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国内分析师预测能否反映市场预期？——基于MBE的市场反应分析[1]

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摘要

针对新兴资本市场分析师能否影响及反映市场普遍预期的问题，本文通过检验国内上市公司盈利达到或超过分析师盈利预测（Meet-or-Beat Expectation, MBE）时公司股票价格变化，发现实际盈余没有让分析师失望的公司在年报披露日前后的短窗口以及披露后的长窗口都能获得更高的累计非正常报酬，从而说明国内分析师的盈利预测能够影响并反映市场预期。这个基本结论为国内分析师的后续研究做出了铺垫。同时本文发现一些与成熟资本市场不同的结论，比如市场在对MBE信息做出反应时，未能区分非正常应计项目；在投资者特征方面，机构投资者对是否MBE的反应程度是非对称的；最后通过构造组合收益检验了分析师相对二级市场的经济重要性。

关键词：市场预期、分析师预测、MBE、市场反应
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[1] 本研究成果是朱红军教授主持的曙光计划“中国证券分析师行业的运行效率及其监管机制研究”的阶段性成果，同时本文得到“上海财经大学优秀博士生论文培育基金”的资助。作者非常感谢2009年“四校会计学博士生论坛”上各位老师和同学的点评；两位匿名审稿人和执行编辑吴东辉博士提出的修改建议让本文获益匪浅，同时南开大学花贵如、中山大学孔祥婷、清华大学王玉涛和上海财经大学李路等博士生同学的修改建议也对本文有很大帮助，在此一并致谢。当然文责自负。

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一、引言

随着国内机构投资者和证券分析师行业的发展，倡导价值投资的分析师盈利预测对股票市场的影响日益受到人们关注。越来越多的学者也把目光投到了证券分析师的研究领域（姜国华，2004；吴东辉、薛祖云，2005；方军雄、洪剑峭，2007等）。从存在意义上讲，财务分析师的主要作用就是从各个渠道获得公司的相关信息，形成自己的盈利预测传递给市场，以作为市场对公司权益定价的重要信息。

但是关于分析师的一些基础假设在国内较少经过实证检验，比如：分析师是否依据公司的真实基本面信息进行预测？他们提供的预测能否影响市场上投资者对公司盈利情况的预期？也就是说国内市场投资者在意这个信息"传递者"吗？会否参考其盈利预测？从市场的角度看，如果公司实际披露的盈余达到或者超过了分析师的预期（Meet-or-Beat Expectation，下文简称MBE），这个差额会不会以及会在多大程度上影响其权益价格？这都是国内展开分析师研究需要解决的基础问题。

很显然，上述问题的解答不能照套国外成熟资本市场的研究成果，毕竟我国的分析师行业以及A股二级市场在诸多方面有自身特点，甚至在某些方面颇受诟病。由于发展不到20年，大的方面上，法律环境、上市流程、上市公司的类型比例及股权比例等多个方面皆具自身特点，小的方面如券商和分析师的数量及其跟踪范围，公司经营及盈余信息的披露方式、要求，机构投资者的持股分布情况以及市场中投资者的成份构成都与成熟市场差别很大。有时就如"木桶原理"，每一个因素的不足都可以把市场整体的成熟程度落下一大截。

为了检验国内分析师盈利预测能否影响并反映市场预期，本文从达到或超过盈利预期的角度出发，对基于分析师盈利预测的MBE市场反应进行检验。根据WIND金融资讯搜集的针对2005至2008年财报的券商分析师盈利预测样本，发现了一些与成熟资本市场相同的结论：(1)二级市场会调高MBE公司的股票相对估值；(2)分析师的盈利预测要比管理层披露的业绩预测更好地反映出市场预期；(3)能够基于MBE信息构造盈利的投资组合。但同时也发现一些和成熟资本市场不同的地方：(1)国内分析师预测数据只提供年度预测，所以较多的预测出现在报表日与披露日之间；(2)针对MBE信息，短窗口内市场提前约10至5个交易日开始显著反应，表面存在报表信息的提前泄露，带有新兴资本市场特点；(3)投资者在披露日后的短期对盈余管理有区别对待，但长期应计项目成份对股价走势没有影响；(4)机构投资者对MBE的信息存在反应的非对称性，机构持股比例越高，MBE带来的CAR值越小。

在研究贡献方面，本文以较有代表性的数据（包含更多券商分析师的样本）检验了国内的分析师盈利预测是否能影响并反映市场的整体盈利预期这个基础命题，回答了分析师行业是否成功扮演了蔡祥、李志文和张为国（2003）提到的信息"接受者"和"传递者"的角色的问题；还用数据支持了在新兴资本市场上，MBE的盈利信息能显著地带来的正面的股价反应，披露日后较长时窗的累计超额报酬能部分地被MBE信息所解释，同时发现了国内市场与成熟资本市场诸多不同的结论。

本文的结构安排如下：第二部分为文献综述及假说提出；第三部分为研究设计；第四部分为数据、描述性统计及回归结果；第五部分为敏感性检验；第六部分为该问题的经济重要性检验；第七部分为全文总结。

二、文献回顾及假说提出

2.1 文献回顾

分析师研究在成熟资本市场研究中占有重要席位，大量的文献在Schipper (1991)和Brown (1993)以后涌现出来，研究的角度包括论证分析师盈利预测的信息含量、对证券市场的影响、分析师专业能力的本质以及盈利预测的分布特征、分析师的决策依据和过程以及分析师面临的监管环境及其独立性问题等各方面（Ramnath *et al.*, 2008）。而MBE方面的研究起步稍晚。

起初，Skinner (1997)，Kasznik and Lev (1995)、Francis *et al.* (1994)和Soffer *et al.* (2000)等发现越来越多的公司倾向于警告投资者即将到来的不好盈利信息，Burgstahler and Eames (1998)也发现分析师在公司财报实际盈余披露前调低预测的现象逐年增多，而且这种调低的预测刚好可以避免高于公司的实际披露盈余。之后Brown (2001)发现从1984年到1999年，恰好超过分析师的盈利预测一点点的观测数逐渐增多，而且这类公司的比例与"低于"预测的公司所占的比率是不对称的，成长类公司尤其如此，这是否是故意的呢？De George *et al.* (1999) 则从经理人盈余管理的动机阐述，认为在上市公司管理层的三大财务目标中，达到分析师的盈利预测已经成为经理人进行盈余管理的重要动机之一。[3]对于通过盈余管理来达到MBE目标的研究同样得到了Kasznik (1999) 和Payne and Robb (1997)的证据支持。

但直接和市场反应联系起来，明确证明了MBE会获得超额股票收益的文章还属Bartov *et al.* (2002)和Kasznik and McNichols (2002)，其中Bartov *et al.* (2002)基于I/B/E/S季度盈利预测的数据，证明了MBE的公司会在整个季度获得相对更高的股票收益，市场能部分识别披露盈余中的盈余管理成份。

在国内，随着股权融资在公司经营中的重要性日益凸显，股票全流通以及经理人股权激励的实施，股票价格更加受到公司各利益相关者重视。但作为向市场传递经营和盈利信息的分析师，其提供的盈利预测对公司股价的的影响尚有待检验。

出于多方面原因，国内关于分析师的研究一直难以延展。首先，分析师行业的发展和规范是一个渐进的过程；其次，分析师盈利预测数据需要全面、持续地累积，部分的研究文献（如朱宝宪和王怡凯，2001;吴东辉和薛祖云，2005；林翔，2000等）无奈于当时数据的缺乏只能从个别券商或公开媒体处取得；最后，券商分布及其市场影响力尚有待检验，国内券商规模、分析师数量及行业覆盖差异较大，其市场影响力自然不可相提并论，这也为国内的分析师研究带来了一些困难。

纵然在这样的条件下，之前的诸位学者仍旧给我们提供了积极的研究结论。关于分析师在现代资本市场的角色早已被提及（如朱宝宪和王怡凯，2001；蔡祥、李志文、张为国，2003；朱红军、何贤杰、陶林，2007等），其中朱宝宪和王怡凯（2001）以1999年1至11月《上海证券报》每周日的《为您选股》栏目提供的投资建议为样本，发现分析师对短期热点有相当的把握能力；朱红军等（2007）从股价同步性的角度出发，发现在我国A股二级市场上，如果一家上市公司的分析师跟踪人数越多，那么公司的股价就越能反映公司的基本面信息，从而提高市场的有效性；同时对分析师预测的价值做出肯定的还有吴东辉、薛祖云（2005），他们从国泰君安网站

[3] 另外两个目标是"披露盈利"、"不低于之前的业绩"。

取得针对2001年中报和年报的预测数据，发现可以利用公开的盈利预测构造套头组合获得显著为正的回报率，从而说明可以利用这些盈利预测的资料来获取超过市场的收益率，肯定了财务分析师的专业胜任能力。

关于分析师影响投资者的渠道是否存在，吴东辉、薛祖云（2005）发现分析师的原始预测或是对预测的调整会带来市场反应，分析师预测比随机游走模型得到的预期值更能体现出市场对未公布盈余的预期。之后，朱红军等（2008）则基于不同的年份和样本发现市场反应的与EPS调整的幅度正相关。从分析师预测修正的角度，这些研究都支持了分析师影响投资者渠道的存在。

国内也有文献提到了分析师行业的新兴市场特征，比如券商的规模以及声誉良莠不齐，分析师对选择什么样的公司来跟踪也有选择。李丹蒙（2007）从分析师获取信息的难易程度来分析，发现控制其他因素后，公司透明度越高，跟踪的分析师人数越多，预测误差越小。部分控制了内生性问题之后结论依旧成立，而且分析师的预测行为对于公司的透明度没有显著作用。朱琦（2007）则发现了上市公司通过提高信息披露质量，能使得分析师的盈利预测行为更为积极。

可以看出国内的文献已经对分析师预测的投资价值及国内分析师行业的特点进行了分析，但是，对于分析师盈利预测与市场之间的链接尚未有较全面的分析。其次，分析师预测的意义可以从预测的准确性和市场反应两个角度加以检验，但从分析师要提高证券市场信息含量的目标来看，从市场反应角度来检验更为合理。本文着重就这个问题进行实证分析。

2.2 假说提出

分析师除了能够获得以前年度的盈利信息，还能够在跟踪期内对新出现的信息（如新的投资项目、公司的生产条件、生产资料价格变化等）进行吸收，进而确定或纠正之前的盈利预测，形成分析报告之后通过所属证券公司发给各购买报告的机构投资者，或者直接面对机构投资者进行路演交流。同时在部分财经媒体的宣传下，券商的研究报告可以一部分地被其他投资者所知悉。[4]既然国内分析师的专业胜任能力已经被实证支持（吴东辉、薛祖云，2005），那么分析师的盈利预测就应该可以提供给投资者更多的公司经营信息，形成一定的市场盈利预期。

如果上市公司的权益定价基于一定的盈利预期上下波动，那么公司披露的年报盈余比盈利预期更差时，市场理应会降低对这个公司的权益定价水平。如果分析师预测能够影响并反应市场的盈利预测，那么当实际EPS超过分析预测形成的预期时，理应会带来更高的权益估值。所以MBE在短期对投资者来说是一个“利好”的消息。

但现实中投资者是否参考了一种和分析师同方向的预测呢？如果这样，那还不能说分析师影响了投资者的盈利预期。朱红军等（2008）发现分析师在更改盈利预测的时候，二级市场会有显著的市场反应，而且反应的程度与EPS预测调整的幅度正相关。这个结论佐证了投资者会考虑分析师提供的信息，中间存在可靠的传递渠道。

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[4] 比如“第一财经”电视或“迈博汇金”网站经常传递当天部分券商的公司研究报告信息，而部分券商的网站也会披露其部分盈利预测或晨会信息，当然这些报告的时效性及权威性尚需验证。

MBE带来的相对市场超额收益率却不一定为正，这是因为分析师跟踪并作出预测的公司都存在自选择问题（李丹蒙，2007），比如规模较大、信息披露较为积极、吸引的机构持股比例不同等等。这些自选择特点完全有可能在某段时间导致样本公司跑输大盘。但在这类公司之间，本文认为MBE公司的市场表现要好于非MBE公司，由此提出假说1：

假说1：短窗口内，相比于实际盈余低于分析师盈利预测的公司，MBE公司的股票在披露日前后会获得更高的累计超额收益。

假说1之所以考虑披露日前，主要是考虑到国内资本市场的新兴市场特点，可能存在报表信息的提前泄露，这种违规现象在二级市场上常有发生。为了更完整地考察MBE的影响，故而把披露日前也纳入考查范围。

在披露日之后较长的时间来看，市场对MBE的反应会有不同的解释。首先从交易成本的角度考虑，短窗口内并非所有投资者都可以依据年报信息迅速调整投资组合。如果要市场上的投资者对年报信息作出充分反应需要一个长期的过程，尤其是注重盈利信息的机构投资者，他们的组合调整行为会影响到股票的长期收益。Ke *et al.* (2005) 发现在公司披露盈利信息后，投机性机构投资者（Transient Institutional Investors）会在使股价反映公司盈利信息的过程中导致长期的盈余公告漂移（Post-Earnings-Announcement-Drift，后文简称PEAD）。

其次在公司盈余公告之后，分析师会基于报表信息逐步调整之前的盈利预测，这种调整行为可能会影响到长期股价走势。Zhang (2008)发现如果在公司披露财报后紧跟着密集的分析师预测调整，那么之后的PEAD会显著的减弱，从而说明分析师预测能提高市场有效性，减少PEAD。

再次，考虑我国资本市场自身的特点，除了市场波动较大外，上市公司的非整体上市带来很多诸如股东占款、关联交易、资产重组等问题，这些因素可能导致上市公司的基本面在较长时间内发生变化，使得PEAD走势脱离之前的报表基本面，所以对国内的资本市场盈余公告后的股价走势做一个检验是有意义的。

尽管长窗口可能出现竞争性结果，但从MBE的角度出发，本文提出第二个假说：

假说2：相比于低于分析师盈利预测的公司，MBE公司的股票在披露日之后的较长时期将获得更高的累计超额报酬。

当然，在检验上述两个假说的时候，需要考虑国内资本市场自身特点的影响，比如重要信息在公开之前的提前泄露、机构投资者的持股比例及分布与成熟市场差异较大等。

三、研究设计

为了从MBE的市场反应检验上述假说，把检验时窗分为短期和长期两个窗口，分别计算在公司实际盈余披露前后的累计超额投资收益率（CAR）变化情况。本文超

额收益率计算方法采用买入－持有投资收益率的方式，计算公式为：

$$CAR = \prod_{t=t_1}^{t_2}(1+R_{it}) - \prod_{t=t_1}^{t_2}(1+R_{mt}) ,$$

其中：t表示交易日期，(t_1, t_2)是CAR值的计算区间；[5] R_{it}表示个股i在第t个交易日的收益率数据；R_{mt}表示在第t个交易日的市值加权市场指数收益率，上交所公司对应上证综指，深交所上市公司对应深证成指。

对于实际盈余与分析师预测盈余差额的衡量，本文采用实际盈余减去分析师的平均预测盈余，并且除以公司期初的股价加以标准化。分析师的平均预测$SURP_i$则直接对相应区间内的分析师EPS预测取算术平均得到，为了更好地考察对MBE的市场反应，基于$SURP_i$的正负构造一个虚拟变量$DMBE_i$：

$$SURP_i = \frac{ACTUAL_i - (\sum_{ix} EPS_{ix})/N_i}{P_{io}}$$

$$DMBE_i = \begin{cases} =1, & \text{如果} SURP_i \geq 0, \\ =0, & \text{如果} SURP_i < 0 \end{cases}$$

其中：$ACTUAL_i$表示公司i实际披露的每股盈余数据；EPS_{ix}表示当期跟踪公司i的所有分析师中第x个分析师提供的每股盈余预测值；N_i是当期对公司i做出预测的分析师人数；P_{io}是第i个公司在上次年报披露后第二个交易日的收盘价格，作为当期的期初股价。

基于上述的变量衡量，本文构造如下的回归模型(1)：[6]

$$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * DMBE_i * SURP_i + \beta * CONTROLVAR_i + \varepsilon_i \quad (1)$$

此回归模型因变量是市场反应的超额报酬，自变量包括两类：$SURP$的相关变量以及公司的相关特征变量。按照模型，β_2和β_3是模型的关键系数，其中β_2直接体现

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[5] 设定公司的报表披露日$t = 0$，且无论短窗口还是长窗口的CAR 值计算都基于交易日的数量，而非日历天数；如果披露日并非交易日(如周末、短期停牌或其他假期)，那麼设定披露日之后的第一个交易日$t = 0$。

