productivity gains from innovation lead to overinvestment—e.g., the dotcom bubble). It is important to emphasize the behavior of prices in these scenarios. Periods of positive supply act to lower the price of funding, which increases vulnerability to a sudden spike in that price (as was the case during the 2008 crisis). On the other hand, periods of higher demand for funding raise funding prices, potentially limiting the risk of overinvestment.

## IV. Assessing Drivers of Global Liquidity

### A. Identification of Demand and Supply

In order to identify changes in the demand and supply of liquidity, we use a vector auto-regression (VAR) model with sign restrictions imposed (see Box 2 for more details on the methodology).[15] Demand shocks are defined as parallel shifts of the (negatively sloped) demand curve with equilibrium prices and quantities moving in the same direction,[16] In other words, a positive demand shock would be associated with a contemporaneous increase in both the price and quantity aggregate of liquidity.

Similarly, supply shocks are defined as parallel shifts in the (positively sloped) supply curve, with prices and quantities therefore moving in opposite directions. Thus, a positive supply shock would be associated with an increase in the quantity aggregate of liquidity, but a simultaneous decrease in the price.

Note that our usage reverses the convention regarding the demand and supply of money. Our supply of liquidity is the supply of funding, and corresponds to the demand for money in traditional monetary analysis. One advantage of this approach is that it focuses attention on the behavior of the financial sector and its balance sheet management over the cycle.[17]

In principle, our approach to identifying demand and supply makes no assumptions on the structure of the market for liquidity that is which institution or sector demand or supply liquidity. One can adopt the convention that the entity whose liabilities have increased following the transaction has demanded liquidity (funding), while the entity, whose assets have increased, has supplied liquidity.

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[15]As suggested in Canova and De Nicolo (2002), sign restrictions can help identify supply and demand shocks. This approach has been widely used in the macroeconomic literature to identify business cycles (see also Uhlig, 2005; and Peersman, 2005).

[16]Krishnamurthy and Vissing-Jorgensen (2007) find evidence that demand curves for liquidity are negatively sloped, by studying the demand curves for liquidity services provided by Treasury debt.

[17]Kim, and others (2012) , who also adopt this convention, argue that the "as if" preferences of the banking sector are more pro-cyclical than households, therefore there is a difference between e.g., households supplying credit via the financial sector as opposed to them directly investing in corporate bonds.