Bank Relationships, Business Cycles, and Financial Crises

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International finance literature has long emphasized the importance of information in international investment, citing information asymmetry as one of the leading explanations for portfolio home bias and lack of international diversification. Financial globalization created a number of avenues through which the effects of asymmetric information potentially can be reduced. One of them is international banking in general and banks' lending to each other in particular. It is commonly accepted that bank lending to corporate borrowers establishes the relationship and produces information flows between the lender and the borrower, which in turn facilitate further lending. It is thus reasonable to believe that lending of one bank to another establishes a channel for information flows between the lender and the borrower that might facilitate future lending, international capital flows of other types, as well as international trade.

Recent global financial crisis had a major impact on the global banking system. But did the crisis simply affect the volume of bank lending, or did it also affect the structure of international banking system? If relationships between banks play a role, the implications of these two developments are not identical. The aim of this paper, therefore, is to investigate the impact of the global financial crisis, as well as of country-specific recessions and banking crises of the past 30 years on the formation of new relationships between banks and the importance of banks in the affected country. To achieve that goal, **Hale** uses micro-level data on international syndicated bank loans

from the Loan Analytics database to construct a bank-level global banking network in which relationships are formed by banks extending loans to each other. She analyzes the dynamics of the structure of this network, in particular the formation of new relationships and the formation of banks that are important intermediaries. This is the first study in which a bank-level network is analyzed in a global scale.

To verify that relationships between banks defined by lending of one bank to another have indeed an effect on subsequent lending and borrowing, Hale demonstrates that when a bank establishes a new relationship, it originates more loans as either borrower or lender in the following three years. Moreover, she finds that when the number of important intermediaries in a given country increases, that country experiences an increase in both lending and borrowing origination in at least four years which follow.

Since the 1980s the global banking network experienced two major periods of rapid expansion - one in the early 1990s and one between 2002 and 2006. These periods of expansion were characterized by an increasing number of banks, increasing number of connections between banks, and increasing number of countries in which banks participate in the global banking. Importantly, network expansion during these periods was achieved more through formation of new connections by existing banks than trough an increase in the number of banks. Hale very clearly observes a collapse of the GBN during the global financial crisis that brought most measures of the network back to the level that was observed prior to the 2002-2006 expansion.

She finds that recessions and banking crises have an important effect on the development of the global banking network through lowering the number of new

connections banks make and altering the distribution of these connections across banks and countries. Thus, she shows that in addition to real costs of banking crises, there are costs associated with deterioration of bank relationships. Global financial crisis in particular played an important role by shifting the center of network from developing to developed countries and by affecting the formation of new relationships by large banks, banks that are normally immune to the effects of local recessions and banking crises. These findings have two important implications. A methodological implication is that the structure of a global banking network responds to economic and financial shocks, and it may therefore not be appropriate to model banking networks as static and exogenous in a dynamic setting, especially when the effects of financial shocks are analyzed. A broad empirical implication is that inasmuch as bank relationships facilitate international capital flows by overcoming information asymmetry obstacles, the slow-down in building bank relationships during recessions and banking crises, and especially during the global financial crisis, might be important in understanding the patterns of the decline in international capital flows in the aftermath of such events.