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The financial integration of China: New evidence on temporally aggregated data for the A-share market ☆

Eric GIRARDIN [a,*], Zhenya LIU [b,c]

[a] GREQAM, Université de la Méditerranée, Aix-Marseille II, Aix en Provence, France
[b] People's University of China, Beijing, PR China
[c] The University of Birmingham, Birmingham, UK

Abstract

In the presence of *de jure* capital account inconvertibility, but in spite of high trade openness of China, existing empirical work, using daily data, has not found any evidence of international financial integration of its A-share market. In this paper we shed new light on this issue, examining a long sample of active trading, over 1992–2005, within the framework of a regime-switching error correction model, with a major focus on the role of temporal aggregation. With end-of-week closing prices we do not find any long run relationship between the Shanghai market and either the New York or the Hong Kong market, thus replicating previous findings. However, with weekly-averaged indices, up to late 1996, the Shanghai index was cointegrated with the S&P 500. Subsequently, this relationship broke down and a long run relationship with the Hang Seng index gradually arose. Information flows, as well as the prospects of *de jure* financial opening, and the growing awareness of valuation concepts among Chinese domestic investors, in the presence of identical fundamentals (multiple listing of Mainland firms), help explain the evidence of long run financial integration in spite of capital controls.

JEL classification: F36; G15
Keywords: China's A-share market; Markov-switching; Error correction; Temporal aggregation; International financial integration

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* Corresponding author. Faculté de Sciences Economiques, Université de la Méditerranée, 14 avenue Jules Ferry, 13621 Aix en Provence, France.
E-mail addresses: girardin@romarin.univ-aix.fr (E. Girardin), zhenya_liu@hotmail.com (Z. Liu).

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1. Introduction

Resisting wisely the East Asian wave of external financial liberalisation in the 1990s, China has retained capital controls, preventing foreigners to access A-share markets and residents to access foreign stock markets (Lardy, 1998). However, since the end of 1999, internationalisation has become one of the big themes of Chinese stock market reform. Going beyond WTO commitments, which do not concern liberalisation of portfolio flows, China allowed foreign investors to acquire a share of domestic companies' capital and, since late 2002, large foreign institutional investors have been allowed to invest in bonds or stocks listed in Chinese domestic markets under the Qualified Foreign Institutional Investors' (QFII) scheme. *De jure* financial openness has thus made some progress, leading to a presumption that the integration of China's capital markets would have increased in the new millennium.

However, existing work on emerging markets show that, in the presence of high trade openness, external *de jure* financial openness is neither sufficient nor necessary for the *de facto* openness of domestic capital markets (Aizenman, 2003). The degree of trade openness in China has certainly reached high levels and hidden capital (out)flows have been very large, especially in the second half of the nineties (Gunther, 2004), accumulating to more than the stock of inward FDI, while, since 2001, very large portfolio inflows have tried to benefit from the expected appreciation of the yuan.

Still a consensus view among empirical researchers is that the Chinese stock market has been mostly protected from the influence of foreign stock markets. Existing work, using widely different samples (always ending in 2002 at the latest) with high frequency (daily) data, does not find any evidence either of long-run or of short-run relationships between A-share indices and foreign stock market indices. Neither does this literature document the emergence of such relationships at the time of the East Asian crisis.

In this paper we re-examine the issue of the existence of long run relationships between Shanghai's A-share market and international stock markets, over a long sample of active trading (January 1992–November 2005). We focus on New York as the major global stock market with which the A-share market has connections, and on Hong Kong as the regional market which is an important benchmark for Chinese domestic investors, given that more than one third of the Hang Seng index lists Mainland Chinese firms. We use a regime-switching error correction model which is more flexible than other techniques in detecting gradual changes in long run anchors. This enables us to determine whether there was a change in regime in international financial integration of China at the time of the East Asian crisis, or whether seeds of change were already present before the latter.

We proceed in two steps. Firstly, using end-of-week closing prices, we replicate, on our longer sample and with this different methodology, the results of previous work on the absence of cointegration of the Shanghai-A market with international markets. Secondly, in line with existing work supporting the use of temporally aggregated data when testing for the presence of long run relationships, the study of weekly-averaged data leads us to provide fresh evidence of evolving cointegration. There was a change in long run anchor for the Shanghai A-share market from a global one, the Standard & Poor's 500, up to 1996, to a regional one, the Hang Seng index, subsequently. This finding enables us, in particular, to explain what millions of individual Chinese investors, and many observers, see as a puzzle, i.e. the everlasting bear phase of the secondary market between 2001 and 2005.

In previous empirical work, the absence of link between the Chinese stock market and foreign stock markets is always interpreted as proof of the lack of financial integration of China. However