[6] Bartov *et al.* (2002)模型中，用两个报表披露日间的第一个分析师提供的盈利预测形成的差额，来控制住公司的盈余可预测性，其计算如下：

$ERROR_i = \frac{|ACTUAL_i - EPS_{io}|}{P_{io}}$ 其中：EPS_{i0}表示当期针对公司i的第一个分析师盈利预测；

但是用国内数据控制的时候，发现放入模型后与$SURP$ 存在严重的多重共线性，VIF 值超过5。于是模型并未对此加以控制。事实上，不论是否放入$ERROR$，对本文主要结果都没有影响。另外，本文加入其它公司特征变量和分析师跟踪人数变量，试图从别的角度控制住结果，加入新的变量后未有多重共线性问题，同时，未加控制变量的回归结果也一并列示。

了MBE带来的CAR值增加，而β_3反映的是：*SURP*对CAR值的贡献是否因为MBE而不同，是敏感性差异的衡量。如果数据完全符合我们的假说，那最理想的情形就是β_2和β_3都显著为正。考虑到交叉项带来的影响，退而求其次，也需要至少一个变量显著为正。如何看待*SURP*的系数呢？本文认为：*SURP*是超过分析师预测的程度，如果公司盈利超过(低于)分析师预测太多，公司的盈余持续性值得怀疑，市场反应检验将受到影响，相对来讲，*DMBE*是个更直接的指标。

模型(1)与Bartov *et al.* (2002)的模型相比，没有控制公司盈利的可预测性，这是因为按照Bartov *et al.* (2002)计算的可预测性衡量变量与*SURP*和*DMBE*存在多重共线性(VIF值 = 6)，所以本文改用其他公司特征变量来控制住企业的可预测性，具体变量和解释如下：

SIZE：公司规模的控制变量，为上市公司市值的对数；

LEV：资产负债率；

ROA：资产收益率，分子为公司的净利润加利息支出，分母为公司的总资产；

MB：市净率，控制公司的成长性；

EPS：期末股本摊薄的每股盈余；

ANANUM：公司的分析师跟踪人数。

为了减弱控制变量带来的一阶效应(First-order Effect)、二阶效应(Second-Order Effect)无法区分等问题，未加控制变量的结果也需要一并列示。

四、数据来源、描述性统计及回归结果

4.1 数据和描述性统计

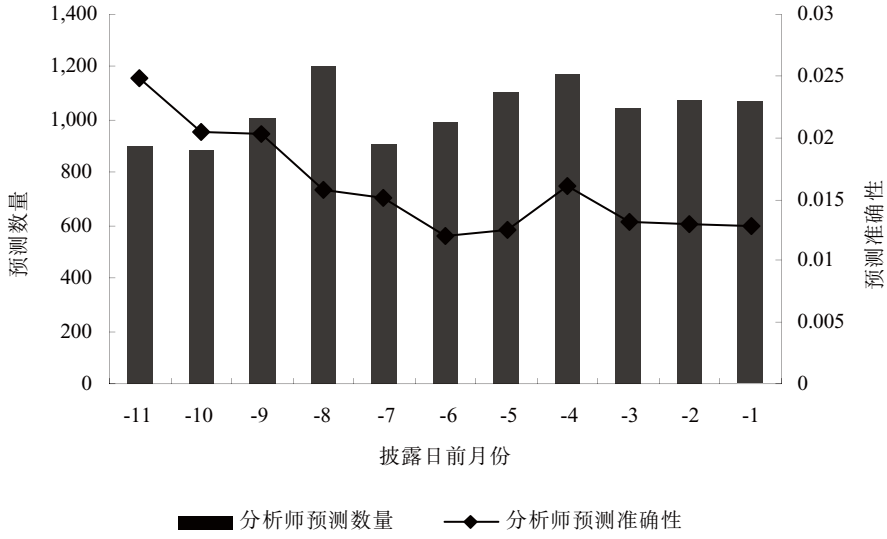
本文从WIND金融资讯获取了41家券商的分析师对A股上市公司2005年到2008年四年年报的每股盈余预测数据。WIND金融资讯每天搜集这些券商当天新发布的公司研究报告和晨会报告，并针对部分会员公开，其积累的以前年度的盈利预测数据库覆盖的券商范围较广，而且分析师预测的观测值较多，这些特点对分析师的研究非常重要。在下载的数据中，共有12817个预测期在一年内的观测值。

国外的分析师往往在公司披露重要的财务信息时跟着发表自己的盈利预测，体现在整个年度的预测频数分布上有些规律。本文也对此进行描述，如图-1所示，以披露日为基准，对之前各时段的分析师预测频数分布做一描述。图中显示：分析师有两次预测集中期，分别为年报披露日前第8至9个月以及第0至4个月，第一个高峰期大约为公司半年报的披露期，第二个高峰期为公司报表日和披露日之间，分析师集中在这两个时期发布盈利预测有其合理性。

从分析师预测准确性考虑，随着公司经营信息的逐步公开，分析师是否会持续吸收公司的经营信息从而不断降低预测误差呢？同样的做法，本文把各个月份的分析师预测误差做一个描述，以观察是否越临近披露日，分析师预测越准确？结果如图-1所示，总体上分析师预测误差呈现降低的趋势，准确性在不断提高。但有趣的是后6个月的预测准确性没太大变化，而报表日还出现了误差均值的增加。总体的结果支持分析师在持续吸收公司经营信息，从而降低预测误差。

图-1 分析师预测频数分布及预测误差变化趋势

本图以2005-2008年年报披露日为$t = 0$，描述披露日前各月份的分析师预测分布以及预测准确性变化。横轴上-11表示报表披露日前的第11个月，柱形图表示当月分析师做出预测的数量(对应左边纵轴)，折线图表示当月的分析师预测准确性(对应右边纵轴)，用*SURP*的绝对值代理准确性。



为了检验MBE相关结果，本文保留符合以下条件的数据：

1) 分析师做出预测的时间必须在公司三季报披露日后，在当年年报披露两个日历天数之前。
2) 单个分析师如果针对某个上市公司提供了两次或两次以上的预测，本文取其最后一次的预测为观测；
3) 每个公司－年度的财务预测须至少有2个或2个以上的观测数；

最后保留下来的数据中，针对A股上市公司2005年到2008年财报的EPS预测共有5890个观测，四年分别为1,001、2,345、982以及1,562个观测值，券商的覆盖范围达到41家。然后本文计算每个公司－年度的分析师平均EPS盈利预测值并据此求*SURP*，最后得到1381个公司－年度的*SURP*值，平均每个公司－年度有4.27次财务预测，由于只取每个分析师的最后一个预测值，且样本只保留了三季报之后的预测，这意味着至少有4.27个券商分析师在跟踪同一个公司。

表-1 分年度样本量及MBE频率统计结果

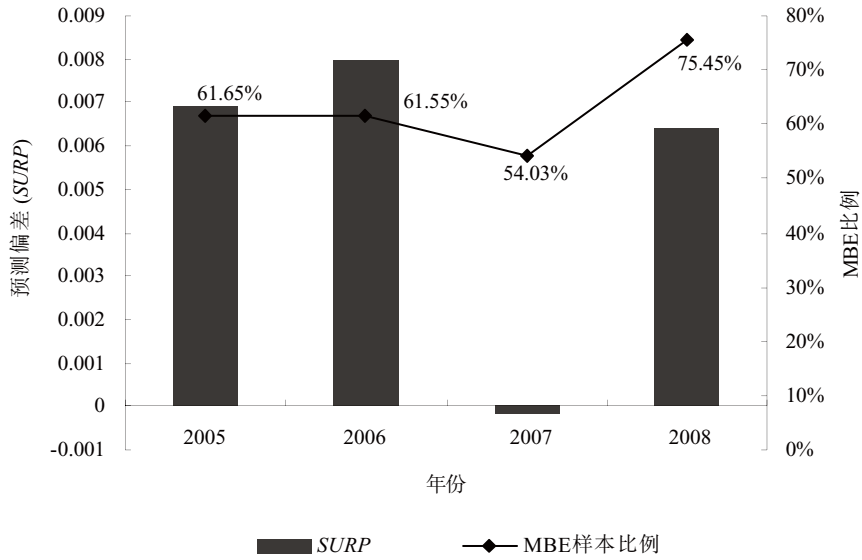
财务年度	总观测数	MBE观测数	MBE比例
2005	266	164	61.65%
2006	476	293	61.55%
2007	248	134	54.03%
2008	391	295	75.45%
2005-2008	1381	886	64.16%

表-1可以看出2005年至2008年间MBE的比例都超过了50%，总样本均值为64.16%。2007年的MBE比例出现了下降，但2008年的比例出现了上升，这可能是分析师盈利预测乐观性变化导致的结果。

由于2005至2008年间市场波动较大，且中间夹杂着股改、企业会计准则变更等因素，对分析师预测差额在各年度的变化做一描述是有必要的，如图-2所示：会发现针对2007年年报的预测突然有一个下降，可能的原因是：从2007年开始企业实行的新准则要求公允价值损失列入损益计量，而市场行情的大幅下跌使得部分上市公司出现大幅度的投资损失；同时也可能与本文分析师预测取值区间(三季报披露日与年报披露日之间的分析师预测)有关，毕竟越早的预测越无法估计之后的投资损失。

图-2 05-08财报分析师预测*SURP*变化图

本图描述分析师预测产生的*SURP*在2005-2008年间的变化，以及各年达到MBE的公司所占的比例；柱形图表示当年分析师预测产生的*SURP*均值(对应左边纵轴)，折线图表示当年上市公司中达到MBE水平的比例(对应右边纵轴)。

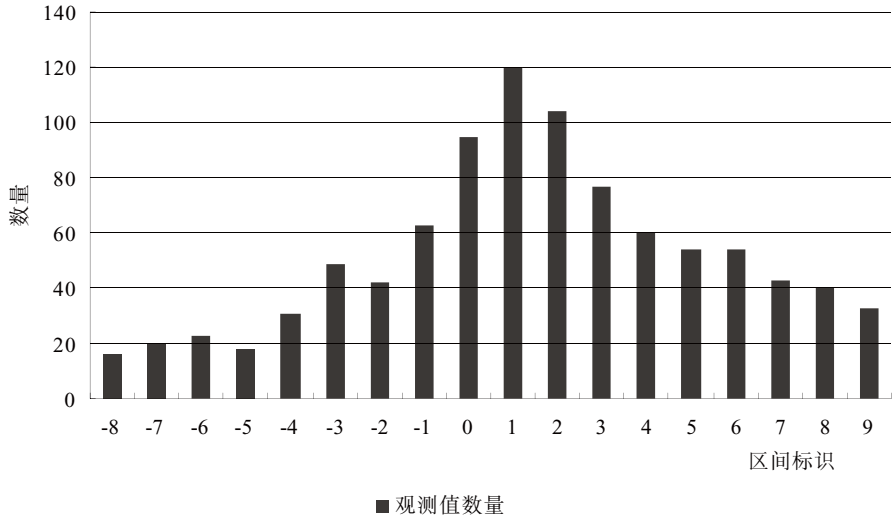


接下来，作为关键变量的*SURP*分布情况，尤其是在零值附近(MBE临界附近)的分布情况值得引起注意。为了描述上述疑问，本文按照0.001为一个*SURP*划分等级，把*SURP*处于(-0.009~0.009)的公司取出来分成18组，描述子样本在*SURP*的零值区域的分布情况？结果如图-3所示。

从图-3可以看出*SURP*的分布零值区域呈非对称分布，*SURP*为正的公司数量要明显多于未达到MBE的公司数量，而且主要是在零值的关键位置开始增加的。

图-3 国内上市公司05-08财报*SURP*零值区域观测数分布

本图描述*SURP*零值区域附近的公司数量分布，区间划分标准如下：以(0, 0.001)为第0组，以(0.001, 0.002)为第1组，往右依0.001的等级类推，左边以(-0.001, 0)为第-1组，以(-0.002, -0.001)为第-2组，以-0.001往左类推；进别对*SURP*在此区间的公司进行计数，用柱形图表示。



4.2 短窗口回归结果

为了检验市场对MBE的反应，对模型(1)进行OLS回归，为了区分检验两个假说，本文分成短窗口及长窗口的累计超额报酬进行OLS回归。表-2列示的是针对短窗口的回归结果。

从表-2中可以看出，年报盈余披露的MBE信息能够带来显著为正的市场反应(β_2显著为正)，表明投资者对于实际EPS超过分析师预测值的上市公司，会提高相应的权益估值。CAR(-5, -1)、CAR(0, 0)、CAR(0, 5)三个窗口不论是否加入控制变量，系数都显著为正。正的市场反应表示实际EPS超过了"投资者的普遍预期"，但回归模型中预期的计算采用分析师的一致预测，所以分析师预测值能够反映出市场的普遍预期，对假说进行了检验。CAR(-5, -1)的回归结果中DMBE显著也表明，国内二级市场确实存在年报盈余信息的提前泄露，由于年报披露涉及上市公司、会计师事务所、证监会以及交易所等市场主体，所以泄露的途径尚有待进一步分析。

交叉项在披露日前显著为正，表明市场对*SURP*的敏感程度是不对称的，MBE的公司受到投资者更多地追捧，从而对这类公司的*SURP*反应更敏感。原因可能是投资者认为低于预测值仅仅是一种暂时性的现象，不会持续，因此反应的程度较小；也有可能如行为金融学的解释：投资者对正面和负面、盈利和亏损的态度和操作由于心里作用，存在不对称，但这已非本文主题，不做深究。

另外，*SURP*的系数只有在一个窗口显著，且有的窗口为负值，这与美国市场的季度数据结果是一致的。在其他控制变量中，EPS的大小也对CAR值有影响，披露日后显著为负，投资者似乎对EPS过高的公司采取回避，而对EPS亏损或者亏损较大的公司抱有一定希望，这也从侧面说明：投资者对年报信息的反应并不是针对EPS的高低，而是看实际的EPS是否能超过投资者普遍的预期。

表-2　总样本短窗口回归结果

回归模型为：$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_3 * DMBE_i + \beta * CONTROLVAR_i + \varepsilon_i$，列(1)－列(8)分别是不同时期短窗口的CAR值对应的回归结果。其中CAR值的计算是基于市场收益率调整的买入－持有超额收益率(B-H Return)。报表日设定为t=0，如果公司的报表披露日非交易日，则以披露日之后的第一个交易日为t=0。表中的天数计算皆基于交易日，而非日历天数。列(1)－列(4)为披露日前、列(5)－列(8)为披露日后。*SURP*为分析师的一致预测(consensus forecast)与实际EPS的差额除于期初股价。*DMBE*是达到或超过分析师预测的虚拟变量，如果*SURP*>=0，则*DMBE*=1；否则=0；*SIZE*是公司的规模，取总市值的对数表示；*LEV*是资产负债率；*ROA*是总资产收益率；*MB*是市净率；*EPS*是每股盈余；*ANANUM*是分析师跟踪人数。

