STOCKHOLM SCHOOL OF ECONOMICS
Master Thesis in Finance

Ownership restriction and stock price

Empirical study from Chinese stock market

Xiaofang Li Tianrong Jiang

Abstract:

Market segmentation and restrictions on investment options lead to different required return by different groups of investors and thus result in different pricing of shares that are for domestic investors only and shares that are available to foreign investors even when the two types of shares have same rights on dividends and control over the company. Normally the domestic-only shares trade at a discount compared to their corresponding shares available to foreigners however the A shares and H shares in the Chinese stock market shows an opposite pattern. This thesis aims to examine the underlying reasons for the unique Chinese asset-pricing pattern and via using an International Asset Pricing Model analyse the theories and frameworks introduced by the relevant previous studies. Our purpose is to test if conventional IAPM model and equilibrium return rate model have explaining power for Chinese stock price phenomena. The findings of this thesis will provide some insights for domestic and international investors as well as regulators in the Chinese market.

Key words: A share, H share, Market Segmentation, Ownership restriction, Required return

Tutor: Andrei Simonov
Discussants: Timotheos Mavropoulos and Nikita Koptyug
Date: 17th Jun., 2008, 11:30-13:00
Venue: Room 750, Stockholm School of Economics
Xiaofang Li: 80324@student.hhs.se
Tianrong Jiang: 80334@student.hhs.se

Acknowledgements: We would like to thank our tutor, Andrei Simonov for the continuing support and guidance which is invaluable to us throughout the process. We would also like to express our gratitude to Per-Olov Edlund for his invaluable advice, and great contribution.

Contents

1. Introduction

1.1 Effect of capital market segmentation: the general and not-so-general case

As suggested by International Asset Pricing Model (IAPM), internationalising the capital structure for the firm's cost of capital will lower a company's cost of capital, and that dual-listed companies tend to find their shares issued in a relatively integrated and liquid stock market have a higher price. However this assumption generally observed worldwide cannot explain the substantial price discount between H share and A share, the twin stocks Chinese companies can list in Hong Kong market and China Mainland market. The discount is unusual especially given A share is subject to ownership restriction.

We therefore want to investigate reasons for price discount in ownership-restricted stocks, in particular whether it is the difference in required excess return over market by different groups of investors that result in price divergence.

Investors' enthusiasm for investing in foreign equity markets, especially in emerging economies, has grown rapidly in recent years as they seek higher returns and international diversification. In many markets, foreign investors as well as domestic investors face various kinds of ownership restrictions, from foreign ownership restrictions imposed by governments to ensure that control remains in the hands of domestic nationals, to ownership restrictions distinguish among various classes of domestic investors, such as between individuals and institutions. Such investment barriers can induce segmentation, in the sense that share prices for identical entitlements to cash flows and voting rights vary across investor groups. Besides, foreign investors also face different degree of ownership restriction.

International asset pricing theory has been a common explanation for pricing differences in segmented markets. Because required returns on risky assets depend on their level of exposure to risk factors and corresponding market risk premiums, different perceived exposures and premiums across different clienteles of investors in segmented markets could explain price differences. Bailey, Chung, and Kang (1999) test this theory for eleven countries, whereby they allow for time-varying exposures and premiums. They find little evidence supporting this theory. They show price differences are better explained based on the notion of a downward-sloping demand for equities as suggested by Stulz and Wasserfallen (1995) who argue that because

of the deadweight cost, the demand for domestic shares by foreign investors is less price elastic than the demand by domestic investors.

Existing researches (Hietala 1989, Finish market; Bailey and Jagtiana 1994, Thai market; Domowitz, Glen, and Madhavan 1997, Mexican market) show that the shares for foreign investors trade at premium prices compared to the shares for domestic investors due to a combination of factors including risk diversification and cost of capital. Domestic entrepreneurs like to limit foreign ownership restrictions so that they can maximize firm values through price discrimination against foreign investors. However, while these researches could explain equity premiums for foreign shares in many emerging markets, none could explain the foreign share prices in China, which has proven to be an exceptional case where domestic shares trade at a premium against their corresponding foreigner-owned shares.

The purpose of this thesis is to evaluate the partially segmented Chinese capital market to test whether general International Asset Pricing Model (IAPM) and equilibrium pricing model taking into actual investment barriers have explanatory power for Chinese stock pricing. This paper is to our knowledge the first to test if Pekka T. Hietala's equilibrium return rate model is applicable for Chinese dual listing share pricing. Besides, we use the first difference equation to detect real explanatory factors more precisely, which is also innovative for stock pricing examination

The rest of the paper is organized as follows. Section 2 contains a brief introduction of the Chinese equity markets. Section 3 gives an overview of the previous studies done on the subject of segmented market and different asset pricing therein. Section 4 summarises the hypothesis methodology used as well as relevant theories backing them. Section 5 is data and variable description. Section 6 is model and results analysis, Section 7 provides a further discussion and conclusion, Section 8 is reference and Appendix is attached in Section 9.

2. Background

2.1 A brief introduction to the Chinese stock market

After being closed for more than half a century, the Chinese stock market was re-opened in the early 1990s. Compared to its western counterparts, the Chinese stock market has various state-imposed constraints, a tiny asset float and heavy share turnover in spite of the high transaction costs. Furthermore, the market is arguably dominated by inexperienced individual investors. In recent years the capitalization and trading activity in the Chinese market is one of the largest in the world, and the market has become increasingly complicated.

Like in many other emerging stock markets, foreign investors' ownership of the domestic stocks is restricted by the Chinese state authorities. Limitations on foreign ownership of domestic equity is observed in the Chinese stock market where restrictions are imposed on the foreign ownership of domestic equity to ensure domestic control of local firms, especially those firms regarded as 'strategically important' to national interests. Furthermore, China also has a set of limitations on capital outflows, such as on domestic investment in foreign capital markets. In China, Chinese citizens cannot buy foreign currency freely.

These two forms of capital controls make the Chinese capital market segmented from the world capital market. To comply with the controls, companies in China sometimes issue up to three classes of shares, one (A share) for domestic investors and two (B and H) for foreign investors. Such arrangements enable companies to attract foreign investors without bearing the risk to lose ownership control of the companies. The three classes of shares have prices quoted in different currencies; trading systems that are different, and their admissible investors are restricted and different. Hence the market segmentation aiming at foreign investors is formed, and the Chinese stock market is categorised as a high-segmented one according to the statistics of the International Financial Corporation.

2.2 Brief introduction to Chinese A, B and H shares

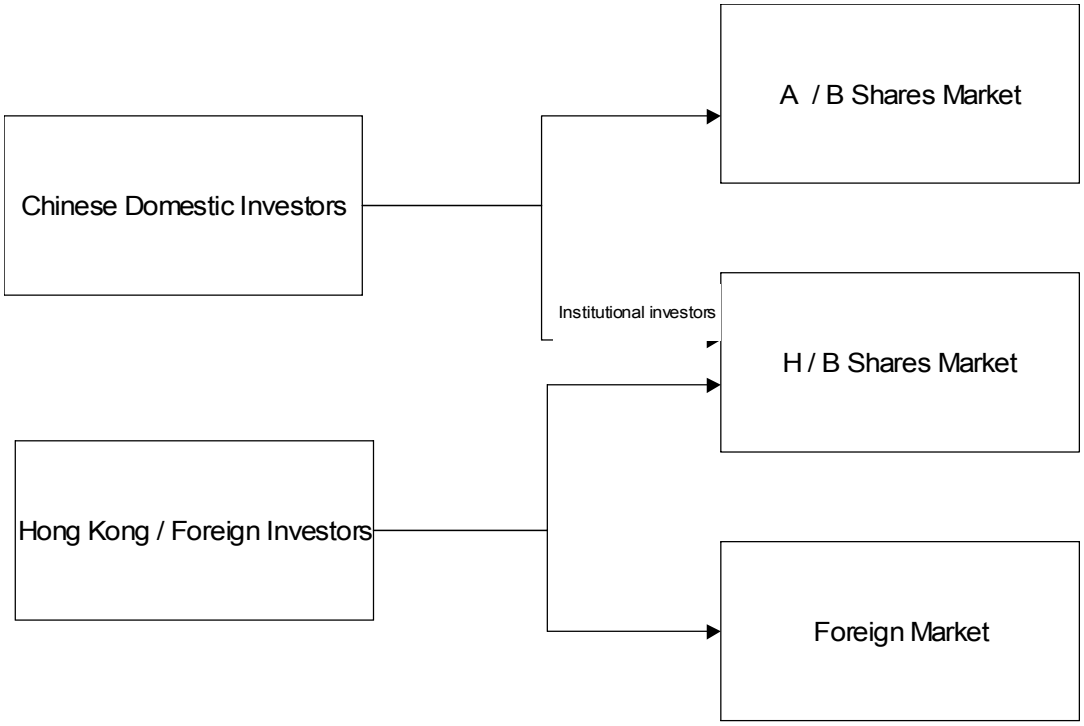
During the 1980s, China's securities market evolved in tandem with the country's economic reform and opening up and the development of socialist market economy. On 26th Nov., 1990, Shanghai Stock Exchange (SSE) was established again and began operation a few weeks later on 19th Dec. A shares, which are securities of

Chinese incorporated companies that trade on the Shanghai or the later opened Shenzhen stock exchanges, quoted in Chinese Renminbi (RMB), were traded by residents of the People's Republic of China (PRC). Since investors have only a few alternatives to invest their increasing wealth following the economic reforms, listed companies experience little difficulty in seeking capital investment and are normally significantly oversubscribed at IPOs. The number of companies listed increased from a dozen in 1991 to more than 600 in 1997. At the same time, the market capitalisation increased from less than 10 billion to more than 1,300 billion RMB.

China's equity markets first opened to international investors in the form of B shares, which are issued by companies in the two Mainland China exchanges (Shanghai and Shenzhen) that can be owned and traded by foreign investors. Until 2001, domestic investors could only hold A shares while foreign investors could only buy B shares. Despite their identical payoffs, B shares traded on at an average discount of around 60% towards the corresponding A shares. In addition, A shares turned over at a much higher rate, compared to B shares.

H share is another class of shares offered to foreign investors. These are the securities of companies incorporated in the PRC Mainland and nominated by the Chinese Central Government for listing and trading on the Hong Kong Stock Exchange, quoted and traded in HKD. Until now investors from the Mainland China are not allowed to trade H shares whilst there are no restrictions on international investors. However in Aug 2007 the Chinese government has shown plans to gradually open the H share market to domestic investors.

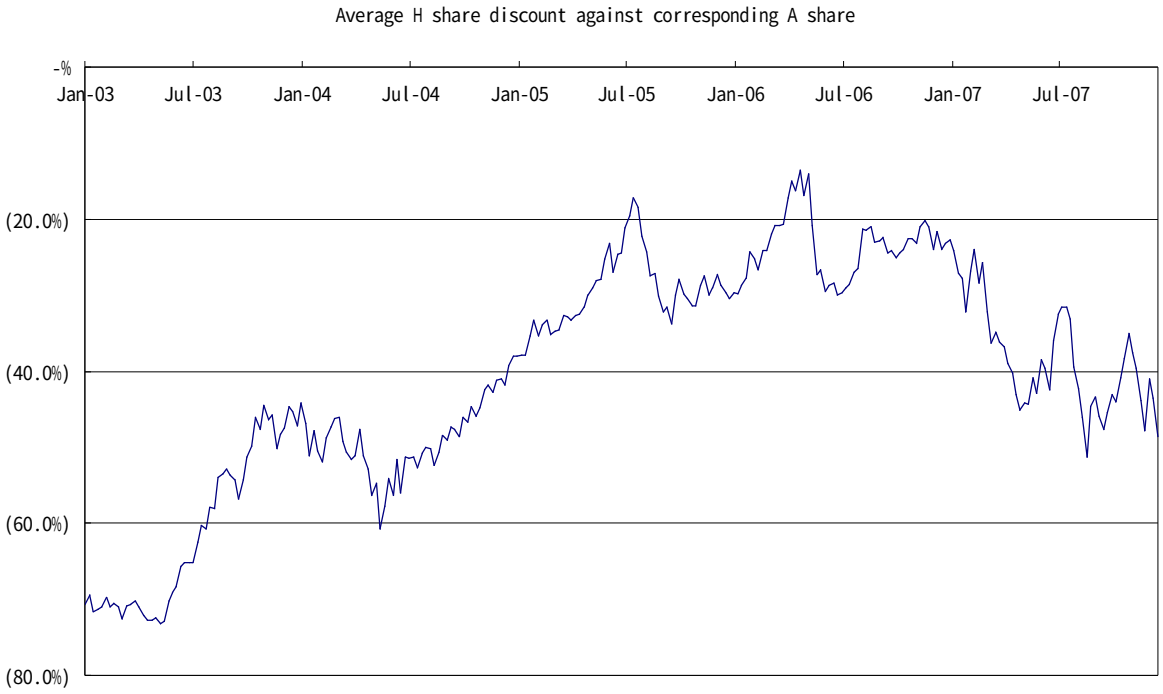
Chart 2.1 Different investor groups' access to the Chinese / world stock market



H share holders have the same voting rights and dividend as A shares, however they also enjoy effectively a lower taxation, since there is no capital gain tax in Mainland China but gains from the stock market are subject to a 20% tax categorised as income. In Hong Kong there is no tax on capital gain.

Similar to B shares, those Chinese companies that list both H shares and A shares in the Hong Kong Exchange and the Mainland's stock market used to witness much higher prices in A-shares than H-shares. However, in recent years the gaps are seen to be narrowing. In Jun. 2003, the discount is around 70%, and the average discount was reduced to below 20% in 2005. By 6th Jul., 2005, five companies had witnessed their A-shares become cheaper than their H-shares, and another five companies' A-share prices were very close to their H-share prices, due to the shrinking gap to the long-time downturn of the Mainland's stock markets and the recent booming of H-shares. Since then, however, the record boom in the A share market brought the discount back above 50% in 2007. Chart 2.2 below shows the change in H share discounts over time.

