Accounting Conservatism: A Study of Market-Level and Firm-Level Explanatory Factors[1]

Jingjing Xu[2] and Changjiang Lu[3]
Fudan University

Abstract

This paper investigates the factors affecting the conservatism of accounting reports at the market-level and firm-level. At the market-level, law and institutional factors explain conservatism, while at the firm-level contracting is the driver. We predict and observe that while both levels jointly affect conservatism, it is firm-level factors that play a dominant role. The conclusion suggests that it is more effective to improve the quality of accounting reports by motivating the firm's own demand rather than through listing in a developed capital market.

Key Words: Accounting Conservatism; market-level; firm-level; A-share companies; H-share companies; red chip companies, China, Hong Kong.

Introduction

Conservatism is an important attribute of high quality reporting. It is often

used to assess the quality of companies accounting reports. Ahmed (2002) argues that accounting conservatism plays an important role in mitigating bondholder-shareholder conflicts over dividend policy, and in reducing firms' debt costs; Ahmed (2007) argues that accounting conservatism can help reducing agency costs of firms; Watts (2003) argues that accounting conservatism is part of the efficient mechanism employed in the organization of the firm, and it can reduce the firm's expected litigation cost and present value of taxes and ultimately increase the value of the firm. Evidence suggests that accounting conservatism is important to firms' thereby stimulating enquiry into the determinants of conservatism of accounting reports. In current US literature, Ball (2000, 2003, 2005) suggests the origin of law, institution, and market demand have effects on accounting conservatism; in international studies, Li and Lu (2003) considered the effects of conservatism on accruals and found the accounting conservatism in financial reports of China A-share market listing firms. Li and Li (2005) suggest that in the China A-share market, the observed conservatism phenomena is due to the "big bath" of loss companies and not genuine conservatism but more to do with the earnings management of loss companies. Liu and Wang (2006) studied the influence of corporate governance on accounting conservatism and found that debt and ownership structure has an effect on accounting conservatism. Most of the exiting literature focuses on the influence of one specific factor on accounting conservatism rather than on their joint effects.

Based on prior literature, the paper makes a number of contributions:

1. Prior studies suggest many factors are related to accounting conservatism (Ball 2000, Ball 2003, Ball 2005, Ahmed 2007). Almost all focus on a specific factor. In this paper, we group these factors into two levels: market-level and firm-level. Market-level factors include legal environment and institutional environment; firm-level factors include some of the firms own characteristics. We study factors influencing accounting conservatism under the market-firm framework.

2. Under market-firm framework, this paper studies the effects of the two level factors on accounting conservatism, and then investigates whether there is a dominant level. We seek to show that the two levels do have effects on accounting conservatism, and we seek to determine which has greater influence. The research design compares China A-share listed companies with Hong Kong local listed companies in order to test the effects of the two levels factors on accounting conservatism. Two steps were followed: first we study the influence of market-level factors on accounting conservatism holding firm-level factors constant. To test this, we choose the AH-share listed companies as the sample and compare accounting conservatism of financial reports of these companies in the A-share market with that in the H-share market; secondly, we study the influence of firm-level factors on accounting conservatism holding market-level

factors constant. To test this, we selected the Hong Kong local listed companies and H-share listed companies to form the sample and to make comparison of their accounting conservatism.

Prior research mostly studied one specific factor influencing accounting conservatism with either national or international data. In this paper, we study the effects of several factors considered in prior research on accounting conservatism by forming special samples for comparison. In China, the Hong Kong stock market and mainland A-share stock market give us a special setting for this to be tested. The conclusion suggests that firm-level factors play a dominant role in determining the conservatism of accounting reports.

The rest of the paper is organized as follows. Section 2 presents the factors influencing accounting conservatism mentioned in prior research and develops the hypotheses. The empirical study is presented in Section 3. Robust tests and our conclusion follow in sections 4 and 5.

Factors Influencing
Accounting Conservatism and Hypotheses

1. Definition of Conservatism

Ball (2005) discusses the definitions of two types of accounting conservatism, specifically, conditional and unconditional accounting conservatism. Unconditional conservatism is defined as an accounting bias toward reporting low book values of stockholder equity. Under this definition a firm's accounting is conservative if it delays revenue recognition by one period, or subtracts a constant from earnings every period independently of current economic gains and losses. Conditional conservatism, on the other hand, stresses the timeliness of loss recognition. Under conditional conservatism, the reduction in accounting earnings reflects a contemporaneous economic loss. It is not caused by an earlier expense recognition, deferring revenue, or under-reporting income or book value on a regulated basis. Under unconditional conservatism, when the downward bias is known and is adjustable, the conservatism should have very little impact on contracting. However, when the bias is hard to assess due to arbitrary discretion, the accounting conservatism is likely to reduce contracting efficiency. Under conditional conservatism, accounting conservatism can increase efficiency of debt contracting, compensation contracting and corporate governance. Therefore, only conditional conservatism should be used as an indicator of a high quality financial report. In this paper, we define conservatism to be conditional conservatism based on the treatment by Basu (1997).