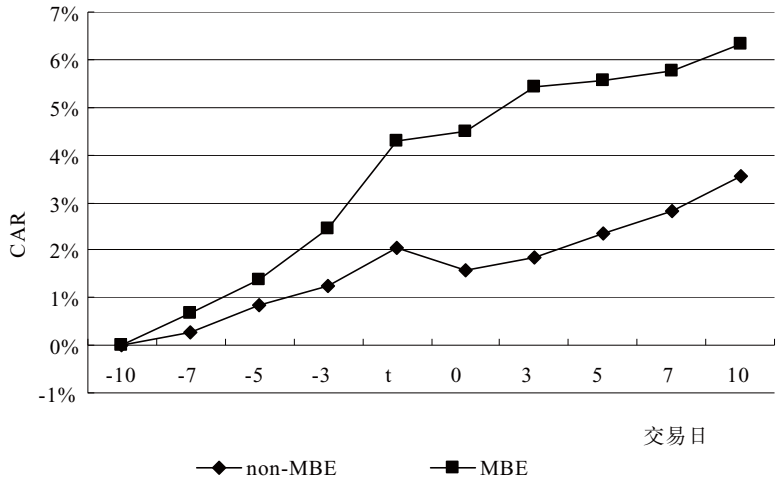
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CAR(-10, -1)	CAR(-10, -1)	CAR(-5, -1)	CAR(-5, -1)	CAR(0, 0)	CAR(0, 0)	CAR(0, 5)	CAR(0, 5)
Intercept	0.0225***	0.1495**	0.0122***	0.084*	-0.006***	-0.0633**	-0.0018	0.0029
	(5.92)	(2.26)	(4.59)	(1.78)	(-3.92)	(-2.36)	(-0.44)	(0.04)
SURP	0.1815	0.2195	-0.0191	-0.047	0.0162	0.0959	-0.4264**	-0.212
	(1.09)	(1.21)	(-0.16)	(-0.36)	(0.24)	(1.30)	(-2.39)	(-1.09)
DMBE	0.0047	0.0096	0.0077*	0.0094**	0.0063**	0.0067***	0.0162***	0.0169***
	(0.70)	(1.45)	(1.67)	(2.01)	(2.36)	(2.50)	(2.28)	(2.40)
*DMBE*SURP*	1.6582***	1.2988***	1.0632***	0.9185***	-0.016	0.0705	0.161	0.1971
	(4.13)	(3.14)	(3.77)	(3.11)	(-0.10)	(0.42)	(0.37)	(0.44)
SIZE		-0.0035		-0.0015		0.0024**		0.0002
		(-1.23)		(-0.71)		(2.05)		(0.06)
LEV		0.0071		-0.0033		-0.0011		-0.0017
		(0.39)		(-0.25)		(-0.15)		(-0.09)
ROA		0.051		0.0162		0.0235		0.0736
		(0.78)		(0.35)		(0.88)		(1.04)
MB		-0.0028**		-0.0016*		0.0001		-0.0017
		(-2.29)		(-1.80)		(0.25)		(-1.27)
EPS		0.0053		0.0053		-0.0076***		-0.0148*
		(0.90)		(1.26)		(-3.18)		(-2.33)
ANANUM		-0.0056***		-0.0021*		-0.0003		-0.0004
		(-3.64)		(-1.92)		(-0.48)		(-0.22)
年度变量		控制		控制		控制		控制
行业变量		控制		控制		控制		控制
Adj R-sq	0.0248	0.0659	0.0208	0.029	0.0041	0.0314	0.0041	0.0425
Obs.	1351	1351	1351	1351	1351	1351	1351	1351

注：(1)*、**、***分别表示在10%、5%、1%的显著性水平上显著；(2)所有连续性变量都已在1%和99%的水平上做Winsorize处理。

本文以公众获得年报信息的当天为零点（t = 0），以t = -10开始买入股票，用买入-持有超额收益率（B-H Return）为衡量指标，描述了公司在披露年报信息前后短窗口的股价走向，如图-4所示：

图-4 按MBE分组的公司披露日前后短窗口CAR变化

本图描述MBE信息给披露日短窗口股价走势带来的影响，CAR值计算采用市场收益调整的买入－持有超额报酬率方法，图中t为报表披露日未开盘时，t = 0的收益率考虑了披露日当天的超额报酬，图中假设从t = -10开始，一直累积到披露日后第10个交易日t = 10。



从图-4我们可看到，在年报信息披露前后，MBE公司的超额收益率都要超过非MBE公司的超额收益率。在t = 10时，MBE的公司超额报酬率为6.31%，非MBE的公司为3.55%，二者相差2.76%。

图-4的股价走势并没有出现好消息一直往上走，坏消息一直往下走的情形（Ball and Brown, 1968），本文认为原因可能在于两个：首先本文选择的样本包含的公司数量不到所有上市公司数量的一半，而且由于分析师选择上市公司进行跟踪本身带有选择性，这会导致本文的选择样本有偏差，当然这种样本的偏差不会对本文的主要结论有影响；其次，本文计算CAR值的方法基于两个二级交易市场的综合指数，而以总市值计算的指数对市场上所有公司的代表程度还值得商榷，比如"二八现象"[7]的说法在国内财经媒体上不时出现。

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[7] "二八现象"尚无统一定义，但一般认为国内的市场指数如"上证综指"或"深圳成指"由大约占市场20%的上市公司股价决定，而另外80%的小盘上市公司则不纳入指数计算。由于20%的股票变动对市场指数影响巨大，所以经常出现"指数涨，股民持股大多不涨"或者"股民持股收益跑过大盘收益"的现象，这类现象表示了大盘股和小盘股的分离走势。

表-3　总样本长窗口回归结果

回归模型为：$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * DMBE_i * SURP_i + \beta * CONTROLVAR_i + \varepsilon_i$，列(1)－列(9)分别考察了(5,60),(5,90),(5,120)的回归结果。其中CAR值的计算是基于市场调整的买入-持有收益率(B-H Return)。报表日设定为$t = 0$，如果公司的报表披露日非交易日，则以披露日之后的第一个交易日为t = 0。表中的天数计算皆基于交易日，而非日历天数。如果观测值不足60、90或120个交易日，则从样本中剔除。*SURP*为分析师的一致预测(consensus forecast)与实际EPS的差额除于期初股价。*DMBE*是达到或超过分析师预测的虚拟变量，如果*SURP*>=0，则*DMBE*=1；否则=0；*SIZE*是公司的规模，取总市值的对数表示；*LEV*是资产负债率；*ROA*是总资产收益率；*MB*是市净率；*EPS*是每股盈余；*ANANUM*是分析师跟踪人数。

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	CAR(5, 60)	CAR(5, 90)	CAR(5, 120)	CAR(5, 60)	CAR(5, 90)	CAR(5, 120)	CAR(5, 60)	CAR(5, 90)	CAR(5, 120)
Intercept	-0.0064	-0.0296***	-0.0398***	-0.0177*	-0.0451***	-0.0523***	-0.2835	-0.5397**	-0.5184*
	(-0.82)	(-3.25)	(-3.35)	(-1.65)	(-3.57)	(-3.16)	(-1.58)	(-2.56)	(-1.85)
SURP	0.7736*	0.6966	1.7842***	0.2365	-0.0239	1.1708*	0.6462	0.2603	0.9448
	(1.94)	(1.49)	(3.16)	(0.50)	(-0.04)	(1.76)	(1.31)	(0.45)	(1.37)
DMBE				0.0052	0.0083	-0.0014	-0.0002	0.0076	0.0025
				(0.27)	(0.37)	(-0.05)	(-0.01)	(0.36)	(0.09)
*SURP*DMBE*				2.5252**	3.3043**	3.3767**	1.4544	3.1511**	4.3141**
				(2.22)	(2.47)	(2.00)	(1.29)	(2.38)	(2.55)
SIZE							0.0048	0.0129	0.0078
							(0.60)	(1.40)	(0.64)
LEV							0.0629	0.1431**	0.1873**
							(1.28)	(2.47)	(2.44)
ROA							0.0201	0.3628*	0.503*
							(0.11)	(1.73)	(1.79)
MB							-0.0075**	-0.0095**	-0.0099*
							(-2.21)	(-2.39)	(-1.95)
EPS							-0.0097	-0.0294	-0.0265
							(-0.61)	(-1.56)	(-1.03)
ANANUM							0.0047	0.0109**	0.0176***
							(1.14)	(2.23)	(2.66)
年度变量							控制	控制	控制
行业变量							控制	控制	控制
Adj R-sq	0.0021	0.0017	0.0075	0.0051	0.0051	0.0095	0.1231	0.1254	0.1126
Obs.	1349	1349	1191	1349	1349	1191	1349	1349	1191

注：(1)*、**、***分别表示在10%、5%、1%的显著性水平上显著；(2) 所有连续性变量都已在1%和99%的水平上做Winsorize处理。

4.3 长窗口的累计超额报酬回归结果

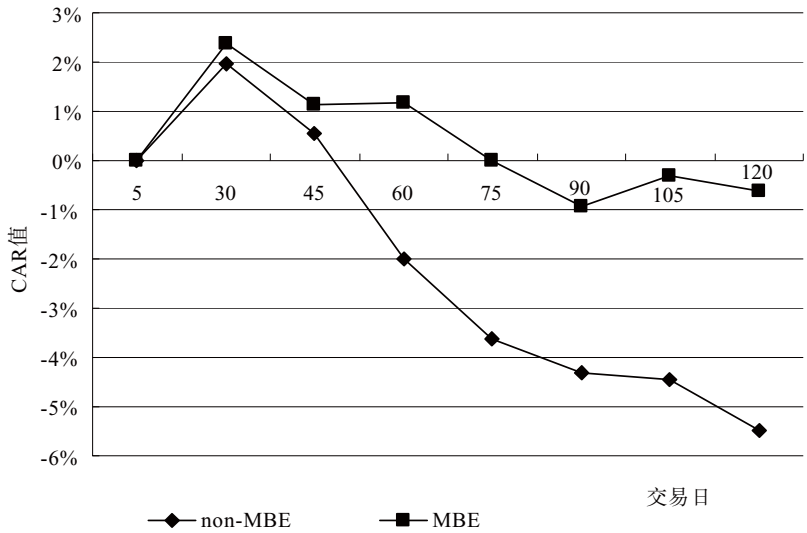
Ball and Brown (1968)基于“上期盈余信息”和“时间序列预测”把公司分成好消息和坏消息两类，分别考察会计信息披露后的股票价格走势，发现了PEAD现象。本文研究的MBE对投资者而言也可以作为区分好消息和坏消息的基准，所以本文试图从公告后的长期股价走势来分析：市场对MBE信息是否也存在漂移现象呢？ 用披露日后的长窗口来计算模型(1)左边的CAR值，代入模型，得到的回归结果如表-3所示。

在表-3中总共有三个长窗口，都是从报表披露后第5个交易日开始计算长期CAR值，表中的回归结果我们可以看出：前三列对*SURP*的单变量回归中，*SURP*显著为正，说明*SURP*越大的公司在年报披露后的长期，会有更高的权益估值；在列(4)至列(6)中，交叉项显著为正，表明MBE的公司相对于未MBE的公司，长窗口CAR值对*SURP*的反应更加敏感，MBE带来了增量信息；最后三列加入控制变量后，主要结果保持不变。在控制变量中，我们发现分析师跟踪人数越多的公司，其长期的股价表现较好，这其中是分析师的自选择问题还是分析师引导了更好的股价表现尚不得而知。

同样为了直观地描述，本文从$t = 5$开始，计算不同时间段每个公司基于分析师预测偏差的长期累积超额报酬，并依据MBE与否分成两组，对两组样本公司的CAR值大小进行对比，以期对MBE的长期收益有个直观的了解，如图-5；

图-5 按是否MBE分组的公司披露日后长窗口的CAR变化

本图描述MBE信息给披露日长窗口股价走势带来的影响，CAR值计算采用市场收益调整的买入－持有超额报酬率方法，图中横轴为披露日后的交易日，以第5个交易日($t = 5$)的开盘价买入，一直累积到披露日后第120个交易日($t = 120$)。



比短期窗口更加明显，MBE的公司在长窗口的股价走势上一直处于上方，虽然整体的趋势在回落，但在t = 120时，MBE的买入-持有超额收益为-0.63%，非MBE组最终为-5.49%，二者相差4.86%。但刚开始两组样本均值差距并不大，在t = 45与t = 60之间开始拉大差距，按照交易日推算，这大约为当年半年报披露的时间。

从短窗口和长期的披露日后股价变化出发，本文实证检验了我国的A股二级市场能够对公司的财务信息和分析师原先的预测信息做出反应，而且给达到MBE的公司更高的权益估值。由于MBE的计算基于分析师的盈利预测，这也说明分析师的盈利预测能反映投资者的普遍预期。其次，A股二级市场对MBE公司给出更积极反应，得到了与成熟资本市场相同的主要结论，但在一些细节上与成熟资本市场有出入。

本文同时对MBE的公司下一财年是否具有更高的盈利能力进行检验，看成熟市场的解释(Bartov *et al.*, 2002)是否也同样符合国内的情形，若符合，则无疑为MBE带来正的股价超额报酬带来了支撑性解释。从数据库中提取平均净资产收益率(*ROE_A*)、扣除非经常损益后的摊薄净资产收益率(*ROE_E*)、总资产收益率(*ROA*)以及销售净利率(*RTS*)四个指标作为上市公司盈利能力的代理指标，分别对前一财年的*DMBE*和*SURP*进行回归，加入分析师跟踪人数、公司规模、资产负债率、机构持股和行业等控制变量，看超过分析师盈利预测的公司是否具有更高的盈利能力？结果显示，在所有的回归结果中，关键变量*DMBE*和*SURP*都在99%的置信水平上显著为正，支持了"MBE的公司具有更高的盈利能力"的猜想，与成熟市场的结论一致。

4.4 盈余管理的影响

上述MBE的实证分析没有对每股盈余进行区分，尤其是在盈余管理情形下的EPS可持续性需要进一步分析。本文需要分析投资者对MBE的反应过程中，是否考虑了公司实际披露EPS中的盈余管理成份。一般认为盈余中的应计成份持续性较弱，而且可以管理的程度或可以操纵的程度更大(Sloan, 1996; Jones, 1991; Bartov *et al.*, 2001；夏立军，2003)，本文采用行业截面调整的Jones模型估算出每个公司的非正常应计项目金额，用如下模型来考虑投资者对公司盈余管理的影响：

模型(2)：

$$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * AA_i + \beta_4 * AA * DMBE_i + \beta * CONTROLVAR_i + \varepsilon_i \quad (2)$$

其中*AA*是基于调整的Jones模型估算出来的非正常应计被总资产标准化后的数值，行业的截面估计采用证监会2001行业划分标准，制造业采用二级行业，其余采用一级行业，再剔除单个行业－年度中上市公司不足15的样本和金融行业的样本。我们预期β_3和β_4为负，模型(2)的回归结果如表-4和表-5所示。

表-4　盈余管理对MBE的影响分析

本表是模型（2）$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * AA_i + \beta_4 * AA * DMBE_i + \beta * CONTROLVAR_i + \varepsilon_i$的短窗口回归结果；CAR值计算基于市场指数调整的买入-持有超额报酬率，*AA*为行业截面的调整Jones模型估算的非正常应计项目；*SURP*为分析师预测偏差。控制变量包括：公司规模、资产负债率、总资产收益率、市净率、实际每股盈余和分析师跟踪人数。

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CAR(-10, -1)	CAR(-10, -1)	CAR(-5, -1)	CAR(-5, -1)	CAR(0, 0)	CAR(0, 0)	CAR(0, 5)	CAR(0, 5)
Intercept	0.0343***	0.1269**	0.0156**	0.0453	-0.0062*	-0.0669***	-0.0102	-0.0005
	(3.80)	(2.02)	(2.45)	(1.02)	(-1.70)	(-2.62)	(-1.15)	(-0.01)
SURP	0.3751**	0.275*	0.0985	0.0112	0.0327	0.098	-0.3508**	-0.2499
	(2.55)	(1.70)	(0.95)	(0.10)	(0.55)	(1.49)	(-2.44)	(-1.57)
DMBE	0.0164**	0.0164**	0.0141***	0.0135***	0.0062**	0.0068***	0.0192***	0.0217***
	(2.57)	(2.55)	(3.12)	(2.96)	(2.40)	(2.60)	(3.07)	(3.43)
AA	-0.0281	-0.0283	-0.0101	-0.0121	-0.0294*	-0.024	0.0331	0.0437
	(-0.69)	(-0.69)	(-0.35)	(-0.42)	(-1.78)	(-1.44)	(0.83)	(1.09)
*AA*DMBE*	0.0822	0.0855	0.0426	0.047	0.0297	0.0237	-0.0537	-0.0661
	(1.56)	(1.62)	(1.14)	(1.26)	(1.39)	(1.11)	(-1.04)	(-1.28)
控制变量		控制		控制		控制		控制
年度变量	控制	控制	控制	控制	控制	控制	控制	控制
行业变量	控制	控制	控制	控制	控制	控制	控制	控制
Adj R-sq	0.0446	0.0497	0.0159	0.0184	0.0271	0.0336	0.0474	0.0493
Obs.	1286	1286	1286	1286	1286	1286	1286	1286

注：（1）*、**、***分别表示在10%、5%、1%的显著性水平上显著；（2）所有连续性变量都已在1%和99%的水平上做Winsorize处理。

表-5 盈余管理对MBE的影响分析

本表是模型(2)长窗口CAR值回归结果。CAR值计算基于市场指数调整的买入－持有超额报酬率，*AA*为行业截面的调整Jones模型估算的非正常应计项目；*SURP*为分析师预测偏差。控制变量包括：公司规模、资产负债率、总资产收益率、市净率、实际每股盈余和分析师跟踪人数。

