International Review of Business Research Papers
Vol. 7. No. 4. July 2011 Pp. 46-58

The Post-Event Price Behaviour of Dual Listed Chinese B and H Shares

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This paper studies the dual listing impacts of Chinese A shares on B and H shares. We use three models employed by Kothari and Warner (1997) to examine whether there are average abnormal returns of B or H shares on the event day of dual listing and the cumulative average abnormal returns (CARs) after the dual listing. The test results show that there are no significant average abnormal returns for both B and H shares on the event day of dual listing. However, CARs are observed significantly for dual listed B shares in all three models. For the dual listed H shares, the test results show that the CARs are generally insignificant.

JEL Codes: G12, G14, G15

1. Introduction

Many previous studies reveal that abnormal performance of stock returns persists following major corporate events or decisions, such as dividend initiation (Michaely, Thaler, and Womack, 1995), mergers and acquisitions (Jensen and Ruback, 1983, and Agrawal, Jaffe, and Mandelker, 1992), initial public offering (Ritter 1991) and dual listing of depositary receipts program (Miller 1999, and Alaganar and Bhar, 2002). This paper intends to study the post-event price behaviour of dual listed Chinese B and H shares on the Shanghai Stock Exchange and the Stock Exchange of Hong Kong. By means of the event study methodology, this paper examines separately whether there exist post dual listing price anomalies of B shares on the Shanghai Stock Exchange, and of H shares on the Stock Exchange of Hong Kong.

We use three models, i.e., market-adjusted model, market model, and CAPM employed by Kothari and Warner (1997) to estimate the dual listing abnormal returns of B and H shares. In the literature, Barber and Lyon (1997) also use these models to study if there is model misspecification to calculate the long-run abnormal stock returns. In our study of dual listed Chinese B and H shares, these models are used to test whether there are cross-sectional average abnormal returns on the event day of dual listing and cumulative average abnormal returns (CARs) after the date of dual listing. The test results show that no significant average abnormal returns are observed for both B and H shares on the event

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day of dual listing. The test results also show that there are significant cumulative average abnormal returns of dual listed B shares in all three models. As to the dual listed H shares, the results show that CARs are overall insignificant with the exception of market model.

2. The Chinese Market Structure and Literature Review

There are two types of dual listings for Chinese stocks: domestic dual listing and international dual listing. A domestic dual listing occurs when a firm lists on a domestic exchange with two different forms. An international dual listing occurs when a firm listed on a domestic exchange also lists on a security exchange outside the country. A Chinese firm with both domestic A shares and foreign B shares listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange is the domestic dual listing. A Chinese firm with its foreign H shares listed on the Stock Exchange of Hong Kong and domestic A shares listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange is the international dual listing.

Domestic dual listing on two different Chinese stock exchanges is not allowed for all Chinese stocks. Under the current trading system, domestic Chinese investors can only buy and trade A shares in local currencies, while foreign investors can only buy and trade B or H shares in foreign currencies. Such a market setting causes market segmentations between both A and B shares and A and H shares markets.

Before February 1992, common stocks listed and traded on Chinese stock exchanges were only for domestic investors, so called A shares. On February 21, 1992, the first B share of Shanghai Vacuum Electron was dual listed on the Shanghai Stock Exchange. B shares are denominated in US dollars on the Shanghai Stock Exchange, while they are denominated in Hong Kong dollars on the Shenzhen Stock Exchange. In the normal circumstances, the B share of a company is listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange at first, the corresponding A share is then dual listed on the same exchange later.

H shares are denominated in Hong Kong dollars issued, supervised and traded on the Stock Exchange of Hong Kong. The first H share, Tsingtao Brewery, was listed in Hong Kong on July 15, 1993. Subsequent to its listing of H shares in Hong Kong, the corresponding A share was listed on the Shanghai Stock Exchange on August 27, 1993. Up to January 2010, 85 Chinese state enterprises have issued both A and B shares, and 61 companies have issued both A and H shares (Sources: http://data.eastmoney.com and http://hk.eastmoney.com).

