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# IFRS的强制采用、新法律实施与应计及真实盈余管理◆

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## 摘要

本文研究新法律实施、IFRS的强制采用分别对应计与真实盈余管理的影响。利用我国独有的2003至2008年的制度环境，本研究发现：首先，在新法律实施以后，公司的应计盈余管理行为尽管得到了一定的抑制，但这是公司选择激进会计政策的结果。同时，新法律实施以后，公司的真实盈余管理在费用方面显著增加，在现金流方面和产品成本方面显著下降，综合真实盈余管理显著下降，真实盈余管理整体在调节利润方面则没有明显的一致方向。这与Cohen（2008a）的发现不一致，表明我国新法律的实施可能没有对公司的盈余管理行为产生象SOX法案那样明显的治理效果。其次，与IFRS趋同的新会计准则在我国实施以后，公司的应计盈余管理增加了，而公司整体真实盈余管理水平则没有变化，真实盈余管理带来了利润的下降。

关键词：新法律、新会计准则、IFRS、应计盈余管理、真实盈余管理
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## 一、问题的提出

近年来，关于国际财务报告准则（IFRS，下同）的采用是否能提高会计信息质量、抑制盈余操纵行为是一个争论激烈的热点问题。一种有代表性的观点（Leuz *et al.*, 2008; Hail *et al.*, 2009）认为，仅仅改变会计准则可能无助于提高会计信息质量、抑制公司的盈余操纵行为，各国的制度环境如司法体系等也是影响会计信息质量的重要方面（Leuz *et al.*, 2003; Cohen *et al.*, 2008a）。Cohen *et al.*（2008a）研究了在美国规则导向会计准则的前提下，法律对应计与真实盈余管理的影响，发现SOX法案的实施使美国公司从应计盈余管理转向了真实盈余管理。Barth *et al.* (2008)则研究发现，在自愿采用IFRS的情况下，IFRS的自愿采用有助于抑制公司的应计盈余管理行为。Ahmed *et al.* (2010)则发现，在强制采用IFRS的情况下，IFRS的采用带来了更大的应计盈余管理，在投资者保护较好的国家这种现象尤为明显。但是，究竟会计准则和司法体系分别在提高会计信息质量、抑制盈余操纵行为方面扮演了何种角色，尤其是在强制采用IFRS的背景下，则还有待进一步研究。而且，关于强制采用IFRS对公司应计与真实盈余管理的影响，目前还尚无相关的直接经验证据。此外，公司会采用多种方式进行盈余管理（Zang, 2007），包括应计盈余管理和真实盈余管理，每种具体盈余管理方式所需的成本也不相同。那么，在不同法律环境和会计准则下，公司会怎样选择具体的盈余管理方式组合呢？这也是值得关注的问题。鉴于此，本文研究新法律实施、IFRS的强制采用及应计与真实盈余管理的关系。

目前，世界各国实施的会计准则主要分为三类，第一类是原则导向的会计准则，如2005年以后欧盟各成员国采用的就是原则导向的IFRS，第二类就是北美实施的规则导向的会计准则，如美国会计准则等，第三类就是介于这两类之间的会计准则，如2007年之前的中国会计准则等。尽管Cohen *et al.*（2008a）发现在美国的规则导向会计准则下，SOX法案的实施限制了公司的应计盈余管理行为，使公司转向了真实盈余管理操纵方式，但这个结论之后尚无进一步的证据支持。这是因为：（1）Cohen *et al.*（2008a）的发现是基于规则导向的会计准则，尚无法据此判断，在其它类型会计准则的前提下，法律的趋严是否会对盈余管理行为产生同样的影响；（2）目前，投资者保护最好的是北美、欧洲等一些成熟市场经济国家和地区（Leuz *et al.*, 2003），中国大陆作为转型经济体，司法不独立，即使法律有所完善，但在法律执行层面等和发达地区相比仍还存在一定的差距，那么，在这种情况下，法律规定的趋严是否会对盈余管理行为产生像SOX法案类似程度的影响，尚不得而知；（3）转型经济作为一股新兴的经济力量，它和成熟市场经济相比，一个明显不同就是公司的财务行为会存在一些系统性的差异，那么，在转型经济下，法律与会计准则的配置关系（刘启亮，2006）是否会对公司的盈余管理行为产生一些有别于成熟市场经济的影响呢？这也不得而知。因此，利用处于转型经济中的中国大陆地区的A股上市公司数据，来分析在第三类会计准则的基础上，法律规定的趋严对应计与真实盈余管理的影响，这既可以对Cohen *et al.*（2008a）等人的发现提供进一步的佐证证据，也可以拓展该结论的适用范围。

同时，由于原则导向会计准则与规则导向会计准则的差异，可能会对应计盈余管理行为产生一些诱致性的影响，进而引起真实盈余管理的变化。根据SEC的研究，以规则为基础的会计准则是以界线检验、大量例外事项、内容十分具体和准则

内在的不一致为特征的。它被普遍认同存在三个重大缺陷(SEC, 2003):(1)有太多的界线标准,它们最终会被财务工程师作为依据,仅仅遵循这些字面的东西,而不太注重准则的精神实质;(2)有众多的原则例外,从而导致对于具有类似经济实质的交易或事项,其会计处理却截然不同;(3)更加要求庞大详尽的应用准则的操作指南,容易造成准则应用中的复杂性和关于准则运用的不确定性。这样,如实践所表明的那样,在以规则为基础的会计准则下,尽管操纵盈余的难度相对较大,公司仍会通过操纵交易来满足一些分界线的要求,据此操纵会计信息,形成形式上遵循而实质上不遵循准则的现象。与此相反,以原则为基础的会计准则包括一个关于主要会计原则的简明扼要的陈述,在这些陈述中会计目标是会计原则的一个重要组成部分,并很少有(如果有的话)与这些原则例外或不一致的地方。同时,准则应该根据交易的种类和实质提供足够的实务指南,但应避免界线检验。此外,此类准则还应符合并且来源于具有一致性的财务会计概念框架。这样,原则导向会计准则也给了公司更大的会计政策选择空间。在其他条件相同的情况下,相比于规则导向会计准则,在原则导向的会计准则下通过应计项目来操纵利润的难度会相对变小,可能不再需要通过操纵交易来满足分界线的要求,而且,操纵利润以后被发现的可能性更小,因此,应计盈余管理的成本会相对较小,公司可能会直接利用原则导向准则给予的灵活性来操纵利润,而不愿选择所需成本较高的真实盈余管理。那么,为什么很多国家会转向原则导向的会计准则呢?这是因为准则制定者试图通过原则导向会计准则纳入管理当局和审计师的责任心,促使其按经济交易的实质来提供财务信息,进而提高会计信息的质量。那么,由此产生的一个重要问题是,公司管理层作为自利的经济人,在规则导向的会计准则下采取形式上遵循而实质上规避的种种手段来操纵会计信息,为什么在原则导向的会计准则下,他们就会提高了责任心按经济实质来提供会计信息呢? 更何况原则导向的会计准则给其操纵盈余提供了更大的灵活空间。因此,这也需要相关经验证据来验证。

我国近年来在法律和会计准则上的实施情况,则为研究上述问题提供了一个较好的独特环境。一方面,我国从2006年1月1日实施新的《公司法》和《证券法》。它们的一个显著变化就是,健全了对股东尤其是中小股东利益的保护机制,明确了股东的权利,增加了相关责任人的民事赔偿责任。具体而言,主要包括以下三个方面:(1)明确规定了相关责任人和审计师的民事责任。[2]如新《证券法》第173条规定,证券服务机构为证券的发行、上市、交易等证券业务活动制作、出具审计报告等文件,应当勤勉尽责,对所制作、出具的文件内容的真实性、准确性、完整性进行核查和验证。其制作、出具的文件有虚假记载、误导性陈述或者重大遗漏,给他人造成损失的,应当与发行人、上市公司承担连带赔偿责任……。(2)新公司法规定了董

[2] 在新《公司法》颁布之前,我国曾颁布过两个司法解释规定,要求审计师对虚假陈述承担民事赔偿责任。一是2002 年实行的《最高人民法院关于受理证券市场因虚假陈述引发的民事侵权纠纷案件有关问题的通知》,该通知规定:"人民法院受理的虚假陈述民事赔偿案件……,须经中国证券管理委员会及其派出机构调查并作出生效处罚决定。当事人依据查处结果作为民事诉讼事实依据的,人民法院方予以受理。"此通知对民事责任的实施规定了附加条件,因而影响有限。二是2003 年2 月1 日施行的《最高人民法院关于受理证券市场因虚假陈述引发的民事赔偿案件的若干规定》。该规定第六条规定: 投资人以自己受到虚假陈述侵害为由,依据有关机关的行政处罚决定或者人民法院的刑事裁判文书,对虚假陈述行为人提起的民事赔偿诉讼,符合民事诉讼法第一百零八条规定的,人民法院应当受理。第三十条规定,虚假陈述行为人在证券交易市场承担民事赔偿责任的范围,以投资人因虚假陈述而实际发生的损失为限。这些司法解释规定对民事赔偿诉讼做出了一些限制性规定,可能减弱了它们的影响。

事、监事、高级管理人员应当遵守法律、行政法规和公司章程，对公司负有忠实义务和勤勉义务。他们执行公司职务时违反法律、行政法规或者公司章程的规定，给公司造成损失的，应当承担赔偿责任。董事应当对董事会的决议承担责任。股份有限公司董事会的决议违反法律、行政法规或者公司章程、股东大会决议，致使公司遭受严重损失的，参与决议的董事对公司负赔偿责任……。(3) 做出了股东代表诉讼等强化对中小股东利益保护的新规定。根据新公司法第152条第2款和第3款的规定，监事会、不设监事会的有限责任公司的监事，或者董事会、执行董事收到本条第1款规定的股东书面请求后拒绝提起诉讼，或者自收到请求之日起三十日内未提起诉讼，或者情况紧急、不立即提起诉讼将会使公司利益受到难以弥补的损害时，第1款规定的股东有权为了公司的利益以自己的名义直接向人民法院提起诉讼。第153条还规定，董事、高级管理人员违反法律、行政法规或者公司章程的规定，损害股东利益的，股东可以向人民法院提起诉讼。同时，从2003年至2006年，我国的会计准则较为稳定。这就为我们检验法律趋严对公司应计与真实盈余管理的影响，提供了较好的独特条件。另一方面，从2007年1月1日起，我国上市公司被要求强制采用与IFRS趋同的新会计准则，在此之前，我国实施的是主要借鉴于美国会计准则的中国会计准则，这样，从2005年[3]至2008年我国公司面临的法律环境基本相同而实施的会计准则不一样，这就为我们研究IFRS的强制采用对公司应计与真实盈余管理的影响，提供了恰当的检验环境。因此，本文使用我国上市公司2003-2008年的数据来研究上述两个问题。

本研究主要发现：首先，在新法律实施以后，公司的应计盈余管理行为尽管得到了一定的抑制，但公司的*DA*显著增加，正向应计盈余管理显著增加、负向应计盈余管理显著下降。这是公司采用激进会计政策调高利润的表现。同时，新法律实施以后，公司的真实盈余管理在费用方面显著增加，在现金流方面显著下降，在产品成本方面也显著下降，综合真实盈余管理显著降低。表明公司通过真实盈余管理在同时调增和调低利润，真实盈余管理整体在调节利润上则没有一致性的方向。这与Cohen *et al.*(2008a)的发现不一致。

其次，与IFRS趋同的新会计准则在我国实施以后，公司的应计盈余管理增加了，与此同时，公司的整体真实盈余管理水平则没有变化，真实盈余管理带来了利润的下降。这可能表明，应计与真实盈余管理是公司管理盈余的一套组合方式(Zang, 2007)，当公司的应计盈余管理成本增大以后，公司就会转向真实盈余管理。反之，当应计盈余管理的成本降低以后，公司就会减少所需成本较高的真实盈余管理转向应计盈余管理。这与Barth *et al.*(2008)基于自愿采用IFRS的发现不一样，他们发现公司自愿采用IFRS以后，应计盈余管理显著降低了，与Ahmed *et al.*(2010)的发现部分一致，即强制采用IFRS以后，应计盈余管理增加了。这可能是由于公司自愿采用IFRS和强制采用IFRS存在系统性偏差所致，自愿采用是公司的一种选择，而强制采用则反应了整个上市公司的情况，没有自选择问题。

本文的贡献在于：首先，本文首次研究了在强制采用IFRS的前提下，IFRS的强制采用对应计与真实盈余管理的影响。其次，本文较好地分别研究了法律环境和会

[3] 这里所说的年度是针对财务报告年度而言的。我国2005 年的财务报告在2006 年1 月1 日后经过审计之后披露，因此会受到新法律的影响。

计准则对公司应计与真实盈余管理的影响，避免了现有的一些研究无法有效地区分法律环境和会计准则对应计与真实盈余管理影响的情况（Leuz *et al.*, 2003; Cohen *et al.*, 2008a）。最后，本文发现处于转型中的中国大陆实施的新法律对盈余管理行为并没有产生像SOX法案那样明显的治理效果，这表明法律体系的差异确实会给公司的盈余管理行为带来不同的影响，同样的法律趋严行为在成熟市场经济与转型经济产生了不同的结果，支持了一些学者（Leuz *et al.*, 2008; Hail *et al.*, 2009）的观点，进一步丰富了Barth *et al.*（2008）的研究，并与Leuz *et al.*（2003）、Cohen *et al.*（2008a）和Ahmed *et al.* (2010)的发现形成互补。

本文后面的安排如下：第二部分是文献综述与研究假说，第三部分是研究设计与描述性统计，第四部分是实证结果分析，第五部分是进一步分析与稳健性测试，最后是结论与总结。

## 二、文献综述与研究假说

### 2.1 文献综述

尽管有一些文献（Hunt, Moyer and Shevlin, 1996; Beatty, Chamberlain and Magliolo, 1995; Gaver and Paterson, 1999; Barton, 2001; Pincus and Rajgopal, 2002）研究公司使用多种方式进行盈余管理的情况，但是到现在，主要的文献还是应计盈余管理研究为主（如：Jones, 1991; Defond and Jiambalvo, 1994; Dechow *et al.*, 1995; Kothari *et al.*, 2005），只是近期有少数学者才开始同时关注应计和真实盈余管理两种方式。Roychowdhury（2006）认为，真实盈余管理是由于管理层试图误导一些股东，以使其相信公司通过正常经营活动达到了既定的财务目标，通过偏离正常经营情况的真实经营活动来操纵利润的行为。最初对于真实盈余管理的研究（Bens *et al.*, 2002, 2003; Dechow and Sloan, 1991; Baber *et al.*, 1991; Bushee, 1998; Zarowin *et al.*, 2005; Osma and Young, 2009; Seybert, 2009）主要集中在通过减少研发费用来降低费用开支以增加利润的情况。Wang（2006）发现当会计灵活空间小（高）时，管理层更（不）可能削减研发支出。然而，对于研发费用之外的其他真实盈余管理的研究，则没有发现一致的证据（Anderson *et al.*, 2003; Chapman *et al.*, 2005; Cohen *et al.*, 2009）。Gunny（2005）发现真实盈余管理对公司未来业绩有负面影响，Roychowdhury（2006）发现为了避免年度报告亏损，公司利用真实盈余管理（包括经营活动现金流操纵、产品成本操纵和费用操纵）来进行盈余管理的证据。Edelstein *et al.*（2007）发现由于受股利支付的约束，公司会通过真实盈余管理来减少税收性收入以满足股利支付的要求。Athanasakou *et al.*（2009）发现市场并不会奖励通过盈余管理（含真实盈余管理）来满足分析师预测的公司。

近年来，一些学者开始同时注意应计与真实盈余管理。Zang（2007）发现公司在操纵利润时，会相互替代性地使用应计与真实盈余管理方式，同时也发现诉讼风险加重以后，公司会从应计盈余管理转向真实盈余管理。Chen *et al.* (2008)发现市场并不能辨别应计与真实盈余管理。Lin *et al.*（2006）发现公司会使用一套盈余管理的方式（包括真实盈余管理）来满足分析师的盈利预测目标。Cohen *et al.*（2008a）发现在2002年SOX法案通过之前，公司应计盈余管理逐年稳定地增加，但是在实施该法案

之后，应计盈余管理则显著下降，而真实盈余管理则恰好与此相反，是先降后升。这就说明，该法案通过之后，公司盈余管理方式从应计盈余管理转向了真实盈余管理。Cohen *et al.*（2008b）则发现为了股票增发（SEOs），公司使用了真实与应计盈余管理两种方式。Kim *et al.*（2009）研究了公司的权益资本成本是否以及怎样受公司真实盈余管理程度的影响，发现公司的真实与应计盈余管理加剧了外部投资者所面临信息的不确定性，其中真实盈余管理带来的不确定比应计盈余管理更严重，因此，市场对真实盈余管理比对应计盈余管理会要求更高的风险溢价。

## 2.2 研究假说

以前，我国的《公司法》等对中小投资者的利益保护较差，如对虚假记载、误导性陈述财务报告仅规定了行政责任和刑事责任，[4]而无需承担民事责任。2002年和2003年的司法解释规定对审计师提出了民事赔偿责任的要求，但由于一些限制条件，一直没有产生较大的影响。2006年1月1日实施的新《公司法》和《证券法》，规定公司和审计师因虚假财务报告不仅要受到行政处罚和承担刑事责任，而且还要承担民事赔偿责任，从而加重了对公司管理层和事务所等中介机构的处罚力度。此外，还做出了股东代表诉讼等强化对中小股东利益保护的新规定以及进一步强化了公司治理等。这样，新法律的实施可能会对管理层和事务所产生威慑作用，提高了预期的风险水平和盈余操纵的难度。具体表现在三个方面：一是新法律对公司治理的强化可能会增大管理当局操纵应计盈余管理的难度；二是股东代表诉讼、民事责任赔偿规定等可能会对管理层操纵盈余的行为产生阻吓作用，会使他们在操纵盈余时，需要考虑到由此带来的各种后果；第三是审计师的民事赔偿责任可能会使审计师对公司的盈余操纵行为保持高度的谨慎性，也会增大公司应计盈余管理的难度。这样，由于应计盈余管理的难度增加，其成本也会增加。

同时，公司的盈余管理方式有应计盈余管理和真实盈余管理两种主要方式（Zang, 2007; Cohen *et al.*, 2008a; Roychowdhury, 2006）。两种盈余管理方式都会需要一定的成本（Wang, 2006），至于公司采取何种具体盈余管理方式，取决于两种盈余管理方式所需的成本对比（Zang, 2007; Cohen *et al.*, 2008a）。由于新法律的实施增大了管理层操纵盈余的风险，也会使事务所更加谨慎地审计，公司应计盈余管理的难度可能会加大（Leuz *et al.*, 2003），进行盈余管理管理以后的风险也会增加，如严重的盈余管理可能会带来股东的诉讼，融资成本可能会增加等，因而，应计盈余管理的成本可能会增加。那么，公司为了调整业绩等，就可能会采取真实盈余管理方式，因为真实盈余管理是以实际的交易为基础，受到法律的约束较弱。因此，在法律责任趋严、应计盈余管理的成本增加以后，相对来说，真实盈余管理的成本相对会降低。Ewert and Wagenhofer（2005）通过模型分析认为会计准则的严厉执行会增大应计盈余管理的难度进而会使公司降低应计盈余管理，但同时带来的一个后果就是

[4] 需要说明的是：应计盈余管理并不完全等同于虚假财务报告或误导性陈述。根据Leuz *et al.*（2003），应计盈余管理包括盈余平滑（earnings smoothing measures）和盈余操纵（earnings discretion measures），当投资者保护较好时，投资者保护会对管理层的私人控制利益产生抑制作用，进而会降低公司用以隐藏私人控制利益的应计盈余管理行为。简言之，当要求虚假记载、误导性陈述财务报告承担民事赔偿责任时，就可能会对盈余管理产生抑制作用。

真实盈余管理会增加。Zang（2007）和Cohen *et al.*（2008a）为此进一步提供了分析证据和经验证据，他们发现，对会计准则执行的严厉监管会导致公司更多地选择真实盈余管理而减少操作难度小的应计盈余管理。这样，我国新法律实施以后，公司的应计盈余管理可能会降低，同时，真实盈余管理会增加。[5]因此，我们提出假设H1：

**H1：在其它条件相同的情况下，新法律的实施会抑制公司的应计盈余管理空间，与此同时，公司的真实盈余管理会相应增加。**

一般而言，应计盈余管理主要是利用会计准则的灵活性进行账面上的调整，会计准则的灵活性越大，盈余管理的难度就越小，所需成本也越少。从事后的角度来看，如果准则的灵活度较大，进行应计盈余管理以后被发现的概率也会较小，即使发现以后申辩的难度也会较小，从而有利于应计盈余管理（Wang, 2006），相反，如果会计准则的可操纵空间较小，进行应计盈余管理的难度就会较大，较大幅度的应计盈余管理也会受到公司治理、审计师审计的抑制，也容易被分析师等发现且其申辩难度较大，并且可能导致融资成本的增加等。而真实盈余管理则可能涉及真实交易业务的操纵，需要其他公司和部门的配合，操纵的难度较大，每次操纵所需的成本相对较高（Cohen and Zarowin, 2008b）。

如前所述，规则导向的会计准则是以界线检验、大量例外事项、内容十分具体和准则内在的不一致为特征的，因此，如要通过会计方法的选择来从账面上调节利润，就须先通过操纵交易来满足分界线的标准要求。因此，会计人员仅从账面上来调节利润的空间就相对较小。相反，IFRS是原则导向，相比于规则导向会计准则，分界线少，会计处理方法的灵活性较大，需要会计人员基于交易的实质运用大量的职业判断来确定经济业务的会计处理方法（SEC, 2003），因此，会计人员的业务处理弹性空间较大。Barth *et al.*（2008）认为这种内生的弹性空间就给了公司更大的机会来操纵盈余。而我国旧会计准则尽管也借鉴了IFRS的一些方法，但主要是以美国会计准则的模式为主来制定的，因此，相比于IFRS，会计准则的灵活性要小一些，应计盈余管理的难度就会大一些。这样，我国采用与IFRS趋同的新准则以后，就可能使应计盈余管理的成本降低，从而使真实盈余管理的成本会相对增加。尽管IFRS要求管理当局和审计师要有责任心，基于业务的经济实质来提供会计信息，但由于他们也是自利的经济人，他们可能会乘机利用IFRS的灵活性来进行盈余管理。Ahmed *et al.* (2010)也发现，在强制采用IFRS的情况下，IFRS的采用带来了更大的应计盈余管理。基于此，本文提出假设H2：

