capture movements in the globally available funding. In recent years, much work has focused on capturing the role of the shadow banking system. Adrian, Ashcraft, Boesky and Poszar (2010) find that the volume of credit intermediated by the shadow banking system has far exceeded that of the traditional banking system since the mid-1990s. Adrian and Shin (2010) find that the balance sheet expansion of investment banks is a good proxy for overall funding conditions in market-based financial systems.[6]

Another strand of literature has focused on exploring cross-border liquidity linkages. Shin and Shin (2011) find that an increase in noncore liabilities (defined as the sum of foreign exchange bank liabilities and wholesale bank funding) is found to be a good predictor of an appreciation in the Won and rising credit spreads in Korea. McGuire and von Goetz (2009) find that European banks' reliance on interbank borrowing and dollar funding exposed them to funding risk and balance sheet pressure during the financial crisis. Bruno and Shin (2011) focus on the fluctuating leverage of cross-border banks as the channel through which financial conditions are transmitted globally.

The financial crisis highlighted the role of collateralized borrowing in amplifying risk propagation mechanisms (Bernanke and Gertler, 1989, Kiyotaki and Moore, 1997, and Bernanke, Gertler and Gilchrist, 1999). Leverage, with its self-reinforcing feedback loops on asset valuation and macroeconomic stability, is gaining increasing attention. Brunnermeier (2009) and Adrian and Shin (2010) find that the creation (and destruction) of credit to the private sector is increasingly tied to institutions' ability to leverage their balance sheets. The study of 14 developed countries over 140 years by Jorda et al (2011) finds credit growth as the single best predictor of financial instability. Furthermore, pro-cyclical margin requirements can create liquidity spirals, whereby a small loss in equity price that prompts a margin call could result in a fire sale of assets, further exacerbating the initial equity loss and needed deleveraging (Geanakoplos, 2009, Brunnermeier and Sannikov, 2010). Following the financial crisis, Singh (2011) finds that the use and reuse of collateral help "lubricate" the financial system; a significant decline in such collateral—a result of more stringent regulations and crimped risk appetites—will likely reduce market liquidity.

III. A New Approach to Measuring Global Liquidity

The global financial crisis has highlighted structural shifts in the financial system and the importance of moving beyond standard monetary aggregates. The analysis of such aggregates had focused on the transactions role of money and the multiplier that connects narrow money (cash and other claims on the central bank) with broad money (the deposit liabilities of the banking sector). An alternative economic rationale for monetary aggregates is that they are

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[6] See also Adrian and others (2011) for a discussion on the repo and securities lending market and Poszar (2011) for the role of institutional cash pools as a demand driver for shadow banking activities.