

# The Earning Persistence of High Tech Enterprise And Market Efficiency of China Capital Market

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## **Abstract**

The paper investigates the extent to which current earnings performance persists into future is depended on the components of earnings and try to find out whether stock price reflects the information of earnings. Comparing to accrued components of earnings, cash flow components of earnings substantially has more explanatory ability for abnormal returns and with higher persistence, especially for high tech industry. Eventually we find that investors' inability to distinguish correctly between the components of earnings. Constructing a portfolio based on the magnitudes of accrued components of earnings, we can earn 4% and 13% of excess returns for high tech industry and general industry.

**Keywords:** Earning persistence, Accrual, Market efficiency

## **1. Introduction**

Ball and Brown (1968) first find the relationship between unexpected earning and excess return. According to the development of internet, a new economy period (NEP) company such as high tech company change the production cycle from real product to unreal assets such as software. Under this circumstance, how will the value relevant of component of financial report change?

According to above, the paper investigates the extent to which current earnings performance persists into future is depended on the components of earnings and try to find out whether stock price reflects the information of earnings and set up a trading strategy to the different earning quality of company to acquire excess return.

## **2. Prior Research and Hypothesis Development**

Whether accounting earnings predict stock return is based on the assumption that accounting information will change the expectation of investor and influence stock future return. Ball and Brown (1968) find the positive relationship between unexpected earning and excess return. The result explains that stock price will reflect the information content.

Sloan (1996) investigates whether stock prices reflect information about future earnings contained in the accrual and cash flow components of current earnings. The extent to which current earnings performance persists into the future is shown to depend on the relative magnitudes of the cash and accrual components of current earnings. However, stock prices are found to act as if investors "fixate" on earnings, failing to reflect fully information contained in the accrual and cash flow components of current earnings until that information impacts future earnings. Under the development of high tech knowledge, economic nature changed these years. Fama and French (2002) estimate the equity premium using dividend and earnings growth rates to measure the expected rate of capital gain. Their estimates for 1951 to 2000, 2.55 percent and 4.32 percent, are much lower than the equity premium produced by the average stock return, 7.43 percent. Their evidence suggests that the high average return for 1951 to 2000 is due to a decline in discount rates that produces a large unexpected capital gain. Their main conclusion is that the average stock return of the last half-century is a lot higher than expected.

Trueman (2001) provide insights into the manner in which (relatively sparse) accounting information, along with measures of Internet usage, is employed by the market in the valuation of the Internet firms. They do not find a significant association between bottom-line net income and their sample firms' market prices, consistent with the claim made by some investors that financial statement information is of very limited use in the valuation of Internet stocks. However, when they decompose net income into its components, they find that gross profits are positively and significantly associated with prices. In addition, they find that in most instances both unique visitors and page views, as measures of Internet usage, provide incremental explanatory power for stock prices, over and above net income and its components. They also separately analyze the e-tailers and the portal and content community firms in our sample and find significant valuation differences with respect to both their financial data and the measures of Internet usage. As a result, how will the earning persistence influence valuation is a interesting topic to develop under the circumstance.

According to prior research, the accrual component will be inversed in future. As a result, the accrual component will negatively influence next period earnings and reduce the persistence of earnings. High tech company set up lately with simple stock holder structure. Earning will better reflect the operating result in high tech industry. This paper predicts:

**H1 The persistence of earning is decreasing with the magnitude in accrual component of earnings and increasing with the magnitude in cash component of earnings. Furthermore the persistence accrual component of earnings and cash component of earnings or high tech industry is better than those of general industry.**

If investors "fixate" on earnings, failing to reflect fully information contained in the accrual and cash flow components of current earnings. It exist a arbitrage chance. This paper predicts:

**H2 Constructing a portfolio based on the magnitudes of accrued components of earnings, we can earn excess returns for new economic industry and general industry.**

### 3. Sample analysis

#### 3.1 Sample selection

The sample comes from the Wind database of financial information and stock return from 1998-2005. We select those companies listed in Shanghai and Shenzhen stock exchange firm. We define high tech company according to the information and technical industry in the wind first level industry classification standard. We classify the other industry to general industry company. We rid off those ST, PT company and finance industry. We have 388 high tech company and 5862 general company observations in our sample.

#### 3.2 Variable definition

Hribar and Collins (2002) find it is better to use cash flow item in statement of cash flow than calculation in balance sheet. We define the accrual component as follows:

$$Accruals = Earnings - CashFlows$$

Earning is defined as operation income and cash flow is defined as cash flow from operating. We use market adjusted return to compute excess return and event day is defined as the first day in may for sure that investor acquire the information of financial statement declare. We separate 5 groups for each high tech company and general company base on the magnitude of accrual component.

### 4. Empirical Results

#### 4.1 Test of H1

We regress next year earning on current earning by ordinary least square method (OLS) as following equation:

$$Earning_{t+1} = \alpha_0 + \beta_1 Earning_t + v_{t+1} \quad (1)$$

We can see the result in table 1 panel A. we find the coefficient of earning  $\beta_1$  is 0.526 and 0.546, for high tech company and general company, respectively. Because the coefficient is small than 1, it implies earning reverting.

We furthermore regress next year earning on current earning by ordinary least square method (OLS) as following equation:

$$Earning_{t+1} = \alpha_0 + \beta_1 Accruals_t + \beta_2 CashFlow_t + v_{t+1} \quad (2)$$

We expect  $\beta_1$  is smaller than  $\beta_2$ . We can see the result in table 1 panel B. the coefficient of accrual component of high tech company and general company is significantly 0.463 and 0.338. The coefficient of cash component of high tech company and general company is significantly 0.526 and 0.47. It interprets that the persistence accrual component of earnings and cash component of earnings or high tech industry is better than those of general industry.

#### 4.2 Test of H2

We test whether investors' inability to distinguish correctly between the components of earnings. We constructing a portfolio based on the magnitudes of accrued components of earnings, we can earn 4% and 13% of excess returns for new economic industry and general industry with significant test of Kruskal-Wallis.

### 5. Conclusion

This paper find that the stock price result is inconsistent with traditional efficient market review that stock price fully reflects all public information. Comparing to accrued components of earnings, cash flow components of earnings substantially has more explanatory ability for abnormal returns and with higher persistence, especially for

new economic industry. Eventually we find that investors' inability to distinguish correctly between the components of earnings. Constructing a portfolio based on the magnitudes of accrued components of earnings, we can earn 4% and 13% of excess returns for new economic industry and general industry.

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Table 1. next year earnings regression current earnings by ordinary least square method(OLS)

PanelA	$Earning_{t+1} = \alpha_0 + \beta_1 Earning_t + v_{t+1}$					
	coefficient		t value		Sig.	
	high tech	general	high tech	general	high tech	general
	company	company	company	company	company	company
$\alpha$	0.01	0.0046	3.5	3.49	.0005	.0005
$\beta_1$	0.526	0.546	15.6	41.05	<.0001	<.0001
Adjusted-R <sup>2</sup>	0.3686	0.2232				
PanelB	$Earning_{t+1} = \alpha_0 + \beta_1 Accruals_t + \beta_2 CashFlow_t + v_{t+1}$					
	coefficient		t value		Sig.	
	high tech	general	high tech	general	high tech	general
	company	company	company	company	company	company
$\alpha$	0.018	0.0128	5.76	10.12	<.0001	<.0001
$\beta_1$	0.463	0.338	10.79	29.78	<.0001	<.0001
$\beta_2$	0.526	0.47	12.8	32.28	<.0001	<.0001
Adjusted-R <sup>2</sup>	0.2566	0.15				

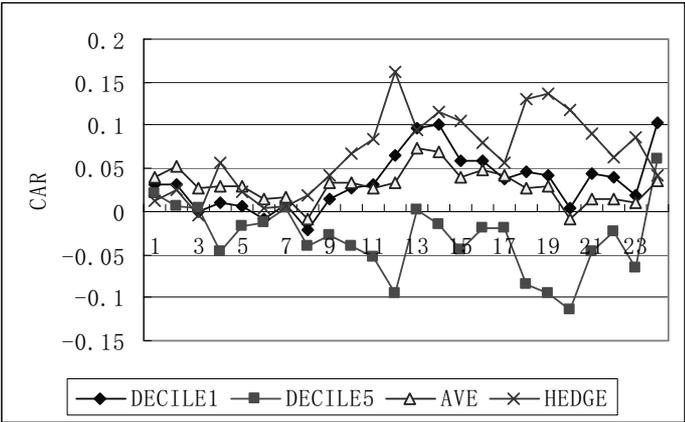


Figure 1. Time series properties of Car in high tech company

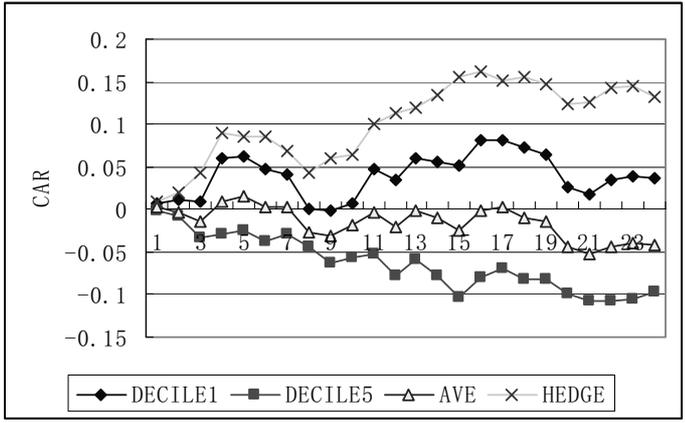


Figure 2. Time series properties of Car in general company