**H2：在其它条件相同的情况下，IFRS的强制采用会使公司的应计盈余管理增加，与此同时，公司的真实盈余管理会降低。**

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[5] 当然，司法体系的效率取决于两个方面的联合作用：一是相关法律规定的完善，二是法律的执行力度。当法律的执行较差的时候，即使法律有所完善，也仍然无法提高司法体系的威慑力。从目前来看，我国的司法不独立，法律的执行较差，可能会影响司法体系对应计盈余管理的治理作用，这样，其对应计盈余管理的治理作用可能就没有美国SOX 法案那样明显。在此情况下，就可能仍然使应计盈余管理的成本低于真实盈余管理的成本。因此，在此文中，这也是一个有待检验的问题。

## 三、研究设计与描述性统计

### 3.1 应计与真实盈余管理的计量

对于应计盈余管理，我们使用修正的Jones模型（Dechow *et al.*, 1995）来计算。[6] 首先，运用不同行业不同年份的数据对模型（1）进行OLS回归取得参数 $\alpha_1$，$\alpha_2$，$\alpha_3$，再将其代入模型（2）中计算得出不可操纵性应计数，最后将计算所得的不可操纵性应计数代入模型（3）估计出可操纵性应计数（$DA_t$）。

$$TA_t A_{t-1} = \alpha_1 (1 / A_{t-1}) + \alpha_2(\Delta REV_t / A_{t-1}) + \alpha_3(PPE_t / A_{t-1}) + \varepsilon_t \quad (1)$$

$$NDA_t = \alpha_1 (1 / A_{t-1}) + \alpha_2(\Delta REV_t / A_{t-1} - \Delta REC_t / A_{t-1}) + \alpha_3(PPE_t / A_{t-1}) \quad (2)$$

$$DA_t = TA_t / A_{t-1} - NDA_t \quad (3)$$

这里，$TA_t = NT_t - CFO_t$，其中$NT_t$为第t期经营利润，$CFO_t$为第七期的经营活动现金流量，$A_{t-1}$为第t-1期期末总资产，$NDA_t$为经过t-1期期末总资产调整后的第t期的非操控性应计数，$\Delta REV_t$为第t期和第t-1期主营业务收入的差额，$\Delta REC_t$为第t期和第t-1期应收帐款的差额，$PPE_t$为第t期期末总的厂场、设备等固定资产原值。

对于真实盈余管理，我们仿照Roychowdhury（2006）和Cohen *et al.*（2008a），用异常经营活动现金流、可操控性费用和异常产品成本来计量。首先，我们计算出正常的经营活动现金流、不可操控性费用和正常产品成本，基于此，分别算出异常经营活动现金流、可操控性费用和异常产品成本。

首先，根据Dechow *et al.*（1995），正常的经营活动现金流和销售额存在如式（4）的线性关系，通过回归可计算出正常经营活动现金流，再用实际的经营活动现金流减去正常的经营活动现金流，就得到异常经营活动现金流。通过折扣和赊销等可以扩大销售，增加公司盈利，但反过来可能会使公司的经营现金流降低。也就是说，由于来自经营活动的现金流的异常降低可能是通过销售折让、折扣等促销活动形成的。因此，现金流的异常降低可能增大了公司的盈利，反之，则调低了公司的盈利水平。

$$CFO_t / A_{t-1} = \alpha_0 (1 / A_{t-1}) + \beta_1(S_t / A_{t-1}) + \beta_2(\Delta S_t / A_{t-1}) + \varepsilon_t \quad (4)$$

产品成本就是销售产品成本加上当年存货的变动额。销售产品成本和当年销售存在如式（5）的线性关系。

$$COGS_t / A_{t-1} = \alpha_0 (1 / A_{t-1}) + \beta(S_t / A_{t-1}) + \varepsilon_t \quad (5)$$

存货变化额和当期及上期销售变动额存在如式（6）的线性关系。

$$\Delta INV_t / A_{t-1} = \alpha_0 (1 / A_{t-1}) + \beta_1(\Delta S_t / A_{t-1}) + \beta_2(\Delta S_{t-1} / A_{t-1}) + \varepsilon_t \quad (6)$$

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[6] 我们同时也使用了Ball and Shivakumar（2006）的模型来做稳健性检验。

根据式(5)和(6)，我们用式(7)来估计正常的产品成本。公司实际的产品成本减去正常的产品成本就是异常的产品成本。产品成本的增加主要来自产品产量的增加，产量的增加则导致单位产品固定费用的减少，因此，异常产品成本的增加就可能会导致单位产品的获利能力的提高，进而会提高公司的利润，反之，就降低公司的利润。

$$PROD_t / A_{t-1} = \alpha_0 (1 / A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \beta_3 (\Delta S_{t-1} / A_{t-1}) + \varepsilon_t \quad (7)$$

同时，我们使用式(8)来估计不可操控性费用。公司实际的费用减去不可操控性费用，就是可操控性费用。可操控费用的增加会使公司的利润降低，反之，则使公司利润增加。

$$DISEXP_t / A_{t-1} = \alpha_0 (1 / A_{t-1}) + \beta (S_t / A_{t-1}) + \varepsilon_t \quad (8)$$

在上述公式中，$CFO_t$是当年来自经营活动的现金流量净额，$S_t$是当年的销售收入，$\Delta S_t$是当年和上年销售收入的变化额，$\Delta S_{t-1}$是上年和上上年销售收入的变化额，$\Delta INV_t$是当年和上年存货变化额。$COGS_t$是当年的产品销售成本。$PROD_t$是当年的产品成本，由当年的销售产品成本和存货变化额组成。$DISEXP_t$[7]是当年的可操控性费用，包括当年的销售费用和管理费用。异常经营活动现金流、异常产品成本和异常费用均是实际数与预期正常数之间的差额。我们使用这三个指标来代表真实盈余管理。异常经营活动现金流的增加、异常产品成本的降低和异常费用的增加，则分别表示公司的利润被调低，反之，则表示公司的利润被调高。那么，公司如果要向上操纵利润，就可能使用下面一种或多种真实盈余管理的方法：异常低的经营活动现金流、和(或)异常低的可操纵性费用、和(或)异常高的产品成本，因此，为捕获到这一点，仿照Cohen *et al.*(2008a)，我们也将这三个指标之和作为真实盈余管理的总体计量指标(*RM_PROXY*)，以此表示真实盈余管理的程度，该指标越大，表示真实盈余管理的程度越高，反之，表示越低。当然，正如Cohen *et al.*(2008a)所说，三个真实盈余管理的个体指标也有其独特的信息含量，它们变化方向的含义也不一致，会存在相互抵消的关系，仅用总体计量指标来分析可能会遗漏一些信息，因此，本文会同时使用三个个体指标和一个总体指标来计量真实的盈余管理水平。

此外，为增加稳健性，根据三个指标变化方向的含义，本文也将综合真实盈余管理指标按照式(9)计量。[8]该指标的含义是，*NRM_PROXY*高则意味着公司调高了利润，反之，则表示公司调低了利润。

$$NRM\_PROXY = -R\_CFO + R\_PROD - R\_DISX \quad (9)$$

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7 这个指标包括研发费用、广告费用和销售与管理费用。但在我国，公司没有专门披露公司当年转入费用的研发费用和广告费用，而是把它们包含于销售费用、管理费用等里面了。所以，在本文中，该指标只包含了销售费用和管理费用两个项目。

8 关于综合真实盈余管理的计量，感谢匿名审稿人提出的富有建设性的修改意见。

需要说明的是：在计算*DA*和真实盈余管理的各项指标时，为了避免异常值的影响，我们均对各相关因素变量两端按1%进行了winsorize处理，据此计算各相关的盈余管理指标。

### 3.2 回归模型

仿照Barth *et al.*（2008）和Cohen *et al.*（2008a），对于应计盈余管理，本文使用式（10）来回归。

$$DEP_j = \beta_o + \beta_1 LAW_j\ (orIFRS_j) + \beta_2 RM\_PROXY_j + \beta_3 GROWTH_j + \beta_4 LEV_j + \beta_5\ TURN_j + \beta_6\ DISSUE_j + \beta_7 ROA_j + \beta_8 SIZE_j + \beta_9 LOSS_j + \beta_{10} EISSUE_j + \beta_{11}\ CFO_j + \beta_{12} BIG4_j + \beta_{13} GOV_j + \varepsilon_j \quad (10)$$

上述回归模型中各变量的定义如下：

*DEP* = 各种应计盈余管理变量，包括应计盈余管理绝对值、正向应计盈余管理和负向应计盈余管理。
*LAW* = 哑变量，如果年度报告受新法律的影响，取值为1，否则为0。
*IFRS* = 哑变量，如果年度报告根据与IFRS趋同的新会计准则编制，取值为1，否则为0。
*RM_PROXY* = 衡量真实盈余管理水平的综合指标。
*GROWTH* = 主营业务收入变化的百分比。
*LEV* = 年末负债总额除以年末总资产。
*TURN* = 主营业务收入除以年末总资产。
*DISSUE* = 负债总额变化的百分比。
*ROA* = 净利润除以年末总资产。
*SIZE* = 年末总资产取自然对数。
*LOSS* = 哑变量，如果公司年末亏损，取值为1，否则为0。
*EISSUE* = 发行的股票数变化的百分比；
*CFO* = 经营活动现金流除以年末总资产。
*BIG4* = 哑变量，如果审计年度报告的事务所属于国际四大，取值为1，否则为0。
*GOV* = 哑变量，如果公司的实际控制人是中央或地方政府，取值为1，否则为0。

同样，仿照Cohen *et al.*（2008a），对于真实盈余管理，本文使用式（11）来进行回归。

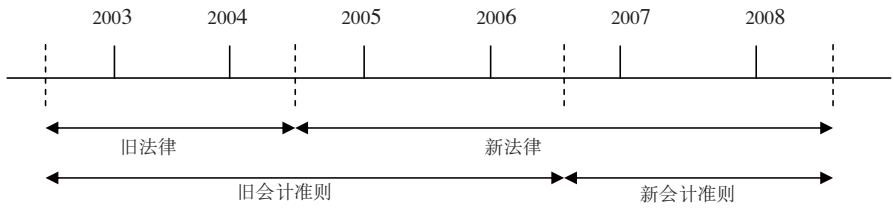
$$DEP_j = \beta_o + \beta_1 LAW_j\ (orIFRS_j) + \beta_2 ABS\_DA_j + \beta_3 GROWTH_j + \beta_4 LEV_j + \beta_5\ TURN + \beta_6\ DISSUE_j + \beta_7 ROA_j + \beta_8 SIZE_j + \beta_9 LOSS_j + \beta_{10} EISSUE_j + \beta_{11} BIG4_j + \beta_{12} GOV_j + \varepsilon_j \quad (11)$$

这里，*DEP*代表四个真实盈余管理的指标。*ABS_DA*代表应计盈余管理的绝对值。其余变量的含义同(9)式。

### 3.3 样本选择与描述性统计

如图1所示，我国在2006年1月1日实施了新《公司法》和《证券法》，规定公司和审计师因虚假财务报告须承担民事赔偿责任，加重了处罚的力度。同时，从2007年1月1日起我国强制实施了与IFRS趋同的原则导向会计准则，给予了公司更多的操纵灵活性。从2003年至2006年，我国实施的法律发生了变化，而会计准则的变化很小，这种环境有利于检验法律趋严对应计与真实盈余管理的影响。从2006年1月1日至2008年，[9]我国关于公司方面的法律规定基本没有变化，同时实施了IFRS，这正好可以检验IFRS的强制采用对应计与真实盈余管理的影响(具体关系见图1)。因此，本文选择从2003年至2008年的纯A股上市公司的年报数据作为本文的研究样本。其中，关于新法律对应计与真实盈余管理的影响，本文使用2003至2006年的样本组，关于新会计准则对应计与真实盈余管理的影响，我们使用2005年至2008年的样本组。

图1：样本期间图

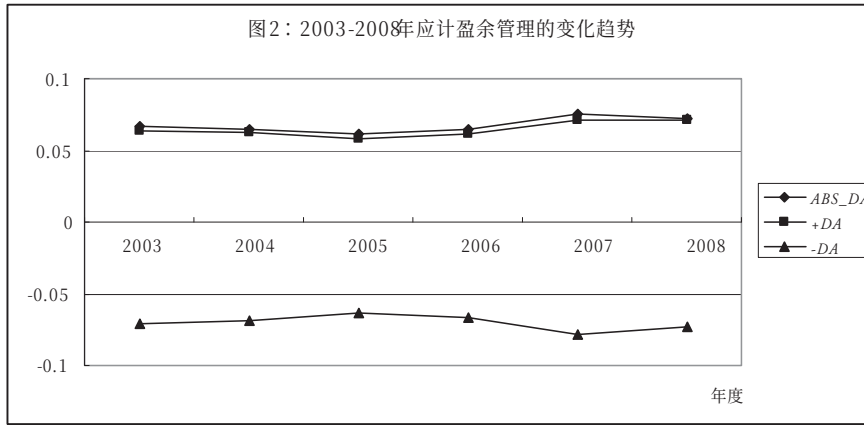


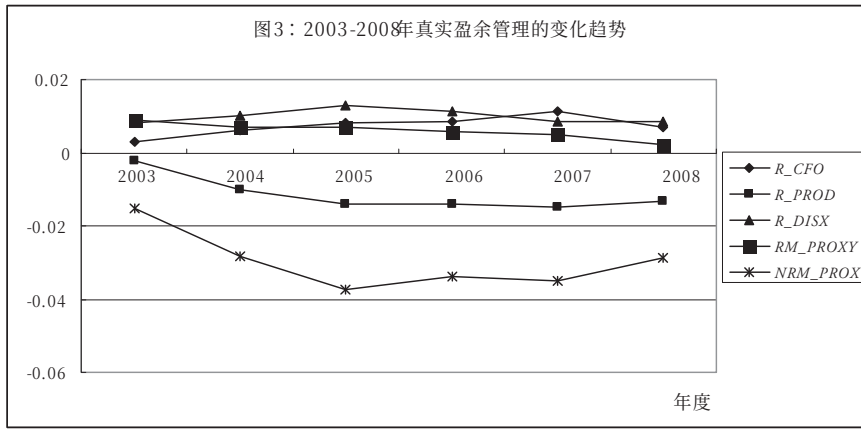

样本选择时，本文剔出了金融行业的公司、计算应计盈余管理数据不完整的样本观察值。由于同时发行B或H股的公司可能直接采用IFRS，我们也剔出了同时发行B或H股的公司。这样，共得到6953个观察值，其中2003年1019个，2004年1077个，2005年1130个，2006年1219个，2007年1223个，2008年1285个。

从2003年至2008年应计盈余管理的折线图(图2)来看，2005和2006年应计盈余管理绝对值比2003和2004年有所降低，2007和2008年比2005和2006年有明显上升。正向应计盈余管理的分布趋势与应计盈余管理绝对值的分布一致，负向盈余管理的分布趋势与应计盈余管理绝对值的分布刚好相反。表明2005和2006年的应计盈余管理比2003和2004年有所降低，2007和2008年比2005和2006年有明显上升。

从图3来看，综合真实盈余管理(*RM_PROXY*)幅度的分布是从2003年至2008年呈逐年下降趋势。综合真实盈余管理(*NRM_PROXY*)调节利润的方向基本呈U型分布。现金流真实盈余管理(*R_CFO*)从2003年至2007年逐年上升，在2008年则明显下降。产品成本真实盈余管理(*R_PROD*)基本呈U型分布。费用真实盈余管理(*R_DISX*)基本呈倒V型分布。

[9] 因2005 年的会计年报在2006 年1 月1 日以后提供，会受新法律的约束。因此，公司2005 年至2008 年的年报都基本处在相同的法律制度背景下。




从表1来看，2005-2006年*ABS_DA*的均值为0.062，中位数为0.044，2003-2004年的*ABS_DA*均值为0.066，中位数为0.043，*ABS_DA*的均值在2005-2006年明显降低。相比于2003-2004年，*R_CFO*的均值和中位数在2005-2006年有所提高。*R_PROD*的均值和中位数在2003-2004年分别为-0.006和-0.013，在2005-2006年分别为-0.014和-0.017，均有显著下降。费用方面的真实盈余管理（*R_DISX*）在2005-2006年的均值为0.012，中位数为0.005，在2003-2004年的均值则为0.009，中位数为0.001，均有所提高。*RM_PROXY*的均值和中位数则均有所降低，*NRM_PROXY*的均值和中位数均有显著下降。相比于2003-2004年，在2005-2006年，公司亏损（*LOSS*）、资产周转率（*TURN*）、公司规模（*SIZE*）无论从均值还是中位数来看，均有显著增加。公司成长性（*GROWTH*）、债务变化（*DISSUE*）、公司现金流（*CFO*）、负债水平（*LEV*）、股权增发（*EISSUE*）只在中位数检验方面有明显变化。

同时，*ABS_DA*的均值和中位数在2007-2008年分别为0.073和0.044，在2005-2006年分别为0.062和0.044，2007-2008年均比2005-2006年有显著增加。对于正向应计盈余管理（+*DA*）和负向应计盈余管理（－*DA*），无论是均值还是中位数，2007-2008年均比2005-2006年在应计盈余管理幅度上均显著增加。真实盈余管理除费用（*R_DISX*）在均值上有显著降低外，其余则没有明显变化。在控制变量方面，相比于2005-2006年，在2007-2008年，资产周转率（*TURN*）、公司规模（*SIZE*）、股份增发（*EISSUE*）无论从均值还是中位数来看，均有显著增加，公司亏损（*LOSS*）和政府控制（*GOV*）则有显著下降。公司现金流（*CFO*）和公司成长性（*GROWTH*）只在中位数检验方面有明显变化。

**表1**　描述性统计(2003-2006年)

| | 2003-2004年(1) | | | 2005-2006年(2) | | | 2007-2008年(3) | | | (1)和(2) 差异检验 | | (2)和(3) 差异检验 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 均值 | 中位数 | 标准差 | 均值 | 中位数 | 标准差 | 均值 | 中位数 | 标准差 | 均值检验 | 中位数检验 | 均值检验 | 中位数检验 |
| *DA* | -0.001 | 0.001 | 0.096 | -0.002 | 0 | 0.089 | -0.002 | 0 | 0.105 | 0.845 | 0.652 | 0.975 | 0.708 |
| *+DA* | 0.062 | 0.043 | 0.063 | 0.060 | 0.044 | 0.059 | 0.070 | 0.047 | 0.073 | 0.392 | 0.910 | 0.000*** | 0.013** |
| *-DA* | -0.070 | -0.044 | 0.115 | -0.065 | -0.044 | 0.067 | -0.075 | -0.053 | 0.077 | 0.123 | 0.594 | 0.000*** | 0.000*** |
| *ABS_DA* | 0.066 | 0.043 | 0.070 | 0.062 | 0.044 | 0.063 | 0.073 | 0.044 | 0.075 | 0.090* | 0.512 | 0.000*** | 0.0000*** |
| *R_CFO* | 0.005 | 0.006 | 0.089 | 0.008 | 0.008 | 0.081 | 0.009 | 0.008 | 0.096 | 0.194 | 0.185 | 0.891 | 0.933 |
| *R_PROD* | -0.006 | -0.013 | 0.125 | -0.014 | -0.017 | 0.123 | -0.014 | -0.017 | 0.182 | 0.044** | 0.044** | 0.933 | 0.230 |
| *R_DISX* | 0.009 | 0.001 | 0.067 | 0.012 | 0.005 | 0.066 | 0.008 | 0.005 | 0.061 | 0.160 | 0.009*** | 0.034** | 0.138 |
| *RM_PROXY* | 0.008 | 0.003 | 0.122 | 0.006 | 0.002 | 0.116 | 0.003 | 0.002 | 0.171 | 0.069* | 0.741 | 0.453 | 0.282 |
| *NRM_PROXY* | -0.021 | -0.028 | 0.204 | -0.035 | -0.040 | 0.204 | -0.031 | -0.039 | 0.259 | 0.026** | 0.013** | 0.557 | 0.869 |
| *ROA* | -0.004 | 0.023 | 0.244 | -0.923 | 0.022 | 44.282 | 9.696 | 0.022 | 469.684 | 0.315 | 0.402 | 0.275 | 0.0000*** |
| *LOSS* | 0.144 | 0 | 0.351 | 0.169 | 0 | 0.374 | 0.14 | 0 | 0.344 | 0.0258** | 0.0255** | 0.002*** | 0.002*** |
| *CFO* | 0.053 | 0.045 | 0.120 | 0.062 | 0.052 | 0.126 | 0.074 | 0.052 | 1.257 | 0.961 | 0.0000*** | 0.280 | 0.023** |
| *GROWTH* | 0.649 | 0.188 | 9.912 | 1.875 | 0.120 | 78.074 | 1.78 | 0.120 | 48.818 | 0.475 | 0.0000*** | 0.960 | 0.000*** |
| *LEV* | 0.553 | 0.509 | 0.711 | 0.975 | 0.543 | 18.099 | 0.7454 | 0.543 | 4.192 | 0.286 | 0.0000*** | 0.547 | 0.1908 |
| *TURN* | 0.607 | 0.474 | 0.504 | 0.694 | 0.548 | 0.911 | 0.74 | 0.548 | 0.638 | 0.000*** | 0.0000*** | 0.045** | 0.0000*** |
| *DISSUE* | 0.054 | 0.021 | 0.446 | 0.411 | 0.015 | 18.092 | -0.242 | 0.015 | 16.426 | 0.367 | 0.0253** | 0.187 | 0.0000*** |
| *SIZE* | 21.179 | 21.129 | 0.959 | 21.261 | 21.220 | 1.087 | 21.464 | 21.220 | 1.259 | 0.008*** | 0.0063*** | 0.000*** | 0.0000*** |
| *GOV* | 0.730 | 1.000 | 0.443 | 0.679 | 1 | 0.466 | 0.64 | 1.000 | 0.480 | 0.000*** | 0.0002*** | 0.008*** | 0.007*** |
| *BIG4* | 0.06 | 0 | 0.230 | 0.05 | 0 | 0.221 | 0.05 | 0 | 0.212 | 0.004 | 0.524 | 0.005 | 0.464 |
| *EISSUE* | 0.084 | 0 | 0.231 | 0.095 | 0 | 0.333 | 0.161 | 0 | 0.475 | 0.207 | 0.0318** | 0.000*** | 0.000*** |

说明：(1)均值检验报告的是T检验的P值，中位数检验报告的是Wilcoxon检验的P值(双尾)。(2)本表可以看出2005-2006年*ROA*存在较为明显的异常值，将其两端按1%进行winsorize处理后，其均值是-0.014，中位数是0.022，标准差是0.345。将2007-2008年*ROA*两端按1%进行winsorize处理后，其均值是0.049，中位数是0.031，标准差是1.674。