2. *Factors Influencing Accounting Conservatism*

Conservatism is an important characteristic of high quality financial reports. The focus of debate has been to identify factors that influence financial report conservatism. There are both national and international studies. Ball (2000) suggests that the legal system can influence the conservatism of accounting reports and that common-law accounting income exhibits significantly greater conservatism than code-law accounting income. Ball (2003) suggests also that the institutional environment can influence accounting conservatism by influencing report preparers' incentives; so in this regard common-law accounting income is not necessarily more conservative than code-law accounting income; Ball (2005) finds that even in environments with the same law origin and institutional environment, that the financial reports of listed companies are conservative. This is not found though for private companies, thereby suggesting that market demand plays a key role in determining accounting conservatism. Bushman (2006) explores financial reporting incentives created by an economy's institutional structure, suggesting that a country's legal/judicial system, securities laws, and political economy create incentives that influence the behavior of corporate executive, investors, regulators and other market participants, and these incentives ultimately influence the accounting conservatism. Watts (2003) suggests that corporate contracts, litigation, taxation *et al* can influence accounting conservatism. Ahmed (2002) finds that firms facing more severe conflicts over dividend policy tend to use more conservative accounting while in a later paper (2007) he shows that governance mechanisms affect firms' accounting conservatism. Beekes (2004) studies the link between accounting conservatism and the composition of the board of directors.

From this collective prior research, we can see that the factors influencing accounting conservatism can be classified into two groups: firstly, market-level factors including legal systems and the institutional environment; secondly, firm-level factors, such as the firm's own demand for conservative reports. Hence, it appears that international studies, such as Ball (2000), Ball (2003), Bushman (2006) are concerned with the influence of market-level factors on accounting conservatism while the national studies, Ahmed (2002), Ahmed (2007), Beekes (2004) are concerned with the influence of firm-level factors on accounting conservatism.

Market-level factors include both legal systems and the institutional environment. Ball (2005) is concerned with the influence of legal origins on accounting conservatism, namely common law and code law. These two legal origins exhibit different features. Common law follows the market-oriented and shareholder model, where shareholders and bondholders are diverse, and information asymmetry is resolved through public disclosure rather than through inside communication, and litigation costs are high.

Code law focuses on the planning-oriented and stakeholder model, where shareholdings are concentrated, debt tends to be private, and information asymmetry is resolved through insider communication rather than public disclosure, and income recognition considers the interests of each stakeholder. Because of these differences, companies under common law have more demands for conservative reports. Companies under common law are more likely to prepare conservative reports when compared to companies under code law.

Factors influencing reporting incentives with an impact on accounting conservatism include the judicial system, the development of capital markets, political economy, and standard setting. More specifically, conservatism is related to the fairness of the judicial system, protection of investors, the degree of political intervention in the economy, and companies' financing channels. These factors have either an individual effect or a joint effect on accounting conservatism. In a capital market with a high level of investor protection and a well developed judicial system, shareholders will be more likely to sue the company for their loss. Therefore, if there is a problem in the financial reports, the likelihood of companies facing expensive litigation will be higher in this environment. In order to obviate expensive litigation effects, companies will be motivated to adopt conservatism in accounting reports. In a less developed capital market, companies may need to seek private financing for their capitals needs. In this case, the demand for conservative reports is reduced, because companies resolve conflicts, not by additional public disclosure, but more by private communication (Ball 2003). Further, in less developed markets shareholdings tend to be concentrated, so larger shareholders do not necessarily need financial reports to monitor corporate operations. Due to their knowledge about the company and the close relationship with managers, the demand for conservative reports will be reduced. The degree of intervention and the role of government in the economy have joint effects on accounting conservatism. If a government is "benevolent", it will assume control over poorly performing firms. Companies will report good news in a timely manner but delay the reporting of bad news so as to avoid government control. In this case, accounting reports do not exhibit conservatism. If a government is "self-serving", it will extract some resources from companies when firms perform well, and this will motivate companies to recognize bad news in a timely manner but delay the reporting of good news to avoid paying out resources. Therefore, the company's accounting reports will demonstrate conservatism. Bushman (2006) discusses this phenomenon and provides empirical evidence. Companies with high-intervention from government bear more responsibilities such as employment, local economic development and stability, and they are less concerned with accounting report conservatism.

Firm-level factors determine if the company itself instigates the demand for conservative reports. Watts (2003) suggests factors such as corporate

contracts, litigation and taxation will determine a company's demand for accounting conservatism. Corporate contracts include debt contracts and management compensation contracts. In debt contracting, the creditors receive a fixed income. They are not entitled to receive additional income despite bearing additional risks from actions taken by managers. On the other hand, shareholders and managers enjoy additional income but bear limited losses from high risk operations. Under such circumstances, creditors are concerned with whether the net assets of the company are sufficient to meet their principal and interest. Hence they want timely recognition of losses and delayed recognition of income. Creditors will be interested in accounting conservatism when decisions are made about lending because the more conservative the reports, the less information asymmetry they face. Therefore, companies reliant on higher levels of debt financing are inclined to use conservative reports to ensure successful financing and reduce financing costs. In earnings-based compensation contracts, managers are inclined to report higher earnings so as to maximum their compensation. Possessing inside knowledge about companies operations but with limited tenure protection, managers tend to choose projects which produce short-term positive net present values but long-term negative net present values, in order to maximize their compensation payments. Due to limited tenure, any excessive compensation cannot be recovered and is a permanent loss for company. Conservative reports can recognize eventual losses in a timelier manner by acknowledging disadvantageous projects earlier, thereby reducing the tendency for managers to engage in opportunistic behavior. This will increase the efficiency of the compensation contracts and the firm's value. In order to make compensation contracts more effective and reduce agency cost and increase firm value, companies with severe information asymmetry will adopt conservative reports. Companies belonging to a high litigation risk industry will also adopt conservative reports to reduce litigation risk and cost.

