOSS*, *3LOSS*, *TURNOVER*, and *SMOOTH* all influence the provisioning and reversal of the four impairments (H1). Among them, the most significant (t-value being the largest) and steadiest (being significant every year) incentives are *ILOSS* and *2LOSS*, similar to the next regressions on *NET_R_O* (see Table 9), indicating that listed companies' strongest manipulation incentive is taking a big bath when loss is unavoidable in order to turn a profit more smoothly the following year. Such strong incentives are caused by the great necessity of avoiding *Special Treatment, Special Treatment, and delisting. The regression with the data of 2006 shows that ORIs are insignificant in that year (H3). With regard to OPIs, only companies posting the first year of loss (*ILOSS*) and two consecutive years of loss (*2LOSS*) continue to over-write down in that year. This is partly because these two kinds of companies have the strongest OPIs (or incentives for turning a profit in future), and partly because they have anticipated that they can reverse profits through write-offs starting from 2007 (H2). The variable *TP* is insignificant in each regression of Table 7, the reason for which needs to be analysed through the below regressions that explain *NET_OFF* and *NET_R_O*.

Following Chen *et al.* (2007), we run regressions on *NET_REV* exclusively with either EMIs or economic factors as the explanatory variables to examine which of these two dominate impairment operations. We find that their Adj-R² values are 0.1687 and 0.0856, respectively (regression results are not listed herein for simplicity). The explanatory power of the former regression is significantly larger than that of the latter regression, implying that it is EMIs, and not real economic conditions, that dominate the provisioning and reversing of the four impairments.²⁹

Table 8 contains the regression results for *NET_OFF*. It can be seen that *NET_OFF* is influenced by EMIs every year, and is significantly related to as many as seven EMIs except *TURNOVER*, showing that apparently real transaction-based write-offs combined with previous over-provisions probably form a covert manipulation method of "over-provisioning followed by writing off" (H2). We estimate that the write-off data disclosed in asset impairment breakdowns may in part be based on real transactions and in part be a covert disclosure of reversals. But even if based on real transactions, deliberate over-provisioning in anticipation of later asset disposal is also a feasible means of accounting manipulation.

²⁸ In all OLS regressions, the VIF value of each variable is below 10 (see the endnote for each table), so we can conclude that our results do not have the problem of multicollinearity.

²⁹ This finding is similar to the conclusion of Chen *et al.* (2007), which states that reporting incentives dominate economic factors as the main influential factors on fair value recovery reversals and total reversals based on their study of eight impairments.

Table 7 Influential Factors of *NET_REV*

Dependent Variable		<i>NET_REV</i>			<i>NET_REV</i>		
Sample Year		2003	2004	2005	2003–2005	2006	
Independent Variable	Predicted Sign	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
<i>TP</i>	-	0.0000	-0.01	0.0008	0.27	0.0030	1.17
<i>SP</i>	-	-0.0025	-2.08***	-0.0033	-2.36***	0.0008	0.63
<i>ISSUE</i>	-	-0.0011	-1.65**	-0.0030	-3.62***	0.0013	1.28
<i>ILOSS</i>	+	0.0082	1.76**	0.0102	2.76***	0.0204	3.68***
<i>2LOSS</i>	+	0.0261	3.36***	0.0276	2.40***	0.0445	4.12***
<i>3LOSS</i>	+	0.0213	1.38*	0.0147	1.67**	0.0228	1.75**
<i>TURNOVER</i>	+	-0.0006	-0.21	0.0056	1.78**	0.0012	0.30
<i>SMOOTH</i>	+	0.0040	1.76**	0.0074	3.36***	0.0015	0.30
<i>IND_AROA</i>	-	0.0318	0.15	0.0811	0.56	0.1640	1.51
<i>IND_ΔMTB</i>	-	-0.0032	-1.51*	-0.0049	-1.03	-0.0069	-0.76
<i>IND_G_REV</i>	-	-0.0055	-0.57	-0.0005	-0.07	0.0011	0.07
<i>ΔMTB</i>	-	-0.0002	-0.36	0.0003	0.40	0.0036	2.58*
<i>ΔOCF</i>	-	-0.0068	-1.48*	0.0029	0.45	0.0003	0.04
<i>G_REV</i>	-	-0.0004	-0.33	-0.0001	-0.15	0.0008	0.30
<i>OROA</i>	-	-0.0073	-0.36	-0.0613	-3.15***	0.0347	1.53
Cons.	?	0.0025	1.16	0.0026	0.82	-0.0022	-0.36
Obs.		766	886	1061	2713	1181	
Prob > F		0.0001	0.0000	0.0000	0.0000	0.0056	
Adj-R ²		0.1516	0.2375	0.2023	0.1735	0.1571	

Notes: Industry and year are controlled for but not listed herein. Variables are labelled with one-tailed test significance if the resulting sign accords with prediction, otherwise with two-tailed test significance. ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively. The significance and signs of ORIs for year 2006 are predicted according to H3, and signs of OPIs for year 2006 are predicted based on the necessity of over-provisioning each incentive bears under the new prohibition on reversals. VIF-values listed in this table are all less than 3.

