New Challenges in Central Banking: Monetary Policy Governance and Macroprudential Issues

Report on a conference jointly organised by SUERF and BAFFI CAREFIN Centre, Bocconi University
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Conference Report

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Which are the new frontiers in central banking? Which things have changed in the aftermath of the financial, economic and sovereign debt crisis? These are questions raised frequently by central bankers, academics and interested observers alike. There are quite a few areas to cover in answering these questions. The aim of the workshop organized jointly between SUERF and the Baffi Carefin Centre of Bocconi Unversity was to focus on two areas: monetary policy committees, on the one hand, and new prudential responsibilities, on the other hand.

Donato Masciandaro, President BAFFI CAREFIN Centre, Bocconi University and SUERF, and **Urs W. Birchler**, SUERF President and University of Zurich, opened the conference emphasising the importance of bringing together academic research and practitioners' views, in order to gain relevant insights in the field.

Athanasios Orphanides and Donato Masciandaro

The keynote speech was given by **Athanasios Orphanides**, MIT Sloan School of Management on the topic of"ECB monetary policy and euro area governance: collateral eligibility criteria for sovereign debt". He started out by arguing that risk spreads and credit ratings on various countries' sovereign bonds had little to do with debt to GDP levels and thus debt sustainability. A key feature of the euro area crisis in his view was the compromising of most euro area countries' safe asset status. Before the euro, eligibility of government debt by the various NCBs as collateral for monetary policy operations was beyond questioning. With the start of the euro, the ECB used private credit ratings to determine collateral eligibility of a large number of private assets. After the softening of the Stability and Growth Pact by Germany and France in 2014, the ECB was criticized for differentiating insufficiently between various governments' debt and was encouraged to exert fiscal discipline. In November 2015, the ECB communicated that eligibility of government debt was subject to a credit rating threshold. However, during a crisis, credit ratings based eligibility thresholds can become destabilizing: Fears of downgrades and potential default become self-fulfilling if investors expect that the ECB might refuse to accept government debt as collateral. Thus, reliance on credit ratings unintentionally guides markets to an adverse expectational equilibrium for sovereign with more fragile fundamentals. The resulting safe haven portfolio shift from weak to strong governments in Orphanides' view induces an indirect fiscal transfer in the form of risk premium differentials. While the November 2015 decision initially entailed no market effects, the cliff effect resulting from it showed in spring 2010, when rating agencies downgraded Greece below the ECB threshold. The ECB suspended its collateral

rules but only after the Greek government accepted conditions set by other member states. As a result, the ECB's collateral framework de facto became a disciplining device against affected euro area governments. It would not be imaginable in e.g. the US or Japan that the corresponding national central bank adopts collateral rules aiming to discipline their respective governments.

Furthermore, in October 2010, France and Germany agreed that whenever a euro area member state faced difficulties, losses on private creditors would be demanded. This agreement relied crucially on the ECB's collateral framework to be used as a threat against weak governments. As a result, sovereign debt of weak governments lost its status as a safe asset for private investors; the central bank no longer served as a backstop for governments and against adverse self-fulfilling expectational equilibriums. This in turn reduced fiscal scope for weak countries, reducing governments' ability to cushion negative shocks. A reason often put forward in favour of using the collateral framework as a disciplinary device for governments is moral hazard, in the sense that extremely low interest rates would reduce governments' willingness to embark on reforms. In Orphanides' view, with such collateral policy, the ECB exceeds its mandate. The ECB should thus reconsider its collateral policy, perform its own independent debt sustainability assessment, without including unjustified default fears in its analysis. Enforcement of the EU's fiscal rules should be left to the European Commission and the member states, in accordance with the Treaty; the ECB should in turn confine itself to its mandate.