Market-level and firm-level factors have joint effects on accounting conservatism. No accounting report is subject to the influence of only one level and not the other. Market-level factors set the requirements for conservatism while firm-level factors provide the demands for accounting conservatism. Therefore, even though firm-level factors provide the demands for accounting conservatism, reports may still not be conservative if not required by market-level factors. Even if market-level factors require accounting conservatism, the reports may be not conservative if not demanded by firm-level factors. Accounting reports will be conservative when demanded by both market-level factors and firm-level factors.

3. Hypotheses

The official name of an A-share is RMB common stock and is issued by domestic companies in mainland China and traded in RMB by domestic institutions and individuals (not including Taiwan, Hong Kong and Macau). The A-share market adopts the T+1 settlement system and places a 10% limit on upward or downward price movements in each trading day. According to the investors' classification, A-shares can be classified into state-owned shares, legal-entity shares and individual shares. Due to government restrictions, state-owned shares and legal-entity shares are viewed as public shares and could not be traded on the stock market before the reform of non-tradable shares in 2005. A-share listed companies are subject to "Company Law", "Securities Law" and various rules promulgated by the China Securities Regulatory Commission, which also governs the listed companies.[4]

H-shares are formed by companies from China mainland listing on the Hong Kong stock market. Most of the listed companies are large-scale companies from key industries. Many are leading enterprises in their industries, have far-reaching impact on downstream business and play a vital role in national economic development. Listed on the Hong Kong capital market, H-share companies are subject to the "Listing Rules", "Securities and Futures Ordinance" and the governance of Hong Kong Securities and Futures Commission.[5]

Companies issuing A-shares on the China mainland stock market while also issuing H-shares on the Hong Kong stock market are AH-share listed companies. Most of these are large-scale state-owned companies. AH-share companies are not subject to requirements of the Hong Kong capital market but also the requirements of the China mainland capital market.

At the market-level, Ball (2003) notes that due to its special colonial history, the law source of Hong Kong is common law whereas the law origin of China is code law. Compared with the China mainland, the economy of HK has less government intervention, while the capital market is more developed. At the market-level, companies in HK are more likely to issue conservative reports than would companies on the China mainland. At the firm-level, Li and Li (2005) note that listed companies in China mainland have less demand for accounting conservatism from firm-level factors such as debt contracts, management and compensation contracts. For HK local share companies, all shares are tradable and debt contracts and executive compensation are both factored in by the market. Zhang (2005) suggests that in HK, most listed companies other than Chinese-funded companies rely on equity and bank financing. At the firm-level, companies in HK are more likely than companies in the China mainland

---

to prepare conservative reports. Based on this discussion, our first hypothesis is stated thus:

H1: HK local share companies' exhibit more accounting conservatism than A-share companies.

AH-share companies issue A-shares in China mainland and H-shares in HK. They face the same firm-level factors but different market-level factors. Based on our prior literature review and discussion, hypothesis two is stated thus:

H2: H-share companies exhibit more accounting conservatism than A-share companies.

H-share companies listed on the HK capital market are affected by the same market-level factors as HK local share companies. They will not present different levels of conservatism on market-level factors alone. However, the firm-level factors, namely, the demands of contracting became dominant in causing differential conservatism. Most of the H-share companies are large-scale state-owned, with state ownership determining the different demand for accounting conservatism. With respect to debt contracts, H-share companies also need debt finance. Because they have the backing of "large-scale state-ownership", banks are not especially concerned about accounting report quality when they make lending decisions and the interest rate. These state-owned companies do not need to be concerned with reporting quality and are motivated to apply accounting conservatism more from the point of view of obtaining debt financing at low cost. Financing of some large-scale state-owned companies is undertaken by government, so companies are not motivated to engage in conservative accounting. Sun *et al* (2005) finds that the influence of debt contracts on accounting conservatism is smaller in state-owned listed companies than that in other companies. Wang and Sun (2006) find that the need for conservatism accounting by banks is reduced due to the quasi-creditor relationship between state-owned listed companies and state-owned commercial banks.

