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Macro-financial policies and their relationship with international financial markets

Executive summary

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Executive summary

In the doctoral thesis we analyze the macro-financial policies – international financial markets nexus. We aim to enhance the current policymaking framework, to align it with the financial developments in order to reduce the sources of systemic risk and its effects on the real sectors. We achieve the objectives by exploring the pivotal role of international financial markets framework in driving policy initiatives and advise that the behavioral biases of market participants, the pro-cyclical financial conditions, the concentration of risk in the system or the limits posed by financial openness need to be addressed with robust measures that minimize the trade-off between financial stability and economic growth.

The first part of the thesis is dedicated to understanding the theoretical foundations of financial markets along with the strong critique to the mainstream rational modern finance approach coming from the behavioral finance exponents. In this part of the thesis we understand financial markets fluctuations in response to new information, how rational investors should price the financial securities depending on the associated risk and how rational investors select the investment portfolios. This effort enables us to pin-point the importance of efficient financial markets in channeling the stock of capital to productive investments that add long-term value to the investors and in aggregate terms, promote long-term economic growth. On the other hand, we also understand that market participants can commit systematic errors in their assessment of risk because of their behavioral biases, that unregulated financial markets can exacerbate the adverse selection costs and that price efficiency is a paradox because of the research costs, as showed by Grossman and Stiglitz (1980). Deviations from price efficient financial markets imply that (i) this channel of intermediation can disrupt investment decisions and destroy value and that (ii) an enhanced institutional framework is needed in order to "restore" efficiency via limiting the behavioral biases at collective level and the adverse selection.

Further, we extend our analysis to the conceptual framework of international financial markets and advise on the role of the central bank in an open economy. In particular, we find that the monetary decision regarding the exchange rate regime is critical for the financial stability of the country and in general, we argue that in international financial markets governed by the law of one price (i.e. absence of arbitrage opportunities) the monetary policy options are limited in accordance to the logic of the trilemma of international finance. Understanding the links between

the exchange rate, interest rates and capital controls enables central bankers to react with responsibility to the financial developments. We show that excessive financial integration can escalate into financial contagion risk and can induce fragility in financial markets which further transfers the financial imbalances to the real sectors. Considering these developments, we depart again from the efficient international financial markets governed by the policy trilemma view to a world in which open financial markets pose additional uncertainty to national economies and investors, induced by pro-cyclicality or collective irrational behavior, where central bankers decisions become subject to a policy dilemma, as explained by Rey (2015). Research finds that the flow of speculative capital originating from countries with "easy money" policies, can overheat emerging economies and without some level of discipline exercised by central bankers in the form of capital controls, the financial stability objective cannot be achieved.

Further, we switch to the macroeconomic view and show that financial markets have a central role in promoting long-term economic growth, but also bank-based financial systems, which are by definition more centralized as compared to financial markets, can have a pivotal role in economies that lack strong legal systems or financial discipline. Although there are significant differences in terms of financial systems between emerging and developed economies, we document that both system types have a critical role in facilitating long-term economic growth, the important aspect is to have a developed financial system that provides funding to firms and households and risk management instruments.

The final section of the doctoral thesis addresses the financial markets - macro-financial policies (i.e. monetary and macro-prudential policies) nexus in the context of the recent global financial crisis.

Our analysis of monetary policy actions from major central banks in the context of recent financial developments shows important improvements on how monetary policy is conducted and increased awareness of monetary authorities regarding build-up of financial imbalances. In more general terms, monetary policy started to move away from the Bernanke-Gertler (1999) paradigm, which implied that price stability is a sufficient condition for financial stability, to addressing the realities of the global financial crisis and understanding that monitoring of financial developments is critical for identifying systemic risk and preventing severe spillovers to the real sectors. Along with the new financial stability objective, academia together with monetary authorities identified new monetary transmission channels and policy instruments. Research shows that discretionary monetary innovations taken prior to the global financial crisis by the Federal Reserve, that are quantified by financial market participants as “too relaxed”, can induce risk-taking practices in the banking sector, further leading to collective underestimation of systematic risks. We find that the implementation of policy rules and the communication strategy have an instrumental role in limiting the negative effects induced by pro-cyclical conditions and therefore policymakers should not deviate persistently from a clear, understandable policy rule that is also accepted by the public. Secondly, in response to the global financial crisis and with the limitation from the zero-lower-bound of the policy rate, central bankers began to operate more prominently in financial markets through the asset prices transmission channel by conducting large scale financial assets purchase programs, absorbing credit risk when markets were dominated by irrational behavior.