Session I, chaired by **Sylvester Eijffinger,** Tilburg University, CESifo and CEPR, was devoted to monetary policy governance. The first paper by **Sylvester Eijffinger** and **Louis Raes**, Tilburg University, was entitled "Estimating the Preferences of Central Bankers: an Analysis of four Voting Records". The results presented were results of an ongoing research agenda covering various central banks, with this presentation focusing on the Czech National Bank. Recent research has paid attention to the influence of the design and composition (internal versus external members, appointment procedures, gender, regional representation, etc.) of central bank decision-making committees on monetary policy decisions. Using ideal point models, the authors first estimate latent preferences of the Czech National Bank's central bank committee members and rank them according to their dovishness versus hawkishness on a latent scale. Using data between 1998 and 2017, they tend to confirm earlier empirical results that women tend to be more hawkish; governors are either found to be rather neutral or very dovish. Their research on various central banks so far does not allow any generalized conclusions; every central bank needs to be treated as an individual case study.

The second paper by **Alessandro Riboni**, École Polytechnique, Paris, and **Francisco Ruge-Murcia**, McGill University, dealt with "Deliberation in Monetary Policy Committees". The authors analyse a model of communication and voting within a monetary policy committee and checks whether the predictions made by the model match FOMC voting data. In particular, he is interested to what extent FOMC members change their view following the discussion and decision-making procedure (measured as the difference between final votes and views expressed before). He finds that deliberation in committees partially reveals individual members' ability (or lack thereof) and private signals. Absence of mind changes of individual members' does not necessarily signal ability, in the sense that a person sticking to her gun may appear smarter. On the contrary, low-skilled members may try to conceal a contrarian signal and take a conservative stance, while smart members may be less afraid to share a contrarian signal, putting it on the table for an open discussion; thus smart members might even appear less consistent.

The third paper by **Donato Masciandaro**, Bocconi University and SUERF, **Paola Profeta**, Bocconi University, and **Davide Romelli**, Trinity College Dublin, was entitled "Behavioural Monetary Policymaking and Gender: Theory, Institutions and Empirics". The paper starts from the observation that women continue to be under-represented in many industries and professions, including executive positions in money and finance. They raise the question whether in monetary policy, increased gender diversity might change decision-making, e.g. because of gender-related differences in

risk aversion, loss aversion or "conservativeness", or simply because gender diversity adds to committees' diversity of views. The paper offers innovations in theory, metrics (first index of gender diversity in monetary policy-making for the period 2002-2015 in 37 countries) and empirics (cross-section analysis of drivers and effects of gender diversity in monetary policy committees). Based on various data sources, they first show that over time, in the sample of 37 countries, the share of women strongly increased from below 10% to 14% between 2002 and 2005, then fell back to just over 10% until 2010, and rose again to 14% by the end of the sample in 2015. In 2015, the female share was 15% for a larger sample of 112 countries. The evolution of the share of female depute governors followed a similar but more volatile pattern, rising from below 5% in 2002 to above 11% by 2015. The share of central bank boards with two or more females increased from 10% in 2002 to 30% by 2015; however, a little less than 50% of central bank boards continue to have no female member at all in 2015. The share of women over the past decade has mostly increased in those central banks, where representation was already higher. North America and Africa as well as low-income countries have the highest share of women on central bank boards. Preliminary econometric estimates indicate that gender representation on monetary policy boards is influenced by country and institutional factors, such as staff gender ratio, country gender equality and central bank independence. Female representation can affect monetary policy-making: a higher female share according to preliminary estimates seems to be associated with more hawkish monetary policy decisions.