Table 8 Influential Factors of *NET_OFF*

Dependent Variable		<i>NET_OFF</i>				<i>NET_OFF</i>				
Sample Year		2003	2004	2005	2003–2005	2006				
Independent Variable	Predicted Sign	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Predicted Sign	Coefficient	t-value
<i>TP</i>	-	-0.0098	-3.64***	-0.0045	-1.08	-0.0144	-2.73***	-	-0.0094	-3.93***
<i>SP</i>	-	-0.0033	-1.95**	-0.0006	-0.47	-0.0022	-1.90**	-	-0.0020	-2.67***
<i>ISSUE</i>	-	-0.0012	-1.37*	-0.0036	-2.74***	0.0000	-0.03	-	-0.0015	-2.05***
<i>ILOSS</i>	+	0.0086	2.10**	0.0181	4.83***	0.0172	4.05***	+	0.0157	6.40***
<i>2LOSS</i>	+	0.0279	3.44***	0.0376	2.89***	0.0451	3.69***	+	0.0388	5.43***
<i>3LOSS</i>	+	0.0014	0.07	0.0338	11.70***	0.0060	1.08	?	0.0092	0.78
<i>TURNOVER</i>	+	0.0016	0.47	0.0037	0.87	-0.0057	-1.16	?	-0.0003	-0.11
<i>SMOOTH</i>	+	0.0025	1.27*	-0.0005	-0.20	0.0027	0.59	?	0.0013	0.68
Cons.	?	0.0007	0.42	-0.0002	-0.14	0.0013	0.56	?	0.0001	0.05
Obs.			766		886		1061			2713
Prob > F		0.0000		0.0000		0.0000			0.0000	
Adj-R ²		0.1278		0.1614		0.1457			0.1347	

Notes: Industry and year are controlled for but not listed herein. Variables are labelled with one-tailed test significance if the resulting sign accords with prediction, otherwise with two-tailed test significance. ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively. Since write-offs attract little attention, ORIs for year 2006 are predicted to be negative in sign. Signs of OPIs for year 2006 are predicted based on the necessity of over-provisioning each incentive bears under the new prohibition on reversals. VIF-values listed in this table are all less than 2.5.

Unlike *NET_OFF*, *NET_R_O* comprises the influence of write-offs. Table 9 further indicates that *NET_R_O* is also influenced by EMIs (H2). Notably, *TP* is insignificant in the regression on *NET_REV* for each year, but significant in the regression on *NET_OFF* or *NET_R_O* for each year, meaning that companies having an incentive to turn a profit mainly rely on write-offs to make profits, consistent with the general reliance of loss companies on asset restructurings to overcome difficulties (asset restructurings usually involve impairment write-offs). In addition, it is also possible that since turning a profit comparatively draws attention, *TP* companies are more motivated to purposely put fair value recovery reversals under the “write-offs due to other reasons” category for disclosure.

Table 10 compares 2006 with 2003, 2004, and 2005, respectively. Although significant EMIs have the anticipated signs, *YR06* itself is insignificant, indicating that the control sample representing companies without manipulation incentives did not have an onrush of reversals in 2006. The interactions of *YR06* with ORIs are either insignificant, or significant and consistent with the predicted signs denoting manipulation weakening (see *YR06*OFFER* and *YR06*SP*), implying that although the new prohibition on reversals did motivate an onrush of reversals in 2006, a strengthened regulatory environment made the ORIs a little weaker (H3).³⁰ Moreover, the interactions of *YR06* with *2LOSS*, *3LOSS*, and *SMOOTH* are all negative, and each regression contains significant interactions, indicating that the net write-downs of OPI companies decreased in magnitude in 2006 compared with the previous years (H4). Since later over-reversals rely on previous over-provisions, such a decrease implies that the new prohibition on reversals did restrain manipulation by over-provisions followed by over-reversals.

