Fire-Sale Spillovers and Systemic Risk
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Abstract

We construct a new systemic risk measure that quantifies vulnerability to fire-sale spillovers using detailed regulatory balance sheet data for U.S. commercial banks and repo market data for broker-dealers. Even for moderate shocks in normal times, fire-sale externalities can be substantial. For commercial banks, a 1 percent exogenous shock to assets in 2013:Q1 produces fire-sale externalities equal to 21 percent of system capital. For broker-dealers, a 0.1 percent shock to assets in August 2013 generates spillover losses equivalent to almost 6 percent of system capital. Externalities during the last financial crisis are between two and three times larger. Our systemic risk measure reaches a peak in the fall of 2007 but shows a notable increase starting in 2004, ahead of many other systemic risk indicators. Although the largest banks and broker-dealers produce – and are victims of – most of the externalities, leverage and linkages of financial institutions also play important roles.

Key words: systemic risk, fire-sale externalities, leverage, concentration, bank holding company, tri-party repo market

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