Chart 2.2 Average weekly H share discount against corresponding A share 2003-2007



3. Previous Studies on Capital Market Segmentation and Pricing Differences

Difference pricing on the same assets in different markets as a consequence of market segmentation became a topic of academic research primarily in the 1980s.

Stulz and Wasserfallen (1981) in "Foreign Equity Investment Restrictions, Capital Flight, and Shareholder Wealth Maximization" provided a theory of foreign equity investment restrictions. Demand function for domestic shares differs between foreign and domestic investors due to the difference in deadweight costs, such as withholding taxes, political risks, transaction costs, or information acquisition costs, in holding these shares, depending on the investor's country of residence. These deadweight costs imply that the demand for shares from domestic investors is more price elastic than the demand from foreign investors, and that the shares available to foreign investors trade at a premium relative to the shares available to domestic investors.

Pekka T. Hietala (1989) in "Asset Pricing in Partially Segmented Markets: Evidence from the Finnish Market" studied the asset pricing in the partially segmented Finnish stock market, in which local investors were allowed to hold only their domestic securities, whilst foreign investors were essentially allowed to hold all the securities around the world. The paper tried to explain the observed cross-sectional variation in the prices premiums in the Finish stock market from January 1984 to June 1985 by constructing a modified capital asset pricing model where such factors as cap on foreign ownership, restrictions concerning short-selling and the restriction with regard to Finnish investors' possibilities to invest abroad were incorporated. The conclusion was that in the equilibrium, Finish citizens were paying lower prices for their domestic securities than were the foreign investors who required a lower risk premium. Moreover, the size of the discount was determined by the international and domestic Beta of the stock.

In their paper "Foreign ownership restrictions and stock prices in the Thai capital market" (1994), Bailey and Jagtiani studied the effects of barriers to capital flows using data from Thailand, which also segments local and foreign trading of securities that have reached foreign ownership limits. According to their findings, cross-sectional differences between local and foreign prices are correlated with proxies for the severity of foreign ownership limits, liquidity, and information availability. Time series variability in the spread between local and foreign returns is consistent with

differences in risk exposures and expected risk premiums, which suggests effective capital market segmentations. As multinational investors perceive many more positive NPV projects than developing country locals do and enjoy a relatively low cost of capital, the domestic investors tend to trade securities at a discount. More generally, the financial market signal fundamental information about the underlying economy: price discounts on shares restricted to locals are in line with a booming local economy, high demand for capital and high required returns on investments.

Ma (1996) in his paper "Capital controls, market segmentation and stock prices: Evidence from the Chinese Stock Market" provides an asset pricing theory of the segmented Chinese stock markets with a focus on the difference in A share and B share prices. Cross-sectional differences between prices of A and B shares are correlated with the investors' attitudes towards risks, regulatory changes and the diversification value of the stocks in merging markets.

Domowitz, Glen and Madhavan (1997) examined the relationship between stock prices and market segmentation induced by ownership restrictions in the Mexico stock market, in their paper "Market Segmentation and Stock Prices: Evidence from and Emerging Market". They developed a panel-data model to jointly examine the cross-sectional and time-series behaviour of the equity premium, and came to the conclusion that the observed equity premium in the Mexican market reflected the relative scarcity of the unrestricted shares available to the domestic investors, whereas liquidity effects only last for a few days. The paper also showed that segmentation increases with firm capitalization, and that premium exhibited strong mean reversion, consistent with transitory price movements in restricted and unrestricted series stock induced by liquidity shocks.

Bailey, Chung and Kang (1999) studied the impact of barriers to international capital flows with stock prices data from 11 countries whose stock markets feature shares restricted to locals and otherwise identical shares available to foreigners in their work "Foreign Ownership Restrictions and Equity Price Premiums: What Drives the Demand for Cross-Border Investments". Large price premiums for unrestricted shares relative to matching restricted shares are typically observed with the exception of the Chinese A / B share markets. Bailey found little evidence that the price premiums are explained by lower foreign required returns, and that premiums are correlated with foreign investor demand in the form of international mutual fund flows, sentiment implicit in matching close-end country fund premiums, market liquidity and information reflected in press coverage, country credit rating and firm size.

Chakravarty, Sarkar and Wu (1999) in their paper "Information asymmetry, market segmentation and the pricing of cross-listed shares: theory and evidence from Chinese A and B shares" looked into the reason why Chinese foreign class B shares trade at an average discount of ca. 60% to the prices at which domestic A shares trade, whilst the opposite pricing difference is observed in other emerging markets of a similar nature. They developed a model incorporating both information asymmetry and market segmentation, and derived a relative pricing equation for A shares and B shares. Their main argument was that information asymmetry explained a significant portion of the cross-sectional variation of the B share discounts.

Bailey's paper "Risk and return on China's new stock markets: Some preliminary evidence" (1999) also focused on the difference in pricing between the Chinese B shares and A shares. Discount on B shares relative to A shares are inconsistent with premiums observed in other Asian capital markets and are hard to explain quantitatively, though Bailey argues that it is sensible to imagine that the pent-up savings of Chinese citizens and the systematic political risk perceived by Hong Kong investors have an effect. Moreover, the correlation of B share discounts with similar phenomena in Singapore and Thailand is consistent with simple notions of equilibrium cross-border asset pricing.

4. Theoretical Framework and Hypothesis

4.1 Theoretical framework

4.1.1 International Asset Pricing Model (IAPM)

IAPM is the extended version of CAPM and applicable for internationally tradable assets. In CAPM, the expected return can be determined:

$$R_i = R_f + (R_M - R_f)\beta_i$$

where β_i is a measure of market systematic risk inherent in security i

In IAPM, since equities are also being traded in foreign market, different market risk lead investors have various expected return.

In our thesis, the same Chinese company's two sets of stocks are traded in two markets. China Mainland stock market which is segmented, and foreign ownership restricted and Hong Kong market, which is integrated and liquid. So there will be different required return. Required return rate in two markets are

$$R_{id} = R_{fd} + A^D \, DCov(R_i, R_M)$$
$$R_{iw} = R_{fw} + A^W WCov(R_i, R_W)$$

Where R_i is the current equilibrium expected return on the i_{th} asset, R_f is the risk free rate of return in two markets. A^D (A^W) is the aggregate risk-aversion measure of domestic (world) investors, denotes the aggregate market value of all domestic securities, and W is the aggregate market value of the world market portfolio. $Cov(R_i, R_M)$ [$Cov(R_i, R_W)$] denotes the covariance between the future returns on the i_{th} asset and returns on the domestic (world) portfolio, since Hong Kong market is matured and highly correlated with other main stock market. We therefore deem that investors buying H share require risk premium return over world equilibrium portfolio. Additionally, in Stulz and Wasserfallen (1995), the authors also use discounted sum of the difference between the expected return rates of two types of share to explain price difference.

4.1.2 Equilibrium Asset Pricing Model

Pekka T. Hietala's developed IAPM taking into ownership restriction into consideration. The main argument of equilibrium model is that unrestricted asset price, which can be bought by both foreign investors and domestic investors, is determined by the demand from the investor group for which the required risk premium is lower.

In his formula derivation restricted and unrestricted stock required return should be separately less than Equilibrium return considered by domestic investor and foreign investors

$$E\left[R_g\right] \le R_f + \left(E\left[R_{G*}\right] - R_f\right) Var^{-1}\left(R_{G*}\right) cov\left(R_g, R_{G*}\right) \forall h \in G - G*$$
$$E\left[R_h\right] \le R_f + \left(E\left[R_{H*}\right] - R_f\right) Var^{-1}\left(R_{H*}\right) cov\left(R_h, R_{H*}\right) \forall h \in H - H*$$

R_g, R_{G*}, R_f are the returns on security g, the return on domestic investors' equilibrium, and risk free rate.

R_h, R_{H*} are the returns on security h, the return on foreign investors' equilibrium.

Empirically, this model contain coefficients analysis of Beta of unrestricted share respect to foreign assets (excluding domestic stock), to see whether foreign investors have required return for buying equity in another market, this could be interpreted as diversification value. In IAPM, investors attained the same return but bear lower risk by investing internationally. If International Beta is significant and large in size, it indicate diversification value of buying foreign asset is low, and foreign investor do have high required return on another market's equity.

We will use Beta A (Beta domestic), which is Beta of A share with respect to Shanghai index, and Beta MSCI (Morgan Stanley Capital All Country Index, Beta world), which is Beta of H share with respect to MSCI, to explain stock price discount. MSCI index can well represent foreigner investors' equilibrium return, since it doesn't include Chinese A share market in its portfolio. Further more we also investigate other variables that might contribute to stock pricing, which have been tested by previous studies.

4.2 Hypothesis

4.2.1 Hypothesis one

The dependent variable is negatively affected by difference between Beta MSCI and Beta A.

In addition to reasons illustrated in theory framework, in discount dividend model, stock price is determined using $P = D / r - g$. The companies pay the same amount of dividend in same currency for H share and A share shareholders. So the price discount is due to different expected return from investors' perspective Different Betas, loading to measure different market risk premium, could be served to proxy return rate required from different types of investors.

Differences in restricted and unrestricted multifactor betas yield differences in domestic and foreign investors required returns and, thus, restricted and unrestricted share price differences. Following Hietala (1989) and Stulz and Wasserfallen (1993) we estimated Beta MSCI-Beta A

4.2.2 Hypothesis two

The dependent variable is affected by Beta H.

If the markets are segmented, then the prices of cross-listed securities can be quite different, and can be influenced by the market movement of the country in which the securities are traded (Froot and Dabora, 1999).

We include Beta H as local risk factor in our model, since Beta H can aggregate location risk exposure. Considering two markets are different in accounting standard, culture, we predict that Beta H has substantial explaining power in our model.

Local market event and shocks also can explain price discount movement. As in pricing model, Beta H should negatively affect dependent variable. But if herding effect does exist, Beta H will positively affect dependent variable, we observe there might be herding effect of Hong Kong market. Investors are risk lover and behave as rest of other investors. For instance, In 2007 Sep, Hong Kong optimistic prediction that Chinese individual investors were allowed to buy H share directly, leading to H share price increasing sharply.

4.2.3 Hypothesis three

The dependent variable is negatively depend on ratio of US T bill 3-month rate to China 3-month central bank bill rate

We use this ratio as the local risk exposure factor that especially affects foreign investor and China Mainland investors' investment appetite. 3-month bond yield rate in mainland China and U.S do vary and since these rates are studied by investors as risk-free rates (and thus as investment hurdles). The higher is the risk-free rate, the higher becomes the opportunity cost for investing in the stock market and the higher returns investors ask for, which leads to higher discount rate and a lower share price. Therefore we expect a negative impact on the dependent variable (i.e. if domestic investors see the government bond as an attractive alternative to A share market, prices of A shares will decrease and thus so will do the H share discounts).

4.2.4 Hypothesis four

The dependent variable is positively affected by appreciation of Chinese Yuan, CNY.

Since company pay both H share and A share in Chinese Yuan, according to discounted dividend model, increased dividend will increase H share value. We therefore think CNY's recent appreciation will reduce H share price discount

4.2.5 Hypothesis five

The dependent variable is positively affected by market capital.

This hypothesis is amount of firm-specific information available to foreign investors can influence relative A share and H share price. Firms which are relatively information-rich from the non-mainland Chinese point of view will tend to exhibit less unrestricted price discount. We attempt to detect such an effect with firm size variable or more specifically the average monthly aggregate value of equity reported identifies large, well-known firms for which foreigners may find it relatively easy to acquire or produce information. (Bailey, Jagtiani, 1994)

The market capitalization represents the size of the firm. Other things being equal, larger companies are more likely to be more appealing to foreign investors compared to small firms, due to the fact that their size may in market generally lead

less information asymmetry (it is fair to assume that more analysts tend to cover and follower larger firms), We expect a positive sign in regression results.

In our sample, nine largest out of the total 28 companies, each with more than 4.28 billion USD market cap, have an average discount rate of 21.40% between 2004 and 2007, compared to the rest 19 companies with an average discount rate of 42.30%.

4.2.6 Hypothesis six

The dependent variable is positively affected by turnover rate ratio.

The liquidity hypothesis implies that the observed foreign share discounts are due to their lower liquidity and higher trading costs. Datar et al. (1998) use the turnover as a proxy for liquidity and find that the liquidity measure plays a significant role in explaining the cross-sectional variation in stock returns. As a complement to the cross-sectional positive return-illiquidity relationship, Amihud (2002) shows that over time, expected market illiquidity also positively affects stock excess returns. He suggests that liquidity is not directly observable, and has a number of aspects that cannot be captured in a single measure.

We use turnover rate ratio to proxy liquidity character. Turnover ratio is calculated by Ln (Average trading volume of H shares / Number of H shares Outstanding) / (Average trading volume of A shares / Number of A shares Outstanding). It measures the relative liquidity in the H share markets vs. A share markets. We expect the ratio to have a positive impact on the dependent variable, given that the more frequently traded a share is, the higher the demand at any point of time is indicated and the higher will be the discount rates. This is consistent with Bailey and Jagtiani (1994)‘s findings.

4.2.7 Hypothesis seven

Dependent variable is negatively correlated with supply proxy.

Supply Proxy is calculated by dividing the number of H shares outstanding by the number of A shares outstanding. It measures the relative supply for H share and A share in the two markets.

