

## Impact of the Issuance of A-shares on the Turnover of H-shares

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### Executive Summary

Some commentators have suggested that the issuance of A-shares may reduce the attractiveness of the H-share market. A number of tests have been conducted. All test results suggest that the issuance of A-shares either has no impact on or appears to raise the turnover of H-shares. Among other factors, this could be attributable to a number of reasons :

- the A and H-markets are segregated with separate groups of investors, and the issuance of A-shares has little direct impact on the turnover of H-shares; and
- the Hong Kong stock market has a longer history of development and is perceived to be more mature in various aspects. Therefore, the issuance of A-shares should not affect interest in the H-share market.

Meanwhile, the forthcoming launch of derivatives products on H-shares may help bring more liquidity to the H-share market.

Although the A and H-markets are segregated, there may be spillover effects of the issuance of A-shares so that the turnover of H-shares seems to increase. Factors underpinning these spillover effects include:

- the premium of issuing prices of A-shares over their H-share counterparts;
- increased visibility due to the issuance of A-shares; and
- a broadened investor base and enlarged market capitalisation.

### Introduction

With the rapid developments in the opening up of the Chinese economy, Mainland enterprises have been using Hong Kong as a fund-raising centre to raise capital from international stock markets<sup>2</sup>. As of the end of 2003, there were 93 overseas listings. Of these, 92 were listed in Hong Kong as H-shares<sup>3</sup>. Hong Kong appears to be a preferred place for overseas listing of Mainland enterprises, as it offers :

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<sup>2</sup> The role of Hong Kong as a fund-raising centre has been discussed in a previous research paper entitled "*IPO Activities in Hong Kong*" (Research Paper No. 10). The paper is downloadable from the SFC website <http://www.hksfc.org.hk/eng/statistics/html/index/index0.html>.

<sup>3</sup> H-share companies refer to companies incorporated in the PRC and approved by the CSRC for a listing in Hong Kong. Shares of these Chinese enterprises are listed on HKEx, subscribed for and traded in HKD or other currencies, and referred to as H-shares.

- access to foreign exchange;
- a broader investor base;
- international visibility;
- a sound legal and regulatory framework that is of international standard;
- a deep market with a wide product range and liquidity provided by institutional and retail as well as local and overseas investors;
- a critical mass of professionals and service-providers that adopt practices at international standard; and
- access to the rest of the world whilst benefiting from proximity to the Mainland.

Some of these factors, as discussed later, also underpin the fact that trading of H-shares continues to remain active even after the issuance of A-shares.

### **Mainland Enterprises Which Issued Both A-shares and H-shares**

Of the 92 H-share companies listed in Hong Kong, 29 also issued A-shares in the Mainland. All 29 companies issued H-shares before they issued A-shares. Other than differences in the currency of trading, the A-shares and H-shares offer the same entitlements with regard to issues like dividends and voting rights, and both have exactly the same RMB par values.

### **Data and Methodology**

Data is primarily sourced from information vendors. For A-shares, the issuance dates, issue prices and number of outstanding shares are collected from the SHSE and SZSE Monthly/Market Statistics. For H-shares, the listing date and number of outstanding shares are collected from HKEx.

### *Change in Turnover*

To examine the impact of the issuance of A-shares on the turnover of H-shares, a number of tests are carried out. First, the average daily turnover of H-shares before and after the issuance of their A-share counterparts up to a 6-month period is compared. Therefore, only companies with the issuance of A-shares at least 6 months after the listing of H-shares are included in the study, and the sample size is 20 companies.

A test period up to 6 months is selected in order to :

- focus on the issuing event only<sup>4</sup>;

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<sup>4</sup> Even though efforts have been dedicated to focusing on the impact of the issuing event, the issuance of A-shares may coincide with other incidents and their impacts on the turnover of H-shares cannot be isolated.