V. ROBUSTNESS TESTS

In the above context, we use net write-down ratios as the explanatory variables to reflect the influence of the impairment provisions net of reversals and/or write-offs. To examine unilateral reversals, write-offs, and total reversals, we replace *NET_REV*, *NET_OFF*, and *NET_R_O* respectively with the reversal ratio (*REV*), write-off ratio (*OFF*), and total reversal ratio (*REV_OFF*).³¹ Tables 11 and 12 present the regression results. Since reversals, write-offs, and total reversals are all related to ORIs,

³⁰ In 2006 manipulation through over-reversals did not deteriorate, and some ORIs became even weaker. Such evidence is enough for us to conclude that consolidated regulation has functioned as expected. We cannot count on the strengthened regulations to completely stop impairment manipulation.

³¹ Definitions of three variables are as follows: *REV* = the four impairments' current-year total fair value recovery reversals / the four assets' total beginning net balance; *OFF* = the four impairments' current-year total write-offs due to other reasons / the four assets' total beginning net balance; *REV_OFF* = the four impairments' current-year total reversals / the four assets' total beginning net balance, and total reversals = fair value recovery reversals + write-offs due to other reasons.

Table 9 Influential Factors of *NET_R_O*

Dependent Variable		<i>NET_R_O</i>				<i>NET_R_O</i>			
Sample Year		2003	2004	2005	2003–2005	2006			
Independent Variable	Predicted Sign	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
<i>TP</i>	-	-0.0124	-3.80***	-0.0099	-2.70***	-0.0084	-1.56*	-0.0105	-4.52***
<i>SP</i>	-	-0.0012	-0.70	-0.0035	-2.17**	0.0010	0.57	-0.0014	-1.41*
<i>ISSUE</i>	-	0.0003	0.22	-0.0037	-2.92***	0.0010	0.75	-0.0007	-0.95
<i>ILOSS</i>	+	0.0104	2.57***	0.0115	2.94***	0.0219	4.32***	0.0157	5.90***
<i>2LOSS</i>	+	0.0289	4.08***	0.0259	2.19**	0.0463	4.41***	0.0370	5.72***
<i>3LOSS</i>	+	0.0192	1.08	0.0136	1.59*	0.0132	1.62**	0.0167	1.53*
<i>TURNOVER</i>	+	0.0006	0.19	0.0022	0.55	-0.0037	-0.69	-0.0003	-0.12
<i>SMOOTH</i>	+	-0.0005	-0.22	-0.0007	-0.21	-0.0011	-0.24	-0.0008	-0.38
<i>IND_AROA</i>	-	0.1544	0.54	0.0645	0.64	-0.1580	-1.00	-0.0601	-0.54
<i>IND_AMTB</i>	-	-0.0015	-0.49	-0.0022	-0.46	0.0055	0.52	0.0024	1.16
<i>IND_G_REV</i>	-	0.0056	0.43	0.0077	0.91	0.0057	0.26	0.0068	0.84
Δ <i>MTB</i>	-	0.0000	0.02	0.0006	0.78	0.0023	1.64*	0.0007	1.32
Δ <i>OCF</i>	-	-0.0107	-1.66**	0.0045	0.63	-0.0001	-0.01	-0.0018	-0.41
<i>G_Rev</i>	-	-0.0023	-1.30*	-0.0005	-0.43	-0.0005	-0.11	-0.0009	-0.83
<i>OROA</i>	-	0.0295	1.44	-0.0295	-1.56*	0.0441	1.89*	0.0130	1.05
Cons.		-0.0029	-1.05	-0.0012	-0.33	0.0002	0.03	-0.0013	-0.66
Obs.		1096	1161	1238	3495	1232			
Prob > F		0.0000	0.0000	0.0000	0.0000	0.0000			
Adj-R ²		0.1152	0.1206	0.1562	0.1219	0.1028			

Notes: Industry and year are controlled for but not listed herein. Variables are labelled with one-tailed test significance if the resulting sign accords with prediction, otherwise with two-tailed test significance. ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively. Since *NET_R_O* comprises write-offs, which attract little attention, ORIs for year 2006 are predicted to be negative in sign. Signs of OPIs for year 2006 are predicted based on the necessity of over-provisioning each incentive bears under the new prohibition on reversals. VIF-values listed in this table are all less than 3.