Previous study show that the investor with lower demand elasticity will be offered with discriminated higher prices. In order to achieve the maximum profit or to have the lowest loss, Marginal Cost should be equal to Marginal Revenue.

$$MC = MR_A = MR_H;\ MR = P\ (1+1/E),$$

E is demand elasticity. So we could get

$$P_H / P_A = \ (1+E_A)\ /\ (1+E_H),$$

which means price ratio depends on elasticity ratio.

In reality, China Mainland investors have rather few investment opportunities. Individual investors are not allowed to invest in foreign securities directly; saving rate is rather low long time. So we can derive that China Mainland investors have lower demand elasticity and therefore be charged more.

4.2.8 Hypothesis eight

Dependent variable will be positively affected by information ratio. Information proxy is computed = $Cov\ (R_A, R_H)/Var\ (P_A)$, for each stock with A and H shares, we calculate the sample covariance between their return, and divide by the sample variance of A share price, as suggested in Chakravarty, Sarkar and Wu (1999). Since a high value of $Cov\ (R_A, R_H)$ indicates that A share returns are informative of H share return, and high value of $Var\ (P_A)$ means that price of A shares is very noisy, resulting in foreign investors making decisions imprecisely. We predict that higher value of information proxy indicates a lower degree of informational asymmetry, therefore lead less discount.

4.2.9 Hypothesis nine

A company's own characteristic will have different level of degree on dependent variable, and within different time period, parameter may not stable.

We set dummy variable for each individual company to include its unique feature not captured by our above explanatory e.g. differences in management style or managerial talent. Besides, we set dummy variables for time variant.

5. Data and Variables Description

Variables	Variabe Discription	Expected sign
Discount rate (DR)	Price differential between H share and Ashare divided by A share price	
BetaMSCIA	Difference between Beta of H share respect to MSCI index and beta of A share respect to A share index	-
BetaH	Beta of H share respect to H share index	+
Relative bond yield	Ratio of US T bill 3 month rate to China central bank 3 month bill rate	-
Currency	Exchange rate between USD and CNY	+
Market capital (MC)	Company Market Capital	+
Turnover rate ratio (TR)	Log variable of ratio of H share turnover rate to A share turnover rate	+
Supply Proxy(SP)	Number of H outstanding share divided by Number of A outstanding Share.	-
Information ratio(IM)	Covariance between A share and H share return divided by variance of A share price	+
Year	Dummy variable to capture variant within different year	
Company	Dummy variable to capture variant within different company	

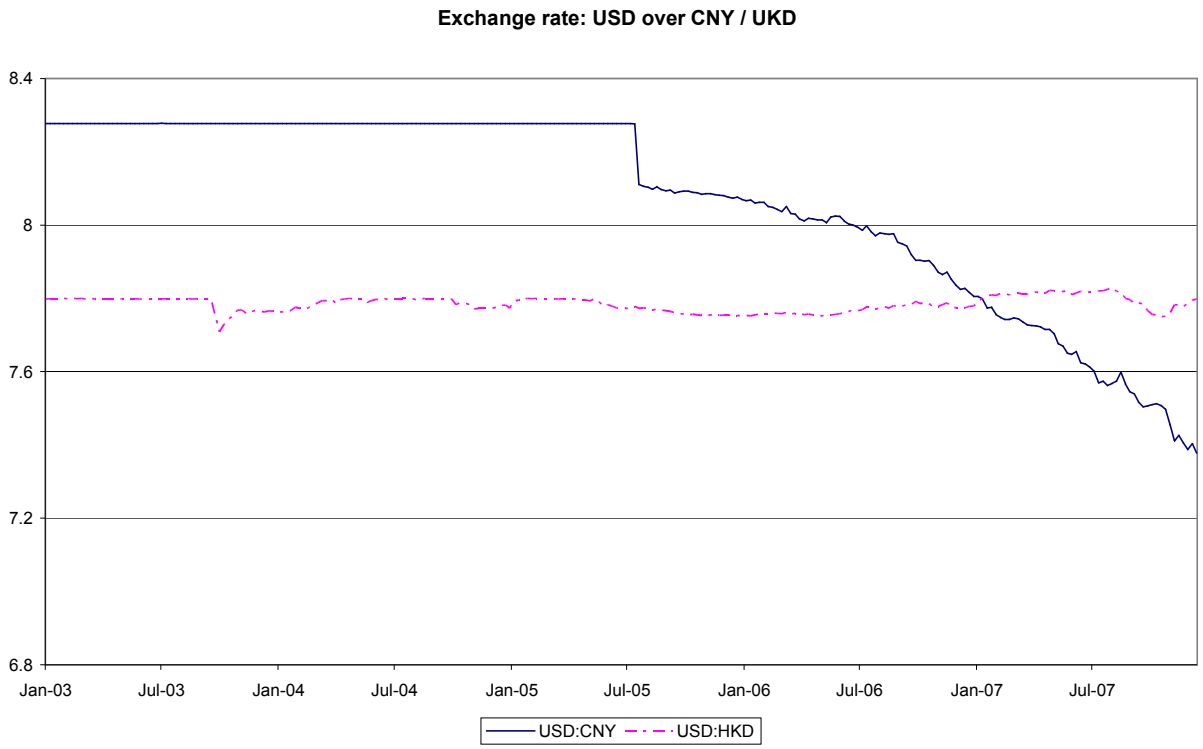
5.1 Data Description

All data was obtained from Thomson Financials Data Stream. We collected closing share prices and indexes weekly data from Jan., 2003, to Dec., 2007, in order to compute the same amount of observation of Beta variables for our econometric model, we intended to get one more year original data. For other data, marketing capital, 3-month bill yield, and outstanding share number, we obtained data from Jan., 2004 until Dec., 2007.

We chose 28 companies that have listed in both China Mainland stock market and Hong Kong market for at least three years. Since the listing dates of companies are different, observation numbers are ranged from 146 to 207 among 28 companies, A table which outlines the name, security code of the chosen companies and the number of observations collected from each company can be found in the appendix. With the exception of China Southern airline (dual listed since 25th Jul., 2003); ZTE (since the 4th Dec., 2004): Huadian Power International (since 4th Feb., 2005), all the companies have dual listed share since beginning of 2003. Besides, we also converted H share price from Hong Kong dollar to Chinese Yuan using CNY / HK dollar exchange rate from in the corresponding weeks.

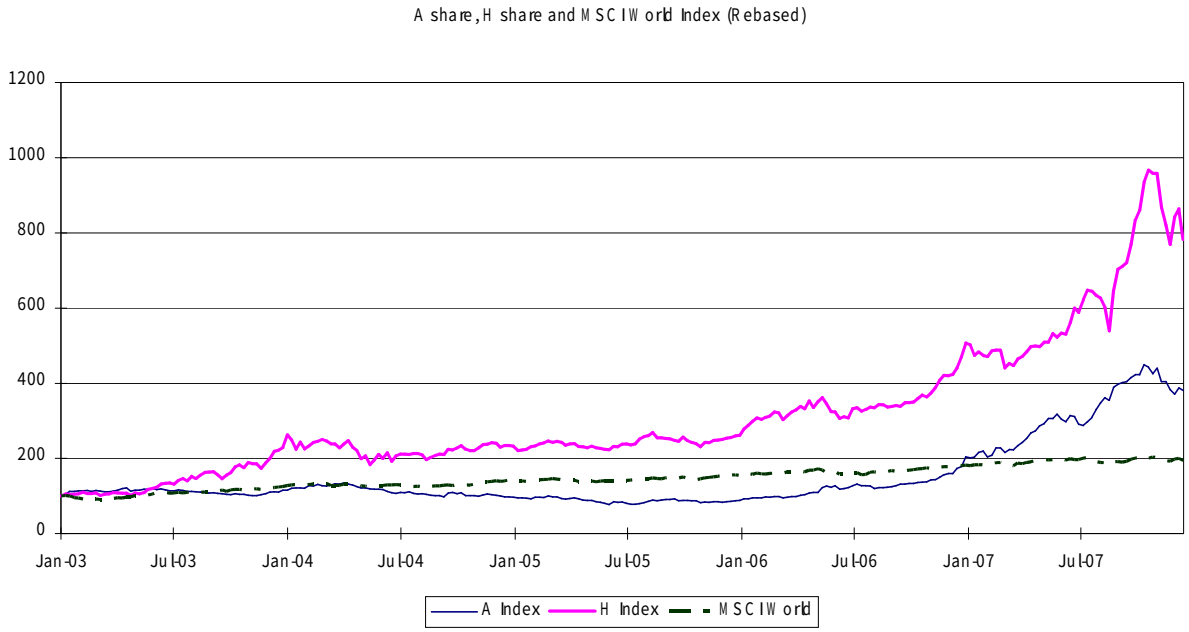
We aim to get contemporaneous stock price data, for each company in each week, we get price for A share and H share on the same day, if there is no positive volume on that given day, due to different holiday in Hong Kong and China mainland, a missing value will be generated. It is worth noting that over the past 12 month the CNY has been appreciating whilst HKD has effectively lost value due to the weakened USD dollar, thereby further increasing the H share discounts. See below for the change in CNY / HKD value over USD.

Chart 5.1 Exchange rate USD over CNY / HKD 2003-2007



We also collected Shanghai index, Hang Seng China Enterprises Index and MSCI index. Shanghai index can be regarded as A share index proxy, Hang Seng China Enterprises Index (H share index) is free float capitalization-weighted index comprised of H-Shares listed on the Hong Kong Stock Exchange and included in the Hang Seng Mainland Composite Index and MSCI all country index can be served as benchmark for international investors. We used three indexes log return to calculate Beta variables. The A share and H share index have increased significantly in value in the last few years whilst MSCI also doubled. The chart below show shows the index movements 2003-2007

Chart 5.2 A share / H share MSCI World Index Movements 2003-2007



Besides, we attained market capital for each company. There is a wide variation in our samples: 9 companies with average market capital in our sample period above 4.28 billion US dollar and 9 below 0.14 billion.

5.2 Variable Description

5.2.1 Discount rate

Discount rate is defined as stock j price differential between H share price and A share price divided by A share price. $DR = (P_H - P_A) / P_A$

During our sample period, almost all company's H share prices are lower than corresponding A share price, so our discount rate values are typically negative.

In this thesis, we use absolute value of discount rate to describe its' size, but use its' negative value for statistic tests i.e. a positive impact on the dependent variable from the independent variable means that any increase in the latter tend to decrease the discount of H share against A share.

5.2.2 Beta variables

In order to get time series Beta, we calculate log return of each company's stock, Shanghai (A) share Index, H share index, and MSCI index then use 51weekly historical data compute Beta in a rolling basis, using formula:

$$\beta_{it} = Cov(R_{it}, R_{Mt}) \ / \ Var(R_{Mt})$$

Besides, we also run regression in each year for individual companies to examine realized Beta trend. When comparing Beta A and Beta MSCI within the same company along sample period, number of company with big MSCI Beta is getting fewer in the first three years, but became more in 2007. the same trend also applicable for Beta H and also supportive to our observed phenomena, H share discount is getting smaller in the first three years, but be enlarged in 2007.

Besides size of Beta of H share with respect to MSCI index is large and significant meaning that H shares are highly relevant to other foreign assets, diversification value of buying H share is very low. Another factor contributes to H share discount.

5.2.3 Relative supply ratio

When comparing relative supply ratio here. We can find 16 out of 28 companies have mean value more than one during sample period, indicating that number of outstanding H share is bigger than its corresponding A share. In China Mainland, aggregate supply of stocks is small. Since A large proportion of stocks is held by government- and state-owned enterprises, so the amount of shares floating in the market is a small proportion of the shares outstanding. Therefore large amount of A share may not available for average investors. But H share are mostly available for average investors. We calculate Real Outstanding Share Number = Free Float Rate * Outstanding Number.

Besides, there is time series trend as well. Since free float rate of H share is almost constant during sample period, but free float rate of A share is getting smaller along time, relative supply ratio is getting bigger during sample period.

5.2.4 Relative turnover rate ratio

In contrast, relative turnover rate ratios are smaller than one, in other words, turnover rate of H share is smaller than that of A share. The reason for this is quite straightforward: trading activity is more frequent in A share, due to the relative scarcity of A share, and the fact that investors are less experienced and more enthusiastic.

Contradictory to relative supply ratio, we found that relative turnover rate ratio is getting smaller across time. For example China Petroleum & Chemical Corporation

used to have relative turnover rate ratio around 6 in 2004, but now this number has been reduced to less than one in 2007. Finding can be easily explained that higher A share trading volume and relative fewer A share outstanding available.

5.2.5 Stationary Test

In order to examine data stationary, Dickey-Fuller test is used to test the null hypothesis that variables has unit roots.

$$\Delta Y_t = \beta_1 + \rho Y_{t-1} + \mu_t$$
$$\mathrm{H}_0: \ \rho=0$$
$$\mathrm{H}_1: \ \rho<0$$

The series contains a unit root is rejected if the observed t value is < critical τ value. We use Dickey-Fuller test to examine our variables.

Our results indicated that for discount rate, 26 out of 28 companies have unit roots at 0.05 levels.

The fact that H share discount rate is not stationary also indicates that H share discounts do not have a constant long–run mean.

6. Model and Results

To investigate the hypothesis discussed above, we use panel data techniques, since our hypothesis concern factors that vary both over time and across firms, in addition to increasing degrees of freedom and generally reducing the co linearity among explanatory factors, panel data methods can improve the precision of estimates of model dynamics in short time series the biggest benefit is we are able to control the firm specific effects

Besides, we also use the first difference model as a result of the unit root observed in our variables. Changes due to explanatory variable will cause changes of dependent variable, the first difference model assist us find the most relevant causes.

