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China's financial linkages with Asia and the global financial crisis☆

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This paper presents empirical evidence on asset market linkages between China and Asia and how these linkages have shifted during and after the global financial crisis of 2008–2009. We find only weak cross-country linkages in longer-term interest rates, but much stronger linkages in equity markets. This finding is consistent with the greater development and liberalization of equity markets relative to bond markets in China, as well as increasing business and trade linkages in the region. We also find that the strength of the correlation of equity prices changes between China and other Asia countries increased markedly during the crisis and has remained high in recent years. We attribute this development to greater "attentiveness" of international investors to China's role as a source and destination of equity finance during the crisis rather than to any greater financial deepening and liberalization, as China did not implement any major policy measures during this period. By contrast, the transmission of U.S. equity returns to Asian countries decreased after the crisis.

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1. Introduction

China's pace of real growth and transformation into a global economic power over the past three decades has been unprecedented. However, the development of its financial sector has been more gradual and irregular. Despite evident growth in the size and depth of China's financial sector, state-controlled banks and institutions dominate financial markets, many asset prices are heavily managed, and a myriad of regulations and controls still affect international financial transactions. This uneven pattern of development raises the question of how soon will the ongoing liberalization of China's financial sector and the internationalization of its currency, the renminbi (rmb), enable China's financial sector to catch up with the real side of the economy, allowing China to stand among other major economic powers as a world financial center.

A large body of literature has addressed various aspects of the policy challenges faced by China as it seeks to sequence capital-account opening and currency internationalization with other policies, such as exchange-rate flexibility and financial market development (e.g. Glick and Hutchison, 2009). Less well discussed is how the global financial crisis (GFC), together with the gradual process of China's domestic financial development and drive toward internationalization of the rmb has affected its Asian neighbors. Given the size and dynamism of China's economy, these forces inevitably will have repercussions, not only for the global financial system, but for its regional trade and financial partners in Asia as well. Moreover, these connections may have deepened with the advent and aftermath of the GFC that pushed China even further to the fore of the world economy as an engine of growth.

The impact of China's economic development on global trade and production connections is self-evident and well documented by business and economic research. Less studied has been the extent to which impulses from the Chinese economy have been transmitted to financial markets abroad. These linkages may be both real and financial in nature. On the real side, trade linkages—working through final goods or input markets – may link economies' financial sectors via the transmission of business cycle fluctuations, even without direct connections and arbitrage across financial markets. On the financial side, the increased size and depth of Chinese financial markets, combined with ongoing domestic financial liberalization and deregulation of international capital flows to date, may also foster stronger financial sector linkages. Moreover, stronger financial linkages may have been created with the onset of the global financial crisis (GFC), which disrupted traditional international financial linkages, challenged the dominant position of the United States in global financial markets, and correspondingly boosted the role of China both as a destination and source of financial capital. Thus, the "attentiveness" of international investors to financial developments in China, particularly investors in other equity markets in Asia, may have increased since the GFC.

In this paper we investigate the extent of Chinese financial linkages with its East Asian neighbors, how these connections have been affected by the GFC, and how the financial role of China has shifted in relation to the United States. We examine linkages in equity and bond markets, both of which depend in principle upon the extent of trade linkages, the size, depth, and liberalization of domestic financial markets, as well as on the degree of capital account openness. We investigate both equity and bond market linkages, since China has liberalized its domestic equity markets and outward foreign direct investment – tying Chinese economic development to equity markets abroad – much more than it has liberalized its bond markets. Examination of the differential "interconnectedness" between equity and bond markets in China and those in other East Asian economies, in turn, may shed light on the effects of financial deepening and liberalization in equity markets as opposed to linkages related to common business cycles and trade.

We find that equity market linkages between China and other Asian countries have grown substantially since the GFC, while bond market linkages are limited and fairly stable. Our review of the literature and own empirical analysis suggests that the rise in equity market linkages is not attributable to greater domestic financial market deepening or liberalization of international capital flows, since no major changes in these areas occurred around the time of the GFC. We argue instead that the GFC caused disruptions in traditional financial linkages and increased investors' awareness of China and "attentiveness" to its role as an origin and destination of equity finance because of its substantial trade linkages, foreign direct investment flows, and the interconnections of business relationships. Theory and empirical evidence suggest that once investor "inattentiveness" turns to "attentiveness,"

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