	(1)	(2)	(3)	(4)
	CAR(5, 90)	CAR(5, 90)	CAR(5, 120)	CAR(5, 120)
Intercept	-0.0633**	-0.3129***	0.0491	-0.5388*
	(-2.56)	(-1.79)	(1.18)	(-1.96)
SURP	0.714*	0.7079	1.5168**	1.385**
	(1.77)	(1.60)	(2.39)	(2.03)
DMBE	0.0085	0.0061	0.0286	0.023
	(0.49)	(0.35)	(1.04)	(0.84)
AA	0.0148	0.0379	-0.037	0.0128
	(0.13)	(0.34)	(-0.20)	(0.07)
*AA*DMBE*	-0.1222	-0.1367	-0.0591	-0.0866
	(-0.85)	(-0.94)	(-0.26)	(-0.38)
控制变量		控制		控制
年度变量	控制	控制	控制	控制
行业变量	控制	控制	控制	控制
Adj R-sq	0.0955	0.0989	0.0638	0.083
Obs.	1284	1284	1140	1140

注：(1)*、**、***分别表示在10%、5%、1%的显著性水平上显著；(2)所有连续性变量都已在1%和99%的水平上做Winsorize处理。

表-4的回归结果显示主要结果*DMBE*显著为正的结果保持不变，但盈余管理的关键变量*AA*只在CAR(0,0)上显著为负，其他窗口没有显著性，而且交叉项也没有显著性。在多数窗口，投资者对EPS中持续能力较弱的盈余管理成份并未进行区别对待。表-5选取了CAR(5, 60)与CAR(5, 120)两个窗口，*SURP*显著为正保持不变，但非正常应计项目和交叉项都没有显著性，投资者没有区别对待EPS中间的非正常应计成份。

无论在短窗口还是在长窗口，市场对MBE的反应并不区分披露盈余中的非正常应计成份，无论是否通过非正常应计来达到MBE的水平，市场"一视同仁"，这与成熟资本市场结论相左。当然这也可能是修正的Jones模型不能很好地衡量盈余管理成分，导致未能检测出市场的合理反应。

五、敏感性检验

尽管实证部分检验了分析师预测可以反映投资者的普遍预期，但是同时可以形成的市场预期的还有别的可能，分析师的预测会否只是一种同方向的替代呢？比如上一年度的盈利、管理层的盈利预测都可能作为市场预期，也就是说需要对管理层的盈利预测的替代性解释进行检验。同时，机构投资者在MBE的市场反映中扮演的角色也需要考察，为此，对本文的实证结论作如下两个敏感性检验：

5.1 管理层预测的替代性解释检验

除分析师之外，公司披露的盈利预测也可以对投资者的盈利预期产生影响，如果大多数分析师的预测参照了公司管理层的盈利预测，那么管理层预测就可能是上述实证结果的一个替代性解释。为了检验这种可能性，我们把公司的盈利预测加入考虑，构造如下回归模型：

模型(3)：

$$CAR = \beta_0 + \beta_1 * SURP + \beta_2 * MAN\_SURP + \beta * CONTROLVAR + \varepsilon \quad (3)$$

其中：*MAN_SURP*为公司自己提供的盈利预测形成的预测偏差；*SURP*为当年分析师针对公司的预测偏差均值。

从WIND金融资讯中提取的管理层盈利预测较多是针对公司净利润的变动百分比预测，我们据此调整公司预测的当年净利润，再用当年年末的总股本求预测的EPS，与公司年报披露的EPS之差额再被公司期初股价标准化后得到*MAN_SURP*。由于WIND中并非每家公司都有盈利预测披露，和分析师预测的数据按公司和财务年度合并后样本量减少为471个观测。

如果管理层盈利预测能作为分析师预测的替代性解释，那么在由CAR和*MAN_SURP*进行回归的时候，我们应该能找到些许显著性，模型(3)的回归结果如表-6所示。

虽然样本量减少，而且加入了管理层的盈利预测，但是针对分析师预测形成的*SURP*结论没有变化，短窗口内，在披露前显著为正，之后为负。基于管理层预测构造的变量*MAN_SURP*在短窗口内不显著，对投资者盈利预期不具有代表能力。在CAR(5,60)和CAR(5,120)两个长窗口中，*SURP*的单变量回归都显著，而*MAN_SURP*单变量都不显著，随后加入控制变量后，*MAN_SURP*在CAR(5,60)显著，但在CAR(5,120)上不显著，长窗口整体的结果显示，分析师预测对投资者更具有代表性，数据不支持管理层预测的替代性解释。

在实际中，分析师完全可以观察到公司的盈利预测值，在公司披露盈利预测之后，可以吸收管理层预测的信息，进而使得自己的预测更加准确。公司以前年度的EPS和管理层的盈利预测只是分析师预测的某一种信息渠道，这样一来分析师预测可作为市场预期的解释依旧成立。

5.2 考虑机构持股的影响

机构投资者和普通的散户投资者由于在信息优势和持仓交易成本、交易习惯上不同，所以对MBE信息的反应可能存在快慢、大小的不一样。首先，机构投资者能更全面得获得分析师预测数据，同时对公司盈利信息有更多获得渠道，而且为了争取相对其他机构投资者之间的竞争优势，他们有动机更快对MBE信息进行反应；其次，散户投资者“船小好调头”，但机构投资者一般持仓较高，短期反应完全必然导致其交易成本上升，这就形成了一种均衡。那么到底机构投资者对年报信息是如何进行解读的呢？

表-6　管理层盈利预测的替代性解释检验

本表是模型(3)$CAR=\beta_0+\beta_1*SURP+\beta_2*MAN_SURP+\beta*CONTROLVAR+\varepsilon$的回归结果；CAR值计算基于市场指数调整的B-H超额报酬率，管理层盈利预测为公司业绩快报计算而得的预测误差，已被期初股价标准化；*SURP*为分析师预测偏差。面板A是短期窗口CAR值回归结果，在披露前选择四个窗口，在披露后亦选择四个窗口。面板B为长期PEAD窗口CAR值回归结果。控制变量包括：公司规模、资产负债率、总资产收益率、市净率、实际每股盈余和分析师跟踪人数。

A：短窗口	(1)	(2)	(3)	(4)	(5)	(6)
	CAR(-5, -1)	CAR(-5, -1)	CAR(-5, -1)	CAR(0, 5)	CAR(0, 5)	CAR(0, 5)
Intercept	0.0239***	0.0234***	-0.0852	-0.0049	-0.0051	-0.1671
	(6.32)	(5.92)	(-1.01)	(-1.00)	(-1.03)	(-1.50)
SURP	0.7734***		0.5433*	-0.6237*		-0.6133
	(3.14)		(1.89)	(-1.94)		(-1.61)
MAN_SURP		-0.1051	0.0576		-0.0186	-0.0234
		(-0.84)	(0.44)		(-0.12)	(-0.13)
控制变量			控制			控制
年度和行业			控制			控制
Adj R-sq	0.0253	-0.0008	0.0507	0.008	-0.0029	0.0124
Obs.	342	342	342	342	342	342

B：长窗口	(1)	(2)	(3)	(4)	(5)	(5)
	CAR(5, 60)	CAR(5, 60)	CAR(5, 60)	CAR(5, 120)	CAR(5, 120)	CAR(5, 120)
Intercept	-0.0375**	-0.0342**	-0.777**	-0.0524**	-0.0421	-1.1625**
	(-2.31)	(-2.03)	(-2.13)	(-2.03)	(-1.56)	(-2.07)
SURP	2.4178**		1.4284	5.8278***		5.7325***
	(2.28)		(1.15)	(4.10)		(3.54)
MAN_SURP		0.3316	1.1637**		0.1787	1.1196
		(0.62)	(2.05)		(0.26)	(1.53)
控制变量			控制			控制
年度和行业			控制			控制
Adj R-sq	0.0122	-0.0018	0.0307	0.0528	-0.0033	0.0977
Obs.	342	342	342	284	284	284

注：(1)*、**、***分别表示在10%、5%、1%的显著性水平上显著；(2)所有连续性变量都已在1%和99%的水平上做Winsorize处理。

齐伟山、欧阳令南(2006)发现中国证券市场在较短的时间窗口内机构持股没有减轻价格漂移的程度，在较长的时间窗口内反而加重了价格漂移的程度。孔东民、柯瑞豪(2007)得出了同样的结论，他们发现盈余公告后，机构进一步驱动了好消息的价格漂移，鉴于机构在A股市场的特殊地位和持股分布，在考虑MBE时需要进一步检验机构投资者的持股比例对MBE信息的影响，因为机构投资者是分析师预测信息的主要受众。

为了考察机构投资者在MBE信息中扮演的角色，本文构造如下回归模型：

模型(4)：

$$CAR = \beta_0+\beta^*SURP+\beta_2^*DMBE+\beta_3 INS+\beta_4^*INS^*DMBE+\beta^*CONTROLVAR+\varepsilon \quad (4)$$

其中：*INS*为公司在年度报告中披露的机构投资者持股数量占总流通股的比率。*SURP*为当年分析师针对公司的预测偏差均值。

我们预计β_2在披露前及披露后的长期漂移CAR值回归中显著为正，而机构持股*INS*对短期股价的影响较难预测，如果如齐伟山、欧阳令南(2006)的推测，那么我们可以看到β_4显著为正，表示机构持股比例越高，越是加剧了好坏消息带来的漂移。长短窗口的回归结果如表-7所示：

从表-7面板A中短窗口CAR值对模型(4)的回归结果我们发现，MBE与否的主要结果未变。但是机构持股比例*INS*的系数在CAR(-10, -1)和CAR(0, 5)的窗口中显著为负，其他窗口没有显著性，加入其它控制变量后，没有显著性，而且交叉项也不显著。总体说来，机构持股比例对短窗口CAR值没有影响。

面板-B中考察机构持股对长期股价走势的影响，发现随着CAR(5, 30)到CAR(5,90)的窗口逐渐拉大，机构持股比例*INS*的显著性逐渐降低，但总体上显著为负，而且加入控制变量后，交叉项显著为负，表示机构对MBE的信息反映是不对称的。对MBE的公司反应不如对未MBE公司的反应敏感，也就是说会削弱利好的上涨，会加剧利空的下跌，这与成熟资本市场的结果一致，但与齐伟山、欧阳令南(2006)、孔东民、柯瑞豪(2007)的结论不同。

这部分的分析表明：机构持股对公司在年报披露日前后的短窗口表现没有影响，但长窗口回归时，发现了对MBE信息的非对称反应，对好消息的敏感性不如坏消息，这与之前国内文献基于时间序列区分好坏消息得到的结论不一致。

除了管理层预测与机构持股影响分析外，本文也对样本进行了分年度数据的敏感性检验，只有2007年年报的结果与文章稍有出入(为负，但不显著)，其他年份与文章主要结果保持一致。经进一步分析，我们认为2007年的结果可能是投资者的投资范围缩小导致的，指数在一年72.81%的跌幅下，投资者的选股从‘主动出击’转变为‘被动防守(稀释重仓股成本)’。同时本文也对连续性变量的Winsorize范围和Truncation操作进行敏感性检验，结论保持不变。

表-7　　机构投资者对MBE的影响回归结果

本表是模型(4)$CAR=\beta_0+\beta*SURP+\beta_2*DMBE+\beta_3 INS+\beta_4*INS*DMBE+\beta*CONTROLVAR+\varepsilon$的短窗口回归结果；CAR值计算基于市场指数调整的B-H超额报酬率，机构持股变量*INS*为机构持股数占当期流通股数的比率；*SURP*为分析师预测偏差。控制变量包括：公司规模、资产负债率、总资产收益率、市净率、实际每股盈余和分析师跟踪人数。

面板A：	CAR(-10, -1)		CAR(-5, -1)		CAR(0, 0)		CAR(0, 5)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0454***	0.1066*	0.0195***	0.037	-0.0079**	-0.0721***	0.00002	-0.042
	(4.76)	(1.74)	(2.87)	(0.84)	(-2.04)	(-2.89)	(0.00)	(-0.70)
SURP	0.4778***	0.319*	0.1434	0.0013	0.0299	0.0968	-0.2892*	-0.2179
	(3.01)	(1.80)	(1.27)	(0.01)	(0.46)	(1.34)	(-1.87)	(-1.25)
DMBE	0.0172***	0.0167	0.0144***	0.0185**	0.0063**	0.0055	0.0176***	0.0253**
	(2.73)	(1.53)	(3.22)	(2.38)	(2.49)	(1.23)	(2.88)	(2.36)
INS	-0.0343***	-0.0233	-0.0078	0.0008	0.0037	0.0008	-0.021*	-0.0092
	(-2.72)	(-1.33)	(-0.87)	(0.06)	(0.72)	(0.11)	(-1.71)	(-0.54)
*INS*DMBE*		-0.0013		-0.0143		0.0045		-0.0157
		(-0.06)		(-0.83)		(0.46)		(-0.67)
控制变量		控制		控制		控制		控制
年度变量	控制	控制	控制	控制	控制	控制	控制	控制
行业变量	控制	控制	控制	控制	控制	控制	控制	控制
Adj R-sq	0.049	0.0601	0.0174	0.0233	0.0241	0.0278	0.0452	0.0443
Obs.	1351	1351	1351	1351	1351	1351	1351	1351

注： (1)*、**、***分别表示在10%、5%、1%的显著性水平上显著；(2) 所有连续性变量都已在1%和99%的水平上做Winsorize处理。

六、经济重要性检验

前述实证部分分析了二级市场对于MBE信息的反应，为了检验本文研究问题的经济重要性，本文希望通过*SURP*的大小构造出收益率为正的投资组合。依据每个公司年报披露后形成的预测偏差由高到低排序，分别设定10%、…、90%的*SURP*临界值，依据后一年的年报披露时产生的*SURP*分成10组投资组合。比如：先依据2005年的*SURP*设定临界值，当2006年每个公司的年报披露时，其*SURP*落在哪个区间，就标记成相应的等级进立即进行操作，总共分成10组公司。之所以用上一年的*SURP*临界值是因为这样具有可操作性，当年的临界值只有在所有公司年报披露后才能确定，这样就无法确定先披露的公司的分组。

把公司划分成1至10共十等份，第1组由超出分析师预测最多的公司构成，第2组次之，依次类推，直到低于分析师预测最多的公司组成第10组。在分组完毕后，等额买入第1组和卖出第10组公司的股票，组合的平均收益率就可以简单由下式求得：

$$profit_p = (\Sigma R_{1t})/N_1 - (\Sigma R_{10t})/N_{10}$$

其中等式的左边是组合获取的超额收益，右边的第一项表示第1组公司的超额报酬，第二项表示第10组公司的超额报酬。由于国内二级市场中不存在卖空机制，所以我们同时需要单独考察第1组公司的超额收益。2006年至2008年的样本组合收益如图-6所示，同时我们对收益的显著性进行检验，如表-8所示：

表-8　分组后组合收益率及显著性检验

按照前一年的*SURP*等级划分，把当年的公司分成10组，第1组为*SURP*最大的一组，第10组为最小的一组，分别计算2006-2008年样本的组合收益率并计算组合的平均超额报酬。CAR值的计算基于市场指数调整的B-H超额报酬率。以报表披露日为$t = 0$，如果披露日非交易日，则以之后的第一个交易日为$t = 0$，分别求年报披露日后的CAR(5, 30)一直到CAR(5, 120)。对这些CAR值取均值。

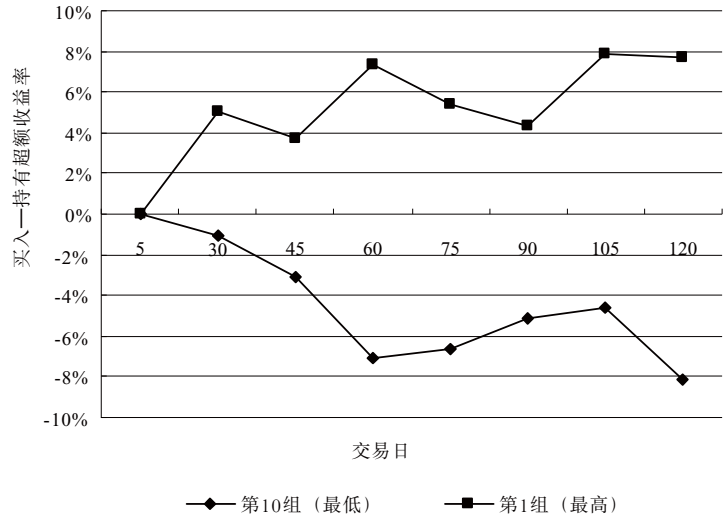
交易日(t)	5	30	45	60	75	90	105	120
第1组	0	5.08%	3.68%	7.33%	5.38%	4.37%	7.91%	7.66%
第10组	0	-1.10%	-3.14%	-7.05%	-6.61%	-5.14%	-4.59%	-8.17%
Profit（P1-P10）	0	6.18%	6.82%	14.37%	11.98%	9.50%	12.49%	15.83%
组合相异T检验		-1.71*	-1.62	-2.96***	-2.08**	-1.53	-1.66*	-1.79*
第1组T检验		2.09**	1.25	1.89*	1.29	0.94	1.33	1.06

