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Broader use of saving products among people can make deposit funding of the banking system more resilient ☆

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Can broader use of formal saving tools among people boost the stability of bank deposit funding? We examine this question using the cross-country data on the use of formal savings from the Global Findex and the bank deposit growth from the International Financial Statistics. We run a cross-country regression using the averages over the 2007–10 period while controlling for relevant covariates such as the average level of development and existence of deposit insurance. We further condition on the access to deposits by firms using the Enterprise Survey data. The experience from the global financial crisis suggests that when a greater share of people use formal saving products, the country's banking system enjoys more stable deposit funding.

1. Introduction

From 2006 to 2009, the average real growth of global bank deposits dropped by over 12 percentage points per year.[1] Upper-middle-income countries experienced the greatest drop of 15 percentage points on average. Deposit growth in individual countries such as Azerbaijan, Iceland, and Montenegro fell from 58%, 57%, and 94% in 2007 to declines of −2%, −1%, and −8% in 2009, respectively. Rampant insolvency problems, financial crises, and their pairing with fiscal and economic crises could have explained the decline in deposit growth in many countries. But could a more diversified deposit funding of the banking sector have mitigated the systemic slowdown or reversal in deposit growth—and for that matter its volatility?

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[1] Global Financial Development Statistics of the World Bank; see also Fig. 1.

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This paper investigates whether a *broader use* of formal saving products by a country's population had a positive effect on the *growth* of bank deposits in the country during 2007–10 across our sample of 95 countries. In other words, when a greater share of people use formal saving products, does the banking system enjoy more stable funding through retail deposits during times of financial stress as the period of the global financial crisis? We measure the use of formal saving products according to Demirguc-Kunt and Klapper (2012) and also control for the access to deposits by firms using the Enterprise Survey data at the country level.[2] In addition, we examine the interaction between banking crises and the use of saving products by the population to determine whether the possible stabilizing effect of a broader use of saving products could have been stronger in crisis-affected countries.

In the regression analysis, we condition on relevant control variables, including gross national income (GNI) per capita, growth in aggregate output, the population size, inflation, occurrence of a banking crisis, existence of explicit deposit insurance, a banking sector stability indicator, the banking sector liquidity position, banking sector concentration, the ratio of deposits to gross domestic product (GDP), the ratio of loans to deposits, and capital account openness, as well as the rate of deposit growth and change in the exchange rate. We address the problem of potential endogeneity by timing the explanatory variables before or by 2007. Because the adopted measure of financial inclusion in deposits of Demirguc-Kunt and Klapper (2012) is from 2010, we instrument the measure by relevant variables from the Financial Access Survey of the International Monetary Fund (IMF) and by education and aging variables from the World Development Indicators (WDI) of the World Bank. As for the relevance of the latter, the general level of education and the share of young population in total population are assumed to positively affect financial literacy and financial inclusion, including the use of bank deposits. We estimate the regression by the generalized method of moments (GMM) using robust standard errors. We also check the robustness of our results with an alternative measure of our dependent variable.

We find that, when a greater share of the adult population uses formal saving products, the national banking system is likely to enjoy more stable growth in deposit funding including in periods of macro-financial shocks. In addition, we reject the hypothesis that this positive effect of broader financial inclusion in saving products could be particularly strong in countries that experienced a banking crisis during 2007–10. Per capita income (as a proxy for level of development), the population size, inflation (as a proxy for macroeconomic stability), the existence of deposit insurance, the aggregate resilience of the banking sector, and the openness of capital accounts (as a proxy for a country's financial openness)—in addition to the use of saving products among the adult population—are the most significant explanatory variables in our regressions. Our instrumental variables satisfy the exclusion restriction, and they are validated by first-stage regression statistics, and the test of overidentification restrictions. The results hold even when an alternative specification of the dependent variable—the standard deviation of deposit growth—is used. The results also hold when the direct measure of financial inclusion in saving products from the Global Findex survey is substituted with a composite measure of financial inclusion in the use of deposits such as that of Honohan (2008) (Han and Melecky, 2013).

Our paper tries to fill an existing gap in the empirical literature linking financial inclusion in deposits (the broader use of saving products among the adult population) with financial (banking sector) stability and resilience. Although the literature postulates that an inclusive financial sector with a more diversified and stable retail deposit base could increase systemic stability, empirical research confirming existence of such a relationship, especially at the level of the entire financial system, is largely absent in the literature (GPFI, 2012; Cull et al., 2012; Prasad, 2010). Only Sarma and Pais (2011) show that greater financial inclusion is significantly correlated with the better health of the banking system, gauged by lower nonperforming assets.

Low-income savers tend to maintain steady financial behavior through the business cycle. Hence, during crises, deposits from low-income clients typically act as a continued source of funds even when other sources of bank financing dry up or become difficult to roll over (Hannig and Jansen, 2010).[3] Indeed, the global crisis showed that stable retail sources of funding, in contrast with reliance on borrowed funds, can greatly enhance the soundness and resilience of individual financial institutions and reduce the volatility of earnings (Khan, 2011; Hannig and Jansen, 2010). Small customers can provide big opportunities to mobilize stable deposits. Banking systems that focus on generating retail deposits could secure a more diversified and stable funding that is less sensitive to changes in market interest rates and a bank's financial condition.

In times of financial stress, all depositors can get anxious, withdraw their deposits, or even participate in a run on banks (Diamond and Dybvig, 1983; Shin, 2009). By the law of large numbers and given the heterogeneous preferences of depositors, correlated deposit withdrawals could be mitigated if bank deposits were more diversified—that is, held by many rather than fewer individuals or entities. Indeed, researchers have found, controlling for size, that banks with more interconnected

[2] An alternative approach would be to study the effect of the use of deposits by individuals on retail deposits rather than total private sector deposits. However, there are problems with this approach. First, retail deposits already include microenterprise and often small enterprise deposits—that is, they go beyond purely consumer deposits. Data on consumer deposits are not readily available across countries. The IMF Financial Access Survey and Bankscope data both carry retail deposits. Second, even data on retail deposits are sparse and available for a small number of countries. We attempted to carry out the analysis presented in this paper with the use of retail deposits and had to work with 40 degrees or freedom which was prohibitive for drawing any reliable inference for the estimates (results available from authors upon request). Using total deposits as the dependent variable has also the advantage of studying both the effect of the use of deposits by individuals and its spillover effect into the economy at large, including firms. Firms are managed by individuals and the behavioral economics of financial inclusion suggest that firms may be more likely to use formal deposits if their managers do so as well, and vice versa.

[3] According to the 2001 Survey of Consumer Finance in the United States, less than 40% of low-income households (the bottom decile of wealth distribution) own any safe assets such as checking or savings accounts. But those households that do, put all their assets in safe assets compared to the median households that allocate less than 5% of assets to safe assets (Campbell, 2006).

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