- minimize the possibility of incorporating such events as the release of earnings occurring during the year;
- ensure a sufficient sample size – if the test period is raised to one year, companies which issued A-shares at least one year after the listing of H-shares are included, leaving a sample of only 14 companies (less than half of the total number of companies which issue both A-shares and H-shares); and
- be in line with practices of similar studies<sup>5</sup>.

Therefore, the impact of the issuance of A-shares on the turnover of H-shares in excess of six months has not been tested.

### *Change in Turnover Relative to Overall Market Turnover*

Second, since the change in turnover of a company should be benchmarked against the change in overall market turnover, the change in turnover of a company is adjusted for the change in overall market turnover<sup>6</sup>.

### *Change in Liquidity Ratio*

Third, a change in turnover of a company could be attributable to a change in stock price and/or a change in volume. To eliminate price effect, changes in liquidity ratio<sup>7</sup> of H-shares before and after the issuance of A-shares are examined. An increase in liquidity ratio means an increase in the volume of shares traded relative to the number of shares issued, and vice versa. Thus, it reflects the trading activities of a stock after eliminating price effect.

### *Regression Analysis*

Fourth, if the issuance of A-shares has any impact on the turnover of H-shares, regression analysis is conducted to examine the significance of the issuing event. Two variables related to the issuing event, namely the premium of the issue prices of A-shares over their H-share counterparts and the number of A-shares issued, have been included.

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<sup>5</sup> Kumar and Saudagaran (2003) adopted a 100-day period in the study entitled “The Impact of International Listings on Liquidity: Evidence from the Indian Stock Market”. They pointed out that “*the choice of the length of the test period is a critical question where a balance between the length of the test period to estimate reliable parameters is weighted against the possibility that other events would affect the data and parameter estimates*”. Smith and Sofianos (1997) also applied a 6-month period in their study entitled “The Impact of an NYSE Listing on the Global Trading of Non-US Stocks”.

<sup>6</sup> The adjusted change in the turnover of a company is equal to the percentage change in the turnover of the company net of the percentage change in the overall market turnover. For example, if the turnover of a company increases by 10% whilst the overall market turnover over the same period increases by 6%, the adjusted change in the turnover of the company will be 4%.

<sup>7</sup> Liquidity ratio is a ratio of turnover of a company to its market capitalisation.

## Impact of the Issuance of A-shares on the Turnover of H-shares

### *Change in Turnover*

On average, turnover of the 20 H-shares appeared to increase after the issuance of A-shares. This observation applies across the board for up to a 6-month period after the issuance of A-shares (Table 1).

- On the first three days when A-shares were issued, for instance, the turnover of the H-share counterparts was 14% higher than the value on the three days before issuance<sup>8</sup>.
- For a one-month period after the issuance of A-shares, the average daily turnover of the H-shares was 20% higher than the level before the issuance.
- The rise in turnover appeared to persist even up to six months after the issuance of A-shares. As the percentage increase was somewhat smaller, the positive impact was less obvious. Nevertheless, at least, the issuance of A-shares did not have adverse impact on the turnover of H-shares.

<b>Change in Turnover Over the Period before and after the Issuance of A-shares</b>	<b>% Change in H-share Turnover</b>	<b>% Change in H-share Turnover - % Change in Market Turnover</b>
<b>three trading days</b>	14%	16%
<b>fifteen trading days</b>	21%	23%
<b>one calendar month</b>	20%	22%
<b>three calendar months</b>	11%	10%
<b>six calendar months</b>	5%	2%

Source: SFC Research

### *Change in Turnover Relative to Overall Market Turnover*

Changes in the turnover of the 20 H-shares should be benchmarked against changes in overall market turnover. Having adjusted for changes in the overall market turnover, turnover of the 20 H-shares still appeared to increase after the issuance of A-shares.

<sup>8</sup> The percentage changes are calculated by the average of the turnover before and after the issuance of A-shares, based on the following equation.