## 四、回归结果分析

### 4.1 新法律与应计及真实盈余管理

我们首先分析了各应计盈余管理与真实盈余管理指标之间的相关性，可以看出（见表2），*DA*与*R_PROD*、*NRM_PROXY* 显著正相关，与*R_CFO* 和*R_DISX* 显著负相关，与*RM_PROXY* 也显著负相关。*ABS_DA* 与*R_CFO* 显著负相关，与*R_PROD* 和*R_DISX* 显著正相关，与*RM_PROXY* 、*NRM_PROXY* 也显著正相关。这表明应计盈余管理空间与真实盈余管理之间基本没有一致的相互替代的关系，也不是一致的互补关系，这表明公司可能同时使用了几种具体的盈余管理方式来达到调节利润的目的。*RM_PROXY* 与*R_CFO* 、*R_PROD* 和*R_DISX* 显著正相关。*RM_PROXY* 与*NRM_PROXY* 也显著正相关。

**表2** 盈余管理各变量的相关系数（2003-2006）

| | *DA* | *ABS_DA* | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|---|---|
| *DA* | 1 | | | | | | |
| *ABS_DA* | -0.133*** | | | | | | |
| | (0.000) | 1 | | | | | |
| *R_CFO* | -0.612*** | -0.103*** | | | | | |
| | (0.000) | (0.000) | 1 | | | | |
| *R_PROD* | 0.106*** | 0.147*** | -0.369*** | | | | |
| | (0.000) | (0.000) | (0.000) | 1 | | | |
| *R_DISX* | -0.293*** | 0.208*** | 0.066*** | -0.357*** | | | |
| | (0.000) | (0.000) | (0.000) | (0.000) | 1 | | |
| *RM_PROXY* | -0.492*** | 0.197*** | 0.367*** | 0.580*** | 0.236*** | | |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | 1 | |
| *NRM_PROXY* | 0.416*** | 0.065*** | -0.663*** | 0.880*** | -0.572*** | 0.123*** | |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | 1 |

说明：（1）本表是Pearson相关系数（双尾）。（2）***,**,*分别表示在1%、5%和10%水平下显著（双尾）。(3) 括号内是P值。

采用2003年至2006年的样本，本文来分析新法律实施对应计与真实盈余管理的影响。对于应计盈余管理，如表3所示，当因变量为*ABS _ DA* 时，*LAW*时，的系数显著为负，说明新公司法的实施对公司的应计盈余管理空间具有一定的抑制作用。同时，当因变量是正向应计盈余管理（+ *DA*）时，其系数显著为正，因变量为负向盈余管理（– *DA*）时，其系数也显著为正，说明新法律的实施对负向盈余管理具有抑制作用，对正向盈余管理则没有抑制作用，同时，也表明应计盈余管理空间的缩小是由负向应计盈余管理所带来的。这是公司采用激进会计政策的表现。这可能表明，新法律的实施并没有对公司的激进会计行为产生抑制作用，公司仍是通过应计盈余管理来调增利润的目的。

**表3** 新法律实施与应计盈余管理(2003-2006年)

| | *ABS_DA* | *+DA* | *–DA* |
|---|---|---|---|
| Constant | 0.145*** | 0.094*** | -0.014 |
| | (0.000) | (0.001) | (0.593) |
| *LAW* | -0.003* | 0.006*** | 0.007*** |
| | (0.095) | (0.000) | (0.000) |
| *ROA* | -0.129*** | 0.534*** | 0.270*** |
| | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.003 | 0.013* | -0.014*** |
| | (0.332) | (0.062) | (0.000) |
| *CFO* | -0.073*** | -0.672*** | -0.508*** |
| | (0.004) | (0.000) | (0.000) |
| *RM_PROXY* | 0.090*** | -0.040* | -0.192*** |
| | (0.000) | (0.055) | (0.000) |
| *GROWTH* | 0.011*** | 0.000 | -0.010*** |
| | (0.000) | (0.981) | (0.000) |
| *LEV* | 0.029*** | 0.014* | -0.021*** |
| | (0.000) | (0.085) | (0.001) |
| *TURN* | 0.009*** | -0.004* | -0.009*** |
| | (0.000) | (0.099) | (0.001) |
| *DISSUE* | -0.000*** | 0.029 | 0.000*** |
| | (0.000) | (0.309) | (0.000) |
| *SIZE* | -0.004*** | -0.002* | 0.001 |
| | (0.001) | (0.050) | (0.431) |
| *BIG4* | 0.003 | 0.004 | 0.005 |
| | (0.384) | (0.359) | (0.299) |
| *EISSUE* | 0.010* | 0.009 | 0.000 |
| | (0.054) | (0.153) | (0.913) |
| *GOV* | -0.000 | -0.002 | -0.002 |
| | (0.888) | (0.331) | (0.258) |
| 行业效果 | 控制 | 控制 | 控制 |
| Observations | 4,445 | 2,260 | 2,185 |
| R-squared | 0.211 | 0.554 | 0.660 |

说明：(1)***,**,*分别表示在1%、5%和10%水平下显著。(2)括号内是P值。(3)变量*ROA*，*CFO*，*GROWTH*，*LEV*两端分别按1%进行了winsorize处理。(4)本表回归已按公司进行了Cluster处理。

从表4 来看，当因变量为*R_DISX* 时，*LAW* 的系数显著为正，因变量为*R_CFO* 和*R_PROD* 时，*LAW* 的系数显著为负，因变量为*RM_PROXY* 时，*LAW* 的系数显著为负。说明随着新法律的实施，公司通过费用和成本方面的真实盈余管理调低了利润，通过现金流真实盈余管理调高了利润。*RM_PROXY* 的系数显著为负，表明真实盈余管理水平在整体上有明显降低，*NRM_PROXY* 的系数不显著，表明真实盈余管理在整体上对利润并没有明显的一致性影响。

**表4** 新法律与真实盈余管理（2003-2006年）

| | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|
| Constant | -0.043** | -0.149*** | -0.220*** | -0.412*** | 0.114 |
| | (0.024) | (0.005) | (0.000) | (0.000) | (0.197) |
| *LAW* | -0.002*** | -0.006* | 0.002** | -0.006* | -0.006 |
| | (0.002) | (0.071) | (0.033) | (0.059) | (0.155) |
| *ROA* | -0.040*** | 0.029 | -0.282*** | -0.293*** | 0.353*** |
| | (0.000) | (0.312) | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.001 | -0.001 | 0.0027 | -0.000 | -0.002 |
| | (0.419) | (0.743) | (0.406) | (0.887) | (0.727) |
| *CFO* | 1.012*** | -0.498*** | 0.094*** | 0.609*** | -1.60*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *ABS_DA* | -0.019 | 0.197*** | 0.092*** | 0.270*** | 0.124* |
| | (0.223) | (0.000) | (0.000) | (0.000) | (0.078) |
| *GROWTH* | -0.004*** | 0.005 | -0.006*** | -0.006 | 0.017** |
| | (0.008) | (0.404) | (0.000) | (0.394) | (0.018) |
| *LEV* | -0.003 | 0.027*** | -0.021*** | 0.002 | 0.052*** |
| | (0.219) | (0.001) | (0.001) | (0.670) | (0.000) |
| *TURN* | -0.050*** | 0.033*** | -0.023*** | -0.039*** | 0.107*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *DISSUE* | 0.001*** | -0.001*** | 0.001*** | 0.001*** | -0.004*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *SIZE* | 0.002*** | 0.004* | 0.012*** | 0.019*** | -0.010** |
| | (0.003) | (0.067) | (0.000) | (0.000) | (0.014) |
| *BIG4* | -0.002 | -0.033*** | 0.013 | -0.022*** | -0.043** |
| | (0.358) | (0.002) | (0.135) | (0.001) | (0.022) |
| *EISSUE* | 0.004 | 0.007 | 0.001 | 0.013 | 0.001 |
| | (0.319) | (0.704) | (0.456) | (0.377) | (0.959) |
| *GOV* | -0.001 | -0.000 | 0.000 | -0.001 | -0.000 |
| | (0.307) | (0.900) | (0.797) | (0.782) | (0.985) |
| 行业效果 | 控制 | 控制 | 控制 | 控制 | 控制 |
| Observations | 4,445 | 4,445 | 4,445 | 4,445 | 4,445 |
| R-squared | 0.846 | 0.133 | 0.283 | 0.248 | 0.396 |

说明：（1）***,**,*分别表示在1%、5%和10%水平下显著。(2) 括号内是P值。(3) 变量*ROA*，*CFO*，*GROWTH*，*LEV*两端分别按1%进行了winsorize处理。(4) 本表按公司进行了Cluster处理。

结合表3和表4来看，新法律的实施并没有改变公司的激进会计行为，公司仍是通过应计盈余管理来调增利润。尽管公司的具体真实盈余管理方式对利润产生了不同的影响，但是整体的真实盈余管理水平明显降低，整体上对利润也没有产生明显的影响。这与Cohen *et al.*（2008a）的发现不一致。我们对此的解释是：（1）尽管中国大陆的新法律加强了对中小投资者的保护，但是中国的司法不独立，法律执行较差，因此，减弱了新法律对公司盈余操纵行为的威慑力，公司仍然主要通过所需成本较低的应计盈余管理来调增利润；（2）2002年和2003年的司法解释规定对虚假陈述提出了民事赔偿责任的要求，也可能提前释放了新法律中民事赔偿责任等规定的惩戒作用，减弱了新法律的影响。

这表明，公司没有改变通过应计盈余管理来操纵利润的行为，没有明显地向美国那样从应计盈余管理转向真实盈余管理。也就是说，法律的低威慑力可能并没有明显地改变公司应计盈余管理与真实盈余管理的成本，因而并没有导致其盈余管理方式的较大转变。这也可能表明，中国的新法律并没有对公司的会计行为产生象SOX法案那样明显的治理效果。

从控制变量来看（表3和表4），*RM_PROXY* 与*ABS_DA* 显著正相关，与*+DA*、*−DA* 显著负相关，从而没有一致性关系。*ABS_DA* 与*R_CFO* 负相关，与*R_PROD* 、*R_DISX* 、*RM_PROXY* 和*NRM_PROXY* 均显著正相关，也没有一致性关系。表明公司可能同时采用了应计与真实盈余管理两种方法来达到操纵盈余的目的。

### 4.2 IFRS的强制采用与应计及真实盈余管理

采用2005 年至2008 年的数据，我们首先分析了各应计盈余管理与真实盈余管理指标之间的相关性，发现各应计与真实盈余管理指标之间的关系（这里没有报告相关系数的表格）与前面表2 基本一样，*DA*与*R_PROD*、*NRM_PROXY*显著正相关，与*R_CFO*和*R_DISX*显著负相关，与*RM_PROXY*也显著负相关。*ABS_DA* 与*R_CFO*显著负相关，与*R_PROD*和*R_DISX*显著正相关，与*RM_PROXY* 、*NRM_PROXY*也显著正相关。这仍然表明应计盈余管理空间与真实盈余管理之间基本没有一致的相互替代的关系，也不是一致的互补关系。公司可能同时使用了几种具体的盈余管理方式。*RM_PROXY*与*R_CFO*、*R_PROD* 和*R_DISX*显著正相关。*RM_PROXY* 与*NRM_PROXY*也显著正相关。

从表5来看，当因变量是*ABS _ DA*时，*IFRS*的系数显著为正，因变量为正向应计盈余管理时，*IFRS* 的系数显著为正，因变量为负向应计盈余管理时，*IFRS*的系数显著为负。说明随着与*IFRS*趋同的新会计准则的实施，公司的应计盈余管理空间显著增加了，包括正向和负向盈余管理。这说明，*IFRS*的强制采用增大了公司的应计盈余管理空间，与Ahmed *et al.* (2010)的发现一致，他们发现在强制采用*IFRS*后，公司的应计盈余管理明显增加了。这与Barth *et al.*（2008）的发现不一致，他们的跨国比较研究发现在自愿采用IFRS的情况下，公司的应计盈余管理降低了。这可能是由于公司自愿采用*IFRS*和强制采用*IFRS*存在系统性偏差所致，自愿采用是公司的一种自选择，而强制采用则反映了整个上市公司的情况，没有自选择问题。当然，强制采用*IFRS*的结论更具有推广性。此外，也可能是相比*IFRS*，Barth文中的样本公司

原来所采用的准则给予了管理者更多的应计盈余管理空间所致。

**表5** IFRS的强制采用与应计盈余管理(2005-2008年)

| | *ABS_DA* | *+DA* | *−DA* |
|---|---|---|---|
| Constant | 0.156*** | 0.00589 | -0.241*** |
| | (0.000) | (0.847) | (0.000) |
| *IFRS* | 0.013*** | 0.005** | -0.018*** |
| | (0.000) | (0.026) | (0.000) |
| *ROA* | -0.145*** | 0.186*** | 0.220*** |
| | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.0001 | 0.009 | 0.004 |
| | (0.977) | (0.111) | (0.276) |
| *CFO* | 0.0001 | -0.016* | -0.001 |
| | (0.949) | (0.0860) | (0.164) |
| *RM_PROXY* | 0.045*** | -0.066*** | -0.167*** |
| | (0.000) | (0.001) | (0.000) |
| *LEV* | 0.000 | 0.015*** | 0.0004*** |
| | (0.940) | (0.001) | (0.007) |
| *GROWTH* | 0.000 | 0.000 | -0.001 |
| | (0.307) | (0.353) | (0.285) |
| *TURN* | 0.006*** | -0.009*** | -0.012*** |
| | (0.002) | (0.000) | (0.000) |
| *DISSUE* | -0.000 | -0.002*** | 0.000 |
| | (0.298) | (0.007) | (0.872) |
| *SIZE* | -0.004*** | 0.002 | 0.008*** |
| | (0.004) | (0.119) | (0.000) |
| *BIG4* | 0.003 | -0.010 | -0.012* |
| | (0.552) | (0.117) | (0.070) |
| *EISSUE* | 0.017*** | 0.016*** | -0.010* |
| | (0.000) | (0.000) | (0.058) |
| *GOV* | -0.006*** | -0.007** | 0.002 |
| | (0.006) | (0.022) | (0.323) |
| 行业效果 | 控制 | 控制 | 控制 |
| Observations | 4857 | 2438 | 2419 |
| R-squared | 0.137 | 0.216 | 0.301 |

说明：(1) ***,**,* 分别表示在1%、5%和10%水平下显著。(2) 括号内是P值。(3) 变量*ROA*，两端分别按1%进行了winsorize处理。(4) 本表按公司进行了Cluster处理。

同时，从表6 来看，当因变量为*R_CFO*时，*IFRS*的系数均显著为正，当因变量为*R_PROD*时，*IFRS*的系数均显著为负，当因变量为*RM_PROXY*时，*IFRS* 的系数为正不显著，说明实施与IFRS趋同的新会计准则以后，公司在现金流方面的真实盈余管理增加了，但成本方面的真实盈余管理下降了，整体真实盈余管理水平没有增加。同时，*NRM_PROXY*的系数显著为负，表明公司整体上因真实盈余管理带来的利润下降了。这样，结合表5和表6来看，新会计准则实施后，公司明显增加了应计盈余管理的幅度，通过应计盈余管理来操纵了利润，同时降低了通过真实盈余管理来调增利润的水平。如前所述，这可能是由于与IFRS趋同的新会计准则是原则导向准则，具有更多的灵活性，给了公司更多的应计盈余管理的空间，从而使应计盈余管理的难度小于真实盈余管理的难度，导致应计盈余管理的成本低于真实盈余管理的成本，因此，新会计准则实施以后，公司增加了应计盈余管理的水平，降低了通过真实盈余管理操纵利润的幅度。

**表6** IFRS的强制采用与真实盈余管理（2005-2008年）

| | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|
| Constant | -0.0359 | -0.234*** | -0.0411 | -0.311*** | -0.157 |
| | (0.277) | (0.000) | (0.299) | (0.000) | (0.141) |
| *IFRS* | 0.008*** | -0.007** | -0.000 | 0.000 | -0.015*** |
| | (0.000) | (0.047) | (0.617) | (0.951) | (0.000) |
| *ROA* | -0.038** | -0.104* | -0.136*** | -0.278*** | 0.070 |
| | (0.025) | (0.089) | (0.000) | (0.000) | (0.322) |
| *LOSS* | -0.002 | -0.008 | 0.005 | -0.005 | -0.011 |
| | (0.239) | (0.296) | (0.126) | (0.453) | (0.282) |
| *CFO* | 1.017*** | -0.572*** | 0.094*** | 0.540*** | -1.684*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *ABS_DA* | -0.038** | 0.232*** | 0.047** | 0.240*** | 0.223*** |
| | (0.014) | (0.000) | (0.011) | (0.000) | (0.003) |
| *GROWTH* | -0.008*** | 0.005 | -0.009*** | -0.011 | 0.023** |
| | (0.000) | (0.515) | (0.000) | (0.214) | (0.021) |
| *LEV* | 0.001 | 0.011 | -0.006 | 0.006 | 0.015 |
| | (0.707) | (0.192) | (0.262) | (0.520) | (0.259) |
| *TURN* | -0.030*** | 0.024*** | -0.011 | -0.017 | 0.067*** |
| | (0.000) | (0.001) | (0.144) | (0.140) | (0.003) |
| *DISSUE* | 0.000*** | -0.000*** | 0.000 | 0.000 | -0.001*** |
| | (0.003) | (0.000) | (0.415) | (0.929) | (0.006) |
| *SIZE* | 0.001 | 0.009*** | 0.003 | 0.013*** | 0.004 |
| | (0.402) | (0.001) | (0.130) | (0.000) | (0.412) |
| *BIG4* | 0.001 | -0.025* | 0.012 | -0.011 | -0.039* |
| | (0.818) | (0.075) | (0.165) | (0.267) | (0.086) |
| *EISSUE* | 0.003 | 0.011 | 0.005** | 0.020** | 0.003 |
| | (0.286) | (0.313) | (0.048) | (0.049) | (0.806) |
| *GOV* | -0.002 | 0.005 | -0.000 | 0.002 | 0.008 |
| | (0.138) | (0.374) | (0.826) | (0.632) | (0.354) |
| 行业效果 | 控制 | 控制 | 控制 | 控制 | 控制 |
| Observations | 4,857 | 4,857 | 4,857 | 4,857 | 4,857 |
| R-squared | 0.799 | 0.125 | 0.092 | 0.119 | 0.343 |

说明：（1）***,**,*分别表示在1%、5%和10%水平下显著。(2)括号内是P值。(3)变量*ROA*，*CFO*，*GROWTH*，*LEV*两端分别按1%进行了winsorize处理。(4)本表按公司进行了Cluster处理。

从控制变量来看（表5 和表6），*RM_PROXY*与*ABS_DA*显著正相关，与+ *DA*、*−DA*显著负相关，没有一致性关系。*ABS_DA*与*R_CFO*显著负相关，与*R_PROD* 、*R_DISX* 、*NRM_PROXY*和*RM_PROXY*显著正相关，也没有一致性关系。这与表3和表4的发现一致。

总体来看，当会计准则给了公司更多的选择空间，从而使应计盈余管理的成本降低以后，公司就会转向了应计盈余管理，从而降低了所需成本较高的真实盈余管理水平。这可能是IFRS的强制采用改变了公司应计盈余管理与真实盈余管理的成本。这也进一步支持了Zang（2007）的理论分析。当然，这与IFRS的制定者及各实施IFRS国家的监管者的期望不一致。

## 五、进一步分析与稳健性测试

### 5.1 进一步分析

由于不知真实盈余管理的计量方法是否能捕捉到公司的真实盈余管理行为，为了增强结论的稳健性，我们以中国市场最为常见的洗大澡和扭亏为目的盈余管理方式，用对比检验的方法来检验前面所述真实盈余管理计量方式是否能捕捉到公司的真实盈余管理行为。同时，我们也顺便考察了应计盈余管理的计量。借鉴李享等（2008）的做法，对于扭亏样本观察值，我们选取了上年亏损且本年盈利的公司观察值为样本组；对于洗大澡样本组，我们包含了三种情况：一是本年首次发生亏损，二是上年和本年均亏损，三是前两年和本年均发生亏损。对于对照样本组，我们选取了没有六种盈余管理动机（李享等，2008）的样本观察值。六种盈余管理动机分别是扭亏、洗大澡、融资、保持微利（或称避亏）、高管变更、盈余平滑。其中：融资动机分为增发配股和债务融资，如果公司下一年存在增发配股行为且非扭亏和非洗大澡，则视为存在增发配股动机；如果公司当年的债务比率比上年有增加且非扭亏、非洗大澡和非增发配股，则视为存在债务融资动机。如果*ROA*落在[0，0.015]且非扭亏、非融资时，视为保持微利动机。如果公司本年发生董事长或总经理变更，且非扭亏、非亏损、非融资、非微利时视为高管变动动机。如果公司当年营业利润为正，且高于当年所有营业利润为正的75%分位值，且非扭亏、非融资、非微利、非高管变更时视为存在盈余平滑动机。应计与真实盈余管理的计量方式与本文前面所述的计算方法一样。从前面的结果来看，由于公司的真实盈余管理在新会计准则实施前后（2005年至2008年）的变化比较明显，因此，我们选取了2005年至2008年的数据。如表7所示，在洗大澡样本组，我们取得699个观察值，在扭亏样本组，取得379个观察值，在对照样本组，我们取得了871个观察值。

在洗大澡样本组，相比于对照样本组，无论是在IFRS强制采用前、还是强制采用后、还是整个样本期间，*DA*均明显地向下调整了利润，*ABS_DA*均明显地高于对照样本组。同时，*R_CFO*均显著地降低，*R_PROD*均显著地增加，*R_DISX*也基本上均显著增加，综合真实盈余管理（*RM_PROXY*）均明显地增强，通过真实盈余管理（*NRM_PROXY*）基本上显著地调低了利润。可以看出，在三项具体真实盈余管理方式中，通过*R_CFO*和*R_PROD*调高了利润，通过*R_DISX*调低了利润，通过真实盈余管理总体上调低了利润，表明公司在真实盈余管理方式上可能进行了事前的规划，从而采取了一种组合的方式来达到操纵盈余的目的。总的来看，真实盈余管理和应

