

Comments on : “Register, Issue, Cap and Trade” by Alistair Milne.

This paper proposes a method to limit the frequency and severity of systemic risk episodes caused by excessive credit growth. First a central register of all financial assets and liabilities should be created. Second a cap and trade method based on auctioned licenses should limit the excessive credit creation. Third the central bank can increase the money supply as it sees fit to prevent credit crunches.

An important point, related with the benefits a central register may have, is to what extent different financial assets have different impact on systemic risk. In a recent paper (*), we estimate several systemic risk measures for a subset of the 91 biggest U.S. bank holding companies for the period from 2002 to 2011. Then we examine six issues: (1) is there a relationship between the banks’ holdings of financial derivatives and their contributions to systemic risk?; (2) is this relationship uniform across derivatives classes?; (3) is the impact on systemic risk the same irrespective of whether the derivative is held for trading or for other purposes?; (4) is the relationship between derivatives holdings and systemic risk sensitive to the emergence of the subprime crisis?; (5) in the case of credit derivatives, is their impact dependent on whether the bank is net protection seller or net protection buyer?; (6) besides derivatives, are there other balance-sheet asset items which are significant contributors to systemic risk?.

We find the following results:

1. Yes. There is a significant relationship between the fair value of derivatives holdings of bank j in quarter t and the contribution to systemic risk of bank j in period $t+1$. Therefore derivatives holdings act as leading indicators of systemic risk contributions.
2. No. Banks’ holdings of credit and foreign exchange derivatives have an increasing effect on systemic risk whereas holdings of interest rate and commodities derivatives have a decreasing effect.
3. No. Derivatives held for trading have usually a significant effect, either positive (foreign exchange) or negative (interest rate, commodities) whereas derivatives held for other purposes do not significantly affect systemic risk.
4. Yes and No. We find that before the subprime crisis credit derivatives decreased systemic risk whereas after the crisis increased it. But foreign exchange, interest rate, equity and commodities derivatives influence systemic risk in all time periods in the same way.
5. Yes. If the bank is net protection buyer its credit derivatives holdings increase its systemic risk.
6. Yes. Some variables (measured as ratios over total assets) are also leading indicators of systemic risk contributions. Increases in the following variables increase systemic risk contributions: total loans, net balance to banks belonging to the same banking group, leverage ratio and the proportion of non-performing loans (measured in this case relative to total loans). On the other hand, increases in total deposits decreases systemic risk. The variables with the highest economic impact on systemic risk are the proportion of non-performing loans

to total loans and the leverage ratio. In fact, their economic impact is much higher than the one corresponding to derivatives holdings.

So, from the point of view of controlling systemic risk the added value of having a central register of all financial assets is unclear. Of more significance are accurate and timely measures of non-performing loans and leverage ratios. Our results suggest that these variables are the key factors determining the contribution of individual banks to the aggregate systemic risk component.

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(*) Rodriguez Moreno, Maria, Mayordomo, Sergio and Peña, Juan Ignacio, Derivatives Holdings and Systemic Risk in the U.S. Banking Sector (March 19, 2012). Available at SSRN: <http://ssrn.com/abstract=1973953> or <http://dx.doi.org/10.2139/ssrn.1973953>