Table 10 *NET_REV* Comparison Between 2006 and Other Years

Dependent Variable	<i>NET_REV</i>						
	2003 + 2006		2004 + 2006		2005 + 2006		
Sample Year	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	
Independent Variable	Predicted Sign						
<i>YR06*TP</i>	+	0.0000	0.01	-0.0035	-1.16	-0.0016	-0.71
<i>YR06*SP</i>	+	0.0022	1.45*	0.0002	0.15	0.0009	0.58
<i>YR06*ISSUE</i>	+	0.0044	2.09**	0.0054	2.58***	0.0034	1.62**
<i>YR06*ILOSS</i>	-	0.0082	1.41	-0.0008	-0.15	-0.0007	-0.13
<i>YR06*2LOSS</i>	-	0.0003	0.03	-0.0119	-0.95	-0.0223	-1.60**
<i>YR06*3LOSS</i>	-	-0.0173	-1.04	-0.0244	-3.39***	-0.0199	-1.48*
<i>YR06*TURNOVER</i>	-	0.0022	0.55	-0.0033	-0.80	0.0010	0.22
<i>YR06*SMOOTH</i>	-	-0.0030	-1.37*	-0.0031	-1.28	-0.0070	-1.60**
<i>YR06</i>	insignificant	-0.0001	-0.09	0.0002	0.11	-0.0013	-0.56
<i>TP</i>	-	0.0003	0.20	0.0023	0.82	0.0019	0.91
<i>SP</i>	-	-0.0018	-2.03**	-0.0012	-1.01	0.0001	0.08
<i>ISSUE</i>	-	-0.0011	-1.94**	-0.0024	-3.57***	0.0002	0.24
<i>ILOSS</i>	+	0.0098	2.34***	0.0163	4.60***	0.0198	4.19***
<i>2LOSS</i>	+	0.0273	3.53***	0.0358	3.29***	0.0500	4.19***
<i>3LOSS</i>	+	0.0236	1.55*	0.0267	5.43***	0.0224	2.13**
<i>TURNOVER</i>	+	-0.0002	-0.05	0.0055	1.74**	0.0006	0.17
<i>SMOOTH</i>	+	0.0022	1.12	0.0042	2.19***	0.0038	0.89
<i>IND_AROA</i>	-	0.1332	1.13	0.0379	0.39	0.1810	2.00**
<i>IND_AMTB</i>	-	-0.0015	-1.09	-0.0019	-0.88	-0.0012	-0.48
<i>IND_G_REV</i>	-	-0.0099	-1.47*	-0.0072	-1.14	-0.0105	-1.08
<i>AMTB</i>	-	0.0000	-0.02	0.0001	0.25	0.0004	1.35
<i>ΔOCF</i>	-	-0.0012	-0.33	0.0034	0.82	0.0032	0.71
<i>G_REV</i>	-	0.0007	0.63	0.0006	0.77	0.0005	0.39
<i>OROA</i>	-	0.0031	0.31	-0.0194	-1.81**	0.0181	1.47
Cons.	?	0.0030	1.80	0.0038	1.41	0.0030	1.00
Obs.		1947		2067		2242	
Prob > F		0.0000		0.0000		0.0000	
Adj-R ²		0.1503		0.1849		0.1680	

Notes: Industry and year are controlled for but not listed herein. Variables are labelled with one-tailed test significance if the resulting sign accords with prediction, otherwise with two-tailed test significance. ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively. VIF-values listed in this table are all less than 10.