计盈余管理的各种计量方式基本上能捕捉到公司的盈余管理行为。这也表明，公司为达到洗大澡的目的，会同时使用应计与真实盈余管理两种方式。

在扭亏样本组，相比于对照样本组，无论是在IFRS强制采用前、还是强制采用后、还是整个样本期间，*DA*均明显地向下调整了利润，*ABS_DA*均明显地高于对照样本组。但是，*R_PROD*均显著地增加，*R_DISX*也基本上均显著增加，*R_CFO*均无明显变化，综合真实盈余管理(*RM_PROXY*)均明显地增强，通过真实盈余管理(*NRM_PROXY*)均显著地调高了利润。这表明，公司仍然是同时使用了应计与真实盈余管理两种方式，其中，通过真实盈余管理调高了利润，以达到扭亏的目的。可能是通过真实盈余管理带来了较多的利润，因此，又通过应计盈余管理隐藏了一些利润，以便在以后期间释放出来。这可能表明，在不同的具体盈余管理动机方面，结合公司的具体情况，公司使用的具体盈余管理方式组合可能不一样。

总体而言，表7的结果表明，本文中的真实与应计盈余管理计量方式基本上能够捕捉到公司的各种盈余管理行为。也同时表明，公司会同时使用应计与真实盈余管理两种方式，并相互调节地来配合使用。当然，这还有待进一步研究。

**表7** 盈余动机、应计与真实盈余管理

| 变量 | 样本组 | IFRS强制采用前（2005-2006年） | IFRS强制采用后（2007-2008年） | 整个期间(2005-2008年) |
|---|---|---|---|---|
| Panel A：洗大澡(n=1570，其中：洗大澡观察值699个，强制前374个，强制后325个；对照样本组观察值871个，强制前308个，强制后563个) | | | | |
| *DA* | 测试样本 | -0.059 | -0.063 | -0.061 |
| | 对照样本 | 0.007 | 0.013 | 0.011 |
| | 差异 | -0.067*** | -0.077*** | -0.073*** |
| *ABS_DA* | 测试样本 | 0.094 | 0.089 | 0.092 |
| | 对照样本 | 0.052 | 0.067 | 0.062 |
| | 差异 | 0.041*** | 0.021*** | 0.029*** |
| *R_CFO* | 测试样本 | -0.017 | -0.020 | -0.018 |
| | 对照样本 | 0.017 | 0.014 | 0.015 |
| | 差异 | -0.034*** | -0.034*** | -0.034*** |
| *R_PROD* | 测试样本 | 0.007 | 0.021 | 0.014 |
| | 对照样本 | -0.045 | -0.043 | -0.044 |
| | 差异 | 0.052*** | 0.065*** | 0.058*** |
| *R_DISX* | 测试样本 | 0.053 | 0.014 | 0.035 |
| | 对照样本 | 0.006 | 0.010 | 0.009 |
| | 差异 | 0.046*** | 0.003 | 0.025*** |
| *RM_PROXY* | 测试样本 | 0.043 | 0.015 | 0.030 |
| | 对照样本 | -0.020 | -0.019 | -0.019 |
| | 差异 | 0.063*** | 0.034*** | 0.050*** |
| *NRM_PROXY* | 测试样本 | -0.028 | 0.027 | -0.002 |
| | 对照样本 | -0.069 | -0.068 | -0.068 |
| | 差异 | 0.040*** | 0.096*** | 0.066*** |

**表7** 盈余动机、应计与真实盈余管理

| 变量 | 样本组 | IFRS强制采用前（2005-2006年） | IFRS强制采用后（2007-2008年） | 整个期间(2005-2008年) |
|---|---|---|---|---|
| Panel B：扭亏动机(n=1250，其中：扭亏观察值379个，强制前201个，强制后178个；对照样本组观察值871个，强制前308个，强制后563个) | | | | |
| *DA* | 测试样本 | -0.016 | -0.037 | -0.026 |
| | 对照样本 | 0.007 | 0.013 | 0.011 |
| | 差异 | -0.024*** | -0.051*** | -0.038*** |
| *ABS_DA* | 测试样本 | 0.061 | 0.089 | 0.074 |
| | 对照样本 | 0.052 | .067 | 0.062 |
| | 差异 | 0.008* | 0.022*** | 0.012*** |
| *R_CFO* | 测试样本 | 0.014 | 0.004 | 0.009 |
| | 对照样本 | 0.017 | 0.014 | 0.015 |
| | 差异 | -0.002 | -0.009 | -0.005 |
| *R_PROD* | 测试样本 | 0.002 | 0.026 | 0.013 |
| | 对照样本 | -0.045 | -0.043 | -0.044 |
| | 差异 | 0.047*** | 0.069*** | 0.058*** |
| *R_DISX* | 测试样本 | -0.005 | 0.004 | -0.001 |
| | 对照样本 | 0.006 | 0.010 | 0.009 |
| | 差异 | -0.012** | -0.006 | -0.010*** |
| *RM_PROXY* | 测试样本 | 0.011 | 0.034 | 0.022 |
| | 对照样本 | -0.020 | -0.019 | -0.019 |
| | 差异 | 0.032*** | 0.053*** | 0.042*** |
| *NRM_PROXY* | 测试样本 | -0.005 | 0.017 | 0.005 |
| | 对照样本 | -0.069 | -0.068 | -0.068 |
| | 差异 | 0.063*** | 0.085*** | 0.073*** |

说明：(1)本表是均值检验；(2)***,**,*分别表示在1%、5%和10%水平下显著(双尾)。

同时，我们也试着用应计盈余管理的计量方式来计量真实盈余管理，对真实盈余管理取绝对值，不考虑真实盈余管理调节利润的方向，以此按文中表4和表6的模型来进行重新回归。其中，*ABSR_CFO*、*ABSR_PROD*、*ABSR_DISX*分别是对应变量*R_CFO*、*R_PROD*、*R_DISX*的绝对值。这里，本文只报告了主要变量的结果。如表8所示，在新法律实施之后，公司在现金流和产品成本方面进行了真实盈余管理，并且方向相反，这与表4的结果基本一致。同时，如表8所示，IFRS强制采用后，公司在费用方面显著地降低了真实盈余管理，在产品成本方面显著地增加了真实盈余管理。

**表8** 对真实盈余管理绝对值的回归

| Panel A：新法律实施与真实盈余管理绝对值的回归（2003-2006年） | | | |
|---|---|---|---|
| | *ABSR_CFO* | *ABSR_PROD* | *ABSR_DISX* |
| *LAW* | -0.003*** | 0.005** | -0.001 |
| | (0.009) | (0.035) | (0.292) |
| Panel B：IFRS强制采用与真实盈余管理绝对值的回归（2005-2008年） | | | |
| | *ABSR_CFO* | *ABSR_PROD* | *ABSR_DISX* |
| *IFRS* | 0.001 | 0.015*** | -0.004*** |
| | （0.237） | （0.000） | （0.000） |

说明：(1) ***,**,*分别表示在1%、5%和10%水平下显著。(2) 括号内是P值。(3) 变量*ROA*，*CFO*，*GROWTH*，*LEV*两端分别按1%进行了winsorize处理。(4) 本表按公司进行了Cluster处理。

## 5.2 稳健性测试

(1) 在表3中，新法律实施对正向盈余管理具有促进作用，对负向盈余管理具有抑制作用。对此，本文用2003至2006年样本组进行了进一步检验分析，以不加绝对值的*DA*回归，发现*LAW*的系数显著为正，表明新法律对正向盈余管理没有抑制作用，对负向盈余管理具有抑制作用，这仍然支持公司采用了激进会计政策的推论。

同时，由于关于新会计准则实施的宣布时间是在2006年下半年，可能会事先对公司2006年的年度报告产生一些影响，因此，为避免这种影响，我们以2004年至2005年的样本观察值进行了如表3的相同分析，发现2004-2005年样本的分析结果同2003-2006年样本分析的结果完全一致，新法律的实施对负向盈余管理具有抑制作用，对正向盈余管理具有促进作用。同样，以不加绝对值的*DA*回归，发现*LAW*的系数仍显著为正。这仍然表明在新法律实施以后，公司采取了激进的会计政策，新法律没有产生明显的威慑作用。同时，采用2004-2005年的数据，我们也对真实盈余管理按表4进行了回归，发现结果与表4完全一致。

另外，我们也选择了中国资本市场公司调增利润动机最强烈的扭亏动机来对表3的结果作进一步分析。我们采用了将扭亏样本组与无六种盈余管理动机的样本进行了对比分析，来看公司盈余管理的变化趋势。对六种盈余管理动机的界定同表7。对于扭亏样本观察值，我们仍然选取了上年亏损且本年盈利的公司观察值为样本，共得到433观察值（2003至2006年）。无六种盈余管理管理动机的对照样本组有观察值85个。结果如表9所示，[10]在扭亏动机下，新法律实施后，*DA*的均值虽然为负，但向下调整的幅度明显降低，在2005-2006年比2003-2004年明显提高了0.022。正向应计盈余管理（+*DA*）的均值也有一定的增加，但不显著，负向应计盈余管理（-*DA*）的向下调整受到了显著的抑制。与此同时，在对照样本组，*DA*的均值虽然为正，但在新法律实施后，*DA*的均值有所下降，正向应计盈余管理（+*DA*）和负向应计盈余管理（-*DA*）的均值均有所下降。这表明，相比于对照样本组，公司通过应计盈余管理在新法律实施后调高了利润。扭亏样本组和对照样本组的*ABS_DA*的均值均有所下降。同时，真实盈余管理程度（*RM_PROXY*）在扭亏样本组有所下降，在对照

[10] 由于扭亏样本组和对照样本组均基本没有平衡样本，所以没办法使用Difference-in-Difference 方法来对两组样本的差值进行检验。

样本组则有所增加，对利润调整的幅度（*NRM_PROXY*）在扭亏样本组有所提高，在对照样本组则有所下降。可见，相比于对照样本组，扭亏公司在应计与真实盈余管理方式上基本发生了相反的变化，主要通过应计盈余管理来调高了利润，真实盈余管理对调高利润有所贡献但并不显著。这基本与表3和表4的结果一致。

同时，我们对扭亏样本进行了回归分析。由于扭亏样本主要是调高利润，在对真实盈余管理回归时，我们直接用*DA*而不是*ABS_DA*作为了控制变量。[11]如表10所示，当因变量为*DA*时，*LAW*的系数显著为正，因变量为*ABS_DA*时，则*LAW*的系数并不显著。同时，当因变量为五个真实盈余管理指标时，*LAW*的系数均不显著。这表明，扭亏样本公司主要是通过应计盈余管理来调高了利润。这基本与表3和表9的结果一致。同时，我们发现，当因变量分别为*R_CFO*、*R_PROD*、*R_DISX*和*RM_PROXY*时，*DA*的系数均显著为负，当因变量为*NRM_PROXY*时，*DA*的系数不显著。表明扭亏公司利用应计盈余管理提高利润时，也利用了现金和费用方面的真实盈余管理调高了利润，利用成本方面的真实盈余管理降低了利润，整体真实盈余管理水平显著降低，真实盈余管理对利润没有明显的一致性影响。这可能表明，扭亏公司在扭亏时，不是单独采用一种盈余管理方式，而是将多种方式结合起来使用，表现出一种整体规划性。

(2) 为了控制异方差和自相关所带来的影响，我们对文中的表3、表4、表5、表6、表8和表10，也从年度方面用cluster进行了处理，发现所有表格的结论基本不受影响。文中表3、表4、表5、表6、表8和表10 中，所有变量的VIF均不超过5，表明所有回归模型均不存在严重的共线性问题。

(3) 对于文中的应计盈余管理，我们采用了基本Jones模型，以及仿照Kothari *et al.*（2005）在基本Jones模型加当年业绩（*ROA*）控制变量来重新计算了应计盈余管理。采用这两种方式计算的*DA*，对表3、表4、表5、表6、表8 和表10 重新进行了相应的回归，发现文中的结论基本不受影响。同时，我们也在修正Jones模型中加当年业绩（ROA）控制变量来重新计算了应计盈余管理。用这种方式计算的*DA*来重新对表3、表4、表5、表6、表8和表10进行了相应的回归，发现文中的结论也基本不受影响。

此外，由于Ball and Shivakumar (2006)认为分段线性模型在计算盈余管理时更为合理，我们用基于Jones模型的分段线性模型来重新计算了*DA*。使用的模型如式(11)，这里，$TA_t = NT_t - CF_t$，其中$NT_t$为第t期经营利润，$CF_t$为第t 期的经营活动现金流量，$\Delta REV_t$为第t 期和第t-1 期主营业务收入的差额，$PPE_t$为第t 期期末总的厂场、设备等固定资产原值。$DCF_t$是哑变量，如果$CF_t < 0$，取值为1，否则为0。其中，$TA_t$，$CF_t$ ，$\Delta REV_t$和$PPE_t$均用上年和本年末总资产的平均数进行了标准化处理。计算的残差项为*DA*。我们对表3至表6进行了重新回归。对表3的重新回归结果（见表11）显示，因变量为*ABS_DA*和*+DA*时，*LAW*的系数均显著为正，因变量为*–DA*时，*LAW*的系数为正不显著。这进一步表明，新法律的实施没有对公司的盈余管理管理行为产生治理作用，与表3的结果较为一致。对表4至表6的重新回归结果与原结果基本一致。

$$TA_t = a_1 + a_2 CF_t + a_3 \Delta REV_t + a_4 PPE_t + a_4\ DCF_t + a_5\ DCF_t\ *CF_t + \varepsilon_t \qquad (12)$$

[11] 使用*ABS_DA*作为控制变量，回归所得的结果相同。

**表9** 新法律实施、扭亏动机与应计及真实盈余管理

| | 扭亏动机样本组（N=433） | | | 对照样本组（N=85） | | |
|---|---|---|---|---|---|---|
| | （2003-2004年）(1)（N=200） | （2005-2006年）(2)（N=233） | 差异(3)（2）－（1） | （2003-2004年）(4)（N=42） | （2005-2006年）(5)（N=43） | 差异(6)（2）－（1） |
| *DA* | -0.039 | -0.016 | 0.022** | 0.050 | 0.037 | -0.012 |
| *+DA* | 0.047 | 0.056 | 0.008 | 0.073 | 0.070 | -0.003 |
| *-DA* | -0.091 | -0.068 | 0.023** | -0.034 | -0.047 | -0.012 |
| *ABS_DA* | 0.074 | 0.063 | -0.011* | 0.064 | 0.065 | -0.001 |
| *RM_PROXY* | 0.033 | 0.015 | -0.018 | -0.041 | -0.025 | 0.015 |
| *NRM_PROXY* | -0.008 | -0.006 | 0.001 | -0.121 | -0.145 | -0.024 |

说明：(1)本表是均值检验；(2)***,**,*分别表示在1%、5%和10%水平下显著（双尾）。(2)对于变量*+DA*，扭亏样本组有观察值171个，对比样本组有观察值64个，对于变量*–DA*，扭亏样本组有观察值262个，对比样本组有观察值21个。

**表10** 扭亏动机、新法律实施与应计及真实盈余管理

| | *DA* | *ABS_DA* | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|---|---|
| *Constant* | -0.018 | 0.304*** | -0.063 | 0.045 | -0.462*** | -0.480*** | 0.571*** |
| | (0.785) | (0.000) | (0.232) | (0.743) | (0.000) | (0.001) | (0.001) |
| *LAW* | 0.010* | -0.003 | 0.000 | -0.006 | 0.005 | -0.000 | -0.013 |
| | (0.082) | (0.525) | (0.764) | (0.615) | (0.294) | (0.995) | (0.410) |
| *ROA* | 0.526** | 0.301 | 0.240** | 0.097 | 0.170 | 0.507 | -0.313 |
| | (0.013) | (0.134) | (0.019) | (0.822) | (0.258) | (0.243) | (0.514) |
| *CFO* | -0.720*** | 0.229*** | 0.689*** | -0.145 | -0.248*** | 0.296* | -0.586*** |
| | (0.000) | (0.001) | (0.000) | (0.344) | (0.004) | (0.066) | (0.003) |
| *RM_PROXY* | -0.164*** | 0.125*** | | | | | |
| | (0.000) | (0.001) | | | | | |
| *DA* | | | -0.308*** | -0.249* | -0.223*** | -0.780*** | 0.282 |
| | | | (0.000) | (0.095) | (0.002) | (0.000) | (0.125) |
| *GROWTH* | 0.002 | 0.006 | -0.000 | 0.020 | -0.010*** | 0.009 | 0.031* |
| | (0.678) | (0.229) | (0.726) | (0.178) | (0.001) | (0.520) | (0.058) |
| *TURN* | -0.016* | 0.014 | -0.056*** | -0.011 | -0.009 | -0.076*** | 0.053* |
| | (0.055) | (0.124) | (0.000) | (0.598) | (0.277) | (0.000) | (0.069) |
| *SIZE* | 0.001 | -0.012*** | 0.003 | -0.001 | 0.022*** | 0.024*** | -0.027*** |
| | (0.776) | (0.003) | (0.152) | (0.783) | (0.000) | (0.001) | (0.001) |
| *BIG4* | 0.023 | -0.001 | -0.014 | 0.063* | -0.035* | 0.013 | 0.114** |
| | (0.130) | (0.904) | (0.324) | (0.088) | (0.078) | (0.576) | (0.049) |
| *GOV* | -0.002 | 0.006 | 0.001 | -0.024 | -0.002 | -0.025 | -0.024 |
| | (0.757) | (0.339) | (0.631) | (0.161) | (0.713) | (0.135) | (0.243) |
| 行业效果 | 控制 | 控制 | 控制 | 控制 | 控制 | 控制 | 控制 |
| Observations | 433 | 433 | 433 | 433 | 433 | 433 | 433 |
| R-squared | 0.648 | 0.370 | 0.886 | 0.071 | 0.265 | 0.405 | 0.268 |

说明：(1)***,**,*分别表示在1%、5%和10%水平下显著。(2)括号内是P值。(3)变量*ROA*，*CFO*，*GROWTH*，*LEV*两端分别按1%进行了winsorize处理。(4)本表按公司进行了Cluster调整。

**表11** 新法律实施与应计盈余管理(2003-2006年)

| | *ABS_DA* | *+DA* | *-DA* |
|---|---|---|---|
| *Constant* | 0.050*** | 0.020*** | -0.049*** |
| | (0.000) | (0.001) | (0.000) |
| *LAW* | 0.001* | 0.001*** | -0.000 |
| | (0.099) | (0.001) | (0.711) |
| *ROA* | -0.124*** | 0.0725*** | 0.141*** |
| | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.005*** | 0.005*** | 0.004*** |
| | (0.001) | (0.000) | (0.007) |
| *CFO* | 0.031*** | -0.037*** | -0.055*** |
| | (0.000) | (0.000) | (0.000) |
| *RM_PROXY* | 0.001 | 0.004* | -0.004 |
| | (0.844) | (0.067) | (0.373) |
| *GROWTH* | 0.001 | 0.000 | -0.001* |
| | (0.107) | (0.558) | (0.066) |
| *LEV* | 0.011*** | 0.004* | -0.015*** |
| | (0.000) | (0.057) | (0.000) |
| *TURN* | 0.001** | 0.000 | 0.001 |
| | (0.010) | (0.473) | (0.490) |
| *DISSUE* | 0.000** | -0.013*** | -0.000*** |
| | (0.027) | (0.000) | (0.004) |
| *SIZE* | -0.002*** | -0.001** | 0.002*** |
| | (0.000) | (0.026) | (0.000) |
| *BIG4* | 0.006*** | 0.001* | -0.005*** |
| | (0.000) | (0.056) | (0.001) |
| *EISSUE* | 0.002*** | 0.000 | -0.001 |
| | (0.00621) | (0.866) | (0.152) |
| *GOV* | 0.000 | 0.000 | -0.001 |
| | (0.989) | (0.551) | (0.513) |
| 行业效果 | 控制 | 控制 | 控制 |
| Observations | 4,445 | 2,260 | 2,185 |
| R-squared | 0.538 | 0.336 | 0.688 |

说明:(1)***, **, *分别表示在1%、5%和10%水平下显著。(2)括号内是P值。(3)变量*ROA*、*CFO*、*GROWTH*、*LEV*两端分别按1%进行了winsorize处理。(4)本表回归已按公司进行了Cluster调整。

(4) 对于各真实盈余管理指标的计量,我们在计算时,对各相关回归变量两端没有进行winsorize处理,以此计算的各真实盈余管理指标对表4、表6、表8和表10重新进行回归,发现结论不受影响。

(5) 我们在文中表3、表4、表5和表6中同时加入时间趋势变量(时间趋势变量*TIME*的取值方式与Cohen *et al.* (2008a)一致)和经济环境变量(Δ*GDP*就是年度GDP的增长率,与Cohen *et al.* (2008a)衡量方法一致)作为控制变量重新进行了回归,发现文中的结论基本不受影响。

(6) 此外,我们在模型中加入了行业集中度变量来对主要结果进行了稳健性测试。由于数据获取困难的原因,我们用上市公司的数据对行业集中度进行了较为粗略的计算:本文用中国A股和B股市场2003-2008年的上市公司数据,剔除掉同时发行A股和B股的公司。在此基础上,以每个行业每年至少有50家公司为标准,计算该行业销售额排在前50的公司的市场集中度,以此代表该行业的行业集中度。其中,制造行业按两位代码来进行了细分。在表3和表4的重新回归中,我们发现,在表3中,当因变量为*ABS_DA*时,*LAW*的系数为-0.002,P值为0.324,显著性下降,其余结果则与表3一致。在表4中,当因变量为*R_PROD*、*R_DISX*时,*LAW*的系数均不显著,其余结果与表4一致。同时,行业集中度变量大多数不显著,本身也没有一致性的结果。同时,也对表5和表6进行了重新回归,发现结论完全不受影响,并且行业集中度变量在所有的回归中均不显著。

## 五、结论与总结

近期,司法体系、IFRS与会计信息(包括盈余管理)的关系,是北美讨论的一个热点话题。一个有代表性的观点认为,仅仅改变会计准则可能无助于提高会计信息质量和抑制公司的盈余操纵行为,各国的制度背景如司法体系等也是影响会计信息质量的重要因素。但是,究竟会计准则和司法体系分别在提高会计信息质量、抑制盈余操纵行为中扮演了何种角色,尤其是在强制采用IFRS的情况下,则还没有较为直接的经验证据。我国于2006年1月1日实施的新《公司法》和《证券法》、2007年强制实施与IFRS趋同的新会计准则,为上述问题的研究提高了较好的制度环境,藉此也可以考察IFRS在转型经济中的运用情况。