For debt contracts, the demand for accounting conservatism is much less for H-share companies. As to compensation contracts, the separation of ownership and control give rise to agency cost (Jensen and Meckling 1976, Fama and Jensen 1983a, 1983b). H-share companies mostly are state-owned companies with the state being the large shareholder. The state is not in a position to directly manage the company, so an agent is designated instead. Here the manager is the representative of the largest shareholder, resulting in immaterial agency problems and less need for conservative reporting to constrain manager's opportunistic behavior. Furthermore, if the manager decides the terms of the compensation contract, non-pecuniary career development and other "grayer income" are more important. In Chinese state-

owned listed companies Chen *et al* (2005) notes that a regulation exists to limit the size of managerial compensation. Hence, there is a need for non-pecuniary compensation as an alternative choice for managers. Tong (2005) argues that the economic reason for the executive of state-owned companies' receiving low compensation but remaining is that position is because they can receive certain "gray income" by exercising control rights. As a result, the demand by H-share companies for accounting conservatism stemming from compensation contracts is low. Overall, from a consideration of firm-level factors, there is not much demand for accounting conservatism in H-share companies.

Zhang (2005) suggests that except for Chinese-funded listed companies, there are two kinds companies: family model firms and UK-American model firms. UK-American model firms that are financed by the stock market or banks, have diverse shareholders and agency problems between shareholders and managers. This type of company has a demand for accounting conservatism. Family model companies can obtain finance from family parties, while bank finance and equity finance are also important. These family-related companies grow and expand; they adopt western advanced governance models and recruit many professional managers from the labour market. When family model companies evolve to that stage, they are close to UK-American model firms. Based on firm-level factors, there are demands for accounting conservatism in this type of HK local share company. Ball (2003) concludes that of conservatism studied in four East Asian countries, HK companies have the most conservative reports. They also are closest to companies in common law countries in terms of accounting conservatism. Based on this discussion, the third hypothesis is stated thus:

H3: HK local share companies' exhibit more accounting conservatism thank do H-share companies' accounting reports based on the differences in firm-level factors.

Empirical Study

This paper adopts Basu's (1997) definition of accounting conservatism as a tendency by accountants to require a higher degree of verification in financial statements for recognizing good news than for bad news. We adopt two models in our empirical study: earning-price model in Basu (1997) and accrual-cash flow model in Ball (2005). The earning-price model in Basu (1997) is the most widely used model in conservatism research. However, a precondition for its implementation is the presence of a well developed stock market. Because the stock market in China is less developed, we also adopt the second model, accrual-cash flow model in Ball (2005). We establish our final samples according to each

model's requirements, and this resulted in unequal sample sizes under the two models.

1. Earning-price Model

In this paper we adopt the earning-price model as follows:

$$NI = \beta_0 + \beta_{01}CD + \beta_1 RD + \beta_{11}RD^*CD + \beta_2 R + \beta_{21}R^*CD + \beta_3 R^*RD + \beta_{31}R^*RD^*CD$$

Variables: Pope (1999) shows that inclusion or exclusion of extraordinary items in accounting reporting will influence the results of conservatism comparison. To account for this we adopt two earnings variables: $NI_t = EPS_t/P_{t-1}$ or $NI_t = $operating income/(number of tradable shares$^*P_{t-1}$+number of non-tradable shares*net asset per share$_{t-1}$)[6], EPS_t is the earnings per share at year t; P_{t-1} is the closing price at year t-1; R is the stock return (May to next April due to the deadline of auditing report); RD is dummy variable which equal 1 when R<0, otherwise equal 0; CD is dummy variable. When we compare HK local share companies with A-share companies, CD=0 for A-share companies, CD=1 for HK local share companies. When we compare two kinds of accounting reports of AH-share companies, CD=0 for accounting report in China mainland, and CD=1 for accounting report in HK market. When we compare HK local share companies and H-share companies, CD=0 for H-share companies, CD=1 for HK local share companies.

Sample: The firm/years for the four kinds of listed companies (HK local share companies, H-share companies, AH-share companies, and A-share companies) were selected from WIND database over the period 2003-2005 using the following procedure. First, we delete H-share companies and Red Chip Stocks companies, the remaining companies with fiscal year from Jan to Dec to form HK local share companies. We delete AH-share, AB-share in A-share market to form A-share companies. Second, we delete companies from the finance and insurance industry. Third, for each variable the two extreme percentiles of firm/years observations are eliminated. Fourth, all firm/years with missing values for stock returns and earnings variables are eliminated.

Table 1 contains sample descriptive statistics. The samples are pooled firm/years, with sample sizes ranging from 61 to 3135. Table 1 reports means, medians and standard deviations for annual returns and earnings. Returns are considerably more volatile for HK local shares than in both H-share and A-share, the same volatility for experienced earnings. For example, relative to HK local shares, the A-share has approximately 73% less stock volatility, but 79% less earning 1 volatility, the H-share has approximately 60% less stock volatility, but 63% less earning 1 volatility. This may be a sign of a greater degree of "smoothing" of accounting income in A-share companies and H-shares. For AH-shares, returns are less volatile in HK than in China mainland, while earnings by contrast are

---

[6]   In following study, earning 1 represents the first, and earning 2 represents the second.

more volatile in HK than in the China mainland. This is consistent with greater "smoothing" of accounting income in the China mainland, with longer lags to incorporate value changes.