- The percentage change in turnover of H-shares = 
$$\frac{\text{Turnover after Issuance} - \text{Turnover before Issuance}}{0.5(\text{Turnover after Issuance} + \text{Turnover before Issuance})} * 100\%$$
- Average of the turnover before and after the issuance of A-shares in the denominator of the above equation is used to normalize the large variability in percentage changes.
- To illustrate the large variability in percentage changes, if turnover increases from HK\$1 mn before the issuance to HK\$20 mn after the issuance, the percentage change will be 1900% under the traditional percentage calculation. Based on the above equation where averages are used, the percentage will be 181%.
- In contrast, if turnover decreases from HK\$20 mn before the issuance to HK\$1 mn after the issuance, the percentage change will be -95% under the traditional percentage calculation. Based on the above equation where averages are used, the percentage will be -181%.
- Therefore, by using averages in calculating percentage change, there will be a symmetric treatment in percentage increase and percentage decrease.

On average, having adjusted for changes in the overall market turnover, turnover of the 20 H-shares seemed to rise after the issuance of A-shares. This observation applies across the board up to 6 months after the issuance of A-shares (Table 1).

- On the first three days when A-shares were issued, for instance, the adjusted turnover of the H-share counterparts was 16% higher than the value on the three days before issuance.
- For a one-month period after the issuance of A-shares, the adjusted turnover of the H-shares was also 22% higher than its corresponding level before the issuance.
- The rise in adjusted turnover appeared to persist even up to six months after the issuance of A-shares. As the percentage increase was smaller, the positive impact was less obvious. Nevertheless, the issuance of A-shares at least did not have adverse impact on the turnover of H-shares.

### *Change in Liquidity Ratio*

A change in liquidity ratio reflects the trading activities of a stock by eliminating the price effect and concentrating on the volume effect.

On average, liquidity ratio of the 20 H-shares appeared to increase after the issuance of A-shares, indicating an increase in trading activities of these stocks. This observation applies across the board up to 6 months after the issuance of A-shares (Table 2).

- On the first three days when A-shares were issued, for instance, the liquidity ratio of the H-share counterparts was 0.59 percentage point higher than the value on the three days before issuance.
- For a one-month period after the issuance of A-shares, the liquidity ratio of the H-shares was 0.42 percentage point higher than its corresponding level before the issuance.
- The rise in liquidity ratio appeared to persist even up to six months after the issuance of A-shares. As the increase in percentage point was smaller, the positive impact was less obvious. Nevertheless, at least, the issuance of A-shares did not have adverse impact on the liquidity ratio of H-shares.

**Table 2 – Change in Liquidity Ratio (Turnover / Market Cap) of H-Shares after the Issuance of A-Shares**

Change in Liquidity Ratio Over the Period before and after the Issuance of A-shares	Simple Average Daily Liquidity Ratio		
	Before A-share Listing	After A-share Listing	Change
three trading days	0.70%	1.29%	0.59%
fifteen trading days	0.55%	0.99%	0.43%
one calendar month	0.53%	0.95%	0.42%
three calendar months	0.69%	0.76%	0.07%
six calendar months	0.69%	0.70%	0.01%

Source: SFC Research

### *Regression Analysis*

Given that the issuance of A-shares appears to have positive impact on the turnover of H-shares, regression analysis is conducted to examine the significance of the issuing event on the turnover of H-shares. Two variables related to the issuing event have been included.

- The first variable is the premium of the issuing prices of A-shares over their H-share counterparts prior to the issuance of A-shares (i.e. on the day before the issuance).
- The second variable is the proportion of the number of A-shares issued in the total number of outstanding shares. The issuance of A-shares on a larger scale could attract more attention, thus bring more liquidity to the trading of its H-share counterparts.

The dependent variable of the regression model is the percentage change in the turnover of H-shares after the issuance of A-shares. Following the previous approach and to ensure the robustness of the model, the dependent variable takes three forms :

- change in turnover;
- change in turnover adjusted for change in overall market turnover; and
- change in liquidity ratio.

Regression analysis is conducted separately. Altogether, 15 regressions have been conducted.  $R^2$  for most regressions is in excess of 60% (14 are in excess of 50%). The coefficients of two variables in most regressions are also statistically significant (Table 3).

Regression results suggest that changes in turnover of H-shares after the issuance of A-shares are significantly and positively related to the premium of A-share's issue prices over prices of H-shares. A higher premium of A-share issue prices over their H-share counterparts might raise the attractiveness of H-shares so that more investors are willing to buy the relatively "cheaper" H-shares. This relationship exists for all three forms of dependent variables.

In addition, changes in turnover of H-shares after the issuance of A-shares are significantly and positively related to the proportion of A-shares issued in the total number of outstanding shares. This may be due to the fact that a larger proportion implies a broadened investor base, which is more likely to enhance accountability of the management to its shareholders of the company. This could in turn raise investor confidence in trading these shares.

The issuance of A-shares also enlarges the capital base of the company, which helps facilitate further expansions and realize other investment opportunities. Besides, a larger proportion of A-shares issued in the total number of outstanding shares could help arouse interest in these stocks including the H-shares in Hong Kong.

Regression analysis has also been conducted on another variable, namely the premium of prices of A-shares over prices of their H-share counterparts. This variable is different from the first variable discussed, as this refers to the premium after the issuance of A-shares. However, the coefficient of this variable is not significant,

implying that the premium after the issuance of A-shares is not a significant reason in explaining the increase in turnover of H-shares.

<b>Table 3 – Explaining Changes in Turnover: Regression Results</b>				
<b>Change in Turnover Over the Period before and after the Issuance of A-shares</b>	<b>Coefficient of Independent Variables (with T-stats in Bracket)</b>			<b>R<sup>2</sup></b>
	<b>Intercept</b>	<b>Proportion of A-shares in Total Issuance</b>	<b>Premium of A-share Issue Price</b>	
<b>Dependent Variable: Change in Turnover (basis points)</b>				
before and after 3 trading days	-25.80 (-2.23)	2.71 (3.61)	4.60 (1.89)	<b>0.59</b>
before and after 15 trading days	-1.45 (-0.15)	1.68 (2.46)	5.57 (2.46)	<b>0.52</b>
before and after 1 calendar month	-7.06 (-0.78)	1.63 (2.53)	6.91 (3.25)	<b>0.65</b>
before and after 3 calendar months	-6.83 (-0.50)	0.14 (0.15)	11.90 (3.86)	<b>0.53</b>
before and after 6 calendar months	-25.14 (-2.10)	0.93 (1.20)	11.83 (4.81)	<b>0.69</b>
<b>Dependent Variable: Change in Turnover adjusted for Change in Overall Market Turnover (basis points)</b>				
before and after 3 trading days	-20.74 (-2.21)	3.18 (4.90)	3.78 (1.88)	<b>0.72</b>
before and after 15 trading days	6.97 (0.75)	0.59 (0.77)	6.37 (4.01)	<b>0.62</b>
before and after 1 calendar month	3.44 (0.38)	0.87 (1.18)	5.56 (3.53)	<b>0.53</b>
before and after 3 calendar months	-5.92 (-0.63)	0.29 (0.49)	10.43 (5.43)	<b>0.75</b>
before and after 6 calendar months	-25.94 (-3.02)	0.47 (0.80)	11.55 (6.21)	<b>0.77</b>
<b>Dependent Variable: Change in Liquidity Ratio (basis points)</b>				
before and after 3 trading days	-1.18 (-1.83)	0.12 (2.32)	0.28 (1.15)	<b>0.31</b>
before and after 15 trading days	-0.50 (-3.15)	0.07 (5.91)	0.15 (3.81)	<b>0.80</b>
before and after 1 calendar month	-0.47 (-4.12)	0.05 (6.07)	0.18 (6.13)	<b>0.88</b>
before and after 3 calendar months	-0.29 (-2.14)	0.01 (0.90)	0.26 (7.96)	<b>0.81</b>
before and after 6 calendar months	-0.47 (-3.61)	0.02 (2.15)	0.20 (6.62)	<b>0.80</b>
Source: SFC Research				