本文研究发现:首先,在法律责任加重以后,尽管公司的应计盈余管理空间得到了一定的抑制,但这可能是公司采用激进会计政策的结果。其表现是:公司的*DA*在新法律实施以后显著增加,公司的正向盈余管理也显著提高,负向盈余管理却显著降低。同时,新法律实施以后,公司的真实盈余管理在现金流和成本方面显著降低,在费用方面显著增加,在整体真实盈余管理方面显著降低,但是在利润调节方面则没有明显的一致性方向。这个发现与Cohen *et al.*(2008a)的发现不一致。这表明我国的新法律对公司盈余管理行为的治理作用不如美国SOX法案的影响那样明显。

其次,与IFRS趋同的新会计准则实施以后,公司的应计盈余管理增加了,与此同时,公司在现金流方面的真实盈余管理增加了,在成本方面的真实盈余管理下降了,整体真实盈余管理水平没有变化,通过真实盈余管理操纵的利润也下降了。说明公司利用应计盈余管理操纵利润之后,就减少了对真实盈余管理的利用。这可能表明,应计与真实盈余管理是公司的一套可供选择的盈余管理组合方式,公司会基于两种盈余管理方式的成本来选择具体的盈余管理方式。由于原则导向会计准则比规则导向会计准则具有更大的灵活性,给予了公司更大的操纵空间,降低了公司应计盈余管理的成本,因而公司就选择了应计盈余管理,减少了所需成本较高的真实

盈余管理。这与Zang (2007)的理论预期一致，但与Barth *et al.*(2008)基于自愿采用IFRS的跨国研究对应计盈余管理得出的结论不一致，与Ahmed *et al.* (2010)的发现部分一致，即强制IFRS采用以后，应计盈余管理增加了。

此外，本文可能预示着，IFRS的强制采用，可能会改变公司应计与真实盈余管理的成本，进而会影响到公司具体盈余管理方式组合的选择。同时，在不同的盈余管理动机下，盈余管理组合方式的选择可能也不一样。这可能是盈余管理的后续研究方向之一。

本文需要指出的是：(1)本文中使用修正Jones模型、Roychowdhury (2006)和Cohen *et al.* (2008a)的方法计算应计和真实盈余管理数据，有可能会存在一定的计量误差，进而可能会对文中的结论产生一定的影响。(2)本文发现，我国实施新法律以后，尽管应计盈余管理的空间得到了一定的抑制，但这是公司采用激进会计政策的结果，因此，假设1基本没有得到支持。同时，Cohen *et al.*(2008a)发现在美国的规则导向会计准则下，SOX法案的实施使美国公司从应计盈余管理转向了真实盈余管理，而Ahmed *et al.* (2010)则发现在强制采用原则导向的IFRS以后，公司的应计盈余管理增加了，特别是在投资者保护越好的国家或地区，应计盈余管理越严重。这是否预示著，会计准则类型和法律制度环境存在一个耦合的内生配置需求。如果二者的配置关系不好，就可能达不到预期的会计信息质量要求。由于我国的法律执行较差，进而使会计准则与法律制度的耦合关系不好，因而尽管法律规定逐渐趋严，但还是没有产生较为理想的治理作用。当然，究竟法律与会计准则类型如何配置才能获得一个好的预期的会计信息质量，这还是一个值得继续研究的问题。(3)由于受美国次贷危机的影响，我国企业也在2007年下半年开始受到次贷危机的冲击，因此，这可能会对我国公司2007年和2008年的盈余管理行为产生一些系统性影响。因此，本文关于IFRS强制采用对公司盈余管理行为影响的结论，可能不能完全归因于会计准则本身。对其结论的使用须持谨慎态度。

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# Mandatory Adoption of IFRS, Implementation of New Laws, and Accrual and Real Earnings Management♦

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## Abstract

This paper investigates the effect of the new laws and the International Financial Reporting Standards (IFRS) on accrual and real earnings management. Under the unique institutional environment in China between 2003 and 2008, we obtain the following results: First, after the new laws are implemented, activities to manage accrual earnings are inhibited to some extent because firms choose aggressive accounting policies. Second, after the implementation, the expenses of real earnings management increase significantly, while cash flow and product costs decline. Comprehensive real earnings management also declines dramatically, while lacking an obviously consistent direction in adjusting earnings. This is not consistent with Cohen *et al.* (2008a), suggesting that implementation of the new laws in China has not had the same effects on earnings management as SOX in the US. Finally, after implementation of the new accounting standards in convergence with IFRS, accrual earnings management increases, with no change in comprehensive real earnings management. Real earnings management also reduces earnings.

***Keywords:*** New Laws, New Accounting Standard, IFRS, Accrual Earnings Management, Real Earnings Management
***CLC codes:*** F23, F234.4, D922.29

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# I. Introduction

Recently, the question of whether the International Financial Reporting Standards (IFRS) can improve the quality of accounting information and inhibit earnings management has been hotly debated. A representative opinion (Leuz *et al.*, 2008; Hail *et al.*, 2009) is that these two aims may not be achievable simply by changing accounting standards, because various institutional environments, such as the judicial system, are important factors affecting the quality of accounting information (Leuz *et al.*, 2003; Cohen *et al.*, 2008a). Cohen *et al.* (2008a) investigate the effects of laws on accrual and real earnings management under the rule-based accounting standards. They find that after the Sarbanes-Oxley Act (SOX) was implemented, US corporations shifted from accrual earnings management to real earnings management. Barth *et al.* (2008) find that voluntary adoption of IFRS may help inhibit accrual earnings management. Ahmed *et al.* (2010) examine the compulsory adoption of IFRS and find that its adoption may increase accrual earnings management, which is especially obvious in countries with better investor protection. But the role played by accounting standards and the judicial system in improving the quality of accounting information and inhibiting earnings manipulation, especially after the compulsory adoption of IFRS, remains to be further researched. Moreover, direct empirical evidence concerning the effects of compulsory adoption of IFRS on accrual and real earnings management is lacking. In addition, firms may choose various ways to manage earnings (Zang, 2007), including accrual and real earnings management, the costs of which differ. With different legal environments and accounting standards, one may then ask, which combination of earnings management tools will a firm choose? In this paper, we focus on the relationship between the new laws and IFRS on the one hand, and accruals and real earnings management on the other.

At present, the accounting standards implemented throughout the world can be classified into three main categories. The first is principle based, such as the IFRS implemented in the European Union after 2005. The second is rule based, such as accounting standards in the US. And the third lies between the previous two categories, such as the accounting standards adopted in China before 2007. Although Cohen *et al.* (2008a) find that SOX restricts firms from manipulating accruals and induces them to shift to real earnings management under the US rule-based accounting standards, there has been no further evidence to support their position. We try to explain this by the following three considerations. First, because the results of Cohen *et al.* (2008a) are based on the rule-based accounting standards, we cannot infer from them whether stricter laws will have the same effects on earnings management under other types of accounting standards. Second, countries with a mature market economy, such as those in North America or Europe, provide the best protection for investors (Leuz *et al.*, 2003), whereas China, which is experiencing an economic transition, lacks an independent judicial system. Even if the laws are improved, they remain less well enforced in China than in developed countries. Under these circumstances, we cannot infer whether stricter laws

will generate the same effects as SOX on earnings management. And third, a transition economy has some systematic differences in financial behaviour compared with mature market economies. Therefore, it is not clear whether the configuration between laws and accounting standards (Liu, 2006) will have effects on earnings management that differ from those in mature market economies. In view of the three considerations above, we use the data of Chinese A-share companies to analyse the effects of stricter laws on accrual and real earnings management, based on the third category of accounting standards. The results could provide corroborative evidence for and expand the scope of application of Cohen *et al.* (2008a).

In addition, the differences between principle-based and rule-based accounting standards may have inductive influences on accrual and real earnings management, thereby causing changes in the latter. According to research by the US Securities and Exchange Commission (SEC), rule-based accounting standards have the following features: limit tests, extant exceptions, detailed contents, and inconsistency within the standards. It is well known that rule-based standards have three main defects. First, they have too many limit tests that may lead financial engineers to care more about literal requirements than the essence of the standards. Second, with respect to transactions of a similar economic essence, extant exceptions are treated with different accounting choices. And third, more detailed guidance is required, making application of the standards more complex and inaccurate. As proved by practice, although it is relatively difficult to manage earnings under the rule-based accounting principle, firms are able to manage accounting information by manipulating business activities to meet some boundary requirements. Thus, the information complies with the accounting standards in form rather than in essence.

In contrast, principle-based accounting standards include brief statements on main accounting rules, among which the accounting objectives are an important component. There are few (if any) exceptions inconsistent with the principles. The standards should provide guidance according to the categories and essence of transactions, but should avoid limit tests. Also, the standards should be in accord with the conceptual framework of financial accounting. In consequence, principle-based accounting standards may provide firms with more flexible accounting choices. Compared with the rule-based accounting standards, principle-based standards make accrual earnings management easier to manipulate and harder to detect than the manipulation of real business transactions. Since accrual earnings management is relatively less costly under the principle-based standards, firms may manipulate accruals rather than real activities. Because many countries have shifted to principle-based standards, it may thus be up to supervisors and auditors to improve the quality of accounting information. Since management are self-interested, they will manipulate accounting information in various ways under the rule-based standards. But when granted more flexibility under the principle-based standards, will they provide information of economic essence? We seek to find empirical evidence for this question.

China has some unique factors. On the one hand, the Government implemented the new Corporation Law and the Securities Act as of 1 January 2006. A unique feature of these new laws is that they enhance the protection of minority shareholders, clarify the rights of shareholders, and specify civil liabilities. Three details are as follows. First, the civil liabilities of responsible persons and auditors are defined.[4] For example, as provided by Article 173 of the Securities Act, institutions making and providing files, such as auditing reports, for the issuance, listing, and trading of securities should maintain diligence. They should also verify and validate the authenticity, accuracy, and completeness of contents. They also ought to shoulder the compensation liabilities if any existing fraudulent or misleading statements, or major omissions in the files, cause losses to others. Second, the new Corporation Law requires that directors, supervisors, and senior managers should comply with laws, administrative regulations, and articles of associations. They should also maintain loyalty and diligence. If their activities are in breach of the laws, administrative regulations, or articles of associations, and cause losses to firms when they are on duty, they should bear the compensation liabilities. Directors are responsible for the decisions made by the board of directors. If a decision made by the board or by the limited liability company is in breach of the laws, administrative regulations, articles of associations, or the decisions of the general meeting, and if it brings heavy losses to the firm, directors partaking in the decision procedure are responsible for compensation. And third, new rules enhance the protection of minority shareholders, as shown in shareholder lawsuits. According to Sections 2 and 3 of Article 152 of the Corporation Law, if the board of supervisors, supervisors of limited liability companies without a board of supervisors, or the board of directors or executive directors reject written litigation by shareholders, or do not litigate within 30 days, or in an emergency where without instant litigation the firm would suffer huge losses, shareholders can litigate in court for the benefit of the firm on their own. Article 153 also provides that shareholders can litigate in court if directors and senior managers violate laws, administrative regulations, or articles of associations, and harm the benefit of shareholders. From 2003 to 2006, the accounting standards in China were stable, favouring our investigation concerning the effects of stricter laws on accrual and real earnings management. In contrast, listed companies have been required to adopt the new

[4] Before the new Corporation Law, there were two judicial interpretations of an auditor's liability for fraudulent statements. One was the *Notice on Fraudulent Statements* published by the Supreme Court in 2002, which stated that cases of fraudulent statements would be accepted by a court only if the Chinese securities regulatory authorities or their agencies had made penalty decisions that had been executed. The court would accept and hear the case when the litigants provided the decisions as evidence. Since the notice added requirements for the implementation of civil liabilities, it was restricted to some extent. The other interpretation was the rules established by the Supreme Court in 2003 on civil compensation cases for fraudulent statements, which stated that the court should accept and hear the case of fraudulent statements in accord with civil procedure No. 108 if investors suffered losses from fraudulent statements and there had been administrative punishments or criminal judgments about it. As provided in No. 30, persons making fraudulent statements assumed civil compensation liabilities within the top limits of the actual loss from fraudulent statements. These judicial interpretations set restrictive clauses on civil compensation procedures, which may have weakened the impact of the rules.

accounting standards in convergence with IFRS from 1 January 2007, whereas before 2003 the accounting standards adopted in China were based mainly on the US rule-based accounting standards. This means that the listed companies faced an environment with similar legal requirements but different accounting standards between 2005 and 2008,[5] which is suitable for our examination of the impact of the mandatory adoption of IFRS on accrual and real earnings management. In this paper, we obtain data from 2003 to 2008 to conduct our research.

We come up with two main findings. First, after the new laws are implemented, activities of accrual earnings management are inhibited to some degree, while discretionary accruals (*DA*) increase significantly, with a remarkable increase in positive accrual earnings management and an obvious decline in negative accrual earnings management. This may be the result of a firm's aggressive accounting choices. On the other hand, after implementation of the new laws, comprehensive real earnings management declines significantly, with discretionary expenditure increasing, and cash flow of operations (CFO) and product costs declining, both significantly. This indicates that firms are using tools of real earnings management to adjust earnings up and down simultaneously, and that earnings are adjusted in different directions, which is not in accord with Cohen *et al.* (2008a).

Second, after the new accounting standards are implemented in convergence with IFRS, activities of accrual earnings management increase, while there is no change in the level of comprehensive real earnings management, and such management activities reduce earnings. This shows that there may be a combination of accrual and real earnings management tools (Zang, 2007), that is, when the costs of accrual earnings management increase, a firm will shift to real earnings management, but when these costs decline, the firm will shift to accrual earnings management from the relatively costly real earnings management. This differs from the finding of Barth *et al.* (2008), who report that after a firm voluntarily adopts IFRS, accrual earnings management declines dramatically. Also, our findings partially accord with Ahmed *et al.* (2010), that is, accrual earnings management increases after the compulsory adoption of IFRS, which may result from the systematic bias of voluntary and compulsory adoption of IFRS. Voluntary adoption is a choice of firms, whereas compulsory adoption reveals the conditions of listed companies overall, rather than the decision of a company.

This paper contributes to the extant literature in three ways. First, there have been no previous studies examining the impact of the compulsory adoption of IFRS on accrual and real earnings management. Second, we successfully distinguish the effects of the legal environment and accounting standards on accrual and real earnings management, whereas other studies (Leuz *et al.*, 2003; Cohen *et al.*, 2008a) do not. And third, we

[5] The year stated refers to the year of financial reports. In China, the financial reports of year 2005 are audited and disclosed after 1 January 2006, as a result of which these reports are influenced by the new laws.

find that the new laws implemented in mainland China do not have the same effects on earnings management as does SOX in the US. This shows that the differences in legal systems do have different effects on earnings management, and the effects of stricter laws differ between mature market economies and economies in transition. Altogether our study coincides with Leuz *et al.* (2008) and Hail *et al.* (2009), while enriching the research of Barth *et al.* (2008), Leuz *et al.* (2003), Cohen *et al.* (2008a), and Ahmed *et al.* (2010).

Section II presents the extant literature and hypotheses of this paper, Section III explains the research design and descriptive statistics, Section IV analyses the estimation results, Section V discusses further analyses and the robustness test, and the final section concludes the paper.

# II. Existing Literature and Hypotheses

## 2.1 Existing literature

Except for some literature on the multiple ways of managing earnings, such as Hunt, Moyer, and Shevlin (1996), Beatty, Chamberlain, and Magliolo (1995), Gaver and Paterson (1999), Barton (2001), and Pincus and Rajgopal (2002), the existing literature focuses mainly on accrual earnings management, such as Jones (1991), Defond and Jiambalvo (1994), Dechow *et al.* (1995), and Kothari *et al.* (2005). A few recent studies concern accrual and real earnings management. Roychowdhury (2006) finds that real earnings management results from management's attempt to mislead shareholders into believing that firms have achieved earnings targets. Firms usually manipulate real business activities, which deviate from normal business operations. The initial studies on real earnings management are mainly concerned about research and development expenditures, for example, Bens *et al.* (2002, 2003), Dechow and Sloan (1991), Baber *et al.* (1991), Bushee (1998), Zarowin *et al.* (2005), Osma and Young (2009), and Seybert (2009). They find that firms reduce research and development expenses to increase earnings. Wang (2006) argues that firms are more/less likely to cut research and development expenditures when there is more/less flexibility in accounting choices. But there is no consistent evidence for other real earnings management besides research and development expenditures (Anderson *et al.*, 2003; Chapman *et al.*, 2005; Cohen *et al.*, 2009). Gunny (2005) finds that real earnings management has negative effects on a firm's future performance. Roychowdhury (2006) provides evidence for the existence of real earnings management to avoid reporting losses; his research focuses mainly on the manipulation of CFO, product costs, and discretionary expenditures. Edelstein *et al.* (2007) show that firms manipulate real earnings by cutting tax income to meet the requirements of dividends. Athanasakou *et al.* (2009) report that the market will discount earnings manipulated through earnings management, including real earnings management, even if the earnings meet analyst earnings forecasts.

Recently, some scholars have paid attention to both accrual and real earnings management. Zang (2007) finds that firms use accrual and real earnings management as substitutes in manipulating earnings, and then shift to real earnings management in response to increasing risks of litigation. Chen *et al.* (2008) argue that the market fails to distinguish between accrual and real earnings management. Lin *et al.* (2006) show that firms meet analyst earnings forecasts using a combination of earnings management tools, including real earnings management. Cohen *et al.* (2008a) find that accrual earnings management increased gradually before passage of SOX in 2002, after which it declined significantly, while real earnings management increased after declining in the previous period. Their finding suggests that after SOX was passed, firms shifted from accrual earnings management to real earnings management. Cohen *et al.* (2008b) find that firms use both accrual and real earnings management for the benefit of issuing equity. Kim *et al.* (2009) investigate the relationship between the cost of equity and the magnitude of real earnings management. They find that accrual and real earnings management aggravate the uncertainty of information for outside investors, and that the latter induces more uncertainty than the former. As a result, the market requires more risk premiums for real than for accrual earnings management.

## 2.2 Hypotheses

The old Corporation Law failed to provide adequate protection for minority shareholders. For example, fraudulent and misleading statements in financial reports led to only administrative and criminal liabilities, rather than civil liabilities.[6] The judicial interpretations in 2002 and 2003 ruled that auditors should make civil compensations under certain circumstances. But these have rarely come into effect as a result of some constraints. In contrast, the new Corporation Law and Securities Act implemented on 1 January 2006 made it clear that firms and auditors should bear not only administrative punishment or criminal liabilities, but also civil compensation liabilities. These rules aggravate the punishment of management and agencies. In addition, the new laws include rules on shareholder lawsuits to protect minority shareholders and enhance corporation governance. As a result, the implementation of these new laws may have some deterrence on management and agencies by increasing the expected risk and difficulty of manipulation. More simply, first, the enhancement of corporation governance by the new laws may make it harder to manipulate earnings. Second, rules on shareholder lawsuits and civil compensation liabilities may deter earnings manipulation activities, that is, when firms manipulate earnings, they should take the legal consequences into account.

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[6] Accrual earnings management is not equivalent to fraudulent or misleading statements in financial reports. According to Leuz *et al.* (2003), accrual earnings management includes measures on earnings smoothing and earnings discretion. When investors are well protected, they will restrict the private interests of management and further reduce accrual management for personal benefit. In a word, civil liabilities for fraudulent or misleading statements in financial reports may inhibit earnings management activities.

And third, the civil liabilities of auditors may make auditors more aware of earnings management activities, in turn making it more difficult to manage accrual earnings. As accrual earnings management becomes more difficult, its costs will increase as well.

There are two main ways to manage earnings: accrual based and real based (Zang, 2007; Cohen *et al.*, 2008a; Roychowdhury, 2006). Both ways create certain costs (Wang, 2006). The choice of a specific way to manage earnings depends on the relative costs of specific manipulation tools (Zang, 2007; Cohen *et al.*, 2008a). Accrual earnings management becomes more difficult for firms because the new laws enlarge the risks of earnings manipulation and alert agencies to be cautious (Leuz *et al.*, 2003). Since the risks increase after manipulating earnings (for example, risks of shareholder lawsuits or increasing costs of financing), the costs of accrual earnings management also increase. To improve performance, firms are likely to manipulate real earnings, because such earnings management is based on real business transactions, the manipulation of which is less restricted by laws. So with stricter legal liabilities and increasing costs of accrual earnings management, real earnings management becomes relatively less costly. Ewert and Wagenhofer (2005) produce results through estimation models and find that stricter accounting standards make it more difficult to manage accrual earnings, further reducing accrual earnings management and inducing more real earnings management. Zang (2007) and Cohen *et al.* (2008a) provide further normative and empirical evidence, finding that tighter supervision of the execution of accounting standards induces firms to manipulate real earnings and reduce the relatively easier management of accrual earnings. As a result, accrual real earnings management should decrease and real earnings management increase after implementation of the new laws in China.[7]

**H1: When other conditions are controlled for, implementation of the new laws will reduce accrual earnings management and increase real earnings management.**

Generally speaking, accrual earnings management is based mainly on the manipulation of reported accounting numbers. The more flexible accounting standards are, the less difficult and less costly earnings management will be. It is less probable that accrual earnings management will be detected if accounting standards are more flexible, and even if it is detected, it will be easier to defend (Wang, 2006). Manipulation of real earnings, on the other hand, becomes more difficult as a result of restrictions from stricter accounting standards, corporation governance, auditing, detection by analysts, and increasing costs of financing. Since real earnings management is related to the

[7] The efficiency of the judicial system depends on the maturity of its relative provisions and legal enforcement. The judicial system remains weak when the laws are poorly executed. At present, the judicial system in China is not independent and the laws are poorly executed, which may weaken its effects on accrual earnings management. In China, we cannot obtain the obvious effects as with SOX in the US. Under such conditions, accrual earnings management may be less costly than real earnings management. This is a topic to be tested in this paper.

manipulation of real business transactions, which requires the cooperation of different departments, manipulation of real earnings is relatively more difficult and costly (Cohen and Zarowin, 2008b).

Given the previous analysis, to adjust earnings via accounting choices within the rule-based accounting standards, firms must manipulate real transactions to meet the fundamental requirements of boundary limits; that is to say, management's ability to adjust reported earnings is restricted. But with fewer boundary limits and more flexibility in accounting choices, the principle-based accounting standards (IFRS) grant management the ability to make judgements in accounting choices (SEC, 2003). Barth *et al.* (2008) think that endogenous flexibility enables firms to manipulate earnings. In China, although the old accounting standards took IFRS into consideration, they referred mainly to the US accounting standards. As a result, the old standards were less flexible than IFRS and made accrual earnings management more difficult. Since the adoption of new accounting standards in convergence with IFRS, real earnings management has become relatively costly compared with accrual earnings management. Although IFRS makes clear the liabilities of management and auditors, management is likely to use the flexibility the new law grants to manipulate earnings for their private interest. Ahmed *et al.* (2010), for instance, find that more accrual earnings management occurs after the compulsory adoption of IFRS.

