



## [Nominal rigidities in debt and product markets](#)

CFM-DP2016-25

Carlos Garriga<sup>3</sup>, Finn E. Kydland<sup>4,5</sup> and Roman Šustek<sup>1,2,6</sup>

<sup>1</sup>CERGE-EI, <sup>2</sup>Centre for Macroeconomics, <sup>3</sup>Federal Reserve Bank of St. Louis, <sup>4</sup>NBER, <sup>5</sup>University of California–Santa Barbara, <sup>6</sup>Queen Mary University of London,

The presence of nominal rigidities in the economy is crucial for the transmission of monetary policy from its policy instrument, usually a short-term nominal interest rate, to real economic activity. For a number of developed economies, yield curve data reveal that fluctuations in nominal interest rates, including the interest rate effectively controlled by monetary policy, are well captured by two distinct components. One is relatively temporary whereas the other is highly persistent. Such changes in the policy interest rate can potentially generate both aggregate as well as redistributive effects in the economy, in particular when borrowers and lenders use long-term nominal contracts, such as mortgages, and products markets are not fully flexible.

Using a dynamic stochastic general equilibrium model, we compare the quantitative importance of such nominal rigidities, sticky prices and long-term mortgage contracts, in transmitting temporary and persistent changes in the policy rate into the real economy. Sticky prices have been at the core of models used for monetary policy analysis for nearly two decades, while the interest in nominal debt contracts is more recent. Our model indicates that the sticky price channel is the more important transmission mechanism for temporary changes in the policy rate, whereas the mortgage channel is powerful when the changes are persistent. The real effects of the two channels, however, manifest themselves differently. The rigidities in product markets generate significant aggregate effects but small redistributive effects. The opposite holds for the transmission through mortgages. Simulating the economy shows that the redistributive consequences of monetary policy operating through the mortgage channel are of similar magnitudes as the standard aggregate consequences operating through the sticky price channel. The size of the redistribution is not affected by the nature of the mortgage contract (adjustable vs. fixed rate), although the timing and direction is. Furthermore, consumption of homeowners (borrowers) is affected significantly more than consumption of lenders.



In terms of policy implications for central banks, the model suggests that while persistent changes in the policy rate have a small impact on aggregate economic activity, they generate sizeable redistributions in mortgage markets. This lesson is especially pertinent in the current policy environment, in which nominal interest rates have been kept at low levels for almost a decade. The purpose of such policies was to stimulate aggregate economic activity. According to our model, the initial cut in policy rates may have fulfilled this objective, to the extent it was expected to be temporary, but the subsequent policy of keeping rates low for a substantial period of time more likely led to income and consumption redistribution than to the desired aggregate effects. As inflation followed nominal interest rates to similarly low levels, based on our model, we can infer that in countries with mainly fixed rate mortgages lenders gained at the expense of borrowers due to persistently low inflation rates, whereas in countries with mainly adjustable rate mortgages borrowers gained at the expense of lenders due to persistently low nominal interest rates.