


# Opinions

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## Financial Market Integration and the International Business Cycle: Theory vs. Reality



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Over the past few decades, the financial market has rapidly become integrated across different countries. The financial integration index, measured by the ratio of total financial inflows and outflows to global GDP, has increased six times over the past 50 years<sup>1</sup>. As financial linkage increases, financial crises become more prevalent. This point is illustrated by the 400 financial crises that took place between 1970 and 2013<sup>2</sup>. The contagion of financial market disturbances is very quick and widespread, leading to business cycle co-movement during a financial crisis.

<sup>1</sup> Lane, Philip R., and Gian Maria Milesi-Ferretti (2007).

<sup>2</sup> Lane and Valencia (2013).

In theory, there should be risk sharing in the integrated financial market. Though an unfavorable shock occurs in Korea, Korean consumers holding foreign assets still smooth their consumption because their income comes in part from the foreign assets they hold. Due to the shock, investors in the integrated financial market invest more outside of Korea, where productivity is relatively higher than in Korea. Thus, output rises in the foreign country but falls in Korea. This refers to a tendency to “make hay where the sun shines.” In the theoretical model, business cycles in the home and foreign countries move in opposite directions with respect to a country-specific shock.

What theory predicts, however, is not always consistent with what we observe in reality. We know this from past experience: the 2008 financial crisis and the 1997 Asian financial crisis. The Great Recession started in the U.S. subprime mortgage market and spread swiftly all across the world. As a result of this phenomenon, the world economy is still struggling to get out of the legacy of the 2008 financial crisis. In 1997, the Asian financial crisis began in Thailand with a large depreciation in the value of the Thai baht. Subsequently, the economies of many Asian countries were affected by this crisis. These two financial crises led to simultaneous economic downturns and business cycle co-movement, which are the opposite of what theory predicts. What causes this difference between theory and reality?

There are several factors that influence the differences<sup>3</sup>, but the key component is the financial friction that hinders the efficient allocation of resources across countries. Financial friction refers to the asymmetric information between lenders and borrowers. The traditional International Real Business Cycle model overlooks financial friction because it resides in the world where the Modigliani-Miller theorem holds. This theorem describes the financial market as just a simple reflection of the real side of the economy, but we know that this is not always true.

Financial friction does affect the real economy, meaning that the Modigliani-Miller theorem no longer holds. In the case of the 2008 financial crisis, the asymmetric information problem was worsened by derivative securities such as MBS (mortgage backed securities) and CDO (collateralized debt obligations). These were considered products of financial innovation but became the main reason behind the financial crisis. These derivative securities underestimated inherent risk by veiling the underlying assets and borrowers from which the ultimate risk orig-

<sup>3</sup> The characteristics of the shock (global or local, permanent or temporary, financial shock or productivity shock etc.), period (normal time or crisis), home bias, types of financial market integration etc. are factors that should be reflected in the model to become consistent with the data.

inated. This created a large financial bubble that finally collapsed in 2008, after the Lehman bankruptcy. This shock, which was initially emerged in the U.S., was rapidly transmitted to other countries via the integrated financial market.

When it comes to the 1997 Asian financial crisis, asymmetric information for global investors also played a large part. These investors did not have much information about the Korean financial market and the fundamentals of Korea's economy. Given limited information, global investors thought that there should be a common factor shared by Asian countries and this drove business cycle synchronization. When the Thai baht started depreciating, global investors simultaneously began to collect debts from many Asian countries, including Korea. Though we told ourselves that, "the fundamentals of Korea's economy are sound," global investors turned out to disagree.

In international macroeconomics literature, we still need to figure out financial friction in more detail and try to incorporate it into the model rigorously, though several papers have focused on this task over the last couple of years. In terms of policy implications, financial friction is closely related to the health of the financial system, which is why the government must implement macroprudential policy to relieve it. In the globalized financial market, the government should also coordinate policies between countries to dampen negative cross-border spillovers. **KIEP**