

ARTICLES

CURRENT MACROECONOMIC CHALLENGES

GIOVANNI DI BARTOLOMEO AND ENRICO SALTARI

Sapienza University of Rome

The events driven by the financial crisis have highlighted limits and drawbacks of current paradigms. Economists began to rethink the role and impacts of financial factors and standard policies. At the same time, a more general sentiment of revision has challenged several consolidated “dogmas.” Accordingly, this special issue of *Macroeconomic Dynamics* aims to refresh the debate on some important macroeconomic topics from new and fresh perspectives. A number of questions relating to the challenges faced by macroeconomic theory and policies are raised. The issue, first, discusses some topics that stemmed from the financial factors, such as overleveraging, forward guidance, bank regulation; it then explores other “waters” related to price-setting behavior, productivity, and growth.

In the first contribution, Stefan Mittnik and Willi Semmler look at the consequences of overleveraging and the possible drivers for destabilizing effects from financial and real sector interactions. They build a nonlinear theoretical model of the banking macro-linkage with leveraging and investigate the role of an endogenous financial stress on output. The model also includes different macro feedback loops. Using the NMPS algorithm, they solve the model and show that, in the case of overleveraging, these macro feedback mechanisms lead to higher financial market stress, higher risk premia, higher credit spreads, and lower demand and output, leading to a falling capital stock. All this induces stress to the banking system and increases overall fragility. The empirical part of the paper analyzes the individual drivers of financial stress by using the multi-regime vector autoregression (MRVAR) approach. The authors run the Granger causality and response analyses between/of several financial indicators and the growth rate of industrial production in eight industrialized countries.

Andrew Hughes Hallett and Nicola Acocella construct a general theory of forward guidance, which is interpreted as the stabilizability of the economy in a control-theory sense. An economy is stabilizable if it can return to the initially expected path, whatever the initial conditions and shocks experienced to that point, given that no further shocks or changes in expectations appear. The main result is that this property holds for general linear models with lagged and expectations

Address correspondence to: Giovanni Di Bartolomeo, Dipartimento di Economia e Diritto, Sapienza Università di Roma, via del Castro Laurenziano 9, 00161 Rome, Italy; e-mail: giovanni.dibartolomeo@uniroma1.it.

leads of endogenous variables, provided the policy maker can use policy rules that can depend on the lagged value of endogenous variables, expected future values of the endogenous variables (up to the horizon considered), and time-varying policy parameters.

Lorenza Rossi and Carla La Croce present a calibrated dynamic stochastic general equilibrium (DSGE) model with a monopolistically competitive banking sector and endogenous firm entry, and analyze responses to shocks. In addition, macroprudential policy is studied. Specifically, it brings together firms' endogenous entry decisions and a monopolistic banking sector to study the effects of shocks (technology, bank capital, and bank markup) on several macroeconomic variables. It also analyzes the effects of bank capital regulation as in Basel II and III. The results can be summarized as follows. First, the model with endogenous firm entry generates more volatility in output and spreads. Second, capital regulation as in Basel III is more effective in a model with endogenous entry, although it has little effect on output volatility.

Giovanni Di Bartolomeo and Marco Di Pietro reconsider optimal inflation targeting in a model where persistence is generated by rational choices of the price makers because of a time-dependent pricing mechanism (a generalization of the Calvo model). By using a linear-quadratic approach, they study the welfare effects and optimal policies. They disentangled two sources of distortions, showing how welfare falls in both the average of the probability of changing prices and its distribution among different firms. Normative implications for optimal inflation targeting are then investigated (including uncertainty and robustness). By using robust control techniques, the authors consider the consequences of implementing a "wrong" monetary rule due to a misinterpretation of sources of inflation inertia.

Rainer Klump and Anne Jurkat study how the effect of the rate of monetary growth policy on the speed of convergence to the steady state in the Sidrauski (1967) model depends on the elasticity of substitution between capital and labor. We know that in the Sidrauski model, the speed of convergence is higher if the rate of monetary growth is higher. The new result of their contribution is that the effect is higher when the elasticity of substitution is lower. The result is derived analytically and then quantified in a set of simulations.

Peter McAdam and Alpo Willman study the US skill-biased technical change. The authors nest and discriminate between the capital-skill complementarity and the skill-augmenting technical change explanations by using a multilevel constant elasticity of substitution (CES) production function (where factors are disaggregated into skilled and unskilled labor, and capital into structures and equipment capital). Estimations can produce results in line with the capital-skill-complementarity hypothesis. However, those results are outperformed where the only source of the widening skill-premium has been skill-augmenting technical change.

Daniela Federici and Enrico Saltari tackle the problem of the spurious regression bias that may affect estimations of the elasticity of substitution of the production factors due to serially correlated residuals. They propose a dynamic model

characterized by frictions and rigidities. Their estimation confirms that the introduction of rigidities and frictions is sufficient to eliminate the residual autocorrelation since they make the model dynamic.

The last contribution, by Olivier de la Granville, closes the special issue with a comprehensive analysis of several aspects of modern optimal growth theory. De la Granville begins with a scathing critique of the traditional growth model and a series of unreasonable implications that it generates. He continues the critique of the traditional model by showing that the concavity of the utility function is linked to the nonexistence of competitive equilibrium. Finally, a solution to these problems is proposed. The solution implies that the utility function should be an affine function of consumption. Its reasonableness is documented with some robustness checks.