The purpose of dual listing is quite different in China than in other countries. The commonly used explanation for dual listing is to benefit firms from overcoming investment barriers (Miller 1999, and Alaganar and Bhar, 2002). For Chinese state enterprises, however, the dual listing of B shares in Shanghai or Shenzhen

and H shares in Hong Kong is to attract foreign capitals and to internationalize Chinese securities markets. The restrictions on ownerships apply to both domestic and foreign investors and hence cause market segmentations between both A and B shares and A and H shares markets. For a long time period after dual listing, the foreign B and H shares were observed to trade at discounts than their corresponding A shares. In fact, the B and H shares were observed to trade at deep discounts than their corresponding A shares in the entire 1990's. The price gaps between A and B and A and H shares are much narrowed recently.

Several studies have examined the price behaviour of shares around dual listings. Howe and Kelm (1987), Kahn et al. (1993) and Baker et al. (1994) find that negative abnormal returns occur significantly after dual listings. Karolyi (1998) conducts a survey on the effects of shares listed abroad. The evidence indicates that market values of companies are increased in the month around the dual listing. Miller (1999) examines the stock price impact of international dual listing and shows positive abnormal returns when a foreign firm announces a depository receipt listing. Levine and Schmukler (2007) find that internationalization has a negative spillover effect on the liquidity of domestic firms. Chan et al. (2008) studies the B share discounts in the Chinese domestic dual listing markets. They construct measures of information asymmetry and find that they explain a significant portion of cross-sectional variation in B share discounts.

This paper examines the dual listing price impacts of A shares in the Shanghai Stock Exchange on the existing B shares in Shanghai and H shares in Hong Kong. As in a long time period, the A share prices are consistently higher than their corresponding B or H shares, this paper intends to investigate whether there are positive abnormal returns of B or H shares on the date of dual listing and the periods after the date of dual listing. Specifically, we use three models employed by Kothari and Warner (1997) to test two null hypotheses that Hypothesis One: The cross-sectional average abnormal returns of B or H shares are zero on the event day of dual listing; and Hypothesis Two: The average abnormal returns cumulated over different periods up to 200 days after the dual listing are zero.

3. Data and Methodology

3.1 Data

The daily data of A and B shares and A and H shares are extracted from the Datastream. For the domestic dual listing, this study includes 25 companies issuing both A and B shares on the Shanghai Stock Exchange. The listing dates of 25 B shares are from 22 July 1992 to 18 January 1999, and the dual listing dates of their corresponding A shares are from 7 August 1992 to 26 April 2001. For the international dual listing, the study includes 24 companies issuing H shares on the Stock Exchange of Hong Kong and their corresponding A shares on the Shanghai Stock Exchange. The listing dates of 24 H shares are from 15

July 1993 to 19 October 2000, and the dual listing dates of their corresponding A shares are from 27 August 1993 to 3 February 2005.

For a dual listed company to be included in our study, the foreign B or H share of the company should be listed on the Shanghai Stock Exchange or the Stock Exchange of Hong Kong at first. The corresponding A share dual listed on the Shanghai Stock Exchange should be at least 10 trading days later for the estimation purpose. We include a dual listed stock in the study only if there are return data for days -10 through 0 before the dual listing of A share on the Shanghai Stock Exchange. The 10-day period, i.e., t= -10 to -1, is the estimation period for model parameters used to estimate abnormal returns. Abnormal performance of dual listed B or H shares is estimated for up to 200 days from the event day of dual listing, t=0. This is the test period. Thus, a total of 211 trading-day period is selected in this study to examine the abnormal performance of dual listed B or H shares.

