



How does the US credit crisis affect the Asia–Pacific economies?— Analysis based on a general equilibrium model[☆]

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ABSTRACT

The current financial crisis differs from most post-war recessions in that the balance sheets of both households and banks have been severely damaged, which could lead to structural changes in the behavior of households. Therefore, it may exert some far-reaching effects on regional economies in the short run as well as in the medium term. This paper studies these effects using a multi-country dynamic structural model. In the short run, the US credit crisis weighs heavily upon the Asia–Pacific economies through financial linkages in addition to the traditional trade channel due to the deepening global financial integration. The relative importance of various financial channels differs notably across economies. While stock market contagion is more important for advanced economies, flight to quality across borders plays a key role in less developed economies. From a medium-term perspective, changes in the US household behavior caused by the credit crisis can help correct global imbalances, but the effectiveness hinges largely upon how long US households can maintain a reasonably higher savings rate. In addition, although the declining American public savings rate may not exert material impacts on the global imbalances, it can darken regional growth prospects due to a potentially higher world real interest rate.

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1. Introduction

The credit crisis that originated in the US has generated significant ripple effects and weighed heavily upon real as well as financial activities across the globe. The current crisis differs from most post-war recessions in that the balance sheets of both households and banks in the US have been badly damaged by the collapse in the US housing prices. Asset prices plunged in the US as well as in the rest of the world. As a result, the crisis was transmitted to other regions not only through the traditional trade channel but also through financial linkages due to the rapid development of global financial integration in the past decade. Yu and Fung (2009), for instance, find that during the recent credit crisis of 2007–2008 the distress in the US dollar market has had a material impact on the interbank markets for the Hong Kong dollar, Japanese Yen, Australia dollar and New Zealand dollar. As stated in a report from the International Monetary Fund (IMF, 2009), although Asian financial institutions have had limited exposure to US subprime securities and little involvement in high-risk mortgage lending

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practices, indirect effects of the global financial turmoil have proved to be extremely strong, as Asian financial ties with outside markets have deepened significantly since the Asian financial crisis.

While there are numerous papers and reports discussing how the US slowdown can affect the Asia–Pacific economy through the traditional trade linkage (N'Diaye, Zhang, & Zhang, 2010; Zhang, 2008, for example), there is little research on the spreading of the US crisis to regional economies through the financial channel. Against this backdrop, this paper first studies how the US credit crisis affects 11 East Asian and Pacific economies in the short run.² We explore how the crisis propagates to this area through both financial as well as trade channels, with more emphasis on the former. As economies in this area differ noticeably in both financial structures and the level of financial development, it is necessary to dissect the financial transmission mechanism by distinguishing how the crisis affects EMEAP economies through three channels: banking sector contagion, flight to quality across borders, and stock market infection. Details on these channels are discussed in the following sections.

The current financial crisis could have far-reaching effects on global imbalances, an issue intensively debated among economists as well as policymakers (Bernanke, 2007; Faruquee, Laxton, Muir, & Pesenti, 2005; Obstfeld & Rogoff, 2005). Governments and investors have realized from the crisis that financial markets were under-regulated and financial institutions were over-leveraged. Regulatory reforms could potentially change the rule of the game and lead to more stringent lending practice in the banking industry. Meanwhile, US households appear to have learnt that over-leveraging cannot be maintained indefinitely and adjustment in behaviors is inevitable at some point. These developments have led to the ascending personal savings rate in the US recently and discussion on the implications for the long-standing global imbalances, which have, to a large extent, been attributed to the over-consumption in the US.³ To what extent can the de-leveraging in the US household sector help achieve global balances, and how can it affect regional current accounts in the medium term? On the other hand, the US government deficit, which has also been blamed for the global imbalances in recent years, is set to rise further as a big fiscal stimulus package has been launched to fuel the weakening economy. To what extent will this offset the effects of the rising private savings rate on global imbalances? We try to address these issues in this paper.

Some researchers argue that the current global imbalances are also related to the high savings rate in the Chinese household sector. It has been claimed that regional financial imperfections and unbalanced growth pattern in emerging market economies and oil exporters have contributed to low global interest rate, a conducive if not determining factor in the global financial crisis (Bernanke, 2007; Bracke, Bussiere, Fidora, & Straub, 2008). Against this background, we also explore how a declining savings rate in China, which has been actively engaged in a series of structural reforms to rebalance its growth pattern and to prompt domestic demand, may affect regional current accounts in the medium term.

This paper uses an eight-region version of the Global Integrated Monetary and Fiscal (GIMF) model as the main tool of analysis. The GIMF model was first developed at the IMF and was extended to the eight-region version by the Hong Kong Monetary Authority (HKMA) to capture the heterogeneous economic structure in East Asia. It is well suited for analyzing the issues discussed above, given its strength in modeling cross-country linkages and the effects of fiscal policy. We find that the US credit crisis weighs heavily upon the Asia–Pacific economy through financial linkages in addition to the traditional trade channel. For some economies the former can be much more important than the latter due to their close financial ties with the US. The relative importance of the three financial channels (banking sector, flight to quality across borders, and stock markets) differs notably across economies. While stock market contagion proves to be important for advanced economies, flight to quality across borders plays a key role in less developed economies.

From a medium-term perspective, simulations based on the GIMF model show that the changes in the behavior of US households can be conducive to correcting the global imbalances, but the effectiveness hinges largely upon how long US households can maintain a reasonably higher savings rate. The effect of lower savings rate in China on current accounts in other economies is smaller compared with the effect of savings rate adjustment in the US.

Our findings also contribute to the literature on the potential for emerging markets to decouple from the US business cycles. Akin and Kose (2008) document the stylized facts on the changing nature of linkage between developed economies and developing economies. Hong, Lee, and Tang (2008) find that severe financial downturns or recessions in advanced economies are often associated with financial crises or recessions in Asia, whereas He, Cheung, and Chang (2007) and Zhang (2008) explore the trade linkages between East Asian economies and developed countries. IMF (2008) and the Asian Development Bank (2007) examine how Asian economies depend on the developed countries through the trade and financial channels. While there are numerous empirical papers in the “decoupling” literature, theoretical research is limited. This paper is the first to utilize a multi-country DSGE model to illustrate the trade and financial channels through which a crisis in the US affects the Asian economies. It confirms the findings in recent empirical papers that the linkage between Asian economies and the developed countries remains strong, and the financial crisis affects the Asian economies through both trade and financial channels.

² These are the members of the Executives' Meeting of East Asian-Pacific Central Bank (EMEAP). Founded in 1991, EMEAP is a cooperative organisation of central banks and monetary authorities in the East Asia and Pacific region. It comprises central banks and monetary authorities of the following 11 economies: Australia, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, and Thailand.

³ While Bracke et al. (2008) define global imbalances in a broad sense considering both current account imbalances as well as financial positions, we here focus mainly on current account imbalances.

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