The Bank Capital Channel of Monetary Policy

Abstract

This paper examines the role of bank lending in the transmission of monetary policy in the presence of capital adequacy regulations. I develop a dynamic model of bank asset and liability management that incorporates risk-based capital requirements and an imperfect market for bank equity. These conditions imply a failure of the Modigliani-Miller theorem for the bank: its lending will depend on the bank's financial structure, as well as on lending opportunities and market interest rates. Combined with a maturity mismatch on the bank's balance sheet, this gives rise to a 'bank capital channel' by which monetary policy affects bank lending through its impact on bank equity capital. This mechanism does not rely on any particular role of bank reserves and thus falls outside the conventional 'bank lending channel'. I analyze the dynamics of the new channel. An important result is that monetary policy effects on bank lending depend on the capital adequacy of the banking sector; lending by banks with low capital has a delayed and then amplified reaction to interest rate shocks, relative to well-capitalized banks. Other implications are that bank capital affects lending even when the regulatory constraint is not momentarily binding, and that shocks to bank profits, such as loan defaults, can have a persistent impact on lending.