从图-6可以看到，*SURP*最大的第一组公司，其平均超额收益为正，各个时点都处于零值上方，*SURP*最小的一组则刚好相反。结合表-8，两组样本公司的超额收益的差额在$t = 120$时达到15.83%，而且二者收益差额在CAR(5, 30)、CAR(5, 60)、CAR(5, 75)、CAR(5, 105)、CAR(5, 120)窗口上都显著。

由于国内不能卖空，需要单独看第1组公司的可获利性。表-9显示，买入第1组公司后，超额收益均值可以在$t = 105$时最高达到7.91%，最小为$t = 45$时的3.68%，而且在CAR(5, 30)、CAR(5, 60)两个窗口上显著异于零。

图-6 基于06-08年报样本构造的可操作投资组合收益率

本图描述基于*SURP*构造的可操作组合收益率，分组的标准参照前一年的*SURP*十级划分临界值，以当年某公司的*SURP*来确定该公司的分组。比如以2005年的*SURP*确定十等份临界值，2006年一家公司披露EPS后，计算其*SURP*，并参照2005的标准判定其分组。第1组为*SURP*最高的公司，第10组为*SURP*最低的公司，考察各组公司的平均超额报酬。而超额报酬的计算采用市场收益调整的买入-持有超额报酬率方法。



七、结论

基于国内A股二级市场分析师的盈利预测数据，本文发现在公司披露年度盈余时，若实际值超过分析师预测值，市场会给予公司更高的权益定价。从而对国内分析师的盈利预测可否影响并反映市场的预期水平进行了检验，为内地新兴经济体资本市场上MBE的经济后果提供了实证支持。

在对分析师预测误差进行描述性统计时，发现国内分析师预测主要分布在半年报披露日以及年报报表日与披露日之间，而且分析师的预测误差在报表日前逐月减小，表明分析师在逐渐吸收新信息，并修正自己的盈利预测使之更准确；在描述MBE方面，发现MBE的比例以及*SURP*的大小呈现出与资本市场环境的相关性，披露日处于"熊市"的2007年报表的*SURP*均值甚至为负。

在用截面修正Jones模型估算盈余管理时发现，二级市场的投资者短期对非正常应计项目有微弱反应，但长期的PEAD与非正常应计项目不具有相关性。敏感性检验中，无论从短窗口还是长窗口，分析师预测都要比管理层预测更能代表投资者的盈利预期；投资者特征方面，机构持股越高的公司，对MBE的"好消息"反应更小，表现为对"是否MBE"反应的非对称性。

基于更多更全面的分析师预测数据，本文研究的问题和结论给国内分析师的研究增加了一些边际贡献。首先，从影响和反映市场预期的方面再次论证了分析师的行业意义并肯定了他们提供的盈利预测蕴含的投资价值；其次，发现在国内这样的

新兴资本市场，投资者同样倚重于MBE的信息，投资者会对MBE的公司会提高其估值；最后，基于*SURP*构造组合的超额报酬在多数窗口显著为正，检验了分析师预在国内的经济重要性。当然，这不能用于说明市场有效性的状态，因为计算预测偏差所依赖的所有分析师的预测信息并非对所有投资者公开，而且不同投资者在做投资决定时所倚重的信息来自于不同的方面。

本文有以下的研究局限性：首先本文的样本时间跨度较短，只有四年的样本；其次，由于国内的分析师预测数据只针对年报盈余，所以对季度财务报告的MBE信息无法检验，也不能考察MBE的公司在之后的盈余披露中继续达到MBE水平的可能性；再次，本文的结论来自于有两个或两个以上分析师跟踪的上市公司样本，对于分析师跟踪人数较少或没有的上市公司，结论不具有推广型；最后分析师预测的结论非常倚重于分析师数据的"代表性"，尽管本文包含了41家知名券商的预测样本，但以后若能加入更多的预测会使结论更有价值且更加可靠。

未来有关MBE的研究可以更多地考虑公司所面临的制度性约束、不同的公司以及不同形式的盈余管理对MBE的影响、不同的机构投资者在年报披露日附近的投资行为等方面展开。

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Do Domestic Analysts' Forecasts Matter to Market Consensus? – A Market Reaction Analysis of MBE[1]

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Abstract

This paper investigates whether analysts can influence or fix the market consensus on earnings in emerging markets such as China. Based on a Chinese analyst forecast dataset, I find that stocks meeting or beating expectations (MBE) have a significantly higher valuation in both the short window around and the long window after the announcement day. This paper confirms the analyst's important role in the domestic stock market and presents some of the fundamental conclusions of analyst research in emerging markets. In addition, this paper finds that domestic investors tend to ignore the lower persistence of abnormal accruals and that institutional investors behave asymmetrically with respect to MBE and non-MBE companies.

Keywords: Market Consensus, Analyst Forecasts, MBE (Meeting or Beating Expectations), Market Reaction
CLC codes: F83, C93, G20

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I. Introduction

As the institutional investor market and the analyst industry have developed in China, researchers have begun to pay more attention to the relationship between securities analysts' forecasts and stock pricing. Some papers focusing on analyst research have already been published (e.g. Jiang, 2004; Wu and Xue, 2005; Fang and Hong, 2007). Generally speaking, analysts are those people who (1) collect all kinds of public information relating to the future performance of companies and (2) send forecast reports to some investors.

However, a few basic assumptions of analyst research have not been empirically tested under domestic circumstances. For instance, is corporate fundamental information important for domestic analysts' forecasts? Can domestic analysts influence the market consensus on earnings expectations? Do investors in emerging markets care about analysts' forecasts? Moreover, if one company's actual earnings meet or beat analysts' estimations, will its stock price be adjusted as a reward? All of the above questions are very important and fundamental issues in analyst research.

Obviously, we should not assume that the results for emerging markets will be the same those for developed markets because, compared with developed markets, many of the environmental concerns in respect to the stock markets or the analyst industry are different in emerging markets. The Chinese stock markets have been developing for less than 20 years, and both the macro factors (legal environment, IPO process, and types and ownerships of listed companies) and the micro factors (number of brokerage firms and affiliated analysts, disclosure quality, and investor behaviour) are significantly different from those in developed markets.

To test whether or not domestic analysts' forecasts can fix the market consensus, I examine the stock price change caused by meeting or beating expectation (hereafter "MBE"), where the expectation is based on analysts' forecasts. My data contain the forecast observations for the fiscal years from 2005 to 2008, and I obtain some results similar to those found for the US market: (1) MBE stocks will attain a higher value as a reward in the secondary market; (2) analysts' forecasts can proxy for the market's expectation better than managerial forecasts; and (3) we can obtain a profitable arbitrage portfolio solely based on the MBE classification. However, there are some dissimilar results: (1) the object of the domestic analysts' forecasts is annual financial performance, and so most of the estimations are made between the fiscal year end date and the announcement date; (2) the actual information of annual earnings per share (EPS) is known to some investors 5 to 10 trading days before the announcement, and the stock price changes significantly before the announcement; (3) it seems that domestic investors do not differentiate the abnormal accruals from the earnings because it brings no significant pricing consequence; and (4) the higher the institutional ownership, the lower the abnormal return that MBE stocks can receive as a reward, so institutional investors seem to react asymmetrically to MBE information.

This paper contributes to the domestic analyst literature in the following ways. Using a more representative sample, I test the fundamental question of whether or not domestic analysts can fix market's earnings expectations. I find that MBE announcements are followed by significantly positive stock premiums in the emerging capital market, and even the long-window abnormal return can be partially explained by MBE. In addition, this paper obtains some results that are different to those found in the US stock market.

The remainder of the paper proceeds as follows: Section II describes the literature review and the hypothesis; Section III presents the research design; Section IV explains the sample, the descriptive statistics, and the regression results; Section V describes the robustness test; Section VI presents the test of economic significance; and Section VII concludes the paper.

II. Literature and Hypothesis

2.1 Literature Review

Since the works of Schipper (1991) and Brown (1993), many papers relating to financial analysts have been produced. The angles of research include the investment value of analysts' forecasts, the Efficient Market Hypothesis (EMH), analysts' forecast skills, accuracy distribution, and information process, and the regulatory environment and related incentive problems of analysts (Ramnath *et al*., 2008).

Initially, Skinner (1997), Kasznik and Lev (1995), Francis *et al*. (1994), and Soffer *et al*. (2000) find that more and more companies tend to warn investors about their potential losses. Burgstahler and Eames (1998) then show that analysts are inclined to revise their forecasts slightly downwards before the announcement and that the final estimations usually coincide with the MBE situation. Using a sample from 1984 to 1999, Brown (2001) shows that the number of observations of earnings beating analysts' expectations increases gradually, and that the frequency scattering surrounding the zero surprise is asymmetrical, especially for high growth companies. From the angle of managerial incentives, De George *et al*. (1999) regard MBE as one of the three financial thresholds and as an important incentive for earnings management.[3] This view is also supported by the empirical evidence provided by Kasznik (1999) and Panyne and Robb (1997).

However, the benefits of MBE announcement are not tested until Bartov *et al*. (2002) and Kasznik and McNichols (2002). Based on quarterly analysts' EPS forecast data from I/B/E/S, Bartov *et al*. (2002) show that MBE companies experience a positive drift during the whole financial quarter after the announcement and that the market can partially distinguish abnormal accruals from the reported earnings.

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[3] The other two thresholds are "disclosing positive earnings" and "beating the earnings of last fiscal quarter".

As equity financing becomes increasingly important and with the implementation of managerial stock options, all kinds of company stakeholders are paying more attention to stock prices, and many Chinese research papers have focused on this field. Nevertheless, the analysts' influence on market consensus has not been empirically tested with Chinese data.

For several reasons, research on analysts is still limited in China. One important restriction is the development and regulation of the analyst industry. Moreover, domestic analyst forecast data had not been observed continuously until the establishment of the WIND and CSMAR databases. Some researchers (Zhu and Wang, 2001; Wu and Xu, 2005; Lin, 2000) had to collect analyst data from the public financial media or from only one brokerage firm. In addition, domestic brokerage firms are very different from one another in terms of size, the number of analysts employed, and industry coverage; therefore, their power to influence stock prices cannot be assumed to be the same.

Nevertheless, domestic research still provides us with helpful conclusions. The function of analysts in capital markets has been investigated and empirically tested (e.g. Zhu and Wang, 2001; Cai *et al*., 2003; Zhu *et al*., 2007). Based on analyst forecast data collected from securities newspapers, Zhu and Wang (2001) find that domestic analysts are very sensitive to some key information. Zhu *et al*. (2007) show that companies with more analysts following them have lower stock price synchronism and that investors are better informed about the fundamental information of these companies. Wu and Xue (2005) also provide a positive view of the analyst industry. They obtain analyst data from the Guotai Junan Securities company and find that arbitrage portfolios based on the forecast data will beat the market index; this result confirms the professional skill of domestic analysts.

Is there an effective channel between analysts and investors? Wu and Xue (2005) find that the market reacts after analysts disclose their original or revised forecasts. Zhu *et al*. (2008) also find that the abnormal return around the forecast revision date is significantly and positively related to the extent of the revision. Both of these papers confirm the existence of an effective channel between analysts and investors.

The typical characteristics of the domestic analyst industry have been analysed in a few studies. Li (2007) tries to figure out the relationship between analyst following and the difficulty of accessing company information, and the results show that companies that are more transparent are followed by more analysts and that the analysts' forecasts have higher accuracy. Zhu (2007) reaches the same conclusion, namely that a company will be followed by more analysts or brokerage firms if it provides higher quality earnings.

Overall, both the investment value of domestic analysts' estimations and the analyst industry's characteristics have been analysed, but the particular connection between analyst forecast and market price has not yet been tested. Specifically, there are two angles from which we can test the advantages of analysts' forecasts: forecast accuracy and market reaction. If we take market efficiency into consideration, the market reaction test may be a more reasonable approach. This paper focuses on this aspect.

2.2 Hypotheses

Apart from periodical statements, analysts can also observe updated information from companies on matters such as new investment projects, improved technology, and the price change in all kinds of inventories. Then, if necessary, they can adjust their previous estimations and either send updated reports to institutional investors or communicate with them directly. Meanwhile, their reports can also be partially observed by other investors through different financial media.[4] Since their professional skills have been empirically confirmed (Wu and Xue, 2005), domestic analysts should be able to fix the market consensus on earnings expectation.

Usually, the stock price is supposed to fluctuate around a fixed earnings expectation. If the actual EPS fails to reflect this consensus, the stock may be punished by a downward price movement. Similarly, if the analyst can influence and reflect the expectation of earnings, the MBE situation should merit a higher equity valuation, which means that MBE is good news for investors.

Are there any other factors that can influence stock prices apart from analyst estimations? Zhu *et al*. (2008) show that the stock price will change simultaneously with the analysts' forecast revision, which is a good argument to exclude the other factors explanation.

Specifically, the stock return on an MBE situation may not necessarily be positive when we take the selection-bias problem into consideration (Li, 2007). Companies that are large, actively disclose information, or have higher institutional ownership may react to MBE in a different way or even fail the market indices. However, for these companies that have been followed by analysts, I hypothesise that MBE stocks will perform better.

H1: MBE stocks will be rewarded with a pricing premium in the short window surrounding the announcement day.

H1 takes the *ex ante* window into account because information about annual earnings may be revealed before the announcement day; prohibited insider trading is often found in the Chinese stock markets.

There may be different explanations for stock movements when considering the long window after the announcement day. First, most institutional investors cannot adjust their portfolios completely in the short window because of the higher transaction cost. They need a longer period to fully reflect on the information in the annual reports. This view is supported by Ke *et al*. (2005), who find that it is the transient institutional investors who drive the post-earnings announcement drift (hereafter "PEAD").

On the other hand, analysts will adjust their estimations based on the information in the annual reports, and their revisions will lead to a long-term stock price adjustment.

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[4] The financial media, such as China-CBN television or microbell.com, disclose some of the analysts' current-day reports, and a few brokerage firms will also present their reports on their websites. However, the timeliness and the authority of all of this information have not been tested.

Zhang (2008) finds that the stocks with more analyst revisions after the announcement day will experience weaker PEAD.

In addition, the Chinese stock markets usually experience large fluctuations, and the split share structure of listed companies may bring about related party transactions or asset restructuring that can change the fundamentals of some companies. All of these factors may make stock prices move inconsistently with the fundamentals disclosed in annual reports. As mentioned above, it is necessary to have a stock return analysis after the announcement of annual statements. I therefore present the second hypothesis:

H2: MBE stocks will experience a higher drift return in the long window after the announcement.

The institutional background is extremely significant in the empirical test relating to these two hypotheses. Early disclosure of important information and the proportion and distribution of institutional ownership should also be considered.

III. Research Design

I divide the stock window into short and long windows and calculate the cumulative abnormal return (CAR) respectively. The means of calculation is based on the buy-and-hold abnormal return outperformed to the market index:

$$CAR = \prod_{t=t_1}^{t_2}(1+R_{it}) - \prod_{t=t_1}^{t_2}(1+R_{mt}) \ ,$$

where t is the trading date, and (t_1, t_2) gives the CAR calculation period;[5] R_{it} is the stock return of the trading day t of the company i; and R_{mt} is the value-weighted average market return of the trading day t. The companies listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange are represented by the respective market index.

The difference between the actual EPS and the analysts' EPS forecasts are deflated by the opening stock prices. The analysts' consensus forecasts are calculated as the mean of the EPS forecasts. Consistent with Bartov *et al*. (2002), I generate a dummy variable $DMBE_i$ to describe the surprise as follows:

$$SURP_i = \frac{ACTUAL_i - (\sum_{ix} EPS_{ix})/N_i}{P_{io}}$$

$$DMBE_i = \begin{cases} =1, & \text{if } SURP_i \geq 0, \\ =0, & \text{if } SURP_i < 0 \end{cases}$$

[5] I set the announcement day as $t = 0$. All windows of the CAR are accounted by trading days, not by calendar days. If the announcement day is a non-trading day (e.g. the weekend), then the first trading day following that day will be considered to be $t = 0$.

where $ACTUAL_i$ is the actual EPS of a given firm-year; EPS_{ix} means the forecast value of analyst *x;* N_i is the number of analysts following company *i* in that period; and P_{i0} is the closing stock price on the second trading day following the latest announcement day, which is considered to be the opening stock price.