Table 1: Descriptive Statistics

	N	Return			Earning 1			Earning 2		
		mean	med	std	mean	med	std	mean	med	std
HK local share	781	0.324	0.000	1.440	0.061	0.080	0.275	0.105	0.092	0.269
H-share	107	0.105	-0.018	0.578	0.064	0.061	0.103	0.108	0.108	0.128
A-share	3135	0.064	0.000	0.386	0.008	0.017	0.057	0.030	0.034	0.089
AH-share HK	61	0.024	0.025	0.033	0.095	0.091	0.073	0.359	0.277	0.251
AH-share mainland	61	-0.006	-0.010	0.035	0.043	0.040	0.036	0.141	0.112	0.089

Table 2: Comparison between A-share Companies and HK Local Share Companies

	Earning 1			Earning 2		
	Beta	t	Sig	Beta	t	Sig
(Constant)	0.014***	2.743	0.006	0.032***	6.052	0.000
R	0.021**	2.053	0.040	0.048***	4.292	0.000
RD	-0.005	-0.581	0.561	-0.001	-0.068	0.945
R*RD	0.036	1.452	0.146	0.040	1.511	0.131
CD	0.086***	9.541	0.000	0.125***	12.853	0.000
R*CD	-0.023**	-2.125	0.034	-0.060***	-5.050	0.000
RD*CD	-0.022	-1.355	0.175	-0.037**	-2.100	0.036
R*RD*CD	0.119***	2.949	0.003	0.150***	3.411	0.001
F statistic	32.056			52.072		
Adj. R^2	0.053			0.084		
N	3916			3916		

Notes: *,**,*** *denote significance levels at 10% , 5% and 1% respectively.*

Table 2 contains the results for H1. Following Basu (1997), we focus on the slope of R*RD*CD which indicates the incremental recognition of losses in HK local share companies compared with A-share companies. In earning 1 group, the incremental slope is positive 0.119 and statistically significant. In earning 2 group, the incremental slope is positive 0.15 and statistically significant. The larger incremental slope in earning 2 suggests that compared with A-share companies, HK local share companies are more inclined to recognize losses above the operating income line. The R*CD reflects that relative to the China companies, the difference of timeliness in recognizing good news in Hong Kong local companies. As shown in Table 2, the coefficients are -.023 and -.06 for earning 1 and earning 2, respectively. This indicates that Hong Kong local companies tend to have lower timeliness in recognizing good news than China companies. This is consistent due

to differences in the factors in both levels; HK local share companies' accounting reports are more conservative than those of A-share companies'.

Table 3 contains the results for H2. In this table, the slopes of R*RD*CD are positive but insignificant, meaning that the AH share companies accounting reports in Hong Kong do not recognize bad news in a more timely fashion than their reports in China. We therefore are unable to reject the hypothesis that AH-share companies' accounting reports in H-share markets and in A-share markets follow identical loss recognition practices. This result does not support H2, and it suggests that even with differences in market-level factors, there may not be significant differences in accounting conservatism when firm-level factors are the same. There is a possibility that firm-level factors play a dominant role.

Table 3: Comparison between AH-share Companies' Reports in HK and those in China Mainland

	Earning 1			Earning 2		
	Beta	t	Sig.	Beta	t	Sig.
(Constant)	0.051**	2.302	0.023	0.181**	2.604	0.011
R	-0.085	-0.208	0.836	-0.145	-0.348	0.728
RD	0.016	0.070	0.945	-0.020	-0.090	0.929
R*RD	0.149	0.607	0.545	0.203	0.815	0.417
CD	0.378*	1.736	0.085	0.336	1.513	0.133
R*CD	0.234	0.721	0.472	0.291	0.886	0.378
RD*CD	-0.165	-0.756	0.451	0.121	0.567	0.572
R*RD*CD	0.080	0.541	0.589	0.117	0.762	0.448
F statistic	7.540			7.549		
Adj. R^2	0.274			0.292		
N	122			122		

Notes: *, **, *** *denote significance levels at 10%, 5% and 1% respectively.*

Table 4 contains the results for H3. Because the companies in the final sample of H-shares are all from the manufacturing industry, we choose companies from the same industry in HK local share sample to form the final sample for comparison. The incremental slopes in the two groups are both positive and statistically significant, which is consistent with higher accounting conservatism in HK local share companies compared with H-share companies due to the different firm-level factors. It shows that, although the H-share and local Hong Kong companies are both subject to the same legal and institutional environment, the local Hong Kong firms still exhibit stronger accounting conservatism. In addition, the incremental slope in earning 2 is larger, which suggests that compared with H-share companies, HK local share companies are more inclined to recognize losses above the operating income line.

