



ELSEVIER

Contents lists available at SciVerse ScienceDirect

# Finance Research Letters

journal homepage: [www.elsevier.com/locate/frl](http://www.elsevier.com/locate/frl)

## Butterfly effect: The US real estate market downturn and the Asian recession

Yi Xue<sup>a,\*</sup>, Yin He<sup>b</sup>, Xinjian Shao<sup>a</sup>

<sup>a</sup>Department of Finance, School of International Trade and Economics, University of International Business and Economics, #10 Huixin Dongjie, Chaoyang District, Beijing, China

<sup>b</sup>Department of International Trade, School of International Trade and Economics, University of International Business and Economics, #10 Huixin Dongjie, Chaoyang District, Beijing, China

### ARTICLE INFO

#### Article history:

Received 3 October 2011

Accepted 20 February 2012

Available online 6 March 2012

#### JEL classification:

G01

G15

E60

F30

#### Keywords:

Sub-prime crisis

Economic effects

Common component analysis

Transmission mechanism

### ABSTRACT

We construct a comprehensive measure for the evolution of the US financial crisis by extracting the common components in the real estate market (S&P Case-Shiller composite-10 housing price index), the equity market (S&P 500 index), and the money market (M2 money multiplier). We then investigate the effects of this crisis on six Asian economies. Using the quarterly data from Q1 1991 to Q1 2010, we find that, surprisingly, the Asian equity markets are not contagious by the crisis; rather, trade contagion is the dominant transmission channel for the crisis to be transmitted to Asia. Finally, our empirical investigations suggest that monetary policy, rather fiscal policy, is a better choice for assisting Asian economies during this crisis.

© 2012 Elsevier Inc. All rights reserved.

## 1. Introduction

The first indications of a global financial crisis emerged in the middle of 2007 with rising defaults on sub-prime mortgages in the US. It began as a relatively isolated crisis in low-quality mortgage loans in US but later spiraled out of control due to the chained and mutually dependent institutional design of the loans, under which the global financial system was contaminated by increased risk-taking in search of higher yields and the use of sophisticated mechanisms such as asset-backed securities and structured credit products. Neither the markets nor the regulators were fully aware of the potential danger of these practices to the financial stability of the system or of the fact that the rate of

\* Corresponding author.

E-mail address: [yxue@uibe.edu.cn](mailto:yxue@uibe.edu.cn) (Y. Xue).

economic and financial globalization over the last decade had been higher than the speed of policy and regulatory adjustment. Thus, when housing prices started to crash and the default rate of mortgages rose, financial institutions were hit rapidly in most developed countries. Following this, those countries experienced unemployment and a loss of confidence that reduced consumption and investment, which began the economic recession that gave the crisis a worldwide dimension.

Several channels are commonly understood to have transmitted the crisis from the US to the world economy. First, the most direct channel is the mutually dependent and highly correlated financial systems of the countries. For instance, Banks in Japan invested in bonds that provided high yields but were backed by low-quality mortgages. Thus, when the sub-prime crisis began in the US, these banks automatically lost their investments. Second, the failure of the US banking system may have caused a shortage of liquidity, leading to capital outflows from the rest of the world back to the US. Third, financial contagion may have resulted in sectoral contagion: persistent liquidity shortages are likely to cause a systematic impact on non-financial sectors as well. One possible explanation for this phenomenon is that a fear of “insolvency” makes banks reluctant to ease their line of credit. Meanwhile, the increasing cost of borrowing caused by strict credit lending can further increase the probability of a firm’s insolvency. Finally, unemployment and a loss of confidence may have changed consumers’ expectations and behaviors, leading to a reduction in consumption. As one of the biggest consumers in the world, decreases in demand in the US would reduce exports in many countries across the world. Such a problem in the global production chain would affect sectors in all countries. In particular, countries that depend on external consumption would suffer if most of their exports were intended for partners affected by the crisis.

This paper attempts to study the impact of the financial crisis on a set of Asian countries. To study the side by side impact of the crisis on the Asian countries, the first challenge is to measure the crisis’ evolution. Due to the difficulty to find suitable events during the crisis which can be used as the benchmark to separate the effect of the crisis on the target economy before and after, a standard event-study analysis to investigate the economic effects of the financial crisis on the target economy can be contaminated. Many research efforts have been dedicated to measuring financial crises. For instance, [Reinhart and Rogoff \(2009\)](#) documented many features of financial crises that have occurred over the last 200 years. [Reinhart and Rogoff \(2008\)](#) claimed that the 2007 sub-prime crisis shared many similarities with past crises. However, little is known about measuring a crisis’ evolution. [Kaminsky and Reinhart \(1999\)](#) employed a set of indicators (both fundamental and financial) to describe past crises. However, each indicator only measured one aspect of the crisis and they did not construct an index to capture the evolution of the financial crisis as a whole.

In this paper, we construct a simple but comprehensive measure of financial crises to measure the common shocks among various economic indicators as documented in [Kaminsky and Reinhart \(1999\)](#) and [Reinhart and Rogoff \(2008\)](#). Intuitively, a financial crisis can be thought as a series of random (negative) shocks. We assume that this series of shocks enters into many economic indicators additively, including housing prices, equity prices and others. We also allow each indicator to contain idiosyncratic shocks that capture the specific features of a particular market or an aspect of the economy. Intuitively, when an exogenous negative shock occurs, the shock enters different aspects of the economy at different rates, and each aspect of the economy responds to the common shock differently. Uncorrelated idiosyncratic shocks persist as well.

We employ two disentangling methods for identifying the common financial crisis shocks in this paper: principle component approach, and averaging method, which follows [Lumsdaine and Prasad \(2003\)](#). Principle component approach is widely used to identify the unobserved factor in financial markets. For instance, [Baker and Wurgler \(2006\)](#) use principle component approach to construct the index measuring investment sentiment from several series which are believed to be correlated with investment sentiment in the market. The averaging method used in [Lumsdaine and Prasad \(2003\)](#) is a robust method for identifying the common components of multiple time series. This method allows for non-synchronic entry of common shocks, which captures possible delays in the transmission and responses from each market or each aspect of the economy. Using these two measures of the evolution of the financial crisis, we are able to investigate the economic effects of the crisis on the Asian economy.

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات