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PRESS RELEASE

Liquidity risk in securities settlement

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Securities settlement, which effects the legal transfer of securities that are traded in financial markets, is a critical element of the financial market infrastructure. Disruptions in settlement can increase trading risks for participants and, if serious enough, can lead to an erosion of market liquidity, which may undermine financial stability. This article uses a multi-period, multi-security model of a gross settlement system to simulate the effect of a shock to securities settlement arising from the default of the largest participant in the system. It shows that differences between securities settlement and payment systems lead to different impacts of shocks.

A first specificity of securities settlement systems is the presence of a settlement lag: trades are settled with a lag of at least one day after the trade has occurred. The simulation results show that this settlement lag causes the impact of a participant's default to last for more than one day. Thus, in assessing the potential severity of a settlement disruption, policy makers need to look beyond the first-day impact. Indeed, the simulations illustrate that the impact on trade settlement may last even longer than the period corresponding to the settlement lag.

A second peculiarity of securities settlement systems is the coexistence of a securities and a cash leg in transactions. This suggests that, in the absence of securities lending facilities, the impact of a default by a large participant and the degree of contagion may be greater if the defaulting participant is a net buyer than if it is a net seller. This is because cash is needed for every transaction, whereas securities are needed only in transactions involving those particular securities. The simulations reveal that when little or no credit is provided during the settlement process, the impact of a default is greater if the defaulting participant is a net buyer. Although generous liquidity is sufficient to eliminate the differential impact of a net buy versus a net sell position for the defaulter, liquidity provision is not sufficient to completely eliminate settlement contagion, due to the existence of the securities leg.

Finally, the results suggest a potential policy trade-off between liquidity provision by the securities settlement system and participants' reactions to a disruption in settlement. That is, either generous liquidity provision or participants' voluntary limitations of the volume of trades – in an attempt to avoid additional settlement failures – can help to rapidly restore the system's settlement efficiency to its normal level. Whereas generous liquidity provision can sharply reduce contagion, it places a potentially heavy burden on the liquidity provider. On the other hand, conservative reactions by market participants would avoid the burden on the liquidity provider but may entail a potentially severe fall in trading volume, thereby impacting market liquidity.