**H2: When other conditions are controlled for, accrual earnings management will increase and real earnings management will decline after the compulsory adoption of IFRS.**

# III. Research Design and Descriptive Statistics

## 3.1 Measurement of accrual and real earnings management

We use the modified Jones model (Dechow *et al.*, 1995) to estimate the level of accrual earnings management.[8] First, we use industry-year data to estimate coefficients $\alpha_1$, $\alpha_2$, and $\alpha_3$, of Model 1. Then, we calculate the non-discretionary accruals with the estimated coefficients $\alpha_1$, $\alpha_2$, and $\alpha_3$ via Model 2. Finally, we estimate discretionary accruals ($DA_t$) in Model 3 with the non-discretionary accruals estimated in Model 2.

$$TA_t / A_{t-1} = a_1 (1 / A_{t-1}) + a_2 (\Delta REV_t / A_{t-1}) + a_3 (PPE_t / A_{t-1}) + \varepsilon_t \quad (1)$$

$$NDA_t = a_1 (1 / A_{t-1}) + a_2 (\Delta REV_t / A_{t-1} - \Delta REC_t / A_{t-1}) + a_3 (PPE_t / A_{t-1}) \quad (2)$$

$$DA_t = TA_t / A_{t-1} - NDA_t, \quad (3)$$

[8] We also use the model in Ball and Shivakumar (2006) to test the robustness of our results.

where,

$TA_t = NT_t - CFO_t$ ;

$NT_t$ = income from operations in year $t$;

$CFO_t$ = cash flow of operations in year $t$;

$A_{t-1}$ = total assets at year end ($t$-1);

$NDA_t$ = non-discretionary accruals by lagged total assets at year end ($t$-1);

$\Delta REV_t$ = change in sales between years $t$ and $t$-1;

$\Delta REC_t$ = change in accounts receivable between years $t$ and $t$-1;

$PPE_t$ = gross value of property, plant, and equipment at year end $t$.

We follow Roychowdhury (2006) and Cohen *et al.* (2008a) to estimate the level of real earnings management, including abnormal levels of CFO, discretionary expenditures, and product costs. First, we calculate the normal levels of CFO, discretionary expenditures, and product costs, based on which we further measure the abnormal levels of the same items.

We take normal CFO as the linear function of sales, as shown in Equation 4. We calculate normal CFO through regression, and further estimate abnormal CFO by subtracting estimated normal CFO from actual CFO. Firms usually increase earnings by boosting sales with extreme discounts or aggressive sales credits, which may in turn reduce CFO; that is to say, abnormal reduction of CFO may result from sales discounts and sales credits. This means that an abnormal decline in CFO may increase earnings; otherwise, it may reduce earnings.

$$CFO_t / A_{t-1} = a_0 (1 / A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \varepsilon_t \quad (4)$$

Product costs are the sum of costs of goods sold and changes in inventories. Model 5 shows the linear relationship between costs of goods sold and sales.

$$COGS_t / A_{t-1} = a_0 (1 / A_{t-1}) + \beta (S_t / A_{t-1}) + \varepsilon_t \quad (5)$$

Changes in inventories are a linear function of changes in sales for the current and previous periods.

$$\Delta INV_t / A_{t-1} = a_0 (1 / A_{t-1}) + \beta_1 (\Delta S_t / A_{t-1}) + \beta_2 (\Delta S_{t-1} / A_{t-1}) + \varepsilon_t \quad (6)$$

We use Model 7 to estimate normal product costs according to the results of Models 5 and 6. The abnormal product costs are equal to actual product costs minus normal product costs. The increase in product costs is caused mainly by the increase in product volume, while the increase in product volume leads to a decrease in fixed expenses per unit of products. As a result, the increase in abnormal product costs may increase the

profitability per unit of products and further increase earnings; otherwise, it may reduce earnings.

$$PROD_t / A_{t-1} = a_0 (1 / A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \beta_3 (\Delta S_{t-1} / A_{t-1}) + \varepsilon_t \quad (7)$$

We estimate non-discretionary expenditures through Model 8. Discretionary expenditures are equal to actual expenditures minus non-discretionary expenditures. The increase in discretionary expenditures may reduce earnings; otherwise, it may increase earnings.

$$DISEXP_t / A_{t-1} = a_0 (1 / A_{t-1}) + \beta (S_t / A_{t-1}) + \varepsilon_t, \quad (8)$$

where,

$CFO_t$ = cash flow of operations in year $t$;

$S_t$ = sales income in year $t$;

$\Delta S_t$ = changes in sales income between years $t$ and $t$-1;

$\Delta S_{t-1}$ = changes in sales income between years $t$-1 and $t$-2;

$\Delta INV_t$ = changes in inventories between years $t$ and $t$-1;

$COGS_t$ = costs of goods sold in year $t$;

$PROD_t$ = product costs in year $t$, equal to the sum of costs of goods sold and changes in inventories in year $t$;

$DISEXP_t$ [9] = discretionary expenditures in year $t$, including sales and administrative expenses.

We use three indexes to measure real earnings management. Abnormal CFO, abnormal product costs, and abnormal discretionary expenditures are the differences between actual numbers and expected numbers; increases in these suggest that earnings are manipulated downwards; otherwise, they are adjusted upwards. Firms attempting to increase earnings may manipulate real earnings via one or more tools, including extremely low CFO, extremely low discretionary expenditures, and extremely high product costs. To prove this, we follow Cohen *et al.* (2008a) to use the sum of the previous three indexes as the measurement of comprehensive real earnings management (*RM_PROXY*). The greater/smaller the index is, the higher/lower the degree of real earnings management. According to Cohen *et al.* (2008a), the three indexes above contain specific information that the comprehensive index is not able to reveal; they will also change in different directions so that they may offset the effects of one another. As a

[9] The index includes research and development expenses, advertising expenses, and sales and administrative expenses. In China, firms do not specifically disclose research and development expenses and advertising expenses, which are included in sales and administrative expenses. As a result, the index in this paper includes only sales and administrative expenses.

result, we use both the three single indexes and the comprehensive index to measure the level of real earnings management.

In addition, considering the changes in the three single indexes, we estimate the comprehensive index with Model 9 to guarantee the robustness of our results.[10] A higher *NRM_PROXY* means that firms increase earnings; otherwise, they reduce them.

$$NRM\_PROXY = -R\_CFO + R\_PROD - R\_DISX \tag{9}$$

To avoid the influence of abnormal value, we treat the tails of variables with a 1 per cent winsorisation test when estimating the *DA* and other indexes.

## 3.2 Estimation models

Consistent with Barth *et al.* (2008) and Cohen *et al.* (2008a), we use Model 10 to estimate accrual earnings management.

$$\begin{aligned} DEP_j = {} & \beta_0 + \beta_1 LAW_j\ (orIFRS_j) + \beta_2 RM\_PROXY_j + \beta_3 GROWTH_j + \beta_4 LEV_j \\ & + \beta_5 TURN_j + \beta_6 DISSUE_j + \beta_7 ROA_j + \beta_8 SIZE_j + \beta_9 LOSS_j \\ & + \beta_{10} EISSUE_j + \beta_{11} CFO_j + \beta_{12} BIG4_j + \beta_{13} GOV_j + \varepsilon_j \end{aligned} \tag{10}$$

Definitions of variables are as follows:

*DEP* = Variables of accrual earnings management, including absolute value of accrual earnings management, positive accrual earnings management, or negative accrual earnings management.
*LAW* = Dummy variable, equal to 1 if annual reports are influenced by the new laws, and otherwise 0.
*IFRS* = Dummy variable, equal to 1 if annual reports refer to the new accounting standards in convergence with IFRS, and otherwise 0.
*RM_PROXY* = Comprehensive index of real earnings management.
*GROWTH* = Changes in the percentage of main business income.
*LEV* = Total liabilities at year end divided by lagged total assets at year end.
*TURN* = Main business income divided by lagged total assets at year end.
*DISSUE* = Changes in the percentage of total liabilities.
*ROA* = Net income divided by lagged total assets at year end.
*SIZE* = Natural logarithm of year-end total assets.
*LOSS* = Dummy variable, equal to 1 if firms suffer loss, and otherwise 0.
*EISSUE* = Changes in the percentage of issued stocks.
*CFO* = Cash flow of operations divided by lagged year-end total assets.
*BIG4* = Dummy variable, equal to 1 if the firm is one of the four biggest CPA firms, and otherwise 0.

[10] As for the measurement of comprehensive real earnings management, we appreciate the valuable comments of the anonymous reviewers.

*GOV* = Dummy variable, equal to 1 if the firm is actually controlled by the central or local government, and otherwise 0.

Following Cohen *et al.* (2008a), we estimate real earnings management with Model 11.

$$DEP_j = \beta_0 + \beta_1 LAW_j\ (or IFRS_j) + \beta_2 ABS\_DA_j + \beta_3 GROWTH_j + \beta_4 LEV_j + \beta_5 TURN + \beta_6 DISSUE_j + \beta_7 ROA_j + \beta_8 SIZE_j + \beta_9 LOSS_j + \beta_{10} EISSUE_j + \beta_{11} BIG4_j + \beta_{12} GOV_j + \varepsilon_j, \quad (11)$$

where,

*DEP* = the four indexes of real earnings management;

*ABS_DA* = the absolute value of accrual earnings management.

Definitions of the other variables are the same as those of Model 9.

## 3.3 Sample and descriptive statistics

As shown in Figure 1, after implementation of the new Corporation Law and the Securities Act on 1 January 2006, firms and auditors engaging in fraudulent financial reports suffer heavier punishment. Moreover, the new accounting standards in convergence with IFRS implemented on 1 January 2007 provide firms with greater flexibility in manipulation. Over the period 2003 to 2006, the laws executed in China changed while few changes occurred in accounting standards. This setting favours our examination of the impact of the stricter laws on accrual and real earnings management. Rules related to corporations barely changed, whereas accounting standards turned to converge with IFRS from 1 January 2006 to 2008.[11] This enables us to examine the impact of the compulsory implementation of IFRS on accrual and real earnings management. We use the reported data of A shares from 2003 to 2008 as our samples. We use the sample period between 2003 and 2006 to test the impact of the new laws on accrual and real earnings management, and the sample period between 2005 and 2008 to test the influence of the new accounting standards on the same.

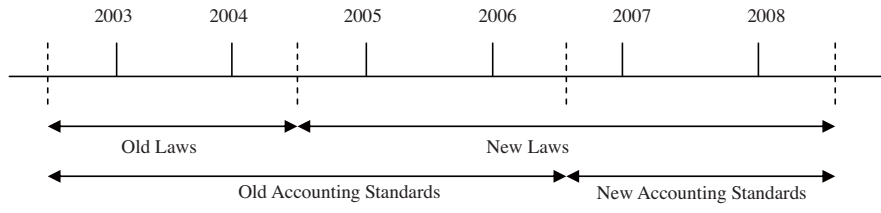


**Figure 1** Sample Period

[11] Annual reports of 2005 are disclosed after 1 January 2006, meaning that these reports are constrained by the new laws. In a word, annual reports from 2005 to 2008 are under the same legal background.

With respect to the choice of sample, we exclude firms in the financial industry and those without the necessary observations of accrual earnings management. Since firms simultaneously issuing B or H shares may adopt IFRS directly, we also exclude such firms. We thus obtain 6953 observations, including 1019 for 2003, 1077 for 2004, 1130 for 2005, 1219 for 2006, 1223 for 2007, and 1285 for 2008.

The line chart (Figure 2) of accrual earnings management from 2003 to 2008 suggests that its absolute values are smaller at years 2005 and 2006 than at years 2003 and 2004, while increasing significantly at years 2007 and 2008. The distribution trend of positive accrual earnings management coincides with that of the absolute value of the same. Negative earnings management, however, shows an opposite distribution trend.

Figure 3 indicates the distribution of magnitudes of comprehensive real earnings management (*RM_PROXY*), which declines gradually from 2003 to 2008. The direction of this type of earnings management to adjust earnings is distributed mainly in a U shape. The CFO of real earnings management (*R_CFO*) increases gradually from 2003 to 2007, while declining dramatically in 2008. The distribution of product costs (*R_PROD*) is U shaped, while that of discretionary expenditures (*R_DISX*) presents an inverted V shape.

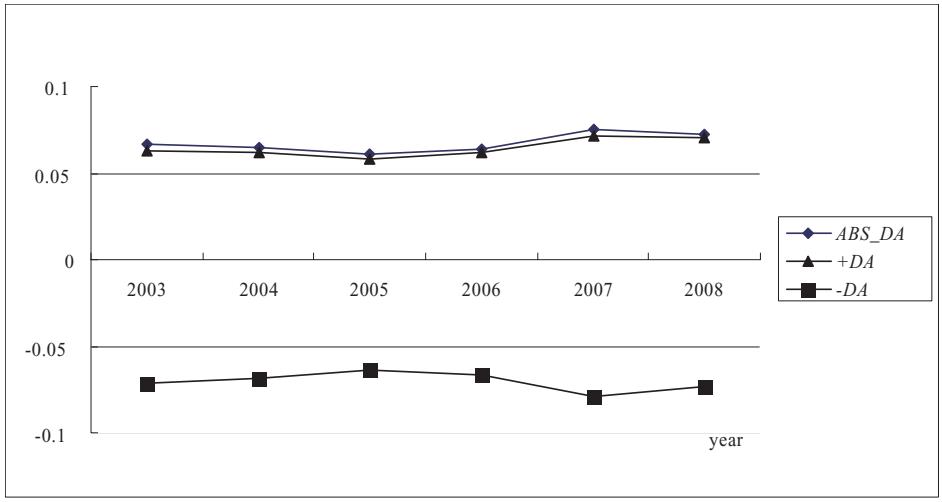


**Figure 2** Accrual Earnings Management (2003–2008)

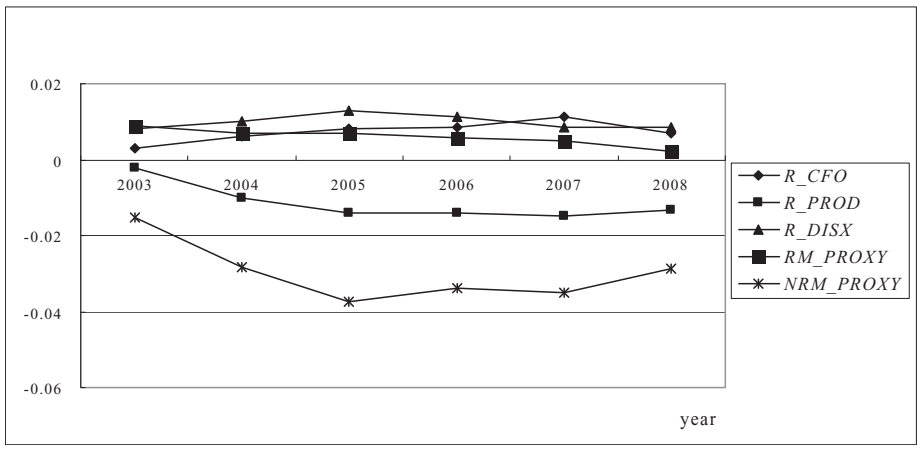


**Figure 3** Real Earnings Management (2003–2008)

Table 1 presents the descriptive statistics. The mean and median of *ABS_DA* are 0.062 and 0.044 between 2005 and 2006, respectively, whereas the mean and median are 0.066 and 0.043 between 2003 and 2004, respectively. The mean of *ABS_DA* between 2005 and 2006 thus shows an obvious decline. Compared with those for the period between 2003 and 2004, the mean and median of *R_CFO* increase between 2005 and 2006. The mean and median of *R_PROD* between 2003 and 2004 are -0.006 and -0.013, respectively, and -0.014 and -0.017, respectively, between 2005 and 2006, both showing a significant decline. The mean and median of discretionary expenditures (*R_DISX*) is 0.012 and 0.005 between 2005 and 2006, respectively, whereas the mean and median between 2003 and 2004 are 0.009 and 0.001, respectively; both statistics thus increase. The mean and median of both *RM_PROXY* and *NRM_PROXY* decline significantly. Compared with those for the period between 2003 and 2004, the mean and median of *LOSS*, *TURN*, and *SIZE* increase significantly between 2005 and 2006, while the coefficients of *GROWTH*, *DISSUE*, *CFO*, *LEV* and *EISSUE* are significant only in the median test.

The mean and median of *ABS_DA* between 2007 and 2008 are 0.073 and 0.044, respectively, and 0.062 and 0.044, respectively, between 2005 and 2006. This shows a significant increase in *ABS_DA* between 2007 and 2008. For the positive (*+DA*) and negative (*–DA*) accrual earnings management, the mean and median between 2007 and 2008 increase significantly compared with those between 2005 and 2006. The mean of real earnings management, except for discretionary expenditures (*R_DISX*), declines significantly, without obvious changes in other statistics. For the control variables, the mean and median of *TURN*, *SIZE*, and *EISSUE* increase significantly, whereas those of *LOSS* and *GOV* decline dramatically between 2007 and 2008, compared with the period between 2005 and 2006. *CFO* and *GROWTH* are significant only in the median test.

# IV. Analysis of Regression Results

## 4.1 The new laws and accrual and real earnings management

First, we analyse the correlation between the various indexes of accrual and real earnings management (see Table 2). *DA* is positively correlated with *R_PROD* and *NRM_PROXY*, while negatively correlated with *R_CFO*, *R_DISX*, and *RM_PROXY*. *ABS_DA* is negatively correlated with *R_CFO*, but positively correlated with *R_PROD*, *R_DISX*, *RM_PROXY*, and *NRM_PROXY*. This suggests there is neither an alternative nor complementary relationship between accrual and real earnings management. This may be because firms adjust earnings simultaneously via multiple earnings management tools. In addition, there is a significant positive correlation between *RM_PROXY* and *R_CFO*, *R_PROD* and *R_DISX*, as well as between *RM_PROXY* and *NRM_PROXY*.

**Table 1** Descriptive Statistics (2003–2006)

| | 2003–2004 (1) | | | 2005–2006 (2) | | | 2007–2008 (3) | | | Difference Test (1) and (2) | | Difference Test (2) and (3) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Median | Standard Error | Mean | Median | Standard Error | Mean | Median | Standard Error | Mean Test | Median Test | Mean Test | Median Test |
| *DA* | -0.001 | 0.001 | 0.096 | -0.002 | 0 | 0.089 | -0.002 | 0 | 0.105 | 0.845 | 0.652 | 0.975 | 0.708 |
| *+DA* | 0.062 | 0.043 | 0.063 | 0.060 | 0.044 | 0.059 | 0.070 | 0.047 | 0.073 | 0.392 | 0.910 | 0.000*** | 0.013** |
| *-DA* | -0.070 | -0.044 | 0.115 | -0.065 | -0.044 | 0.067 | -0.075 | -0.053 | 0.077 | 0.123 | 0.594 | 0.000*** | 0.000*** |
| *ABS_DA* | 0.066 | 0.043 | 0.070 | 0.062 | 0.044 | 0.063 | 0.073 | 0.044 | 0.075 | 0.090* | 0.512 | 0.000*** | 0.0000*** |
| *R_CFO* | 0.005 | 0.006 | 0.089 | 0.008 | 0.008 | 0.081 | 0.009 | 0.008 | 0.096 | 0.194 | 0.185 | 0.891 | 0.933 |
| *R_PROD* | -0.006 | -0.013 | 0.125 | -0.014 | -0.017 | 0.123 | -0.014 | -0.017 | 0.182 | 0.044** | 0.044** | 0.933 | 0.230 |
| *R_DISX* | 0.009 | 0.001 | 0.067 | 0.012 | 0.005 | 0.066 | 0.008 | 0.005 | 0.061 | 0.160 | 0.009*** | 0.034** | 0.138 |
| *RM_PROXY* | 0.008 | 0.003 | 0.122 | 0.006 | 0.002 | 0.116 | 0.003 | 0.002 | 0.171 | 0.069* | 0.741 | 0.453 | 0.282 |
| *NRM_PROXY* | -0.021 | -0.028 | 0.204 | -0.035 | -0.040 | 0.204 | -0.031 | -0.039 | 0.259 | 0.026** | 0.013** | 0.557 | 0.869 |
| *ROA* | -0.004 | 0.023 | 0.244 | -0.923 | 0.022 | 44.282 | 9.696 | 0.022 | 469.684 | 0.315 | 0.402 | 0.275 | 0.0000*** |
| *LOSS* | 0.144 | 0 | 0.351 | 0.169 | 0 | 0.374 | 0.14 | 0 | 0.344 | 0.0258** | 0.0255** | 0.002*** | 0.002*** |
| *CFO* | 0.053 | 0.045 | 0.120 | 0.062 | 0.052 | 0.126 | 0.074 | 0.052 | 1.257 | 0.961 | 0.0000*** | 0.280 | 0.023** |
| *GROWTH* | 0.649 | 0.188 | 9.912 | 1.875 | 0.120 | 78.074 | 1.78 | 0.120 | 48.818 | 0.475 | 0.0000*** | 0.960 | 0.000*** |
| *LEV* | 0.553 | 0.509 | 0.711 | 0.975 | 0.543 | 18.099 | 0.7454 | 0.543 | 4.192 | 0.286 | 0.0000*** | 0.547 | 0.1908 |
| *TURN* | 0.607 | 0.474 | 0.504 | 0.694 | 0.548 | 0.911 | 0.74 | 0.548 | 0.638 | 0.000*** | 0.0000*** | 0.045** | 0.0000*** |
| *DISSUE* | 0.054 | 0.021 | 0.446 | 0.411 | 0.015 | 18.092 | -0.242 | 0.015 | 16.426 | 0.367 | 0.0253** | 0.187 | 0.0000*** |
| *SIZE* | 21.179 | 21.129 | 0.959 | 21.261 | 21.220 | 1.087 | 21.464 | 21.220 | 1.259 | 0.008*** | 0.0063*** | 0.000*** | 0.0000*** |

**Table 1** Descriptive Statistics (2003–2006)

| | 2003–2004 (1) | | | 2005–2006 (2) | | | 2007–2008 (3) | | | Difference Test (1) and (2) | | Difference Test (2) and (3) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Median | Standard Error | Mean | Median | Standard Error | Mean | Median | Standard Error | Mean Test | Median Test | Mean Test | Median Test |
| *GOV* | 0.730 | 1.000 | 0.443 | 0.679 | 1 | 0.466 | 0.64 | 1.000 | 0.480 | 0.000*** | 0.0002*** | 0.008*** | 0.007*** |
| *BIG4* | 0.06 | 0 | 0.230 | 0.05 | 0 | 0.221 | 0.05 | 0 | 0.212 | 0.004 | 0.524 | 0.005 | 0.464 |
| *EISSUE* | 0.084 | 0 | 0.231 | 0.095 | 0 | 0.333 | 0.161 | 0 | 0.475 | 0.207 | 0.0318** | 0.000*** | 0.000*** |

(1) The mean test reports the P-value from the t-statistics test, while the median test reports the P-value of the Wilcoxon test (two-tailed). (2) This shows that ROA has outliers in 2005–2006. After we winsorise it at the bottom and top one per cent, respectively, its mean is -0.014, with a median of 0.022 and a standard error of 0.345. We winsorise ROA in the 2007–2008 subsample as well, and its mean is 0.049, with a median of 0.031 and a standard error of 1.674.