With the variables above, I specify the follow regression model (1):[6]

$$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * DMBE_i * SURP_i + \beta * CONTROLVAR_i + \varepsilon_i \quad (1)$$

The dependent variable is the abnormal stock return. The independent variables can be classified into two kinds: the surprise-related variables and the company's fundamental variables. According to this model, β_2 and β_3 are the key coefficients, β_2 directly reflects the abnormal return, and β_3 reflects the sensitivity difference to MBE information. If the data support the hypothesis, the ideal result is that both β_2 and β_3 are significantly positive. To say the least, one of them should be significantly positive. What about the coefficient of *SURP*? Actually, the earnings persistence may decrease as the absolute value of *SURP* increases. If so, the market reaction to the continuous value of *SURP* may be inaccurate and non-dependable and *DMBE* may be a more direct variable.

Unlike Bartov *et al*. (2002), Model (1) does not control for the company's predictability because there is a multicollinearity problem between *SURP* and *DMBE* (VIF = 6). I then choose to control for predictability with some fundamental variables, the definitions of which are as follows:

SIZE: a company's size, calculated as the logarithm of market value;

LEV: financial leverage, calculated as the average liability to average assets;

ROA: return on assets, which is the sum of net income and interest paid divided by average total assets;

MB: market-to-book value;

EPS: earnings per share;

ANANUM: number of analysts following a company.

As the fundamental variables may make it difficult to distinguish between a first-order effect and a second-order effect, the results without these controlling variables should also be considered.

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[6] In the model of Bartov *et al.* (2002), the absolute value of the first analyst's bias is used to control for the company's forecast error. However, when I put exactly the same variable into the model, I find that there is a serious multicollinearity problem with the variable *SURP*. The VIF value is above 5. The main results actually remain the same if I put *ERROR* into the model. However, there is no multicollinearity problem in the final regression, in which other variables control for the forecast error. The results without the controlling variables are also presented.

IV. Data Source, Statistical Description, and Regression Results

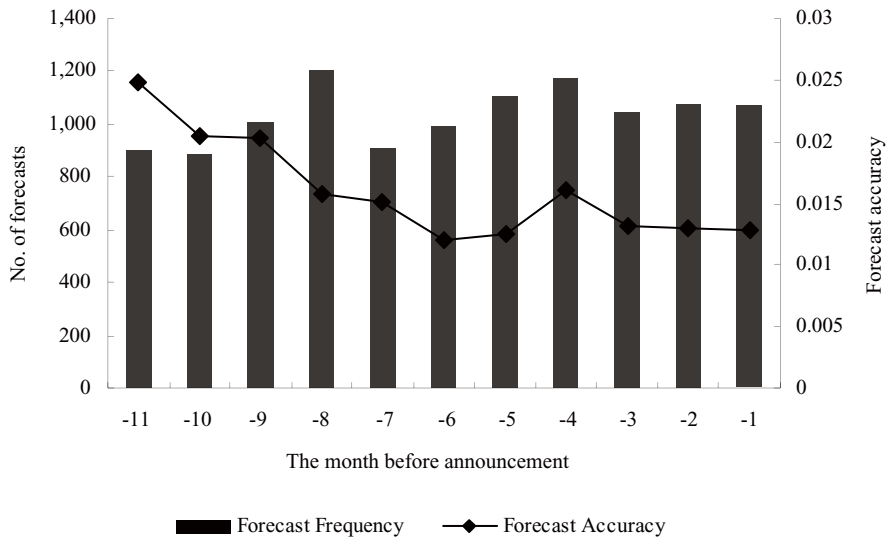
4.1 Data and Statistical Description

I obtain analysts' EPS forecasts for 41 brokerage firms from the WIND database. The sample covers the fiscal years from 2005 to 2008. The WIND database collects all of the analysts' research reports and the morning meeting reports, which are accessible to some members of the database. In the downloaded data, there are 12,817 observations of which the forecast period is one year or less.

US analysts usually give their forecasts or revisions around the announcement day of some important corporate information, such as periodical reports. Figure 1 presents the monthly frequency of domestic analysts' forecasts. As shown in the figure, there are two peak periods in a year: the eighth to ninth months and the last four months before the announcement day of the annual reports. The first peak period is around the announcement day of the semi-annual reports and the second one is between the fiscal year-end day and the disclosure day; both are information sensitive periods in relation to analysts' estimations.

Figure 1 Analysts' Forecast Frequency and Accuracy

The figure describes the scattering and accuracy of monthly forecast frequency for fiscal years 2005 to 2008. "-11" on the lateral axle means the 11th month before the announcement day. The bar graph measures the number of forecasts in that month, while the bend line shows the change in forecast accuracy.



It is also interesting to know the changes in the accuracy of monthly forecasts, since analysts can continuously observe the corporate operating situation and revise their estimations. Using the same method, I calculate the monthly forecast accuracy and present the results in Figure 1. Generally, the monthly forecasts are found to be more accurate because forecast errors are decreasing, but the forecast errors do not change much in the last six months. The overall results confirm that analysts continue to obtain operating information from companies so as to reduce forecast errors.

I delete observations that do not satisfy the following conditions:

1) The forecast should be made after the announcement day of the third quarterly report and two calendar days before the announcement day of the annual report;
2) If one analyst provides more than one EPS forecast relating to the same fiscal year, then I choose the latest one only;
3) Each firm year should contains at least two forecasts.

The remaining sample contains 5,890 forecasts relating to annual EPS from 41 brokerage firms and covering the period from 2005 to 2008; the number of observations for the four years are 1,001, 2,345, 982, and 1,562, respectively. I then calculate each firm-year forecast surprise based on the analysts' consensus forecast, which is the mean of all estimations. The final sample contains 1,381 firm-year surprises. On average, there are 4.27 forecasts for each firm year, which means that there are 4.27 analysts following the same firm.

Table 1 Sample Scattering and the MBE Ratio

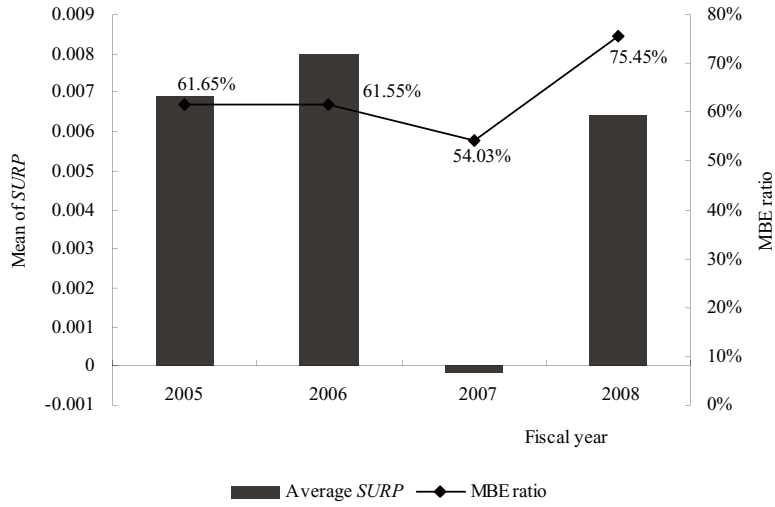
Fiscal year	Observations	MBE observations	MBE ratio
2005	266	164	61.65%
2006	476	293	61.55%
2007	248	134	54.03%
2008	391	295	75.45%
2005-2008	1381	886	64.16%

Table 1 shows the annual surprise and the ratio of MBE. The MBE ratios are higher than 50 per cent for the four years, and the mean ratio is 64.16 per cent. Moreover, there is a decreasing trend in the fiscal year 2007, which may have been influenced by the change in the analysts' optimism regarding the market index.

Given the huge market index fluctuation, split stock reform, and enforcement of new accounting standards during the sample period, a description of the change in annual forecast errors is necessary. As shown in Figure 2, the average forecast error for 2007 turns out to be negative. The possible explanation for this may be as follows: In accordance with the newly enforced accounting standards, the fair value measurement was applied and most of the listed companies suffered huge investment losses because of the index fluctuation of that year.

Figure 2 Annual Average *SURP* from 2005 to 2008

This figure shows the MBE ratio and the annual average surprise based on analyst forecasts for the fiscal years 2005 to 2008. The bar graph shows the mean of *SURP*, and the bend line shows the MBE ratio.



In addition, the frequency distribution around the zero surprise (coincidentally meeting the expectation) is shown in Figure 3. I divide the subsample into 18 groups with a *SURP* between -0.009 and 0.009, while each group has a value range of 0.001.

Figure 3 *SURP* Scattering around Zero Value

The figure describes the companies' scattering around the zero surprise. The groups are classified as follows: a company with a surprise subject to (0, 0.001) is in group 0, while a company with a surprise subject to (0.001, 0.002) is in group 1. It is with the same range to the left side that a company with a surprise subject to (-0.001, 0) is in group -1. All groups are divided with equal value ranges. The bar graph shows the number of companies in a given group.

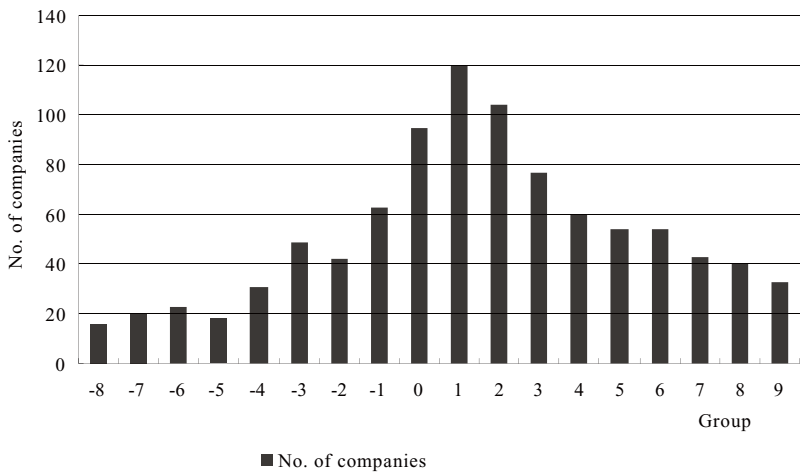


Figure 3 shows that the frequency distribution surrounding the zero surprise is asymmetrical: the number of small positives is obviously more than number of small negatives.

4.2 Regression Results in the Short Window

I take the short-window abnormal return as the dependent variable and run the regression of Model (1). The results are shown in Table 2.

The results in Table 2 support the view that MBE disclosure will result in a higher cumulative abnormal return (β_2 is significantly positive). The coefficients in the windows (-5,-1), (0, 0), and (0, 5) are significantly positive regardless of whether the controlling variables are included or not. The positive market reaction means that the announced EPS beats the market consensus. Therefore, if I calculate the consensus using the analysts' forecasts, the results will support the hypothesis that the forecasts of domestic analysts can fix the market consensus (H1). The actual annual EPS information may be revealed before the announcement day, as the coefficient of the window (-5,-1) is significant. Generally, the actual EPS may be known to the listed companies, the auditors, the China Securities Regulatory Commission (CSRC), and the stock exchanges, and so it is hard to determine where the actual EPS information is leaked from.

The coefficients of the interaction term are also significantly positive, so the market reacts to a positive surprise and a negative surprise asymmetrically and the companies with a positive surprise attract a more sensitive market reaction. One possible explanation of the result is that investors consider non-MBE earnings to be a temporary phenomenon. The result can also be explained by behavioural finance, which holds that investors react asymmetrically to positive/negative news or positive/negative earnings. However, any further analysis of the asymmetric result is beyond the main topic of this paper.

In addition, only one coefficient of *SURP* is significant, while some of the others are negative, and the result is consistent with quarterly US data. Also, the EPS affects the value of CAR, where the coefficient of EPS becomes significantly negative after the announcement day. Investors tend to avoid those companies with a high EPS, and they do not change their expectations based on the companies' real EPS but on the basis of the difference between the real EPS and the expectation.

4.3 Regression Results in the Long Window

Ball and Brown (1968) show the PEAD when they divide their sample into two groups: good news and bad news. In this paper, the companies can also be classified into two kinds solely on the basis of the MBE situation. I also want to know whether there are drift movements in the long-run window with MBE information. I calculate the B-H abnormal return of the long window and take it as a dependent variable. The regression results are shown in Table 3.

Table 2 Regression Results of Short Windows

The regression model is $CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * DMBE_i * SURP_i + \beta * CONTROLVAR_i + \varepsilon_i$. Columns (1) to (8) contain different results in respect to different windows. CAR is calculated as the B-H return. I set the announcement day as $t = 0$; if the announcement day is not a trading day, the first trading day following the announcement day will be $t = 0$. All windows are counted by trading days, not calendar days. Columns (1) to (4) are windows before the announcement, while Columns (5) to (8) are windows after the announcement. *SURP* is the consensus analysts' forecasts and is deflated by the opening stock price. *DMBE* is a dummy variable: if *SURP* >= 0, then *DMBE* = 1; otherwise *DMBE* = 0. *SIZE* is the logarithm of market value. *LEV* is leverage. *ROA* is return on assets. *MB* is the market-to-book ratio. *ANANUM* is the number of analysts following a company.

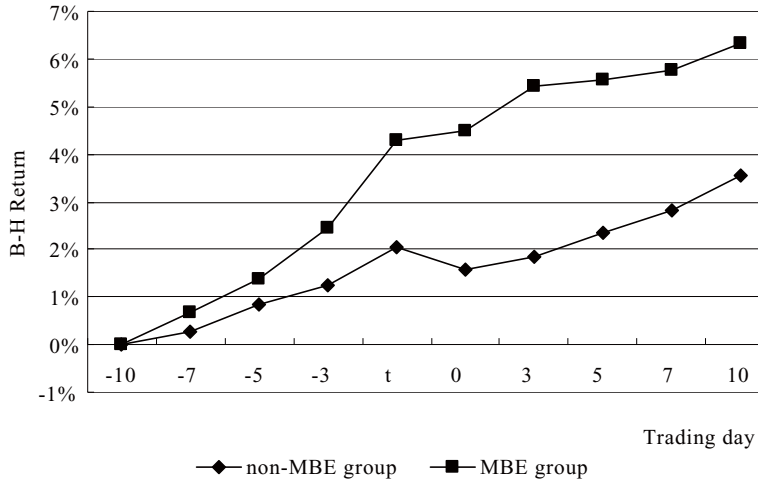
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CAR(-10, -1)	CAR(-10, -1)	CAR(-5, -1)	CAR(-5, -1)	CAR(0, 0)	CAR(0, 0)	CAR(0, 5)	CAR(0, 5)
Intercept	0.0225***	0.1495**	0.0122***	0.084*	-0.006***	-0.0633**	-0.0018	0.0029
	(5.92)	(2.26)	(4.59)	(1.78)	(-3.92)	(-2.36)	(-0.44)	(0.04)
SURP	0.1815	0.2195	-0.0191	-0.047	0.0162	0.0959	-0.4264**	-0.212
	(1.09)	(1.21)	(-0.16)	(-0.36)	(0.24)	(1.30)	(-2.39)	(-1.09)
DMBE	0.0047	0.0096	0.0077*	0.0094**	0.0063**	0.0067***	0.0162***	0.0169***
	(0.70)	(1.45)	(1.67)	(2.01)	(2.36)	(2.50)	(2.28)	(2.40)
*DMBE*SURP*	1.6582***	1.2988***	1.0632***	0.9185***	-0.016	0.0705	0.161	0.1971
	(4.13)	(3.14)	(3.77)	(3.11)	(-0.10)	(0.42)	(0.37)	(0.44)
SIZE		-0.0035		-0.0015		0.0024**		0.0002
		(-1.23)		(-0.71)		(2.05)		(0.06)
LEV		0.0071		-0.0033		-0.0011		-0.0017
		(0.39)		(-0.25)		(-0.15)		(-0.09)
ROA		0.051		0.0162		0.0235		0.0736
		(0.78)		(0.35)		(0.88)		(1.04)
MB		-0.0028**		-0.0016*		0.0001		-0.0017
		(-2.29)		(-1.80)		(0.25)		(-1.27)
EPS		0.0053		0.0053		-0.0076***		-0.0148*
		(0.90)		(1.26)		(-3.18)		(-2.33)
ANANUM		-0.0056***		-0.0021*		-0.0003		-0.0004
		(-3.64)		(-1.92)		(-0.48)		(-0.22)
Year Dum.		Control		Control		Control		Control
Ind. Dum.		Control		Control		Control		Control
Adj R-sq	0.0248	0.0659	0.0208	0.029	0.0041	0.0314	0.0041	0.0425
Obs.	1351	1351	1351	1351	1351	1351	1351	1351

Note: (1) *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively; (2) All continuous variables are winsorised at the 1% and 99% levels.

