A market-risk approach to liquidity risk analysis

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A financial crisis usually is due to the emergence of one or more risks to the financial system at a particular point in time. The costs to the economy affected by a crisis are high, which is why financial system stability is of constant concern to economic authorities, including the central banks.

According to Sir Andrew Large (2005), Deputy Governor of the Bank of England, this concern should translate into a profound analysis of those risks, the idea being to monitor their course in the interest of preserving financial stability. Nonetheless, any such analysis depends essentially on what is known about the origins of the risks at hand and, more importantly, the underlying forces that might result in a situation were a risk to a particular institution becomes a problem for the financial system as a whole.

The intention of this article is to help readers understand the mechanics of liquidity risk, particularly the forces that allow it to be “transmitted” to every institution in the financial system, in the event of a crisis.2 Specifically, we try to show how the liquidity risk to these institutions can become a financial crisis by being “converted” into a market risk. Briefly speaking, the process works as follows. When a financial institution runs into liquidity problems, it tries to liquidate some of its negotiable assets to cover its obligations. If the demand for thoseas sets is not perfectly elastic, their price will drop. And, if the banks list those assets on their balance sheets at market prices (mark to market), the drop in price results in a loss in portfolio value for every institution in system. This is how liquidity risk ends up becoming a market risk.

This idea is explained herein by simulating a microeconomic model that captures a bank’s treasury objectives and behavior in the face of uncertainty surrounding its liquidity needs and opportunities for investment. To accomplish this, the article is divided into four sections. The first classifies the major contributions to literature on how liquidity risk operates. As we attempt to demonstrate, literature on this subject tends to ignore the “mechanics” of liquidity risk. The second section provides an outline of the model and the third contains the results of its simulations. The fourth section offers several thoughts in the form of a conclusion.

Fuente: https://www.banrep.gov.co/en/estabilidad-tema-15