

Self-Fulfilling Risk Panics

Philippe Bacchetta

University of Lausanne
Centre for Economic Policy Research
Hong Kong Institute for Monetary Research

and

Cédric Tille

Graduate Institute, Geneva
Centre for Economic Policy Research
Hong Kong Institute for Monetary Research

and

Eric van Wincoop

University of Virginia
National Bureau of Economic Research
Hong Kong Institute for Monetary Research

November 2010

Summary

Recent crises have seen very large spikes in asset price risk without dramatic shifts in fundamentals. We propose an explanation for these risk panics based on self-fulfilling shifts in risk made possible by a negative link between the current asset price and risk about the future asset price. This link implies that risk about tomorrow's asset price depends on uncertainty about risk tomorrow. This dynamic mapping of risk into itself gives rise to the possibility of multiple equilibria and self-fulfilling shifts in risk.

Apart from a regular fundamental equilibrium, there is an equilibrium in which either a sunspot or macro fundamental takes on a role as coordination device for self-fulfilling shifts in perceived risk. In addition we show that it is possible to suddenly switch from a low risk state, similar to the fundamental equilibrium, to a high risk state. During such a risk panic a macro fundamental suddenly takes on the additional role of a coordination device for a self-fulfilling shift in risk. The weaker the fundamental is at the time of the panic, the larger the magnitude of the panic.

The panic involves a sharp increase in risk and the volatility of risk, a large drop in the asset price, decreased leverage and reduced market liquidity. After the panic occurs the asset price is very sensitive to changes in the macro fundamental as it remains a focal point for shifts in risk perceptions as long as we remain in the high risk state. We show that the model can account well for the developments during the recent financial crisis.