

The impact of “Credit Cycles” by Kiyotaki and Moore

The Stephen A. Ross Prize in Financial Economics has been awarded to “Credit Cycles”, written by Nobuhiro Kiyotaki from Princeton University and John Moore from the London School of Economics and the University of Edinburgh. The prize committee chose this paper because it is one of the leading papers emphasizing the importance of financial frictions for the macroeconomy and asset price volatility. The paper emphasizes the important role of assets as collateral in addition to their role as a factor of production. The insights of this literature have been essential in understanding the current crisis and the “lost decade” in Japan.

The paper argues that financial frictions are the primary reason why adverse shocks can lead to significantly and persistently depressed macroeconomic activity. Earlier work in Bernanke and Gertler (1989) emphasized that financial frictions amplify adverse shocks and are persistent. That is, a temporary shock depresses not only current but also future economic activity. Kiyotaki and Moore identify an important dynamic feedback mechanism. The cutback of investment in the future will not only reduce the asset price of future periods, but since this decline is anticipated, it is immediately reflected in a fall in the current asset price. This lowers the current collateral value of assets reducing firms’ debt capacity even further. Hence, demand for these assets is subdued and price declines further, eroding productive agents’ net worth in turn and so on, as predicted by the static multiplier effect. In sum, Kiyotaki and Moore add a dynamic multiplier effect to the static one and thereby point out an interesting interaction between amplification and persistence.

This is a landmark paper for the literature that tries to explain asset price movements and fluctuations in economic activity with financial frictions rather than shifts in preferences of a hypothetical representative agent. This seminal work sparked the development of a huge literature on macroeconomics with financial frictions and finance. It is now commonly taught in a first year Ph.D. sequence as part of macroeconomics as well as finance courses.

More recent work builds on their analysis of credit constraints. From a macroeconomic perspective Kocherlakota (2000) stresses that credit cycles are asymmetric, sharp downturns are followed by slow recoveries. Einfeld and Rampini (2006) develop a model where credit constraints are more binding in recessions in order to match the empirical regularity that capital reallocation is lower in downturns than in booms. Iacoviello (2005) evaluates the quantitative relevance of the Kiyotaki-Moore mechanism in a

setting with nominal mortgage debt using real estate as collateral. Caballero and Krishnamurthy (2001) and Mendoza (2010) study sudden stops within an international context.

In Kiyotaki and Moore credit is limited by the expected price of the collateral in the next period. In Geanakoplos (1997, 2003) and Brunnermeier and Pedersen (2009) borrowing capacity is limited by possible adverse price movement in the next period. Hence, greater future price volatility leads to higher haircuts and margins, further tightening the liquidity constraint and limiting leverage. Gromb and Vayanos (2002) provide a welfare analysis for a setting with credit constraints. In Brunnermeier and Sannikov (2010) more productive agents are concerned about hitting their solvency constraint in the future and consequently do not fully exploit their debt capacity. As volatility rises they cut back on borrowing by selling assets: This depresses prices further, leading to rich volatility dynamics. He and Krishnamurthy (2010) also stress the non-linear volatility effects and derive novel asset pricing implications in a setting in which risky asset holdings have to be channeled through credit-constrained risk averse financial experts. In Xiong (2001) price effects are also driven by experts' risk aversion. Experts' speculation is typically stabilizing, but after a large shock they become more risk averse and hype volatility by destabilizing the price process.

The ongoing financial crisis and subdued real economic activity underlines the importance of this line of research not only in finance but also in monetary economics and related fields.

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