Session II, chaired by **Ernest Gnan**, SUERF Secretary General and Oesterreichische Nationalbank, addressed macro-prudential policy from theoretical, institutional and empirical viewpoints. The first paper by **Anil Kashyap**, University of Chicago, **Dimitrios Tsomocos,** University of Oxford, and Alexandros Vardoulakis, Federal Reserve Board, gave a presentation on "Optimal Bank Regulation in the Presence of Credit and Run Risk". They extend the Diamond-Dybvig (1983) model to study externalities emerging from intermediation, and how regulation can mitigate their effect. They find that all the types of regulation they investigate reduce the probability of runs, thus raising welfare for businesses and savers. The probability of a run due to bad fundamentals falls but does not vanish. Bankers are worse off because regulation does not allow them to take full advantage of limited liability. Different types of regulation (capital and leverage versus liquidity regulations) have different effects on investment and credit risk. Capital and liquidity ratios can be combined to usefully complement each other. Liquidity ratios are useful for dealing with liquidity risk but not credit risk. Capital regulations are useful for addressing credit risk but also the risk of bank runs. Net stable funding regulation is useful for addressing both liquidity and credit risks but is hard to combine with other forms of regulation. There at least three different types of margin distortions in private banking decisions. Thus, there is need for at least three separate tools to address all these externalities. But it needs to be ensured that these tools are jointly binding.

The second paper by **Eugenio Cerutti**, International Monetary Fund, **Stijn Claessens** (BIS) and **Luc Laeven** (ECB) provided evidence on the use and effectiveness of macro-prudential policies, based on a series of papers prepared by the authors. A first study published in 2015 covered 119 countries for the period 2000-2013 and considered 12 different macro-prudential measures: loan-to-value caps, debt-to-income ratios, time-varying loan-loss provisioning, counter-cyclical requirements, leverage ratios, capital surcharges on systemically important financial institutions, limits on interbank exposures, concentration limits, limits on foreign lending, reserve requirements, credit growth caps, and levies or taxes on financial institutions. They found that over time the use of macro-prudential measures increased markedly, less so in advanced economies than in emerging market and developing nations. Advanced economies use more borrower-based, emerging economies a broad set of macro-prudential tools. Regressions show significant and large effects of macro-prudential tools (measured by a summary index) on credit. The effect is stronger in emerging than in advanced economies, the measures are less effective in open economies, pointing to possible circumvention, which is also confirmed by a positive correlation between the use of macro-prudential tools and cross-

border activities. Furthermore, they find macro-prudential tools to have less impact on credit in countries with more developed financial systems and with flexible exchange rates. Macro-prudential tools are found to be more effective when credit growth is high. The effect of macro-prudential tools is furthermore found to be asymmetric for upswings versus downswings. A further study from 2017 covered 64 countries for the period 2000-2014, investigating usage intensity of five types of prudential instruments. The study finds that reserve requirements and loan-to-value caps are adjusted most often, while interbank exposure limits and concentration limits were not often adjusted. Capital requirements were tightened especially after the global financial crisis. Loan-to-value ratios were raised often after the financial crisis, counteracting loose monetary policies in several countries. Loan-to-value ratios and reserve requirements were used more systematically in a counter-cyclical fashion than other types of instruments. Overall, experience with macro-prudential measures is still at an early stage. More research and experience with respect to interactions with other policy areas, on side effects and costs, on political economy aspects and on rule-based versus discretionary application are needed.

The third paper by **David Martinez-Miera**, Carlos III University, Madrid and CEPR, and **Eva Schliephake** (University of Bonn and Harvard) dealt with the topic of "Bank Capital Regulation with Unregulated Competitors". The authors analyse optimal bank regulation in a model where regulated banks are confronted with competition from unregulated institutions. They find that, contrary to common wisdom, an increase in competition from unregulated entities can result in a decrease of social welfare if the level of competition in the banking market is high enough. To limit this loss of welfare, bank regulators should reduce capital regulation. On the other hand, if the level of competition among banks is low, an increase in competition from unregulated entities leads to higher optimal capital requirements and results in higher welfare. These non-monotonic results highlight the need of a better understanding of the underlying trade-offs regarding bank capital regulation, regulatory arbitrage and social welfare.