Table 4: Comparison between HK Local Share Companies and H-share Companies

	Earning 1			Earning 2		
	Beta	t	Sig.	Beta	1	Sig.
(Constant)	0.045	1.578	0.115	0.032***	6.052	0.000
R	0.094***	2.620	0.009	0.048***	4.292	0.000
RD	-0.001	-0.024	0.981	-0.001	-0.068	0.945
R*RD	-0.029	-0.311	0.756	0.040	1.511	0.131
CD	0.064**	2.051	0.041	0.125***	12.853	0.000
R*CD	-0.075**	-2.014	0.045	-0.060***	-5.050	0.000
RD*CD	0.001	0.025	0.980	-0.037**	-2.100	0.036
R*RD*CD	0.187*	1.767	0.078	0.150***	3.411	0.001
F statistic	32.056			52.072		
Adj. R^2	0.053			0.084		
N	3916			3916		

*Notes: *, **, *** denote significance levels at 10%, 5% and 1% respectively.*

2. Accrual-cash flow model
In this paper, we also adopt the accrual-cash flow model of Ball (2005).

$$ACC = ß_0 + ß_1 CFO + ß_2 RD + ß_3 CD + ß_4 CFO*RD + ß_5 CFO*CD + ß_6 RD*CD + ß_7 CFO*RD*CD$$

Variables: CFO is cash flow from operations; ACC is accruals measured as Net Income minus CFO; RD is a dummy variable which equals 1 when CFO<0, otherwise equals 0. CD is a dummy variable which distinguishes different group companies. In the comparison between HK local share companies and A-share companies, CD=0 for A-share companies, CD=1 for HK local share companies; in the comparison between HK local share companies and H-share companies, CD=0 for H-share companies, CD=1 for HK local share companies; in the comparison between two kinds of accounting reports of AH-share companies, CD=0 for accounting report in China mainland, and CD=1 for accounting report in HK market.

   Sample: The firm/years data for the three kinds of listed companies (HK local share companies, H-share companies, and A-share companies) were selected from WIND database over the period 2003-2005, and for AH-share companies over 2000-2005 using the following procedure. First, we deleted H-share companies and Red Chip Stocks companies to form HK local share companies, and deleted AH-share, AB-share in A-share market to form A-share companies. Second, we deleted companies from the finance and insurance industry. Third, for each variable the two extreme percentiles of firm/years observations were eliminated. Fourth, we eliminated all firm/years data with missing values for CFO and ACC.

   Ball (2005) suggests that this model incorporates both roles of accruals: namely,

the mitigation of noise in cash flow and asymmetric recognition of unrealized gains and losses. Accounting conservatism will exist if positive correlation between cash and accruals arising from the second role of accruals is greater in the case of losses. Hence we focus on the slope of CFO*RD*CD.

Table 5 contains sample descriptive statistics. Results for empirical study using the accrual-cash flow model are contained in Table 6. In this Table, based on prior analysis, we focus on the slope of CFO*RD*CD. In the test for H1, the slope is positive 0.678 and statistically significant, suggesting that the positive relationship between accruals and cash flows are stronger in local companies. HK local share companies have more accounting conservatism than A-share companies due to the differences in the two levels factors between them. In the test for H2, the slope is positive 0.044 but statistically insignificant, so we are unable to reject that there is no difference in conservatism between AH-share companies' reports in A-share market and those in the H-share market, which suggests the dominant role of firm-level factors. In the test for H3, the slope is positive 0.719 and statistically significant suggesting HK local share companies have higher accounting conservatism than H-share companies due to the different firm-level factors. Overall, the accrual based tests also supported our hypothesis.

Table 5: Descriptive Statistics

	N	ACC/asset			CF0/asset		
	N	mean	med	std	mean	med	std
HK local share	2493	-0.017	-0.007	0.158	0.047	0.042	0.163
A-share	3719	-0.059	-0.027	0.154	0.103	0.053	0.211
H-share	357	-0.019	-0.023	0.088	0.096	0.088	0.110
AH-share HK	142	-0.049	-0.053	0.069	0.109	0.101	0.084
AH-share mainland	142	-0.062	-0.068	0.072	0.119	0.111	0.090

Table 6: Results for Accrual-cash Flow Model

	A-HK local		AH HK-AH mainland		H-HK local	
	Beta	t	Beta	t	Beta	t
(Constant)	-0.012***	-4.327	0.002	0.26	0.010	0.735
CF0	-0.494***	-45.337	-0.560***	-10.519	-0.387***	-4.224
RD	-0.004	-0.563	0.016	0.601	0.024	0.668
CD	0.017***	3.065	0.002	0.131	-0.006	-0.393
CFO*RD	-0.403***	-4.857	-0.529	-1.173	-0.444	-1.039
CFO*CD	0.227***	7.474	0.072	0.907	0.12	1.235
CD*RD	0.007	0.677	-0.021	-0.555	-0.021	-0.567
CFO*RD*CD	0.678***	7.24	0.044	0.053	0.719*	1.672
F statistic	416.304		41.279		21.716	
Adj. R^2	0.319		0.499		0.048	
N	6212		284		2850	

*Notes: *, **, *** denote significance levels at 10%, 5% and 1% respectively.*

Robustness Checks

1. Test for Red Chip Stocks

Red Chip stock companies are those with a core business in the China mainland, which register abroad, and list on the HK capital market. Red Chip Stock companies and H-share companies are both related to the China mainland, but they possess an essential difference, namely, the shares for Red Chip Stocks companies are all tradable, while for H-share companies the state-owned shares and legal-entity shares are non-tradable. Compared with H-share companies, Red Chip Stock companies are more market oriented. They are more inclined to resolve conflicts by public disclosure rather than by insider communication, which give rise to demands for accounting conservatism. Because of the firm-level factors, there are differences in accounting conservatism between Red Chip Stock companies and H-share companies. There are no differences regarding accounting conservatism between Red Chip Stock companies and HK local share companies.