### Turnover of H-shares Appeared to Increase After the Issuance of A-shares

Results of this study suggest that the issuance of A-shares either has no impact or appears to raise the turnover of H-shares<sup>9</sup>. Among other factors, this could be attributable to the segregated A and H-markets as well as the advantages enjoyed by the H-market.

<sup>9</sup> The issuance of A-shares may coincide with other incidents and their impacts on the turnover of H-shares cannot be isolated.

### *Segregated A and H-markets*

The A-markets in the Mainland and the H-market in Hong Kong are segregated. Due to capital control in the Mainland, Mainland investors are prohibited from trading securities listed on HKEx, including H-shares. On the other hand, foreign investors (including Hong Kong investors) are not allowed to trade A-shares in the Mainland<sup>10</sup>. Capital flow between the Mainland and Hong Kong is still controlled. Thus, the A and H-markets are essentially segregated, with two separate groups of investors. The issuance of A-shares therefore has little direct impact on the turnover of H-shares.

### *Advantages of the H-market*

The Hong Kong stock market has a longer history of development and is perceived to be more mature in various aspects such as currency convertibility, legal and regulatory framework, etc. These make the Hong Kong stock market attractive to local and international investors, and the issuance of A-shares should not affect their interest in the H-share market.

Financial derivatives products are not allowed in the Mainland. In the Hong Kong market, derivatives products on H-shares have also been made available to investors. HKEx launched the H-share index futures on 8 Dec 2003, whilst Hang Seng Investment Management launched a H-share ETF on 10 Dec 2003. These new products provide investors alternative means to benefit from the economic growth of the Mainland as well as a convenient and cost-effective way to hedge against risks. Trading activities of these new products may also bring more liquidity to the underlying H-shares, thus creating a virtuous circle.

### **Spillover Effects**

Further, there are possibly spillover effects of the issuance of A-shares on the turnover of H-shares. Factors underpinning these spillover effects include :

- the premium of issuing prices of A-shares over their H-share counterparts;
- increased visibility due to the issuance of A-shares; and
- a broadened investor base and enlarged market capitalisation.

### *Premium of Issuing Prices of A-shares over Their H-share Counterparts*

A-shares are often issued at premiums over their H-share counterparts. This reflects different investment opportunities facing investors in the Mainland and abroad. The premium of A-share issue prices over their H-share counterparts may make H-shares seem relatively “cheaper”.

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<sup>10</sup> Qualified Foreign Institutional Investors (QFIIs) have been allowed to trade in the A-share markets since mid 2003, but the extent and the scale are still controlled.



### *Increased Visibility and Media Attention*

The issuance of A-shares is often a highly publicized event with extensive media coverage. This arouses trading interest in these stocks and in the H-shares in Hong Kong.

### *Broadened Investor Base and Enlarged Market Capitalisation*

The issuance of A-shares broadens the investor base of the company by allowing Mainland investors to trade and hold these shares. A broadened investor base is more likely to enhance the accountability of the management of the company to its shareholders, and thus raise investor confidence in trading these shares.

The issuance of A-shares also enlarges the capital base of the company, which helps improve the financial conditions of the company and facilitate further expansions and realize other investment opportunities. Therefore, the increased capital base of the company might attract more interest to trade the H-shares.

### **Conclusion**

The results of this study suggest that the issuance of A-shares either has no impact or appears to raise the turnover of H-share companies. The issuance of A-shares is not a zero-sum game, but creates a win-win situation with both the Mainland and the Hong Kong markets benefiting from increased turnover. Concerns that the issuance of A-shares might reduce the attractiveness of the H-share market are not supported by the results of the study.