Table 11 Tobit Regression: Influential Factors of *REV_OFF* and *REV_OFF*

Dependent Variable		<i>REV</i>			<i>OFF</i>			<i>REV_OFF</i>					
Sample Year		2003–2005	2006	2003–2005	2006	2003–2005	2006	2003–2005	2006				
Independent Variable	Predicted Sign	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value				
<i>TP</i>	+	0.0040	2.09**	-0.0021	-0.72	0.0170	10.21***	0.0107	4.11***	0.0228	10.02***	0.0092	2.77***
<i>SP</i>	+	-0.0001	-0.08	0.0008	0.27	-0.0004	-0.28	0.0002	0.06	-0.0018	-0.91	-0.0010	-0.25
<i>ISSUE</i>	+	0.0000	0.01	0.0002	0.08	0.0010	0.78	0.0002	0.05	0.0007	0.42	0.0000	-0.01
<i>IND_ΔROA</i>	+	-0.1262	-1.24	0.3535	0.88					0.0699	0.53	-0.0439	-0.10
<i>IND_ΔMTB</i>	+	0.0017	0.58	0.0050	1.02					-0.0016	-0.46	0.0067	1.09
<i>IND_G_REV</i>	+	0.0045	0.54	-0.0165	-0.70					0.0000	0.00	-0.0136	-0.48
<i>ΔMTB</i>	+	0.0000	-0.04	0.0000	0.08					-0.0007	-2.21**	0.0008	3.14***
<i>ΔOCF</i>	+	-0.0076	-1.64*	0.0024	0.27					0.0003	0.06	-0.0082	-0.72
<i>G_REV</i>	+	0.0011	1.35	0.0018	1.30					0.0010	0.90	0.0126	6.91***
<i>ORA</i>	+	-0.0095	-1.20	-0.0115	-0.81					-0.0396	-4.28***	-0.0646	-3.78***
Cons.	?	-0.0198	-6.08***	-0.0204	-3.94***	-0.0138	-6.49***	-0.0155	-3.93***	-0.0159	-4.26***	-0.0168	-2.69***
Obs.		2713	1181	1181	1181	2713	2713	1181	1181	2713	2713	1181	1181
Prob > chi2		0.1260	0.0492	0.0492	0.0492	0.0000	0.0000	0.0023	0.0023	0.0000	0.0000	0.0000	0.0000
Pseudo R2		-0.0932	-0.1117	-0.1117	-0.1117	-0.0389	-0.0389	-0.0184	-0.0184	-0.0570	-0.0570	-0.0572	-0.0572
Log likeli.		167.35	150.32	150.32	150.32	1662.41	1662.41	847.50636	847.50636	1558.37	1558.37	886.11	886.11

Notes: Industry and year are controlled for but not listed herein. Predicted signs given are not applicable to regressions on year 2006. ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively.

Table 12 Tobit Regression: Comparison Between 2006 and Other Years

Dependent Variable	REV			REV			
	Sample Year	2003 + 2006	2004 + 2006	2005 + 2006	Coefficient	t-value	
Independent Variable	Predicted Sign	Coefficient	t-value	Coefficient	t-value	t-value	
<i>YR06*TP</i>	- / insignificant	-0.0114	-2.69***	0.0105	1.29	-0.0062	-1.37*
<i>YR06*SP</i>	- / insignificant	0.0022	0.42	-0.0030	-0.65	0.0032	0.77
<i>YR06*ISSUE</i>	- / insignificant	0.0001	0.02	-0.0036	-0.88	0.0015	0.40
<i>YR06</i>	insignificant	0.0012	0.33	0.0020	0.43	-0.0003	-0.09
<i>TP</i>	+	0.0100	2.90***	-0.0125	-1.33	0.0046	1.22
<i>SP</i>	+	-0.0012	-0.27	0.0039	1.09	-0.0025	-0.79
<i>ISSUE</i>	+	-0.0004	-0.15	0.0034	1.27	-0.0018	-0.75
<i>IND_AROA</i>	+	0.0936	0.33	-0.4006	-1.70*	0.0370	0.24
<i>IND_AMTB</i>	+	0.0045	1.42	0.0086	2.11**	0.0050	1.41
<i>IND_G_REV</i>	+	0.0122	0.83	0.0099	0.65	-0.0050	-0.43
<i>AMTB</i>	+	0.0002	0.95	-0.0001	-0.26	0.0000	0.04
<i>ΔOCF</i>	+	-0.0046	-0.74	-0.0032	-0.46	-0.0010	-0.18
<i>G_REV</i>	+	0.0014	1.27	0.0022	2.15**	0.0019	1.76*
<i>OROA</i>	+	-0.0072	-0.69	-0.0174	-1.56	-0.0090	-0.94
Cons.	?	-0.0226	-5.49***	-0.0263	-4.55***	-0.0199	-4.83
Obs.		1947		2067		2242	
Prob > chi2		0.0000		0.0000		0.0001	
Pseudo R2		-0.1979		-0.2108		-0.1434	
Log likeli.		213.78		174.50		225.21	

Notes: Industry and year are controlled for but not listed herein. Variables are labelled with one-tailed test significance if the resulting sign accords with prediction, otherwise with two-tailed test significance. ***, **, and * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively.

by reference to Chen *et al.* (2007), these models do not contain any OPIs such as *ILOSS*. Since *REV*, *OFF*, and *REV_OFF* are all unilaterally restricted on the below-zero side, these models are run using the Tobit regression, but not the OLS regression (Maddala, 1991; Francis *et al.*, 1996; Chen *et al.*, 2007). For simplicity, we do not provide the results for each year between 2003 and 2005, but present the total results for the combined three years. The Tobit regressions for *REV*, *OFF*, and *REV_OFF* in Table 11 correspond to the OLS regressions in Tables 7, 8, and 9, respectively. Table 12 corresponds to Table 10.