Table 7: Descriptive Statistics

	Descriptive statistics	
	CF0/asset	ACC/asset
N	232	232
Mean	0.06	0.008
Med	0.054	-0.001
Std	0.115	0.155

Table 8: Test for Red Chip Stock Companies

	H-Red Chips			HK local share–Red Chips		
	Beta	t	Sig.	Beta	t	Sig.
(Constant)	0.010	1.058	0.291	0.034	1.836*	0.066
CF0/asset	-0.387***	-6.078	0.000	-0.543	-3.913***	0.000
RD	0.024	0.961	0.337	0.084	2.527**	0.012
CD	0.024	1.498	0.135	-0.030	-1.529	0.126
CFO*RD	-0.444	-1.495	0.135	0.779	2.836***	0.005
CFO*CD	-0.156	-1.389	0.165	0.276	1.930*	0.054
CD*RD	0.060*	1.801	0.072	-0.081	-2.350**	0.019
CFO*RD*CD	1.222***	3.508	0.000	-0.503	-1.801*	0.072
F statistic	31.282			19.713		
Adj. R^2	0.265			0.046		
N	589			2725		

Notes: sample: The firm/years for Red Chip listed companies were selected from WIND database over 2003-2005, using the following procedure. First, delete companies from finance and insurance industry. Second, for each variable the two extreme percentiles of firm/years observations are

eliminated. Third, we eliminate all firm/years with missing values for CFO and ACC.

Variable: the definitions of variables are the same as the above test except CD. CD is dummy variable. In the comparison between H-share and Red Chips Stocks, CD=1 for Red Chips Stocks companies, CD=0 for H-share companies; in the comparison between HK local share companies and Red Chip Stock companies, CD=1 for HK local share companies, and CD=0 for Red Chip Stock companies.

*, **, *** denote significance levels at 10%, 5% and 1% respectively.

Table 7 contains sample descriptive statistics. Table 8 contains the results of the test for Red Chip Stock companies. In the first group, the incremental slope is positive 1.222 and statistically significant, suggesting higher accounting conservatism for Red Chip Stock companies compared with H-share companies. This is consistent with H3. In the second group, the significant negative incremental slope -0.503 suggests more accounting conservatism is practiced by Red Chip Stock companies compared with HK local share companies. Although different from our hypothesis, the possible explanations are that some local family firms in Hong Kong relied on different financing channels to those used by regular local firms. Further, there are a large number of companies in the finance and insurance industry in HK local shares, and deleting these may alter the nature of HK local share companies. When we add these finance and insurance companies into the sample for comparison between HK local share and Red Chip Stock companies, the result shows there is no significant difference in accounting conservatism. The results are qualitatively unchanged when we use an earnings-price model for this test.

2. Another Model

Ball (2003) argues that if accounting income is conservative because it anticipates decreases but not increases in expected future cash flows, it will exhibit larger transitory decreases than increases. Hence, we also use the following model proposed by Ball (2003)

$$\Delta NI_t = \beta_0 + \beta_1 RD + \beta_2 \Delta NI_{t-1} + \beta_3 \Delta NI_{t-1}*RD + \beta_4 CD + \beta_5 CD*\Delta NI_{t-1} + \beta_6 RD*CD + \beta_7 \Delta NI_{t-1}*RD*CD$$

Table 9: Test Results

	HK local share-A share		HK local share-H share	
	Beta	t	Beta	t
(Constant)	-0.002	-0.256	0.026	0.609
ΔNI_{t-1}	(-0.359)***	-3.068	-0.028	-0.091
$\Delta NI_{t-1}*RD$	-0.148	-0.869	-0.182	-0.162
$\Delta NI_{t-1}*CD$	0.179	1.459	-0.352	-1.103
$\Delta NI_{t-1}*RD*CD$	(-0.939)***	-4.899	-0.159	-0.135
F statistic	50.824		3.656	
Adj. R^2	0.224		0.142	
N	1209		113	

Notes: *, **, *** denote significance levels at 10%, 5% and 1% respectively.

Table 9 contains the results for this test. We focus on the slope of $\Delta NI_{t-1}*RD*CD$ which suggests an incremental persistence of losses for CD=1 companies than for CD=0 companies. The results are qualitatively unchanged for the comparison between HK local shares and A shares. But the results for the comparison between HK local shares and H shares are insignificant, perhaps due to bias because of the different sample sizes.

Conclusion

This paper groups factors influencing accounting conservatism into market-level and firm-level, so as to study their effects and determine whether there is a dominant level. This is tested by using several special samples. We make comparison of conservatism between A-share companies and HK local share companies to test the effects of two-level factors on accounting conservatism. Based on this we further test for a dominant level by using a two step process. First, we compare conservatism between AH-share companies' reports in the A-share market and those in the H-share market to test the effects of market-level on accounting conservatism by controlling firm-level factors. Secondly, we make a comparison of conservatism between HK local companies and H-share companies to test the effects of firm-level factors on accounting conservatism by controlling market-level factors. The conclusion indicates that firm-level factors play a dominant role in determining accounting conservatism.