Let the announcement day be day zero (t = 0): I calculate the buy-and-hold abnormal return (B-H return) from the 10th trading day before day zero. The profit movement is shown in Figure 4.

Figure 4 Short Window Stock Movements of MBE Stocks and Non-MBE Stocks

This figure shows the different stock movements of MBE and non-MBE stocks in the short window. CAR is calculated as the B-H return adjusted by market indices. The announcement day is set as t = 0, so t = -10 is the 10th trading day before the announcement day and t = 10 is the 10th trading day after the announcement day.



As can be seen from Figure 4, the MBE group has a higher abnormal return. At day t = 10, the MBE group obtains a B-H return of 6.31 per cent while the non-MBE group obtains only 3.55 per cent. The difference is 2.76 per cent.

However, the stock movement shown in Figure 4 does not show an upward movement for positive news and a downward movement for negative news (Ball and Brown, 1968). There are two possible explanations for this: (1) the sample covers less than half of all listed companies and (2) the analysts following the companies are self-selected, so the sample is biased (the biased sample will not bias the main results). In addition, I obtain the CAR based on the two market indexes calculated as the market value weighted average, but the proxy ability of these two market indexes is still controversial because of the "2-8 synchronism"[7], which is usually mentioned in domestic research.

I use three windows to capture the long-run stock movements in Table 3, which are calculated from the fifth trading day after the announcement. In the first three columns, the coefficients of *SURP* are significantly positive, which means that the companies with higher surprise will have higher valuations in the long run. In columns (4) to (6), the interaction terms are significantly positive, which means that the prices of MBE stocks are more sensitive and that MBE does bring additional information. The results remain

[7] There is no generally accepted definition of "2-8 synchronism", which usually means that the market indexes are calculated mainly using the 20% of companies with the larger market value, while the stock prices of the remaining 80% are not counted. Then, separate stock movements between the 20% and the 80% frequently occur.

consistent when I control for more fundamental variables in the last three columns. Also, I find that stocks followed by more analysts will perform better. However, it is not known whether analyst following leads to this outperformance or whether analysts choose to follow companies of this kind.

In the same way, I picture the long-term stock movements of the MBE group and the non-MBE group from the trading day $t = 5$.

Obviously, the abnormal return of the MBE group outperforms that of the non-MBE group in all long-term windows. At the trading day $t = 120$, the difference extends to 4.86 per cent, where the CAR of the MBE group is -0.63 per cent and that of the non-MBE group is -5.49 per cent. The difference in return is amplified when the trading day is around $t = 45$ or $t = 60$, which is about the date of the disclosure of the next semi-annual financial report.

The results above provide empirical evidence for the view that MBE can lead to a better stock performance both in the short-and long-term period after the announcement. Since I calculate the surprise based on the analysts' consensus forecasts, it is shown that the domestic analysts can fix or reflect the market consensus expectation. Moreover, I find that some details are different from those found in developed capital markets.

In accordance with the approach of Bartov *et al*. (2002), I test whether MBE announcements have predictive ability in respect to the accounting profit performance of the next fiscal year. This result may provide an additional explanation of the PEAD caused by MBE.

I take four profitability indices from the WIND database: the average ROE (*ROE_A*), the ROE without the non-recurring items (*ROE_E*), the ROA, and the return to sales (*RTS*). The regression model includes the key variable *DMBE/SURP*, the number of analysts following a company, company size, financial leverage, institutional ownership, and the industry variables. In all of the regressions, the key variable *DMBE* or *SURP* is positive at the 99 per cent significance level. The results support the view that the MBE condition does have some predictive information in relation to the next fiscal year's profitability, which is consistent with the research conclusions drawn on the US market.

Figure 5 Long Window Stock Movements of MBE Stocks and Non-MBE Stocks

This figure shows the different stock movements of MBE and non-MBE stocks in the post-announcement long window. CAR is calculated as the B-H return adjusted by market indices. The announcement day is set as $t = 0$, so $t = 30$ is the 30th trading day after the announcement day.

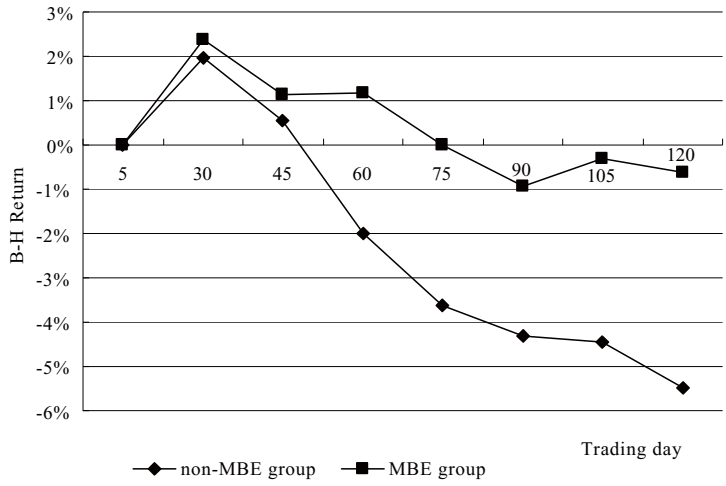


Table 3 Regression Results of Long Windows

The regression model is $CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * DMBE_i * SURP_i + \beta * CONTROLVAR_i + \varepsilon_i$. Columns (1) to (8) contain different results in respect to different windows. The CAR is calculated as the B-H return. I set the announcement day as $t = 0$; if the announcement day is not a trading day, the first trading day following the announcement day will be $t = 0$. All the windows are counted by trading days, not calendar days. Observations of less than 60, 90, or 120 trading days will be deleted. *SURP* is the consensus analysts' forecasts and is deflated by the opening stock price. *DMBE* is a dummy variable: if *SURP* >= 0, then *DMBE* = 1; otherwise, *DMBE* = 0. *SIZE* is the logarithm of market value. *LEV* is leverage. *ROA* is return on assets. *MB* is the market-to-book ratio. *ANANUM* is the number of analysts following a company.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	CAR(5, 60)	CAR(5, 90)	CAR(5, 120)	CAR(5, 60)	CAR(5, 90)	CAR(5, 120)	CAR(5, 60)	CAR(5, 90)	CAR(5, 120)
Intercept	-0.0064	-0.0296***	-0.0398***	-0.0177*	-0.0451***	-0.0523***	-0.2835	-0.5397**	-0.5184*
	(-0.82)	(-3.25)	(-3.35)	(-1.65)	(-3.57)	(-3.16)	(-1.58)	(-2.56)	(-1.85)
	(-0.82)	(-3.25)	(-3.35)	(-1.65)	(-3.57)	(-3.16)	(-1.58)	(-2.56)	(-1.85)
SURP	0.7736*	0.6966	1.7842***	0.2365	-0.0239	1.1708*	0.6462	0.2603	0.9448
	(1.94)	(1.49)	(3.16)	(0.50)	(-0.04)	(1.76)	(1.31)	(0.45)	(1.37)
DMBE				0.0052	0.0083	-0.0014	-0.0002	0.0076	0.0025
				(0.27)	(0.37)	(-0.05)	(-0.01)	(0.36)	(0.09)
*SURP*DMBE*				2.5252**	3.3043**	3.3767**	1.4544	3.1511**	4.3141**
				(2.22)	(2.47)	(2.00)	(1.29)	(2.38)	(2.55)
SIZE							0.0048	0.0129	0.0078
							(0.60)	(1.40)	(0.64)
LEV							0.0629	0.1431**	0.1873**
							(1.28)	(2.47)	(2.44)
ROA							0.0201	0.3628*	0.503*
							(0.11)	(1.73)	(1.79)
MB							-0.0075**	-0.0095**	-0.0099*
							(-2.21)	(-2.39)	(-1.95)
EPS							-0.0097	-0.0294	-0.0265
							(-0.61)	(-1.56)	(-1.03)
ANANUM							0.0047	0.0109**	0.0176***
							(1.14)	(2.23)	(2.66)
Year Dum.							Control	Control	Control
Ind Dum.							Control	Control	Control
Adj R-sq	0.0021	0.0017	0.0075	0.0051	0.0051	0.0095	0.1231	0.1254	0.1126
Obs.	1349	1349	1191	1349	1349	1191	1349	1349	1191

Note: (1) *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively; (2) All continuous variables are winsorised at the 1% and 99% levels.

4.4 Earnings Management

Earnings management, which is very important to the persistence of EPS, is not tested in the above MBE analysis. Generally speaking, accruals have less persistence (Sloan, 1996; Jones, 1991; Bartov *et al*., 2001; Xia, 2003) and can be managed more frequently. I calculate the abnormal accrual (*AA*) based on the industry-adjusted cross-sectional Modified Jones Model and run a regression with the follow model:

$$CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * AA_i + \beta_4 * AA * DMBE_i + \beta * CONTROLVAR_i + \varepsilon_i \quad (2)$$

The *AA* item in the model is the abnormal accrual scaled by the company's total assets. In the calculation of *AA*, the classification of industry is based on the CSRC Industry Classifications of 2001; the manufacturing industry is grouped with sub-classifications, while other industries are not. I also delete the financial companies and the industry year containing less than 15 observations. According to the model specification, if the abnormal accrual has less persistence and can be distinguished by the investors, the coefficients of *AA* and the interaction item should be significantly negative. The results are shown in Tables 4 and 5.

In Table 4, the main results of *DMBE* are the same, but there are no significantly negative coefficients of *AA* except for the window (0, 0). It seems that investors treat an abnormal accrual equally with cash flows or normal accruals. In Table 5, the coefficients of *SURP* are significantly positive, but both the coefficients of *AA* and the interaction term show no significance.

In the analysis, neither the short nor the long window shows the significance of abnormal accruals. Investors in the Chinese markets tend to ignore the lower persistence of accruals when they react to MBE information, which is different from what happens in the US market. However, the results may be caused by the biased measurement of earnings management obtained with the Modified Jones Model if the *AA* coefficient cannot reasonably reflect the market reaction to earnings management.

V. Robustness Examination

Although Section IV shows that the forecasts of domestic analysts can fix or reflect the market consensus expectation, there may be some other possibilities that cause the same results. Analyst forecast may be just one of several fake measurements with the same purpose. The earnings of the previous fiscal year or the managerial forecasts could be substitutes for market consensus, and so a robustness examination is required. Meanwhile, the role of institutional investors in MBE reaction also needs to be tested.

Table 4 MBE Reaction and Earnings Management

The regression model is $CAR_i = \beta_0 + \beta_1 * SURP_i + \beta_2 * DMBE_i + \beta_3 * AA + \beta_4 * AA * DMBE + \beta * CONTROLVAR_i + \varepsilon_i$. CAR is the B-H return adjusted by the market indices. *AA* is the abnormal accrual calculated from the cross-sectional industry-adjusted Modified Jones Model. *SURP* is the surprise based on analyst forecasts. The controlling variables include company size, leverage, *ROA*, *MB*, actual EPS, and the number of analysts following a company.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CAR(-10, -1)	CAR(-10, -1)	CAR(-5, -1)	CAR(-5, -1)	CAR(0, 0)	CAR(0, 0)	CAR(0, 5)	CAR(0, 5)
Intercept	0.0343***	0.1269**	0.0156**	0.0453	-0.0062*	-0.0669***	-0.0102	-0.0005
	(3.80)	(2.02)	(2.45)	(1.02)	(-1.70)	(-2.62)	(-1.15)	(-0.01)
SURP	0.3751**	0.275*	0.0985	0.0112	0.0327	0.098	-0.3508**	-0.2499
	(2.55)	(1.70)	(0.95)	(0.10)	(0.55)	(1.49)	(-2.44)	(-1.57)
DMBE	0.0164**	0.0164**	0.0141***	0.0135***	0.0062**	0.0068***	0.0192***	0.0217***
	(2.57)	(2.55)	(3.12)	(2.96)	(2.40)	(2.60)	(3.07)	(3.43)
AA	-0.0281	-0.0283	-0.0101	-0.0121	-0.0294*	-0.024	0.0331	0.0437
	(-0.69)	(-0.69)	(-0.35)	(-0.42)	(-1.78)	(-1.44)	(0.83)	(1.09)
*AA*DMBE*	0.0822	0.0855	0.0426	0.047	0.0297	0.0237	-0.0537	-0.0661
	(1.56)	(1.62)	(1.14)	(1.26)	(1.39)	(1.11)	(-1.04)	(-1.28)
Con. Var.		Control		Control		Control		Control
Year Dum.	Control	Control	Control	Control	Control	Control	Control	Control
Ind. Dum.	Control	Control	Control	Control	Control	Control	Control	Control
Adj R-sq	0.0446	0.0497	0.0159	0.0184	0.0271	0.0336	0.0474	0.0493
Obs.	1286	1286	1286	1286	1286	1286	1286	1286

Note: (1) *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively; (2) All continuous variables are winsorised at the 1% and 99% levels.

Table 5 MBE Reaction and Earnings Management

The table shows the long window results of Model (2). CAR is the B-H return adjusted by the market indices. *AA* is the abnormal accrual calculated from the cross-sectional industry-adjusted modified Jones Model. *SURP* is the surprise based on analyst forecasts. The controlling variables include company size, leverage, *ROA*, *MB*, actual EPS, and the number of analysts following a company.

	(1)	(2)	(3)	(4)
	CAR(5, 90)	CAR(5, 90)	CAR(5, 120)	CAR(5, 120)
Intercept	-0.0633**	-0.3129***	0.0491	-0.5388*
	(-2.56)	(-1.79)	(1.18)	(-1.96)
SURP	0.714*	0.7079	1.5168**	1.385**
	(1.77)	(1.60)	(2.39)	(2.03)
DMBE	0.0085	0.0061	0.0286	0.023
	(0.49)	(0.35)	(1.04)	(0.84)
AA	0.0148	0.0379	-0.037	0.0128
	(0.13)	(0.34)	(-0.20)	(0.07)
*AA*DMBE*	-0.1222	-0.1367	-0.0591	-0.0866
	(-0.85)	(-0.94)	(-0.26)	(-0.38)
Con. Var.		Control		Control
Year Dum.	Control	Control	Control	Control
Ind. Dum.	Control	Control	Control	Control
Adj R-sq	0.0955	0.0989	0.0638	0.083
Obs.	1284	1284	1140	1140

Note: (1) *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively; (2) All continuous variables are winsorised at the 1% and 99% levels.

5.1 Comparing with Managerial Forecasts

In addition to analyst forecasts, managerial forecasts can also influence investors' expectations. If most analysts take managerial estimations as the threshold of earnings expectations, the managerial expectations can be an alternative explanation of the above empirical results. In order to examine this possibility, I obtain the managerial forecasts and run the following model:

$$CAR = \beta_0 + \beta_1 * SURP + \beta_2 * MAN\_SURP + \beta * CONTROLVAR + \varepsilon, \quad (3)$$

where *SURP* is the surprise based on analysts' consensus forecasts (mean) and *MAN_SURP* is the surprise based on the managerial EPS estimation. These two variables are deflated by the opening stock price.

I obtain the managerial forecast data from the WIND database and calculate the estimated EPS based on description notes disclosed by the listed company. I then deflate the difference between the actual EPS and the managerial EPS estimation with the opening stock price (*MAN_SURP*). However, not all companies voluntarily provide their managerial estimations, so the final sample contains only 471 observations.

If analyst forecast is just a reflection of managerial forecast, it may be found that *MAN_SURP* is significantly positive in the regression of Model (3). The results are shown in Table 6.

Despite of the reduction in the sample, the main results of *SURP* are consistent even when I add the managerial forecasts into the regression model. Meanwhile, the coefficient of *MAN_SURP* is not significant in the short window, which means that the managerial forecast can hardly proxy for the consensus expectation. In the two long windows (5, 60) and (5, 120), the *SURP* coefficients are all significant in single variable regression, while the coefficients of *MAN_SURP* are not. If other fundamental variables are controlled for, *MAN_SURP* is only significant in the window (5, 60). On the whole, analyst forecast is more representative than managerial estimation. The empirical results therefore do not support the alternative explanation.