3.2 Expected Return Models

We use three models employed by Kothari and Warner (1997) to estimate the dual listing abnormal returns of B and H shares: market-adjusted model, market model and CAPM.

a. Market-adjusted model: The abnormal return of dual listed stock i in day t MAR_{it} is

$$MAR_{it} = R_{it} - R_{mt} \tag{1}$$

where R_{it} is the daily return inclusive of dividends for stock i in day t and R_{mt} is the daily market return. To evaluate the abnormal performance of dual listed B and H shares, the Shanghai B Share Index and the Hang Seng China Enterprises Index are used to obtain the daily market return of B shares and H shares, R_{mt}, respectively.

b. Market model: The abnormal return of dual listed stock i in day t using the market model $MMAR_{it}$ is

$$MMAR_{it} = R_{it} - \alpha_i - \beta_i R_{mt} \tag{2}$$

where α_i and β_i are market model parameter estimates obtained by regressing daily returns for stock i, R_{it}, on the market index, R_{mt}, over the 10-day estimation period (i.e., days -10 to -1).

c. CAPM: The abnormal return of dual listed stock using CAPM is

$$CAPMAR_{it} = R_{it} - R_{ft} - \beta_i (R_{mt} - R_{ft}) \tag{3}$$

where R_{ft} is the risk-free rate, and β_i is the slope obtained by regressing $(R_{it} - R_{ft})$ on $(R_{mt} - R_{ft})$ for the estimation period. The daily rates of China's Treasury Bills are used as the risk-free rates for the study of abnormal performance of B shares, while the daily rates of Hong Kong Interbank Offer Rates (HIBOR) are used as the risk-free rates for the study of abnormal performance of H shares.

3.3 Test Statistics

We test two null hypotheses that Hypothesis One: The cross-sectional average abnormal returns of B or H shares are zero on the event day of dual listing of corresponding A shares; and Hypothesis Two: The cumulative average abnormal returns (CARs) over different periods up to 200 days following the dual listing of A shares are zero. For the Hypothesis One, the test statistic is the ratio of the average abnormal return of B or H shares on the event day to its estimated standard deviation in the estimation period. The test statistic for the event day (illustrated using market-adjusted returns) is given by equations (4) to (6)

$$MAR_{pt} / \sigma(MAR_{pt}) \tag{4}$$

where

$$MAR_{pt} = \frac{1}{n_t} \sum_{i=1}^{n_t} MAR_{it} \tag{5}$$

$$\sigma(MAR_{pt}) = \sqrt{\frac{\sum_{all.pt} MAR_{pt}{}^2 - \frac{1}{10}(\sum_{all.pt} MAR_{pt})^2}{9}} \tag{6}$$

Here MAR_{pt} is the average abnormal return of B or H shares on the event day of dual listing, $\sigma(MAR_{pt})$ is the estimated standard deviation of MAR_{pt} in the estimation period, and n_t is the number of dual listed B or H shares in the study (n_t is 25 for dual listed B shares and 24 for dual listed H shares).

The cumulative average abnormal returns of B or H shares from event day 0 to T days, $CMAR_{pt}$, are obtained by cumulating daily abnormal returns. The test statistic to assess the statistical significance of cumulative average abnormal returns of B or H shares from 0 to T days is the ratio

$$CMAR_{pt} / (\sigma(MAR_{pt}) \sqrt{T}) \tag{7}$$

where

$$CMAR_{pt} = \sum_{t=0}^{T-1} MAR_{pt} \tag{8}$$

and $\sigma(MAR_{pt})$ is given by equation (6).

4. Empirical Results

This section reports the test results of the study. Table 1 reports the abnormal performance of B and H shares on the event day of dual listing. Tables 2 to 5 report the test results of cumulative average abnormal returns (CARs) from 20 to 200 days after the dual listing of B and H shares.

The test results show that no significant abnormal returns are found for both B and H shares on the event day of dual listing. In the study of post dual listing effects on B shares, we do observe very high significant CARs in all three models. In the study of post dual listing effects on H shares, however, the test results are somewhat different. No significant CARs have been detected in the short and medium terms in all three models. For the longer time horizons, no CARs are found in the market-adjusted model and CAPM. However, significant positive CARs are found in the market model from 50 to 200 days after the dual listing of corresponding A shares.

