International Review of Economics and Finance xxx (2017) 1–8

Contents lists available at ScienceDirect

International Review of Economics and Finance

journal homepage: www.elsevier.com/locate/iref

Quantifying the impact of the November 2014 Shanghai-Hong Kong Stock Connect☆

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ARTICLE INFO

Keywords:
Capital account liberalization
Stock returns
Sentiment
Shanghai
Hong Kong

JEL classification:
G15

ABSTRACT

The November 2014 Shanghai-Hong Kong Stock Connect represented an important step in China's capital account liberalization, allowing relatively free movement of investor funds between the two markets for the first time. We offer a quantification of the effects of the new program, examining Northbound and Southbound flows of funds over the first two years of the Stock Connect. While controlling for other sentiment and liquidity effects, we test how these flows may have affected the extent of the premium seen for local A-share listings in Shanghai relative to the prices accruing to the same companies in Hong Kong market trading.

1. Introduction

Renminbi liberalization has been accelerating rapidly in recent years. Although China's currency was not even fully convertible for current account transactions until 1996, a growing array of bilateral currency swaps and offshore renminbi centers have expanded renminbi usage as far as Europe, Africa and South America. The largest offshore trading is in Hong Kong, where renminbi-based transactions soared after the offshore market was formally established in July 2010. Whereas the offshore renminbi rate in Hong Kong has fluctuated in value relative to the onshore rate in Shanghai since 2010, the launch of the Hong Kong-Shanghai Stock Connect on November 17, 2014 was accompanied by a major surge in the offshore premium. The spread between the offshore rate and onshore rate has itself been found to be influenced by relative sentiment levels in Shanghai and Hong Kong, as reflected in the spread between A-shares listed in Shanghai and H-shares listed in Hong Kong (Burdekin & Tao, 2017).

The November 2014 Stock Connect program not only significantly added to the linkages between Shanghai and Hong Kong but also provided a gateway into China for international investors utilizing the Hong Kong market. As with the offshore renminbi market, investment flows are influenced by both the availability of funds and investor sentiment towards the relative prospects of the Shanghai and Hong Kong markets. In this paper we test the relationship between the Northbound and Southbound flows and an array of variables proxying for sentiment and liquidity effects. We focus especially on the relationship with the A-H Share premium that has already been seen to be significant with respect to the spread between the offshore renminbi rate in Hong Kong and the onshore rate in Shanghai.

A major factor limiting the potential impact of the Stock Connect program has been the restrictions imposed on capital movements

☆ An earlier version of this paper was presented at the 2016 meetings of the Western Economic Association in Portland, Oregon, June 29-July 3. The authors thank Ran Tao and an anonymous referee for helpful comments and are grateful to Jinlin Gu for excellent research assistance.

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http://dx.doi.org/10.1016/j.iref.2018.01.001
Received 10 July 2017; Received in revised form 26 December 2017; Accepted 4 January 2018
Available online xxxx

between the two markets. Southbound investors from Shanghai had to have a minimum account balance of half a million renminbi and aggregate southbound flows to Hong Kong were subject to a daily quota of RMB 10.5 billion and aggregate quota of RMB 250 billion.[1] Northbound trade faced slightly higher limits of RMB 13 billion and RMB 300 billion, respectively. Moreover, only large capitalization stocks were eligible to be traded via the new Stock Connect, with less than 600 Shanghai-listed companies initially being eligible. The exclusion of smaller firms may have been one factor dampening investor enthusiasm for the new scheme from Shanghai investors. For example, Gui Haoming of Shenyinwanguo Securities argues that southbound investment remained relatively small not only because mainland investors were unused to foreign investment opportunities but also because many enjoy chasing hot stocks based on market enthusiasm.[2] A 2015 research report from Oriental Patron, a Hong Kong based investment services firm, further argues that mainland China investors focus more upon policy direction, market sentiment and growth potential as opposed to a more western-based focus upon profit growth, valuation metrics, and dividend returns.[3]

In addition to the available Hong Kong shares not being attractive to mainland investors, quota restrictions further explained why the opening up of Shanghai-Hong Kong Stock Connect did not immediately eradicate the price differential between the two markets. Enthusiasm for an additional Shenzhen-Hong Kong market link from the mainland China side stemmed, in large part, from the expectation that this would include start-ups and smaller stocks (Yiu, 2016). Ironically, the actual launch of the Shenzhen-Hong Kong Stock Connect in December 2016 appeared to draw only muted interest initially (Wildau, 2017).[4] This may have been more a reflection of the timing of the launch than indicative of its long-run potential, however – with the June 2016 MSCI decision to keep Chinese shares out of its global indexes being followed by the post-election rally in US shares that may have further reduced interest in mainland Chinese shares.