6.1 Preliminary model

$$\begin{aligned}\Delta Discount\ rate_{tj} = {} & \alpha_{tj} + \beta_1 \Delta(Beta\ MSCI_{tj} - Beta\ A_{tj}) + \beta_2 \Delta Beta\ H_{tj} \\ & + \beta_3 \Delta BR_{tj} + \beta_4 \Delta Currency_{tj} + \beta_5 \Delta LNTR_{tj} \\ & + \beta_6 \Delta LNMC_{tj} + \beta_7 \Delta SP_{tj} + \beta_8 \Delta IM_{tj} + \beta_9 \Delta DummyYear_m \\ & + \beta_{10} \Delta DummyCompany_n + \varepsilon_{tj}\end{aligned}$$

$$\begin{aligned}where:\ t &= different\ time \\ j &= different\ company\end{aligned}$$

For dummy variable, we set year of 2007 as the base year, and company No.28 as the base company, the coefficients of dummy variable stand for difference between the company's characteristic and its base company and differences between other years and year 2007.Here we assume intercepts are different for all individual company across time.

The reason we use log variable of marketing capital and turnover rate is that we want to make variable more symmetrically distributed.

We eliminate outliers those with bigger than 3 standard deviations. In preliminary model, Adjusted R square is not high, 8%, which means around 8% of the total variation in discount rate is explained by this regression model. Since the first difference model reduce absolute value discrepancy between sample companies and detect the sensitivity of each variable on dependent variable. So we could conclude

that individual company feature is not obvious in our dataset. On contrary, dummy year coefficients are significantly different from zero, indicating data in 2004, 2005, and 2006 have different trend comparing to year of 2007. But three coefficients of dummy year variables are very close, implying data from those three years have the same trend and can be analyzed using one model. So we will first analyze model separately using data from 2004 to 2006 and using period 2007. We did simple correlation test between explanatory variables, results tell us among Diff lnMC, DifflnTR and DiffSP, each of them has the relation to the other two variables. We did Co linearity test, CI index are well below 10, implying there is no severe Co linearity effect in our model.

We did partial correlation test separately using different time period,

2004-2006

Partial correlation between independent variable and explanatory variable

DIFFBetaMSCIA	DIFFBetaMSCI	DIFFBetaA	DIFFBetaH	DIFFBR	DIFFCurrency	DIFFLNMC	DIFFLNTR	DIFFSP
-0.046	-0.048	0.005	0.025	-0.316	0.16	-0.136	0.142	-0.044
(.017)	(.012)	(0.779)	(0.184)	(.000)	(.0406)	(.000)	(.000)	(.022)

2007

Partial correlation between independent variable and explanatory variable

DIFFBetaMSCIA	DIFFBetaMSCI	DIFFBetaA	DIFFBetaH	DIFFBR	DIFFCurrency	DIFFLNMC	DIFFLNTR	DIFFSP
-0.043	-0.062	0.022	0.024	-0.052	0.172	-0.17	0.275	-0.184
(.131)	(0.03)	(0.441)	(0.405)	(.000)	(.000)	(.000)	(.000)	(.000)

Most results are in line with our hypothesis. For ease of illustration, we will first start with discuss those variables with insignificant coefficients.

Information proxy

Information proxy variable's coefficient is not significant at 10 percent level and it contain with unexpected sign. Besides we did time series test for 28 companies, none of them have significant information proxy coefficient at 10 percent level. We did correlation test between pair A and H share return, and find 28 pairs without an exception are highly correlated, we didn't find much evidence of failure of information transmission between A share and H share, therefore, and it could be not important factor for price discount.

Beta H

Beta of H share respect to H index is not significant at 10 percent level in both time periods. Reasons could be historical beta fail to predict today's stock price. We run regression of historical beta on it's stock price one year after, 28 regression without exception have low R-square and insignificant coefficient. Historical betas tells us how fluctuations in the return of stock co-vary with H share index in the past , achieving statistical significance usually meant using returns from past periods that

were no longer relevant. Besides a minor reason would be companies we studied cover industry from oil industry to airline industry, which in theory should expose to systematic risk. Until 2006, there are 37 companies included in H share index, but among the five biggest market capitalization companies, we only study two of them, since other three launched after 2004. So other companies stock may behave differently from stocks we studied.

Beta A

Beta A coefficient is insignificantly different from zero in both period, risk premium over Chinese mainland stock market in the past cannot explain price discount. The same reason illustrated above also applicable for Beta A, historical beta couldn't have predictive power for Chinese stock price. The A share market, is full of inexperienced investors that are less rationale and more willing to take on risks and make speculative moves. The extremely limited options for investment in China means that investors are less sensitive to the risks on A shares. And Beta A will be even less informative.

Company character

Insignificance of company dummy variable coefficients means that companies main characteristics are already captured by explanatory variables and companies are not different from company No.28 in other respects. Another reason is that after using the first difference variable, the difference between different companies has been reduced.

We eventually include Beta MSCI, Currency, relative turnover rate ratio, market capital, relative supply ratio and bond yield rate ratio into final model, since we need to take consideration of year 2007, we analyze it using unstable parameter model, which assume intercept as well as explanatory variable slope is not stable in two periods.

6.2 Final model

$$\begin{aligned}\Delta Discount\ rate_{it} = {} & \alpha_{it} + \beta_1 \Delta Beta\ MSCI_{it} + \beta_2 \Delta Currency_{it} + \beta_3 \Delta LNTR_{it} + \beta_4 \Delta LNMC_{it} \\ & + \beta_5 \Delta SP_{it} + \beta_6 \Delta BR_{it} + \beta_7 D_t + \beta_8 D_t \Delta Beta MSCI_{it} + \beta_9 D_t \Delta Currency_{it} \\ & + \beta_{10} D_t \Delta LNTR_{it} + \beta_{11} D_t \Delta LNMC_{it} + \beta_{12} D_t \Delta SP_{it} + \beta_{13} D_t \Delta BR_{it} + \varepsilon_{it}\end{aligned}$$

$$where D_t = 0\ for\ the\ period\ 2007\ and\ 1\ for\ period\ 2004\ to\ 2006$$

Table 6.2 Final model regression coefficient result

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	0.003	0.002		1.662	0.097
	DIFFLNMC	-0.172	0.014	-0.349	-12.583	0.000
	DIFFLNTR	0.017	0.002	0.303	10.585	0.000
	DIFFSP	-0.011	0.001	-0.161	-7.627	0.000
	DIFFBR	-0.477	0.035	-0.573	-13.814	0.000
	Currency	13.214	4.845	0.082	2.728	0.006
	Y0406	-0.002	0.002	-0.021	-1.120	0.263
	DDIFFLNMC	0.072	0.017	0.106	4.217	0.000
	DDIFFLNTR	-0.011	0.002	-0.168	-5.865	0.000
	DDIFFSP	0.006	0.003	0.042	2.383	0.017
	DDIFFCURRENCY	-10.107	5.600	-0.054	-1.805	0.071
	DDIFFBR	0.440	0.037	0.477	11.826	0.000
	DIFFBetaMSCI	-0.016	0.007	-0.017	-1.206	0.080
	DDIFFMSCI	-0.010	0.010	-0.021	-1.108	0.070

a Dependent Variable: DIFFDR

$$Period\ 2007\ D_t = 0$$

$$\Delta Discount\ rate_{ij} = \alpha_{ij} + \beta_1 \Delta Beta\ MSCI_{ij} + \beta_2 \Delta Currency_{ij} + \beta_3 \Delta LNTR_{ij} + \beta_4 \Delta LNMC_{ij} + \beta_5 \Delta SP_{ij} + \beta_6 \Delta BR_{ij} + \varepsilon_{ij}$$

$$Period\ 2004-2006\ D_t = 1$$

$$\Delta Discount\ rate_{ij} = (\alpha_{ij} + \beta_7) + (\beta_1 + \beta_8)\Delta Beta\ MSCI_{ij} + (\beta_2 + \beta_9)\Delta Currency_{ij} + (\beta_3 + \beta_{10})\Delta LNTR_{ij} + (\beta_4 + \beta_{11})\Delta LNMC_{ij} + (\beta_5 + \beta_{12})\Delta SP_{ij} + (\beta_6 + \beta_{13})\Delta BR_{ij} + \varepsilon_{ij}$$

From equations above it is clear that β_7, β_8, β_9, β_{10}, β_{11}, β_{12}, β_{13} express the difference in the intercept and elasticises respectively between the two periods, since most of them are significantly different from 0 at 5 percent level.

6.2.1 Results analysis

Adjusted R-square of final model is 13.90% and most explanatory variables are significant with expected sign at least at 5 percent level, except FOR DIFFLNMC market capital with an opposite sign, and Beta MSCI explanatory variable, which is not significantly different from zero at 10 percent level. If we evaluate the contributions of each explanatory variable on the basis of size of standardized

coefficients, market capital, relative turnover rate proxy, relative supply rate ratio has more explanatory power than the other variables.

Market capitalization (Information theory)

All variables turned out to be in line with our expected signs except market capital variable, which has an opposite sign and is significant.

One possible explanation for this could be the first difference variable is not the ideal proxy to measure a firm's value; in that substantial change in firm value couldn't be interpreted as the firm has absolute big value. In order to test the true relationship between discount level and firm value, we did a partial correlation between them using original form, whilst controlling for all other factors. This time the sign is positive and significant, which verifies our prediction that firm size, a measurement of good company information publicity, has effect on H share price discount.

Beta of MSCI (Diversification value)

Beta of MSCI is the variable we are most interested in, and it turns out to be very significant. The negative sign support our hypothesis. As illustrated in Data Description section, size of realized Beta of H share in respect to MSCI index is large and significant, explanatory power of MSCI index on H share return is substantial. All together our results indicate that foreign investors have high required return rate towards H share and H share has low diversification value, due to its strong positive correlation with other foreign equity markets that foreign investors have access to. High required return rate and low diversification value jointly bring down H share price. When compared to historical Beta A and Beta H, it is evident that Beta MSCI has significant prediction power.

Relative supply ratio (Demand theory)

Relative supply ratio is very significant at 1 percent level, in line with our hypothesis.

The insufficient supply of shares in the market, coupled with huge demand by individual investors, bids up the price of the A-shares.Chinese domestic investors have relatively smaller elasticity for they have fewer investment alternatives and foreign investor have more diversified substitutes in contrast. To illustrate, from 2003 to 2006 Chinese stock investors gain 0.34% return and bear 0.029 standard deviation risks, compared with investors in Hong Kong who gain 0.78% with standard deviation of 0.039. Chinese domestic investors gain less return and bear a relatively higher risk. Furthermore, Chinese deposit total reached USD$2.25 trillion in Apr 2007 even with relatively low interest rate, at which point international hot money streamed

into the stock market and the Chinese domestic stock market value HAD rocketed to USD$2.90 trillion by the end of 2007. Besides, from ownership perspective, for a relatively large country, there is no need to charge foreign investor discrimination price to gain firm control right.

We could conclude that Chinese demand for available investment vehicle is greater than foreign demand for invest in China.

Relative turnover rate (Liquidity Theory)

We find evidence in favour of a liquidity premium in Chinese market. Relative turnover rate variable is significant at 5 percent level and with the expected sign.

Inexperienced A share investors are more likely to have a bigger appetite for risk, and these investors have more preference focus on short term gains. Relative scarcity of outstanding A share available for average Chinese domestic investors leads to relative high liquidity of A share. As tested in existed literature, high liquidity benefit firms from reducing their cost of capital and increase their value.

Currency

Sign of Currency variable is consistent with our hypothesis; higher potential of Chinese currency appreciation will attract foreign investors and lead to H share price increase. This particular variable's significance / impact level changes greatly over time. If we run regression using date from 2004 to 2006, currency coefficient is not significant at 10 percent level, meaning appreciation effect of CNY against US dollar in 2007 plays an important role.

Bond yield rate ratio

Bond yield rate ratio is significantly different from 0 at 1 percent level in both sample periods, which is in line with our hypothesis, that increased risk free rate will add more required return rate by different type investors, consequently affect stock price. From partial correlation results, we noticed that size of standard coefficient of bond yield rate ratio is bigger in 2007 than in the previous three year sample period. One possible explanation could be that Chinese central bank 3-months bill ranged around 2 percent during the whole period, in contrast to the big variation and movements in the US 3-months bill during sample period. But in 2007, US 3-months Treasury bill rate was reduced greatly, narrowing gap between risk free rates obtained by different type investors. Therefore the ratio has less effect on stock price.

6.3 Model fitness check

We conducted several tests to examine our model fitness.

Our final model is used to test 28 companies individually; adjusted R-squares range from 4% to 45% with a mean of c.20%.