4.1 Event Day Abnormal Performance of Dual Listed B and H Shares

Panel A of Table 1 reports the summary statistics of the cross-sectional average abnormal returns of 25 B shares on the event day of dual listing. The means of average abnormal returns of the B shares in three models range from 0.10% to 0.34%, which are small in absolute value and also statistically insignificant. The results indicate that we cannot reject the Hypothesis One for dual listed B shares, i.e., the cross-sectional average abnormal returns of B shares are zero on the event day of dual listing of A shares. In other words, there is no evidence that we can get benefits from buying B shares before the dual listing of corresponding A shares in the Shanghai Stock Exchange.

Panel B reports the summary statistics of the cross-sectional average abnormal returns of 24 H shares on the event day of dual listing. The means of average abnormal returns of the H shares show some negative signs which are different from that observed in the dual listed B shares, though they are small in absolute value (range from -0.01% to 0.15%) and also statistically insignificant. The results also indicate that we cannot reject the Hypothesis One for dual listed H shares. The same as dual listed B shares, we still cannot get benefits from buying H shares before the dual listing of corresponding A shares in the Shanghai Stock Exchange.

Table 1: Descriptive statistics of event day average abnormal returns of dual listed B and H shares

Panel A: Descriptive statistics of event day average abnormal returns of dual listed B shares

	Market-adjusted	Market model	CAPM
Mean	0.0011	0.0034	0.0010
SD	0.0093	0.0119	0.0115
(Test Stat.)	(0.1182)	(0.2857)	(0.0870)
Min	-0.0242	-0.0319	-0.0324
Median	0.0010	0.0039	0.0014
Max	0.0334	0.0349	0.0323
Skewness	0.0836	-0.0882	-0.0870

Panel B: Descriptive statistics of event day average abnormal returns of dual listed H shares

	Market-adjusted	Market model	CAPM
Mean	-0.0003	0.0015	-0.0001
SD	0.0072	0.0079	0.0079
(Test Stat.)	(-0.0417)	(0.1899)	(-0.0127)
Min	-0.0246	-0.0234	-0.0259
Median	-0.0003	0.0014	-0.0003
Max	0.0196	0.0258	0.0268
Skewness	-0.0265	0.1580	0.2371

Note: The means and standard deviations of the event day average abnormal returns of B and H shares are obtained from Equations (5) and (6).

The efficient market hypothesis could be used to explain the insignificant event day abnormal performance of dual listed B and H shares. It is very common that before the dual listing of B or H shares, the information is already spread in the market. With the information absorbed by the market, the dual listing of corresponding A shares cannot generate much price impacts on the existing B or H shares.

4.2 Rejection Frequencies of Dual Listed B Shares

Table 2 reports the percentages of cumulative return periods for which the null hypothesis of zero average abnormal returns of 25 dual listed B shares is rejected. The rejection rates are obtained using one- and two-sided tests at 10% and 5% significant levels for three models over 200 days after dual listing. Panel A shows that the null hypothesis is rejected significantly for all three models using a two-sided test at 10% significant level, with the rejection rate from 20% to 94.52%. However, there is no clear pattern between the rejection rate and the return cumulating length. For example, the rejection rate using the market model rises from 47.61% over 20 days to 94.52% over 200 days. While the rejection

rate using the market-adjusted model rises from 57% over 20 days to 76% over 50 days at first, and then falls to 20% over 200 days. The similar pattern is also found when CAPM is used.