There was certainly no sign of a narrowing of the A-H Share premium in the first year of operation of the Shanghai-Hong Kong Stock Connect. On the contrary, the average premium rose substantially from a little under 100% when the program was launched to nearly 150% in early 2016. This rise in the premium continued even in the face of a sharp decline in the Shanghai market index, which encouraged mainland Chinese investors to use the Stock Connect to find shelter in Hong Kong (Hunter, 2016). One consideration is that the volume of trading facilitated by the Stock Connect remained small, accounting for less than 5% of total Hong Kong stock market turnover in early 2016. Southbound quota usage did accelerate during 2016, however, standing at 34.9% at the end of the third quarter – and totalling RMB 279.5 billion since the inception of the program in November 2014 (Hong Kong Exchanges and Clearing, 2016). This was accompanied by continued weakness of the Shanghai market during 2016 and underperformance relative to Hong Kong.

The A-H Share premium was actually entirely eliminated during 2016, with an A-Share discount developing in July 2016 and remaining in place over the remainder of the year. Although this may have been driven by reduced investor appetite for mainland China shares owing to concerns over a growth slowdown as well as the aforementioned June 2016 MSCI decision, the Stock Connect helped facilitate flows of funds from Shanghai to Hong Kong that went hand in hand with the ending of the prior A-H Share premium. High frequency analysis using minute-by-minute data suggests the Stock Connect significantly strengthened volatility spillover between the two markets (Huo & Ahmed, 2017; Zhang & Jaffry, 2015). Meanwhile, Wang and Tsai (2016) find significant effects of the Stock Connect launch on both Shanghai and Shenzhen stock market volatility using daily data, but little evidence of an impact on the Hong Kong market. Similarly, Bai and Chow's (2017) event study approach reveals significant short-run effects of the Stock Connect on the Shanghai and Shenzhen markets, but not Hong Kong – with the asymmetric effects attributed primarily to the different levels of market maturity. Huang and Lin (2016) also apply an event study approach, but utilize individual company data on cross-listed shares. They find evidence of significant abnormal returns in both the Shanghai and Hong Kong markets around the implementation date of the Stock Connect. None of these studies focuses directly on the A-H Share Premium, however.

Jiang and Sohn's (2016) analysis of the A-H Share premium suggests that the Stock Connect contributed to price discovery, albeit with the major influence arising from the more established Hong Kong market. But their findings of overall price convergence rely upon the use of the cross-listed Shenzhen-Hong Kong shares as a "treatment" group, which seems questionable given that the Shenzhen-listed companies are typically smaller, as well as being more tech-focused, than those listed in Shanghai – leaving the book values of Jiang and Sohn's Shanghai-Hong Kong pairs substantially higher than the book values of their Shenzhen-Hong Kong pairs. Chan and Kwok (2016) directly test for cointegration between A-shares and H-share based on the prices of 61 cross-listed shares. Initially focusing upon the effects of the April 10, 2014 announcement of the pilot program (as opposed to the actual implementation date), Chan and Kwok find evidence of less price disparity, and more cointegration, over the post-announcement period between April 2014 and July 2014. Analysis of the period following the actual implementation of the Stock Connect provided further support for substantial price co-movements across the two markets despite the fact that the A-H Share premium was rising over their November 17, 2014 – February 25, 2015 post-implementation sample.

Unlike the extant work, our analysis of the A-H Share premium incorporates data on the daily fluctuations in actual Northbound and Southbound flows. These observations were not used previously. The relationship between these flows and the A-H Share premium, as well as other sentiment and liquidity variables, is modelled via a two regime Markov process over an extended sample of daily data from the Stock Connect's launch in November 2014 through early January 2017. We chose this methodology in large part because, as we shall see, in the sample considered there are clearly identifiable periods of high and low uncertainty. This suggests that a model with two

[1] For full details of the Stock Connect agreement, see Hong Kong Exchanges and Clearing Limited (2014).
[2] See "Shanghai-Hong Kong Link Expert Interview" (2015).
[3] See "Shanghai-Hong Kong Link Anniversary" (2015).
[4] In a further effort to attract capital inflows, a new Bond Connect between Shanghai and Hong Kong was planned for July 2017 – but with only Northbound flows being allowed initially (Herrero, 2017).