Further more, in order to detect if Beta A and Beta H fail to explain Chinese stock market. We ran a separate test using cross section data from 2004 to 2006. We obtained realized beta in each year, pooled the data and ran regression using the equation below.

$$DR = \alpha + \beta A + \beta H + \beta MSCI + \varepsilon$$

Table 6.3 regression results

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-0.333	0.085		-3.922	0.000
	BetaA	-0.098	0.085	-0.140	-1.155	0.252
	BetaH	0.180	0.102	0.284	1.760	0.082
	BetaMSCI	-0.056	0.055	-0.166	-1.024	0.309

a Dependent Variable: Discountrate

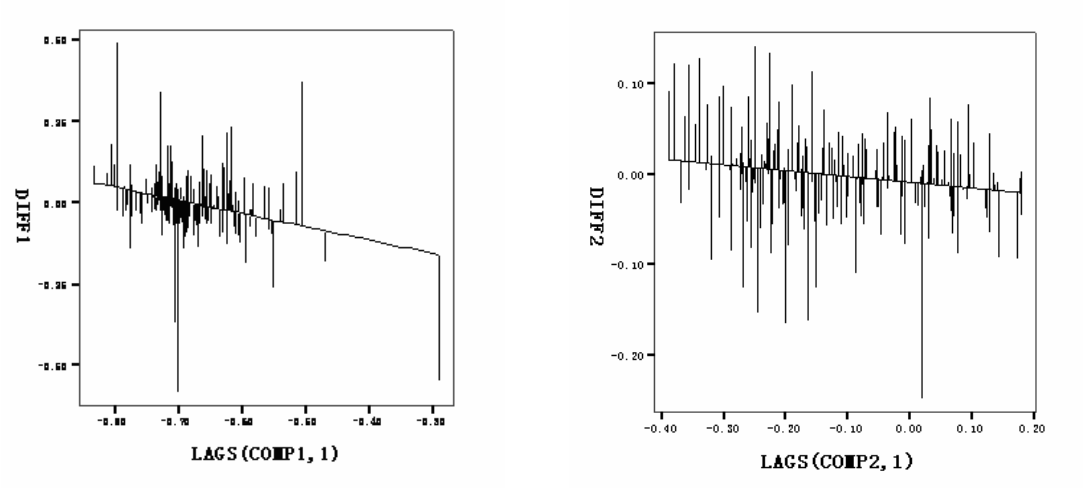
Again, βA is not significantly different from 0, and βH is barely significant at 10 percent. This supports our previous finding that βA has no explanatory power for Chinese stock price discount

In addition, we compared realized return rate, mean value and variance between H share and A share. Naturally we would imagine if price discount is due to the higher expected returns H share investors have, the realized returns of H shares would also be higher than those of A shares in our results. We found that during our examination period 2004 to 2007, 16 companies realized H share mean returns higher than their realized A share returns, it cast very little evidence that required return rate differentiation might work for Chinese stock market.

Finally, our measurements show that the forecast power over realized stock return is consistent with presence of time varying risk premiums If H share price discount reflect different H share investors' and A share investors' required returns, they may be able to forecast differences between realized H share and A share returns. Thus, we could see a positive correlation between the H share price discount at time t and the realized difference between H share and A share return from t to t+1.

The results are partly supportive of the association between lagged H share price discount and returns.

Chart 6.3 regression of lag discount rate on return difference between A and H share (company 1 and company 2)



Supplement test offer some evidence that IAPM might work in Chinese stock market.

7. Further discussion and Conclusion

7.1 Behaviour of large shareholders of the dual-listed companies

In the past few years it is observed that large shareholders of dual-listed companies are benefiting from the pricing difference between A and H shares via the sell-out-buy-in mechanism: the large (and effectively controlling) shareholders issue new A shares via a placement to the public market at a discount that is attractive to the outside investors, and purchase their own shares from the H share market to retain the effective control. As a result of the significant discount of H shares to A shares, the large holders realise a profit without losing control of the company. The very party hurt here are the small investors of the company's A shares which are diluted.

Currently there is no relevant regulation in China to prevent such mechanisms, and given the big gap between H and A shares it seems wise for investors to get hold of the H shares of the dual-listed companies if it is possible. On the other hand the regulators should be considering introducing new articles to ensure the market is a fair one. A possible solution would be to set the rule such that for a given period of time after A share placement / Dual-listing of shares at the same time, the large shareholders of the company cannot increase their holding in the H share market but only in the A share market.

7.2 Conclusion

In this thesis, we employ several concepts from the finance literature to study the nature and impact of international investment barriers on the Chinese / Hong Kong stock markets.

Looking into the Chinese H share price discount phenomena, we found that historical betas of both A and H share in respect to their local stock market indices do not have a significant effect on stock price. One explanation is that Chinese market is generally viewed as an inefficient market and information from beta is not very useful in the Chinese case.

Our findings support the diversification theory, Beta coefficients of H share in respect to MSCI index, which represents H shares' diversification value in foreign investors perspective, are significantly different from 0 in both sample period, proving that less diversification value of stock will bring down its share price.

Another two risk exposure factors, currency and bond yield rate ratio, both exhibit differently in different sample period, are able to explain H share price discount, this is in line with our hypothesis.

We should admit however, unlike integrated stock markets, as a result of the unique Chinese segmentation and special stock market mechanism, as well as the ownership restrictions therein; supply & demand, company size, liquidity and different perspective toward firm's development potential all have substantial power to explain the Chinese A/H share price discrepancy phenomenon.

From supplement model fitness test, required return rates from two groups of investors, originated from expected excess return over individual equilibrium portfolio could explain price discount in Chinese stock market, which could in turn partially prove that conventional International Asset Pricing model work in Chinese stock market.

In contrast to Pekka T. Hietala's findings from his equilibrium model, that price premium (discount) is mostly determined by one type of investors and that the other party should passively accept, our finding implies that H share's discount is the joint effect made by both Chinese domestic investors and international investors. The discount on H share prices is caused by its unattractive low diversification value, and further exaggerated by the overpriced A share as a result of scarcity of investment opportunity in china mainland.

Our results indicate that for future valuation of A share and H share, we should refer to investors equilibrium return rate, risk exposure to market location, liquidity, supply elastic and should have different valuation approach of two types of stocks issued by the same company.

The highly significant intercept term indicates that other variables may have added explanatory power. For further study, we reckon choosing a longer study period with more sample company will be useful for more precise studies; factors such as political risk and event study could also be taken into consideration to improve the model.

8. References

- Adler, Michael and Bernard Dumas, 1983, Inter national portfolio choice and corporate finance: A synthesis, Journal of Finance 38, 925-984
- Amihud, Yakov and Haim Mendelson, 1986, Asset pricing and the bid-ask spread, Journal of Financial Economics 17, 223-247.
- Bailey, Warren and Julapa Jagtiani, 1994, Foreign ownership restrictions and stock prices in the Thai capital carket, Journal of Financial Economics.
- Bailey, Warren, 1994, Risk and return on China's new stock markets: Some preliminary evidence, Pacific Basin Finance Journal.
- Bailey, Warren, Chung, Peter Y and Kang, Jun-koo, 1999, Foreign Ownership Restrictions and Equity Price Premiums: What Drives the Demand for Cross-Border Investments.
- Chakravarty, Sugato., Sarkar, Asani and Wu, Lifan, 1998, Information asymmetry, market segmentation and the pricing of cross-listed shares: theory and evidence from Chinese A and B shares, Journal of International Financial Markets, Institutions and Money Vol. 8
- Chan, K.C. and Nai-fu Chen, 1988, An unconditional asset-pricing test and the role of firm size as an instrumental variable for risk, Journal of Finance 43, 309-325.
- Chen, Nai-fu, Richard Roll and Stephen Ross, 1986, Economic forces and the stock market, Journal of Business 59, 451-471.
- Cutler, David M., James M. Poterba and Lawrence H. Summers, 1989, What moves stock prices, Journal of Portfolio Management, Spring, 1-12.
- Datar, V.T., Naik, N.Y., Radcliffe, R., 1998. Liquidity and stock returns: An alternative test. Journal of Financial Markets 1, 205-219.
- Domowitz, Ian., Glen, Jack and Madhavan, Ananth, 1997, Market Segmentation and Stock Prices: Evidence from an Emerging Market, Journal of Finance 3, 1059-1084
- Errunza, Vihang and Etienne Losq, 1985, International asset pricing under mild segmentation: Theory and test, Journal of Finance 40, 105-124.
- Eun, Cheol S. and S. Janakirmanan, 1986, A model of international asset pricing with constraint on foreign equity ownership, Journal of Finance 41, 897-914.
- Fama, Eugene F. and James MacBeth, 1973, Risk, return, and equilibrium: Empirical test, Journal of Political Economy 38, 607-636.
- Fama, Eugene F. and Kenneth R. French, 1992, The cross-section of expected stock returns, Journal of Finance, 427-465.
- Froot, K.A., Dabora, E.M., 1999. How are stock prices affected by the location of trade Journal of Financial Economics 53, 189-216. Gale, Douglas, 1992, Standard securities, Review of Financial Studies 59, 731-755.

- Harvey, Campell R., 1993, Predictable risk and returns in emerging markets, Unpublished working paper (Duke University, Durham, NC).
- Hietala, Pekka, 1989, Asset pricing in partially segmented markets: Evidence from the Finnish market, Journal of Finance 44, 697-718.
- Hirshleifer, David, 1988, Residual risk, trading costs, and commodity futures risk premia, Review of Financial Studies 1, 173--193.
- Lee, Charles, Andre Shleifer and Richard Thaler, 1991, Investor sentiment and the closed end fund puzzle, Journal of Finance 40, 75-110.
- Ma, Xinghai, 1995, Capital controls, market segmentation and stock prices: Evidence from the Chinese stock market, Pacific-Basin Finance Journal Vol4, 219-239
- Mullin, John, 1993, Emerging equity markets in the global economy, FRBNY Quarterly Review, Summer, 54-83.
- Melton, Robert C., 1973, An inter temporal capital asset pricing model, Econometrical 41, 867-887.
- Price, Margaret M., 1994, Emerging stock markets (McGraw-Hill, New York).
- Stultz, Rene, 1981, A model of international asset pricing, Journal of Financial Economics 9, 383-406.
- Stultz, Rene and Walter Wasserfallen, 1993, Foreign equity restrictions and shareholder wealth maximization: Theory and evidence, Unpublished working paper (Ohio State University, Columbus, OH).
- Weian, Wang and Na, Bai, 2004, An Empirical Study on Prices Difference Between A-share and H share, South China Financial Research Vol 19
- White, H., 1980, A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity, Econometrica 48, 149-170

9. Appendix

Table 1 Ownership restriction in other countries.

Country	Ownership restriction description
France	20% limitation on direct foreign investment (for companies outside the European Economic Area) for the mobile communications sector.
Korea	The limit of foreign shareholding for facilities-based service providers is 33%
Mexico	Foreign investment can be no greater than 49% except for cellular telephony services
New Zealand	No single foreign entity is permitted to own more than 49.9% of shares of Telecom New Zealand
Poland	Foreign ownership restriction for national and local telecommunication services,: shares of foreign equity in company cannot exceed 49%
Turkey	After the monopoly has ended in 2004 new licenses will require not less than 51% equity by Turkish citizens.

Source: Organization for Economic Cooperation and Development,2005

Table 2 Stocks Used in the Model

The table shows the companies we studied in this thesis.

Stock Name	A share code	H share code	Number of observations
NORTHEAST ELEC.DEV	**CH000585**	**HK0042**	**207**
TSINGTAO BREWERY	**CH600600**	**HK0168**	**207**
JIANGSU EXPRESSWAY	**CH600377**	**HK0177**	**207**
BEIREN PRINT.MCH.	**CH600860**	**HK0187**	**207**
SHENJI GP.KUMATO.	**CH600806**	**HK0300**	**207**
GUANGZHOU SHIP.INTL.	**CH600685**	**HK0317**	**207**
MAANSHAN IRON & STL.	**CH600808**	**HK0323**	**207**
ANGANG STEEL	**CH000898**	**HK0347**	**207**
JINGWEI TEXTILE MACH.	**CH000666**	**HK0350**	**207**
JIANGXI CPR.	**CH600362**	**HK0358**	**207**
CHINA PTL.& CHM.	**CH600028**	**HK0386**	**207**
SHN.EXPRESSWAY	**CH600548**	**HK0548**	**207**
NANJING PANDA ELEC.	**CH600775**	**HK0553**	**207**
CHINA EASTERN AIRL.	**CH600115**	**HK0670**	**207**
SHANDONG XINHUA PHARM.	**CH000756**	**HK0719**	**207**
ZTE	**CH000063**	**HK0763**	**155**
GUANGZHOU PHARM.	**CH600332**	**HK0874**	**207**
HUANENG POWER INTL.	**CH600011**	**HK0902**	**207**
ANHUI CONCH CMT.	**CH600585**	**HK914**	**207**
ANHUI EXPRESSWAY	**CH600012**	**HK995**	**207**
CHINA SOUTHERN AIRL	**CH600029**	**HK1055**	**207**
TIANJIN CAP.ENV.PROTC	**CH600874**	**HK1065**	**207**
HUADIAN POWER INTL	**CH600027**	**HK1071**	**146**
DONGFANG ELECT MER	**CH600875**	**HK1072**	**207**
CHINA SHIPPING DEV	**CH600026**	**HK1138**	**207**
YAH ZHOU COAL MINNING	**CH600188**	**HK1171**	**207**
SINOPEC SHAI	**CH600688**	**HK338**	**207**
SINOPEC YIZHENG	**CH600188**	**HK1033**	**207**

Table 3 Data Description

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
DR	5289	-0.8155	0.3860	-0.3448	0.2420
LNMC	5289	6.3931	14.3428	9.5086	1.3508
LNTR	4309	-5.3442	5.8782	0.0003	1.6502
SP	4765	0.0000	26.1494	1.4444	1.7130
IM	5289	-0.0058	0.0668	0.0024	0.0045
BetaA	5289	-0.1176	2.4043	0.9509	0.3226
BetaH	5289	-0.3322	2.0244	0.7890	0.3602
Beta MSCI	5289	-1.6233	3.8500	1.0127	0.6707
Currency Rate	5289	0.1207	0.1356	0.1252	0.0043
IR1	5289	0.0231	2.7061	1.6614	0.8742
IR2	5289	0.4971	2.9064	1.9618	0.7375
Valid N (listwise)	4309				

Table 4

We calculated Beta of A share respect to A share index, Beta of H share respect to H index, and Beta of H share respect to MSCI index separately for each company in each sample year.