Panels B and C report rejection frequencies using one-sided tests at 10% and 5% significant levels, respectively. The rejection rates are the percentages of cumulative return periods for which the models show positive average abnormal returns, i.e., CAR>0, on B shares over 200 days after dual listing. Both panels B and C show high rejection rates in all three models between 20 to 200 days. For example in the market model, the rejection rate increases from 66.67% over 20 days to 96.51% over 200 days at 10% significant level, and increases from 47.61% over 20 days to 94.52% over 200 days at 5% significant level. Both panels B and C show that no negative CARs are observed using market-adjusted model and market model at both 5% and 10% significant levels. Only some insignificant negative CARs are observed using CAPM at both 5% and 10% test levels.

Table 2: Percentages of samples (t = 0 to 200 days) for which the null hypothesis of zero mean cumulative average abnormal return (CARs) of dual listed B shares is rejected

	Average abnormal return cumulating period (days)				
Model	20	50	100	200	
Panel A: α = 10%, two-sided test					
Market-adjusted	57.00%	76.00%	40.00%	20.00%	
Market model	47.61%	78.43%	89.10%	94.52%	
CAPM	42.85%	76.47%	57.42%	78.10%	
Panel B: α = 10%, one-sided test, CAR > 0					
Market-adjusted	67.00%	86.00%	52.00%	29.00%	(no neg. CARs)
Market model	66.67%	86.27%	93.07%	96.51%	(no neg. CARs)
CAPM	61.90%	84.31%	65.34%	82.58%	(neg. CARs not sig.)
Panel C: α = 5%, one-sided test, CAR >0					
Market-adjusted	57.00%	76.00%	40.00%	20.00%	(no neg. CARs)
Market model	47.61%	78.43%	89.10%	94.52%	(no neg. CARs)
CAPM	42. 85%	76.47%	57.42%	78.10%	(neg. CARs not sig.)

Note: The test statistics of CARs of B shares are obtained from Equations (7) and (8).

4.3 Rejection Frequencies of Dual Listed H shares

Table 3 reports the percentages of cumulative return periods for which the null hypothesis of zero average abnormal returns of 24 dual listed H shares is rejected. The rejection rates are obtained using one- and two-sided tests at 10% and 5% significant levels for three models over 200 days after dual listing. The results show that the cumulative average abnormal returns (CARs) of the H shares are overall insignificant with the exception of market model. Panel A shows that no significant CARs of H shares are found in all three models 50 days after the dual listing using two-sided tests. However, CARs are found highly significant using market model over longer horizons. They are 40.59% and 70.15%, respectively, over 100 and 200 days after dual listing of A shares in the Shanghai Stock Exchange. As for the market-adjusted model and CAPM, no significant CARs are found over the whole 200 days after dual listing.

Table 3: Percentages of samples (t = 0 to 200 days) for which the null hypothesis of zero mean cumulative average abnormal returns (CARs) of dual listed H shares is rejected

	Average abnormal return cumulating period (days)			
Model	20	50	100	200
Panel A: α = 10%, two-sided test				
Market- adjust	0.00%	0.00%	0.00%	0.00%
Market model	0.00%	0.00%	40.59%	70.15%
CAPM	0.00%	0.00%	0.00%	0.00%
Panel B: α = 10%, one-sided test, CAR > 0				
Market-adjust	0.00%	0.00%	0.00%	0.00%
Market model	0.00%	5.88%	43.56%	71.64%
CAPM	0.00%	0.00%	0.00%	0.00%
α = 10%, one-sided test, CAR < 0				
Market-adjust	0.00%	0.00%	2.97%	4.48%
Market model	0.00%	0.00%	0.00%	0.00%
CAPM	0.00%	0.00%	0.00%	0.00%
Panel C: α = 5%, one-sided test, CAR >0				
Market-adjust	0.00%	0.00%	0.00%	0.00%
Market model	0.00%	0.00%	40.59%	70.15%
CAPM	0.00%	0.00%	0.00%	0.00%
α = 5%, one-sided test, CAR < 0				
Market-adjust	0.00%	0.00%	0.00%	0.00%
Market model	0.00%	0.00%	0.00%	0.00%
CAPM	0.00%	0.00%	0.00%	0.00%

Note: The test statistics of CARs of H shares are obtained from Equations (7) and (8).