Actually, analysts can observe the estimations of firms and make revisions when necessary. Therefore, analysts can give a more accurate and more convincing forecast than that given in managerial forecasts. The EPS of past years or the managerial forecasts are simply types of information that analysts can comprehensively consider. Therefore, the analyst forecast explanation still holds.

5.2 The Role of Institutional Investors

Compared with retail investors, institutional investors are more sophisticated and possess the advantages of information, transaction cost, and potential portfolio, and so they may react to MBE in a different way. Institutional investors hold more analysts' forecasts and can communicate with managers frequently with lower cost, and they may react earlier to MBE information in order to gain the predominant position. On the other hand, retail investors can change their stock position completely in a short time since they hold less stocks, whereas institutional investors cannot. Institutional investors have to figure out the optimal situation in the trade-off between the transaction cost and the profit to be gained after portfolio adjustments in a long window.

Qi and Ouyang (2006) find that domestic institutional investors do not alleviate the drift in the short window and that they even extend it in the long run. Kong and Ke (2007) find the same result, namely that institutional investors drive the drift return on good news after the announcement. Given that domestic institutional investors have to abide by different stock investment regulations and their ownership is scattered, it is necessary to further examine the role of institutional investors in the analysis of MBE reaction.

As mentioned above, I construct the following regression model:

$$CAR = \beta_0 + \beta_1 * SURP + \beta_2 * DMBE + \beta_3 INS + \beta_4 * INS * DMBE + \beta * CONTROLVAR + \varepsilon, \quad (4)$$

Table 6 Results of Alternative Explanation of Managerial Forecasts

The regression model is $CAR=\beta_0+\beta_1*SURP+\beta_2*MAN\_SURP+\beta*CONTROLVAR+\varepsilon$. CAR is the B-H return adjusted by the market indices. *MAN_SURP* is managerial forecasts deflated by the opening stock prices. *SURP* is the surprise calculated by analysts' forecasts. Panels A and B show the regression results of the short window and the long window, respectively. The controlling variables include company size, leverage, *ROA, MB*, actual EPS, and the number of analysts following a company.

Panel A	(1)	(2)	(3)	(4)	(5)	(6)
	CAR(-5, -1)	CAR(-5, -1)	CAR(-5, -1)	CAR(0, 5)	CAR(0, 5)	CAR(0, 5)
Intercept	0.0239***	0.0234***	-0.0852	-0.0049	-0.0051	-0.1671
	(6.32)	(5.92)	(-1.01)	(-1.00)	(-1.03)	(-1.50)
SURP	0.7734***		0.5433*	-0.6237*		-0.6133
	(3.14)		(1.89)	(-1.94)		(-1.61)
MAN_SURP		-0.1051	0.0576		-0.0186	-0.0234
		(-0.84)	(0.44)		(-0.12)	(-0.13)
Con. Var.			Control			Control
Year and Ind. Dum.			Control			Control
Adj R-sq	0.0253	-0.0008	0.0507	0.008	-0.0029	0.0124
Obs.	342	342	342	342	342	342

Panel B	(1)	(2)	(3)	(4)	(5)	(5)
	CAR(5, 60)	CAR(5, 60)	CAR(5, 60)	CAR(5, 120)	CAR(5, 120)	CAR(5, 120)
Intercept	-0.0375**	-0.0342**	-0.777**	-0.0524**	-0.0421	-1.1625**
	(-2.31)	(-2.03)	(-2.13)	(-2.03)	(-1.56)	(-2.07)
SURP	2.4178**		1.4284	5.8278***		5.7325***
	(2.28)		(1.15)	(4.10)		(3.54)
MAN_SURP		0.3316	1.1637**		0.1787	1.1196
		(0.62)	(2.05)		(0.26)	(1.53)
Con. Var.			Control			Control
Year and Ind. Dum.			Control			Control
Adj R-sq	0.0122	-0.0018	0.0307	0.0528	-0.0033	0.0977
Obs.	342	342	342	284	284	284

Note: (1) *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively; (2) All continuous variables are winsorised at the 1% and 99% levels.

where *INS* is the institutional ownership deflated by the total exchangeable outstanding shares, both of which are reported in the annual financial reports, and *SURP* is the surprise calculated using the analysts' consensus forecasts.

I expect that β_2 will be significantly positive, but it is hard to guess the coefficients of *INS*. If the data support the view of Qi and Ouyang (2006), then β_4 will be significantly positive, which means that institutional investors extend the drift. The final results are shown in Table 7.

Panel A shows the short-window regression results of Model (4). The main results of MBE remain consistent, but the coefficients of *INS* only become significantly negative in the windows (-10, -1) and (0, 5) The significance disappears if I control for the fundamental variables. Overall, the data do not support the influence of institutional ownership on the short-window CAR.

Panel B shows the results of the long windows. It can be seen that the significance of *INS* weakens as the window gets longer, but it is negative in all windows. If the fundamental variables of companies are controlled for, the interaction item becomes significantly negative. The coefficients show an asymmetrical reaction of institutional investors to the MBE. The non-MBE stocks are more sensitive in the long window after the announcement, which is consistent with the US market but different from the findings of Qi and Ouyang (2006).

The analysis in this section finds that institutional investors do not react significantly to MBE in the short window, but that there is an asymmetrical reaction in the subsequent long windows in which institutional investors are more sensitive to bad news.

Apart from the robustness test of managerial forecast and institutional investors, the results of each fiscal year are basically the same. Only the result of the 2007 fiscal year (negative, but with no significance) is different from the total sample result. In a further analysis, I suggest that the 2007 results may be biased by the compaction of the stock selection range of the institutional investors because, in that year, the market index suffers a 72.81 per cent slump from the high point around the announcement day. In that period, the stock selection range of investors is only about one-third of normal, indicating the use of a defensive strategy (diluting the holding cost of a smaller range of stocks). I also winsorise or truncate the extreme observations in different ranges, and the main results remain consistent.

VI. Economic Significance Examination

As the market reaction to MBE has been empirically tested in above sections, I expect to examine the economic significance of MBE by constructing a positive arbitrage portfolio based on the *SURP*. At first, I sort the sample by *SURP* and obtain the range values of 10 per cent to 90 per cent, which are then used to divide next year' s sample into 10 groups; for instance, the 2006 sample is grouped into 10 sub-samples according to the range values of *SURP* for 2005. I use the fourth year' s range values because only a portfolio arbitraged in this way is exercisable. Investors can be sure about whether a stock should be bought or sold according to its surprise.

Table 7 Market Reaction to MBE and Institutional Ownership

The regression model is $CAR = \beta_0 + \beta_1 *SURP + \beta_2 *DMBE + \beta_3 INS + \beta_4 *INS*DMBE + \beta *CONTROLVAR + \varepsilon$. CAR is the B-H return adjusted by the market indices. *INS* is institutional ownership deflated by the ratio of outstanding tradeable shares. *SURP* is the surprise based on analysts' forecasts. The controlling variables include company size, leverage, *ROA, MB*, actual EPS, and the number of analysts following a company.

Panel A:	CAR(-10, -1)		CAR(-5, -1)		CAR(0, 0)		CAR(0, 5)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.0454***	0.1066*	0.0195***	0.037	-0.0079**	-0.0721***	0.00002	-0.042
	(4.76)	(1.74)	(2.87)	(0.84)	(-2.04)	(-2.89)	(0.00)	(-0.70)
SURP	0.4778***	0.319*	0.1434	0.0013	0.0299	0.0968	-0.2892*	-0.2179
	(3.01)	(1.80)	(1.27)	(0.01)	(0.46)	(1.34)	(-1.87)	(-1.25)
DMBE	0.0172***	0.0167	0.0144***	0.0185**	0.0063**	0.0055	0.0176***	0.0253**
	(2.73)	(1.53)	(3.22)	(2.38)	(2.49)	(1.23)	(2.88)	(2.36)
INS	-0.0343***	-0.0233	-0.0078	0.0008	0.0037	0.0008	-0.021*	-0.0092
	(-2.72)	(-1.33)	(-0.87)	(0.06)	(0.72)	(0.11)	(-1.71)	(-0.54)
*INS*DMBE*		-0.0013		-0.0143		0.0045		-0.0157
		(-0.06)		(-0.83)		(0.46)		(-0.67)
Con. Var.		Control		Control		Control		Control
Year Dum.	Control	Control	Control	Control	Control	Control	Control	Control
Ind. Dum.	Control	Control	Control	Control	Control	Control	Control	Control
Adj R-sq	0.049	0.0601	0.0174	0.0233	0.0241	0.0278	0.0452	0.0443
Obs.	1351	1351	1351	1351	1351	1351	1351	1351

Table 7 *(Continued)*

Panel B:	CAR(5, 30)		CAR(5, 60)		CAR(5, 90)	
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	0.0179	-0.1036	-0.0169	-0.4718***	-0.0169	-0.6095***
	(0.96)	(-0.90)	(-0.64)	(-2.92)	(-0.54)	(-3.21)
SURP	0.6421**	0.4783	0.7772*	0.551	0.3984	0.276
	(2.08)	(1.39)	(1.78)	(1.14)	(0.77)	(0.49)
DMBE	-0.0028	0.0282	0.0121	0.0629**	0.0254	0.0711**
	(-0.23)	(1.32)	(0.70)	(2.10)	(1.24)	(2.02)
INS	-0.0597**	-0.0291	-0.0423	-0.0199	0.0096	0.0065
	(-2.43)	(-0.87)	(-1.22)	(-0.42)	(0.23)	(0.12)
*INS*DMBE*		-0.088*		-0.1479**		-0.1283*
		(-1.88)		(-2.25)		(-1.66)
Con. Var.		Control		Control		Control
Year Dum.	Control	Control	Control	Control	Control	Control
Ind. Dum.	Control	Control	Control	Control	Control	Control
Adj R-sq	0.0478	0.0498	0.0918	0.1053	0.08	0.1029
Obs.	1350	1350	1349	1349	1349	1349

Note: (1) *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively; (2) All continuous variables are winsorised at the 1% and 99% levels.

Among the 10 sub-samples, the first group shows the largest surprise and the 10th group the least. I choose to buy in the stocks of the first group and sell out the stocks of the 10th group with equal market value, and the average return can be calculated with the following equation:

$$profit_p = (\Sigma R_{1t})/N_1 - (\Sigma R_{10t})/N_{10}$$

The left side of the equation is the portfolio profit. The first and second items on the right side are the abnormal returns of the first and 10th groups, respectively. As the short-sell mechanism is prohibited in the Chinese market, the abnormal return of the first sub-sample is also tested. The portfolio return with the sample of the fiscal years 2006 to 2008 is shown in Figure 6, and the significance test is shown in Table 8.

As shown in Figure 6, the abnormal returns of the first group remain positive in all windows and the 10th sub-sample produces all negative returns. In Table 8, the difference in return between the two sub-samples extends to 15.83 per cent and the differences are significant in the windows (5, 30), (5, 60), (5, 75), (5, 105), and (5, 120).

Table 8 Portfolio Profits and Significance Test

The annual sub-sample is divided into 10 groups according to the surprise of the current year and the range values of the previous year's surprise. The first and the 10th groups contain the largest and the smallest surprises, respectively. The average abnormal return of the target companies is the portfolio profit. The CAR is calculated as the G-H return adjusted by market indices. I set the announcement day as $t = 0$; if that day is not a trading day, then the first trading day following the announcement day will be $t = 0$.

Trading day *(t)*	5	30	45	60	75	90	105	120
1st group	0	5.08%	3.68%	7.33%	5.38%	4.37%	7.91%	7.66%
10th group	0	-1.10%	-3.14%	-7.05%	-6.61%	-5.14%	-4.59%	-8.17%
Profit (P1-P10)	0	6.18%	6.82%	14.37%	11.98%	9.50%	12.49%	15.83%
Profit T-test		-1.71*	-1.62	-2.96***	-2.08**	-1.53	-1.66*	-1.79*
T-test of the 1st group		2.09**	1.25	1.89*	1.29	0.94	1.33	1.06

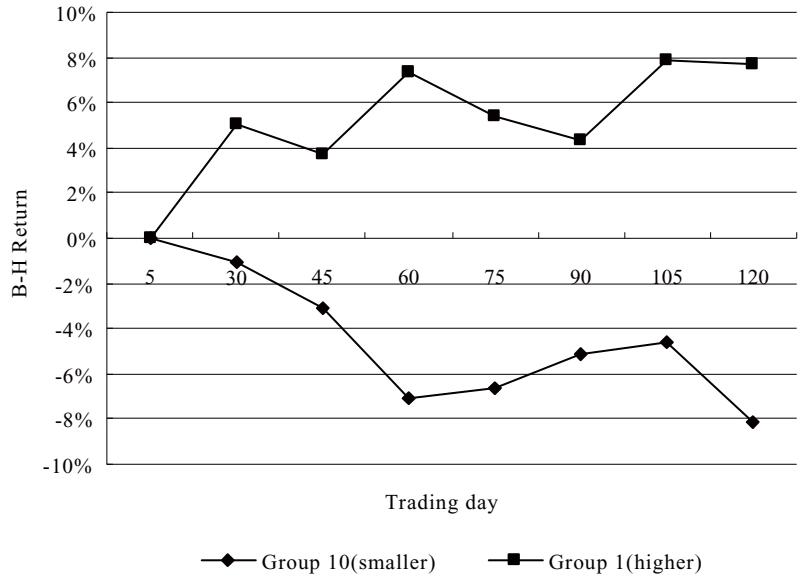
Due to the prohibition of short selling, I need to test the significance of the first group's return individually. In Table 9, the abnormal return is 7.91 per cent at the highest level ($t = 105$) if we only buy in the first group; the least return is 3.68 per cent at $t = 45$. The abnormal returns are significantly different from zero in the windows (5, 30) and (5, 60).

VII. Conclusions

With a database of Chinese analysts' forecasts, I find that a company with an MBE announcement will be rewarded with higher stock pricing. The results support the view that the forecasts of domestic analysts can fix or reflect the market consensus and that MBE does have economic consequences in an emerging capital market.

Figure 6 Arbitrage Profit Based On the Analysts Surprise Information

The figure describes the profit of a portfolio constructed using the analysts' forecast surprise for the fiscal years 2006 to 2008. The range value is defined by the average value for ten groups classified in the previous year. If I classify the companies for 2005 into 10 groups according to the surprise, then the range value is used to define the companies for 2006. The first group contains the companies with a higher surprise, and the 10th group contains the companies with a smaller surprise. The abnormal return is measured with the B-H return adjusted solely by the respective market indices.



In the statistical description of forecast error, I find that monthly forecasts become more accurate as the forecast periods get shorter. Analysts revise their forecasts based on updated corporate operating news. Moreover, the ratio of MBE and the mean of *SURP* are found to be highly correlated with the market cycle. The mean of the 2007 *SURP* even changes to negative in a bear market.

When I measure earnings management with the cross-sectional Modified Jones Model, the empirical results show a weak significance of abnormal accrual in the short windows and that the significance disappears in the long windows. In the subsequent robustness test, the analysts' forecasts are found to be more representative than managerial forecasts in both the short and long windows. Finally, stocks with a higher institutional ownership react less to MBE.

With more representative forecast data, this paper contributes to the domestic analyst literature in several ways. Firstly, the results confirm the market function of domestic analysts from the angle of market consensus expectation. The results also show that MBE will also bring higher valuation in an emerging market, which is consistent with what happens in the US market. Finally, this paper tests the economic significance of the MBE issue by constructing a portfolio with a significantly positive return according to the announcement surprise. However, the significant profit result cannot be used to define the efficiency of the stock market, since the analysts' forecasts are not available to all investors at the same time.

The research has some limitations. First, the sample contains only four years' observations. Second, the database only provides forecasts relating to the annual EPS; quarterly data is not available and cannot be tested. Moreover, all of the results come only from those companies with two or more analysts following them, and so the conclusions may not be generalisable to companies without or with a smaller analyst following. Finally, my sample contains the forecast data of analysts affiliated to 41 brokerage firms, but the results may be more dependable if more forecast observations are included.

Future research could pay more attention to institutional restrictions. More empirical papers considering different types of companies or different measurements of earnings management would also be useful. Finally, the behaviour of domestic institutional investors around the announcement day could be an interesting issue for future study.

References

Please refer to pp. 24-26.