	Beta A				**Beta H**				**Beta MSCI**			
Company	**2004**	**2005**	**2006**	**2007**	**2004**	**2005**	**2006**	**2007**	**2004**	**2005**	**2006**	**2007**
1	0.965	0.66	0.266	0.93	1.127	1.528	0.771	1.23	1.549	0.61	0.412	2.225
2	0.636	0.425	1.041	0.73	0.609	0.536	0.585	0.79	1.153	0.552	0.146	1.686
3	0.678	0.717	0.369	0.68	1.007	0.924	0.517	0.56	1.569	0.983	0.684	1.583
4	0.936	1.492	0.729	0.838	0.754	0.934	0.581	1.05	1.242	0.691	0.338	1.528
5	1.096	1.271	1.028	1.17	0.661	-0.34	0.665	1.19	1.436	-0.536	0.721	1.439
6	0.98	1.554	0.997	1.03	0.634	0.435	0.329	1.04	1.292	0.413	0.133	1.324
7	1.192	0.811	0.947	0.92	1.213	1.16	0.862	0.93	2.704	1.591	0.885	1.89
8	1.244	0.975	0.936	1.25	1.327	0.882	1.001	1.1	2.581	1.389	0.745	1.293
9	0.991	1.217	0.402	0.9	0.775	0.347	0.073	1.09	1.681	0.875	0.145	2.097
10	1.544	1.282	1.108	1.26	1.631	1.364	1.23	1.34	3.081	1.523	1.941	2.632
11	0.993	1.055	1.003	1.05	1.17	1.446	1.256	1.04	1.681	1.431	1.421	1.696
12	1.012	1.048	0.567	0.6	0.651	0.379	0.264	0.49	1.048	0.367	0.461	0.911
13	1.288	1.517	0.532	1.01	0.824	1.251	0.716	1.21	2.176	1.425	0.626	1.976
14	1.079	0.882	0.627	0.64	0.645	0.67	0.272	0.6	1.294	0.526	0.51	1.379
15	0.999	0.572	0.464	1.32	0.368	0.342	0.358	0.87	0.838	0.014	-0.122	1.298
16		0.79	0.371	0.21		0.808	0.652	0.86	-3.54	1.31	1.403	1.809
17	1.187	0.727	0.505	0.83	0.553	0.461	0.111	0.94	1.412	0.433	0.493	1.955
18	1.098	1.078	0.627	0.79	0.877	0.539	0.462	0.83	1.947	0.578	0.852	1.314
19	1.45	0.972	1.117	1.08	1.196	1.084	0.932	1.38	2.581	0.999	0.737	2.318
20	0.802	0.84	0.416	0.74	0.828	0.357	0.376	0.43	1.013	0.158	1.05	1.025
21	1.178	0.928	0.797	0.97	0.951	0.559	0.501	0.76	1.826	0.117	0.817	1.146
22	0.634	1.169	0.587	0.81	0.645	0.406	0.324	0.7	1.251	-0.416	-0.186	1.199
23		1.623	1.376	0.69		0.407	0.669	1.02		0.817	1.143	0.978
24	1.326	1.262	0.779	0.39	0.877	0.772	0.875	0.98	2.064	0.401	1.02	1.371
25	0.953	1.51	0.784	1.29	1.114	1.432	0.836	1.3	1.89	1.085	0.921	2.433
26	0.823	1.088	0.55	0.94	1.267	1.09	1.079	1.03	2.321	1.036	1.187	2.293
27	1.419	1.485	0.243	1.22	1.492	1.306	0.97	1.11	2.379	1.035	0.877	1.883
28	1.181	1.759	0.324	1.01	1.281	1.32	0.732	0.83	1.689	1.748	0.56	1.346

*Table 5 Unit root test**

Discount rate unit root test τ(=t) statistic			
Company	**τ**	**Critical Value**	**Unit root**
1	-4.761	-3.441	No
2	-2.617	-3.441	Yes
3	-3.274	-3.441	Yes
4	-2.686	-3.441	Yes
5	-4.612	-3.441	No
6	-2.059	-3.441	Yes
7	-2.062	-3.441	Yes
8	-1.84	-3.441	Yes
9	-1.864	-3.441	Yes
10	-1.869	-3.441	Yes
11	-2.034	-3.441	Yes
12	-1.689	-3.441	Yes
13	-3.729	-3.441	No
14	-2.979	-3.441	Yes
15	-3.067	-3.441	Yes
16	-3.082	-3.439	Yes
17	-1.966	-3.441	Yes
18	-1.616	-3.441	Yes
19	-3.024	-3.441	Yes
20	-2.096	-3.441	Yes
21	-1.751	-3.441	Yes
22	-2.144	-3.441	Yes
23	-2.499	-3.433	Yes
24	-2.441	-3.441	Yes
25	-1.971	-3.441	Yes
26	-2.517	-3.441	Yes
27	-1.587	-3.441	Yes
28	-1.607	-3.441	Yes

*The test is a unit root test in the discount rate of H share. Unit root is not rejected if the Dickey-Fuller statistics is smaller in absolute value than the critical value.

Table 6 Partial correlation test between marketing capital and discount rate

Correlations

Control Variables			**DR**	**LNMC**
LNTR & SP & IM & BetaA & BetaH & Beta MSCI & Currency Rate & IR1 & IR2	DR	Correlation	1	0.500
		Significance (2-tailed)	.	0.000
		df	0	4298
	LNMC	Correlation	0.500	1
		Significance (2-tailed)	0.000	.
		df	4298	0

Partial correlation test show marketing capital has positive effects on discount rate.

Table 7 Regression results of preliminary model

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**	**B**	**Std. Error**
1	(Constant)	-0.003	0.003		-0.793	0.428
	DIFFLNMC	-0.117	0.008	-0.238	-13.964	0.000
	DIFFLNTR	0.009	0.001	0.159	10.395	0.000
	DIFFSP	-0.007	0.001	-0.100	-5.910	0.000
	DIFFIMR	-0.743	0.734	-0.015	-1.013	0.311
	DIFFBR	-0.104	0.014	-0.124	-7.523	0.000
	DIFFBetaH	0.013	0.013	0.016	0.943	0.346
	DIFFMSCIA	-0.011	0.006	-0.034	-1.952	0.051
	Currency	5.658	2.491	0.035	2.271	0.023
	year04	0.000	0.002	0.001	2.230	0.035
	year05	0.002	0.002	0.023	3.542	0.003
	year06	0.004	0.002	0.036	2.016	0.044
	Comp1	0.005	0.006	0.014	0.824	0.410
	Comp2	-0.001	0.004	-0.005	-0.262	0.794
	Comp3	0.002	0.004	0.011	0.520	0.603
	Comp4	0.001	0.005	0.004	0.207	0.836
	Comp5	0.001	0.005	0.007	0.327	0.743
	Comp6	0.003	0.005	0.011	0.561	0.575
	Comp7	-0.001	0.005	-0.006	-0.311	0.756
	Comp8	-0.002	0.005	-0.007	-0.341	0.733
	Comp9	0.002	0.005	0.007	0.349	0.727
	Comp10	0.001	0.005	0.003	0.147	0.883
	Comp11	-0.001	0.005	-0.005	-0.221	0.825
	Comp12	0.002	0.005	0.009	0.467	0.641
	Comp13	0.001	0.005	0.003	0.169	0.865
	Comp14	0.001	0.005	0.006	0.286	0.775
	Comp15	0.000	0.004	0.002	0.076	0.939
	Comp16	-0.005	0.005	-0.021	-1.100	0.271
	Comp17	0.000	0.006	-0.001	-0.053	0.958
	Comp18	-0.002	0.004	-0.008	-0.402	0.687
	Comp19	-0.003	0.005	-0.013	-0.668	0.504
	Comp20	-0.002	0.005	-0.009	-0.449	0.654
	Comp21	-0.001	0.005	-0.004	-0.180	0.857
	Comp22	0.000	0.005	0.002	0.103	0.918
	Comp23	-0.003	0.006	-0.011	-0.588	0.557
	Comp24	0.002	0.005	0.007	0.379	0.705
	Comp25	0.001	0.004	0.002	0.119	0.906
	Comp26	0.000	0.004	0.000	0.019	0.985
	Comp27	0.000	0.004	-0.001	-0.066	0.947

a Dependent Variable: DIFFDR

Table 8 Model Summary

Table below show model summary for dependent variables. Regression equation

$$\Delta Discount\ rate_{it} = \alpha_{it} + \beta_1 \Delta Beta\ MSCI_{it} + \beta_2 \Delta Currency_{it} + \beta_3 \Delta LNTR_{it} + \beta_4 \Delta LNMC_{it} + \beta_5 \Delta SP_{it} + \beta_6 \Delta BR_{it} + \beta_7 D_t + \beta_8 D_t \Delta BetaMSCI_{it} + \beta_9 D_t \Delta Currency_{it} + \beta_{10} D_t \Delta LNTR_{it} + \beta_{11} D_t \Delta LNMC_{it} + \beta_{12} D_t \Delta SP_{it} + \beta_{13} D_t \Delta BR_{it} + \varepsilon_{it}$$

$where D_t = 0\ for\ the\ period\ 2007\ and\ 1\ for\ period\ 2004\ to\ 2006$

NORTHEAST ELEC.DEV

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.753	0.567	0.447	0.029

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

TSINGTAO BREWERY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.431	0.186	0.119	0.042

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

JIANGSU EXPRESSWAY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.631	0.398	0.349	0.035

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

BEIREN PRINT.MCH.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.706	0.498	0.411	0.025

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

SHENJI GP.KUMATO.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.564	0.318	0.259	0.035

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

GUANGZHOU SHIP.INTL.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.460	0.212	0.132	0.055

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

MAANSHAN IRON & STL.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.642	0.412	0.352	0.041

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

ANGANG STEEL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.548	0.300	0.212	0.052

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

JINGWEI TEXTILE MACH.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.741	0.549	0.494	0.027

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

JIANGXI CPR.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.367	0.134	0.048	0.039

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

CHINA PTL.& CHM.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.393	0.154	0.081	0.035

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

SHN.EXPRESSWAY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.690	0.476	0.425	0.035

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

NANJING PANDA ELEC.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.547	0.299	0.226	0.026

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

CHINA EASTERN AIRL.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.530	0.281	0.217	0.028

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

SHANDONG XINHUA PHARM.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.693	0.480	0.439	0.018

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

ZTE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.358	0.128	0.030	0.046

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

GUANGZHOU PHARM.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.630	0.396	0.256	0.036

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

HUANENG POWER INTL.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.663	0.440	0.396	0.034

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

ANHUI CONCH CMT.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.408	0.166	0.080	0.052

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

ANHUI EXPRESSWAY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.562	0.316	0.245	0.041

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

CHINA SOUTHERN AIRL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.406	0.165	0.093	0.041

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

TIANJIN CAP.ENV.PROTC

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.644	0.415	0.352	0.034

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

HUADIAN POWER INTL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.667	0.445	0.329	0.046

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

DONGFANG ELECT MER

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.470	0.221	0.137	0.052

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

CHINA SHIPPING DEV

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.386	0.149	0.077	0.052

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

YAH ZHOU COAL MINNING

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.490	0.241	0.180	0.043

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

SINOPEC SHAI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.477	0.227	0.165	0.034

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMS

SINOPEC YIZHENG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.499	0.249	0.190	0.025

Predictors: (Constant), Currency, DIFFSP, DIFFBetaMSCI,

Table 9 Regression results

NORTHEAST ELEC.DEV

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	0.015	0.006		2.586	0.013
DIFFLNMC	-0.122	0.046	-0.269	-2.647	0.011
DIFFLNTR	0.021	0.004	0.626	4.961	0.000
DIFFSP	0.286	0.222	0.130	1.288	0.204
DIFFBR	-0.552	0.126	-0.446	-4.397	0.000
Currency	-8.454	18.158	-0.050	-0.466	0.644
Y0406	-0.011	0.015	-0.128	-0.736	0.465
DDIFFLNM	-0.087	0.337	-0.045	-0.259	0.796
DDIFFLNtr	-0.019	0.008	-0.319	-2.356	0.023
DDIFFSP	-258.531	994.884	-0.035	-0.260	0.796
DDIFFCUR	5.603	71.643	0.015	0.078	0.938
DDIFFBR	0.827	2.046	0.056	0.404	0.688
DIFFBetaM	-0.025	0.017	-0.153	-1.486	0.144
DDIFFMSC	0.033	0.060	0.060	0.544	0.589

Dependent Variable: DIFFDR

TSINGTAO BREWERY

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	-0.016	0.009		-1.712	0.089
DIFFLNMC	-0.256	0.104	-0.274	-2.467	0.015
DIFFLNTR	0.033	0.012	0.547	2.744	0.007
DIFFSP	0.516	0.202	1.388	2.554	0.012
DIFFBR	-0.278	0.195	-0.407	-1.429	0.155
Currency	54.114	26.281	0.326	2.059	0.041
Y0406	0.013	0.010	0.133	1.358	0.176
DDIFFLNM	0.283	0.145	0.204	1.952	0.053
DDIFFLNtr	-0.026	0.013	-0.409	-2.059	0.041
DDIFFSP	-0.505	0.204	-1.347	-2.479	0.014
DDIFFCUR	-53.634	29.707	-0.279	-1.805	0.073
DDIFFBR	0.185	0.202	0.254	0.914	0.362
DIFFBetaM	0.166	0.068	0.345	2.450	0.015
DDIFFMSC	-0.284	0.081	-0.485	-3.517	0.001

Dependent Variable: DIFFDR

JIANGSU EXPRESSWAY

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.020	0.007		2.801	0.006
	DIFFLNMC	-0.745	0.114	-0.652	-6.551	0.000
	DIFFLNTR	0.025	0.009	0.429	2.750	0.007
	DIFFSP	-0.391	0.343	-0.270	-1.141	0.256
	DIFFBR	-0.543	0.157	-0.813	-3.463	0.001
	Currency	-10.727	22.011	-0.061	-0.487	0.627
	Y0406	-0.015	0.008	-0.156	-1.939	0.054
	DDIFFLNM	0.410	0.156	0.241	2.624	0.010
	DDIFFLNtr	-0.023	0.010	-0.351	-2.299	0.023
	DDIFFSP	0.388	0.355	0.257	1.091	0.277
	DDIFFCUR	7.872	25.503	0.038	0.309	0.758
	DDIFFBR	0.567	0.164	0.798	3.467	0.001
	DIFFBetaM	-0.002	0.070	-0.003	-0.023	0.982
	DDIFFMSC	0.049	0.080	0.081	0.608	0.544