Panels B and C report rejection frequencies at 10% and 5% significant levels, respectively, of three model using one-sided tests in which the CARs of H shares are either positive or negative. Both panel B and C show that no positive CARs of H shares (CAR>0) are found significantly using market-adjusted model and CAPM. However, positive CARs of H shares are found significantly over the longer horizons when the market model is used. The rejection frequencies of positive CARs are more than 40.00% after 100 days of dual listing at both 10% and 5% significant levels. For the one-sided tests of negative CARs of H shares after dual listing (CAR<0), both panel B and C show that no negative CARs are detected significantly in all three models. Only small percentages of negative CARs are found at 10% significant levels using market-adjusted model, with 2.97% and 4.48%, respectively, after 100 and 200 days of dual listing.

4.4 Cumulative Abnormal Performance Measures and Their Test Statistics of Dual Listed B Shares

Table 4 presents the means and standard deviations of cumulative average abnormal returns (CARs) (Panel A) and their test statistics (Panel B) of B shares from 20 to 200 days after the dual listing of corresponding A shares. Under the

Table 4: Means and standard deviations of cumulative average abnormal returns (CARs) and the test statistics of dual listed B shares

Panel A: Means and standard deviations (SD) of CARs over return cumulating period (days)

Model		CAR 20	CAR 50	CAR 100	CAR 200
Market-adjust	Mean	0.0596	0.1008	0.1024	0.1169
	SD	0.0341	0.0414	0.0322	0. 0353
Market model	Mean	0.0490	0.1316	0.1878	0.3585
	SD	0.0332	0.0772	0.0859	0.1934
CAPM	Mean	0.0249	0.0693	0.0631	0.1115
	SD	0.0194	0.0419	0.0454	0.0621

Panel B: Means and standard deviations (SD) of the test statistics of CARs

Model		Test stat 20	Test stat 50	Test stat 100	Test stat 200
Market-adjust	Mean	1.7462	2.0259	1.6301	1.3569
	SD	0.6631	0.5266	0.5805	0.5121
Market model	Mean	1.7835	3.0103	3.2415	4.2624
	SD	0.8881	1.2221	1.0100	1.2888
CAPM	Mean	1.5502	2.6376	2.0157	2.3204
	SD	1.1902	1.2962	1.4055	1.0692

Note: The cumulative average abnormal returns (CARs) and the test statistics of CARs of B shares are obtained from Equations (7) and (8).

Hypothesis Two, we expect the means of CARs of B shares should be zero after dual listings. The results of panel A demonstrate that the Hypothesis Two is rejected strongly. Panel A shows that the means of CARs of dual listed B shares are positive in all three models and time horizons and increase monotonically with the length of return cumulating periods. There is absolutely no single negative mean CAR observed in our tests. In sum, the results of panel A demonstrate that the dual listings of A shares have strong positive impacts on the existing B shares.

Panel B reports the means and standard deviations of test statistics of CARs of dual listed B shares using three models over different time horizons. The Hypothesis Two will be strongly rejected if the means of test statistics of B shares are systematically nonzero, or the standard deviations used to calculate the test statistics are very small, or both. The results in Panel B show that the means of test statistics are greater than one in all three models and time horizons, indicating that the Hypothesis Two is rejected strongly. However, the standard deviations of test statistics are varied across different models and time periods. They are less than one in market-adjusted model in the whole test periods from 20 to 200 days after dual listing. They are greater than one in both market model and CAPM in most of the test periods.

4.5 Cumulative Abnormal Performance Measures and Their Test Statistics of Dual Listed H Shares

Table 5 presents the means and standard deviations of cumulative average abnormal returns (CARs) (Panel A) and their test statistics (Panel B) of H shares from 20 to 200 days after the dual listing of corresponding A shares. The results are significantly different from that obtained in the study of dual listed B shares. In fact, the negative means of CARs (Panel A) and their test statistics (Panel B) are found using the market-adjusted model and CAPM. However, the positive means of CARs and their test statistics are observed using the market model.