**Table 2** Correlation Coefficient (2003–2006)

| | *DA* | *ABS_DA* | *R_CFO* | *R_PROD* | *R_DISX* | *RM-PROXY* | *NRM-PROXY* |
|---|---|---|---|---|---|---|---|
| *DA* | 1 | | | | | | |
| *ABS_DA* | -0.133*** | 1 | | | | | |
| | (0.000) | | | | | | |
| *R_CFO* | -0.612*** | -0.103*** | 1 | | | | |
| | (0.000) | (0.000) | | | | | |
| *R_PROD* | 0.106*** | 0.147*** | -0.369*** | 1 | | | |
| | (0.000) | (0.000) | (0.000) | | | | |
| *R_DISX* | -0.293*** | 0.208*** | 0.066*** | -0.357*** | 1 | | |
| | (0.000) | (0.000) | (0.000) | (0.000) | | | |
| *RM-PROXY* | -0.492*** | 0.197*** | 0.367*** | 0.580*** | 0.236*** | 1 | |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | |
| *NRM-PROXY* | 0.416*** | 0.065*** | -0.663*** | 0.880*** | -0.572*** | 0.123*** | 1 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | |

(1) This table presents the Pearson correlation coefficients (two-tailed). (2) *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively (two-tailed). (3) The numbers in brackets are P-values.

We examine the effects of the new laws on accrual and real earnings management with sample data between years 2003 and 2006. As for accrual earnings management (see Table 3), we find that the coefficient of *LAW* is negative when the dependent variable is *ABS_DA*, meaning that the new Corporation Law inhibits accrual manipulation activities to some extent. But when the dependent variable is *+DA* or *–DA*, the coefficient of *LAW* is significantly positive, further showing that the new laws inhibit negative accrual earnings management, while having no effects on positive earnings management. This also suggests that negative earnings management diminishes the magnitude of accrual manipulation, which results from the aggressive accounting choices that firms have adopted. We may thus infer that the new laws have not affected aggressive accounting activities by which firms manage accruals to increase earnings.

As Table 4 shows, the coefficient of *LAW* is significantly positive if the dependent variable is *R_DISX*, but negative if the dependent variable is *R_CFO*, *R_PROD*, or *RM_PROXY*. Firms reduce earnings by manipulating discretionary expenditures or product costs, while increasing earnings by manipulating CFO after implementation of the new laws. The significant negative coefficient of *RM_PROXY* suggests a decline in comprehensive real earnings management. At the same time, the non-significant coefficient of *NRM_PROXY* may result from the different directions of real earnings management tools in adjusting earnings.

**Table 3** Implementation of New Laws and Accrual Earnings Management (2003–2006)

| | *ABS_DA* | *+DA* | *-DA* |
|---|---|---|---|
| Constant | 0.145*** | 0.094*** | -0.014 |
| | (0.000) | (0.001) | (0.593) |
| *LAW* | -0.003* | 0.006*** | 0.007*** |
| | (0.095) | (0.000) | (0.000) |
| *ROA* | -0.129*** | 0.534*** | 0.270*** |
| | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.003 | 0.013* | -0.014*** |
| | (0.332) | (0.062) | (0.000) |
| *CFO* | -0.073*** | -0.672*** | -0.508*** |
| | (0.004) | (0.000) | (0.000) |
| *RM_PROXY* | 0.090*** | -0.040* | -0.192*** |
| | (0.000) | (0.055) | (0.000) |
| *GROWTH* | 0.011*** | 0.000 | -0.010*** |
| | (0.000) | (0.981) | (0.000) |
| *LEV* | 0.029*** | 0.014* | -0.021*** |
| | (0.000) | (0.085) | (0.001) |
| *TURN* | 0.009*** | -0.004* | -0.009*** |
| | (0.000) | (0.099) | (0.001) |
| *DISSUE* | -0.000*** | 0.029 | 0.000*** |
| | (0.000) | (0.309) | (0.000) |
| *SIZE* | -0.004*** | -0.002* | 0.001 |
| | (0.001) | (0.050) | (0.431) |
| *BIG4* | 0.003 | 0.004 | 0.005 |
| | (0.384) | (0.359) | (0.299) |
| *EISSUE* | 0.010* | 0.009 | 0.000 |
| | (0.054) | (0.153) | (0.913) |
| *GOV* | -0.000 | -0.002 | -0.002 |
| | (0.888) | (0.331) | (0.258) |
| Industry effect | control | control | control |
| Observations | 4,445 | 2,260 | 2,185 |
| R-squared | 0.211 | 0.554 | 0.660 |

(1) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (2) The numbers in brackets are P-values. (3) These variables — *ROA*, *CFO*, *GROWTH*, and *LEV* — are winsorised at the bottom and top one per cent, respectively. (4) The regression results in this table are clustered by firms.

Taking Tables 3 and 4 into account, we find that the new laws have no effect on the aggressive accounting activities of firms, who increase earnings by managing accrual earnings. Although the tools of real earnings management affect earnings to various extents, comprehensive real earnings management declines significantly, without an obvious impact on earnings. Our results are thus not consistent with Cohen *et al.* (2008a),

possibly for the following reasons. First, although the new laws enhance the protection of minority investors, the legal environment in China weakens their effects on earnings management. Firms increase earnings mainly via the relatively less costly manipulation of accruals. And second, the judicial interpretations of years 2002 and 2003 alerted firms about the civil compensation liabilities of fraudulent statements that were restated in the new laws, thus making it difficult for us to observe the instant impact of the new laws.

**Table 4** New Laws and Real Earnings Management (2003–2006)

| | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|
| Constant | -0.043** | -0.149*** | -0.220*** | -0.412*** | 0.114 |
| | (0.024) | (0.005) | (0.000) | (0.000) | (0.197) |
| *LAW* | -0.002*** | -0.006* | 0.002** | -0.006* | -0.006 |
| | (0.002) | (0.071) | (0.033) | (0.059) | (0.155) |
| *ROA* | -0.040*** | 0.029 | -0.282*** | -0.293*** | 0.353*** |
| | (0.000) | (0.312) | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.001 | -0.001 | 0.0027 | -0.000 | -0.002 |
| | (0.419) | (0.743) | (0.406) | (0.887) | (0.727) |
| *CFO* | 1.012*** | -0.498*** | 0.094*** | 0.609*** | -1.60*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *ABS_DA* | -0.019 | 0.197*** | 0.092*** | 0.270*** | 0.124* |
| | (0.223) | (0.000) | (0.000) | (0.000) | (0.078) |
| *GROWTH* | -0.004*** | 0.005 | -0.006*** | -0.006 | 0.017** |
| | (0.008) | (0.404) | (0.000) | (0.394) | (0.018) |
| *LEV* | -0.003 | 0.027*** | -0.021*** | 0.002 | 0.052*** |
| | (0.219) | (0.001) | (0.001) | (0.670) | (0.000) |
| *TURN* | -0.050*** | 0.033*** | -0.023*** | -0.039*** | 0.107*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *DISSUE* | 0.001*** | -0.001*** | 0.001*** | 0.001*** | -0.004*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *SIZE* | 0.002*** | 0.004* | 0.012*** | 0.019*** | -0.010** |
| | (0.003) | (0.067) | (0.000) | (0.000) | (0.014) |
| *BIG4* | -0.002 | -0.033*** | 0.013 | -0.022*** | -0.043** |
| | (0.358) | (0.002) | (0.135) | (0.001) | (0.022) |
| *EISSUE* | 0.004 | 0.007 | 0.001 | 0.013 | 0.001 |
| | (0.319) | (0.704) | (0.456) | (0.377) | (0.959) |
| *GOV* | -0.001 | -0.000 | 0.000 | -0.001 | -0.000 |
| | (0.307) | (0.900) | (0.797) | (0.782) | (0.985) |
| Industry effect | Control | Control | Control | Control | Control |
| Observations | 4,445 | 4,445 | 4,445 | 4,445 | 4,445 |
| R-squared | 0.846 | 0.133 | 0.283 | 0.248 | 0.396 |

(1) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (2) The numbers in brackets are P-values. (3) These variables — *ROA*, *CFO*, *GROWTH*, and *LEV* — are winsorised at the bottom and top one per cent, respectively. (4) The regression results in this table are clustered by firms.

In China, firms still engage mainly in accrual earnings management, rather than shifting to real earnings management as in the US. That is to say, the new laws have had no effect on the relative costs of accrual and real earnings management, and further have had no effect on the means firms choose to manage earnings. We may thus conclude that the new laws implemented in China have not generated the same obvious effects on firm accounting activities as SOX in the US.

The results further show no consistent relationship between the control variables (see Tables 3 and 4). For example, *RM_PROXY* is positively related to *ABS_DA*, while negatively related to *+DA* and *–DA*. At the same time, *ABS_DA* has positive correlations with *R_PROD*, *R_DISX*, *RM_PROXY*, and *NRM_PROXY*, but a negative correlation with *R_CFO*. This suggests that in order to meet earnings targets, firms may be manipulating accrual items and real transactions simultaneously.

## 4.2 Compulsory adoption of IFRS and accrual and real earnings management

We first analyse the correlation between the indexes of accrual and real earnings management with data between years 2005 and 2008. We obtain results similar to those in Table 2. *DA* is positively correlated with *R_PROD* and *NRM_PROXY*, while negatively correlated with *R_CFO*, *R_DISX*, and *RM_PROXY*. *ABS_DA* is positively correlated with *R_PROD*, *R_DISX*, *RM_PROXY*, and *NRM_PROXY*, while negatively correlated with *R_CFO*. This suggests that neither a consistent alternative nor consistent complementary relationship exists between accrual and real earnings management. Firms may thus be adjusting earnings via multiple earnings management tools simultaneously. *RM_PROXY* has positive correlations with *R_CFO*, *R_PROD*, *R_DISX*, and *NRM_PROXY*.

The coefficient of IFRS is positive if the dependent variable is *ABS_DA* or positive accrual earnings management, while significantly negative if the dependent variable is negative accrual earnings management. This suggests that the magnitude of accrual earnings management, including both positive and negative, increases after the implementation of the new accounting standards in convergence with IFRS. Our results thus coincide with Ahmed *et al.* (2010), who find that accrual earnings management increases significantly after the compulsory adoption of IFRS. Barth *et al.* (2008), however, suggest that accrual earnings management declines according to their studies on the voluntary adoption of IFRS between various countries. This may be the result of systematic biases related to the voluntary and compulsory adoption of IFRS. Voluntary adoption is the result of management's choice, whereas firms have no choice under compulsory adoption, that is, they must adopt IFRS even if they are reluctant to do so. But the results of the compulsory adoption of IFRS can be applied to other conditions. Also, the accounting standards other than IFRS which the sample firms adopted may have led Barth *et al.* (2008) to conclude that firms are provided greater flexibility in managing accruals.

**Table 5** Mandatory Adoption of IFRS and Accrual Earnings Management (2005–2008)

| | *ABS_DA* | *+DA* | *-DA* |
|---|---|---|---|
| Constant | 0.156*** | 0.00589 | -0.241*** |
| | (0.000) | (0.847) | (0.000) |
| *IFRS* | 0.013*** | 0.005** | -0.018*** |
| | (0.000) | (0.026) | (0.000) |
| *ROA* | -0.145*** | 0.186*** | 0.220*** |
| | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.0001 | 0.009 | 0.004 |
| | (0.977) | (0.111) | (0.276) |
| *CFO* | 0.0001 | -0.016* | -0.001 |
| | (0.949) | (0.0860) | (0.164) |
| *RM-PROXY* | 0.045*** | -0.066*** | -0.167*** |
| | (0.000) | (0.001) | (0.000) |
| *LEV* | 0.000 | 0.015*** | 0.0004*** |
| | (0.940) | (0.001) | (0.007) |
| *GROWTH* | 0.000 | 0.000 | -0.001 |
| | (0.307) | (0.353) | (0.285) |
| *TURN* | 0.006*** | -0.009*** | -0.012*** |
| | (0.002) | (0.000) | (0.000) |
| *DISSUE* | -0.000 | -0.002*** | 0.000 |
| | (0.298) | (0.007) | (0.872) |
| *SIZE* | -0.004*** | 0.002 | 0.008*** |
| | (0.004) | (0.119) | (0.000) |
| *BIG4* | 0.003 | -0.010 | -0.012* |
| | (0.552) | (0.117) | (0.070) |
| *EISSUE* | 0.017*** | 0.016*** | -0.010* |
| | (0.000) | (0.000) | (0.058) |
| *GOV* | -0.006*** | -0.007** | 0.002 |
| | (0.006) | (0.022) | (0.323) |
| Industry effect | Control | Control | Control |
| Observations | 4857 | 2438 | 2419 |
| R-squared | 0.137 | 0.216 | 0.301 |

(1) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (2) The numbers in brackets are P-values. (3) The variable *ROA* is winsorised at the bottom and top one per cent, respectively. (4) The regression results in this table are clustered by firms.

**Table 6** Mandatory Adoption of IFRS and Real Earnings Management(2005–2008)

| | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|
| Constant | -0.0359 | -0.234*** | -0.0411 | -0.311*** | -0.157 |
| | (0.277) | (0.000) | (0.299) | (0.000) | (0.141) |
| *IFRS* | 0.008*** | -0.007** | -0.000 | 0.000 | -0.015*** |
| | (0.000) | (0.047) | (0.617) | (0.951) | (0.000) |
| *ROA* | -0.038** | -0.104* | -0.136*** | -0.278*** | 0.070 |
| | (0.025) | (0.089) | (0.000) | (0.000) | (0.322) |
| *LOSS* | -0.002 | -0.008 | 0.005 | -0.005 | -0.011 |
| | (0.239) | (0.296) | (0.126) | (0.453) | (0.282) |
| *CFO* | 1.017*** | -0.572*** | 0.094*** | 0.540*** | -1.684*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *ABS_DA* | -0.038** | 0.232*** | 0.047** | 0.240*** | 0.223*** |
| | (0.014) | (0.000) | (0.011) | (0.000) | (0.003) |
| *GROWTH* | -0.008*** | 0.005 | -0.009*** | -0.011 | 0.023** |
| | (0.000) | (0.515) | (0.000) | (0.214) | (0.021) |
| *LEV* | 0.001 | 0.011 | -0.006 | 0.006 | 0.015 |
| | (0.707) | (0.192) | (0.262) | (0.520) | (0.259) |
| *TURN* | -0.030*** | 0.024*** | -0.011 | -0.017 | 0.067*** |
| | (0.000) | (0.001) | (0.144) | (0.140) | (0.003) |
| | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
| *DISSUE* | 0.000*** | -0.000*** | 0.000 | 0.000 | -0.001*** |
| | (0.003) | (0.000) | (0.415) | (0.929) | (0.006) |
| *SIZE* | 0.001 | 0.009*** | 0.003 | 0.013*** | 0.004 |
| | (0.402) | (0.001) | (0.130) | (0.000) | (0.412) |
| *BIG4* | 0.001 | -0.025* | 0.012 | -0.011 | -0.039* |
| | (0.818) | (0.075) | (0.165) | (0.267) | (0.086) |
| *EISSUE* | 0.003 | 0.011 | 0.005** | 0.020** | 0.003 |
| | (0.286) | (0.313) | (0.048) | (0.049) | (0.806) |
| *GOV* | -0.002 | 0.005 | -0.000 | 0.002 | 0.008 |
| | (0.138) | (0.374) | (0.826) | (0.632) | (0.354) |
| Industry effect | Control | Control | Control | Control | Control |
| Observations | 4,857 | 4,857 | 4,857 | 4,857 | 4,857 |
| R-squared | 0.799 | 0.125 | 0.092 | 0.119 | 0.343 |

(1) *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively (two-tailed). (2) The numbers in brackets are P-values. (3) These variables — *ROA, CFO, GROWTH*, and *LEV* — are winsorised at the bottom and top one per cent, respectively. (4) The regression results in this table are clustered by firms.

The coefficient of *IFRS* is positive if the dependent variable is *R_CFO*, while significantly negative if the dependent variable is *R_PROD*. But when the dependent variable is *RM_PROXY*, the coefficient of *IFRS* is not significant. This means that after implementation of the new accounting standards in convergence with IFRS, the manipulation of CFO increases while that of product costs declines, with no change in comprehensive real earnings management. The negative coefficient of *NRM_PROXY* shows that overall earnings of firms decline as a result of real earnings management. After implementation of the new standards, firms turn to more accrual earnings management and less real earnings management to increase earnings (see Tables 5 and 6). Because the new accounting standards in convergence with IFRS are principle based, thus granting firms greater flexibility in manipulating accruals, it is less difficult and less costly to manage accrual earnings than real earnings. As a result, firms increase accrual earnings management while reducing that of real earnings to manipulate earnings.

We also find no consistent correlation between the control variables (see Tables 5 and 6), which coincides with the results presented in Tables 3 and 4. For example, *RM_PROXY* is positively correlated with *ABS_DA*, while negatively correlated with *+DA* and *–DA*. *ABS_DA* is positively correlated with *R_PROD*, *R_DISX*, *NRM_PROXY*, and *RM_PROXY*, while negatively correlated with *R_CFO*.

On the whole, the new accounting standards make the manipulation of accruals more flexible and less costly, ensuring that firms will turn to more accrual earnings management and less real earnings management. The IFRS has thus changed the relative costs of accrual and real earnings management, and our results thus provide supportive evidence for Zang (2007), while deviating from the expectation of IFRS policy makers and supervisors.

# V. Further Analysis and Robustness Test

## 5.1 Further analysis

To enhance the robustness of our results, we use samples of taking a bath and stopping losses to test whether the estimation measure captures real earnings management activities. We also examine the measurement of accrual earnings management. Following Li (2008), we choose firms with losses in the previous year and profit in the current year as the sample group of stopping losses. For the sample group of taking a bath, we take into account three conditions: (1) suffering a loss for the first time in the current year, (2) suffering losses in both the previous and current years, and (3) suffering losses in the previous two years and current year. For the control sample group, we choose observations without the six incentives to manage earnings (Li *et al.*, 2008), which are stopping losses, taking a bath, financing, maintaining a small profit/avoiding losses, making changes in senior managers, and smoothing earnings; financing includes issuing stocks and financing debts. If a firm issues stocks the following year without

the incentives of stopping losses or taking a bath, we classify it as having the incentive to issue stocks. If a firm raises its debt ratio without the incentives of stopping losses, taking a bath, or issuing stocks, we refer to it as having the incentive to finance debt. If the ROA of a firm belongs to interval [0, 0.015] without the incentives of stopping losses or financing, we classify it as having the incentive of maintaining a small profit. If a firm changes its chairman or general manager in the current year without other incentives, we regard it as having the incentive to change senior managers. If the current operating profit is positive and higher than all positive earnings for the three quarters of the current period, and there are no other incentives, we classify it as having the incentive to smooth earnings. We measure accrual and real earnings management the same as in previous sections. According to the results, since changes in real earnings management are obvious after implementation of the new accounting standards for the period between 2005 and 2008, we choose data of that period. We obtain 699 observations for the sample group of taking a bath, 379 observations for the sample group of stopping losses, and 871 observations for the control sample group.

The *DA* and *ABS_DA* of the sample group of taking a bath are significantly higher than those of the control group over the entire sample period. Also, *R_CFO* declines significantly, while *R_PROD*, *R_DISX*, and *RM_PROXY* increase significantly. *NRM_PROXY* reduces earnings significantly. Among the three tools of real earnings management, firms increase earnings through *R_CFO* and *R_PROD*, while reducing them via *R_DISX*. Comprehensive real earnings management reduces earnings on the whole, suggesting that firms make decisions on real earnings management in advance. To manipulate real earnings, firms use multiple tools. In short, the various measurements of accrual and real earnings management have captured the actual activities. This also shows that firms combine accrual and real manipulation of earnings to meet the target of taking a bath.

For the sample group of stopping losses, *DA* and *ABS_DA* are significantly higher than those of the control group over the entire sample period. *R_PROD* and *RM_PROXY* increase significantly, without obvious changes in *R_DISX* and *R_CFO*. *NRM_PROXY* increases earnings significantly. This shows that firms adjust earnings with both accrual and real manipulation activities, in which they manage real earnings to increase earnings and thereby stop losses. Since real earnings management creates more earnings than management expected, management further manipulates accruals to hide some earnings to be released in the future. Given the various incentives and characteristics of firms, the combinations of various earnings management tools may differ.

In a word, the measurements of accrual and real earnings management have captured actual activities (see Table 7). Also, firms may combine the tools of accrual and real earnings management to adjust earnings. This requires further research.

We try to estimate real earnings management using the same measurement for accrual earnings management, that is, by calculating the absolute value of real earnings

management regardless of the direction in which firms adjust earnings. We use the models presented in Tables 4 and 6 to estimate the coefficients, where *ABSR_CFO, ABSR_PROD*, and *ABSR_DISX* are the absolute value of variables *R_CFO, R_PROD*, and *R_DISX*, respectively. We report only the results of main variables here (see Table 8). After implementation of the new laws, firms engage in real earnings management via manipulating CFO and/or product costs, each with different directions, which coincides with the results in Table 4. Also, after the compulsory adoption of IFRS, firms manipulate real earnings with more manipulation of product costs and less manipulation of discretionary expenditures.