The results in Tables 11 and 12 do not contradict the above main test results, except that the significance of some variables weakens, indicating that the above-mentioned results are robust. The significance of some incentives also weakens, probably because unilateral reversing or writing off without provisioning makes the results “noisy”. With the Tobit regressions, *TP* is the significant ORI, consistent with the results of the OLS regressions on *NET_OFF* and *NET_R_O*.

In terms of logical analysis, over-provisioning is equivalent to less reversing or no reversing, so we predict that OPIs will be negatively related to the reversal ratio (*REV*) and total reversal ratio (*REV_OFF*). In additional tests, we put the five OPI variables into the Tobit models and find that these incentives are either negative or insignificant, consistent with our prediction. For simplicity, the results are not listed herein.

In addition, we change the ROE-based definition ranges of *SP* and *ISSUE* to [0, 0.01) and [0.06, 0.075), respectively, and change the denominator for calculating the net write-down ratios to the current year-end net assets of the four impairments plus the current-year net impairment provisions. We find that the above conclusions are qualitatively unchanged. For simplicity, the results are not listed herein.

VI. CONCLUSIONS AND IMPLICATIONS

Focusing on the new prohibition on reversals with respect to LAIs, and the fact that accounting regulations were accordingly strengthened in 2006, this paper reaches the following four conclusions through theoretical analyses and empirical tests on the four restricted impairments of long-lived equity investment, fixed assets, intangible assets, and constructions in progress.

First, current empirical research on earnings management (or accounting manipulation) focuses on how institutional factors (especially contract terms involving accounting numbers) first induce EMIs, and then lead to accounting manipulation. This follows a thinking pattern that incentives determine behaviour, and ignores restrictive factors like accounting regulation. Because 2006 was the transitional year for enforcing the new accounting standards, listed companies probably had motivation to reverse previously accrued LAIs on a large scale, while accounting regulation was evidently consolidated in that year. Based on these facts, this paper finds that the anticipated onrush of over-reversals did not arise in that year, and some ORIs even became weaker than before. The results indicate that improving the regulatory environment does help restrain accounting manipulation; therefore,

it should be taken into account when studying earnings management. Furthermore, there is a bit of evidence for the effect of China's mode of accounting regulation, which mainly consists of ad hoc administrative supervision and differs from that of Western countries. Tests in this paper show that this regulatory pattern does have some effect.

Second, judging that impairment reversals are used for earnings management, accounting standard makers would rather maintain a material difference between Chinese standards and International Financial Reporting Standards (IFRS)³² than give up the new prohibition on reversals. However, this judgement lacks direct empirical evidence from the four restricted LAIs, because current empirical research on impairments in China is generally pertinent to the four impairments that existed before 2001 or the eight impairments between 2001 and 2005, whereas LAIs differ from SAIs in how they are used. This paper finds that between 2003 and 2005, the provisioning and reversal of the four LAIs were indeed influenced by EMIs, and the influential power of EMIs surpassed that of economic factors, indicating that the new prohibition is grounded in fact.

Third, because of limited data availability, existing studies basically regard reversals and write-offs collectively as reversals and simply apply their conclusions when judging reversals (fair value recovery reversals), leading to the neglect of write-off manipulation. This paper discovers the possibility of using impairment reversal to manipulate earnings through theoretical analyses, and verifies that nominally real transaction-based writing off is probably a covert means of reversing impairments. Our empirical evidence includes the fact that the occurrence frequency and magnitude of the write-offs surpass those of the reversals, and that the net write-down ratios involving write-offs or the write-off ratio itself is significantly related to various EMIs. These results indicate that we cannot simply rely on forbidding "fair value recovery reversals" to eradicate impairment manipulation, but should consolidate audits on "write-offs due to other reasons".

Fourth, this paper finds that ORI companies' net write-downs obviously decreased in magnitude in 2006. Since later over-reversals depend on former over-provisions, such a result indicates that the new prohibition on reversals has hindered impairment manipulation.

REFERENCES

Please refer to pp. 30–31.

³² According to a news item issued by the MOF on 16 November 2005 (MOF, 2005b), the co-declaration signed by the Secretary-General of China Accounting Standard Committee and the Chairman of the International Accounting Standard Council recognises that the prohibition on reversals of impairment is one of three material differences between Chinese Accounting Standards and International Financial Reporting Standards.