In response to the global financial crisis, major central banks deployed a set of unprecedented measures, designed to restore the financial stability and confidence of firms in households in the financial sector. We inspect the evolution of the policy rates and observe that after end of 2008 and observe that monetary authorities decreased the short-term interest rates towards the zero-lower-bound in a short period of time, reducing the effectiveness of this instrument but gaining macroeconomic benefits as showed by Wu and Xia (2016). With this limitation and because major economies continued to underperform, policymakers unfolded unconventional monetary actions, designed to further alter the term structure of interest rates at higher maturity tenors and to restore liquidity in the banking sector. We investigate the relation between unconventional monetary actions, measured as innovations in the balance sheets of central banks, and the evolution of world equity markets and observe that the expansionary monetary actions increased equity market prices to all-time high levels, which we argue that it may indicate some level of irrationality in the financial markets and risk-taking of market participants in response to “easy money” type of policies.

Our analysis of monetary policy rules and discretion is extended to the international level. We elaborate on the role of the Federal Reserve in the international context as well and argue that persistent deviations from the monetary policy rule in the United States cause other major central banks to engage in similar decisions in order to not deteriorate the trade balance and external competitiveness. The international transmission of monetary conditions from the United States to rest of the world that have the potential to materialize in global financial instability, creates the premises of an international effort oriented at the adoption of rules-based policy framework, as advocated by Taylor (2015, 2016a, 2016b, 2017). In this sense, the need of capital controls can only diminish with the condition that major central banks achieve a better international coordination of monetary actions in the context of global policy rules.

In response to the accounts of the global financial crisis and to its identified sources, authorities also added a macro-prudential layer on financial regulation in order to limit the damage to the real sectors that originate from market wide dysfunctionalities caused by pro-cyclical financial conditions or financial externalities, as indicated by Brunnermeier (2009). In particular, macro-prudential regulation addresses (i) developments in the risk dimensions of financial markets, i.e. monitor and manage distribution of risk and risk-taking practices in the financial sector, and (ii) proposes reforms to financial market infrastructure that decrease counterparty risk and increase transparency, with the objective to reduce the amplitude of the global financial cycle by targeting both the expansionary and contractionary phases of the cycle.

We contribute to the field of international finance and macro-financial policies by investigating the microeconomic effects of the monetary policy conduct in the United States by observing the response of the domestic capital market with respect to unexpected changes in the Fed Funds rate target in discretionary as opposed to rules-based policy eras. We find strong evidence that the monetary policy based on rules spawns consistent rational stock market reactions, while a discretionary policy increases microeconomic uncertainty, providing further evidence with respect to the risk-taking monetary policy transmission channel and to the implications of forward rate guidance.

The evolution of macro-financial policies is intimately linked with the predominant ideas developed in the field of finance. The laissez-faire type of financial policies, which was the dominating view of policymakers after the removal of the Bretton–Woods standard, that permitted unrestricted flow of capital at international level, facilitated the financial and economic integration, and adopted the principle of self-regulating financial markets originate from the developments in the field of finance, the advances related to efficient markets hypothesis, the rational pricing of financial securities, the Modigliani-Miller (1958) proposition on the indifference of risk structure and portfolio selection theory that underpins how risks are pooled by the investors in efficient financial markets. Moving forward, the behavioral critique of efficient markets, the reduction of the trilemma of international finance to a dilemma - Rey (2015), the limits of financial integration or the pro-cyclical financial conditions indicate the need of a new view on international financial policies, in many ways opposite with the laissez-faire financial policies.