Changes in financial structure and asset price substitutability: A test of the bank lending channel

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Abstract

In this paper we develop a method for testing the implications of the Bernanke–Blinder model for monetary policy transmission. Multivariate cointegration techniques are used in a sample that includes six major industrial countries with data covering the last 25 years. Moreover, we examine whether changes in financial markets affected the degree of asset substitutability and thus the potency of the lending channel. We find that in the US and the UK, representing the "Anglo-Saxon type" of financial market structure, the lending channel is inoperative, while in Japan it is still important for monetary transmission. The other three European countries examined–Germany, France, Italy–are in between, with the lending channel losing its potency in the last decade.
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1. Introduction

The traditional view of monetary transmission relies on the effects monetary impulses may have on equilibrium in financial asset markets and, through these effects, on the real economy. Thus in the "money" view, exemplified by the simple IS-LM model, there are only two financial assets, money and bonds. When the monetary authorities engineer a change in the supply of money, equilibrium is restored by changes in the interest rate for bonds that will ultimately have an effect on real variables. An appeal to Walras' Law allows us to ignore the bond market. In this framework, monetary policy operates through the liabilities side of bank balance sheets, while the presence of bank loans is in no way necessary for the monetary transmission mechanism (Miron et al., 1993) as loans are perfect substitutes for bonds on the asset side of bank balance sheets. Thus, a loan supply function cannot be defined.

An alternative view of monetary transmission, usually called the "credit" view or "lending" view of monetary policy, builds on the assumption of incomplete markets characterized by imperfect information, which may cause imperfect substitution between loans and bonds both in bank portfolios and as means of borrowing for firms. Banks would then play a special role because they offer a third distinct asset in addition to money and bonds, namely credit. The credit channel that has been more frequently analyzed in the recent literature is referred to as the bank lending channel.[1] As noted by Bernanke (1993), the basic assumption needed for bank credit to have an independent effect in monetary transmission is that loans and bond issues are not perfect substitutes for firms and that banks do not consider loans as perfect substitutes for securities due to financial market imperfections.

Moving away from conventional models of the transmission process which analyze the interest rate channel, and focusing on channels based on financial market imperfections, may be necessary to explain the apparent strength of monetary policy effects on the economy. Bernanke and Blinder (1988) propose a stylized model for analyzing the bank lending channel that departs from the IS-LM framework by taking into account the loan market. A key result of their model is that the existence of imperfect substitutability between bank loans and bonds provides a separate channel of monetary transmission, enhancing the effect of monetary policy on aggregate demand.

The implications of the Bernanke–Blinder model are not easy to test empirically and thus obtaining a "sharp measurement of the channel's potency is a challenging task" (Bernanke and Gertler, 1995, p. 42). A number of studies over the last decade have indirectly tested for the existence of the bank lending channel by examining timing relationships between quantity or price variables and measures of the monetary policy stance. A common limitation of these studies is that they analyze short-run responses that may admit alternative interpretations not necessarily restricted to loan supply shifts which play a central role in the propagation of monetary impulses in the lending channel. In this

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[1] Another part of the credit channel, also based on financial market imperfections, is the balance sheet or net worth channel (Brunner and Meltzer, 1998; Bernanke and Gertler, 1989). The central idea here is that reductions in borrowers' net worth associated with a rise in interest rates increase agency and information costs for lenders.