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A Structural Framework to Analyse the Financial Stability Tool Net Stable Funding Ratio

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ABSTRACT

This paper builds a dynamic stochastic general equilibrium (DSGE) to analyse the new financial stability tool Net Stable Funding Ratio (NSFR). It complements the current literature that uses DSGE to model the banking sector in three ways. Firstly, we introduce endogenous maturity mismatch in the heterogeneous banking sector, where the retail bank uses short-term deposits to provide the firms with long-term corporate loans. Secondly, hitherto neglected components such as endogenous default and money via cash-in-advance (CIA) constraints are incorporated so that liquidity and default are the reasons for the influence of money injections on real economic variables. Lastly, the model analyses the macro-prudential instrument Net Stable Funding Ratio (NSFR), designed to reduce the overall maturity mismatch. With a calibrated DSGE model, we micro-found default and maturity mismatch and analyse how they feed into real economic variables, particularly the term structure of various interest rates, and we have found that a fall in maturity mismatch typically reduces the default rates of the firms and the retail bank. Moreover, we simulate the quantitative policy impact of the macro-prudential policy tool NSFR on the economy and search for optimal policy reaction functions that induce the most welfare gains.

KEYWORDS financial stability; maturity mismatch; default; NSFR; macro-prudential; welfare analysis