## Abstract for "Shadow Banking and the Production of Financial Intermediation Services"

## Kyle Hood (U.S. Bureau of Economic Analysis) Marshall Reinsdorf (U.S. Bureau of Economic Analysis)

The credit intermediation industry was at the epicenter of the US financial crisis of 2007-2008 and the subsequent Great Recession. Nonetheless, the US National Income and Product Accounts (NIPAs) show output of the financial services sector to be too modest for the sector's activities to have much of an impact on the broader economy. Although some of the channels of transmission of financial sector events to the broader economy may not depend on the amount of output produced by the sector, it is also possible that the NIPAs are understating the role of financial activities in the US economy. One source of financial activity not included in official measures of financial services is implicitly priced services of the "shadow banking" sector, including non-depository financial intermediaries such as loan companies, asset securitizers, and deposit-like accounts offered by money market mutual funds. The purpose of this paper is to provide comprehensive estimates implicitly priced intermediation services.

In the last few decades, non-depository financial intermediaries have become important channels through which funds are funneled from lenders outside of the financial services sector to borrowers also outside the financial services sector. Finance companies alone hold hundreds of billions of dollars in consumer, non-financial business, and mortgage loans; to make these loans, such companies may borrow using a variety of credit market instruments. The loans may also pass through a number of different instruments from final borrower to final lender (for example, loans may be packaged into mortgage pools or asset-backed securities, which may be funded from outside the financial services industry through other credit instruments). For this reason, rather than attempting to separately compute each flow along this complicated chain, this paper consolidates all the nonbank financial intermediaries into a single sector. We estimate the services provided to other sectors but not the intra-financial-sector flows of services.

Earlier work by Corrado et al. (2012) provides preliminary estimates of services that some classes of finance companies provide to consumers and businesses. However, this approach looked at only a limited subset of financial intermediaries, and did not provide estimates of depositor services furnished by financial firms to the set of lenders that provide deposit-like funds. In this paper, we expand our measures of financial services using Gallin's (2013) method to compute the net assets and liabilities of all non-depository lenders using the Federal Reserve Board's Flow of Funds data. From these data, estimates of interest flows into and out of the non-depository financial intermediation sector can be computed based both on total interest flows, netting out interest earned or paid by other sectors, and on interest rate data. Estimates of fee-based income associated with certain financial intermediation activities must then be netted out of total computed intermediation services, to avoid double counting. Preliminary estimates suggest that output of borrower services more than doubles when non-depository intermediaries are included in estimates, while the increase in depositor services is more modest. The contribution is greater in recent decades, indicating that the change in methods will have a large effect on growth rates of financial services output.