Dependent Variable: DIFFDR

BEIREN PRINT.MCH.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.012	0.005		2.196	0.031
	DIFFLNMC	-0.167	0.046	-0.375	-3.625	0.001
	DIFFLNTR	0.021	0.004	0.664	5.473	0.000
	DIFFSP	-0.021	0.065	-0.027	-0.318	0.752
	DIFFBR	-0.448	0.115	-0.356	-3.904	0.000
	Currency	-11.851	15.977	-0.094	-0.742	0.461
	Y0406	-0.011	0.007	-0.171	-1.645	0.104
	DDIFFLNM	-0.112	0.089	-0.125	-1.269	0.208
	DDIFFLNtr	-0.017	0.005	-0.394	-3.247	0.002
	DDIFFSP	1.77754E+13	3.71161E+13	0.0401	0.4789	0.6334
	DDIFFCUR	16.475	22.816	0.098	0.722	0.473
	DDIFFBR	-0.286	0.579	-0.042	-0.494	0.623
	DIFFBetaM	-0.026	0.022	-0.111	-1.212	0.229
	DDIFFMSC	0.100	0.065	0.156	1.537	0.128

Dependent Variable: DIFFDR

SHENJI GP.KUMATO.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.024	0.008		2.933	0.004
	DIFFLNMC	-0.332	0.062	-0.569	-5.388	0.000
	DIFFLNTR	0.002	0.010	0.050	0.201	0.841
	DIFFSP	0.014	0.059	0.017	0.237	0.813
	DIFFBR	-0.938	0.166	-1.180	-5.652	0.000
	Currency	-5.707	23.217	-0.039	-0.246	0.806
	Y0406	-0.020	0.009	-0.208	-2.256	0.026
	DDIFFLNM	0.141	0.082	0.177	1.725	0.087
	DDIFFLNtr	0.003	0.010	0.070	0.285	0.776
	DDIFFSP	-0.298	0.383	-0.054	-0.778	0.438
	DDIFFCUR	-5.263	26.045	-0.031	-0.202	0.840
	DDIFFBR	1.002	0.177	1.136	5.660	0.000
	DIFFBetaM	0.019	0.026	0.069	0.724	0.470
	DDIFFMSC	-0.013	0.038	-0.033	-0.344	0.732

Dependent Variable: DIFFDR

SHENJI GP.KUMATO.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.001	0.012		0.046	0.963
	DIFFLNMC	-0.015	0.103	-0.018	-0.142	0.888
	DIFFLNTR	0.045	0.016	0.543	2.777	0.006
	DIFFSP	0.080	0.082	0.101	0.976	0.331
	DIFFBR	-0.655	0.253	-0.445	-2.586	0.011
	Currency	6.445	34.519	0.029	0.187	0.852
	Y0406	0.008	0.013	0.063	0.591	0.556
	DDIFFLNM	-0.242	0.134	-0.228	-1.814	0.072
	DDIFFLNtr	-0.029	0.018	-0.318	-1.649	0.102
	DDIFFSP	-0.055	0.141	-0.038	-0.391	0.696
	DDIFFCUR	-30.352	40.077	-0.119	-0.757	0.450
	DDIFFBR	0.589	0.289	0.333	2.035	0.044
	DIFFBetaM	-0.041	0.048	-0.104	-0.868	0.387
	DDIFFMSC	0.018	0.065	0.032	0.278	0.782

Dependent Variable: DIFFDR

MAANSHAN IRON & STL.

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	0.010	0.009		1.122	0.264
DIFFLNMC	-0.500	0.081	-0.569	-6.135	0.000
DIFFLNTR	0.026	0.009	0.365	2.884	0.005
DIFFSP	0.052	0.133	0.306	0.390	0.697
DIFFBR	-0.789	0.180	-0.623	-4.389	0.000
Currency	11.875	26.467	0.068	0.449	0.654
Y0406	-0.012	0.010	-0.108	-1.218	0.225
DDIFFLNM	0.202	0.127	0.143	1.587	0.115
DDIFFLNtr	-0.011	0.011	-0.128	-0.992	0.323
DDIFFSP	-0.052	0.134	-0.304	-0.387	0.699
DDIFFCUR	6.743	30.068	0.034	0.224	0.823
DDIFFBR	0.706	0.209	0.465	3.380	0.001
DIFFBetaM	0.026	0.058	0.053	0.447	0.656
DDIFFMSC	-0.086	0.074	-0.135	-1.172	0.243

Dependent Variable: DIFFDR

ANGANG STEEL

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	0.012	0.012		1.017	0.312
DIFFLNMC	-0.454	0.105	-0.682	-4.328	0.000
DIFFLNTR	-0.002	0.015	-0.022	-0.152	0.880
DIFFSP	-0.724	0.258	-1.414	-2.799	0.006
DIFFBR	-0.865	0.248	-0.357	-3.490	0.001
Currency	-47.606	33.556	-0.262	-1.419	0.159
Y0406	-0.008	0.014	-0.069	-0.608	0.545
DDIFFLNM	0.342	0.131	0.420	2.619	0.010
DDIFFLNtr	0.021	0.019	0.160	1.068	0.288
DDIFFSP	0.749	0.263	1.439	2.842	0.005
DDIFFCUR	48.067	38.461	0.235	1.250	0.214
DDIFFBR	0.420	0.678	0.056	0.620	0.537
DIFFBetaM	0.097	0.039	0.256	2.514	0.013
DDIFFMSC	-0.072	0.080	-0.093	-0.905	0.368

Dependent Variable: DIFFDR

JINGWEI TEXTILE MACH.

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	0.014	0.006		2.301	0.023
DIFFLNMC	-0.073	0.052	-0.125	-1.386	0.168
DIFFLNTR	0.019	0.006	0.323	2.957	0.004
DIFFSP	-0.092	0.271	-0.070	-0.339	0.735
DIFFBR	-0.692	0.124	-0.470	-5.577	0.000
Currency	-2.110	16.983	-0.017	-0.124	0.901
Y0406	-0.013	0.007	-0.167	-1.972	0.051
DDIFFLNM	-0.480	0.080	-0.525	-6.005	0.000
DDIFFLNtr	-0.013	0.008	-0.182	-1.636	0.105
DDIFFSP	0.195	0.287	0.141	0.678	0.499
DDIFFCUR	4.310	19.383	0.031	0.222	0.824
DDIFFBR	0.627	0.233	0.208	2.684	0.008
DIFFBetaM	-0.066	0.029	-0.185	-2.281	0.025
DDIFFMSC	0.062	0.054	0.091	1.162	0.248

Dependent Variable: DIFFDR

JIANGXI CPR.

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	-0.001	0.008		-0.075	0.940
DIFFLNMC	-0.111	0.082	-0.184	-1.352	0.179
DIFFLNTR	-0.004	0.014	-0.048	-0.260	0.795
DIFFSP	0.004	0.035	0.042	0.107	0.915
DIFFBR	-0.378	0.205	-0.381	-1.849	0.067
Currency	18.972	25.102	0.140	0.756	0.451
Y0406	-0.001	0.009	-0.017	-0.150	0.881
DDIFFLNM	-0.059	0.108	-0.070	-0.545	0.587
DDIFFLNtr	0.006	0.016	0.070	0.378	0.706
DDIFFSP	-0.001	0.036	-0.010	-0.026	0.980
DDIFFCUR	4.617	28.605	0.030	0.161	0.872
DDIFFBR	0.239	0.227	0.201	1.054	0.294
DIFFBetaM	0.009	0.035	0.030	0.245	0.807
DDIFFMSC	-0.081	0.049	-0.208	-1.646	0.102

Dependent Variable: -0.0061118 0.00695237 -0.879102808 0.380751642

CHINA PTL.& CHM.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.006	0.007		-0.879	0.381
	DIFFLNMC	-0.054	0.027	-0.478	-1.997	0.048
	DIFFLNTR	0.022	0.008	0.443	2.621	0.010
	DIFFSP	-0.003	0.002	-0.277	-1.689	0.093
	DIFFBR	-0.090	0.159	-0.127	-0.567	0.572
	Currency	16.922	22.275	0.126	0.760	0.449
	Y0406	0.005	0.008	0.057	0.602	0.548
	DDIFFLNM	0.032	0.031	0.210	1.029	0.305
	DDIFFLNtr	-0.017	0.009	-0.303	-1.825	0.070
	DDIFFSP	-0.010	0.008	-0.120	-1.221	0.224
	DDIFFCUR	-2.347	25.306	-0.015	-0.093	0.926
	DDIFFBR	-0.015	0.171	-0.020	-0.091	0.928
	DIFFBetaM	-0.016	0.057	-0.043	-0.275	0.784
	DDIFFMSC	-0.024	0.065	-0.057	-0.367	0.714

Dependent Variable: DIFFDR

SHN.EXPRESSWAY

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.011	0.006		2.041	0.043
	DIFFLNMC	-0.032	0.053	-0.077	-0.600	0.549
	DIFFLNTR	0.015	0.005	0.497	2.835	0.005
	DIFFSP	0.009	0.031	0.123	0.281	0.779
	DIFFBR	-0.543	0.116	-1.035	-4.682	0.000
	Currency	-9.077	16.404	-0.069	-0.553	0.581
	Y0406	-0.011	0.006	-0.170	-1.706	0.091
	DDIFFLNM	-0.062	0.067	-0.116	-0.926	0.356
	DDIFFLNtr	-0.011	0.006	-0.308	-1.798	0.075
	DDIFFSP	-0.011	0.032	-0.152	-0.348	0.728
	DDIFFCUR	14.749	21.654	0.082	0.681	0.497
	DDIFFBR	0.546	0.124	0.933	4.391	0.000
	DIFFBetaM	-0.034	0.017	-0.204	-2.062	0.041
	DDIFFMSC	0.024	0.027	0.089	0.908	0.366

Dependent Variable: DIFFDR

NANJING PANDA ELEC.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.011	0.006		2.041	0.043
	DIFFLNMC	-0.032	0.053	-0.077	-0.600	0.549
	DIFFLNTR	0.015	0.005	0.497	2.835	0.005
	DIFFSP	0.009	0.031	0.123	0.281	0.779
	DIFFBR	-0.543	0.116	-1.035	-4.682	0.000
	Currency	-9.077	16.404	-0.069	-0.553	0.581
	Y0406	-0.011	0.006	-0.170	-1.706	0.091
	DDIFFLNM	-0.062	0.067	-0.116	-0.926	0.356
	DDIFFLNTF	-0.011	0.006	-0.308	-1.798	0.075
	DDIFFSP	-0.011	0.032	-0.152	-0.348	0.728
	DDIFFCUR	14.749	21.654	0.082	0.681	0.497
	DDIFFBR	0.546	0.124	0.933	4.391	0.000
	DIFFBetaM	-0.034	0.017	-0.204	-2.062	0.041
	DDIFFMSC	0.024	0.027	0.089	0.908	0.366

Dependent Variable: DIFFDR

CHINA EASTERN AIRL.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.009	0.009		0.970	0.334
	DIFFLNMC	-0.156	0.057	-0.314	-2.760	0.007
	DIFFLNTR	0.018	0.006	0.497	3.057	0.003
	DIFFSP	0.017	0.020	0.257	0.834	0.406
	DIFFBR	-0.279	0.221	-0.579	-1.265	0.208
	Currency	43.936	31.194	0.365	1.408	0.161
	Y0406	-0.008	0.009	-0.094	-0.860	0.391
	DDIFFLNM	-0.097	0.079	-0.129	-1.228	0.221
	DDIFFLNTF	-0.010	0.007	-0.239	-1.514	0.132
	DDIFFSP	-0.016	0.021	-0.229	-0.740	0.460
	DDIFFCUR	-41.937	32.531	-0.324	-1.289	0.199
	DDIFFBR	0.259	0.223	0.522	1.161	0.247
	DIFFBetaM	-0.058	0.035	-0.203	-1.657	0.100
	DDIFFMSC	0.032	0.048	0.067	0.655	0.514

Dependent Variable: DIFFDR

SHANDONG XINHUA PHARM.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.012	0.004		3.298	0.001
	DIFFLNMC	-0.164	0.031	-0.391	-5.228	0.000
	DIFFLNTR	0.017	0.004	0.616	4.649	0.000
	DIFFSP	0.066	0.046	0.089	1.418	0.158
	DIFFBR	-0.456	0.079	-1.231	-5.765	0.000
	Currency	-5.581	11.275	-0.057	-0.495	0.621
	Y0406	-0.012	0.004	-0.222	-2.962	0.004
	DDIFFLNM(	-0.093	0.052	-0.132	-1.808	0.072
	DDIFFLNTF	-0.016	0.004	-0.505	-3.882	0.000
	DDIFFSP	-314.986	338.511	-0.054	-0.931	0.354
	DDIFFCUR	3.784	13.113	0.033	0.289	0.773
	DDIFFBR	0.438	0.082	1.111	5.316	0.000
	DIFFBetaM	-0.053	0.016	-0.253	-3.371	0.001
	DDIFFMSC	0.060	0.025	0.176	2.376	0.019