Panel A shows that the means of CARs are all negative and increase monotonically in absolute value with the length of return cumulating periods when the market-adjusted model and CAPM are used. However, the mean of CARs in the market model is positive 1.34% for the first 20 days after dual listing. It increases monotonically to 2.55% in 50 day, 6.46% in 100 days, and finally 12.67% in 200 days after dual listing. The significantly different abnormal performance of dual listed H shares in three models demonstrates that there may be model misspecifications even for the short-term tests. The results also demonstrate that the dual listings of A shares in Shanghai have no clear price impacts on the corresponding H shares in Hong Kong.

Panel B reports the means and standard deviations of test statistics of CARs of dual listed H shares over different time horizons. The means of test statistics of H shares tend to be negative and less than one in absolute value when the market-adjusted model and CAPM are used, indicating that the test results on H

shares are not significant. However, the means of test statistics of CARs of H shares become positive and increase monotonically with the length of return cumulating periods when the market model is used. The standard deviations of test statistics of CARs of H shares are well below one when the market-adjusted model and CAPM are used. Besides, no clear pattern can be observed between the standard deviations of test statistics and the length of cumulating periods in these two models. However, the standard deviations of test statistics increase monotonically with the length of return cumulating periods when the market model is used.

Table 5: Means and standard deviations of cumulative average abnormal returns (CARs) and the test statistics of dual listed H shares

Panel A: Means and standard deviations (SD) of CARs over return cumulating period (days)

Model		CAR 20	CAR 50	CAR 100	CAR 200
Market-adjust	Mean	-0.0009	-0.0131	-0.0294	-0.0493
	SD	0.0060	0.0119	0.0217	0.0283
Market model	Mean	0.0134	0.0255	0.0646	0.1267
	SD	0.0080	0.0173	0.0449	0.0736
CAPM	Mean	-0.0069	-0.0162	-0.0213	-0.0400
	SD	0.0068	0.0122	0.0137	0.0283

Panel B: Means and standard deviations (SD) of the test statistics of CARs

Model		Test stat 20	Test stat 50	Test stat 100	Test stat 200
Market-adjust	Mean	0.0268	-0.3801	-0.6575	-0.8395
	SD	0.3919	0.4523	0.4700	0.4147
Market model	Mean	0.6979	0.8501	1.4710	2.0973
	SD	0.3950	0.4234	0.7372	0.8426
CAPM	Mean	-0.2655	-0.4126	-0.4002	-0.5031
	SD	0.2475	0.2985	0.2463	0.2614

Note: The cumulative average abnormal returns (CARs) and the test statistics of CARs of H shares are obtained from Equations (7) and (8).

5. Conclusion

This paper studies the post-event price behaviour of dual listed Chinese B and H shares on the Shanghai Stock Exchange and the Stock Exchange of Hong Kong. Three models, i.e., market-adjusted model, market model and CAPM are used to test two null hypotheses that Hypothesis One: The cross-sectional average abnormal returns of B or H shares are zero on the event day of dual listing; and Hypothesis Two: The average abnormal returns of B or H shares cumulated over different periods up to 200 days following the dual listing are zero. The test results show that we cannot reject the Hypothesis One, i.e., there are no significant average abnormal returns observed for both B and H shares on the

event day of dual listing. The test results also show that the Hypothesis Two is rejected significantly for dual listed B shares in all three models. As to the dual listed H shares, the results show that the cumulative average abnormal returns (CARs) are overall insignificant with the exception of market model. For both dual listed B and H shares, there are no clear patterns between the rejection rates and the length of return cumulating periods. Finally, we find that test results of CARs of dual listed B and H shares are highly dependent on the choice of methodology, i.e., the models used to obtain CARs, which is consistent with the finding in the literature.

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