**Table 7** Earnings Incentives and Accrual and Real Earnings Management

**Panel A:** Taking a bath (n = 1570, where observations of taking-a-bath are 699; premandatory adoption, 374; post-mandatory adoption, 325; observations of control sample group, 871; pre-compulsory adoption, 308; post-compulsory adoption, 563)

| Variables | Sample Group | Pre-Adoption of IFRS (2005–2006) | Post-Adoption of IFRS (2007–2008) | Total Sample (2005–2008) |
|---|---|---|---|---|
| *DA* | Test Sample | -0.059 | -0.063 | -0.061 |
| | Control Sample | 0.007 | 0.013 | 0.011 |
| | Differences | -0.067*** | -0.077*** | -0.073*** |
| *ABS_DA* | Test Sample | 0.094 | 0.089 | 0.092 |
| | Control Sample | 0.052 | 0.067 | 0.062 |
| | Differences | 0.041*** | 0.021*** | 0.029*** |
| *R_CFO* | Test Sample | -0.017 | -0.020 | -0.018 |
| | Control Sample | 0.017 | 0.014 | 0.015 |
| | Differences | -0.034*** | -0.034*** | -0.034*** |
| *R_PROD* | Test Sample | 0.007 | 0.021 | 0.014 |
| | Control Sample | -0.045 | -0.043 | -0.044 |
| | Differences | 0.052*** | 0.065*** | 0.058*** |
| *R_DISX* | Test Sample | 0.053 | 0.014 | 0.035 |
| | Control Sample | 0.006 | 0.010 | 0.009 |
| | Differences | 0.046*** | 0.003 | 0.025*** |
| *RM_PROXY* | Test Sample | 0.043 | 0.015 | 0.030 |
| | Control Sample | -0.020 | -0.019 | -0.019 |
| | Differences | 0.063*** | 0.034*** | 0.050*** |
| *NRM_PROXY* | Test Sample | -0.028 | 0.027 | -0.002 |
| | Control Sample | -0.069 | -0.068 | -0.068 |
| | Differences | 0.040*** | 0.096*** | 0.066*** |

**Panel B:** Incentives of stopping loss (n=1250, where observations of stopping loss are 379; pre-compulsory adoption, 201; post-compulsory adoption, 178; observations of control sample group, 871; pre-compulsory adoption, 308; post-compulsory adoption, 563)

| Variables | Sample Group | Pre-Adoption of IFRS (2005–2006) | Post-Adoption of IFRS (2007–2008) | Total Sample (2005–2008) |
|---|---|---|---|---|
| *DA* | Test Sample | -0.016 | -0.037 | -0.026 |
| | Control Sample | 0.007 | 0.013 | 0.011 |
| | Differences | -0.024*** | -0.051*** | -0.038*** |
| *ABS_DA* | Test Sample | 0.061 | 0.089 | 0.074 |
| | Control Sample | 0.052 | .067 | 0.062 |
| | Differences | 0.008* | 0.022*** | 0.012*** |
| *R_CFO* | Test Sample | 0.014 | 0.004 | 0.009 |
| | Control Sample | 0.017 | 0.014 | 0.015 |
| | Differences | -0.002 | -0.009 | -0.005 |
| *R_PROD* | Test Sample | 0.002 | 0.026 | 0.013 |
| | Control Sample | -0.045 | -0.043 | -0.044 |
| | Differences | 0.047*** | 0.069*** | 0.058*** |
| *R_DISX* | Test Sample | -0.005 | 0.004 | -0.001 |
| | Control Sample | 0.006 | 0.010 | 0.009 |
| | Differences | -0.012** | -0.006 | -0.010*** |
| *RM_PROXY* | Test Sample | 0.011 | 0.034 | 0.022 |
| | Control Sample | -0.020 | -0.019 | -0.019 |
| | Differences | 0.032*** | 0.053*** | 0.042*** |
| *NRM_PROXY* | Test Sample | -0.005 | 0.017 | 0.005 |
| | Control Sample | -0.069 | -0.068 | -0.068 |
| | Differences | 0.063*** | 0.085*** | 0.073*** |

(1) This table presents the results of the mean test. (2) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

**Table 8** Regression on Absolute Value of Real Earnings Management

**Panel A:** Regression on implementation of the new laws and the absolute value of real earnings management (2003–2006)

| | *ABSR_CFO* | *ABSR_PROD* | *ABSR_DISX* |
|---|---|---|---|
| *LAW* | -0.003*** | 0.005** | -0.001 |
| | (0.009) | (0.035) | (0.292) |

**Panel B:** Regression on the compulsory adoption of IFRS and the absolute value of real earnings management (2005–2006)

| | *ABSR_CFO* | *ABSR_PROD* | *ABSR_DISX* |
|---|---|---|---|
| *IFRS* | 0.001 | 0.015*** | -0.004*** |
| | (0.237) | (0.000) | (0.000) |

(1) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (2) The numbers in brackets are P-values. (3) These variables — *ROA*, *CFO*, *GROWTH*, and *LEV* — are winsorised at the bottom and top one per cent, respectively. (4) The regression results presented in this table are clustered by firms.

## 5.2 Robustness test

Firstly, the new laws promote positive earnings management while inhibiting negative earnings management (see Table 3). To test this, we further examine it with the sample group from 2003 to 2006. We find that the coefficient of *LAW* is significantly positive when the dependent variable is *DA* (not the absolute value of *DA*), which suggests that the new laws inhibit negative but promote positive earnings management. Our results thus support the inference that firms make aggressive accounting choices.

The new accounting standards were first announced in the second half of 2006, which may influence the financial reports for that year in advance. To avoid such influence, we use observations from 2004 to 2005 with the same method in Table 3. We find results consistent with those of the sample period between 2003 and 2006. This shows that the new laws promote positive earnings management while inhibiting negative earnings management. Also, the coefficient of *LAW* is significantly positive when the dependent variable is *DA* (not the absolute value of *DA*), suggesting that the new laws have no effect on firms' aggressive accounting choices. We also re-regress the model in Table 4 with data for the period between 2004 and 2005, and come up with exactly the same results as those presented in Table 4.

We further test the results in Table 3 with the incentive of stopping losses. To examine the trend of earnings management, we compare the sample group of stopping losses and the sample group without any of the six incentives of earnings management (see Table 7 for definitions of the six incentives of earnings management). We choose firms with losses in the previous year and profit in the current year, and obtain 433 observations (2003 – 2006) of stopping losses. We also obtain 85 observations for the control group. After implementation of the new laws, with the attempt to stop losses, the mean of *DA* is still negative, while the mean for the period between 2005 and 2006 increases by 0.022 compared with that for the period between 2003 and 2004 (see Table 9).[12] The increase in the mean of *+DA* is not significant. The coefficient of *–DA* shows that negative accrual earnings management is inhibited significantly. Meanwhile, for the control group, the mean of *DA* is positive. After implementation of the new laws, the mean of *DA*, *+DA*, or *–DA* declines to various extents. Compared with the control

[12] Because there is no balance sample in both the sample and control groups, we are unable to examine the differences using the difference-in-difference method.

group, firms manipulate accruals to increase earnings after implementation of the new laws. The mean of *ABS_D*A declines in both the sample group of stopping losses and the control group; *RM_PROXY* decreases in the sample group, while increasing in the control group; and *NRM_PROXY* increases in the sample group, while decreasing in the control group. In a word, compared with the control group, accrual and real earnings management change in opposite directions, that is, firms adjust earnings upwards mainly through accrual manipulation, while real earnings management does not significantly contribute to increasing earnings. This is furthermore consistent with the results in Tables 3 and 4.

We re-regress using the sample group of stopping losses. When re-examining real earnings management, we use *DA* rather than *ABS_DA* as the control variable,[13] because earnings are adjusted mainly upwards in the sample group. As shown in Table 10, the coefficient of *LAW* is significantly positive when the dependent variable is *DA*, but insignificant when it is *ABS_DA*. Also, the coefficient of *LAW* is not significant when the dependent variables are the other five indexes for real earnings management. We may thus conclude that firms in the sample group increase earnings mainly through accrual earnings management, which coincides with the results presented in Tables 3 and 9. In the meantime, we find that the coefficient of *DA* is significantly negative when the dependent variables are *R_CFO*, *R_PROD*, *R_DISX*, and *RM_PROXY*, whereas the coefficient of *DA* is not significant when the dependent variable is *NRM_PROXY*. This shows that firms attempting to stop losses manipulate not only accruals but also CFO and discretionary expenditures to increase earnings, while manipulating product costs to reduce earnings. Comprehensive real earnings management thus declines significantly. The various tools of real earnings management also do not coincide in the directions of adjusting earnings, suggesting that firms attempting to stop losses simultaneously use multiple tools to manage earnings as they plan in advance.

**Table 9** Implementation of the New Laws, Incentive of Stopping Loss, and Accrual and Real Earnings Management

| | Sample Group (Incentives for Stopping Loss) (N=433) | | | Control Sample Group (N=85) | | |
|---|---|---|---|---|---|---|
| | (2003–2004) (1) (N=200) | (2005–2006) (2) (N=233) | Differences (3) (2)-(1) | (2003–2004) (4) (N=42) | (2005–2006) (5) (N=43) | Differences (6) (2)-(1) |
| *DA* | -0.039 | -0.016 | 0.022** | 0.050 | 0.037 | -0.012 |
| *+DA* | 0.047 | 0.056 | 0.008 | 0.073 | 0.070 | -0.003 |
| *−DA* | -0.091 | -0.068 | 0.023** | -0.034 | -0.047 | -0.012 |
| *ABS_DA* | 0.074 | 0.063 | -0.011* | 0.064 | 0.065 | -0.001 |
| *RM_PROXY* | 0.033 | 0.015 | -0.018 | -0.041 | -0.025 | 0.015 |
| *NRM_PROXY* | -0.008 | -0.006 | 0.001 | -0.121 | -0.145 | -0.024 |

[13] Using *ABS_DA* as the control variable, we obtain the same estimation results.

(1) This table presents the results of the mean test. (2) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (3) For variable *+DA*, the sample group of stopping loss includes 171 observations, while the control group includes 64 observations. For variable *–DA*, the sample group of stopping loss includes 262 observations, while the control group includes 21 observations.

**Table 10** Incentive of Stopping Loss, Implementation of the New Laws, and Accrual and Real Earnings Management

| | *DA* | *ABS_DA* | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
|---|---|---|---|---|---|---|---|
| Constant | -0.018 | 0.304*** | -0.063 | 0.045 | -0.462*** | -0.480*** | 0.571*** |
| | (0.785) | (0.000) | (0.232) | (0.743) | (0.000) | (0.001) | (0.001) |
| *LAW* | 0.010* | -0.003 | 0.000 | -0.006 | 0.005 | -0.000 | -0.013 |
| | (0.082) | (0.525) | (0.764) | (0.615) | (0.294) | (0.995) | (0.410) |
| *ROA* | 0.526** | 0.301 | 0.240** | 0.097 | 0.170 | 0.507 | -0.313 |
| | (0.013) | (0.134) | (0.019) | (0.822) | (0.258) | (0.243) | (0.514) |
| *CFO* | -0.720*** | 0.229*** | 0.689*** | -0.145 | -0.248*** | 0.296* | -0.586*** |
| | (0.000) | (0.001) | (0.000) | (0.344) | (0.004) | (0.066) | (0.003) |
| *RM_PROXY* | -0.164*** | 0.125*** | | | | | |
| | (0.000) | (0.001) | | | | | |
| *DA* | | | -0.308*** | -0.249* | -0.223*** | -0.780*** | 0.282 |
| | | | (0.000) | (0.095) | (0.002) | (0.000) | (0.125) |
| *GROWTH* | 0.002 | 0.006 | -0.000 | 0.020 | -0.010*** | 0.009 | 0.031* |
| | (0.678) | (0.229) | (0.726) | (0.178) | (0.001) | (0.520) | (0.058) |
| *TURN* | -0.016* | 0.014 | -0.056*** | -0.011 | -0.009 | -0.076*** | 0.053* |
| | (0.055) | (0.124) | (0.000) | (0.598) | (0.277) | (0.000) | (0.069) |
| *SIZE* | 0.001 | -0.012*** | 0.003 | -0.001 | 0.022*** | 0.024*** | -0.027*** |
| | (0.776) | (0.003) | (0.152) | (0.783) | (0.000) | (0.001) | (0.001) |
| | *DA* | *ABS_DA* | *R_CFO* | *R_PROD* | *R_DISX* | *RM_PROXY* | *NRM_PROXY* |
| *BIG4* | 0.023 | -0.001 | -0.014 | 0.063* | -0.035* | 0.013 | 0.114** |
| | (0.130) | (0.904) | (0.324) | (0.088) | (0.078) | (0.576) | (0.049) |
| *GOV* | -0.002 | 0.006 | 0.001 | -0.024 | -0.002 | -0.025 | -0.024 |
| | (0.757) | (0.339) | (0.631) | (0.161) | (0.713) | (0.135) | (0.243) |
| Industry effect | Control | Control | Control | Control | Control | Control | Control |
| Observations | 433 | 433 | 433 | 433 | 433 | 433 | 433 |
| R-squared | 0.648 | 0.370 | 0.886 | 0.071 | 0.265 | 0.405 | 0.268 |

(1) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (2) The numbers in brackets are P-values. (3) The tails of variables *ROA*, *CFO*, *GROWTH*, and *LEV* have been treated with a 1% winsorisation test. (4) The regression results presented in this table are clustered by firms.

Secondly, to control for the influences of heteroscedasticity and autocorrelation, we treat the results in Tables 3, 4, 5, 6, 8, and 10 with the clusters in respect of years and find that all results in the tables are robust. The variance inflation factor of all variables in these tables is less than 5, suggesting no serious collinearity in all models.

Thirdly, for accrual earnings management we use the basic Jones model and follow Kothari (2005) in using the Jones model that takes *ROA* (current year performance) as the control variable. We re-calculate *DA* with the above two methods and re-regress the models in Tables 3, 4, 5, 6, 8, and 10. The further analysis results prove the robustness of our conclusion. Meanwhile, we re-calculate accrual earnings management using the modified Jones model with *ROA* as the control variable. The regression results in the models of Tables 3, 4, 5, 6, 8, and 10 also support our conclusion. In other words, our results are robust.

In addition, in accordance with Ball and Shivakumar (2006), who suggest that a piecewise linear model is more suitable for measuring earnings management, we re-calculate *DA* with such a model based on the Jones model. In Model 11, $TA_t = NT_t - CF_t$, where $NT_t$ represents operating income at year $t$; $CF_t$ is the CFO at year $t$; $\Delta REV_t$ is the difference in income between years $t$ and $t$-1; $PPE_t$ represents the gross value of property, plant, and equipment at the end of year $t$; and $DCF_t$ is a dummy variable which is equal to 1 if $CF_t < 0$, and otherwise 0. In addition, $TA_t$, $CF_t$, $\Delta REV_t$, and $PPE_t$ are treated by the mean of lagged total assets at the end of years $t$ and $t$-1. We take the residual as *DA*. We also re-regress using the models in Tables 3 to 6. For the re-regression results of the model in Table 3 (see Table 11), we find that the coefficient of *LAW* is significantly positive when the dependent variable is *ABS_DA* or *+DA*, but not when it is *–DA*. This further supports the conclusion in Table 3 that the new laws have no significant impact on earnings management. Moreover, the re-regression results are consistent with those of Tables 4 to 6.

$$TA_t = a_1 + a_2 CF_t + a_3 \Delta REV_t + a_4 PPE_t + a_4 DCF_t + a_5 DCF_t * CF_t + \varepsilon_t \quad (12)$$

Fourthly, in measuring real earnings management, we do not treat the tails of the variables with winsorisation, but our results are still robust when re-regressing with the models in Tables 4, 6, 8, and 10.

Fifthly, we add the time-trend variable *TIME* and economic environment variable $\Delta GDP$ as control variables to re-regress the models in Tables 3, 4, 5, and 6, where $\Delta GDP$ represents the annual growth rate of the gross domestic product (GDP); the measurement of *TIME* and $\Delta GDP$ follows that in Cohen *et al.* (2008a). We find that the control variables have no effects on our results.

**Table 11** Implementation of the New Laws and Accrual Earnings Management (2003–2006)

| | *ABS_DA* | *+DA* | *-DA* |
|---|---|---|---|
| Constant | 0.050*** | 0.020*** | -0.049*** |
| | (0.000) | (0.001) | (0.000) |
| *LAW* | 0.001* | 0.001*** | -0.000 |
| | (0.099) | (0.001) | (0.711) |
| *ROA* | -0.124*** | 0.0725*** | 0.141*** |
| | (0.000) | (0.000) | (0.000) |
| *LOSS* | -0.005*** | 0.005*** | 0.004*** |
| | (0.001) | (0.000) | (0.007) |
| *CFO* | 0.031*** | -0.037*** | -0.055*** |
| | (0.000) | (0.000) | (0.000) |
| *RM_PROXY* | 0.001 | 0.004* | -0.004 |
| | (0.844) | (0.067) | (0.373) |
| *GROWTH* | 0.001 | 0.000 | -0.001* |
| | (0.107) | (0.558) | (0.066) |
| *LEV* | 0.011*** | 0.004* | -0.015*** |
| | (0.000) | (0.057) | (0.000) |
| *TURN* | 0.001** | 0.000 | 0.001 |
| | (0.010) | (0.473) | (0.490) |
| *DISSUE* | 0.000** | -0.013*** | -0.000*** |
| | (0.027) | (0.000) | (0.004) |
| *SIZE* | -0.002*** | -0.001** | 0.002*** |
| | (0.000) | (0.026) | (0.000) |
| *BIG4* | 0.006*** | 0.001* | -0.005*** |
| | (0.000) | (0.056) | (0.001) |
| *EISSUE* | 0.002*** | 0.000 | -0.001 |
| | (0.00621) | (0.866) | (0.152) |
| *GOV* | 0.000 | 0.000 | -0.001 |
| | (0.989) | (0.551) | (0.513) |
| Industry effect | Control | Control | Control |
| Observations | 4,445 | 2,260 | 2,185 |
| R-squared | 0.538 | 0.336 | 0.688 |

(1) ***, **, and * denote significance at the 1%, 5%, and 10% levels (two-tailed), respectively. (2) The numbers in brackets are P-values. (3) These variables — *ROA*, *CFO*, *GROWTH*, and *LEV* — have been winsorised at the top and bottom one per cent, respectively. (4) The regression results presented in this table are clustered by firms.

Finally, we add an industry concentration variable to the model to test the robustness of the main results. Owing to the difficulty in obtaining data, we do so only for listed

companies that have issued A or B shares in the period between 2003 and 2008. We further exclude firms issuing A and B shares simultaneously. Then, taking at least 50 firms per industry year, we calculate the concentration of the top 50 firms with the biggest sales in each industry to represent the concentration of that industry. Specifically, the manufacturing industry is classified with a two-digit code. For the model in Table 3, the re-regression results coincide with those in Table 3, except that the coefficient of *LAW* is -0.002 with a P value of 0.324, which declines significantly when the dependent variable is *ABS_DA*. Also, the re-regression results coincide with those in Table 4, except that the coefficient of *LAW* is not significant when the dependent variable is *R_PROD* or *R_DISX*. Meanwhile, as for the industry concentration variables, most coefficients are not significant, and the results are not consistent. After re-regressing with the models in Tables 5 and 6, we find that the industry concentration variable does not affect our results, and its coefficients in all estimation models are not significant.

## V. Conclusions

The relationship between the legal system, IFRS, and accounting information (including earnings management) is a hot topic in North America. One representative opinion is that changing accounting standards alone may not improve the quality of accounting information or reduce earnings management, because institutional backgrounds, such as the legal system, are also important factors affecting the quality of accounting information. There is, however, no direct empirical evidence, especially for the period after the compulsory adoption of IFRS, to support the above opinion. In China, the new Corporation Law and Securities Act implemented on 1 January 2006, together with the new accounting standards in convergence with IFRS implemented in 2007, promised a better institutional environment for our research in studying the application of IFRS in transition economies.

This paper complements the existing literature on earnings management in several ways. First, accrual earnings management is inhibited to some extent with stricter laws, which may be the result of a firm's aggressive accounting choices. After implementation of the new laws, *DA* and positive earnings management increase significantly, while negative earnings management declines significantly. With respect to real earnings management, after implementation of the new laws, CFO, product costs, and comprehensive real earnings management decline significantly, while discretionary expenditures increase significantly. Moreover, various tools for managing real earnings show different directions in adjusting earnings. Our results thus do not accord with those of Cohen *et al.* (2008a); in a word, the new laws in China have not generated the same effect on earnings management as has SOX in the US.

Second, after implementation of the new accounting standards in convergence with IFRS, accrual earnings management activities increase. In the meantime, CFO increases and product costs decline. The new accounting standards also have no effects

on comprehensive real earnings management; the latter in turn reduces earnings. Firms manipulate earnings via more accrual and less real earnings management, showing that firms may use multiple tools to manage accrual and real earnings, and will choose the right means to do so based on the relative costs of either type of earnings management. Because principle-based accounting standards provide management greater flexibility than rule-based standards, the costs of accrual earnings management are reduced. Therefore, firms will manipulate accruals more, while reducing their manipulation of real business transactions. Our results thus coincide with the theoretical expectation in Zang (2007), but are inconsistent with that in Barth *et al.* (2008), which is based on the voluntary adoption of IFRS among countries. Also, our results partially accord with those in Ahmed *et al.* (2010), that is, accrual earnings management increases after the compulsory adoption of IFRS.

In addition, our study suggests that such compulsory adoption may change the relative costs of accrual and real earnings management, which may further affect decisions on which tools of earnings management to use. Moreover, with the various incentives to manage earnings, the combinations of earnings management tools will differ from one another, which could be a topic for further research.

Several aspects should be paid attention. First, we use the modified Jones model and follow the methods in Roychowdhury (2006) and Cohen *et al.* (2008a) to estimate accrual and real earnings management; thus, there may be some measurement errors, which may affect our conclusions. Second, we find that accrual earnings management is inhibited to some extent by aggressive accounting choices after implementation of the new laws; in other words, Hypothesis 1 is not proved. In addition, Cohen *et al.* (2008a) find that after the implementation of SOX in the US (with rule-based accounting standards), firms shifted from accrual-based to real-based earnings management. Ahmed *et al.* (2010) further find that after the compulsory adoption of principle-based IFRS, accrual earnings management increases, and is especially serious in countries or districts that successfully protect investors. This suggests that there may be a coupling androgenic allocation demand between the style of accounting standard and the legal environment. If the two do not accord, the quality of accounting information may not be guaranteed. Although the laws are becoming more stringent, they are usually badly executed and so are unable to achieve the desired effects. The allocation of laws and accounting standards remains to be further studied. Finally, because of the influence of the subprime crisis, firms in China suffered losses from the second half of 2007, which may have had a systematic impact on earnings management activities in 2007 and 2008. Therefore, our conclusions on the influence of IFRS on earnings management may not be completely attributable to accounting standards alone, and readers should be cautious about this.

## References

Please refer to pp. 85-87.