

# **The Collateral Channel versus the Bank Lending Channel: Evidence from a Massive Earthquake**

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This paper examines the existence of the collateral and the bank lending channels simultaneously and compare their economic significance, by taking advantage of exogenous shocks to a firm's tangible assets and a bank's net worth caused by the massive Tohoku earthquake in 2011. We obtain the following findings: (1) damages to a firm's tangible assets and to the net worth of its primary banks lead to deterioration in firm's credit availability, which lends support to the existence of both the collateral and the bank lending channels; (2) firms that faced a tighter credit constraint after the earthquake have lower amount of borrowing outstanding and larger fall in the level of production and sales activities; (3) in aggregate, the damage caused by the earthquake and transmitted through the two channels substantially decrease output in the region.