

Diversification at Financial Institutions and Systemic Crises

by Wolf Wagner

It is typically taken for granted that diversification in the financial system should be encouraged. The standard reasoning is that diversification reduces the likelihood of institutional failure and should thus benefit financial stability overall. Financial regulation around the world has been heavily influenced by this paradigm. In this paper we argue that diversification also entails a cost: even though it reduces each institution's individual probability of failure, it makes systemic crises more likely by making banks more similar to each other. We show that full diversification is inefficient as a result and the optimal degree of diversification may be arbitrarily low.

Importantly, there is also an externality associated with diversification. The reason is that when a bank diversifies, it becomes more similar to other banks in the economy. This decreases the value of the bank because it increases the possibility of systemic crises. While the bank takes into account the expected loss of value to itself, it ignores the similar loss of value to other banks, which have also become more vulnerable to systemic crises because of the bank's actions. Because of this externality, banks diversify more than is optimal for the banking sector.

These arguments can be extended beyond diversification. We argue that various forms of financial integration are comparable to diversification in that they also make systemic failures more likely and may hence cause negative externalities as well. For example, when two banks insure each other against liquidity shocks, this tends to increase their likelihood of joint failure and may impose negative effects on other banks. Institutions may hence integrate more than is optimal, which again suggests a rationale for regulation.

Our model captures important aspects of the subprime crisis. The reason why the impact of this crisis is so pronounced is that the crisis is not limited to the banks which traditionally invested in the assets that originally incurred losses (U.S. subprime mortgage loans). This is due to the fact that many financial institutions had expanded beyond their traditional activities by investing in these assets. Thus, what was diversification at the level of an individual institution (e.g., a European commercial bank investing via securitization vehicles in U.S. subprime loans, or a hedge fund buying into credit risk) has caused a global systemic crisis, precisely as the model predicts. The paper's welfare results then suggest that the systemic nature of the crisis is not due to "bad luck", but rather a natural consequence of (socially) inefficient investment decisions at financial institutions which appropriately designed financial regulation could have avoided.

The full paper is available at: <http://people.pwf.cam.ac.uk/ww243/lbh.pdf>