Chapter 8

Financial Contagion and Shock Transmission During the Global Financial Crisis: A Review of the Literature

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ABSTRACT

After the recent financial crisis, the analysis of shock transmission across the financial system has received a great deal of attention. In particular, the role of financial contagion as a shock propagation mechanism has been studied in detail. The globalisation of financial and banking markets has increased the connections and relationship between them. Hence, recent crises have spread all around the world. The stability of linkages between financial assets across different market conditions cast doubt upon the benefits of portfolio diversification. This chapter reviews the extant literature on financial contagion during the global financial crisis and thus provides information for both portfolio managers (when optimizing their investment portfolios) and policymakers (when designing their strategies in order to mitigate spillover effects during crisis periods).

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INTRODUCTION

The credit crisis that began to unfold in U.S. markets in August 2007 heralded a period of financial turbulence that, firstly, spread across the U.S. financial system and, later, across global financial markets. The crisis was prolonged and persistent and impacted greatly on the real economies of many countries, especially in the large developed markets and later in the Eurozone periphery. The propagation of the crisis and the channels through which it spread have been studied extensively in its aftermath, as academics, governments, participants in the financial markets and policy makers all strive for a better and deeper understanding of the transmission of the crisis. Only when this transmission is fully identified can these agents design policies and regulations to make the global financial system more resilient and better prepared to absorb financial shocks.

Defining contagion has proven to be a contentious issue in the literature and an excellent overview of the various definitions employed in the literature to that point is provided by Pericoli and Sbracia (2003). Early studies, like King and Wadhwani (1990), labelled any significant increase in correlation during a crisis period as contagion but Forbes and Rigobon (2002) showed the importance of differentiating between contagion and interdependence, by accounting for changes in the volatility of asset / market volatilities between normal and crisis periods. They showed that failure to account for changes in volatility could lead to an erroneous finding of contagion, simply due to correlation changes induced by the increase in asset volatilities during the crisis. Although there is a considerable debate about the definition and characteristics of financial contagion, a consensus has begun to emerge that contagion is an excess comovement of asset markets during a crisis episode, i.e. the comovement is greater than could be predicted from the interdependence that prevails during normal market conditions.

BACKGROUND

It is now generally accepted that the origins of the U.S. credit crisis lay in the market for securitized products, such as Collateralized Debt Obligations and other complex credit derivatives whose underlying pool of income-generating assets were becoming increasingly concentrated in the U.S. real estate sector, and in particular, on subprime mortgages, see Brunnermeier (2008), Gorton (2009) and Dungey et al. (2013) among others. The spectacular growth of this sector in the early 2000s and its subsequent decline led to widespread financial turbulence for the banking industry. It’s interesting to note that this sector of the financial system was relatively small. Dywer and Tkac (2009) estimate that as of December 2006, this market
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