Dependent Variable: DIFFDR

ZTE

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.003	0.009		-0.349	0.728
	DIFFLNMC	-0.342	0.127	-0.379	-2.681	0.008
	DIFFLNTR	0.005	0.009	0.065	0.492	0.623
	DIFFSP	-0.041	0.310	-0.012	-0.131	0.896
	DIFFBR	-0.018	1.019	-0.019	-0.017	0.986
	Currency	3.048	29.203	0.021	0.104	0.917
	Y0406	0.002	0.011	0.019	0.164	0.870
	DDIFFLNM(	0.137	0.168	0.117	0.813	0.418
	DDIFFLNTF	0.012	0.013	0.115	0.877	0.382
	DDIFFCUR	2.327	32.944	0.014	0.071	0.944
	DDIFFBR	0.077	1.024	0.081	0.075	0.941
	DIFFBetaM	-0.013	0.060	-0.034	-0.215	0.830
	DDIFFMSC	0.039	0.076	0.082	0.516	0.607

Dependent Variable: DIFFDR

GUANGZHOU PHARM.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.008	0.008		-1.052	0.297
	DIFFLNMC	0.034	0.092	0.046	0.366	0.716
	DIFFLNTR	0.024	0.006	0.534	4.156	0.000
	DIFFSP	-0.025	0.128	-0.026	-0.196	0.845
	DIFFBR	-0.232	0.165	-0.161	-1.404	0.166
	Currency	37.751	22.671	0.198	1.665	0.101
	Y0406	0.012	0.012	0.135	0.958	0.342
	DDIFFLNM	0.019	0.221	0.011	0.086	0.932
	DDIFFLNTF	-0.008	0.012	-0.090	-0.654	0.516
	DDIFFSP	-0.028	0.249	-0.017	-0.111	0.912
	DDIFFCUR	-104.359	52.709	-0.282	-1.980	0.053
	DDIFFBR	1.339	1.536	0.107	0.872	0.387
	DIFFBetaM	0.062	0.039	0.185	1.597	0.116
	DDIFFMSC	0.037	0.144	0.030	0.256	0.799

Dependent Variable: DIFFDR

HUANENG POWER INTL.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.006	0.007		0.850	0.397
	DIFFLNMC	-0.515	0.094	-0.523	-5.507	0.000
	DIFFLNTR	0.022	0.010	0.339	2.130	0.035
	DIFFSP	0.409	0.517	2.862	0.791	0.430
	DIFFBR	-0.597	0.156	-0.869	-3.831	0.000
	Currency	-10.798	22.608	-0.065	-0.478	0.634
	Y0406	-0.006	0.008	-0.055	-0.692	0.490
	DDIFFLNM	-0.130	0.123	-0.095	-1.049	0.296
	DDIFFLNTF	-0.019	0.011	-0.273	-1.732	0.085
	DDIFFSP	-0.412	0.518	-2.882	-0.796	0.427
	DDIFFCUR	12.999	25.209	0.068	0.516	0.607
	DDIFFBR	0.621	0.162	0.850	3.834	0.000
	DIFFBetaM	0.029	0.066	0.056	0.435	0.664
	DDIFFMSC	0.021	0.075	0.035	0.279	0.780

Dependent Variable: DIFFDR

ANHUI CONCH CMT.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.011	0.011		0.973	0.332
	DIFFLNMC	-0.150	0.106	-0.186	-1.416	0.159
	DIFFLNTR	-0.006	0.014	-0.074	-0.420	0.675
	DIFFSP	-0.101	0.097	-0.116	-1.038	0.301
	DIFFBR	-0.995	0.238	-0.750	-4.176	0.000
	Currency	10.762	33.320	0.058	0.323	0.747
	Y0406	-0.016	0.012	-0.139	-1.292	0.199
	DDIFFLNM	-0.016	0.146	-0.014	-0.112	0.911
	DDIFFLNTF	0.012	0.016	0.131	0.748	0.456
	DDIFFSP	0.111	0.161	0.073	0.690	0.492
	DDIFFCUR	-0.752	37.583	-0.004	-0.020	0.984
	DDIFFBR	0.941	0.273	0.592	3.444	0.001
	DIFFBetaM	-0.016	0.046	-0.043	-0.344	0.731
	DDIFFMSC	-0.033	0.064	-0.064	-0.517	0.606

Dependent Variable: DIFFDR

ANHUI EXPRESSWAY

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.013	0.009		-1.484	0.140
	DIFFLNMC	-0.294	0.145	-0.252	-2.027	0.045
	DIFFLNTR	0.017	0.008	0.286	2.074	0.040
	DIFFSP	-0.646	0.280	-0.373	-2.310	0.023
	DIFFBR	-0.418	0.193	-0.357	-2.162	0.033
	Currency	56.716	25.730	0.350	2.204	0.029
	Y0406	0.015	0.010	0.148	1.498	0.137
	DDIFFLNM	-0.007	0.196	-0.004	-0.034	0.973
	DDIFFLNTF	-0.001	0.010	-0.013	-0.096	0.924
	DDIFFSP	0.512	0.318	0.254	1.612	0.109
	DDIFFCUR	-60.055	29.315	-0.324	-2.049	0.043
	DDIFFBR	0.462	0.220	0.329	2.100	0.038
	DIFFBetaM	0.042	0.096	0.072	0.442	0.659
	DDIFFMSC	-0.080	0.109	-0.118	-0.736	0.463

Dependent Variable: DIFFDR

CHINA SOUTHERN AIRL

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.001	0.011		-0.121	0.904
	DIFFLNMC	-0.175	0.076	-0.263	-2.306	0.022
	DIFFLNTR	0.009	0.011	0.142	0.792	0.430
	DIFFSP	-0.048	0.061	-0.084	-0.790	0.430
	DIFFBR	-0.310	0.187	-0.369	-1.654	0.100
	Currency	6.364	28.093	0.041	0.227	0.821
	Y0406	0.002	0.012	0.017	0.155	0.877
	DDIFFLNM	-0.025	0.108	-0.025	-0.233	0.816
	DDIFFLNTF	-0.005	0.012	-0.078	-0.438	0.662
	DDIFFSP	-0.043	0.093	-0.047	-0.464	0.643
	DDIFFCUR	-5.358	31.162	-0.030	-0.172	0.864
	DDIFFBR	0.240	0.201	0.258	1.196	0.233
	DIFFBetaM	0.020	0.036	0.059	0.554	0.580
	DDIFFMSC	-0.094	0.051	-0.199	-1.850	0.066

Dependent Variable: DIFFDR

TIANJIN CAP.ENV.PROTC

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.014	0.007		2.011	0.047
	DIFFLNMC	-0.384	0.068	-0.552	-5.612	0.000
	DIFFLNTR	0.021	0.008	0.427	2.610	0.010
	DIFFSP	0.198	0.113	0.787	1.757	0.081
	DIFFBR	-0.384	0.154	-0.365	-2.497	0.014
	Currency	-0.518	21.496	-0.004	-0.024	0.981
	Y0406	-0.015	0.008	-0.167	-1.828	0.070
	DDIFFLNM	-0.049	0.101	-0.047	-0.484	0.630
	DDIFFLNTF	-0.014	0.009	-0.260	-1.593	0.114
	DDIFFSP	-0.192	0.114	-0.750	-1.678	0.096
	DDIFFCUR	-12.922	24.382	-0.080	-0.530	0.597
	DDIFFBR	0.406	0.179	0.319	2.270	0.025
	DIFFBetaM	-0.034	0.030	-0.100	-1.131	0.260
	DDIFFMSC	-0.031	0.056	-0.049	-0.548	0.585

Dependent Variable: DIFFDR

HUADIAN POWER INTL

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.002	0.009		0.231	0.818
	DIFFLNMC	-0.317	0.087	-0.386	-3.638	0.001
	DIFFLNTR	0.009	0.011	0.131	0.852	0.398
	DIFFSP	0.009	0.295	0.008	0.031	0.976
	DIFFBR	-0.392	0.209	-0.194	-1.880	0.065
	Currency	3.055	29.376	0.015	0.104	0.918
	Y0406	-0.011	0.015	-0.096	-0.746	0.458
	DDIFFLNM(	-0.030	0.259	-0.014	-0.117	0.907
	DDIFFLNtr	0.019	0.015	0.197	1.306	0.196
	DDIFFSP	0.050	0.324	0.039	0.155	0.877
	DDIFFCUR	96.886	41.540	0.342	2.332	0.023
	DDIFFBR	0.784	1.585	0.057	0.494	0.623
	DIFFBetaM	0.026	0.049	0.061	0.542	0.590
	DDIFFMSC	-0.191	0.104	-0.203	-1.829	0.072

Dependent Variable: DIFFDR

DONGFANG ELECT MER

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.016	0.011		1.397	0.165
	DIFFLNMC	-0.317	0.120	-0.428	-2.644	0.009
	DIFFLNTR	0.044	0.018	0.572	2.426	0.017
	DIFFSP	-0.174	0.086	-0.556	-2.029	0.045
	DIFFBR	-0.652	0.246	-0.479	-2.656	0.009
	Currency	-25.354	37.016	-0.135	-0.685	0.495
	Y0406	-0.013	0.013	-0.109	-1.065	0.289
	DDIFFLNM(	0.159	0.154	0.135	1.034	0.303
	DDIFFLNTF	-0.046	0.020	-0.533	-2.303	0.023
	DDIFFSP	0.140	0.092	0.381	1.528	0.129
	DDIFFCUR	21.855	40.998	0.102	0.533	0.595
	DDIFFBR	0.516	0.280	0.316	1.846	0.067
	DIFFBetaM	-0.020	0.045	-0.055	-0.445	0.657
	DDIFFMSC	0.001	0.061	0.002	0.015	0.988

Dependent Variable: DIFFDR

CHINA SHIPPING DEV

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.014	0.012		-1.183	0.239
	DIFFLNMC	0.084	0.157	0.083	0.534	0.594
	DIFFLNTR	0.038	0.018	0.455	2.101	0.037
	DIFFSP	0.462	0.214	1.968	2.156	0.033
	DIFFBR	-0.427	0.277	-0.402	-1.542	0.125
	Currency	9.709	34.120	0.050	0.285	0.776
	Y0406	0.016	0.013	0.134	1.275	0.204
	DDIFFLNM	-0.277	0.185	-0.216	-1.501	0.136
	DDIFFLNTF	-0.028	0.020	-0.311	-1.438	0.152
	DDIFFSP	-0.457	0.215	-1.943	-2.128	0.035
	DDIFFCUR	12.478	38.221	0.056	0.326	0.745
	DDIFFBR	0.387	0.291	0.328	1.329	0.186
	DIFFBetaM	0.028	0.070	0.061	0.404	0.687
	DDIFFMSC	-0.024	0.081	-0.044	-0.293	0.770

Dependent Variable: DIFFDR

YAH ZHOU COAL MINNING

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.007	0.009		0.712	0.477
	DIFFLNMC	-0.346	0.116	-0.357	-2.973	0.003
	DIFFLNTR	0.030	0.011	0.450	2.791	0.006
	DIFFSP	-0.070	0.036	-0.855	-1.972	0.050
	DIFFBR	-0.797	0.204	-1.083	-3.916	0.000
	Currency	44.551	26.485	0.249	1.682	0.094
	Y0406	-0.007	0.010	-0.066	-0.711	0.478
	DDIFFLNM	0.243	0.149	0.185	1.628	0.105
	DDIFFLNTF	-0.024	0.012	-0.313	-1.931	0.055
	DDIFFSP	0.070	0.036	0.838	1.927	0.056
	DDIFFCUR	-57.356	30.185	-0.278	-1.900	0.059
	DDIFFBR	0.700	0.213	0.894	3.290	0.001
	DIFFBetaM	0.045	0.062	0.104	0.730	0.467
	DDIFFMSC	-0.051	0.072	-0.102	-0.709	0.479

Dependent Variable: DIFFDR

SINOPEC SHAI

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	0.000	0.007		-0.050	0.960
	DIFFLNMC	-0.219	0.072	-0.322	-3.043	0.003
	DIFFLNTR	0.013	0.007	0.221	1.738	0.084
	DIFFSP	-0.056	0.127	-0.234	-0.439	0.661
	DIFFBR	-0.363	0.148	-0.484	-2.455	0.015
	Currency	10.481	23.055	0.076	0.455	0.650
	Y0406	0.001	0.008	0.012	0.122	0.903
	DDIFFLNM	0.023	0.101	0.025	0.233	0.816
	DDIFFLNTF	-0.012	0.009	-0.180	-1.414	0.159
	DDIFFSP	0.113	0.128	0.467	0.879	0.381
	DDIFFCUR	-26.621	25.721	-0.167	-1.035	0.302
	DDIFFBR	0.320	0.160	0.384	1.998	0.047
	DIFFBetaM	0.013	0.039	0.042	0.329	0.742
	DDIFFMSC	0.043	0.047	0.116	0.905	0.367

Dependent Variable: DIFFDR

SINOPEC YIZHENG

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	-0.001	0.005		-0.144	0.886
	DIFFLNMC	-0.073	0.044	-0.167	-1.644	0.102
	DIFFLNTR	-0.006	0.006	-0.194	-1.082	0.281
	DIFFSP	0.015	0.038	0.410	0.395	0.693
	DIFFBR	-0.150	0.121	-0.428	-1.233	0.219
	Currency	-3.444	17.877	-0.032	-0.193	0.847
	Y0406	0.000	0.006	0.007	0.082	0.935
	DDIFFLNM	-0.148	0.060	-0.245	-2.451	0.015
	DDIFFLNTF	0.005	0.006	0.131	0.756	0.451
	DDIFFSP	-0.021	0.039	-0.552	-0.532	0.595
	DDIFFCUR	4.375	19.748	0.036	0.222	0.825
	DDIFFBR	0.097	0.124	0.269	0.784	0.434
	DIFFBetaM	-0.032	0.022	-0.171	-1.466	0.145
	DDIFFMSC	0.013	0.027	0.055	0.473	0.637

Dependent Variable: DIFFDR