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Market segmentation and price differentials between A shares and H shares in the Chinese stock markets

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Abstract

We find that the risk premiums associated with the Hong Kong and mainland Chinese markets in a two-factor model successfully explain the cross section of returns on the A and H shares. Discounts of H-share prices relative to A-share prices are related to the contemporaneous movements of the H-share local market index relative to the A-share local market index, especially during the period of the Asian financial crisis, as well as the spread of savings rates between Hong Kong and mainland China. The evidence suggests that the risk premiums associated with the segmented A-share and H-share markets exert crucial impacts on the price differentials between the two classes of shares.

JEL classification: G14; G15

Keywords: Cross-listed shares; Price discount puzzle; Market risk premiums

1. Introduction

The rapid openness of Chinese capital markets has attracted cross-border portfolio investment, while the explicit institutional barriers may determine the actual efficiency of international diversification. This prompted some recent literature to explore the distinct price behaviors of stocks that are simultaneously traded in China's segmented markets. Among these studies, one contentious issue is the price differentials among different classes of shares. One pioneer work

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by Bailey (1994) documents that class B shares traded by foreign investors are sold at discounts relative to class A shares traded by domestic investors, a phenomenon that is inconsistent with the price premiums commonly found in other countries (e.g., Bailey and Jagtiani, 1994; Domowitz et al., 1997; Stulz and Wasserfallen, 1995; Bailey et al., 1999).

Several explanations have been provided for this exception. The first is based on the discount-pricing model. Bailey (1994) argues that the lower required returns of Chinese citizens due to the limited investment opportunities might have an effect. Bailey (1994) further suggests that since the political and macroeconomic risks peculiar to the B-share markets are undiversifiable to the primary foreign investors, they may add potential risk premiums on B shares and discount the prices of B shares heavily as compensation for this systemic risk. Bergström and Tang (2001) argue that clientele bias, foreign exchange risks and risk-free return differentials can deter the diversification benefits of foreign investments particularly in the B-share market.

The second hypothesis is invoked by the "investor sentiment" notions introduced by Lee et al. (1991). Bailey (1994) proposes that the unseasoned or unduly optimism of domestic investors may drive the overpricing of A-share. A later work by Ma (1996) demonstrates that the A-share prices are positively related to domestic beta risk, implying the risk-seeking behavior of Chinese investors.

The third strand of theories centers on demand and supply of shares in segmented markets. Sun and Tong (2000) argue that the co-existence of H shares and red chips as alternatives to B shares for foreign investors makes the demand for B shares quite price elastic, leading to low equilibrium prices of B shares. Indeed, the exceptional discount on foreign-only shares in China complements the argument of Stulz and Wasserfallen (1995), who attribute the price premium to the inelastic demand of foreigners.

This article extends the studies on the Chinese stock markets by investigating the price discounts of H shares relative to A shares. As documented by Sun and Tong (2000), the price premiums or discounts of B shares and H shares tend to move together over time and H shares traded in the Hong Kong market offer substitutes for B shares traded in mainland China. Hence, an understanding of the price discounts of H shares relative to A shares should help resolve the price discount puzzle for both B shares and H shares of Chinese firms. Unlike A shares and B shares which are traded in the same stock exchanges within mainland China, A shares and H shares are segmented in terms of the stock ownership as well as the listing and trading locations. Specifically, while A shares are traded in mainland Chinese stock exchanges by local investors, H shares are owned and traded by investors in Hong Kong. The unique nature of segmentation between A shares and H shares suggests that the price discounts of H shares to A shares may be explained by the influence of the local market performance.

More formally, we examine whether and how the differences in market risk premiums, interest rates and exchange rates could induce the substantive price differentials. Although in our time-series model the explanatory factors reflect market-wide information, the tests are mainly performed at the company-specific level over a long sample horizon. In this way our results facilitate closer inspection of stylized price differentials between A shares and H shares without the cost of statistical reliability.[1] Our paper indeed reveals that the firm-specific price discounts of H shares relative to A shares are closely correlated with the difference in the movements between the contemporaneous Hang Seng Stock Index and the Shanghai Stock Index, and the spread between

[1] Bergström and Tang (2001) conduct similar regressions, yet only in an aggregate level partly due to the limitation of the sample horizon.