This paper has constructed a framework to study and analyze factors influencing accounting conservatism, suggests that a firm's own demand is the crucial factor. Therefore, the best way to improve the quality of accounting reports is to motivate the firm's own demand rather than to rely on listing in a developed capital market.

Our research design is subject to limitations. Even though we found the firm level factors to be more influential than market factors, we did not test which specific factors are important and relevant, and whether or not there is a most dominate factor. Further research could examine these issues.

References

1. Anwer S. Ahmed *et al*, 2002, The Role of Accounting Conservatism in Mitigating Bondholder-Shareholder Conflicts over Dividend Policy and in Reducing Debt Costs, *The Accounting Review*, Vol.77, 867-890.
2. Anwer S. Ahmed, Scott Duellman, 2007, Accounting conservatism and board of director characteristics: An empirical analysis, *Journal of Accounting and Economics*, Vol.43, 411-437.

3.   Beekes, 2004, The Link Between Earnings Timeliness, Earnings Conservatism and Board Composition: evidence from the UK, *Corporate Governance*, Vol.12, 47-59.

4.   Chen Donghua *et al*, 2005, Regulation and Non-pecuniary Compensation in Chinese SOEs, *Economic Research Journal* (in Chinese), No.2, 92-101.

5.   Dan Givoly, Carla Hayn, 2000, The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative?, *Journal of Accounting and Economics*, Vol.29, 287-320.

6.   Fama, E.F. and M.C. Jensen, 1983, Separation of ownership and control. *Journal of Law and Economics*, Vol.26, 301-326.

7.   Fama, E.F. and M.C. Jensen, 1983, Agency problems and residual claims, *Journal of Law and Economics*, Vol.26, 327-349.

8.   Jensen, M.C. and W.H. Meckling, 1976, Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, Vol.3, 305-360.

9.   Li Zengquan *et al*, 2003, Accounting Conservatism: Discovery and Implication, *Accounting Research* (in Chinese), No.2, 19-27.

10. Li Yuanpeng *et al*, 2005, The impact of Earnings Management on Accounting Conservatism: Empirical Evidence from Listed companies in Mainland China, *China Accounting and Finance Review*, Vol.7, No.3, 1-56.

11. Liu Fengwei *et al*, 2006, Empirical Study for the Effects of Corporate Governance Mechanism on Accounting Conservatism, *Journal of Shanghai LiXin University of Commerce*, Vol.20, No.3, 16-22.

12. Peter F. Pope, Martin Walker, 1999, International Differences in the Timeliness, Conservatism, and Classification of Earnings, *Journal of Accounting Research*, Vol.37, 53-87.

13. Ray Ball, S.P. Kothari, Ashok Robin, 2000, The effect of international institutional factors on properties of accounting earnings, *Journal of Accounting and Economics*, Vol.29, 1-51.

14. Ross L. Watts, 2003, Conservatism in Accounting Part 1: Explanations and Implications, *Accounting Horizons*, Vol.17, 207-221.

15. Ray Ball, Ashok Robin, Joanna Shuang Wu, 2003, Incentives versus standards: properties of accounting income in four East Asian countries, *Journal of Accounting and Economics*, Vol.36, 235-270.

16. Ray Ball, Lakshmanan Shivakumar, 2005, Earnings quality in UK private firms: comparative loss recognition timeliness, *Journal of Accounting and Economics*, Vol.39, 83-128.

17. Robert M. Bushman, Joseph D. Piotroski, 2006, Financial reporting incentives for conservative accounting: The influence of legal and political institutions, *Journal of Accounting and Economics*, Vol.42, 107-148.

18. Sudipta Basu, 1997, The conservatism principle and the asymmetric timeliness of earnings, *Journal of Accounting and Economics*, Vol.24, 3-37.

19. Sun Zheng *et al*, 2005, Debt, Corporate Governance, and Accounting Conservatism, *China Accounting and Finance Review*, Vol.7, No.2, 112-173.

20. Tong Weihua, 2005, Management Compensation in SOEs: View from Control Right Incentive, *Economist* (in Chinese), No.6, 53-57.

21. Wendy Beekes, Peter Pope, Steven Young, 2004, The Link Between Earnings Timeliness, Earnings Conservatism and Board Composition: evidence from the UK, *Corporate Governance*, Vol.12, 47-59.

22. Wayne Guay, Robert Verrecchia, 2006, Discussion of an economic framework for conservative accounting and Bushman and Piotroski, *Journal of Accounting and Economics*, Vol.42, 149-165.
23. Wang Yichun *et al*, 2006, Bank-Enterprise Relationship, ownership and Accounting Conservatism-Empirical Evidence from Listed Companies in China mainland, *Public Finance Research* (in Chinese), No.7, 70-72.
24. Zhang Tao *et al*, 2005, Research on Corporate Governance Model for HK companies, *China Soft Science*, No.12, 116-120.