Session III, chaired by **Tommaso Monacelli**, Bocconi University, studied how monetary policy and macro-prudential policies are modelled in new DSGE models. The first paper by **Margarita Rubio**, University of Nottingham, and **Fang Yao**, Reserve Bank of New Zealand, focused on macro-prudential policies in a low interest-rate environment. Post-crisis economies are characterised by very low neutral interest rates. These, on the one hand, limit the scope for conventional monetary policy to stimulate the economy while, on the other hand, raising concerns about financial imbalances and future financial instability. Using a calibrated DSGE model, the authors investigate the consequences for business and financial cycles of a steady-state interest rates falling from 4% to 2%. They find that in such a low-equilibrium interest rate environment, the zero lower bound becomes binding more frequently, leading to greater macroeconomic volatility and financial instability. In this environment, the case for macro-prudential tools becomes stronger as they may either be used to contain financial imbalances arising from ultra-low interest rates or to complement monetary policy when conventional monetary policy instruments are constrained. In a low interest environment, macro-prudential policies need to be more aggressive in responding to credit.

The second paper by **Seraffín Frache**, **Jorge Ponce**, Banco Central de Uruguay, and **Javier García-Cicco**, Banco Central de Chile, elaborated on "Monetary and Prudential Policies in a DSGE Setting". They estimate a DSGE model of a small-open economy with a banking sector and endogenous loan default with data for Uruguay, as characterized by a dollarized banking system and by dynamic provisions since 2001. They find that counter-cyclical buffers and dynamic provisions are effective in generating buffers that may cover future losses. It is unclear whether they have counter-cyclical real-economic effects or not. The source of the shock is important, as it matters to select the optimal policy tool: dynamic provisioning seems to outperform counter-cyclical buffers in the event of external financial shocks. For dynamic provisioning, the same calibration may be excessively counter-cyclical if the shock is domestic instead of external.

The third paper by **Dmitriy Sergeyev**, Bocconi University, was devoted to "Countercyclical prudential tools in an estimated DSGE model". The author solves for optimal macro-prudential and monetary policies for members of a currency union in an open economy model with nominal price rigidities, demand for safe as- sets, and collateral constraints. As is the case in EMU, monetary policy is conducted by a single central bank, which sets a common interest rate, while macro-prudential policies are set at a country level through the choice of reserve requirements. Two main results emerge. First, with asymmetric countries and sticky prices, the optimal macro-prudential policy has a country-specific stabilization role beyond optimal regulation of financial sectors. This result holds even if optimal fiscal transfers are allowed among the union members. Second, there is a role for global coordination of country-specific macro-prudential policies. These results call for coordinated macro-prudential policies that go beyond achieving financial stability objectives.

The final paper by **Daniel Cohen**, **Mathilde Viennot**, Paris School of Economics, and **Sébastien Villemot** (OFCE -SciencePo) was entitled "Schäuble versus Tsipras: a New-Keynesian DSGE model for the Eurozone Debt Crisis". The authors calibrate a New-Keynesian DSGE model to show that consumption habit persistence (which makes adjustment after a large GDP shock painful and the shock more persistent) plays an important role in determining default probabilities and debt levels. The authors compare three frameworks: a flexible exchange rate case, a „Schäuble" case (country leaves the monetary union if it defaults) and a „Tsipras" case (country stays in the monetary union even if it defaults). They formulate a "Schäuble theorem": provided habit formation is sufficiently high (i.e. adjustment is painful), if you give a country in a monetary union the choice between a) default and leaving the zone and b) default and staying in the zone, the country will always choose the latter option. From a monetary union policy maker's point of view, one should not offer the choice and impose the first option. This result is, however, reversed in case of low habit persistence.

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As usual with SUERF's events, the workshop managed to translate technical academic research into useful insights for practical and policy purposes. The workshops also showed that these are fields were more research and practical experience will need to be gathered in the years to come.

Eugenio Cerutti and David Martinez-Miera

Conference presentations are available at:

www.suerf.org/milan2017